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CONTENTS.

ORIGINAL COMMUNICATIONS.

APPENDIX.

CONTENTS.

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TWO TAVOY WOMEN GRINDING RICE.

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ROYAL ASIATIC SOCIETY.

ART. I.—*Narrative of a Voyage from Singapore to the West Coast of Borneo, in the Schooner Stamford, in the Year* 1834, *with an Account of a Journey to Montradok, the Capital of a Chinese Colony in possession of the principal Gold Mines, by* GEORGE EARL, Esq. &c. &c.

Read, 4th *July,* 1835.

THE voyage from which I have just returned was undertaken with the view of opening a trade with the Chinese colonies on the island of Borneo; and, that my narrative may be the better understood, I shall first give a short sketch of the situation of those colonies.

The Dutch have two small stations on the coast, one at Sambass, in latitude 1° 25′ N., the other at Pontiana, in latitude 0° 2′ S.; the two being about ninety miles apart. The country between these two settlements is very rich in gold and diamond mines, and has been for many years in the possession of a strong colony of Chinese, who have kept themselves independent, notwithstanding many attempts of the Dutch to get possession of the mines. They are now at peace, and the Dutch, being masters at sea, will not allow any trade on the coast, except at Sambass and Pontiana; so that the Chinese are obliged to import and export every thing through these ports, paying very high duties.

It was to open a direct trade with Sinkawan, the principal seaport town of the Chinese, that this voyage was undertaken. Our cargo consisted principally of opium, tea, and piece-goods: and I was provided with two interpreters; one who understood the Tartar dialect spoken there, which the other was to interpret to me in Malay.

We left Singapore on the 1st of March, and arrived on the coast of Borneo on the 7th, having had fine weather across the China sea. We made the land to the southward of Point Batublat, in latitude 0° 45′ N. where a group of large islands lies close to the coast, pre-

senting no danger under water, although several small rocks, which are always dry, make it awkward to run in during the night, particularly as they are not yet surveyed. We, however, ran through these islands, and brought up off the coast in seven fathoms, at twelve at night.

As the places which I had to call at are not mentioned in any chart, I was under the necessity of searching for some town or village where I might be able to procure information. The coast is low and woody, having thick, swampy jungle near the sea, with numerous creeks, so that the inhabitants are only to be met with some distance inland; and a person, at first arriving on the coast, if not previously aware of this circumstance, would not suppose there was a human being in the neighbourhood.

At daylight, in the morning, I got out the long boat, and set off with twelve men, well armed, for a large creek lying opposite to the vessel. The water was very shallow at the mouth, but deepened inside. About a hundred yards up there was a strong barricade across the river, made of large stakes driven into the mud, having an opening of four feet wide in the middle, apparently for the passage of canoes. After being occupied for nearly an hour in enlarging this place sufficiently to allow the boat to pass clear, we proceeded; and, about half a mile further up, came to another barricade of the same kind, with a dismantled mud-fort on the bank close to it. To tell the truth, I did not altogether like the appearance of the place, particularly as the coast has rather a bad character, and this had every appearance of a pirate's nest; but, as it was absolutely necessary that we should know where we were, we pushed on up the river, although I saw some hesitation among the people, who were all Malays from Java. These people, when well led, are as brave as could be wished; but, if they see any hesitation in their leader, they lose all presence of mind, and become in a moment the greatest cowards on earth.

As we advanced, we disturbed immense numbers of monkeys as large as middling-sized dogs, whose screams and barking made the woods re-echo; many coming down the branches close to the boats, and looking as fierce as tigers. We struck at them with our cutlasses, which only made them ten times worse; and they kept following us as close as they could, much to my annoyance, as I wished to proceed as quietly as possible.

After ascending about two miles, and on rounding a point, we popped upon a little hut where two Chinamen were boiling salt from salt-water. In answer to our inquiries, they said that this river was

called Songy Ryah, and had only a small village on it; but that Sinkawan, the chief town, was three miles up a river fifteen miles to the northward of where we were. We put about immediately and returned, the monkeys still following. As I did not care now about using fire-arms, I shot a large monkey, which appeared to be the chief agitator; and he came down crashing through the trees, and fell on the bank with a noise more like the fall of a bullock than of a monkey. There was immediately a dead silence among the monkeys, and many were descending to him, when a bend of the river took us out of sight. A few of them only followed us, and they kept high up in the trees, taking extraordinary leaps from branch to branch.

On getting on board the schooner I weighed anchor, and, working through the islands to the northward, at dusk, brought up near the mouth of a river, which I supposed was the one I wanted.

Early in the morning, taking the long boat, I left the vessel, and found the river to be about the same size as the Songy Ryah. It was hardly daylight; and being very foggy, before we were aware of any thing being there, we came suddenly close up to two suspicious-looking war-práhus, which were lying in the narrow part of the mouth, and which, on seeing us, commenced beating two large gongs. As we were within range of their guns, I pushed directly up to them, and was agreeably surprised to find they were Dutch cruisers, although I would much rather that no one had been there.

The commodore was a Lingin Malay, and was stationed there by the resident of Sambass, to prevent, as I afterwards discovered, any foreign vessel or práhu from trading there. He tried all he could to dissuade me from going up the river, saying that the Chinese were very savage, and had cut off a boat belonging to a práhu a few days before. It was his duty to have prevented me, which he might easily have done, as he had sixty men, whilst I had only twelve, and the vessel, from shoal-water, could be of no assistance; but he seemed to have a dread of me, for which I could never account. Finding I was determined to go, he said he would accompany me with his boat; upon which I invited him to take a seat with me; and at last got him to do so, when, as he was completely in my power, I did not care for the men. His boat followed ours.

The river was very narrow, not wide enough to admit of the use of the long oars; we had, therefore, recourse to paddles, and, after a pull of three miles, passing several salt-boilers' huts, we arrived at the town.

There were two small trading-práhus from Sambass, and about twenty fishing-boats, lying close to the wooden jetty where we landed. We went thence to the court-house, where the Chinese *cuensí* (magistrates) resided; when I told them what I had come for, and what I had got on board, requesting them to say whether they could or would trade with me, as I was desirous of as little delay as possible. The house kept filling fast with half-naked Chinamen, who rushed in from the town to see the Fan Qui. Each one had something to say, and tried to make himself heard above his neighbour, so that in a short time the court-house became a little Babel, and I was glad to get out of it: but, when I did so, I got into a crowd of women, who formed a compact body round me, quizzing me most unmercifully, if I might judge from their laughter; while I was facing about in all directions, trying in vain to get away from them.

Having at last cleared a passage, I proceeded to inspect the town, which consisted of a long narrow street of thatched, wooden houses, the front room of each being a shop for the sale of meat, grain, grocery, &c., intermixed with houses for opium-smoking, which are much the same kind of receptacles as our public-houses. The court-house, where the *cuensí* resided, was detached from the town, having one large public room and several small ones at the back and sides. The great room had an earthen floor, and was furnished with a great arm-chair, a table, some wooden benches, and a *loss*, or deity. It was surrounded by a low turf wall, with a gate opposite the town, near which several long janjáls, carrying balls of about one pound, were placed muzzle up, leaning against the wall. Three of these were fired as a salute to me on my return from the town; for I had come upon them so suddenly in the first instance, that they had not then time to pay me the compliment. There was still a great talk in the court-house, but it subsided as I entered; and the secretary of the *cuensí*, who appeared to be the chief among them, led me to the great chair, and put some sugar-candy and preserves before me. I could perceive that he was completely at a loss how to proceed, which, when I afterwards understood what was their form of government, did not surprise me. It appeared, from what I could collect from him, that he did not like to let me trade through fear of a breach with the Dutch; and, on the other hand, he hesitated to prevent me, through fear of a disturbance among the people, who wished, above all things, to trade with me: but he said that, if I would wait for a few days, he would send for instructions from the Chinese governor, who lived at Montradok, about

thirty-five miles in the interior, as he was unwilling to act on his own responsibility.

Seeing how undetermined he was, I decided on losing no time, but to proceed to Sambass immediately, to see what I could do there. On passing the cruise-práhus, I observed that they had sent off one of their boats, and, as I supposed, to Sambass; when, getting on board the schooner, I weighed, and made sail along the coast to the northward, with a fine sea-breeze.

In running along the coast, we could perceive several small hills a few miles inland, which appeared to be well cultivated; but the land near the sea was all swampy, and covered with an impenetrable jungle. At six in the evening we passed Stackú, which is situated on a small hilly point. This was formerly a place of considerable trade, but now it consists merely of a few huts inhabited by Chinese and Malays: most of the inhabitants were destroyed two years ago by the Dyaks, a wild people from the northward, of whom I shall say more hereafter.

At seven in the evening the land-breeze sprung up, and at midnight we arrived off Púmankat Hill, which, as I had been informed, was situated on the south part of the entrance to the Sambass river; and, as I did not like to venture over the bar in the night, we brought up in five fathoms, about six miles off shore.

At nine the next morning, the sea-breeze setting in, we weighed, and ran in towards the mouth of the river with the long-boat a-head, sounding, keeping in mid-channel; and, in about an hour, anchored off Púmankat, a small town inside the mouth of the river. The least water we had was nine feet, which was one foot less than our draught; but, as the bottom was soft mud, we easily ran through it. This was at half flood; at high-water and spring tides, there are sixteen or eighteen feet.

I found here two cruise-práhus, and a small schooner, having the resident of Sambass on board, who had come down to meet me. He informed me that he had orders from Batavia to allow no trade at any port on the coast but Sambass and Pontiana. I, therefore, determined to go to Sambass, which is about thirty miles up the river, and arrived there the next day.

The entrance of Sambass river is in latitude 1° 28′ N., being about a mile wide at the mouth, but immediately inside it increases in breadth to between two and three miles, and continues so for a considerable distance. The main branch runs in an E. N. E. direction, and is navigable for ships of considerable burden for upwards of 200 miles, and very likely for more; but I could find no person who

had ascended it further, owing to the country through which the upper part flows being inhabited by hostile tribes of Dyaks.[1]

Sambass is situated on a small river which joins the main branch on the south side, about fourteen miles from the mouth. This river is narrow but deep, and is navigable up to the town by vessels of 200 tons; there being seven fathoms and upwards of water, except in one place, eight miles below the town, called Sabatu, where some rocks run nearly across the river, leaving a channel with fourteen feet at high water close to the right bank. The land near the river is swampy, and is all jungle, except a few small spots which are cultivated for rice.

On arriving off the town I saluted it with nine guns, which was returned by the fort with seven. The fort is situated near the river in the lower part of the town; it is merely a square stockade of wood, with the earth thrown up against it inside, and mounts eight long nine-pounders. The government establishment consists of a resident, a surgeon, and two officers, with about forty soldiers, half of whom are Europeans.

The Dutch have been here about eight years only. Before that time Sambass was a complete nest of pirates; and, in 1812, was fortified by the rájá, who was so bold in his depredations, that some English men-of-war were sent from Batavia, who burnt the town, and destroyed the fort, tumbling the guns into the river. The rájá, and those that escaped, went a great distance up the river, and remained there two years, before they would venture down to rebuild the town on its former site. The resident's house is built close to the old fort, where I saw a long eighteen-pounder, which was split several feet from the muzzle, a shot from one of the brigs having struck it in the mouth. All the old inhabitants have a clear recollection of the attack; indeed, many of them carry the marks of very severe wounds they received at that time.

The day after my arrival I called on the rájá, or, as he is styled by his own people, the sultán. He is the farmer of the opium which is consumed by the people of the district, no other person being allowed to sell it; indeed, it is almost his only revenue; for, though the gold-mines are within his territory, they are in the hands of the Chinese, who exceed in number the Malays in the proportion of about six to one. A few years ago the Chinese had completely the upper hand, which induced the rájá to invite the Dutch to settle there, and

[1] I was informed by one of the pangerans of Sambass, that the river was navigable by canoes to within two days' walk of Borneo Proper; but the Malays are not always to be credited.

take him under their protection. But it has been much the same to him; for, although he is nominally the head of the government, he can do nothing without the resident's permission.

In going to the rájá's house, which is situated about a mile up the river, I was obliged to use my boat, as there are neither horses nor roads in this country; the only communication between houses being by the river.

The houses in the town are very miserable, being all of wood, and covered with plank or attap leaves; many are built on floats in the river, moored to large posts. The latter sometimes break adrift, and three of them came down one night across the schooner's bows, and nearly carried her with them.

The rájá's house was of the same materials as the others, but larger. It was partly hidden by a large wooden pavilion in front, which was his audience-hall, and where I found him, seated on a mat, with a number of his *pangerans*, or petty rájás, with him.

He rose on my entrance, and led me to a chair before a European table that was in the room, himself taking another opposite. The table and chairs were the only furniture, with the exception of several globe lamps suspended from the ceiling.

The rájá was, to appearance, about fifty; but, as he was an inveterate opium-smoker, he might have been several years younger. He was tolerably well informed for a Malay, and was very inquisitive respecting the English, I being the first that he had seen. He said that, in the event of a war between England and Holland, which was then expected, the Dutch would retire from Sambass and Pontiana to Batavia. After about two hours' conversation I departed, without coming to any terms about the opium, as he said he required to sleep over every affair of importance.

Some of the pangerans, though young men, were completely broken down by opium-smoking. This drug has much greater effect on the Malays than on the Chinese, whose constitutions are, perhaps, better able to support it.

During my stay here, I went up the river several times with the doctor and some soldiers, in quest of an orang-outang that had been seen there several times; but, although we saw him once, the jungle was so thick that he escaped out of sight almost immediately. We, however, shot a wild hog or two every time, which kept us in good humour.

Although the orang-outang is more frequently seen here than in any other part of Borneo, yet it is very difficult to procure one; and it is almost impossible to take an old one alive. The doctor had one

about eight months old, which was nearly as helpless as an infant of that age. At a few yards' distance, as it lay on the ground, it was difficult to distinguish it from a negro child; but on nearer inspection, you could perceive a number of long silken hairs growing from the body. He was not yet weaned, and was fed with pap in the same manner as an infant; and if he did not get food when hungry, he would cry and scream till it was brought to him. I used sometimes to puff a little smoke from my cigar into his face, which would put him into a terrible passion, and make him scream and kick; but I never knew him attempt to bite. The natives say that many of the wild ones are seven feet high; but I never saw one so large.

Monkeys are very numerous, and of great variety. I do not think one-third of the different species is known to naturalists. With the exception of monkeys, badgers, and pigs, I saw no wild animals; and domestic ones are very scarce. Sheep and horses are unknown; indeed, they would be quite useless, as there are neither pastures for the one, nor roads for the other.

Rice is the principal food of the natives, but very little is cultivated; and they are dependent on Java for a supply: indeed, a Malay, when he can collect gold-dust enough in four months to supply him for the remainder of the year, is not likely to exert himself much in cultivating the earth, that being a kind of labour he detests, and to which he will not resort unless from necessity. They are, however, improving yearly; and, perhaps, in time will become an industrious people.

The Malays are decidedly a maritime race, and were formerly the carriers of this part of the East; but their commerce has been in a great measure destroyed by Europeans,—and pirating now is a very bad trade: so that their only resource is to turn sober cultivators of the earth, and as such they will, perhaps, be a happier people than they were before.

I must now say something about the Dyaks, who are the aboriginal inhabitants, and are a totally distinct race from the Malays. I have seen very few above the middle size, and they are all slightly built. In colour they are much fairer than the Malays; and many of the men appear quite white, owing to the body being covered with a kind of scale, in appearance much like the leprosy, the cause of which I could never find out. Some of them told me they did it themselves by rubbing their bodies with the juice of a tree, while others again said they were born so. I never saw any of the women so affected; indeed, many of the females are very good-looking, and the Chinese settled in Borneo frequently marry them: but I never

knew an instance of a connexion between a Dyak and a Malay; indeed, the Malays have a great contempt for them, considering them little better than orang-outangs. Those tribes that are in the neighbourhood of Sambass are, in some measure, civilised, and exchange gold-dust, which they procure in the interior, for cloth, glass beads, and tobacco, with the Malays and Chinese; but they never bring more than will supply their wants, although there is no doubt that, if they wished, they could collect a great quantity.

These people are very expert with the blow-pipe, which is a hollow cane about five feet long, through which they blow small arrows. In war-time these arrows are poisoned.

Between Sambass and Borneo Proper the Dyaks have possession of the coast; and at Serawak, about three hundred miles to the northward of Sambass, there is a trade carried on by the Borneo people for antimony-ore, which abounds in the neighbourhood; and for which the Dyaks receive in exchange red and blue cotton cloth, iron, and glass beads. With the iron they make swords, which are not unlike Turkish scimitars, the blade being narrow near the handle, and broad at the end. These they temper so exceedingly well, that I have cut a small nail in two with one of them, without the edge being injured.

These people have retained all their old customs, many of which the Dyaks in the south have left off since their collision with foreigners. One is particularly barbarous: before a young man can marry, he must present his bride with the head of a man cut off with his own hand. This is not intended as a proof of bravery; as the bridegroom may take several friends with him, and they sometimes lie concealed several days to set upon an unfortunate passer-by unawares. It might have been originally adopted as a check to the too great increase of population; but it is not continued for this reason, as they will go several hundred miles from home for the purpose of cutting off Malay práhus and fishing-boats, and securing the heads of their victims.[1]

About a year and a half before I came on the coast, the Dyaks of Serassan, or the country to the northward of Serawak, scoured the whole of the coast to the southward as far as Pontiana. They were about a thousand in number; and came in canoes of from sixty to eighty feet long, hollowed out from a single tree, each canoe carrying

[1] I have remarked a custom something like this among the natives of New Holland; who, on the death of a male belonging to their tribe, will kill another belonging to an adjacent one, which, they say, preserves the balance of power between them.

about forty men. Their arms were the blow-pipe and sabre, being totally unacquainted with the use of fire-arms.

Many trading práhus on the coast were cut off by them; and the inhabitants of Stackú, a town on the sea-coast a few miles to the southward of the Sambass river, were nearly all destroyed in a night-attack. It is extraordinary that they took scarcely any thing away with them, although there was a great quantity of gold-dust and cloth in the town; being apparently satisfied with the heads of their victims. Between three hundred and four hundred people were thus destroyed in the neighbourhood of Sambass alone; and, no doubt, many práhus were cut off.

The Dutch cruise-práhus that were at the mouth of the river might, perhaps, have prevented them from passing to the southward; but, at the first news they had of their being on the coast, they immediately fled up the river, without informing the people on the coast of their danger, and not stopping till they were safe under the guns of the fort. I must mention that the crews of the práhus, though belonging to the Dutch, were all Malays.

On the north-west coast of Borneo there is another people, the Lanuns, who are a kind of sea-gypsies, living entirely on the water, in práhus of from thirty to sixty tons' burden. During the north-east monsoon they remain among the islands on the coast, shifting their berths, as suits their convenience, for fishing, &c.; but in the south-west monsoon they divide themselves into small fleets, and spread themselves over the seas, some going to the Malay peninsula, others to the different straits between Borneo and Sumatra, and others to the coast of Java, where they lie concealed among the islands, ready to attack any vessel or práhu they think they can master—taking care that the odds in their favour be never less than ten to one. The Europeans who are so unfortunate as to fall into their hands are almost always murdered; but the natives whom they take they sell for slaves. These people seldom attack a square-rigged vessel, except during a calm, and when their numbers are immensely superior. They then row up within shot, and attack with brass swivel-guns; but as long as a brisk fire is kept up from the vessel, they seldom come close, and if a lucky shot happens to sink one of the práhus, they in general retire. During a strong breeze at sea, they lie under a great disadvantage, as their práhus are unweildy, bad sailers, and roll about very much when there is a heavy sea. The Java captains sometimes take advantage of this to retaliate: and it is known that more than one fleet has been cut off in detail, without one surviving to tell the story. They are not now so numerous as formerly.

These pests are of Malay extraction, and frequently make the Malay prisoners they take fight with them. When they go on a cruise, they leave their women behind them in charge of a number of práhus. These are well able to defend themselves, which is necessary, as they are liable to attacks from the Dyaks.

At Sambass, the chief revenue of the Dutch is raised by a monopoly of salt, which they import from Samanap, in the island of Madura. No individual person is allowed to import salt, or sell it, under heavy penalties; and if the offender is a native, besides an enormous fine, he will suffer a long imprisonment. It is sold by the government at the rate of seven rupees per picul of 133 lbs.; and as it costs them, when delivered, less than a rupee, the profit must be immense. The sultán is the only person allowed to trade in opium, so that he can charge what price he pleases; and this drug is an absolute necessary with all the Chinese, as well as those Malays who can afford to purchase it. The government receive, also, a duty on tea and tobacco; but since the 1st of January, 1834, all other goods are free of duty. Two junks arrive yearly from China.

Gold-dust and diamonds are the only exports. The gold-dust is made up in paper packets of two dollars' weight, the value of which, according to the touch, is from twenty-seven to twenty-nine Spanish dollars. It is tedious receiving a great sum, as it is necessary to open, examine, and weigh each packet; a yellow, glittering sand, called *passir bruny*, being often mixed with it. Diamonds I had nothing to do with, having very little knowledge of them, which I regretted much, as I am certain many valuable ones might have been procured here. The gold I received here was not so good, nor so well cleaned, as that I afterwards received from the Chinese government at Montradok.

During my stay at Sambass, the resident gave a dinner to the sultán and all the pangerans, so that I had an opportunity of seeing all these gentlemen together. His highness was shewn every honour, being saluted, on passing the fort, with eleven guns, and placed at the head of the table, supported by the resident, and Lieut. Fewler; the other end being occupied by the commandant, the doctor, and myself, who were the only other Europeans present: the two sides were filled by the pangerans, to the amount of about twenty.

The table was inconveniently high, so that the smallest of these noblemen—and they are all very diminutive[1]—could scarcely see

[1] I have remarked here, as well as at many other Malay places that I have visited, that the rájás are much inferior, both in size and intellect, to the poorer classes; which, I think, may be attributed to an immoderate use of opium for several generations.

what was on it; which, together with their unskilfulness in the use of the knife and fork, must have made their meal any thing but a comfortable one.

After dinner we were entertained with dancing and plays. The music was Javanese, which is very sweet, though rather monotonous; and the dancers, who were all girls, kept excellent time: but their performance can never be pleasing to a European. The play, if it can be called such, was a continuation of extempore buffoonery, carried on by several men dressed most grotesquely, with hideous masks on. The one who yielded most amusement was an active little man, dressed like a monkey, whose chief employment appeared to be in annoying his brother-performers to the utmost of his skill and power. The person who represented the unfortunate princess, who was the only female performer, was his chief butt. The dialogue had frequently great point; but I lost much of it, owing to the Sambass Malay being sometimes spoken instead of the high Malay.

After a great deal of trouble, I at last got permission from the resident to dispose of the remainder of my cargo at Sinkawan; and on the 15th of April we weighed with the ebb-tide, and dropped down the river. At Púmankat, I found a Sampan packet from the Straits, which had been seized by the resident at Songy Ryah, near Sinkawan, for trading with the Chinese there. She was manned with thirty Chinese, and had a cargo on board worth upwards of ten thousand dollars. She was afterwards condemned and sold by auction.

I arrived off Sinkawan on the 18th, and went ashore immediately after bringing to. I found a letter at the court-house for me from the governor of Montradok, who had expected my coming, inviting me to Montradok, where he would call all the *cuensí* together, and arrange the plan for the trade to be carried on. I joyfully accepted the invitation, as I had a great wish to see the gold-mines; and, having heard at Sambass that the Chinese allowed neither European nor Malay to go into the interior, I had had little hopes of being able to do so. I accordingly despatched the boat on board for my gun and a few necessaries, intending to start at daylight the next morning: but I heartily regretted my determination to sleep on shore, for the sun had no sooner set than myriads of musquitoes attacked me. My clothes were no protection; and what annoyed me most was to see the Chinese sitting quite unconcernedly in the midst of them: they must have been either musquito-proof, or gifted with the firmness of stoics.

I got up at daybreak, and commenced the journey immediately; as every thing had been prepared over night. I was accompanied by six of the *cuensí* men, each of whom carried a large paper umbrella, and a long tobacco-pipe, my two Chinese interpreters, and two *kúlis* for carrying the baggage. We were all on foot, for there are no horses in the country, and, if there were, the roads are of a nature that would prevent their use. The first five miles were in an easterly direction, through a swampy jungle, the path in many places being upon trees that had been felled for the purpose, and laid length ways, their ends touching each other. They were quite round, and very slippery, and did very well for the bare feet of the Chinese; but, before the first mile had been completed, my feet slipped from under me, and I had an opportunity of trying the depth of the mud, which was considerably higher than my knees. I was pulled out by the united efforts of three Chinamen.

After crossing the swamp, we ascended a rising ground, and a sudden turn of the road brought to view one of the finest prospects I had ever seen; and which was not the less pleasing from being totally unexpected. Immediately below us lay a large valley in a state of the highest cultivation, covered with villages and cottages; and the Sinkawan river, here about fifteen yards wide, winding through it. The south-east side was bounded by some high woody hills, but to the north-east the ground was gently undulating as far as the eye could reach. Our path lay through a number of gardens, which, besides many kinds of culinary vegetables, grew sugar-cane, Indian corn, and plantains. After a delightful walk through the valley of about three miles, crossing the river several times, we arrived at the town where we were to breakfast, at eight o'clock. The street through which we had to pass was crowded with people, many of them women; who, stepping aside, left a small space in the centre for us to pass through to the court-house. From the curiosity and surprise of these people, I am convinced most of them had never seen a European before; and, as the town was too small to contain the third of them, I suspect the greater part belonged to the villages in the neighbourhood. I found the *cuensí* had prepared an excellent breakfast, as they had been informed of my coming by a messenger, who had been sent to Montradok the night before.

A few miles past the town we crossed several trenches about three feet wide, and from three to fifteen feet deep; which, to my surprise, I found were exhausted gold-mines. I had expected that the mines were on the hills to the south-east of the valley, not being aware that gold would be found in the low ground, except

such as was washed down by the rivers. The soil in which these trenches were dug was red, and rather poor, but not so much so as to be incapable of cultivation; for, in the neighbourhood, the rice-fields looked very well.

We continued crossing these trenches for about six miles, the ground still gently undulating, and the distance between them being sometimes not twenty yards, and at other times nearly half a mile. We then struck to the south-east, over a number of hills covered with trees, the valleys between them being generally cultivated, till one o'clock, when we descended the last hill, and had a view of the whole of the valley of Montradok below us. It appeared well cultivated, and it was easy to trace many of the exhausted trenches from the dark lines they formed in the green rice, winding through the valley like snakes, the ends being lost in the distance. The scene was improved by a small lake about half-way between us and Montradok, which I found, on approaching, to be artificial, being formed by a dam thrown across a valley, through which ran a small stream. The water is collected here for the purpose of giving it sufficient force to wash the gold when required.

We arrived at Montradok at three o'clock, having walked about thirty-five miles. I was very tired, not having lately been much accustomed to walk any distance. I might have been carried, if I had liked, on a kind of bamboo sedan, which, together with *kúlis* to carry it, might have been procured at any time on the road; but I did not like to acknowledge myself tired, more particularly as I had joined in the laugh against my two people, both of whom were knocked up before they had proceeded half-way, and had to be carried in the manner just mentioned. They did not arrive at Montradok till two hours after me.

I passed through the town, which consisted of only one street, about three-quarters of a mile long, to the governor's house, which was about a quarter of a mile beyond the town, and was distinguished as well by its superior size as by a tall young tree which had been stuck up in front of it. His excellency, with the *cuensi*, met me at the yard-gate, though it was raining hard, and honoured me with a salute of three guns, one of which kept fizzing for about five minutes before it went off. Three is a regular Chinese salute; and I never heard that they any where give either more or less. He did not understand a word of Malay; so we were unable to converse till the interpreters came, which I was not sorry for, as fatigue had by no means impaired my appetite; and I had plenty of time before their arrival, both for an attack on the good cheer, and to change

my clothes, which were drenched with the rain that had been pouring down for the last half-hour.

I shall now endeavour to give some idea of the people and government: the latter, being strictly republican, is rather a curiosity in this part of the world, and the equality of all ranks is sufficient to satisfy the most determined leveller.

The Chinese here are all of the tribe that forms the lowest class about Canton; and, I believe, are of Tartar origin. They are as dark as Malays, and very spare in the body. I did not see one stout man amongst them. This, however, may be owing to their way of living; for most of the women—that is, those born in China—are the reverse: but I found out, before I left, that the ladies sometimes indulge a little in opium-smoking, as well as their husbands; though the practice is far from being general, and those that use it are as easily distinguished as if they had it written in broad characters on their foreheads. They have great liberty here, quite as much as females in England; and I could perceive, in more than one house, that the "gray mare was the better horse." Pork is the principal animal food. They have, also, plenty of fish, with excellent rice and vegetables; of the latter, I have seen twenty different kinds used at one meal. *Samshú*, an ardent spirit distilled from rice, is used in considerable quantities during dinner, but seldom at any other time.

The dress of the men that labour in the fields or mines is merely a pair of cotton drawers; but the shopkeepers, and those that have no occasion for manual labour, wear a loose pantaloon, with a *baju*, or frock, with wide sleeves, buttoned in front.

The females use precisely the same dress; but, when going out of doors, in wet weather, they put on a wooden shoe, about three inches thick in the sole, which gives their feet a very different appearance from the cramped extremities of the females of the upper class in China.

There seemed to be little distinction of rank; for the *kúlis* who carried my baggage sat down to eat at the same mat with the governor, and frequently dipped their chop-sticks into the same dish: but he always sat at the upper end, and never had occasion to rise to procure *samshú*, which was in general poured out by the women, who always eat with the men.

The governor was the only man to whom I saw any respect shewn, and I think this was owing more to his abilities than to the dignity of the situation he held. To the *cuensi*, or representatives, little or no respect is shewn. The form of government approaches very near to the republican. The country is divided into districts, each of which

contains a town or large village, having, according to the population, from two to five representatives, who are chosen by vote, each male inhabitant, rich or poor, having a vote. They continue in office as long as suits the pleasure of their constituents; who, on suspicion of bad conduct, will depose the obnoxious member, or members, and elect others in their room. On these occasions, I have every reason to believe that there are sometimes serious popular commotions.

These representatives are called "*cuensi*," and have the administration of justice in their respective districts; but capital offences are always referred to the governor, from whose sentence there is no appeal. The *cuensi* of the districts elect the governor, whose office is no sinecure, as he conducts all the affairs of the settlement. The present functionary has been in office upwards of ten years; he is likewise a soldier, and was general of the forces during the war with the Dutch. He is a man of good natural abilities, and it was through his exertions alone that the settlement was freed of its enemies; and, being a great favourite with the people, his power is absolute. He is, however, politic enough to call the *cuensi* together before deciding on any business of importance, although it always goes according to his wishes. Indeed, he is the only man I saw who had any ideas beyond the common affairs of life; and I was told by one of the *cuensi* of Sinkawan, who was rather more gifted than his compeers, that he was afraid the settlement would go to wreck if anything should happen to the present governor, for that there was not another man amongst them who had abilities to conduct their affairs, or authority to restrain the people.

The gold-mines that are at present worked lie about four miles, in an easterly direction, from Montradok, in the same kind of red, stiff soil, as the exhausted ones that I have before mentioned. The veins are very small, and near the surface, being seldom deeper than fifteen feet, and in general considerably less. The ore is procured by digging with spades and mattocks, the soil which contains the metal being carefully taken up and removed in close baskets to the place where it is to be washed. This is done in the dry season, and nearly all the male population are employed at it. When the rains set in, the chief part of the people return to their plantations, leaving only a certain number who are well skilled in washing the gold. The bulk of the soil is removed by turning a strong stream of water through a large wooden trough, in which the whole is put; after which the remainder of the soil is removed by washing in smaller vessels with the hand. It is altogether a very tedious work.

These washers smoke an enormous quantity of opium; and, when

I visited the washing-place, I saw a great number of them lying on the platforms erected for the purpose, some smoking through a bamboo, others, who had finished their debauch, lying in a state of unconsciousness, neither sleeping nor waking. On seeing this, I was inclined to regret that by far the most valuable part of my cargo was composed of this pernicious drug; but I had a kind of consolation in knowing, that, if I had not brought it, they would procure it by some other means; for it is become, with many of them, so absolutely necessary that they cannot live without it. The correctness of this remark I had an opportunity of witnessing on my passage from Singapore to the coast; having two Chinese on board, who were old opium-smokers. They were aware that I would allow no smoking on board, and I had some curiosity in watching the effect it would have on them. The first day they were very restless and uncomfortable, but afterwards appeared quite resigned. This surprised me, as I was aware that they could not smoke on board without being observed; subsequently, however, I found out that they had resorted to the expedient of chewing the drug, which method of using it, though not so good as smoking, had much the same effect on the senses.

I could not learn exactly the proportion in which the gold, after being washed, is distributed; but it is nearly as follows:—The governor and *cuensi* have one fourth for the expenses of government and keeping the dams in order. Of the remainder, the share of the washers is two-thirds greater than that of the labourers who have been employed only a few months in digging the ore; but the gold in general comes into the hands of the merchants and opium-sellers, who purchase the shares at a risk before the gold is washed, and, sometimes, make an immense profit, though at others they may be losers.

The gold is in general very small, being, for the most part, as fine as sand; and I never saw a piece heavier than a sixpence. The dust belonging to the *cuensi* is always better cleaned than any other; and, when it is put up in tials or packets, they stamp a mark on the paper envelope. The punishment for adulterating the dust thus marked, or for forging the stamp, is no less than cutting off the right hand of the offender, which is done immediately on conviction.

I did not see the diamond mines, as they are at some distance, in the interior; but, as far as I could learn, they are found in veins in the same manner as gold, and at the same depth. I saw many diamonds here in the state in which they were procured from the mines. They were covered with incrustations of clay, so hard that they can be removed with a hammer only. A stranger would take them for mere red stones, not supposing they could contain any thing precious.

The rice grown here is of an excellent quality, and very cheap, being at little more than half the price at which it is sold at Singapore. I would gladly have bought a cargo, but it is not allowed to be exported even to the Dutch and Malay settlements in the neighbourhood; so that I could procure only a few piculs for the ship's use.

The houses in Montradok are very small, and are all made of wood and attaps: I did not see one edifice of stone, brick, or any other such substantial material, in the whole settlement, nor any temple or house of worship. While at Montradok, an old man came into the room, and lighting a few small chop-sticks, made some motions before an image of their deity; after which he placed the lighted sticks in a cup, and retired as silently as he had entered, the other persons in the room not taking the least notice of him. I have mentioned before that the Chinese sometimes intermarry with the Dyaks. I saw several of these people here, both male and female; it being the custom of the Chinese, when they marry one, to take the parents, and sometimes the whole family, under their protection; and they do not lose by it, for a few weeks' labour is enough to provide food for the whole year. The Dyaks are supposed by them to be descendants of a Chinese colony, planted many centuries ago on the north coast of Borneo; but, for my part, I suspect the Dyaks to be as ancient a people as the Celestials themselves. It is difficult to distinguish a female when dressed *à la Chinoise*, from a Chinese woman, the former being equally fair, but not so inclined to corpulency. I always remarked, that if a Dyak woman happened to come under my observation, she would appear greatly confused; so much so, that it was painful to see it, while the others were as bold as could be, and would stare me out of countenance. I saw one female Albino who was remarkably fair, and had eyes as red as a ferret's. She shut them on perceiving that I noticed her; and, had it not been for one of the Chinamen, who, in a most ungallant manner, pulled them open with his fingers, I should have passed without seeing them. She was about nineteen or twenty, and appeared in good health, but could see best in the twilight, the glare of the sun being too powerful. I have seen Batta, Malay, and Javanese Albinos, but this female had the fairest complexion of all.

My quarters at Montradok were not of the first order; but my host spared no pains to make me as comfortable as he could. The musquitos were not so numerous as at Sinkawan, though, I think, much fiercer. However, having good musquito curtains, I did not find them very troublesome.

The forenoon after my arrival was spent in examining the gold-mines and washing-place in the neighbourhood; and I returned to

the house about noon, where I found all the *cuensí* from the neighbouring districts, and one from each of the more distant ones assembled. After deliberating for about half an hour, they all came into my room, when the governor told me that they had agreed to open the trade, and that he would immediately send out messengers to inform the people of their determination, and of the goods that I had brought. I felt great inconvenience from being unable to converse directly with him, being obliged to use two interpreters, one of whom was a native of China, who understood the Tartar dialect spoken here, and turned it into Chinese, which the second interpreter, a Malacca Chinese, delivered to me in Malay.

Having arranged every thing before night, I determined to return to the coast at daylight next morning, much against the wish of my kind host, who was making preparations for a play, and other entertainments; but as a report had arrived that a number of Lanun práhus had been seen on the coast, I felt very anxious to be on board the vessel; as, in case of an attack from them, we should have to trust to our own exertions alone, as the cruise-práhus would take care not to shew themselves if there was any danger.

We left Montradok at break of day, and had a most fatiguing and unpleasant walk to Sinkawan; for, we had scarcely commenced our journey, when the rain descended in torrents, and continued so, with little intermission, all the forenoon. We had great difficulty in ascending some of the hills, for the water rushed impetuously down the narrow, deep-worn, footpaths; and, had it not been for the thick brushwood on each side, we should have had hard work to keep our legs. On approaching Sinkawan, I was rather alarmed at hearing great guns fired at intervals near the mouth of the river, expecting it was the pirates that I had heard of at Montradok attacking the schooner; and I was well aware, that had such been the case, it would have been impossible for me to get off to her, for neither love nor money would induce either the Chinese or the Dutch cruise-práhu to put me on board. On arriving at Sinkawan, I found my boat waiting for me; and the cockswain informed me, that a fleet of about a dozen Lanun pirates had appeared in the offing in the morning, but had passed to the southward without coming near the schooner, although they lay to, about two hours, apparently deliberating what they should do; and that the guns I heard were from the cruise-práhu I left here, and three others that had come from Sambass, which had retired inside the river, and were firing to frighten the pirates off the coast. I went on board immediately; and, as the sea-breeze was setting in, got a spring on the cable to bring her

broadside to bear to seaward, in case they should come in the evening, but I saw no more of them. They probably mistook me for a Dutch man-of-war schooner, and they very seldom meddle with each other.

I cannot go on without another remark on the cruisers. During the time the Dutch have been on the coast, there has not been a single instance of a pirate-práhu being taken by them.

The cruise-práhus carry two nine-pounders in the bow, with two or three swivel guns; they have crews of from eighteen to twenty-five Malays, and are built and rigged like Malay trading-práhus, to deceive the pirates; but, with the most absurd inconsistency, they carry large distinguishing flags during the day, and at night keep continually beating a China gong, which can be heard at a great distance; and this totally prevents any accidental rencounter with the "prompaats," as the pirates are called.

The second day after my arrival on board was the day appointed for the sale of my cargo; as, by that time, all the inhabitants who wanted any thing would have time to be at the port. In the meanwhile, the *cuensí* had requested me to dispose of nothing, as it might lead to a disturbance, through the jealousy of the country people, who would suppose that the inhabitants of Sinkawan had got hold of all the best bargains beforehand.

On the day appointed we met at the *cuensí's* house, and the crowd of expectant purchasers was large enough to gratify the most ambitious vender. After a considerable time their names were all put down, and the quantity they wanted of each article opposite their respective names; when one of their number, who, by the by, was the only one I saw who had any idea of commercial business among them, was appointed purchaser of every thing, after which it was to be divided among the rest in the proportion marked down in the list.

This was the only plan that could be adopted to prevent one of those disturbances which so frequently happen, and of which the unfortunate representatives are generally the victims; and if any person was suspected of an endeavour to monopolise any article, particularly opium, he would run great risk of losing his life. Indeed, I should very likely have got into a scrape myself, in the event of a commotion, as the only Europeans that most of them had met before me, they met as enemies; and, being proverbially blind, they might have been unable to see that I was a peaceable merchant.

It was some time before we agreed about the opium; but when that was settled, every thing else went off rapidly: and the next day (April 28, 1834) we bundled out the cargo into a fleet of fishing-

boats that had been sent off to receive it. In the evening, I took the schooner to one of the Lamúkatan islands, about ten miles from Sinkawan, where wood, water, and stone-ballast could be procured in abundance, leaving a Chinese at Sinkawan to weigh the gold-dust, which operation alone would take several days.

The island I selected for the above purpose was the innermost and northernmost of the group, called by the natives "Pulo Batublat." It is about two miles in circumference, well wooded, and I found a beautiful little stream of water running between the two hummocks that formed the island, and falling into the sea from a natural basin opposite to where the vessel lay. The tracks of pigs in the neighbourhood shewed that these animals abounded; and while the boats were watering, I went up the hill with three of the people, and in about ten minutes procured as much game as we could carry to the boat; viz., an enormous boar, and a large sow with two of her family. The boar, strange to relate, I shot in a tree. He was established in a nook formed by the branching out of an old redwood tree, which sloped so much that the ascent and descent were tolerably easy: and, from the appearance of the tree, I have no doubt he had lived there for years. I suspect we had aroused him from his sleep; for immediately after firing at the sow, I was astonished at hearing a tremendous grunting almost directly over my head, and, on looking up, saw him peeping over the side of his nest in great perplexity, apparently undetermined whether to come down or stop where he was; and before he had decided I had reloaded my rifle, and was established at the foot of the tree. He at last came out; and, when he was just on the point of making a rush down, I shot him in the head, the ball passing quite through: he tumbled down among us, his breath leaving him with a shrill roar,—for that is the only way in which I can describe the half-grunt, half-squeak, that he emitted on feeling the shot. This was the largest boar I ever saw. Having no steelyards on board large enough to weigh him, I cannot tell exactly his weight; but it was hard work for four Malays to carry him to the boat with poles. His bristles were like whalebone; and his skin was so thick, that it would have been an awkward and dangerous job for a considerable number of men to have attacked him without fire-arms.

Birds were very scarce, which did not matter much, as pigs of all sizes could be procured at any time. We destroyed no more of the large ones, as the old fellow before described was rather tough; but the small pigs were excellent. The day before I came away, I went out with some of the people to get a few to take as presents to

my Chinese friends at Sinkawan; and, while loading my gun, I was attacked by a sow, one of whose young I had just shot. Before I was aware, she threw me down, and ran over me; and while turning to repeat the attack, one of my people broke her back with a tomahawk, otherwise I should have come off but second best. As it was, my face was scratched, and she had put one of her feet in my eye, and bruised it severely; but, fortunately, when making a gripe at my leg, at the commencement of the attack, my loose trousers, which she seized, saved me from a serious bite.

On the 1st of May, having completed our wood and water, we returned to Sinkawan, where I found we should be obliged to wait some days for the gold-dust, all of which had not arrived from Montradok. At last, after nearly a whole day's disputing, we came to a settlement. The *cuensi*, who had hitherto treated me so well, now endeavoured to cheat me in every way possible; but this will not be wondered at, when it is known that the Chinese do not think it dishonourable to cheat or overreach another, either in commercial dealing or at play. After settling the different accounts, the *cuensi* made the sum total five hundred reals less than it really was. I asked the secretary to add it up again; he did so, but still declared it was the same. I could see in a short time that they were determined to cheat me out of it; so I got up to prepare to set off before dark, having been told in the morning, by a man born at Batavia of Chinese parents, to keep a good look out at the mouth of the river, as several bad characters had come into the town that day, who might take advantage of the narrowness of the river to intercept me when going off with the gold-dust: and, indeed, from the conduct of the *cuensi*, I have every reason to believe these people had a hand in it, and that they intended, by haggling about the five hundred reals, to detain me till night; nor could I help thinking afterwards of the manner in which the secretary delivered me the box of gold-dust, when I took leave. "There," said he, "there is your gold in the hands of your own people; whatever happens to it now, I call you all to witness that I will not be responsible." In reply, I merely told him that I was able to take care of it; and should it come to the worst, that I had two men's lives in my hand, alluding to my double-barrelled gun. Indeed, I had not the least fear of them; for I knew the people well enough to be aware that they would not attack us, when they saw we were prepared to resist. I had fourteen men well armed with muskets in the boat with me, ten

ı stood up facing both ways, while the other four pulled down

r. I am certain, that if we had been sitting down unpre-

pared, we should have been attacked, and, perhaps, cut off. Malays are proverbially treacherous, and these cowardly villains are quite as bad. They will crouch in the thick jungle to attack an unsuspecting passer-by, whom they would not dare openly to attack without the greatest odds; but, thank God, I have done with them, having no chance of getting the five hundred reals.[1] This sum being nearly 100*l.* will detract something from the profits of the enterprise; but I shall know better how to proceed with them another time.

By six o'clock I was on board, and got under weigh immediately for Singapore; never in my life feeling more pleasure at leaving any place. The next day, the 5th of May, I passed through the Tambelan islands, a group, I think, of thirteen, the largest being about twenty-five miles round. The channel I passed through was to the southward of the great Tambelan, between that and a rocky island about a mile from it. I counted upwards of twenty práhus lying close to the great island, which is inhabited by about five hundred Malays, who are mostly employed in making oil from the cocoa-nut, which abounds there. It is said, likewise, to be a resort for pirates.

Being the change of the monsoon, we had light airs and calms; so we did not arrive till the 13th at Singapore, having been away only two months and a-half. I am now going to Penang, Malacca, and Achín, in Sumatra, and shall be away about four months: on my return you may expect another long account.

GEO. EARL.

P.S. The Chinese in Borneo have no idea that the gold can be cleared of the soil, or ore, by any other method than by washing;

[1] This was written soon after my departure thence, so that I have, perhaps, used stronger terms than I should when coolly looking back to the transaction. The governor of the colony is, I have no doubt, an honest man, and, I think, was not aware of the petty exactions of the *cuensi* of Sinkawan; who, besides refusing to pay me the five hundred reals above mentioned, imposed a duty on the tea and blue-cotton cloth, although I had been given to understand by the governor, when at Montradok, that they should be imported duty free. The secretary of Sinkawan, with whom I had every reason to be greatly displeased, was aware that I was in a great hurry to get away, and that I could not send a messenger to the governor at Montradok without his knowledge and permission; and, with a grasping selfishness, preferred extortion to liberality, although perfectly aware that it would throw a damp on a trade in its infancy, which would be of the greatest importance and advantage to the country to which he belonged. I have, perhaps, been hasty in accusing him of a design to rob me; but, from his suspicious conduct, I am certain that some mischief was intended, though what it was I shall most likely never know.

and when I endeavoured to explain how it was done by quicksilver, they could not understand how it was possible. The sand that is frequently mixed with it, after being put up in packets, is removed by shaking it in the bottom of a cocoa-nut shell; and the age, or touch, of the gold is ascertained by rubbing it on a smooth black pebble, which retains the mark, from the appearance of which they can judge of the touch. The gold-dust from Pahang, on the east coast of the Malay peninsula, is supposed to be the best in the eastern archipelago.

ART. II.—*History of Tennasserim, by* Captain JAMES LOW, *Madras Army*, M.R.A.S., &c. &c.

(*Continued from page* 275).

CHAP. III.

PRODUCE OF TENNASSERIM.

THE Tennasserim coast affords several valuable products; yet its advantages in this respect are, to a certain extent, counterbalanced by a paucity of inhabitants, a want for which no natural fertility of soil or happiness of situation can compensate.

This want will only be supplied, other circumstances continuing favourable, by the slow operation of time. Since the provinces fell under British protection, their population has received some increase by the return of emigrants, and the location of new settlers from Pegu, and elsewhere; also from the troops stationed there, and their followers. No accession of magnitude can well be looked for from the Burman side of the *San-lún* river, so long as the Emperor of AVA has the full control of his sea-ports, and the means of detaining the families of men desiring to leave the country, whether for trade or otherwise, as hostages for their punctual return; nor can any reasonable expectation of an increase from the eastern frontier be entertained, since, independently of the mutual antipathy existing betwixt the Siamese and the Burmans, their policy is decidedly adverse to emigration.

Rice may be considered the staple product of this coast.

Under the Burman government, however, the cultivator was debarred the privilege of carrying his grain to the best market, and none was exported except for the special benefit of the local governor. This prohibition rendered the cultivator careless and indolent; and he never willingly raised more grain than sufficed for his own wants and the payment of the taxes.

TANNAU OR MERGUI.

When the Siamese held possession of this province, it produced more grain than now, because it was more populous and better cultivated. After the cession to the Burmans, the Siamese carried on such an incessant system of border warfare and kidnapping, that the inha-

bitants were forced to leave many fertile tracts, and take shelter in and near the chief town.

The land under rice cultivation may be averaged at seven or eight square miles. The soil is alluvial near the banks of the main river, and is, perhaps, more fertile than that of Tavoy.

TAVOY.

Tavay, or Tavoy, is an agricultural province, and the greatest portion of the townspeople are either cultivators themselves or absentee farmers.

When the town was taken by the British, there were four large government granaries in it, containing the assessments of the three preceding years. In former times, Burman armies, when engaged in a frontier warfare with the Siamese, were cantoned in this province, and supplied with rice from its stores.

It requires in Tavoy an extent of 31¼ square miles to raise the average quantity of 3125 koyans[1] of rice; while, on the Keddah coast, it could be raised on 21½ miles square.

The latter country must, therefore, have the advantage of a far more prolific soil than Tavoy possesses; or the system of transplanting the grain-plants adopted by the Malays, but not by the Tavoyers, must be the cause of such a difference in the respective degrees of productiveness. It would seem that culture is partly the cause, and that the soil of the Keddah coast is considerably better than that of most parts of Tennasserim. The Tavoyers observe, that the monsoon comes upon them so suddenly as to allow them no time to go through the tedious process of planting the rice-stalks. The monsoon, on the other hand, southward of Junk-Ceylon, is more irregular and protracted, and the people have long been accustomed to plant, instead of sowing broad-cast. It would be useless there, to cast grain on fields which are flooded with water; besides, it is well known, that in these more southern countries grain thus sown is liable to be entirely devoured by birds, rats, and its other enemies.

The Kareans, however, of Martaban, and more especially the farmers on *Billeo Kyún* island, at the mouth of the *San-lún* river, transplant the seedlings occasionally. In Tavoy, thirty-five square miles may be allowed for the maximum extent of land under rice cultivation, and ten square miles more for gardens and the sites of villages; which, however, is, perhaps, rather more than the actual produce warrants.

[1] Koyan, in weight, is equal to 5323lbs. English.

MARTABAN.—AMHERST, MALAMEIN.

The soil of the province of Martaban is considered more fertile than that of either Tavoy or Tannau. The substratum is commonly a stiff clay, or sand with clay over it Sometimes, especially in the higher parts of the country, it is a gravel. As the elevation above the level of the plains increases in the direction of the Siamese hills, the soil becomes lighter. The detached hills are, for the most part, rocky and barren.

When our troops took possession of it, there were in the town four large wooden tile-roofed granaries, which contained, as far as I was enabled to judge, about three years' assessment raw grain; but the exact quantity was not ascertained.

The province, before it was systematically devastated by the Siamese, was itself a granary for supplying other Burman districts. But the real quantity raised could not be ascertained, as the territory on the north bank of the *San-lún* river was but partially occupied by us, and was not therefore brought under civil management.

That part of Martaban lying south of the river alluded to, and which has been ceded to the British, contained but a few scattered villages at the time of the cession, and consequently produced little grain. But the average yearly produce may now be rated at about 2190 koyans of rice in a state fit for food.

The extent of land under culture for rice may be roughly estimated at nineteen square miles.

It appears from calculations, that the Tennasserim provinces yield a yearly average quantity of 5940 koyans of clean rice. Ten koyans more might perhaps be allowed for improvement in cultivation, making 5950. The value of the above 5940 koyans in the Tennasserim markets is 356,400 Madras rupees.

But the quantity required for seed and for consumption by the population is, in round numbers (leaving the fraction of $\frac{1}{4}$ out), 7355 koyans; and if 360 koyans be allowed for rations to the British troops and followers serving on this coast, the consumption will be 7715 koyans of rice: the balance against the three *provinces* will, therefore, be 1775 koyans.

The revenue on 5940 koyans will be about 95,000 Madras rupees, which amount is higher by 5000 rupees than that received in 1827–28.

It is well known that the Burman court seldom allows grain to be exported; so that neither Rangoon, nor the Burman town of Martaban, can be looked to as places likely to supply a deficiency.

A few general remarks may here be made before leaving this subject. The Burman government allowed to the cultivators that sort of tacit or prescriptive right to the soil which seems the only real tenure in despotic countries. That some distinction existed betwixt public and private landed property, is evident from the fact of certain estates being termed crown lands. There were 274 such estates in Martaban, according to a Burman revenue statement which was procured soon after that place fell, and there were many in Tavoy also.

So long as the AVA government had its grain-tax regularly paid at the rate of ten per cent in kind on the net produce, and had its granaries, for the supply of its armies, filled, it did not take much interest in landed tenures, and seldom, if ever, disturbed the title derived from long occupancy. Prescription is a sufficient title where the will of the sovereign is law.

The Burman assessment of ten per cent was in a great measure nominal, and was, as it is now, where their power obtains, merely a formal, and often unmeaning recognition of the reputed code of Menu.

This code, or one founded upon it, is reverenced by all of the Indo-Chinese nations; but, in practice, its letter is not much attended to.[1]

The Burman Myúwúns had abundant opportunities for extorting subsidies of grain beyond the fixed tax.

There is nothing like the Indian village system in the Burman and Malayan villages. Each cultivator enjoys the entire residue of his crop, after payment of the share due to the state. The Burman's share stands thus:[2] he pays, out of every 100 of produce, 10 to the government; and the expenses of cultivation and carriage, 30, being deducted, leave him a clear gain of 60.

Independently of the actual tax in kind, the Ryot had to deliver it into the public Burman granaries, which made the rate still higher. He now, in the ceded districts, pays in money, and at the rate of twenty per cent on the gross produce *value*, at the market price.

The Indian system of irrigation, by which three crops are frequently

[1] In the Bali ordinances, kings are enjoined to attend to *Satsamedhang*, under which are comprehended the giving loans of seed-grain to the husbandman, and the exacting of one-tenth only of the gross produce; *Parisamedhang*, or payment of dependants by two equal instalments yearly; *i. e.* six months each.

The *Zakát* of the Malays is a Muhammedan assessment, or voluntary contribution, in most instances, of a tenth of the gross produce, in order to support the church establishment and charities. In Siam, a tenth is a nominal duty on landed produce, for the land is assessed according to measurement.

[2] This alludes to territory under the Burman sway.

obtained within a year, has been but very partially introduced into these provinces, and may, in reality, be said to form no part of the general Burman system of cultivation. This neglect of so obvious a means of deriving the greatest possible return, has not been owing to any inaptitude of the soil to produce, with proper care, a second crop; but must be chiefly attributed to the indolence and poverty of the people, and to the indifference of the Burman rulers. The uneven nature of many parts of these countries, and their numerous streams, requiring only to be dyked, afford many facilities for irrigating the plains after the hot weather has dried them up. The Malays of Keddah who do not irrigate, allege, in excuse for their indolence, that grain will only there ripen at the period immediately succeeding the monsoon; but this assertion is entitled to little notice. The real cause may, perhaps, lie in the very level nature of the Malayan coast, which renders embankment of little use.

In the beginning of April the farmer clears away the grass and weeds, and burns them. When the rains commence, about the first week in June, he hires a drove of buffaloes, if he has none of his own, and drives them about, in a compact body, over the wet field until the whole soil has been sufficiently worked up to receive the seed. The seed-grain is commonly steeped in water for twenty-four hours, and then kept covered up in a moist state until germination has begun, after which it is sown broadcast.

The sower traverses the field in a straight line, casting the seed as he walks, and then returns on his steps casting a second time.

A branch of thorns, or a rough harrow, is drawn over the field. The only attention it requires afterwards is, that care be taken to supply it with the proper quantity of water, and to keep off birds and beasts.

The inferior kinds of rice are often sown, and the crop reaped, within two months and a half, or three months, according to the quality of each. Upland rice is cultivated also, but it yields a precarious crop, owing to the multitudes of birds, rats, and other animals which are ever ready to destroy it.

As it is generally sown on dry and newly cleared forest land by dibbling, it would, if unmolested, give a return of from eighty to one hundred fold.

The rice cultivated on this coast is arranged by the Burmans into at least twenty-one different sorts: these, however, need not be enumerated, since the distinction in many cases may be merely fanciful. That termed *Laungbú* is reckoned superior to any other rice cultivated on wet land, and *Nansein mentha* the best of the dry land rices.

The *oryza glutinosa*, of three sorts, black, white, and red, is a favourite article of diet; but it is used more sparingly than other kinds.

Confections are made of this species, and the bázár women mix up with seasoning or sugar, and after dressing it over a fire in pieces of plantain leaf, hawk it about the streets.

The white kind is carried on journeys; and, where no cooking-pots have been left behind, the green bamboo affords a ready substitute: one joint will suffice for cooking a meal in. The Burman soldiers during the late war, carried rations of this rice to serve in cases of necessity. It was found, as those who had the task of taking the stockades will perhaps remember, in long bags wrapped round the waists of those killed or taken prisoners.

The main harvest is commonly reaped in December. The sickle in use much resembles an English one, but is rather smaller. Both sexes reap; and they cut off the ears with about six inches only of the stalk attached. This practice is not wasteful where there is never much want of pasturage; and, as the straw is soon trodden into the fields by the buffaloes, which are let loose into them, it serves to enrich the land.

The ears are laid out on earthen platforms in the open air, and the grain is trodden out by buffaloes. It is then exposed in heaps for several days to a powerful sun, and is finally stored in wooden or clayed-wicker garners, one of which is generally attached to each house. The people of this coast either do not know, or, if they do know, never practice the Indian method of preserving cleaned rice, by parboiling it, to destroy the germinating principle, and then drying it.

The women of Mergui and Tavoy beat out the rice for their family use, by means of hand-mills formed of two grooved logs of wood set upright one above the other, and fitted into each other (*vide* Plate, No. I.), or by means of a simple wooden mortar. The upper roller of the hand-mill is made to describe a semicircle to the right and left alternately, by two women who stand on opposite sides of it. The same mill is used in Keddah. Debtors who have pledged their services for a given period are chiefly employed in preparing rice; and it is, perhaps, to this occupation, and to other similar muscular exercises, that the women of this coast owe a strength of arm, which they do not scruple to illustrate practically when provoked by rudeness in the men.

In Martaban the wooden mortar is also used; but, instead of wooden rollers, they use a hand-mill, consisting of two strong cor

baskets united at the apexes. These last are formed of the wood of the mangrove-tree, and are grooved obliquely, the one fitting into the other. The grain is put into the upper basket; and this being made to revolve by the labour of women, the grain is unhusked in passing down.

The Peguers and Kareans are the chief cultivators in Martaban; but in Mergui and Tavoy the Burmans make a large proportion of the farmers. The Kareans are fond of changing their ground, and will occasionally do so until no fertile tracks remain in a waste condition. Travellers may observe in the higher districts of the Martaban province, the population of whole villages just after migrating.

Temporary huts, in one instance, were noticed to have been built connected with each other, and forming a line of about one hundred yards. The jungle was cleared and burned; the women were engaged in sowing dry rice, indigo, cotton, and other seeds, while the men were employed in hunting with their dogs and bows, or preparing the rice-fields for the ensuing wet season. On another occasion, the men were observed building a large house for the elder of the tribe, after which, they said they should have to provide for themselves according to seniority; for the patriarchal authority is here acknowledged, although mutual interest causes it to be mildly enforced.

Wheeled conveyances, the criterion of improvement in most new countries, are but seldom used on these coasts, owing to the rough and miry state of the roads. They have, however, some light carts: the wheels of these are cut out of a solid plank, and have no spokes. The axle is never greased, and its horrid creak chimes in chorus with the frequent scream of the large black eagle, from the top of some majestic tree.

It is only in the driest season that such vehicles can be employed. In their stead the people use occasionally a sort of sledge drawn by one buffalo. It glides with a light load over sloughs where carts would sink.

It is not permitted to any subject under the rank of a governor to ride in a palankeen, or on an elephant, without special permission. The Kareans travel occasionally on their buffaloes, and are carried on their backs across deep creeks.

The stock of buffaloes belonging to the Tennasserim Ryots cannot well be estimated at less than 20,000. Tavoy, which is the best-settled province, contains upwards of 11,000. A full-grown male buffalo costs about seven rupees, and a female four or five. These animals, with a very few exceptions, are the only domestic cattle of the people, although the country is well fitted to support the other

species. On the route overland, during the Burman war in 1825, from Tavoy to Martaban, my party fell in with several large droves of wild cattle, of good size and fine symmetry. From their near resemblance to the domesticated cattle of the country, it is probable they are from the same stock.

The predilection of the people of this coast for the buffalo is easily accounted for. It is a hardier animal than the ox; and is sufficiently docile, although its aspect is wild. Children of five or six years of age may be seen riding on their backs, without being under any alarm. The buffalo is easily kept in condition, as he seeks his own food; and the country is never so entirely parched up as to deprive him of it. In the hottest months, the heavy night dews keep the grass alive. The people, besides, use no butter, nor what is called *ghí* in India, and do not prefer the milk of the cow to that of the buffalo: nor is milk a very essential part of the diet of the majority of the Ryots, or used frequently in a plain state by any class. Both Burmans and Kareans are gross consumers of animal food, when they can get it. It is curious, therefore, that milk should form so small a part of their diet.

They are not prohibited by their religion from eating either cows' or buffaloes' flesh; yet, as the shedding of bestial blood is, by its dogmas, a sin, they are prevented from feeding these animals for slaughter for their own use. They do not, however, seem to consider it sinful, to be so far accessary to the death of a cow or an ox as to eat, without scruple, the flesh of either.

The agricultural implements used on this coast are, besides the cart and sledge, a rude sort of plough, a harrow, a long knife, slightly curved to cut jungle and weeds, and a sickle.

Che, or tobacco, is cultivated, chiefly for home-consumption, all over Tennasserim, and is in general of a medium quality: that of the Mons and Kareans of Martaban is reckoned the best. Every one smokes, from the child of three years of age to the decrepid grandsire — from the *ménkadá*, or governor's wife, to the *míma chaba thaung*, or rice-beater. The *Cheduba* tobacco is preferred to that of home-growth, and is sold for about forty-five rupees the hundred *vis*, and assessed at twenty-five per cent.

Me, or indigo, is but sparingly cultivated in Mergui and Tavoy, but more generally so in Martaban. Here the Kareans raise two kinds of the plant, the common and the climbling indigo (*t,ha me*); but as it is never put into a shape fit for the European market, the use of it is mostly confined to the natives. The cultivation is conducted in a very slovenly manner; and plants were found by me,

on some islands thirty miles above Martaban, to be intermixed with cotton and other shrubs. It is probable that a large quantity of indigo might be manufactured on any part of the Tennasserim or Malayan coast by an enterprising person. The mode adopted formerly by the Rangoon merchants, of giving small advances on security of gold or silver ornaments, &c. to the natives, and receiving a certain proportion of the plants, might here, should population increase, be also employed with advantage. The Karean tribes might easily, by mild management, be induced to forward the planters' views; and they would take merchandise in exchange for the price of their labour.

The shores of the straits of Malacca are very favourable for the growth of this plant. The Chinese cultivate it at Penang without any difficulty at all seasons, and manufacture enough of the liquid indigo for domestic purposes.[1] In the semi-liquid, or crude state, it forms an article of export from Siam.

Ngrou kaung, or pepper.—This plant is scarcely cultivated either in Mergui or Tavoy. In the latter province there are only forty vines, near Maung Magan, where I observed some very strong healthy vines, said to be from fifteen to twenty years old. It is more widely diffused over Martaban. The date of its introduction, if indeed it is not indigenous, could not be learned.

The Kareans of the *Yúnzalen*, *Wengille*, *Yembaung*, and *Daung Damí* districts, on the Burman side of the *San-lún* river, are the principal cultivators of pepper (*piper nigrum*). The quality is good. It is not supposed that this article was ever exported except in small quantities. The price at Martaban was generally much higher than at Prince of Wales' Island; as supplies were only occasionally imported by petty traders.

P'hala, or *Cardamum*.—This plant is not cultivated: the seeds are collected in the forests by the Karean tribes, and other natives. In Tavoy, the *Taung Byaup* Kareans principally supply this commodity. It is found all along the central ranges of hills. *Palo* supplies it largely. In Martaban a considerable quantity is gathered in the districts of *Púlogyún*, *Daung Damí*, *Yúnzalen*, *Wengille*, and others near the hills. Perhaps the quantity yearly obtained on the whole coast does not exceed six thousand *vis*. The average price may be stated at one hundred and fifty rupees for

[1] Labour is, however, too high, perhaps, in the straits, and the population too scanty and indolent, to render a speculation in this article so profitable as in Bengal.

one hundred *vis* in Rangoon, and at one hundred and twenty rupees in the market of Tavoy.

Thyan, or sugar-cane, is an object of culture all over Tennasserim; but no marketable sugar is made. The cane is often red-coloured, and is said to be of inferior quality to that grown in the Malacca straits. Some coarse, raw sugar is manufactured and used for home-consumption. The island of Kalagyún, in front of Mergui, has a soil well fitted, the natives say, for the cane.

In Tavoy it is cultivated only in small quantities for the daily market, and in Martaban but sparingly. In this last province, the depth and richness of the alluvial soil would, if labour were cheap, which it is not as yet, and a ready market at hand, insure success to any capitalist, who should be enabled to commence planting under a protecting government. The Chinese are the only people who, under present circumstances, can safely be employed as labourers; and they are not yet sufficiently numerous in Martaban. Indeed, while the British possessions in the straits of Malacca afford them full scope for their industry, under mild laws, it cannot be supposed that they will fix themselves, and embark capital, in a country where no assurance can be given them of permanent protection. A wide field for the cultivation of sugar-cane, and the manufacturing of sugar, lies open in our possessions in the straits, especially at Malacca and Prince of Wales' Island. About six thousand *piculs* of excellent raw sugar, believed to be rather superior to that of Siam, is yearly manufactured by Chinese in Province Wellesley, on the Keddah coast, opposite to Prince of Wales' Island, and under its jurisdiction; and this quantity might be greatly increased.

Woá, or cotton. — This produce is chiefly obtained from the Kareans of Martaban, neither Mergui nor Tavoy yielding it in sufficient quantity for home-consumption. In the upper districts, lying on the Martaban rivers, and on the islands in the *San-lún*, the Kareans plant cotton to such an extent, that they yearly export considerable quantities to Rangoon, Mergui, and Tavoy. Small vessels carry on this trade during the north-east monsoon. The staple of the cotton is reckoned good; and the native cloth woven from it is very durable.

The market-price was, in 1825, about twenty-four rupees for one Ava *picul*, or two and a-half Penang *piculs*. Perhaps four rupees for ten *vis* may be taken as the average price. The petty traders of Martaban go up the rivers in large boats, and barter various commodities for cotton, indigo, &c.

The plant is an annual: it is cultivated in a slovenly manner, and

is subject to be injured by rain, if planted too late in the season. The Kareans, whom I observed cultivating it, informed me, that for its cultivation they clean and burn the jungle; dig up roots of trees, and burn them; then make holes with sharp stakes, and into these drop the seeds of the cotton. Scarcely any further attention is paid to the field until the crop is reaped. The *lallong* (*gramen caricosum*) is very hurtful to the plants. Káthá, one of the islands which I visited, was stated to afford about three hundred *piculs* of cotton annually; and the people of the town of Martaban, acquainted with the trade (for the records had been carried off or destroyed), affirmed, that a ship of one thousand tons in bulk, packed lightly in the native way, might be obtained yearly.

The districts yielding cotton are — Zimmí, Bénlein, Lein-boe, Myein Kalaum Kyún Island, Yein-bein-chaung, and Taung-beo.

Nan, or sesame, is raised in considerable quantities over the three provinces by the various classes of cultivators, but chiefly by the Kareans, especially those of Miyein, in Martaban. The machine by which the oil is expressed, differs but little from the Indian one; it consists of a deep conical trough, or cylinder, the apex downwards, in which a long wooden pestle is made to revolve obliquely by the labour of buffaloes. The weight of an Ava *picul* costs from sixty to eighty *ticals*, and a hundred baskets of the seed cost two hundred rupees at the highest.

It is used not only for the lamp, but by all classes for culinary purposes, and in making confections. Neither the Burmans, Peguers, nor Kareans, rub their bodies over with oil like the natives of some parts of Hindústán. Perhaps the general humidity of the Indo-Chinese climates renders unguents unnecessary: besides, these classes are better clothed than the mass of the Indian population.

The places in Martaban where it is raised are — Daung Won, Yúngzillen, Wengille, and Yenbaung.

Sap'han k'ha, or *myrobalan*, the fruit of a tree, *belleric* (*setchinthí*), and *emblic* (*gyí pyúsí*, or *zibyúthí*), are found in the woods of Tennasserim.

Pei-san-ben, or hemp, is little cultivated; it was found growing on some of the islands in the *San-lún* river. The natives, particularly those N.E. of Tavoy, use, sometimes, instead of hemp, the integuments of a creeping plant called *Pan*, and the fibres of the inner bark of the tree termed *Sháni*. The leaf of the *Pan* is used to dye nets. The integuments of the bark are employed instead of hempen thread; and of these they make at Rangoon strong ropes and cables They steep the rope in a strong decoction of the *kabyein-kha* (or *kablein-kau*),

or mangrove-tree bark, which preserves it. This bark is used to dye, or rather to tan fishing-nets and leather; but it is very inferior to the barks used in England in the tanning process.

Pogaung, silk and silken cloth.—The silkworm is hardly known by name in the Tennasserim provinces, raw silk being imported. The weavers mix silk and cotton occasionally.

The Burmans and Peguers have a decided aversion to wear a cotton or silken dress, the stripes of which are arranged vertically: for the upper parts of their dress they are partial to handsome chintzes, gold-flowered silk, and fine muslins; old men wear the plainly coloured cloth called *túnyinthe*; the young men the *panzen*, which is gaudily coloured. In Martaban, there is a plant having a large dark-green leaf, which was pointed out to me as the same kind of shrub, the leaf of which is used by the *Shaans*, and people bordering on China, to feed the silk-worm. Achín is the only place, as far as I can learn, on the coasts to the eastward of Bengal, or to the south extremity of the Straits of Malacca, where the silkworm is cultivated, and it is fed there on the mulberry.

Karawé, or *Kubab-chine*.—This, as far as can be learned, is the product hitherto termed *Kabab-chine*, or *piper longum*. Mr. Crawfurd, in his *Eastern Archipelago*, describes it to be the fruit of a climbing plant common in Java. The *karawé* is highly aromatic; its flower, or rather fruit, resembles black pepper in shape and colour, and has a short tail or stalk attached. *Sumatra* is reported to yield it in abundance. The *kubab chine* is an article of some value; a *picul* has been sold for eighty Spanish dollars. It is well known that it finds a place in the British Pharmacopœia.

Indian leaf (the káyú-láwang-tree leaf of the Malays) is also found in the forests.

Seche is the gum of a tree, the wood of which is of a dark-red colour.[1]

It is used in gilding, a previous coating of it being applied to any wood-work intended to be gilded. The natives affirm that it dries best in wet weather, or perhaps it dries slowly without cracking. It is much used in lackering, and will not yield to common agents except oil, and then only before drying. It costs about twenty-eight *ticals*, a Malayan or Penang *picul*: its colour is at first nearly that of burnt amber, but it afterwards grows black.

Kiya is the root of a tall shrub, and is used as a yellow die.

Kanyenchí, or *Tangenchí*, or dammer oil, is used to pay vessels,

[1] *Batavia Transact.* vol. v. Manga deleteria silvestris.

and for torches. It is most abundant in Tannau and the Tennasserim archipelago. One thousand torches cost seven rupees.

Kanyen-ben is the dammer tree.

Poyet is the gum or resin of the tree used to pay vessels, &c.

Chek'ha, or *Shek'ha*, is the red-coloured bark of a tree so called. It often occurred in the dry tracts during my route from Yé to Martaban, and was found very abundant about Papéngwén. The leaf is small, but no flower was observed by which its botanical character could be known; the natives said it was white-coloured. This bark has a very bitter astringent taste: the Burmans chew it along with the areca and betel leaf, and it is probably a febrifuge.

Woods.—Tennasserim and Pegu (as a port) have long been celebrated for the timber procurable there. Few countries yield such a variety of useful woods as the three Tennasserim provinces. The most valuable only will require to be particularly enumerated.

Kyon-ben, teak.—Teak is one of those singular natural productions which are confined within certain geographical limits without any apparent cause. It has not been found on this coast in perfection south of Martaban: a few stunted trees have been discovered in the *Yé* district. But however confined it may thus appear to be by nature, the tree can be naturalised in more southern latitudes, and it is easily propagated from the seed, which drops and takes root of itself. Java yields it; and teak trees from thirty to forty feet in height, are abundant in Mr. Brown's plantations on Prince of Wales' Island, and thrive luxuriantly. Siam and Cochin-China also yield it. In the province alluded to it is abundant; but is only to be procured in the elevated tracts and plains. The first indication of its existence was observed by me at *Thaní*, on a line stretching north and south, and about forty miles by water above the Burman town of Martaban; and it was discovered to be plentiful higher up at *Kyassún*. It is got also in the districts of Kwam, Zimmí, Taungpho, and Keya. The Burmans used to force the Kareans to fell a certain quantity yearly without receiving any wages; an intolerable grievance, to escape from which they often retired into the deep recesses of the forests. The quantity available is, perhaps, only limited by the number of labourers that can be procured. Some sawing-machines have, I am informed, been erected at Málamein, or Amherst, by merchants from Calcutta.

Tinyet, or Sapan wood.—This valuable article is not general in the provinces, but is almost entirely confined to Tannau or Mergui. It affects the higher tracts like teak, and is abundant in the direction of the river above Old Tennasserim, and five days' journey distant.

It is brought down on rafts in logs of about two feet in length: the root is reckoned best.

The most which it is believed has been obtained in any one year since the conquest by the British, was about 600,000 *vis*,[1] which, at ten rupees the hundred, would give 60,000 rupees as the total value of one year's cutting; the tax, at twenty per cent, would, therefore, average 10,000 rupees. Formerly the woodcutters were only employed on one trip. They now make two a year; one man can cut from 300 to 350 *vis* in one month.

Two *piculs* and one half *picul* of Penang (or one Ava *picul* of Sapan) sold, in 1825, for fifteen rupees, but it was then very scarce; its present price may average ten rupees per 100 *vis*. It, perhaps, exists in all the mountainous tracks dividing Siam from Martaban, Tavoy, and Mergui; and it is abundant on the Siamese side of the mountains north-east of the three Pagoda Pags.

Kublein, or *Kubbyein Khán*, is the bark of the mangrove-tree, called *bakkau* by the Malays: the bark is employed to tan leather, and to give a reddish dye to fishing-nets.

The tree grows in a singular manner; its numerous roots are bare for a considerable space below the trunk, which they seem, as it were, to prop up; the lower end of the trunk is thus generally kept even with high-water mark: it is used to make pegs or nails for boats.

The taxable produce of orchards are chiefly cocoa-nuts (which are not very abundant, areca-nut, dorians, mangoes, mangustins, guavas, plantains, jacks, oranges, and several other fruits, chilli and pulses; but the dorian and mangustin are not found to the northward of the Tavoy province. In Martaban, they reckoned seven hundred and sixty-seven areca gardens, containing in all 75,634 trees; each tree, under the Burman government, paid twelve nuts, or about one fortieth part of the produce. But a considerable quantity of prepared nut was imported from Penang, the above quantity not being found sufficient for the consumption in the province. The tax amounted, it was said, to about 3000 *ticals*, rating the value according to the caprice of a Burman governor.

Kyetha is a red-wood tree, the bark of which is used in medicine, and has a strong disagreeable odour.

Akya, or *Úgyo*, lignum aloes, is a native chiefly of the island lying off the coast of Mergui; but it is occasionally found in the interior. Chade island produces the largest quantity; the tree is not, it is

[1] Since the above was written, the produce of this year, 1829, has been ascertained to be 500,000 vis.

reported, a tall one, but as it is in a decaying or decayed state when it yields the wood in question, its botanical characters do not appear ever to have been ascertained. This wood is much prized by the Burman fair as an ingredient in cosmetics: they rub it down with other sweet-scented woods and barks, on a smooth slab, with water, and, when a thin paste has been thus obtained, they perfume their persons with it. The *Kalambak* is an inferior sort of aloe-wood; its locality seems to be Pulo Lontar; five piculs' weight of it were gathered by some of the roving Malays, who annually visit the Tennasserim archipelago, in 1825, and for this quantity they got 160 Spanish dollars. The bark of the tree, which yields the *kalambak*, is said to be white, delicate, and aromatic.

Sanakha, or *tanakha*, is a white, odoriferous wood, used in cosmetics by the Burman ladies.

Mau, the aloe-tree, is most plentiful betwixt Martaban and Rangoon; but is found all along the Tennasserim coast.

The following are other varieties of wood, besides those already noticed, which grow on this part of the Indo-Chinese continent:—

Sassafra is abundant at Mergui.

Kamau, or *pima*, is used for house-building, and is the *Bongo* of the Malays; it is of two sorts, red and white. The red is best, and is used for ship timbers, being deemed a very durable wood. It bears a reddish-coloured flower.

Sambien, or *semban*, or *themban*. It is not adapted for the saw. The bark is used for making ropes.

Sirrapi, the Malayan *kayú binttangau*, is used for masts. It is the *pún*, both of the red and white sorts.

Kadút is employed in ship-building (the *marantí* of the Malays). It is of two sorts, *kado pyú* and *kado nyí*, red and white. The red, *kado yúathi*, or small leaved, is the most durable.

Kanyo is used for beams and rafters.

Saban thaban is used for boat-planks, but is not easily sawed.

Binnatha is used for house-posts.

Pannatha, next in value to *thengan*, is employed for various purposes; such as for cornices of pagodas.

Kyeze is good for house-building.

Kaumú, or *kamogí*, used in building práhus. It is a light-coloured, close-grained wood, and is easily sawed.

Taungbín is the lightest of the durable woods, or the Malayan *nungka pipit*. It grows on high lands, and is used in ship-building. It is not easily sawed.

Sagú, *thagú*, or *daggú*, is used for constructing canoes. It is

tough, and of a yellow colour. The tree is stunted. It is light and durable.

Taung-kajú, a tree procured from the hills, and used in house-building.

Membanse is a yellowish-coloured wood, of which bows and spinning-wheels, spear-shafts, and the like, are made. The *kranyí-laut* of the Malays.

Mík'hímbí, or *mye-kyembí*, the yellow root of a tree, so called, which is administered internally with black pepper, as a tonic. It is given to boxers previous to their engaging; and is believed by the superstitious to render them innocuous.

Chímamít is a root of a climbing plant. It is used in the cure of wounds; and is given internally in cases of fever. The juice is balsamic.

Than yúglo, or *jojrú*, or *kanzo karo*, is the large tree of which timber is cut for the construction of práhus.

Pén le bien, or *pín*, is cut up into planks. *Lagú* is employed in house-building.

Kajú, or *telethí*, the cashú-tree, the *jack*, and the *nissah*. The fan-palm and the *ber* grow in abundance. The Burmese Proper call the cashú-tree *kaza*; the Tavoyers, *shethallé*; the Merguiers and people of Tennasserim, *kajú*.

Thaung thangí (Malay, *prealaut*): *momordica charantia* of Marsden.

Sein dabo, the *periploca Indica*, or sarsaparilla. It is used by the Burmans in medicine, and for removing the effects of mercury, &c. &c.

Ponyet is *lac* produced by an insect.

Natha is *sandal*, but none of the proper sort is got on this coast. An inferior description is, according to native accounts, to be found in the forests, and in the Ava province of Auntaung.

Thengan-kyaup seems to resemble the tree called by the Malays *dammer-laut*. The real tree of this last name is not found on the coast.

Thíngyín bein, or *thinyen, or kinyen*, is a tree yielding the resin called dammer; and the wood-oil used in giving the first coating to wood previous to painting. It most abounds in the Tennasserim or Mergui archipelago. It is a fine-looking, lofty tree, of great girth; but the wood is of little value. Dammer-oil is, however, got from several other sorts of trees, or, at least, an oil used for similar purposes.

Pen le aung, or sea cocoa-nut, a tree bearing a pyramidal-shaped fruit, the size of a pear. The rind is used to stop fluxes. It is full of seeds. It is called by the Malays, *buah pútut*.

Nungka pipit, or sparrow jack, a red-coloured wood employed in ship-building.

Theni, or red-wood (*Malag kayú merah*), *thinni*, *meke*, or *meleke* (the Malayan *kayú kamúning*). It is found on several of the islands. [It seems to be the *lin* and *astronia* of *Bat. Trans.*] The natives make of it ornamental kris-handles, shafts of spears, and walking-sticks. There are several species of this tree in the Malayan peninsula; the *kamúning amas*, *kamining kúnyet-trús*, and *kamúning-tei*, *karbaú*. They all take a fine polish.

Myenaban, or *myennabeat*, is a tough-wooded tree used in making shafts of spears and bows. It is the lance-wood. It is excellent for carriage shafts. The trunk seldom exceeds ten or fifteen feet in height, and eight or ten in girth.

Zithi zedi, the ber-tree (*bidára* of the Malays). The fruit is sweet tasted, but contains an astringent matter.

The Burmans are rude carpenters, and, as wood is cheap, they very frequently sacrifice a whole tree of large size for the sake of one or two planks. They fell the trees either with their long knives, which increase in breadth and thickness towards the point, or by means of a very small axe.

Pemboa is the white, bulbous root of a sedge. The islanders grate it down by means of a piece of the skin of a large kind of scate. It is washed and soaked for some days in water, dried in the sun, and then laid up for food. It looks somewhat like sago. Eight guntangs used to sell for two Spanish dollars. I brought with me to Penang several roots which throve well.

Kún, or betel vine, is of two sorts; one dies in three years. The leaf of this climbing plant is used by all ranks in their masticatory mixture. The people cultivate it regularly, although it is also found in a wild state. In the dry season the women water the plants, the water being drawn up from the well by a machine of a simple structure, like the Indian *pakotah*. A slender bamboo rests over a small beam; to one end is attached a stone, and to the other a small bucket made of date-bark or leaf. The drawer depresses this with one hand, and, when it is filled, a slight pull at the loaded end brings up the bucket.

Areca-trees were taxed at the rate of the fiftieth part of a rupee for four trees.

Amba, *amphan*, or *ambergris*, has occasionally been picked up in very small quantities in the vicinity both of the Mergui and Nicobar Island.

Samkye, stick-lac, is not a plentiful production of this coast. It

is found occasionally at Kyauptaung, above Old Tennasserim. It probably becomes more abundant in the vicinity of the hills, as the natives say it is plentiful there. It is doubtful if any stick-lac is to be found near the coast.

Yan zein, or saltpetre, is not apparently a product of the Tennasserim soil; at least in such quantity as to make it profitable to the natives to manufacture any. The only resource they have for manufacturing the article would be by boiling a *lixivium* of bats' dung, and purifying the *residuum* after evaporation.

The rocky caves on the coast, particularly those in Martaban, afford the material in large quantities; but the natives prefer the imported saltpetre, and rarely resort to this expedient. The article comes from Ava, *vid* Rangoon. There it is reported to be chiefly made from the soil of bats, and it is abundantly manufactured from this substance at Ka-gon, of which the caves in the vicinity yield large quantities. The Siamese came down formerly, and made saltpetre here.

Kan, or sulphur, is imported. A good deal is got at the burning island near the Nicobar group of islands.

Wax (*phayaun*) is most plentiful at Mergui and Martaban. In the former province, in the upper parts of the river districts, it was formerly obtained in considerable quantity from caves and rocks. In Martaban the bees chiefly inhabit the limestone rocks, there so numerous and so well adapted by their conformation to shelter these insects. In Tavoy, honey and wax are principally obtained from the hives on the branches, and in the hollows of trees. The bear here becomes a greedy rival of the forest wax-gatherer. The rock-honey and wax are best. It was reported to me, that in the Zoegabentaung (a high range of limestone rocks); and in its vicinity a quantity equal to eight hundred *piculs* was formerly obtained yearly. But this appears an exaggerated statement. The price in 1825 was sixty *ticals* per Chinese *picul*. The price now is about two rupees per *vis* of three pounds and a-half. The wax is often adulterated with flour made from the root of sedge, or with rice-flour; but, by melting the wax it is detected. Tavoy may yield about five or eight thousand *vis* yearly, or upwards.

Leik k'hún, or tortoise-shell (of the hog-billed sea-turtle), is procured in the Mergui archipelago; where, also, the natives termed *Chalomes* collect the shell-fish called *noa metse*, which they sell to the Chinese. Some of the last, which we got out of the hollows of rocks on the islands, were nearly the size of a conch, or *buccina*, but not so long. The head of the fish is defended by a hard and smooth stone, more

resembling marble than shell; and which covers the opening of the shell when the fish retires. One of these was found to weigh half a pound, and to be half an inch thick. The upper part only of the fish is preserved: it is first parboiled, and then dried and smoked. It has been sold for seven Spanish dollars a *picul*.

Meyo, or *Beche de mer*, is another article found on the shores of almost all of the islands lying off this coast: it is too well known to the eastern trader to require a further description than that it is of three sorts:—The first, *Payaun Meyo*; the second, *Meyo Byú*; the third, *Meyo Me*.

Shen-joe, or *Chenzoe* ivory, is procured from the Burman hunters. Elephants are so numerous throughout the provinces that it would not be an easy matter to effect any very sensible diminution of them. Their tracts cross the usual forest-roads or paths at very short intervals; but they are not much dreaded, and generally walk quietly away if not molested; they do, however, occasionally pull down the huts of the hunter, or tin-miner, to get at his store of rice. In Tavoy, during the Burman sway, more than two hundred pairs are stated to have rarely been got in any single year. The agreement with government seems to have been, that the hunter was occasionally allowed fire-arms and supplies, and that he got half of the produce, the other half going to the state.

Mergui yielded about two hundred pairs yearly, according to native information. The exact quantity afforded by Martaban was not ascertained: those natives who were acquainted with financial matters stated that five hundred pairs might be collected in a year.

The Burmans carve ivory knife-handles, chess-pieces, and other ornamental work, in a very respectable manner. The present revenue from this source is about one thousand rupees a year, and three rupees a *vis*; but the Burmans, and more especially the Malays, consider it in some measure sinful to take away the life of so noble an animal, and hunters are therefore few. The Burmans of this coast seldom try to catch elephants as they would have little use for them unless in time of war. The chief districts yielding ivory in Martaban, are *Wenra*, *Jagyein*, *Dagyein*, *Leínboe*, *Kalaum*, *Kyún*, *Yúnzillen*, and *Wengille*.

Kyanno.—Rhinoceros' horns are an article of trade, but the quantity is very limited, the natives being more afraid of this animal than of the elephant, or even the tiger. He is considered courageous who will venture near the spot where one may be luxuriating in the cool mud of a creek, for the animal, it is said, almost invariably attacks any person whom he sees near him. On such occasions he uses his

teeth. The rhinoceros is found all the way down to the Malacca Straits. It is frequent in the low tracts of Keddah, and on the borders of that district of Keddah which was ceded to the British.

Ngeksei, or *Ngethaik*, edible bird's-nest.—This substance, so valuable in the Chinese market, is plentifully obtained on many of the rocky islands which lie off the coast, and, from personal observation, it would seem that the swallow, which makes the nest, is rarely found where the lime or calcareous formation does not prevail. Granite is but seldom hollowed out into caves, while the lime-rocks are full of deep caverns and sinuosities, peculiarly fitted for the habits of a bird which nestles in almost total darkness. Several of these islands are so tortuously scooped out by the effect of time, and the percolation of water, that the *nester* is obliged to unravel a clue as he winds through their natural vaults. Sometimes he is let down the front of a precipice by a rope held by his friends above; at others, he ascends a perpendicular rock from the sea which washes its base, by help of rattan ladders arranged in a zig-zag manner, and reeved through perforated projecting angles, or tied to them; when the rock is vertically perforated he descends, torch in hand, by a rope held above by his assistants. The Malays are the most expert class at this employment, in which they have been long engaged.

The piratical Malays from the independent Malayan States, make an annual voyage, in a fleet of about fifty práhus, to the rocky islands of Trang, Junkceylon, and Tennasserim; and about one hundred boats also go to the same quarters from the British settlements in the Straits, from Keddah, and other Siamese ports, in search of the *nests* and of *beche de mer*, and other productions of the islands: the former class plunder as they coast along, and are equally the terror of the petty Malayan trader and the Siamese. It is impossible to state exactly how much is lost to the possessors of the Tennasserim islands by the intrusion of such adventurers; but, judging from what the Malays inform me, they consider the profits of a good voyage, in a large boat, to average forty *catties*, and of a bad one only two or three *catties*. But many of the smaller boats do not actually collect above one or two *catties* at any time. If we allow two *catties* for each boat, which is a very moderate calculation, and for the collection from the Tennasserim islands alone, we shall have not less than two *piculs* of birds'-nests thus annually smuggled; the value of which, at the ports to which it is conveyed, may average ten thousand Spanish dollars: but the quantity smuggled from all of the islands just noticed is much greater.

When the Chinese had the monopoly under the Burman govern-

ment they paid, I was informed (by Mr. Gibson, a person well known during the Burman war,) twenty thousand *ticals* yearly, or value to that amount, in kind. Now, the Chinese must have made a large profit, since they never long keep up a speculation which does not yield ample returns. As the Siamese can scarcely be considered as having ever occupied any of the islands in question, the Chinese, of course, took a wide range; indeed, the Burmans say, that when Mergui was given over to them, the sovereignty of all the islands down to Junk-Ceylon, was also considered as alienated in their favour.

The *bird-nest* swallow is now known to be so formed that it can secrete, probably with the help of some extraneous substance, the glutinous matter of which it builds its transparent nest; by watching their motions the gatherer can oblige them to build two or three nests in a season. The first one which he robs is, perhaps, the most transparent, if it is not an old one. The nesters use both opium and arrack. There are birds-nest islands on the *Bassein* coast, and they are frequent on the east coast of the Peninsula, in the Bay of Siam. The revenue at present derived from this source may average as follows:—

Tavoy Islands.....	15,000 Rupees.
Mergui, ditto	5,000
Total	20,000 Rupees.

Salt (*Chá*).—The coasts of Pegu and Tennasserim are peculiarly favourable for the manufacture of salt; in most places it is obtained by evaporation in boilers. A short description of the method of making it at Tavoy, on the *Taung Byaup* river, will serve for the whole coast, as far as I can learn.

The sea-water (which must here, however, become mixed with the fresh water of the rivers) is, at spring tides, let by channels into large shallow fields, lined with clay or mortar; here the sun frequently evaporates it, and leaves a tolerably white salt. The natives prefer to fill deep wells with the brine, and then to draw it up as the boilers require replenishment. These boilers are simply earthen pots, which, to the number of from fifty to one hundred, are disposed along the upper and rounded surface of an arched kiln; the kiln is three feet high, and is covered with a thick layer of mud, in which are made holes for the pots. These boilers are emptied thrice a day, and thrice at night, and give about five catties[1] each time: the Martaban boilers

[1] Twenty-one, or twenty-two and a half dollars' weight. When the brine is strong in February and March, they will yield about double this quantity.

yield about twenty-five each time. Seven men, the workmen said, can manage two kilns at Tavoy. The salt is, when drying, put into triangular baskets or sieves, where impurities filter off. They stated, but with what truth I had no positive means of ascertaining, that during the hot months, which alone are very favourable for the manufacturer, one man can make three hundred baskets.[1] Salt is valued at about the average of six rupees the one hundred *vis*. The quantity which might be produced is unlimited.

In Martaban, a tax of one rupee a year was put on every pot: the yearly caravans from *Thaumpé*, and from other tribes and countries of the interior, took away large quantities of salt from Rangoon and Martaban. A *picul*, at this last place, was supposed to cost about three rupees, and as it was bartered for the products of the interior, a high profit was obtained. The bázár rate here is about five rupees for one hundred *vis*: it is believed that ten per cent was the tax on this commodity when it was not put on the number of boilers. The places in Martaban province where it is made, are *Wakrú*, *Jenkyeit*, *Rengyein*, *Wen-Kalotroa* and *Teit-Killá*.

Thré, hides, do not appear to have been in the list of Tennasserim exports, unless perhaps in a very accidental manner; but those of the elk, varieties of deer, the rhinoceros, and other animals, might easily be procured if the natives desired it, and if they were in demand.

The *Kidderang* of Malays, and *Klé* of the Siamese, is a yellow dye; it is exported to India from Mergui.

Balachong, *Ngapí* or *Ngapúi*, which is a preparation of dried shrimps and other substances, a sort of caviare, forms an article of general consumption in the provinces. A cattie's weight sold for one tin coin, or about the 40½th part of a rupee; of course, the value of this rude coin is very indefinite. The rate may be taken from 5½ to seven rupees per 100 *vis*.[2]

The balachong and dorians are fit accompaniments to the viands on the board of a Burman, whose nasal sense is rather obtuse; but custom renders him, and even Europeans, unconscious of the disagreeable congregation of smells which these *delicacies* announce. In Martaban, each shrimp-net was assessed at one *tical*.

Ngakyaup, dried fish, forms a considerable article of trade with the interior. The *kabús* fresh-water fish is in great request; the ponds where they are caught were farmed out by the Burman government. The prepared fish is sold for forty rupees a *ul*.

[1] A basket is equal to about ten *vis*.

[2] Sixty-five pounds.

Metals, or *Amyúyoung*.—This coast supplies only two of the metals in quantity sufficient to excite enterprise.

Tin (*K'hé*).—The most generally diffused is tin; and, amongst the ore of this metal, small particles of gold-ore are often found: but however rich the Mergui and Tavoy mines are, the Burman governors, before they were dispossessed by the British, took no care to improve them. The trade of a miner was rendered very dangerous from the proximity of the Siamese, who were in the habit of lying in wait to kidnap him. The hill on which Mergui stands contains tin, the ore is in form of a black sand or oxide; and it is also found in the beds of the rivulets flowing past Mergui. The ore of this metal was chiefly collected at the *Búbeinchaung*, near *Che-úppoeh*, or *Kye-poeh*, (or, "fowl festival places,") a small river flowing from the hills about three miles to the eastward of a spot on the Nayédaung road.

Nayédaung (Devil's Hill).—These mines, as likewise those at *Shenze*, near *Kaleaung* and *Kamaunla*, one day's journey to the northward of *Ke-up Poeh*, were formerly worked by the Burmans during four months in the year, and about four hundred men were frequently employed. Perhaps the government did not gain more than 1500 *ticals* by the tax on the tin procured there, while the miner did not get above one, or one and a half *tical* more in any one month than he might have earned by much less troublesome occupations; but the Burman is averse to steady labour, and fond of speculating.

As the bulk of the population are of agricultural habits, and many Chinese have not yet settled in the country, the mines, I presume, cannot have been rendered so productive as they are capable of becoming.

The Tavoyers smelt the ore in small earthen furnaces, exposed to a red heat, which is kept up by double vertical bellows of bamboo-tubes, the pestle being lined with the feathers of jungle fowls.

There are no tin-mines worked in Martaban, nor have any been discovered. The Búbeinchaung mines in Tavoy may here be described, from which a judgment may be formed of the rest. When visited by me in 1825, there were only about twenty Tavoyers at work. They had elected one of their number to superintend their joint-stock, and this office exempted him from the personal labour of digging or sifting. Stream ore is here so easily obtained that they never think of searching for a vein.

The workman is supplied with a shallow wooden basin about a cubit in diameter, which is swung round his neck, and one or more cocoa-nut shells are attached to his girdle: thus prepared he walks into the stream, where it is about two or three feet deep; he then

sinks the basin to the bottom, fills it with gravel and sand by means of his feet, if it be too cold to immerse his body and to use his hands; the contents are then washed, and the gravel and sand being thrown out the black tin-ore is found at the bottom. The labourer generally rests contented if he can fill one shell: when the party have got as much ore as they can carry, or when their provisions have been expended, they leave their temporary huts and return to Tavoy. Such is the slovenly way in which mines are worked, which, under European or Chinese superintendence and skill, might yield large returns.

The Tavoyers smelt the ore on reaching home: the head smelter takes ten per cent for smelting, he being a government officer. They use an earthen furnance and double bellows; the profits are very small, and less than more regular and better directed labour would insure; but, like the Malay, the Tavoyer is fond of speculation, and will feel more pleased with a rupee thus obtained than with double the sum received as wages.

It does not appear that, at the period when Tavoy fell, the annual sum derived from the mines to government exceeded two thousand *ticals*.

Three or four hundred men worked during four of the dry months, paying, as usual, ten per cent, on the quantity of tin mined; but then the government took the tin at his own valuation, so that the actual tax was higher. The mines are mostly situated in deep forests. Many of the best mines have been neglected owing to the scarcity, or brackish quality of the water in their vicinity.

At mid-day, the temperature of the air may be averaged at 70°; it was found to be 65° at nine o'clock, A.M., while that of the water of the river was 68°. The miners use both opium and arrack to counteract the effect of *malaria*, and the variations of the climate.

These temperatures, which, for the tropics, are very low, are very sensibly felt by the miners. They seldom begin to work until the mists have dissolved, and the sun has appeared a few hours above the horizon. It does not appear that the mines now yield any revenue worth noticing.

The peninsula of Malacca contains inexhaustible stores of this metal.

The ore has lately become an article of trade to Britain; but the natives (Malays) prefer to sell the manufactured tin, alleging that the spirits of the rock, dell, and stream, are offended at any exportation of the raw ore. They are very superstitious, and retain many

ideas inconsistent with the pure Muhammedanism which they practise, and savouring of their primeval idolatry. On opening a mine, the natives of all these countries propitiate the spirits of the ground and stream by the sacrifice of cattle, and by offerings of fruits and other things. Their aversion to export the ore might, however, by good management, be overcome.

T'han, iron.—Ores of this metal are found in various parts of the coast. A low, rocky ridge, running parallel to the Tavoy river for several miles, yields the ore in abundance; but either that is not rich, or the natives can get the metal cheaper elsewhere than they can afford to smelt it, for the mines seemed to have been neglected for some years past.

On the top of the ridge, in the midst of a thick jungle, there is a projecting rock, which I found to be entirely composed of magnetic iron-ore, sufficiently powerful to hold in suspension a needle weighing nine grains. Manganese exists in considerable quantities.

Rich Iron-ores were not observed in Martaban. The Burmans of this coast are bad Ironsmiths.

Pille, or *palle*, pearls, are got on the coasts of the islands in the Mergui archipelago, and on the coast of Tavoy, at Maung Magan. I procured several, but at exorbitant prices, both at Mergui and the latter place.

It does not appear that many pearls of good size and lustre have been obtained; but the extent of the beds is unknown, as the natives only gather such shells as are left dry at low water, and have not tried the diving system. The Ceylon divers have been tried without much benefit, under Captain Drumgool.

There are pearl-banks at the Andoman and Nicobar islands. All subjects were, under the Burman governors, prohibited from having or wearing a pearl, the value of which exceeded fifty *ticals*. The pearl-fishers, of course, smuggled all those above that value, and sold them to traders.

They sold pearls according to their weight and colour, like the people of Hyderabad, Poonah, and Gujarát. They prefer, for their own use, those having a yellow tinge. It is said, that pearls, worth twelve hundred *ticals* each, have been sold by the pearl-fishers, or by regular dealers. Pearls are got at Junkceylon also.

Gold has occasionally been got in small quantities from the beds of mountain torrents. It is chiefly employed to gild pagodas, and for other ornamental purposes. It occurs in small quantities, along with stream-ore; and the smelter will sometimes get about the value of three or four rupees of the metal in twenty *vis* of tin-ore.

Amongst the useful earths, lime (*thaung* or *thaum*) and argillaceous compounds are most abundant. Steatite, or *kingwiasan*, I believe, is also obtained. Lime is never used as a manure; indeed, I am not aware that any kind of manure, except that derived from paring, or cleaning and burning, is ever employed on this coast.

Martaban has always been famous for its jars, and these, before the war, were exported in large numbers. They make various other articles of pottery, especially porous *guglets*, for cooling water in. It is an excellent custom all over these provinces, which the natives of all classes adopt, to preserve water for household purposes in large jars or pots. It purifies, is always cool, and is rendered more wholesome than when muddy, as is most river water here. Jars of cool water are often found on small stands by the side of a road, placed there by charitable persons for the use of passengers.

The minor productions of Burman art are, ivory knife-handles carved with various figures, and bowls made of polished cocoa-nut shells, carved with figures of men and animals in *alto relievo*.

ANIMALS, BIRDS, AND REPTILES.

The wild and domestic animals found on this coast nearly correspond with those on the Malayan peninsula.

Elephants are very numerous, and of large size. The rhinoceros frequents the swampy banks of retired rivulets; the ox, the buffalo, the bison,[1] the elk, and deer of various kinds, traverse the plains and forests; tigers, leopards, tiger and leopard-cats, fox-cats, or *tokyaum*, bears, wolves, baboons, apes, oppossums, flying squirrels, wild sheep, wild hogs, and bandicoots, are abundant. There are no

[1] *Vide* accompanying plate, No. 3. The dimensions of a head of one of these animals, which was killed within the Hon. Company's territory on the Keddah coast, were as follow:—

	feet.	inch.
From the tip of the nose to the back of the skull	2	1
Across the forehead, just below the horns	1	1½
Betwixt the horns, at their roots	0	10
Betwixt the tips of the horns	2	2
Circumference of horns at the root	1	7
Ditto of the head, between the eyes and horns	4	1
Slit of the nostrils, in length	0	4
Breadth of the closed mouth from top of upper lip to top of lower lip	0	5
Length of the ear	0	10
Circumference at the root	1	1½

The native who killed this bison, said it measured seven cubits (10½ feet) from the tip of the nose to the root of the tail, and was 5 feet 7 inches high; the colour being that of buffalo, or grayish black.

No. 2.

The Head of a Rhinoceros.

No. 3.

The Head of a Bison.

hares nor jackals. The hare, it is said, is not found south of Ava Proper, nor the jackal much beyond the Bengal frontier. Some individuals of the latter species were lately introduced at Singapore, but with what object, unless it was intended to confederate them with the mosquitoes, to disturb the nocturnal slumbers of the inhabitants, or to help to thin the not overstocked hen-roosts, it were hard to determine.

Snakes are numerous; but of the various species the bite of which is absolutely dangerous, only two have been discovered, the *copra de capella*, and *copra de Manilla*. There is likewise a yellowish-hooded snake; but its bite only creates a partial inflammation, and has never, to my knowledge, proved mortal: although, where the habit of the person bitten was bad, a cure has been observed to be retarded for several months.

The domestic animals are a few small horses, buffaloes, a small number of oxen, dogs, and cats. The Peguers and Kareans train their dogs, which are strong and fierce, to the chase. They hunt deer and wild hogs by sight and scent, and are also taught to search for the tortoise, which is much relished by these people as an article of food. Near Mendat, a village in Tavoy, a huntsman unkennelled, at my request, a pack of about a dozen large, brown-coloured dogs; and, in the course of about two hours, they hunted down a buck.

It is not consistent with my knowledge that canine madness has been observed to affect dogs on this coast: certainly it is not known at Prince of Wales' Island, although overstocked with these animals. The fact can scarcely be accounted for by the supposition, that the equatorial climate is too moist to admit of the disease occurring; for England and Bengal are both damp climates, and seasons of drought are frequent in Penang.

Lizards are not here regarded with the dislike shewn towards them by Musalmáns, although certainly beheld by them in association with superstitious impressions. The followers of Muhammed shew great respect to the spider, because, on a certain occasion when he was concealed in a well, it wove a dark web over the mouth: but the foresight, as they express it, of the spider was rendered unavailing by the heedless conduct of the lizard, which made the clacking sound peculiar to itself, and thereby induced the prophet's enemies to look into the well and discover him. The *guana* is the king of the tribe on land, as the alligator is in the water. He is, however, amphibious too, but is feebly armed; and depends for subsistence on his agility, his capacious mouth, and superior tact in swallowing. Like the snake-tribe, he does not masticate his food; and when grown to his

full size, which sometimes reaches to six feet in length, and three in circumference, he will quietly seize fowls or other birds, or, crawling under water, suddenly catch an unconscious duck, and gulp it down.

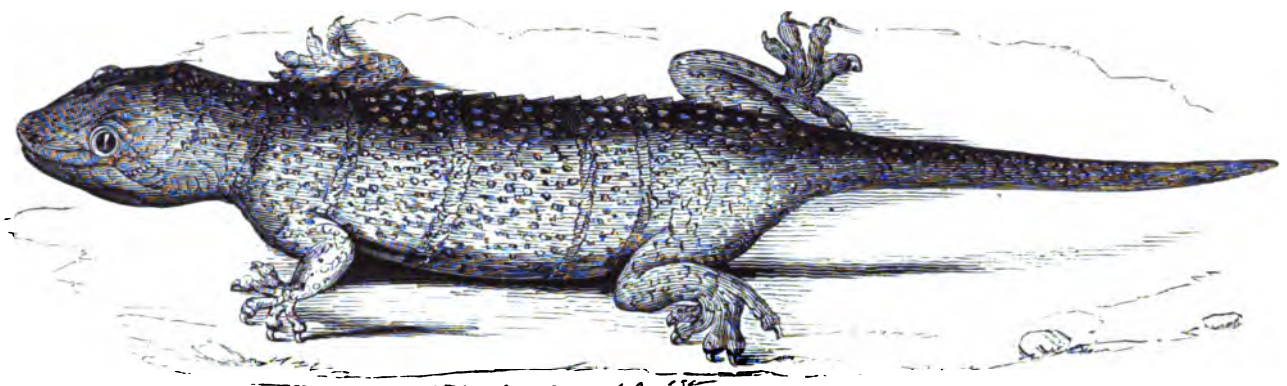
The *Tokké* lizard (*vide* sketch, No. 4) is found in most of the Indo-Chinese countries, and is thus named because it makes a loud and distinct sound, as if repeating the syllables *tok-ké*. Its common colour is a dark-brown mixed with gray; but it possesses, also, the property of changing its hue, like the chameleon. Its back is arched, and armed with a saw-like edge. In Rangoon and Tennasserim they abound in the houses, and are very noisy, although harmless.

The woods are stocked with pheasants, having rare plumage; with the golden-peacock, the common jungle-cock, stock-doves, green pigeons, rhinoceros-birds, and sea and land eagles. The sea-eagle is gray, and is a powerful bird, but avoids the immersion of his body in the water when attacking his prey. When the object is on or near the surface of the sea, he makes one or two rapid falling motions, and finishes with a swoop. It is a curious sight to witness him pounce on a sleeping sea-snake, of three or four feet long, and bear it aloft, the reptile, in the mean time, writhing to extricate itself. The carrion-eagle is a majestic-looking bird, with his dark body and red head and neck; and were he not confined by nature to his loathsome diet, would prove a formidable enemy to the lesser animals, and to birds of every description. He roosts on high trees, and on elevated stations, if possible; and his midday sphere is in the cool regions of the clouds, far beyond human ken. Here he scents his food at a great distance; and, as his comrades are numerous and greedy, he precipitates himself, by a quick, spiral motion, to the earth, to anticipate the general banquet. On the ground he is unwieldy, and, if galloped at, may be knocked down before he can get on the wing.

Kites and hawks are also numerous; as are paroquets, quails, snipes, and a variety of small birds. The quail of this country can only fly short distances, and is not apparently a bird of passage. Of web-footed birds, the large dark-coloured duck, having the body speckled with white, and a few white feathers in the wing, and teal, are the chief. The common duck is only found domesticated. Cyruses are plentiful.

The natives take game in traps and nets. To catch the larger kinds, they select a belt of wood; across this they cut out a narrow passage, and construct along it a fence with the trees thus felled. In this fence openings are left, in each of which is placed a snare or net composed of rattan rope. The game is driven towards the fence by men and dogs. To catch the mouse-deer, a small net is fixed in

No. 4.



The Tokke Lizard.

the opening, and a branch of a tree is bent down and tied to it, and kept in this position by a particular contrivance. The animal enters, touches the spring, and is immediately thrown up into the air along with the net, and remains suspended to the branch.

They have decoy-birds, such as the jungle-cock and king-fishers. The skins, with the feathers on, of this last species of bird are sold for the China market. The decoy-bird is not necessarily a tamed one. He is tied by one leg inside of a trap, or betwixt two nets, and being naturally very noisy, he instantly begins to scream; upon which the birds of his tribe which happen to be near, come, out of curiosity, to see what is the cause of his complaint, and, by peeping into the trap, or pecking at the bird inside, are noosed. The bird-catcher then generally kills the decoy-bird, and substitutes a newly caught one, alleging that the former will not be guilty a second time of leading his friends into danger. Each skin is sold for about twopence.

The domestic birds are common fowls, ducks, a very few geese, and pigeons. The average prices of these are considered high.

There is a class of people called *mauso*, who supply the markets with game, especially venison. They use the firelock. They shoot elephants to obtain their tusks; and sell their flesh, which is eaten by the natives. They occasionally catch wild animals at night, by bewildering them with the glare of torches.

FISH, &c.

The coast abounds in fish: the supply is, perhaps, most plentiful at Mergui. A great deal of what is caught is dried and salted; and a considerable quantity is transported from Martaban to the interior. Fish-preserves are very common all over the country. In these the flat-headed *kabús* is chiefly kept. The rivers abound in fish up to their very sources. In the deep and clear pools of mountain-rivulets which dash over ledges, or force their way through fallen rocks, very large fish may be observed; but they seem shy of the baited hook, and are seldom fished for by the natives. They rise to the natural fly; and although, from want of materials, the experiment could not be tried, it is believed that they might be caught by an artificial one.

The bázárs of Mergui, Tavoy, and Martaban, used to be supplied in a very irregular manner with fish: that of Mergui is the best. A Burman is not very nice on the score of freshness in fish, and supposes the sense of others to be as blunt or vitiated as his own.

Twenty different sorts of fish fit for the table might be enumerated: the most valued are the pomfret, sole, mango-fish, mullet,

cockup, and a sort of rock-cod, scate, seer-fish, and a bummelo, said to be of the same species as that so famed as an article of export from Bombay. Alligators, guanas, sea and river turtles, land and water tortoises, and sharks, abound.

FRUITS.

These are the mango, oranges, small and large; shaddocks, dorians, limes, citrons, the jambu, rambei, rambútan, papaya, water-melon, gourds, cucumbers, guavas, plantains, bananas, jacks, pine-apples, and cocoa-nuts. The mangostín is not found (with the exception of one or two trees in Tavoy) beyond the north boundary of the Mergui province, nor the dorian to the northward of the Tavoy province, as far as I could learn. The wild mangostín, which is a hardy tree, and the wild jambú, were found in various parts of the coast.

Dorians are esteemed a great luxury at the court of Ava; but as the fruit will seldom keep longer than seven or eight days, the dessert for the Golden Feet is often conveyed by relays of horsemen, and by boats pulled by forty or fifty men each. They are preserved by being wrapped in cloth, which is then thickly coated with mud or clay. From the Nicobar Islands cocoa-nuts are brought, which are almost filled with a medullary substance. These are greatly esteemed at court.

WATER.

Tennasserim is well supplied with water. The islands, too, along the coast, even those which are little better than bare rocks, have their rills and natural reservoirs of fresh water.

[*To be continued.*]

ART. III.—*Observations on Atmospheric Influence, chiefly in reference to the Climate and Diseases of Eastern Regions, in Five Parts, by* Sir WHITELAW AINSLIE, M.D., M.R.A.S., F.R.S.E., &c. &c.

(*Continued from Vol. II. p.* 42.)

PART II.

FURTHER REMARKS ON THE EFFECTS OF CLIMATE, MORAL AS WELL AS PHYSICAL.

"The original constitution of the atmosphere, and the preservation of its purity against contaminating influences, may be viewed as the strongest arguments we possess, in demonstration of the benevolence, the wisdom, and the omnipotence of the Deity."[1]

TOWARDS the conclusion of the first part of these Observations, I took occasion to notice the supposed cause or causes of the variation of colour that is found amongst the different nations of the world; and referred to the somewhat opposite opinions of several distinguished writers on this point. I shall now proceed to offer a few remarks on the influence of climate on the tempers and dispositions of men; and we believe that nothing is more evident than its effects on these, totally unconnected with intellectual qualities, in their definite sense. The English are unequal in their spirits, being alternately animated and gloomy; so we find our climate changeable, more so, I may say, than that of any other country in the world. The Romans of these days are grave, ardent, and conscientious; the inhabitants of Naples are cheerful, thoughtless, and enthusiastic, and many of them so giddy in their manner as almost to impress us with a notion that they are under the partial influence of some inebriating liquor: differences which we can in no way account for, but as they may be occasioned by the very opposite climates of the banks of the Tiber and the Bay of Naples.[2]

The natives of Japan, in latitude 32° north, are, by MONTESQUIEU'S account, stubborn and perverse; so THUNBERG says that, "though honest, they are mistrustful, superstitious, haughty, and unforgiving." What is their climate? the extremes of *heat* and *cold*

[1] PROUT'S Bridgewater Treatise on Chemistry, Meteorology, &c.

[2] See an account of the climate of Naples in D. J. CLARK'S work *On the Influence of Climate* (p. 106); also an excellent account of the same climate in a series of papers, by J. D. FORBES, Esq., in BREWSTER'S *Journal*.

are great; the first would be altogether unsupportable if the air was not sometimes cooled by breezes from the sea; the other is most intense, in consequence of the islands being exposed to the winds of the vast Eastern Ocean, and is moreover of that peculiar kind which seems to pierce the body; withal, the weather throughout the year is extremely changeable."[1]

In opposition to the notions of MONTESQUIEU as to the specific effects of climate on the temper and energies of man, and his opinion that indolence must be the result of heat, are those of VOLNEY, who thinks that too much has been ascribed to temperature and climate, and that the theory of the philosopher above-named, if examined, will be found paradoxical; adding, "the truth is, that our sensations are relative to our habits, and our bodies assume a temperament analogous to the climate in which we live, so that we are affected only by the extremes of the ordinary medium."[2]

I have observed, in *Part First*, that, according to FERGUSON, "the genius of political wisdom would appear to have selected his favourites, in particular races of men, as to intellectual capacity;" so countries have also been differently dealt with in regard to the outward form of their inhabitants. How different in aspect is a native of *Pekin* and a *Georgian*, though the latitude of their respective lands is nearly the same (from 33° to 35° north); there may be, it is true, a little variation with respect to their climates, the first being particularly exposed to bleak blasts from the Yellow Sea and the Northern Pacific, but surely not enough to make human beings altogether so unlike in appearance: the Chinese having broad faces, small black eyes, high cheek-bones, thick lips, and noses blunt and turned up; while, according to CHARDIN, the Georgians are singularly handsome. "The blood of Georgia," to use his own words, "is the finest of the east—I may say of the whole earth; I have never observed in either sex one disagreeable face, but I have seen many angelic ones; painting cannot display more charming countenances, or more elegant forms, than those of that country."[3]

Compare what is said of the people of *Bournou*, in northern *Súdán*, in *Africa*, by LUCAS, and others, with the flattering description given by GENTIL of the natives of India, placed in nearly similar latitudes; for the first we refer to the African traveller's work. The

[1] See THUNBERG's Travels, vol. ii. pp. 233–234.

[2] See VOLNEY's Travels in Egypt and Syria, pp. 466–467.

[3] See PITTA's Treatise on the Influence of Climate, p. 30, where he quotes from CHARDIN.

accomplished Frenchman thus expresses himself, speaking of the Hindús:—"Les Indiens, en général, sont beaux, et bien faits; surtout, les Brahmines est une belle caste, un tres beau sang."

So far from the flat faces and dark complexions which characterise so many of the inhabitants of the more southern territories, the Africans of Barbary, for instance; let us see what Mr. ELPHINSTONE says of the Afgháns, in nearly parallel latitudes:—"The women are fair and handsome; the men are muscular, and have high noses and long countenances." It being much doubted whether any variation of climate that could exist, independent of corresponding latitudes, would be sufficient to produce such opposite results in features and expression as distinguish the nations above mentioned, we must either conclude that they are the consequence of the peculiar pursuits and customs prevalent amongst each, according to the theory of FERGUSON, referred to in the first part of *the Observations*, or believe that the great Disposer of all had, at a certain period of the world, allotted particular races of the sons of Adam to peculiar tracts.

I formerly remarked that, while it had been conjectured that the colour of the skin corresponded generally with the temperature of the region, distinguishing features were supposed to be more owing to customs, manners, and pursuits; but then again, it may be asked, what conduces most to these? what even to particular forms of government? Here again we cannot shut our eyes to climate as a powerful agent; how far the only one I shall not venture to say. Let us see what was the opinion of a very able writer on the subject: FALCONER observes, "That when the heat of the sun prevails to a great degree, the government, except when particular causes have intervened, has been uniformly despotic; such has certainly been the state of Asia from the earliest ages. There is no doubt but that indolence and languor have their full share in occasioning this dangerous sway; and these are both the natural consequences of a high temperature of the air." The same author proceeds to observe:—"From what has been said of the effects of cold on the human body, we might be led to imagine that its influence on government would be totally opposite to that of heat; and, where the cold is not extreme, this is really the case; but, when that is excessive, the result, in a great measure, resembles that of inordinate heat; in fact, the disposition of mankind is prepared for servitude in either excess of temperature. In one, the inactivity of the people makes them think no evil so great as exertion and resistance to the ruling power, and their sensibility magnifies the difficulty and danger of every step of this kind; in the other, the insensibility is so great as to make them

disregard the progress of despotism, and perhaps not feel its effect until opposition be of no avail.[1]

With respect to the effect of the temperature of the air on *language*, some writers have given opinions to the world, at least ingenious and amusing, if not just. Dr. ARBUTHNOT, in his work, *On the Effects of Air on the Human Frame*,[2] will be perhaps reckoned not a little fanciful in what he says, though I am disposed to think there is much truth in it. He supposes, "that the close serrated way of speaking of the northern nations may be owing to their reluctance to open their mouths wide in cold air." The climate of the German nations, I should further add, is such as neither to enervate by its heat, nor to produce torpor by its cold; their language is, consequently, bold, figurative, and energetic. The climate of Italy is mild, leading a little to greater indolence: their language is soft, full of vowels, and pronounced without much effort, by no means unlike that of the Malays, who inhabit a country[3] differing, no doubt, much in latitude from that just named, but resembling it in a singular manner in its long peninsular shape and general topography."

Writers on climate have considered its influence on *literature*, *arts*, *inventions*, *laws*, and *religion*;[4] such discussions, however, we must allow, can do little else than multiply conjecture: we trace shades of similitude in many of the decrees and creations of the Almighty; yet, so has he willed it (and unquestionably for the beauty and harmony of the whole), that, in whatever manner by him brought about, no two things are in every part alike.

Having called the attention of the Society to some of the more general effects of climate, and also to the varying aspect of the human race, howsoever produced, it remains for me to offer a few observations on the influence of the atmosphere on the brute creation and vegetable world. It is, I think, evident, that there are many more of the first ferocious in hot than in temperate climes, and that there are to be found, also, a greater number of poisonous reptiles than in colder latitudes: why this should be the case it may be difficult to say;

[1] See FALCONER on Climate, p. 123.

[2] See chapters vi., xx.

[3] The Malaya Peninsula.

[4] The means by which religion has been propagated have varied much in different climates, says Dr. FALCONER; with regard to a persecuting spirit, he supposes that it has prevailed most in warm regions. XERXES, invading Greece, destroyed the altars and temples in both that country and in Ionia (Ephesus excepted); and the Greeks and Romans themselves, whose climate was more moderate, betrayed marks of religious intolerance.—See FALCONER *on Climate*, pp. 152–153.

the subject has not hitherto been investigated in such a manner as its importance would seem to demand. Dr. H. ROBERTSON simply states the facts just mentioned, and goes no further into the investigation than to observe, that both the greater degree of ferocity, and abundance of animal poison, are the consequences of increased heat—which is saying little: perhaps, it might not be deemed unreasonable to suppose, that by this increased temperature of the air, the watery and more innocent part of the fluids would be readily carried off, leaving what remained in the body of a more acrimonious quality; and that animals that had not for ever at hand the means of diluting, would thereby be rendered more ferocious: this is, however, but conjectural.

It has been remarked that race-horses sent to India soon lose that speed which distinguished them in Europe; and that dogs, on making the same change, retain but for a few months their delicacy of scent: while, on the other hand, it is stated, that the same description of animals rather gain in their respective qualities on being conveyed to *Van Diemen's* land, in latitude 42° 5′, where it is also said that women bear children who never bore them before, and had been considered as barren.

It is almost superfluous to observe, that plants, natives of tropical countries, do not thrive in more temperate regions; so, on the other hand, those of colder territories do not vegetate vigorously[1] when transported to latitudes in which the heat of the air is much greater. VOLNEY[2] tells us, that foreign plants degenerate rapidly in Egypt, and that the merchants there are obliged annually to renew their seeds from Malta. The Almighty has doubtless created all things with properties peculiarly adapted to the purposes intended. Men migrating into a land for which they were not originally destined, may, with care, preserve health; though they cannot with impunity, like the natives of that land, take every liberty they do, with respect to exposure, &c. So, with good management and artificial heat, the shrubs of the equator may be made to live, and even bear fruit, in our snowy tracts. It must be remembered, however, that when the regions do not differ very much in point of latitude, the products are sometimes improved instead of being deteriorated by the change: witness the potatos[3] of *England*, and, above all, *Switzerland*, how much superior

[1] See WHEWELL's Bridgewater Essay on Astronomy and General Physics, pp. 57, 58, 59, 60.

[2] See VOLNEY's Travels in Egypt and Syria, vol. i. p. 71.

[3] GERARD, the celebrated gardener of Queen Elizabeth, informs us, in his *Herbal*, published in 1597, that he received the root (potato) from Virginia, and which grew, as well as it could have done, in its native country.

they are to those of any part of America, as allowed by the Americans themselves. The apple was first introduced into our country by the Romans; the apricot is originally a native of America: where are these fruits best now? The tea-plant is a native of *Japan*, the island of *Formosa*, *Tonquin*, *Cochin-China*, and *China*; though the produce of that of the last-mentioned country is alone reckoned fit for exportation:[1] whether this may be owing to opposing climates or topographical positions I know not. In the provinces of *Keangnan* and *Fokien*, tea is more extensively cultivated than in any other part of China: in the first, the green[2] is most attended to; in the other, the black.[3] Now, in all the territories in which this valuable article has been tried, with a view of its being ultimately produced in sufficient quantity, and of a quality worthy of its becoming an object of commercial interest, I believe that *Brazil* is pre-eminent; which (singular to say) is not only in the same latitude with *Fokien* (26°), — though the one is north, and the other south of the equator, — but their geographical positions are otherwise much alike, both lying on the sea-shore, and that sea to the west. The coffee-plant, less fastidious, if the phrase may be used, is now successfully cultivated in regions differing considerably in temperature; for instance, in Arabia, of which country it is a native, especially in Yemen (latitude 14°); in Bourbon (in latitude 22° 52′ north); in Java (from 5° to 7° north): in certain of the more southern parts of our Indian Peninsula;[4] and in Luconia (15° north).

While some plants appear, then, to be improved by removal to another soil and climate, as we have seen with regard to the potato; and while others do live and produce, though less luxuriantly than in their native country on a similar change, such as the tea-plant; yet there is one, and there must surely be more so capricious or so constituted, that it will not, and cannot be expatriated, without great deterioration or death: I mean the *Mangostin* (*Garcinia mangostana*), which D. Ward tells us, in his *Contributions to the Medical Topography of Malacca*, is extremely limited in its *habitat*; not extending, he believes, much further than the old Fort of Tennasserim, in latitude 11° 40′; he, moreover, adds, that all attempts hitherto made to cultivate it on the continent of India had failed: and what

[1] Tea is injured by a long sea-voyage; that sent overland to Russia is far superior to ours.

[2] Particularly west of the city of *Wechufu*.

[3] Especially in the valley of *Bu-ye*.

[4] In the Tennivelly district.

is perhaps scarcely less extraordinary, neither the almond, walnut, nor cherry, grow in Egypt.[1]

The reason why some plants, in cold countries, retain their leaves through the winter, has been attempted to be accounted for by Dr. Hales, who believed that the proportion of moisture transpired by evergreens is not so great as it is from other plants; and Dr. ROBERTSON remarks, that these which, in the south of Europe, often bear at the same time leaves, flowers, and fruit, cannot be transplanted into a colder clime without undergoing an almost immediate change. The peculiar luxuriance[2] of vegetation, observed in hot climates, is supposed to be owing to the heat communicated by the solar rays; though the writer just mentioned (ROBERTSON) is of opinion that other circumstances may conduce to the same end, such as the greater quantity of vapour in the atmosphere, and, perhaps, the richness of the soil containing a greater proportion of matter fit for vegetable assimilation.[3] In our climate the excessive humidity of the air has, by some, been supposed to be injurious to plants yielding bread-corn; but, if there is an evil consequence from too great moisture in the air in respect to agriculture, there may be not a less one proceeding from too great dryness; hence we find, that, in situations so characterised, plants do not attain to their just size, and appear shrivelled.

In a former part of these Observations, when speaking of those Alpine regions which have of late called forth much scientific investigation, I had occasion to glance at the horticultural exertions made at some of those elevated *sanitaria*, whither Europeans, suffering from the enervating heat of the plains of India, find it beneficial to proceed; and where, it is well known, various pot-herbs and certain fruits are now reared, of a quality little inferior to those of England. On the *Nilágiris*, potatoes, strawberries, and cauliflowers, are excellent; and on the Himaláya range, to quote Mr. ROYLE's lately published work, "we find that birch-trees, at the height of 14,000 feet above the level of the sea, and apricots, at an elevation of 10,000, give the mountains of India a singularly rich appearance, compared with those of America; for HUMBOLDT says, that on Chimborazo, only two degrees and a half south of the line, even grasses disappear."

In a thesis sustained at the university of Tubingen, Dr. W. NEUFFER

[1] See Modern Traveller—Egypt, vol. i. p. 23.

[2] See WHEWELL's Astronomy and General Physics, p. 63.

[3] See ROBERTSON's History of the Atmosphere, vol. ii. pp. 236–237.

presented the results of a number of interesting experiments and researches respecting the changes that plants undergo; and in a paper, written by Mr. HALDER, in 1826, it was shewn, that trees in winter are at a lower temperature than the freezing-point, and even pass to the state of congelation without injury to their life. By experiments subsequently made during two successive winters, it appears that a thermometer, placed in the interior of trees, may descend below zero (Fahr.) without vegetation suffering.[1]

With regard to the anatomical construction of plants, much has of late years been done, more especially by CASSINI and MIRBEL; and in the work just cited (same volume and page) may be found an account, by these gentlemen, of some philosophical observations, laid before the Academy of Sciences of Paris by Dr. SCHULTZ, by which it would appear that a "circulation takes place in vegetables conformable, in some respects, to that of animals, quickened, in all probability, by heat in torrid climes, and rendered more torpid in colder countries; but, of course, distinguished by peculiar differences[2] too minute here to enumerate."

It has been long known, and it is a curious fact, that some vegetables only thrive well when totally immersed in water; such as water-cresses, water-parsnips, &c.; but it is still more curious to think, and it has been proved by various experiments, lately made by distinguished men, such as VAN HELMONT, BOYLE, &c., and detailed in the *Register of Arts*, vol. i. p. 126, that water alone is the aliment which plants draw from the earth; in fact, that the influence of this element (earth) in supporting vegetation, is almost entirely confined to its being the means of conveying water. It has also been remarked by botanists, that the plants of fresh water are more widely diffused than those of the land. Many of the aquatic plants of the north of Europe are found equally healthy within the torrid zone; for instance, the *lemna minor* (common duck-weed) grows not only all over Europe, but even Asia and America, from Pennsylvania to Japan, whether eastward or westward,[3] the seeds being probably carried by the *anas* tribe of birds.

All researches concerning the organic constitution of plants must be to the man of mere science more or less interesting; but in a practical point of view they become of still greater importance. A paper of much value on this subject may be found in a work, entitled

[1] See Arcana of Science and Art, fourth year, p. 212.

[2] See Whewell's Work on Astronomy and General Physics, p. 62.

[3] See Register of the Arts, vol. ii. p. 142.

Gleanings of Science, vol. iii. p. 289, published in Calcutta. The communication was by Captain Twemlow, of the Bengal artillery, and treats of the influence of the moon on the sap of trees, and the proper time for felling timber for ship-building. In the discussion, he takes an opportunity of bestowing great praise on the Indian wood-cutters, who know well, from long observation, the exact time to cut down the tree, so as to have the timber in its best condition, and least liable to suffer from insects, or the dry rot. The period, they suppose, when there is the greatest danger from these, is at the full of the moon, or approaching to it; or at any time, in fact, when the sap[1] is up in the tree: for this they conceive, and we believe it, to be the prime source of putrefaction after the tree is taken from the earth. And it is, no doubt, by a due attention to this essential point, that the teak, and other similar produce of the Indian forests, are rendered so durable and excellent.

The ingenious Marcet, being struck with the remarkable analogy betwixt some of the organs of plants and those of animals, was, some time ago, induced to make a series of experiments with several of the principal mineral and vegetable poisons, by introducing a portion of them among the circulating juices of a great variety of vegetable substances; and concluded, by demonstrating, that the metallic poisons act on them nearly in the same manner that they do on animals.

Abbé Nollet, Beccaria, Jalabert, and more especially Bertholon, found, by experiments, that electricity had some effect in hastening the growth of plants. At a subsequent period, however, Baron Humboldt discovered that they were not susceptible of galvanic influence; thus differing in their nature from animals. Since the period when the distinguished Frenchman above mentioned (Bertholon) wrote, further light has been thrown on the subject by Libri, a Florentine of great repute, who appears to have ascertained —and the discovery is an interesting one—that, on a current of electricity traversing an odoriferous plant, the odour of that plant becomes more and more feeble, and at length can no more be perceived.

The irritability of some plants, owing to a peculiarity in their organic structure, and as more or less susceptible of atmospheric influence and climate, has been found to vary; indeed, some plants

[1] The sap ascends at different seasons of the year, according to the hemisphere: in this country, it rises in the months we have denominated spring, and in autumn, especially in the former.

are even said to sleep. The chickweed with white blossoms (*Arenaria peploides*) affords a fair instance of this; for every night the leaves approach each other in pairs, so as to include within the upper surface the tender rudiments of the new shoots. We are all acquainted with the susceptibility, or rather sensibility, of the *Mimosa pudica*,[1] of a class and order very different, and to which the Hindús ascribe almost supernatural powers. A very amusing account of a plant of this species may be found in the *Medical Extracts*, vol. iii. p. 365. It would appear, that one having been carried for some time in a wheeled conveyance, the motion caused it to shut its leaves, and to be, as it were, rocked asleep; and such was the effect of the stimulus, or rather, let me say, the opiate, that they did not again expand—in other words, the plant did not awake—for twenty-four hours! The detail is given in a chapter on "Exhausted Irritability," in which the author compares the exhaustion of the animal frame with that of the vegetable; and informs us, that all the motions of plants and animals, as well as their periodical diseases, may be explained on the same principle, concluding with this avowal, that, while the *Hedysarum gyrans*[2] suffers a temporary exhaustion, equally by the agency of electricity and the heat of the sun, that of the *Mimosa pudica* suffers only by the first.

The most nutritious fruits, and vegetable poisons of the most deleterious qualities, are well known to be produced within the tropics; but, if in the high northern latitudes nature has denied an equal quantity of valuable fruits, "she has," as Dr. ROBERTSON says, "at the same time benignantly rejected from those climes such plants as, by their extraordinary poisonous qualities, would have lessened considerably the comforts of the inhabitants." I do not mean by this to infer, that in the colder climes no poisonous plants are to be met with—far from it; such are only less virulent, less certainly deadly. Without multiplying examples, I shall merely mention the *Conium maculatum* (hemlock), *Digitalis purpurea* (purple foxglove), and *Hyoscyamus niger* (common henbane), the last of which LINNÆUS tells us, in few words, when taken incautiously, produces delirium, madness, convulsions, and death.

[1] It is the *samanga* of the Bráhmans of lower India; but there are various other Sanskrit names for it. The plant is the *múnughú tamara* of the Telugus; the *totalvadie* of the Tamils; and the *wæl-nidi-kumba* of the Cingalese. It is a native of Brazil as well as Ceylon.

[2] A plant of the class and order *Diadelphia decandria*, and altogether singular on account of its voluntary motion (if the phrase may be used), not occasioned by any touch, like that of the *Mimosa pudica*, or *oxalis*. It is a native of Bengal, and there called *barú chadali*.

How far the degree of poisonous quality in plants might be altered by a removal from a tropical to a temperate region, or *vice versâ*, I cannot say; but what has been ascertained, proves that plants generally in vegetating are not entirely under the influence of external causes, such as heat and cold, but that much is owing to their internal structure. It is; and I quote Mr. WHEWELL'S own words, in his *Essay on Astronomy and General Physics*:[1] "When we transplant our fruit-trees to the temperate regions, south of the equator, they continue for some years to flourish, at the periods which correspond with our spring: the reverse of this obtains with certain trees of the southern hemisphere; plants from the Cape of Good Hope, and from Australia, countries whose summer is simultaneous to our winter, exhibit their flowers in the coldest part of the year; and do we not find that Alpine plants cannot be said to wait for the sun's heat, but exert such a struggle to blossom, that their flowers are seen amongst the yet unmelted snow?" This shews, I repeat, that, independent of every other cause, there is a something in vegetables themselves, as in animals, which marks their varied nature, whencesoever they draw their nourishment, and however acted on by a change of temperature.

DECANDOLLE discovered, by a series of experiments, that some plants are more tenacious than others of their distinctive habits; for instance, while the flesh-coloured wood sorrel (*Oxalis incarnata*), however exposed to artificial darkness, or light, or heat, or cold, unfolded its leaves at the usual time,—the *Mimosa pudica*, or sensitive plant, on the other hand, when it was kept in darkness during the day, and had light allowed to fall on it during the night, in three days, strange to say, completely accommodated itself to the unnatural state, opening in the evening, and closing in the morning; thereby evincing a peculiarly organised animal-like frame, or, in other words, forming a kind of link betwixt animal and vegetable life.

It has been observed, that dangerous and deleterious properties often run in particular families or groups of plants. These properties have, besides, been ranked under respective heads, such as *vegetable acrids*, *narcotics*, and *narcotic acrids*. The class and order, *Pentandria monogynia*, embraces many of a poisonous nature; so much so, as to have induced Mr. STOWE, in his *Toxicological Chart*, to state, that plants whose flowers have five stamina, one pistil, and one petal, and whose fruit is a berry, may at once be pronounced poisonous; adding, at the same time, that those termed umbelliferous, which

[1] See Work, p. 26. (Bridgewater Essay.)

grow in water, are mostly so. He might have said, with equal truth, that plants having the calix double, glume valved, with three stamina, two pistils, and naked seeds, indicate a farinaceous quality. Of the first-mentioned class and order (*Pentrandia monogynia*), a good example may be given in the *Cerbera manghas*, which is the *gon-kadúrú* of the Cyngalese (according to Moon, in his *Catalogue of Ceylon Plants*), and the *odolam* of the *Hortus Malabaricus*.[1] Dr. Horsfield, in his *Java Medicinal Plants*, informs us, that a woman, having from curiosity tasted a little of the fruit, was seized with partial delirium, and could no longer perceive the persons or objects that surrounded her. Other plants of the same class and order are well known to possess poisonous qualities, such as the *yetti kottai* of the Tamils (*Strychnos nux vomica*), known to the Arabs under the name of *khánik ulkelb*, خانق الكلب and which Dierback supposes may be the στρυχνος of the Greeks; the *Nerium odorum*,[2] with the root of which, ground down with oil, the natives of India occasionally destroy themselves; the *Strychnos tieute*, lately lifted into its proper place in botany, but which had been ranked in the genus *Cerbera* (opposite *folia*). It may be found noticed by Mr. Crawford in his admirable *History of the Eastern Archipelago*,[3] under the name of *chetik*; and is a large creeping plant, confined to the island of Java, the bark[4] of the root of which contains the *upas*, or poison. The same intelligent observer has given us an account of another *upas-yielding*, or poisonous plant, the *anchar*, or *antiar*, now distinguished by the generic name of the *Antiaris* (*toxicaria*). It is said to be one of the largest trees of the Malayan peninsula, where it is called *ipoh*. The poison which characterises it is got from the outer bark, and, though not so deadly as that procured from the *Strychnos tieute*, is still powerful.

It has been observed, as we have already seen, that deleterious properties are often found to prevail in particular families of plants; and that this holds good to a certain extent, no one will deny: but what shall we say of the *Jatropha curcas*, the *Cannabis sativa*, the *Menispermum cocculus*, and many others, which are of different orders? Notwithstanding all that has been done, doubtless there are in South America many vegetable poisons not yet brought to light:

[1] Vide Rheed. Mal. ii. 23.

[2] The oleander of the English.

[3] See Crawford's History of the Eastern Archipelago, vol. i. p. 469.

[4] See Horsfield's account of this poison in the *Transactions of the Batavian Society*.

for information regarding the *ticunus*, the *woorara*, and the dreadful *curari*, I refer to ORFILA's *Traité des Poisons*, tom. ii. p. 358, merely here mentioning, that the last-named is a black, tough extract, composed by the Choqua Indians with the juices of several deleterious plants, and the poison of various snakes. It is powerfully destructive to human life; and it has been ascertained, that the fumes which arise during the process of making it are nearly as fatal as the preparation itself.[1]

As the anatomical construction of plants varies, and corresponds, no doubt, with the peculiar properties of each species, there must be a consequent distinguishing difference in their effects on the human body, if taken inwardly, or applied externally. An illustration of this we have in two Oriental plants already mentioned, viz. the *Antiaris toxicaria*, and the *Strychnos tieute;* the deleterious quality of the first being directed to the stomach and bowels, that of the second to the brain and nervous system.[2] Both have been carefully examined by PELLETIER and CAVENTOU. The active ingredients of the *antiaris* appear to be a peculiar elastic resin, a gummy principle, and a bitter substance; that of the *strychnos* is *strychnia*, united with the *jgasuric acid.* We have said above, that the most destructive animal and vegetable poisons are produced within the tropics; but it must likewise be observed, that there are also found our most powerful and valuable drugs. The *Convolvulus jalappa* of Mexico, the *Callicocca ipecacuanha* of Brazil, the *cinchona* of Peru,[3] &c. Some very interesting peculiarities have been remarked by different writers respecting the varying powers of medicines in different countries. Dr. HARRISON discovered that narcotics act with greater force in the climate of Naples than in England. Dr. A. T. THOMSON, in his *Elements of Materia Medica*, affirms that vegetables, like animals, have their powers changed by climate, and that the virtues of certain plants are diminished, if not altogether destroyed, by transportation into other regions. This, I conceive, with all due respect to the opinions of that able and most intelligent writer, is going a little too far; though, no doubt, a certain variation in the produce must be the consequence of a removal to another soil and temperature. Witness the singular

[1] I take this opportunity of calling the attention of the Society to a valuable work on poisons, by Professor CHRISTISON of Edinburgh, who has, perhaps, done more for this branch of science than any other of the many who have written on it.

[2] See HORSFIELD's account of the upas poison, in the seventh volume of the *Transactions of the Batavian Society.*

[3] See KID's Essay on the Physical Condition of Man, p. 226.

change that takes place, on carrying the Lisbon and Madeira vines to the Cape of Good Hope, where they are observed in a short time to yield wines which differ considerably from those they afford in Europe. Such alterations must be sought for from various causes, chiefly, we should suppose, climate and a peculiarly dry soil; and, in especial reference to medicinal plants, we know how much has been attributed to this cause (soil) by the ingenious Mr. PASTIE, who says, that more is owing to the particular nature of it, than to the genus to which the plant may belong, or even to the chemical principles which characterise its composition. He remarks, as an instance in support of his assumption, that all the plants which grow in high grounds are of a tonic, acid, and stimulant quality—notions, which to say the least, appear to me to be somewhat hyperbolical.

However much has lately been done to advance the subject of medical botany, it must be allowed that there is still much to do. The great LINNÆUS, not contented with labouring most assiduously to give every plant within his reach, or that he could procure from a distance, its distinct and definite scientific place, also applied his discriminating mind to ascertain, as far as he could in the days in which he lived, which were the species that possessed medicinal qualities; and published, at Upsal, as far back as 1749, a very valuable work for the use of the students of that university: a work, wonderful to say, at no time much inquired after in England, and, what is still more wonderful, but very lately translated, for the first time, into English by Mr. WHITLAW, and which may be seen at the end of his volume, entitled *New Medical Discoveries*. It gives a brief account of no less than five hundred and thirty-four articles, from different dominions, yet which are all to be met with in one or other of the apothecaries' shops of Sweden. From the time above mentioned (1749) till about the year 1785, when the works of SHELDRAKE and BLACKWELL appeared, containing copper-plate figures of the medicinal plants, little had been done to forward the science amongst us; while splendid foreign publications on the subject, by REGNALT, ZORN, and PLENK, found their way to England, and roused the attention of BURNET, STEPHENSON, and WOODVILLE, the last of whom, in 1790, gave to the world his excellent work on *Medical Botany*, enriched with well-executed engravings of the plants, and equally creditable to himself and his country. Other treatises on the same science, of varying importance, have since followed; and two of these but a few months ago,—the one by Mr. RENNIE, entitled *An Alphabet of Materia Medica*, a very

useful compendium; the other the *Hortus Medicus*,[1] a book I cannot sufficiently praise: in fact, I conceive it to be altogether a model for such investigations, combining, as it does and ought to do, for the most perfect knowledge of the plants, an account of their external appearance, virtues, and chemical analysis; and taking advantage of all that has lately been done in the laboratory for the furtherance of professional research.

No member of this Society is ignorant of what has been achieved for botany, simply so called, in eastern countries, by many distinguished individuals, as already mentioned. The names of ROXBURGH, ROLTER, and WALLICH, are as familiar to our ears as they are grateful; and thanks are due to these men by all nations who can appreciate their labours. Still, it is to be regretted that the bestowing a name on a vegetable, and fixing its proper place in botany, should not, oftener than it is, be accompanied with something more decidedly useful to mankind. Amidst the many thousand plants which crowd the vast forests, how few comparatively have yet been accurately examined. Assuredly, they are not given, by the great Power that gives us all, simply to beautify, vary, and shade our earth; or for the birds of the air to build on. No; many of them have far other destinies—for our accommodation in the arts, manufactures, or domestic purposes. Count RUMFORD turned his attention to ascertaining what were the trees which, on burning, yielded most heat. Destructive distillation,[2] as it is called, according to modern chemistry, assists us, by means of high temperature; in the preparation of charcoal, pyrolignic acid, and empyreumatic oils; and GAY LUSSAC and THENARD, have taught us to disclose what are the comparative quantities of oxygen and hydrogen existing in plants so as to render them of an acid nature, of an oily, resinous, or alcoholic quality, or neither acid nor resinous. It is sincerely to be wished, then, that, to deciding as to the class and order, genus and species, of a plant, on its being discovered, could oftener be added the yet more beneficial results, as to how far its bark might be useful to the tanner, its wood to the carpenter, its leaves, flowers, or juices, to the dyer, currier, or painter.

On the subject of medical botany in eastern regions, which will be allowed to be intimately connected with that of climate (the more immediate object of these Observations), HORSFIELD has, by

[1] Hortus Medicus, by Mr. GEORGE GRAVES; the chemical part by Dr. MORRIES. Edinburgh. Black.

[2] See DUNCAN's New Dispensatory, pp. 106–7.

his account of the medicinal plants of Java, convinced us that he was no idle observer in that island. Dr. FLEMING, some fifty years ago, compiled his Catalogue,[1] comprehending a variety of articles employed by the Hindús in their healing art; subsequently I offered to the world my humble contribution on the same branch of science, containing an account of many medicines, as well of a vegetable as mineral nature, in use amongst the natives of eastern countries, and embracing, at the same time, a description of a number of things prized by the Indians in their arts, agriculture, &c.; a publication which, had I continued a few years longer in the service of the Honourable Company, and had had leisure, might have been rendered more worthy of the indulgence it met with. In fact, the *Materia Medica of Hindoostan*,[2] &c. &c. was commenced during a season of anxious and extensive professional duties; the field was almost entirely untrodden by Europeans, consequently the difficulties to be surmounted were not trifling; but the object appeared to me most desirable (crowded as I found the bázárs to be, as well of the *vayittiyans* (physicians) as of the artisans, with articles, the very names of which were unknown to us), and the research was cheerfully undertaken. Whatever may have been the degree of success attending it, yet so convinced am I of its reasonable intent; so attractive did it prove from its novelty; so closely did it bring me into contact with intelligent, liberal-minded, amiable, and industrious men, unacquainted though they might be with the science and refinements of the western world; however partial may have been the success of the pursuit,—I repeat I cannot look back to it, after a long lapse of years, without a pleasurable emotion.

Too much praise cannot be bestowed on Dr. GEDDES for his late exertions in calling the attention of his medical brethern to the *Materia Medica of the Persians*; and in the *Journal of the Asiatic Society of Bengal* for April 1832, I find notice made of a Catalogue

[1] A Catalogue of Indian Medicinal Plants and Drugs.

[2] It has been imagined by some, that the materia medica, properly so called, has not been much attended to in India by the natives; but whatever may be the case in Upper India, where the pure original bráhminical medical science may naturally be supposed to have been polluted by unenlightened Muhammedan invaders, such is not the case in Lower India, where the Musalmáns never reached; and where may be found, amongst the records of several of the pagodas, various works on the materia medica, in high Tamil and in Sanskrit, full of curious matter; for example, the *Vaidya Sastra* of DHANWANTARI, the *Púrána Sutra* of AGHASTYA, &c. Is it not to be regretted, that hitherto our great Orientalists should have so partially exerted their ingenious research? Why should Southern India have been so little an object of attention? There, ancient lore is yet uncontaminated.

of plants in use amongst the natives of the western and northern provinces of India, compiled by Mr. ROYLE;[1] and from the talent and industry testified by that gentleman, I can have no doubt but that his labours will prove highly useful. The same gentleman, I perceive, by *Gleanings in Science* (vol. iii. p. 29), published in Calcutta, had recommended to the Society, that "they should undertake to collect a cabinet of Indian materia medica, to contain the various articles of medicine employed by the natives of India, with specimens of the plants from which the vegetable remedies are prepared; the mode of preparation; statement of the properties ascribed to them by the natives," &c. &c.; and further, that the Society had adopted Mr. ROYLE's proposition.

Might I here suggest—and I do it with great deference, but after long personal experience, considering how facile the Hindú medical men are in admitting, without very particular examination of the article, its medicinal qualities — might I here, I say, suggest, that, far from placing implicit confidence in what those zealots in their anxiety allege, the gentlemen employed in the inquiry should be required to render as perfect an analysis as they can of the drug brought to their notice, whether leaf, or bark, or root, or flower, or earthy, or metallic substance, so that they may come as near as possible to that model, for so I must call it, lately given to the world in the mother country, the *Hortus Medicus* of GRAVES. We have been for a sufficiently long time but little better than nomenclators; I say we, because I myself have been of the number (*quorum pars fui*). But, although hitherto there may have been some excuse for lingering on the threshhold, while science rather glimmered than shone, that no longer exists; the door is thrown open, and we are invited in to partake of the banquet, and revel amidst the treasures of an advanced age.

While on this part of my discussion, I trust it may not be considered as irrelevant to say a few words on the effects of atmospheric influence on the colour of plants. It has been alleged, that in mild climates, such as that of the south of France, or of Italy, leaves were of a more vivid green than in colder countries; and many main-

[1] Since writing the above, the author of this paper has had the happiness of becoming acquainted with Mr. ROYLE, and has seen his copious and most valuable collection of articles of the native materia medica, in use in the upper provinces of Hindústán, and in Persia. Too much praise cannot be bestowed on the zeal which has called forth so great a mass of interesting matter, and which, it is sincerely hoped, may meet with that encouragement and support which are due to such rare exertion.

tain that light is essentially necessary that they should assume that colour in any degree whatever. In Mr. EDWARD ELLIS's excellent discussion, entitled *Further Inquiries into the Changes induced on Atmospheric Air*, &c. a great deal of new and interesting matter may be found on the subject of the causes of colour in plants. In chap. ii. sect. 3, he treats of the colour of plants, arising from their chemical constitution, and which he attributes to the decomposition of their saline compounds by the agency of solar light. In the following section he proceeds to investigate the manner in which light exerts its influence in imparting colour independent of chemical action. In a general view of atmospheric influence, which this essay simply aims at, minute scientific details must not be looked for; I shall, therefore, merely here observe, that the accurate observer above named states at page 166 of his work, that, "since neither the mechanical doctrine of density (as first supposed by NEWTON), nor the supposition of phlogiston, nor the actual combination of oxygen with bodies, seems sufficient to explain these affections of light from which the diversity of their *permanent colours proceeds*, we must seek out some other mode of action for those phenomena less liable to objection." And he seems inclined to lean to the theory of Dr. BANCROFT, who believes that *the permanent colours of different bodies are not produced by mere refraction*, but depend on other properties, and that *there are certain affinities, or elective attractions, existing in, or between, the differently-coloured matters, and the particular sorts or rays of light so absorbed, or made latent:* and that there does exist such an affinity, or attraction, between light and the particles of bodies, seems more than probable, from various reasons. For instance, when the muriate of silver is exposed to the solar rays, and to the *light alone* of those rays, it begins to be discoloured at the end of a few seconds; "after a minute," according to SENEBIER, "its surface is sensibly violet." It would appear, according to experiments made by SCHEELE, and which may be seen in his work on air and fire, that in effecting this discoloration, the violet ray acted the soonest; and by SENEBIER's account, the next in succession were the indigo, the blue, the green, the yellow, the orange, and the red. I find, at page 169 of Mr. ELLIS's work above cited, these words: "The action of light on vegetables seems to resemble, in many respects, its operation on inanimate bodies. We have already seen, that light in its undecomposed state, causes the expulsion of oxygen gas, and gives rise, at the same time, to the *green colour* of plants; and SENEBIER, moreover, discovered that plants, illuminated with different rays, grew with a varying degree of rapidity: thus, plants illuminated

with yellow rays grew with rapidity in height; next, those in the violet rays; afterwards, those in the red."

Yet notwithstanding all this, does not Mrs. SOMERVILLE, in her *Connexion of the Physical Sciences*, speak of the sea-weeds growing to the enormous length of several hundred feet, and all of them highly coloured; though many must live in deep caverns of the ocean, in almost total darkness,—a circumstance which induces that celebrated individual to suppose, that light may not be the *only* principle on which the colour of vegetables depends; more especially, as HUMBOLDT met with *green plants* in complete obscurity at the bottom of one of the mines of Freuberg. Whatever may be the cause, or causes, of the green face of nature; however much *light* may be influential in occasioning it, we know that this has another effect on the vegetable world, by making plants incline towards it, bend towards it, when growing in partial darkness. But the peculiar colour which distinguishes this branch of the creation, singular as its constancy may be, is, perhaps, less remarkable than its tenacity of the living principle. An uncommon instance of this occurred not long ago, in the Royal Park of Bushy, when, on breaking up a portion of ground for the purpose of ornamental culture, flowers immediately sprang up, the seeds of which it was ascertained must have lain dormant from the time of OLIVER CROMWELL;[1] nay, what is still more surprising, are we not informed that Mr. HOULTON produced a *bulbous root*, which was discovered in the hand of an Egyptian mummy, and where it probably had remained upwards of two thousand years; yet, on exposure to the air, it germinated, and when placed in the earth grew[2] with great rapidity? DECANDOLLE has turned his inquisitive mind to this subject with his usual ardour, and seems disposed to believe, that trees do not die of old age, in the real sense of the word, but would live for ever, if provided with an unlimited supply of nourishment, and not shaken or destroyed by storms, or some other of the many accidents that trees are 'heir to.' The baobul-tree, according to ADANSON's computation, may be five thousand years old; and DECANDOLLE thinks that the yews of Fountain's Abbey, near Rippon, may have stood two thousand years.

Before concluding what I have to state respecting atmospheric influence on the vegetable kingdom, I must observe, that that mighty empire now embraces upwards of ten thousand known species of plants. Of these, Mrs. SOMERVILLE informs us, "by far the greater

[1] See Register of Arts, vol. i. New Series, p. 304.

[2] See Arcana of Science and Art for 1831, p. 160.

part are indigenous to equinoctial America; Europe contains about half the number; New Holland, with the islands in the Pacific, still less; and in Africa, there are fewer than in any part of the globe of equal extent."[1]

How far climate may conduce in producing such disparity — how far other causes may, would lead to an interesting investigation: one thing is certain, as Mrs. SOMERVILLE continues to remark, that each separate region of both land and water, from the frozen shores of the Polar seas to the burning climes of the Torrid Zone, possess a *flora* of species peculiarly its own; a fact confirmed by Baron HUMBOLDT, in his personal narrative (vol. v. p. 180), who moreover adds, that it is not by the diversity of climate that we can attempt to explain why equinoctial Africa has no *lauriniæ*, or the new world no *heaths*. At another part of her work,[2] Mrs. SOMERVILLE says, the floras of China, Siberia, Tartary, &c. all differ in specific character; and, singular to say, M. M. POPLAND and HUMBOLDT, in equinoctial America, found only twenty-four species that are identical with those of the old world.[3]

I have elsewhere observed that climates may, to a certain degree, be rendered more healthy by draining marshy lands, and other operations, within the reach of the industry of man; and so it is, as stated in a statistical account of several countries of Europe, by Mr. JAMESON, in the *Philosophical Journal*,[4] that, while formerly the average mortality of France, Germany, and England, taken as a group, used to be one in thirty, it is now not quite one in thirty-eight: in like manner, as we have seen, territories may become unhealthy by the neglect or indolence of those who inhabit them. There are some, however, who are of opinion that climates do change from causes which have no reference to the exertions of the human race, and give us, as an example, that of Italy, which is supposed to be much milder than it was in the time of the ancient Romans, when it was highly

[1] See Mrs. SOMERVILLE's Connexion of the Physical Sciences, p. 274.

[2] Ibid. p. 277.

[3] At a meeting of the Highland and Agricultural Society of Scotland, in July, 1834, Professor GRAHAM called the attention of the gentlemen present to what had been done by Dr. ROLLAND, of Montrose, in having raised from the seed certain plants of the forest-trees indigenous to Van Diemen's land; but one only of which Dr. G. thought would prove hardy enough to be reared in this climate to any considerable size in the open air. Whether the species of wheat lately discovered by Mr. FOSTER, in that country (Van Diemen's land), would thrive with us, remains to be tried.

[4] See JAMESON's Philosophical Journal for April 1834, p. 265.

cultivated; in proof of which they say we no longer hear of snow being seen on Mount Soracte, even in the most severe seasons:

"Vides ut altâ stet nive candidum
"Soracte."——

Indeed, the winters generally, in the south of Europe, would appear to be less severe in these days than in former times. OVID, in the tenth elegy of his *Tristia*, speaks of the freezing of the Black Sea (in latitude 42° and 46°), which never occurs at present. I find a curious fact stated by Dr. ROBERTSON in his *History of the Atmosphere*, and which is altogether in accordance with this view of the question; which is, that even at a much later period, viz. in 1668, the Baltic was so firmly frozen over, that CHARLES XI. transported his army across it; and CÆSAR mentions, that corn did not ripen in the northern provinces of France owing to the cold; nay, ARISTOTLE, speaking of the same country, tells us that there, from a like cause, the ass did not thrive. But, perhaps, no man has spoken more decidedly on the subjects than the Abbé MANN, in his *Essays on the Changes of the Temperature of Climates*, to be found in the *Manheim Transactions*; he says, that from the most careful research transmitted to us from the ancients, it appears to be beyond a doubt, that the soil and temperature of the lands from Spain to India, from Atlas to Lapland, and the remote northern regions, have been gradually changing from a state of great moisture and coldness to a superior degree of dryness and warmth. But, with all this, it is lamentable to find that other writers have taken quite an opposite side in the discussion of change of climates. In the third volume of the *Journal de Physique*, is a paper signed *un gentilhomme de Veverais*, in which many proofs are adduced of the *decreasing*,[1] not *increasing* temperature of France, which he supposes consequent on the gradual precession of the equinoxes, and the declining obliquity of the ecliptic.

LYELL, in his *Principles of Geology*,[2] offers arguments to prove that the northern hemisphere was formerly hotter than it now is. Amongst the most forcible of these, he would consider the remains of animals[3] and vegetables only, in these days, natives of the warmer regions of the earth, having been found preserved in strata of different

[1] See History of the Atmosphere, vol. i. p. 170.

[2] See chapter vi. vol. i. p. 92.

[3] Such, perhaps, as the elephants found in Italy, in the northern parts of Europe, and in Germany, which, however, it must be confessed, CUVIER considered as a distinct species, now extinct, and which differed both from the Asiatic and African animal.

ages in very high latitudes; while, on the contrary, remains of animals or plants natural to a cold climate have never been discovered within the tropics. From these facts some have drawn conclusions that the poles are always shifting, and that, consequently, they may, at some former period, have been where the equator now is. Such opinions appear to me vague, nor are they, I believe, admitted as orthodox by the ablest astronomers; and, as is justly observed by the author I have just quoted (Dr. ROBERTSON), "The very pyramids of Egypt demonstrate that the poles have remained unaltered these three thousand years."

BRANDE, however, in his *Journal* (No. viii. p. 281), scruples not to say, that for several centuries past the climate of England has undergone a very material change for the worse; nor can there be a doubt, continues he, that the springs are now later, and the summers shorter, than they were in the youthful days of many persons not very aged, who are, in fact, now alive. It is demonstrable, he adds, that in the northern part of our hemisphere the mean annual temperature is on the decline; and, by the accounts of modern travellers, it appears, that in the mountainous parts of Europe the accumulation of ice and snow is very sensibly increasing. "But, notwithstanding all this," says the celebrated geologist, "we may still look for a return of milder seasons, for it seems that within the last year (1832), a notable relaxation of the cold has taken place, and a great thawing of northern ice; and what makes a return to former weather the more probable is, that, at the same time, we have heard, that the westward variation of the magnetic needle began to decline, and has already retrograded some degrees to the north." So it is, I would, with great deference, infer, that when variations of climate do appear to have taken place, some beneficent influence of the Creator brings about a restoration to natural order, without our being driven to suppose any actual change of position of our earth with respect to the sun.

Hitherto but little attention has been paid to inquiries of this kind in eastern countries; this much, however, may be said, that they are not altogether unattended to. Some of the most learned Brahmans of lower India, with whom I have conversed, are of opinion, that, two thousand years ago, the general temperature of Hindústán was not nearly so high as it now is, as testified by their most ancient records; it may, therefore, still become a question with the curious, and, may I say, credulous, whether there may not be a gradual return to a more temperate clime in those regions, considering, too, that the twilight there is believed to be lengthening, according to the testimony of a

modern writer.[1] If such is really the case, it must go far to justify the notions of those who are disposed to acquiesce in the possibility of a change of the earth's relative position with respect to the greater orb, amongst whom, I must confess that I cannot at present rank myself. But, independent of any great and permanent actual variation of climate, as consequent of alteration of the position of our earth, there are some of the natural philosophers of these days, and those by no means visionary, who think that the seasons may undergo changes corresponding to others, recurring after certain intervals, and which seem the effect of the general connexion of the globe with the other planets, rather than of its relative position with respect to the sun: and this they allege to be confirmed, by considering the stated alterations which have taken place in the climates of Europe, according to authorities adduced;[2] nay, some of the old writers have fixed the period to a particular revolution of six hundred years.[3]

Moreover, I repeat, independent of all great or permanent actual changes of climate, it will be readily admitted, that there are often extraordinary variations in the seasons, as well in tropical countries as in others: witness those which occur from time to time in our Asiatic territories, when a repetition of unusual and unseasonable drought occasions the most dreadful and destructive famines; witness, also, the havoc not rarely committed by devastating inundations and floods, for both of which it must ever be equally difficult to account. It has been remarked that the severities of these last mentioned (floods), though more awful when they do take place in torrid regions, are there less frequent than in the temperate zone.

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it, caused by the air rushing in to fill up the space left by that which has been rarified by the heat of the torrid zone, and which is the only motion to which the fluid is exposed. The combined effect of these two motions is to produce the *south-east* trade-wind in south latitude, and the *north-east* trade-wind on the other side of the equator." It is somewhat remarkable that rain seldom occurs in the *constant trade-winds*, but abundantly in the adjoining latitudes, nor is the mean height of the barometer affected by them.

Monsoons, which are, it is presumed, well known to most of the gentlemen of the Society, are deviations from the uniform direction of the wind towards the west, which characterise the trade-winds. To use the words of one of the most distinguished meteorologists[1] of the day,—" Those of the Indian ocean, as well as other periodical winds, are consequent of a peculiar distribution of land and water, acted on by the periodical changes of the sun's declination. While the sun is vertical to the places where they occur, the land becomes heated, and the air expanded, and the wind flows towards the coasts; as the sun retires towards the opposite point of its course, the land cools faster than the surrounding seas, and the course of the winds is westward;" or, to express it otherwise, and use the words of Captain Basil Hall, in speaking of the monsoons of India,—" When the sun has great northern declination, the peninsula of Hindústán, the north of India, and China, being heated, the quick-moving equatorial air rushes to the northward to fill up the slow-moving rarified space; and this supply, being possessed not only with a rapid eastern velocity, but with a motion from the south, produces the *south-west* monsoon in the Indian ocean, Bay of Bengal, and in the China Sea. When the sun, on the other hand, goes to the south, the same seas are occupied by the air, which, coming from regions beyond the northern tropic, possesses less easterly velocity than the space they are drawn to, which gives them an easterly character, and this, combined with their proper motion, if I may so call it, from the north, produces the *north-east* monsoon."[2] Such as wish for further information on this subject, I refer to Horsburgh's most valuable work, entitled *East India Directions;* also, to Elphinstone's *Account of Cabul*, (p. 126).

What are termed *hurricanes*, *tempests*, or *typhoons*, are of a very different nature, and are generally allowed to be, of all atmospheric phenomena, the most difficult to account for, such as those

[1] See Daniel's Meteorological Essays, p. 106.

[2] See work just quoted, p. 485.

dreadful tornadoes which are not rarely experienced to the eastward of, and off the Cape of Good Hope, do frequently much mischief in the West Indies, and are often truly terrific in the Chinese seas. They usually advance to windward, and are invariably accompanied with a low state of the barometer. Various causes have been adduced for these visitations: perhaps the most probable is the sudden destruction of a large portion of the atmosphere by electricity, and the subsequent rushing of the surrounding air into the partial void; and, it is not unworthy of remark, that the ancients, especially PLINY, seemed inclined to ascribe tempests to the same cause, or what he calls *thunder*.[1] The Greeks made a distinction betwixt what they named *knephias* and the *typhon*, considering the latter the lesser, during which the wind is not constrained to *turn round*, as in the former; in fact, when, as the natural philosopher just mentioned expresses it, the cleft or breach in the cloud is not so great as in the ἰνηφίας. M. LAMBERT, as well as others, have given it as their opinion that planetary influence has much to do in occasioning hurricanes; and MONIER is allowed to have shewn that the tempestuous winds which are experienced about the equinoxes, are occasioned by the combined influence of the sun and moon. Let us see what VOLNEY says on this subject: he believed hurricanes to be owing to "different strata of air existing in different degrees of density, their equilibrium being destroyed in consequence of the condensation of the vapour in the higher stratum, thereby enabling it to overcome the resistance occasioned by the elasticity of the lower;" and it is on similar principles that Dr. FRANKLIN explains the appearance of hurricanes as they occur in America.[2] So it is that we still find men, and great men too, differing in opinion with respect to atmospheric appearances, after a lapse of many hundred years since such matters were first inquired after. It is amusing to see what PLINY says of the sky (cœlum). "The sky is situated beneath the moon, and far under that planet, and mingling together an infinite portion of the superior celestial nature, or elementary fire, with, likely, a great deal of earthy vapours, it doth partake confusedly of both: from hence proceed clouds, thunders, and terrible lightnings; hence, also, come hail, frost, rain, storms, and whirlwinds.[3] Honestly speaking, we do not know a *very* great deal more at the present time, with all our instruments and discoveries to boot.

[1] Vide PLINY, Nat. Hist. lib. ii. cap. xlviii.

[2] See ROBERTSON'S History of the Atmosphere, vol. i. pp. 263, 299.

[3] PLINY, Nat. Hist. lib. ii. cap. v.

It has by some been supposed that those tremendous tempests recur at certain periods; I do not, however, think this is justified by experience, and it is not admitted by CAPPER: ROBERTSON is led to believe that they usually take place about the time of an eclipse.[1]

Hurricanes, when they do appear in India, for the most part shed their horrors during the interval betwixt the changes of the monsoon, and generally advance first from the north-east; from which point, after blowing with great severity for twelve or fourteen hours, there ensues a brief but awful calm, leaving barely time to take a hasty glance of houses in ruins, cattle destroyed, and many a lofty tree laid low: the calm I have said is transitory, for the enemy soon returns with redoubled force, and, what is remarkable, from a directly opposite quarter. This second assault continues as long as the preceding; is equally calamitous; and usually completes any work of havoc which its predecessor has left unfinished. Thus, in their nature of turning suddenly to an opposite direction, do these tornadoes resemble, in a singular degree, the τυφων (typhon) of the Greeks.

HALLEY seems to consider such Oriental tempests as altogether similar in their kind to those of the West Indies. CAPPER, in his *Observations on the Winds and Monsoons*,[2] gives an account of no less than five, which took place on the Coromandel coast in the month of October, in different years; and I myself witnessed one of extreme violence during the same month in 1807, by which I myself was a sufferer.

The velocity of the wind, on such appalling occasions, has been estimated differently by scientific men. Dr. DERHAM did not imagine that it ever travelled faster than at the rate of sixty feet in a second; on the other hand, SMEATON calculated that a hurricane which tears up trees by the roots and carries houses before it, flies at the rate of 147·70 feet in a second. We learn from Le Chevalier de la COUDRAYE's very interesting publication, *Théories des Vents et des Ondes* (p. 11), that MARIOTTE and BOUGUER, in France; JACQUES BERNOUILLI, at Basle; and DOM GEORGE JUAN, in Spain, have all, at different times, occupied themselves on this curious subject, and brought forth varying results.

What are denominated variable winds, those, in fact, experienced in Europe, seem to possess no character in common except variableness. They commence at no stated periods, and blow with different degrees of force; though these winds are very changeable, yet we

[1] History of the Atmosphere, vol. i, p. 299.

[2] See work, pp. 57—61.

tain that light is essentially necessary that they should assume that colour in any degree whatever. In Mr. EDWARD ELLIS's excellent discussion, entitled *Further Inquiries into the Changes induced on Atmospheric Air*, &c. a great deal of new and interesting matter may be found on the subject of the causes of colour in plants. In chap. ii. sect. 3, he treats of the colour of plants, arising from their chemical constitution, and which he attributes to the decomposition of their saline compounds by the agency of solar light. In the following section he proceeds to investigate the manner in which light exerts its influence in imparting colour independent of chemical action. In a general view of atmospheric influence, which this essay simply aims at, minute scientific details must not be looked for; I shall, therefore, merely here observe, that the accurate observer above named states at page 166 of his work, that, "since neither the mechanical doctrine of density (as first supposed by NEWTON), nor the supposition of phlogiston, nor the actual combination of oxygen with bodies, seems sufficient to explain these affections of light from which the diversity of their *permanent colours proceeds*, we must seek out some other mode of action for those phenomena less liable to objection." And he seems inclined to lean to the theory of Dr. BANCROFT, who believes that *the permanent colours of different bodies are not produced by mere refraction*, but depend on other properties, and that *there are certain affinities, or elective attractions, existing in, or between, the differently-coloured matters, and the particular sorts or rays of light so absorbed, or made latent:* and that there does exist such an affinity, or attraction, between light and the particles of bodies, seems more than probable, from various reasons. For instance, when the muriate of silver is exposed to the solar rays, and to the *light alone* of those rays, it begins to be discoloured at the end of a few seconds; "after a minute," according to SENEBIER, "its surface is sensibly violet." It would appear, according to experiments made by SCHEELE, and which may be seen in his work on air and fire, that in effecting this discoloration, the violet ray acted the soonest; and by SENEBIER's account, the next in succession were the indigo, the blue, the green, the yellow, the orange, and the red. I find, at page 169 of Mr. ELLIS's work above cited, these words: "The action of light on vegetables seems to resemble, in many respects, its operation on inanimate bodies. We have already seen, that light in its undecomposed state, causes the expulsion of oxygen gas, and gives rise, at the same time, to the *green colour* of plants; and SENEBIER, moreover, discovered that plants, illuminated with different rays, grew with a varying degree of rapidity: thus, plants illuminated

with yellow rays grew with rapidity in height; next, those in the violet rays; afterwards, those in the red."

Yet notwithstanding all this, does not Mrs. SOMERVILLE, in her *Connexion of the Physical Sciences*, speak of the sea-weeds growing to the enormous length of several hundred feet, and all of them highly coloured; though many must live in deep caverns of the ocean, in almost total darkness,—a circumstance which induces that celebrated individual to suppose, that light may not be the *only* principle on which the colour of vegetables depends; more especially, as HUMBOLDT met with *green plants* in complete obscurity at the bottom of one of the mines of Freuberg. Whatever may be the cause, or causes, of the green face of nature; however much *light* may be influential in occasioning it, we know that this has another effect on the vegetable world, by making plants incline towards it, bend towards it, when growing in partial darkness. But the peculiar colour which distinguishes this branch of the creation, singular as its constancy may be, is, perhaps, less remarkable than its tenacity of the living principle. An uncommon instance of this occurred not long ago, in the Royal Park of Bushy, when, on breaking up a portion of ground for the purpose of ornamental culture, flowers immediately sprang up, the seeds of which it was ascertained must have lain dormant from the time of OLIVER CROMWELL;[1] nay, what is still more surprising, are we not informed that Mr. HOULTON produced a *bulbous root*, which was discovered in the hand of an Egyptian mummy, and where it probably had remained upwards of two thousand years; yet, on exposure to the air, it germinated, and when placed in the earth grew[2] with great rapidity? DECANDOLLE has turned his inquisitive mind to this subject with his usual ardour, and seems disposed to believe, that trees do not die of old age, in the real sense of the word, but would live for ever, if provided with an unlimited supply of nourishment, and not shaken or destroyed by storms, or some other of the many accidents that trees are 'heir to.' The baobul-tree, according to ADANSON's computation, may be five thousand years old; and DECANDOLLE thinks that the yews of Fountain's Abbey, near Rippon, may have stood two thousand years.

Before concluding what I have to state respecting atmospheric influence on the vegetable kingdom, I must observe, that that mighty empire now embraces upwards of ten thousand known species of plants. Of these, Mrs. SOMERVILLE informs us, "by far the greater

[1] See Register of Arts, vol. i. New Series, p. 304.

[2] See Arcana of Science and Art for 1831, p. 160.

part are indigenous to equinoctial America; Europe contains about half the number; New Holland, with the islands in the Pacific, still less; and in Africa, there are fewer than in any part of the globe of equal extent."[1]

How far climate may conduce in producing such disparity — how far other causes may, would lead to an interesting investigation: one thing is certain, as Mrs. SOMERVILLE continues to remark, that each separate region of both land and water, from the frozen shores of the Polar seas to the burning climes of the Torrid Zone, possess a *flora* of species peculiarly its own; a fact confirmed by Baron HUMBOLDT, in his personal narrative (vol. v. p. 180), who moreover adds, that it is not by the diversity of climate that we can attempt to explain why equinoctial Africa has no *lauriniæ*, or the new world no *heaths*. At another part of her work,[2] Mrs. SOMERVILLE says, the floras of China, Siberia, Tartary, &c. all differ in specific character; and, singular to say, M. M. POPLAND and HUMBOLDT, in equinoctial America, found only twenty-four species that are identical with those of the old world.[3]

I have elsewhere observed that climates may, to a certain degree, be rendered more healthy by draining marshy lands, and other operations, within the reach of the industry of man; and so it is, as stated in a statistical account of several countries of Europe, by Mr. JAMESON, in the *Philosophical Journal*,[4] that, while formerly the average mortality of France, Germany, and England, taken as a group, used to be one in thirty, it is now not quite one in thirty-eight: in like manner, as we have seen, territories may become unhealthy by the neglect or indolence of those who inhabit them. There are some, however, who are of opinion that climates do change from causes which have no reference to the exertions of the human race, and give us, as an example, that of Italy, which is supposed to be much milder than it was in the time of the ancient Romans, when it was highly

[1] See Mrs. SOMERVILLE'S Connexion of the Physical Sciences, p. 274.

[2] Ibid. p. 277.

[3] At a meeting of the Highland and Agricultural Society of Scotland, in July, 1834, Professor GRAHAM called the attention of the gentlemen present to what had been done by Dr. ROLLAND, of Montrose, in having raised from the seed certain plants of the forest-trees indigenous to Van Diemen's land; but one only of which Dr. G. thought would prove hardy enough to be reared in this climate to any considerable size in the open air. Whether the species of wheat lately discovered by Mr. FOSTER, in that country (Van Diemen's land), would thrive with us, remains to be tried.

[4] See JAMESON'S Philosophical Journal for April 1834, p. 265.

cultivated; in proof of which they say we no longer hear of snow being seen on Mount Soracte, even in the most severe seasons:

"Vides ut altâ stet nive candidum
"Soracte."——

Indeed, the winters generally, in the south of Europe, would appear to be less severe in these days than in former times. OVID, in the tenth elegy of his *Tristia*, speaks of the freezing of the Black Sea (in latitude 42° and 46°), which never occurs at present. I find a curious fact stated by Dr. ROBERTSON in his *History of the Atmosphere*, and which is altogether in accordance with this view of the question; which is, that even at a much later period, viz. in 1668, the Baltic was so firmly frozen over, that CHARLES XI. transported his army across it; and CÆSAR mentions, that corn did not ripen in the northern provinces of France owing to the cold; nay, ARISTOTLE, speaking of the same country, tells us that there, from a like cause, the ass did not thrive. But, perhaps, no man has spoken more decidedly on the subjects than the Abbé MANN, in his *Essays on the Changes of the Temperature of Climates*, to be found in the *Manheim Transactions*; he says, that from the most careful research transmitted to us from the ancients, it appears to be beyond a doubt, that the soil and temperature of the lands from Spain to India, from Atlas to Lapland, and the remote northern regions, have been gradually changing from a state of great moisture and coldness to a superior degree of dryness and warmth. But, with all this, it is lamentable to find that other writers have taken quite an opposite side in the discussion of change of climates. In the third volume of the *Journal de Physique*, is a paper signed *un gentilhomme de Veverais*, in which many proofs are adduced of the *decreasing*,[1] not *increasing* temperature of France, which he supposes consequent on the gradual precession of the equinoxes, and the declining obliquity of the ecliptic.

LYELL, in his *Principles of Geology*,[2] offers arguments to prove that the northern hemisphere was formerly hotter than it now is. Amongst the most forcible of these, he would consider the remains of animals[3] and vegetables only, in these days, natives of the warmer regions of the earth, having been found preserved in strata of different

[1] See History of the Atmosphere, vol. i. p. 170.

[2] See chapter vi. vol. i. p. 92.

[3] Such, perhaps, as the elephants found in Italy, in the northern parts of Europe, and in Germany, which, however, it must be confessed, CUVIER considered as a distinct species, now extinct, and which differed both from the Asiatic and African animal.

ages in very high latitudes; while, on the contrary, remains of animals or plants natural to a cold climate have never been discovered within the tropics. From these facts some have drawn conclusions that the poles are always shifting, and that, consequently, they may, at some former period, have been where the equator now is. Such opinions appear to me vague, nor are they, I believe, admitted as orthodox by the ablest astronomers; and, as is justly observed by the author I have just quoted (Dr. ROBERTSON), "The very pyramids of Egypt demonstrate that the poles have remained unaltered these three thousand years."

BRANDE, however, in his *Journal* (No. viii. p. 281), scruples not to say, that for several centuries past the climate of England has undergone a very material change for the worse; nor can there be a doubt, continues he, that the springs are now later, and the summers shorter, than they were in the youthful days of many persons not very aged, who are, in fact, now alive. It is demonstrable, he adds, that in the northern part of our hemisphere the mean annual temperature is on the decline; and, by the accounts of modern travellers, it appears, that in the mountainous parts of Europe the accumulation of ice and snow is very sensibly increasing. "But, notwithstanding all this," says the celebrated geologist, "we may still look for a return of milder seasons, for it seems that within the last year (1832), a notable relaxation of the cold has taken place, and a great thawing of northern ice; and what makes a return to former weather the more probable is, that, at the same time, we have heard, that the westward variation of the magnetic needle began to decline, and has already retrograded some degrees to the north." So it is, I would, with great deference, infer, that when variations of climate do appear to have taken place, some beneficent influence of the Creator brings about a restoration to natural order, without our being driven to suppose any actual change of position of our earth with respect to the sun.

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Moreover, I repeat, independent of all great or permanent actual changes of climate, it will be readily admitted, that there are often extraordinary variations in the seasons, as well in tropical countries as in others: witness those which occur from time to time in our Asiatic territories, when a repetition of unusual and unseasonable drought occasions the most dreadful and destructive famines; witness, also, the havoc not rarely committed by devastating inundations and floods, for both of which it must ever be equally difficult to account. It has been remarked that the severities of these last mentioned (floods), though more awful when they do take place in torrid regions, are there less frequent than in the temperate zone.

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[3] Edinburgh Encyclopædia, article — Navigation.

[4] The velocity of the earth's rotation at the equator is, in round numbers, about one thousand miles an hour; at latitude 30° about eight hundred and sixty miles, that is, one hundred and forty miles slower. The average velocity of the earth's easterly motion in the space betwixt the equator and latitude 30° may be stated at nine hundred and fifty miles an hour.

it, caused by the air rushing in to fill up the space left by that which has been rarified by the heat of the torrid zone, and which is the only motion to which the fluid is exposed. The combined effect of these two motions is to produce the *south-east* trade-wind in south latitude, and the *north-east* trade-wind on the other side of the equator." It is somewhat remarkable that rain seldom occurs in the *constant trade-winds*, but abundantly in the adjoining latitudes, nor is the mean height of the barometer affected by them.

Monsoons, which are, it is presumed, well known to most of the gentlemen of the Society, are deviations from the uniform direction of the wind towards the west, which characterise the trade-winds. To use the words of one of the most distinguished meteorologists[1] of the day,—" Those of the Indian ocean, as well as other periodical winds, are consequent of a peculiar distribution of land and water, acted on by the periodical changes of the sun's declination. While the sun is vertical to the places where they occur, the land becomes heated, and the air expanded, and the wind flows towards the coasts; as the sun retires towards the opposite point of its course, the land cools faster than the surrounding seas, and the course of the winds is westward;" or, to express it otherwise, and use the words of Captain BASIL HALL, in speaking of the monsoons of India,—" When the sun has great northern declination, the peninsula of Hindústán, the north of India, and China, being heated, the quick-moving equatorial air rushes to the northward to fill up the slow-moving rarified space; and this supply, being possessed not only with a rapid eastern velocity, but with a motion from the south, produces the *south-west* monsoon in the Indian ocean, Bay of Bengal, and in the China Sea. When the sun, on the other hand, goes to the south, the same seas are occupied by the air, which, coming from regions beyond the northern tropic, possesses less easterly velocity than the space they are drawn to, which gives them an easterly character, and this, combined with their proper motion, if I may so call it, from the north, produces the *north-east* monsoon."[2] Such as wish for further information on this subject, I refer to HORSBURGH's most valuable work, entitled *East India Directions;* also, to ELPHINSTONE's *Account of Cabul*, (p. 126).

What are termed *hurricanes*, *tempests*, or *typhoons*, are of a very different nature, and are generally allowed to be, of all atmospheric phenomena, the most difficult to account for, such as those

[1] See DANIEL's Meteorological Essays, p. 106.
[2] See work just quoted, p. 485.

dreadful tornadoes which are not rarely experienced to the eastward of, and off the Cape of Good Hope, do frequently much mischief in the West Indies, and are often truly terrific in the Chinese seas. They usually advance to windward, and are invariably accompanied with a low state of the barometer. Various causes have been adduced for these visitations: perhaps the most probable is the sudden destruction of a large portion of the atmosphere by electricity, and the subsequent rushing of the surrounding air into the partial void; and, it is not unworthy of remark, that the ancients, especially PLINY, seemed inclined to ascribe tempests to the same cause, or what he calls *thunder*.[1] The Greeks made a distinction betwixt what they named *knephias* and the *typhon*, considering the latter the lesser, during which the wind is not constrained to *turn round*, as in the former; in fact, when, as the natural philosopher just mentioned expresses it, the cleft or breach in the cloud is not so great as in the ἰκνφίας. M. LAMBERT, as well as others, have given it as their opinion that planetary influence has much to do in occasioning hurricanes; and MONIER is allowed to have shewn that the tempestuous winds which are experienced about the equinoxes, are occasioned by the combined influence of the sun and moon. Let us see what VOLNEY says on this subject: he believed hurricanes to be owing to "different strata of air existing in different degrees of density, their equilibrium being destroyed in consequence of the condensation of the vapour in the higher stratum, thereby enabling it to overcome the resistance occasioned by the elasticity of the lower;" and it is on similar principles that Dr. FRANKLIN explains the appearance of hurricanes as they occur in America.[2] So it is that we still find men, and great men too, differing in opinion with respect to atmospheric appearances, after a lapse of many hundred years since such matters were first inquired after. It is amusing to see what PLINY says of the sky (cœlum). "The sky is situated beneath the moon, and far under that planet, and mingling together an infinite portion of the superior celestial nature, or elementary fire, with, likely, a great deal of earthy vapours, it doth partake confusedly of both: from hence proceed clouds, thunders, and terrible lightnings; hence, also, come hail, frost, rain, storms, and whirlwinds.[3] Honestly speaking, we do not know a *very* great deal more at the present time, with all our instruments and discoveries to boot.

[1] Vide PLINY, Nat. Hist. lib. ii. cap. xlviii.

[2] See ROBERTSON'S History of the Atmosphere, vol. i. pp. 263, 299.

[3] PLINY, Nat. Hist. lib. ii. cap. v.

It has by some been supposed that those tremendous tempests recur at certain periods; I do not, however, think this is justified by experience, and it is not admitted by CAPPER: ROBERTSON is led to believe that they usually take place about the time of an eclipse.[1]

Hurricanes, when they do appear in India, for the most part shed their horrors during the interval betwixt the changes of the monsoon, and generally advance first from the north-east; from which point, after blowing with great severity for twelve or fourteen hours, there ensues a brief but awful calm, leaving barely time to take a hasty glance of houses in ruins, cattle destroyed, and many a lofty tree laid low: the calm I have said is transitory, for the enemy soon returns with redoubled force, and, what is remarkable, from a directly opposite quarter. This second assault continues as long as the preceding; is equally calamitous; and usually completes any work of havoc which its predecessor has left unfinished. Thus, in their nature of turning suddenly to an opposite direction, do these tornadoes resemble, in a singular degree, the τυφων (typhon) of the Greeks.

HALLEY seems to consider such Oriental tempests as altogether similar in their kind to those of the West Indies. CAPPER, in his *Observations on the Winds and Monsoons*,[2] gives an account of no less than five, which took place on the Coromandel coast in the month of October, in different years; and I myself witnessed one of extreme violence during the same month in 1807, by which I myself was a sufferer.

The velocity of the wind, on such appalling occasions, has been estimated differently by scientific men. Dr. DERHAM did not imagine that it ever travelled faster than at the rate of sixty feet in a second; on the other hand, SMEATON calculated that a hurricane which tears up trees by the roots and carries houses before it, flies at the rate of 147·70 feet in a second. We learn from Le Chevalier de la COUDRAYE's very interesting publication, *Théories des Vents et des Ondes* (p. 11), that MARIOTTE and BOUGUER, in France; JACQUES BERNOUILLI, at Basle; and DOM GEORGE JUAN, in Spain, have all, at different times, occupied themselves on this curious subject, and brought forth varying results.

What are denominated variable winds, those, in fact, experienced in Europe, seem to possess no character in common except variableness. They commence at no stated periods, and blow with different degrees of force; though these winds are very changeable, yet we

[1] History of the Atmosphere, vol. i. p. 299.

[2] See work, pp. 57—61.

must allow that they come far oftener from the west[1] than from any other quarter, which is, perhaps, necessary to restore the equilibrium of the atmosphere, constantly disturbed as it is by the trade winds blowing in a directly opposite direction. It is, I think, generally allowed by us, that the western coasts of extra-tropical countries have a much higher mean[2] temperature than the eastern coasts, a difference which DANIEL says is extremely striking between the western coast of North America and the opposite eastern coast of Asia; a fact which is best explained, that distinguished natural philosopher thinks, by the caloric evolved in the condensation of vapour swept from the surface of the ocean by the westerly winds, the temperature of the climate being in this way raised by the evolution of latent heat. The same authority (DANIEL) is of opinion, that one of the chief causes of the variation of the wind in the temperate zone, is the extra abundance of land in the northern hemisphere; something, he thinks, is also due to the variation of the barometrical pressure: but we must not lose sight of another circumstance which cannot fail to conduce to the inconstancy of the winds, I mean the partial condensation and rarefaction of the air, which, on common occasions, may proceed from the nature of the soil, and other local peculiarities. Chevalier de la COUDRAYE considers variable winds as the consequence of the following causes:—1. *L'élasticité de l'air*; 2. *Les condensations, et dilatations partielles de l'atmosphère*; 3. *La fermentation des vapeurs*; 4. *Certains grands mouvemens de l'intérieur du globe*.[3]

How just or fanciful any of these notions may be, we shall not pause to examine; but thus much we may be permitted to suppose, that the very singular deviation from the natural order of the seasons experienced in this country in 1833–1834, and to which we have already alluded, must have had its source in some rare, remote,

[1] On an average of ten years in Great Britain, DANIEL found that the westerly winds exceed the easterly in the proportion of 225 to 140. So, on the same average, he found that the northerly winds are to the southerly, as 192 to 173. He also ascertained that northerly winds almost invariably raise the thermometer, while southerly winds as constantly depress it. — See his *Meteorological Essays, &c.* p. 115.

[2] It would appear by an excellent paper read by Colonel SYKES, at the Literary Association, held at Edinburgh, in September 1834, that that gentleman had found, by actual observation, that the mean temperatures of many situations in India were higher than they are commonly reckoned.

[3] See *Théories des Vents*, p. 40. There is much curious information on this subject in a work entitled *Neptune Oriental*, and which the author just named informs us, has proved of the greatest service to the French marine. It is by M. D'APRES DE MANNE VILETTE, and was published at Brest in 1774.

and most peculiar atmospheric influence. There is, we believe, a very powerful sympathy in that extraordinary aerial fluid which circulates round the globe; and it is, therefore, but reasonable to conclude, that remarkable and unseasonable weather in one part of the world may, or must, induce a something as unseasonable in another at a different period. Now we know that in Turkey, in Persia, in India, and in other eastern regions, the heat in April, May, and June (1833), was more than usually intense; indeed, it has been ascertained that, in the last-mentioned country, on the coast of Coromandel, the thermometer stood, for many days together, as high as 120° in the shade (in the inside of houses) at noon. May not this unusually high temperature of the air have occasioned an extraordinary tendency of the wind to flow from west to east, and often in irregular and tempestuous bursts consequent on local circumstances of sea or land?

It is imagined by some, that nearly similar seasons return at certain intervals; and much labour and ingenuity have been exerted to discover the cycles, as well by men of science as by almanac-makers. PLINY expresses a regret that he could not come to more exact conclusions on this question; he seems, however, to have believed generally, that the planets[1] had much to do in bringing about the observed regularity of the periods; he also seems to have been of opinion, that, while the sun simply "temperates and orders" the year, the planets are the "source or cause from which arise dews, snow, rain, and particular winds."[2] TOALDO, a physician of Padua, who wrote in 1777, and gave much of his time to the study of meteorology and astronomy, concluded that seasons, after a distinct interval, recur, corresponding in temperature and humidity; and this interval he conceived to be eighteen or nineteen years;[3] a notion in which he was seconded by PERE COTTÈ, as well as FOUCHY and VAN SWINDEN, and followed at a respectful distance by Mr. MACKENZIE of our day.

I shall now take the liberty of calling the attention of the Society for a few minutes to what are termed prognostics, as applicable to climate and seasons. In India, and other countries, under the influence of regular monsoons, the inhabitants look perhaps a little less anxiously for such warnings of change; but in all those territories,

[1] See PLINY's Natural History, book ii. chap. xxxix. [2] Ibid.

[3] This precise period discovered by TOALDO, ROBERTSON thinks is indicated in the 18th book and 25th chapter of PLINY's Natural History.—See *History of the Atmosphere*, vol. i. p. 393.

where more variable seasons are common, it is natural for man to contemplate them, so as to enable him, in good time, to take measures against calamity, or prepare for the operations of serene weather.

The ancients paid great attention to such matters, as we learn by ARISTOTLE's well-known work *De Meteoris*; though far more satisfactory information on the subject may be obtained from the writings of his pupil, THEOPHRASTUS, whose book was the groundwork of the Διοσημεια (prognostics) of ARATUS, afterwards translated into Latin verse by CICERO; VIRGIL and PLINY, as well as LUCRETIUS, evinced the same anxious desire to be able to foresee changes in the weather. It would be out of place here to remark at large on the many curious opinions adduced by the writers of antiquity on meteorology; but we may state, that the Egyptians of old, by PLINY's account, judged much by the appearance of the moon; if they observed her at her prime, or on the fourth day after the change, pure, fair, and shining, they looked for fair weather; if she was unusually red, they reckoned on wind; if dim and dusky, they made sure of rain.[1] ARATUS, abovementioned, the celebrated Greek poet and philosopher, and who was supposed to be profoundly skilled in astrology, says, that "If, on the third day of the moon, the horns of the crescent are sharp and well defined, the sky will continue serene during the whole month." But I shall have occasion to speak of lunar influence in the third part of this paper, and will then mention what are the opinions of ARAGO, and other modern authors, with regard to its effect on the weather, tides, &c.

Prognostics, by later writers, have been divided into halos, parhelia, St. Kelmo's fire, &c. &c. as the forerunners of storms, especially in the South Sea and Mediterranean; but ROBERTSON seems to be of opinion that in our climate their appearance is usually followed simply by rain.

A fertile source of prognostics has arisen from the ever-changing appearance of the clouds, of which seven modifications have been treated of by FOSTER, in his *Researches on the Atmosphere*. To these aerial travellers different names have been given (according to their height, colour, and aspect) by Mr. HOWARD, who, at the same time, explains what he believes, or conjectures, each to indicate in the great alembic of the atmosphere.

Red clouds[2] in the west, at sun-set, are supposed by some to

[1] See PLINY's Natural History, lib. xviii. cap. xxxv.

[2] A prognostic acknowledged by the Jews of old, as we learn from the highest of all authorities.—See *St. Matthew*, chap. xvi. verse 2.

portend fine weather; from this cause, that the air, when dry, refracts more red or heat-making rays; and a copper-coloured, or yellow sunset, is said to foretell rain.

As far as regards the brute creation, it has been observed, that, previous to wet weather, dogs get drowsy: so PLINY tells us, that cattle, snuffing up the air, and licking themselves against the hair, are signs of an approaching storm:

"Boves cœlum olfactantes, seque lambentes contra pilum."[1]

Rain, in our latitude, may generally be expected when swallows are observed to fly low, and occasionally dip their wings[2] in the water over which they skim; when the peacock cries louder than usual; and when water-fowl are particularly clamorous; so, a bleaker than usual winter may be foretold, when birds of passage migrate south earlier than they commonly do. Such facts naturally lead us to reflect on a very curious and most interesting subject, and one, till lately, but little attended to, I mean the "habits and instincts of animals," and which we may soon expect to find ably treated by KIRBY in his *Bridgewater Essay*.

I have elsewhere remarked (in the *Materia Indica*), that the Persians, as well as the Hindús, had works on prognostics and meteorology, which it might perhaps be desirable to have translated, and to which I here respectfully beg leave to call the attention of that Committee, now so laudably and successfully employed. Amongst those of the former, I would mention جامع العلوم *Jámi'ul' Ulúm*, a publication from the pen of SUFFY MOHAMMED GHOS, of Gwaliar, on geography, chemistry, omens, agriculture, &c.; also, خفی علائی *Khiffi 'Alái*, by ISMAEL BEN HUSSEIN, on air, seasons, health, &c. written as far back as A.D. 1113.[3]

The Hindú husbandmen practically aver, that very heavy dews falling on the Coromandel coast in December and January, foretell a very hot season; and that the same is denoted by a more than usually loud and savage clamour of the *Fingha* (Lanius cœrulescens), or

[1] PLINY'S Natural History, lib. xviii. cap. xxxv.

[2] See FOSTER'S Researches on the Atmosphere, p. 133.

[3] Another Persian work of great merit and estimation in India, is called by two distinct names of دستور الاطبا *Dastúr ul Alibbá*, and طب فرشتہ *Tibbi Ferishtah*: it is composed by the historian FERISHTAH, and treats of the peculiarities of climate over the face of the earth; it has been translated by D. W. GEDDES.

king of the crows. They also maintain that when the land-wind is not very scorching, or of long duration, on the eastern side of the peninsula, what is termed the south-west monsoon on the Malabar coast, will be scanty or insufficient; but if, on the contrary, it should continue, which it sometimes does, night and day for ten or twelve days successively without an intervening sea-breeze, there seldom fails to ensue a very heavy monsoon on that coast.

Previous to the days of TORICELLI, in the early part of the seventeenth century, mankind had, it is true, various, but uncertain modes of pursuing their meteorological researches: his discovery of the barometer brought these more within the range of definite science, though even now, with all the additional aid that has been derived by DRABELLIUS's discovery of the thermometer about the same period (1627), there is much doubt and frequent disappointment. Every one knows that the mercury in the barometer generally falls before rain, and rises during fair weather; I say generally, for, in some instances, it is no very true prophet: with more certainty does it fall before a heavy gale, and rise rapidly as it blows over. Lord BACON, in his *Natural History*, has given much curious information on the subject of prognostics: amongst other things, he has said, that a cool summer bodeth a hard winter, and that a hot and dry summer portendeth an open beginning of a winter, and a cold mid-winter and spring. Notwithstanding the high authority from which these opinions sprang, we know that they are based more on experience than philosophical principle; were they not so, more certain consequences would be the result. But let us not despair, we live in a most searching and ambitious age; we all know and feel what has been done for science and the arts in various ways within the last half century; and if the nicer movements and changes perpetually going on in the atmosphere, and the peculiar and multiform nature of morbific effluvia, which are therein engendered, are less understood than many other things, it is no reason why industry, research, and perseverance, should not in time unveil the mysteries. We are sufficiently aware what exertions have lately been made by several celebrated men in this most laudable pursuit; DANIEL, WHEWELL, and PROUT, in England, are of great eminence, but I would chiefly, at this time, distinguish Professor FORBES, of Edinburgh, who, to a most acute, inquisitive, and ingenious mind, unites a zeal and ardour in the highest degree commendable.

I know not with what propriety I can call the attention of the Society to a very extraordinary work which has lately appeared, not having had, as yet, leisure particularly to examine it; but in so far as it bears on my present inquiry respecting general climate, I

may say, that Mr. CUNNINGHAM in his publication[1] seems disposed to consider *electro-magnetism* as the omnipresent, all-powerful, and universal cause; and that to it are owing the ebbing and flowing of the tides, the variations of the needle, the existence and eccentricities of the winds, and the periodical changes of the weather. This great innovator (for we can as *yet* call him by no other name) considers the sun as a huge galvanic battery, pouring down his electro-magnetic rays on the earth for the vivifaction of every living thing thereon, as well as for assisting in the completion of those great changes which it has been undergoing since its formation; with the wise "view of making it a fitter nursery for the animal and vegetable creation, which the beneficent Author of all has implanted upon it."

Of the new theory which he has adopted, with regard to the motions of the heavenly orbs, consequent on the attraction and repulsion of his two distinct zones, of what he terms *mass-electricity*, and *mass-magnetism*, surrounding, the one the northern, the other the southern hemisphere—of this new theory, I repeat, I profess myself incapable of giving an opinion. Led, as we have been, for ages past to look to a very different cause for such mighty movements, we may, at all events, be allowed to say, that Mr. CUNNINGHAM's assumption is a very bold one; but, at the same time, that the science and originality he has displayed are of no mean order.

Man in sound health feels but little the changes of the weather in his own frame; but such is not the case with invalids, especially the rheumatic and nervous, who can often tell when a storm or a whirlwind is at hand. Lord VERULAM fell into a syncope on the occurrence of an eclipse; and I have it from undoubted authority,[2] that our late excellent monarch, GEORGE IV., could say with great precision, from peculiar sensations, when thunder might be expected: so could a church Bráhman of Tanjore, a man of more than common acuteness of intellect, and who had attained to great old age.

In reference to prognostics from the vegetable world, it has been remarked by Sir J. E. SMITH, that the *Convolvulus arvensis*, and the *Convolvulus pluvialis*, shut their leaves on the approach of rain. It has also been well ascertained, that the *Porleria hygrometra*, a Peruvian plant, has the same sensibility; and FOSTER says, if the Siberian sowthistle remains open all night, we may expect that the

[1] The work is entitled, "Of the Motions of the Earth and Heavenly Bodies, as explainable by Electro-magnetic Attraction and Repulsion; and on the Conceptions Growth, and Decay of Man, and Cause and Treatment of his Diseases referable to Galvanic Action."

[2] Sir MATTHEW TIERNEY.

next day will be *wet*. These facts are, to say the least, interesting; and in the present limited state of our knowledge, both with regard to atmospheric influence and the anatomy of plants, must be inexplicable.

KIRWIN, that great scrutiniser of the face of nature, has, in his *Synopsis of the Weather*, in different volumes of the *Irish Transactions*, given his sentiments freely with regard to prognostics, as has also done *the Shepherd of Banbury*. But after all that has been said, and well said, too, on the subject, I much fear that no infallible inferences can be drawn from the varying objects around us; and that we must rest contented with the hope of attaining to more definite discoveries at no distant period.

I have above slightly glanced at Mr. CUNNINGHAM'S new theory of the motion of the planets, and observed, that he appeared to consider the sun as a huge galvanic battery, pouring down his electro-magnetic rays on the earth. But not satisfied with this, and extending the notion embraced by Philip and others, that electricity and the nervous influence are identical, he goes so far as to view the human brain in some measure as an electric battery, exciting, by its discharges, the heart and arteries. He, moreover, undertakes to prove the identity of heat and electricity—that is to say, to use the words of an intelligent critical writer in the *Atlas*, that the heating rays of the sun are the same as *positive electricity;* negative electricity, on the other hand, or magnetism, being identified with the deoxidising rays of the same luminary. Proceeding on these principles, he believes that "the distressing emotion of fear, from the paleness and cold shivering, as well as the bristling up of the hair which it produces, is evidently *owing to the escape of electricity from the body;* while that of joy, and other similarly exciting emotions, by their healing and flushing effects, are, in like manner, occasioned by the entrance of electricity into the body; because, electricity being the power which produces heat, its intense escape will naturally chill and enervate the body, as much as its intense entrance will flush and *invigorate it.*"

Here is a part of the gentleman's work which I can speak of with more confidence, his sentiments nearly according with those adopted by myself many years ago in reference to epidemic cholera; and which were fully adduced in the last of the two *brochures* which I have laid before the public on that malady, but which may, perhaps, equally apply to other epidemics or contagious diseases.

Supposing some peculiar morbific effluvia in the air, how first engendered we know not, but producing this or that distemper, and

not rarely moving in particular directions, as currents of air or its own eccentricity may propel it, whom will it most likely attack? I say, with great deference for the opinions of my medical brethren, in all probability, not such as are enjoying a state of positive electricity, vigorous, hopeful, cheerful, digesting well, and sleeping well. No: but such as are labouring under a negative state of electricity, pale from fear, perhaps depressed and languid through sorrow or affliction, chilled by want, digesting badly, and sleeping worse. On such, it is natural to suppose, that the mal-influence of the specific disease, whatever it is, must seize with the greatest avidity; and more especially the *cholera lethalis*, whose prime characteristic feature is an awful and rapid sinking of the vital power. But these points will be discussed more at length in another section of this paper. I cannot, however, abstain from now remarking, that the success, by all accounts, derived from the use of galvanism,[1] when resorted to in Bengal in some extreme cases of a disease which has hitherto proved so deceptive, is any thing but hostile to the notion entertained of its collusion with negative electricity. So much has lately been said and written on the question of the contagious or non-contagious nature of this disorder, that to say much here would be little better than to misspend time. It has ever appeared to me that these terms have not been altogether properly and distinctly defined; I say this, I must add, with great respect for high authorities, and even with some degree of doubt with regard to my own assumption. Diseases are said, somewhat indefinitely, to be contagious or not contagious; but I am much inclined to think, that, were we sufficiently to narrow the circle of contagion, many more maladies would be found actually to be so than are now allowed to be; and that all that cavilling about certain maladies being contagious or non-contagious would fall to the ground.

We see one half of the inquirers after cholera say, without reserve, that it is not contagious, the other half as decidedly that it is; but if they viewed the disorder in the light that I (perhaps erroneously) do, they would all be of one opinion, and that is, that it can at any time be conveyed by very close connexion. Might not contagion be explained as simply an extension of inoculation, and merely differing from it in this, that the one is communicated by means of a morbific fluid from the body, the other by morbific breath, they evidently being equally a part of the diseased frame from which issues the mischief in one shape or other. Disorders undoubtedly are not all

[1] See Calcutta Medical Journal.

contagious in the same degree; and it will, I think, be granted, that those are the most so in which the ferment in the body is the most active, general, and continuous; such as in typhus gravior, the plague, and the exanthemata: those the least so, or rather not at all, in which the fever is merely symptomatic of a derangement in the frame, or more confined to some particular organ, as in hepatitis, nephritis, splenitis, &c. &c. To this last, however, I would offer the exception of phthisis, or consumption, having, in several instances, known husbands fall martyrs to affection from too long and too closely lingering within reach of the air expired by a dying and beloved wife; the poison being, on such occasions, conveyed directly from one lung to another, in the same manner as in a case of putrid fever, when, in a well-ventilated ward, patients at the distance of eight or ten feet from the sufferer, and when even nurses, who bring the food, and otherwise tend upon the sick person, escape the contagion; yet will the comrade who feeds his friend, who sits by him constantly, turns him in bed, or perhaps hangs over him in sorrow during his last moments, nine times in ten catch the infection, thus inoculated, if the phrase may be used, from the morbific source: — but I am, I fear, wandering somewhat from my more immediate subject.

Prognostics, in ancient times, opened a door for popular superstitions; hence the cornix, or raven, garrulous before frosty weather, was afterwards considered by the Romans as the predictor of misfortune. QUINTUS VALERIUS MAXIMUS, in his most interesting work, *Romæ Antiquæ Descriptio* (lib. iv.), tells us, that CICERO had his death foretold by an unlucky sign — a crow striking off the gnomon of a sun-dial before his face. He also observes, that M. BRUTUS, having rallied the remains of his army against CÆSAR and ANTONIUS, had his ultimate defeat predicted by a battle between two eagles.

Many animals, in former ages, were considered as influenced by human prayers, and were worshipped to deprecate diseases, famine, or tempests; and here may we not find the origin of sorcerers and augurs? If I mistake not, PLINY, the natural historian, represents the horned owl as a funereal bird; and OVID, writing under similar impressions, says,—

"Ignavus bubo, dirum mortalibus omen."[1]

In like manner we know that the Hindús have birds of good and bad report; amongst the former may be ranked the *Falco Ponticerianus* of the Malabar coast, whose Malayála name I cannot now recollect; and, amongst the latter, is the screech or church owl,

[1] Vide PLINY, Nat. Hist. lib. x. cap. xii.

(*Strix flammea* of Linnæus). The first of these they highly venerate; the other they believe to be the harbinger of misfortune, storms, and strife. The *Ibis* (mummies of which have been found in lately discovered tombs) was adored by the ancient Egyptians, who were of opinion that it had a certain influence over the climate of the Delta,[1] and the overflowings of the Nile; while the Ethiopian hawk, according to Strabo, was the principal object of worship at Philæ,[2] in Nubia, in propitiating the elements. But in no part of the world have more devout orisons been offered up supplicating the smiles, and prayers breathed to avert the frowns of the elements, than in the country above alluded to, and which must ever be most interesting to us all (India). To you, gentlemen, who are not strangers to the truths which I can here but imperfectly express, much need not be said; but the European world little knows the zeal, the unfortunately blind zeal, with which a religious Hindú can implore the aid of *Varúna*[3] against the ocean's tempests; that of *Agni* against fire; that of *Váyu*[4] against destructive winds. The extreme superstition of the natives of Hindústán is proverbial; they do few things without consulting the astrologer, who, in his turn, has recourse to the astronomical sástras, and regular pánjangans,[5] drawn up from long and laborious observations on the planets, by which he ascertains whether the prognostics are favourable or otherwise to the particular undertaking meditated.

The Hindús and Muhammadans, as well of India as of the Malay peninsula, have alike a firm belief in sorcery and witchcraft.[6] The former have, in consequence, great reliance on the *yantra* and *tantra*, or supplicatory incantations offered up at the shrines of Indra and the genii of the winds; yet, alas! they are not always unmindful of the *mantra*, or imprecatory incantations, breathing, as they frequently do, the spirit of malevolence and revenge.

It may now be naturally supposed that, having alluded to the effects of climate on man, on the brute creation, and on the vegetable world, I should proceed to remark its further influence in producing particular diseases, or modifications of disease, in different countries or situations; and hence leading us to endemic sources, occasioning, for

[1] HERODOTUS describes two kinds of ibis in Egypt, a black and a white: it was death by law in that country to kill either.

[2] According to SENECA this was a strong place on the Nile above the Lesser Cataract. PLINY makes it opposite to Syene.

[3] See COLEMAN's Hindú Mythology, pp. 357—59.

[4] Represented as mounted on an elephant to mark his celerity.

[5] See SONNERAT's Voyages to the East Indies, &c. &c. vol. i. p. 93.

[6] See MOOR's Hindú Pantheon, p. 492. A note.

instance, dangerous remittent fever, such as is prevalent on the banks of the rivers Gambia and Senegal; the *yaws* of the Antilles; the *goitre* of the ill-ventilated valleys in Switzerland, and of some parts of China, as we are told by ELIAS HABESCI,[1] where the affection is called *tchekiantche*. But such remarks will be most in place when we come to another section of the Observations.

Having now brought under the notice of the Society what appears to me to be most essential to my object at this part of my discussion on Atmospheric Influence, I should conclude; but this I cannot feel myself justified in doing without a brief allusion, after all that has been adduced, to that very important question — does climate, or do climates, appear materially to have changed since the commencement of the world? And, to these interrogatories, what more satisfactory reply can be given, than simply to state the sentiments of some of the first authorities of the day? Professor SCHOUW, of Copenhagen, argues against the opinion that certain climates have changed in the lapse of ages. LESLIE has said that it does not seem to him that any material alteration has taken place with respect to climate for the last two thousand years. LYELL, in his *Principles of Geology*, observes (vol. i. p. 123), while he admits the partial amendment of it occasioned by draining and improved cultivation, &c. and speaking like a geologist, "That however great in the lapse of ages may be the vicissitudes of temperature in every zone, it accords with our theory, that the general climate should not experience any sensible change in the course of a few thousand years, because that period is not sufficient to affect the leading features of the globe: notwithstanding the apparent inconstancy of the seasons, it is found that the mean temperature of particular localities is very constant, provided we compare observations made at different periods for a series of years. On this subject, Mrs. SOMERVILLE remarks, after a chain of philosophical reasoning of the highest order — "It is, therefore, beyond a doubt, that the mean temperature of our earth cannot sensibly have varied during two thousand years past, that is, since the time of HIPPARCHUS."[2] So Baron HUMBOLDT, in his *Personal Narrative* (p. 351), speaking of that extraordinary river, the Nile, remarks — "And do we not know by the testimony of antiquity, that the oscillations of the Nile have been sensibly the same with

[1] See Objects interesting to the British Nation, page 36.

[2] See Mrs. SOMERVILLE'S Connexion of the Physical Sciences, p. 83. HIPPARCHUS was a mathematician and astronomer of Nicæa, and made many discoveries, such as the first foundation of trigonometry: it is supposed that he died one hundred and twenty-five years before Christ.

respect to their height and duration for thousands of years past? which is a proof well worthy attention, that the mean state of the humidity and temperature does not vary in that vast basin;" a truth, too, I would add, which may be nearly confirmed by a perusal of HERODOTUS[1] and STRABO: nor is it in any degree at variance with the opinions of the travellers of a later age, whether VOLNEY, SAVARY, RICHARDSON, SHAW, or POCOCKE, or, in fact, any of those able men who have lately explored that interesting land. So there is every reason to think, as has been beautifully expressed by one, who, I regret much, has not given us his name,—"That as the sun continues his eternal course in the heavens to rule the day and the year, the vicissitudes of the seasons following in the same order, will also continue in like manner to carry on, over the face of nature, the alternate process of renovation[2] and decay;"[3] sentiments at variance with an hypothesis[4] lately advanced tending to stir up in us a doubt whether the mighty fabric of the universe may not be in danger of termination (at a distant period) through what has been called a resisting medium in the solar system: in other words, an ethereal fluid pervading and filling all planetary space, and proved by the motion of what is called *Encke's* comet!

In Part III. of the Observations, &c. I shall have the pleasure of calling the attention of the Society to the component parts of the atmosphere, and certain gaseous exhalations found in it; and must now solicit their forgiveness for having so long trespassed on their time.

[1] According to LARCHER the most favourable height for the Nile to rise on these days is twenty-two cubits. In the time of HERODOTUS it was fifteen or sixteen cubits.—See BELOE's *Herodotus*, vol. i. p. 296.

[2] For much valuable and curious matter on the subject of the reproduction of vegetables and animals, I refer to ROGET's admirable and moral essay on Animal and Vegetable Physiology, vol. ii. p. 581.

[3] See a well-written paper on climate in the Farmer's Magazine, vol. ix. p. 313.

[4] See WHEWELL's Bridgewater Essay on Astronomy and General Physics, pp. 195, 197, 199, 200.

END OF PART II.

ART. IV.—*No. I. of* Mr. WATHEN'S *Ancient Inscriptions.*[1]

श्रीसरस्वत्युमाभास्वद्वल्लीसंश्लेषभूषितं ।
भूतयेभवतांभूयाद्जकल्पतरुत्रयं ॥ १
ब्रह्माद्यामरवंद्यधूर्जटिजटाजूटाटवीसंस्थितेः
सिक्ताद्देवनदीविशुद्धसलिलैर्यद्वंद्रकंदादभूत् ।
आर्यैर्जितवृत्तजातमहिमापालीध्वजात्पल्लवो
वंशःकंदसितातपत्रबहुलच्छायासुवृद्धिंगतः ॥ २
तस्मादिंदुरिवांबुधेःशशभृतःकांतिप्रवाहस्ततो
निष्यंदश्चयथामृतस्यसमभूद्वंशोयदोरन्वयः ।
रेमेत्यद्भुतसाहसःसभगवान्गोपीकटाक्षालिभिः
सांगीयत्रनिपीयमानविलसल्लावण्यपुष्योद्गमः ॥ ३
प्रतिबोधितबद्धपद्मखण्डःकृतवालुंप्रघनांधकारनाशः ।
उदगादथदंतिदुर्गभानुर्यदुवंशोदयपर्वतात्प्रतापी ॥ ४
तस्मिन्नपुत्रेनुचतत्पितृष्वःपतिर्भुवोभूदिहकृष्णराजः ।
अष्टादशेशीलयदृश्यरूपंपुष्टीकृतंयेनयशोविशुद्धं ॥ ५
गोविंदराजःक्षितिपश्चतस्मादभूदनेकाहवलब्धकीर्तिः ।
धर्मार्थयोर्येनपालंमनोभूरातृप्तिःकोशवतोपभुक्ता ॥ ६
अतिशयगुणयुक्तत्वाद्यथार्थाभिधानो
निरूपमइतितस्यैवानुजोभूत्क्षितीशः

[1] See Royal Asiatic Journal, vol. ii. p. 376.

[2] यथा दृष्ट

सकलजलधिवेलाप्रान्तविश्रांतसैन्यः
परिणतभुवनत्वादुद्धृतैकातपत्रः ॥ ७
तस्माज्जगद्रुद्रनृपःसुतोभूद्रुद्रत्वमागाज्जगतांगुणैर्यः ।
यस्यानिशंगंधमदेभभीतामदंप्रयाणेदिगिभास्त्यजन्ति ॥ ८
तस्यश्रीमदमोघवर्षनृपतिःश्रीलुप्तकालानलः
सूनुर्भूपतिरूर्जिताहितवधूवैधव्यदीक्षागुरुः ।
आसीदिंद्रपुराधिकंपुरमिदंश्रीमांद्यखेटाभिधं
येनेदंचसरःकृतंगुरुकरप्रासादमन्तःपुरं ॥ ९
तस्मादकालवर्षोभूत्सार्वभौमःक्षितीश्वरः ।
यत्प्रतापपरित्रस्तोव्योम्निचंद्रायतेरविः ॥ १०
चेदीशोदशकंठदर्पदलनःश्रीहैहयानांकुले
कोकल्लःसमभूच्चतस्यतनयायाशद्रुकस्यानुजा ।
तस्यांकृष्णनृपालतःसुतमहादेवीपदायामभूत्
तैस्तैर्यःप्रथितोगुणैर्भुविजगद्रुद्राभिधानःसुतः ॥ ११
चेदीश्वरशंकरगणदुहितरिलक्ष्म्यांततोजगद्रुद्रात् ।
अंतरभूदिंद्रनृपोभावीराज्यश्रियोभर्त्ता ॥ १२
जनकगृहीतैःपरमण्डलैरसंतुष्टमानःस्वस्वपितुः ।
एकछत्रांपृथ्वींकर्तुंनिरगाज्जगद्रुद्रः ॥ १३
चैद्यांमातुलशंकरगणात्मजायामभूज्जगद्रुद्रात् ।
श्रीमानमोघवर्षोगोविन्दावांभिधानायां ॥ १४
आरुह्येन्द्रपदयंदमंस्तनृपतिःश्रीवीरसिंहासनं
दत्वाताम्रनमस्यशासनगतानूयामाननेकांस्तथा ।

अर्थैरर्थिमनोरथाधिकतरैःकृत्वासनाथंजगत्
व्याप्तायेनशिवालयैर्निजयशःपुष्पोपमैर्मेदिनी ॥ १५
ऐन्द्रपदजिगीषयेवस्वर्गमधिरूढेचज्येष्ठभ्रातरिश्रीमत्कृष्णरा
जदेवे ॥ युवराजदेवदुहितरिकन्दकदेव्याममोघवर्षनृपा
ज्जातःखोट्टिगदेवोनृपतिरभूद्भुवनविख्यातः ॥ १६
तस्यानुजान्निरूपमादुपलब्धजन्मा
वीरःश्रियःपदमभूद्भुविकक्कराजः ।
योबालएवसकलामपिराजनीतिं
आलम्ब्यबोधविभवातिशयाद्विवेद ॥ १७
सेमालोतिदिशांगुणीतिविदुषांत्यागोतिदीनार्थिनां
क्रोधीतिद्विषतांशमीतिचसतांरूपीतिसद्योषितां ।
मैत्राणांसुहृदित्यवंध्यविभवोविश्वंभरायाःपतिः
सर्वेषामपिसद्वदेतिनिवसत्येकोपियश्चेतसि ॥ १८
यस्यास्तेकरवालवारिणिचिरंप्रक्षालयंतीयथा
लक्ष्मीरात्मकलंकमाहितमलंनिन्द्यैःकुभूपाश्रयैः ।
सत्यंश्रीरहमेतदव्रजनितोमट्टेषिणीसाप्यत-
स्तिष्ठाम्यत्ररुषेतियस्यचमौवैदेवीसरस्वत्यपि ॥ १९
सत्यंगुर्जरनिर्जितारिनिकरश्चोलादिलीलारतो
हूणाविशरणेषवंकंपितमतिःपाण्डुप्रचण्डोनृपः ।
बंधोयंभवतामनिंद्यचरितस्पर्धंतमास्मामुना
कीर्तिर्यस्यनियामिकेवमनिशंपृथ्वींपरिभ्राम्यति ॥ २०
त्यागेनैवपरंप्रसिद्धिमगमत्कर्णःकिलान्यश्चरीं

सत्येनात्रयुधिष्ठिरोपिनृपतिःप्रख्यातकीर्तिःकृतः ।
सौन्दर्येणमनोभवश्चविदितःपार्थोधनुःकौशलै-
र्यःसर्वाननिशेतएवभुवनेदेवःसमस्तैर्गुणैः ॥ २१
यस्यानुपचतकनकधारानिपातोपजनितलोकहर्षः ।
श्रीमदमोघवर्षः ॥
स्वकौशलक्षिप्तनिशितशरविदारितारातिसार्थः ।
श्रीनूतनपार्थः ॥
सकलबलवदरितिमिरभेदनप्रचण्डः ।
श्रीमदहितमार्तण्डः ।
स्वविक्रमक्षुल्लितवल्लितबलिबंधपरायणः ।
श्रीवीरनारायणः ।
सकलादिराजचरितातिशयतुंगः । श्रीमन्नृपतुंगः ॥
निखिलभुवनाधिपत्यप्रकाशितैकातपत्रः ॥
श्रीराजत्रिणेत्रःसमभवत् ॥
सदार्थाभिधानतया ।
सचपरमभट्टारकमहाराजाधिराजपरमेश्वर
श्रीमदकालवर्षदेवपादानुध्यातपरमभट्टारकमहाराजाधि-
राजपरमेश्वरपरममहामहेश्वरश्रीमदमोघवर्षदेवः ।
पृथ्वीवल्लभःश्रीमद्वल्लभनरेन्द्रदेवःकुशली ।
सर्वानेवयथासंबंध्यमानकाः ।
आंध्रपतिविषयपतियामकूटमहत्तरमुत्तकोपयुत्तकाधिका
रिकानूसमादिशत्यस्तुवःत्वस्तुवःसंविदितं ॥

यथा । श्रीमान्यखेटपुरावासितेश्रीमत्कृष्णदेवराजे ।
शकनृपकालातीतसंवत्सरशतेष्वष्टसुचतुर्नवत्यधिकेषु ॥
अंकतः । ८९४ । अंगिरासंवत्सरान्तर्गतआश्वयुजपौ-
र्णिमास्यायांबुधदिनेसोमग्रहणमहापर्वणिमातापित्रोरात्म-
नश्चपुण्ययशोभिवृद्धये श्रीमत्गेजरबावीवास्तव्यायद्दहैव
कार्याभयागत्तायभारद्वाजगोत्रबह्वृचशाखासब्रह्मचारिणे
त्रिप्रवरायश्रीमत् । शङ्खचैय्यपौत्राय ॥
श्रीमत्सङ्गामैयसुतायश्रीमत्चुंनपैय्यभट्टायउप्पलिकाशतत्रया-
न्तर्गतबबुलत्तल्लद्वादशमध्यपंगरिकानामग्रामः
सवृक्षमालाकुलःसधान्यहिरण्योदेयः ।
सदोषदशापराधः । पूर्वप्रसिद्धचतुःसीमापर्यन्तः ॥
शुल्कादिसमस्तोत्पत्तिसहितःआचंद्रार्कंमयानमस्यदत्तः ।
तस्यपूर्वतःरोहीतल्लग्रामःदक्षिणतःशिलहरेग्रामः ।
पश्चिमतःकिणिहिग्रामःउत्तरतःअंतरवल्लीग्रामः ।
एवंचतुराघाटविशुद्धमभुंपंगरिकायामंश्रीमत्
चुंनपैय्यभट्टाय ।
कृशतःकर्षयतःभुंजतोभोजयतोवानकेनचिद्ग्राघातःकार्यः ।
यश्चकरोतिसपंचभिरपिमहापातकैरुपपातकैश्चसंयुक्तःस्यादि
त्युक्तंच ।
सामान्योयंधर्मसेतुर्नृपाणांकालेकालेपालनीयोभवद्भिः
सर्वानेतान्भाविनःपार्थिवेंद्रान्भूयोभूयोयाचतेरामभद्रः ।
योनिर्हरेद्विप्रतः — — — द्दानानिधर्मार्थयशस्कराणि

निर्माल्यवन्तैःप्रतिमानितानिकोनामसाधुःपुनरादद्दीत ॥
वहुभिर्वसुधाभुक्तापार्थिवैःसगरादिभिः ।
यस्ययस्ययदाभूमिस्तस्यतस्यतदाफलं ॥
विंध्याटवीष्वतोयासुशुष्ककोटरवासिनः ।
कृष्णाहयाभिजायंतेभूमिदानापहारिणः ॥
षष्टिंवर्षसहस्त्राणिस्वर्गेतिष्ठतिभूमिदः ।
आछेत्ताचानुमंताचतान्येवनरकेवसेत् ॥
सुवर्णमेकंगामेकांभूमेरप्येकमंगुलं ।
हरन्नरकमाप्नोतियावदाभूतसंप्लवं ॥
मद्वंशजाःपरमहीपतिवंशजावा
पापादपेतमनसोभुविभाविभूपाः ।
येपालयंतिममधर्ममिदंसमस्तं
तेषांमयाविरचितोंजलिरेषमूर्ध्नि ॥ *
श्रीमदंबार्यपौत्रेणयोगमार्गसुतेनच ।
कायशुक्रमुदसंगिनालिखितंपुन्नार्यनाम्ना ॥ *

MR. WATHEN'S TRANSLATION OF THE ACCOMPANYING INSCRIPTION.

Translation of an Inscription on Three Copper Plates transmitted by Captain POTTINGER, *said to have been found at Kurda, in the Dekkan. Dated in sáka* 894 (*or* A. D. 973), 853 *Years anterior to the present time.*

"INVOCATION."

1. MAY that uncreated triple celestial tree[1] which is adorned and clasped by Srí,[2] Saraswatí,[3] and Umá,[4] resembling beauteous climbing plants, be propitious to you.

"DESCRIPTION OF THE FAMILY OF THE DONOR."

1. This race (or Vansa-tree[5]) having burst forth from that moon as a root, which is in the forest-like knot of the braided hair of that Mahá Déva who has been worshipped by Brahmá, and other immortals; being watered by the pure stream of the sacred river,[6] flourished wonderfully, and grew to an extreme height; from its crown, branches resembling streamers spread themselves, and became lofty under the white, umbrella-like shadow of such a moon.

2. That which preceded the moon was as the ocean from which the moon itself arose; from the numerous rays of which luminary proceeded the ambrosial, heavenly dew, which produced the Yádava family, in which Srí Krishna became incarnated, performed wonderful miracles, and played with the gópís,[7] whose eyes, as bees, were attracted by the beauties of his countenance, resembling a heap of lotus flowers.

[1] This is an invocation to the Trimúrti, or united form of Brahmá, Vishnu, and Siva, the Hindú triad; the centre figure in Elephanta.

[2] Lakshmí, the Sakti of Vishnu.

[3] The Sakti, or energy of Brahmá, personified as his wife.

[4] Sakti of Siva. [5] Bambu. [6] The Ganges.

[7] The milk-maids of Madhura Gokal and Vrindavan (villages).

3. From the Yádava race, as from the eastern mountain, rose the sun of Nandidurga,[1] causing lotus flowers to blossom, and crimes to vanish as darkness.

4. He, being childless, was succeeded by his uncle Krishna, a most beautiful youth, who, in his eighteenth year, obtained a pure and excellent fame.

5. From him sprung Góvinda Rájá, a protector of this earth, who acquired renown in numerous battles. Zealous in maintaining religion and collecting wealth, he possessed immense treasures, and enjoyed this world to the utmost extent of his desires.

6. His younger brother, Nirupama,[2] next became lord of this earth. Eminently virtuous, he rendered the meaning of his name truly applicable to himself by his actions; whose army enjoyed itself in all the quarters of the ocean-girt world; who hath made this world complete. He caused to be elevated one chhattra[3] alone (throughout the world).

7. After him, his son, Jagat-rúdra, reigned; by reason of his supereminent perfections dreaded by the whole world. On the march of his army, at the very sight of his gigantic elephants, the supporters[4] of the several quarters of the world, from dread of them, recovered from their intoxication[5] and became most humble.

8. His son, Srímad Amógha Varsha, then succeeded, who, by the splendour of his majesty, extinguished the flames of the world-destroying fire.[6] He was as the instructor[7] in the initiatory rites of widowhood, to the consorts of his mighty foes. His city, called Srí-Mándya-khéta, is more vast in extent than the city of Indra;[8] by him hath been formed an extensive reservoir of water, as also a magnificent palace and (antapura) seraglio.

9. From him sprung Akálavarsha, lord of the entire world, at whose splendour the sun, being affrighted, became as the moon in the heavens.

[1] The first rájá of the family of the donor.

[2] Nirupama means one who has no equal.

[3] An emperor alone has a right to a chhattra, or umbrella, in Asia generally, whence this means, that the whole of the country was subject to this prince alone.

[4] Eight elephants of enormous bulk and power are supposed to support the eight quarters of the world, viz. N., N.E., &c.

[5] In the original "lose their must."

[6] Exaggeration. The world is expected by the Hindús to be destroyed by fire at the end of the present kalí, or iron age.

[7] Lit. Guru, or Spiritual Instructor. This means, he destroyed all his foes and thus rendered their consorts widows.

[8] In Swerga, or Indra's heaven.

10. Kokalla Rájá, of Chaidi-désa,[1] the destroyer of the ten-necked demon's pride,[2] and of Srí Haihaya's race,[3] was a sovereign; from his daughter, the sister of Sadruka, a Mahádéví[4] (or one who has been seated on a throne), and Krishna Rájá, sprung a son named Jagat-rúdra, far-famed by reason of his virtues.

11. From Jagat-rúdra and Lakshmí, daughter of Sankara-gana, king of Chaidi, proceeded Indranripa, lord of future kingdoms.

12. Not contented with the countries governed by his father, Jagat-rúdra went forth to cause one Chhattra alone to be exalted throughout the universe.

13. From Jagat-rúdra and Góvindámbá, daughter of his maternal uncle, Sankaragana, king of Chaididésa, sprung the ever-fortunate Amógha-Varsha.

14. Seated on his fortunate, heroic throne,[5] considering himself as seated on that of Indra, he granted various villages by copper-inscribed edicts. On supplicants he bestowed even more than they desired. He became lord of the whole world, and covered the face of the earth with temples dedicated to Siva.

15. His elder brother, Srí Krishna Rájá-déva, having left this earth to seize Indra's kingdom, Khodwiga-déva, the son of Amógha-Varsha and Kandaka Dévi, the daughter of the Yuva Rájá,[6] succeeded: a most renowned prince.

16. From Khodwigadévá's younger brother Nirupama, sprung Kakka Rájá, a great hero, who became acquainted with the whole art of state policy while yet a youth.

17. A moon[7] to the various quarters of the world; the most perfect of sages; the best hearted of friends; whose wealth is universally useful; lord of the universe, most profuse in granting the prayers of supplicants; furious against his enemies; kind to the most good; beautiful to women. Thus, though one, yet to many he appears in various and divers perfections and good qualities as a multitude.

18. Srí Lakshmí (propitious fortune) having become impure by dwelling with wicked princes,[8] hath been constrained for a long time

[1] Chandail. [2] Alludes to the defeat of Rávana by a king of Chedi.

[3] A tribe descended from Haihaya, son of the god-like Yadu. There were two branches: one held Andhra, or Telinga; the other reigned in the Gangetic provinces.

[4] Explained in the context. [5] Srí Virasinhásana.

[6] Associated to the throne, like the Cæsars, in the times of the Antonines, &c. Prince Regent.

[7] So mild and clement. [8] This means he was always fortunate in war.

to remain in the water of his sword, to perform her ablutions, and thus wash away her impurities. This is most true; and Srí Sarasvatí[1] exclaims—"As my rival hath taken possession of his sword, I will constantly remain in his army."

19. He hath conquered the numerous armies of his foes in Gurjara (Gujerát); played and amused himself with Chóla,[2] &c.; the constant protector of the Hunavi princes (rájás of Hunadésa[3]), who entreated his protection; dreaded exceedingly by the sovereigns of Pándya,[4] whose renown, as a war-drum, caused this to resound throughout the world. This exalted prince is worthy of your reverence; his conduct is blameless; do not act inimically towards him.

20. On this earth, Karna was far-famed by reason of his profuse generosity; Yudhisht'hira established his widely spread renown by his love of truth[5]—Partha, by his skill in archery. This déva (king) however, is superior, and excelleth them in every perfection and virtue.

He delighteth all his dependents by plentiful showers of gold; the fortunate and ever-fertilising rain; the multitude of whose enemies were pierced by his skilfully darted arrows; the fortunate fresh water; as a sun, dispelling his mighty darkness-resembling foes; the fortunate one; a scorching sun to his foes; the receiver of tribute from those rájás who have been overwhelmed by his prowess, or have cast themselves abjectly at his feet for mercy; the fortunate, heroic Náráyana; one who hath excelled all former kings by his wondrous acts; the most excellent among sovereigns, who hath caused his own Chhattra to shine alone throughout the world; as the three-eyed one (Siva) among fortunate rájás; and he, the auspicious Amóghaversha-Déva-Parama-Bhattáraka (supreme prince); great king; king of great kings; supreme great lord over lords supreme; meditating on the feet of the auspicious Akálaversha-déva-paraméswara, supreme king; lord of lords; supreme prince.

The skilful Vallubha Naréndra-Déva, the friend of the earth — to all those who are dependent — the lords of Andhra,[6] the governors of districts, chiefs of villages — the king being in awful majesty, proclaims — Let these be known to you!

[1] The goddess of wisdom and Sakti of Brahma.

[2] Chóladésa is Tanjor, &c., so named from having been given by Yayati to his son Chóla, when he partitioned the empire among his children.

[3] Hunawar, or Anore.

[4] Pandya, called so from one of the grandsons of Yayati, who held the kingdo of Máthura.

[5] Arjuna.

[6] Andhra-désa is Telingana.

Thus the fortunate Kakkala-Déva Rájá, residing at "Srí-Mandya-Khéta-pura," eight hundred and ninety-four years of the era of King Saka[1] (Salivâhana) being expired, in numerals 894; in the year (of the cycle)[2] called "Angira;" on the full moon of Áswina, on the day of Budha (Wednesday) on the great occasion of an eclipse of the moon, to increase the virtuous fame of his mother, father, and his own, doth grant to

Chunapyya-Bháya, a dweller in "Géjarbari," who had come up here on business, the grandson of Shawachyya and son of Sadbhamyya.

The village called Pangarica (situated) in the twelve of Babbulatala (Taraf), and within the three hundred villages of Uppalica (Prant or Ta'allukah), together with its forests, grain, and gold, complete; with the fines, (and jurisdiction over) misdemeanors, and the ten crimes,[3] within its well-known boundaries, along with the Shulka,[4] &c. and the whole of the produce. This village I have given (the grant is to last) as long as the sun and moon shall exist. To the east is Rohitala village, to the south Silaharé village, to the west Kinehi village, to the north Antaravalli village. Thus complete, with its defined bounds, this Pangarica village, while Chunpyya-Bhata cultivateth, causeth (its land) to be cultivated, doth enjoy, or causeth it to be enjoyed; let no one interrupt him!

For such a one will be guilty of the five higher sins, and of the five lesser; and it hath been thus declared (in the Puránas) *vide*:—

STANZAS.

1st. Rámchandra's bridge—

2d. The crime of resuming land is such and such—

3d. Sagara rájá, &c.

4th. Whoever annihilate a grant of land become huge black serpents, dwelling in the holes of large decayed trees in the Vindhyan forests, devoid of water.

5th. The donor of land will enjoy bliss in heaven for sixty thousand years: whoever resumeth the same, or adviseth its resumption, remaineth in corruption, the like time, in hell.

6th. Whoever resumeth one piece of gold, one cow, or one barley-corn of land, will sink to the lowest hell, until the world be destroyed by a deluge.

[1] This era begins A.D. 79.

[2] Of the cycle of sixty years.

[3] Five greater and five lesser.

[4] Tolls, duties, or revenue-land customs.

7th. With my closed hands up-raised, I bow to the future rájás of my race, and to those of other races who may hereafter reign on this earth, whose minds may be adverse to what is sinful, and exclaim, Protect this religious grant!

The grandson of Srí-Mat-Ambárya, the son of Yogamárga, named Punnárya, in conjunction with Karja-Shukramudra, wrote this.

Translated by W. H. WATHEN.

LIST OF KINGS GIVEN IN NO. I.

1. Nandidúrga, of the Yádava-Jhadow race, and Saiva sect.
2. Krishna, his paternal uncle.
3. Góvinda.
4. Nirupama, his younger brother.
5. Jagat Rúdra.
6. Madanóghvarsha (Amóghaversha).
7. Akálavarsha.

(1.) 8.[1] Jagat Rúdra.
(2.) 9. Indranripa.
3. 10. Jagat Rúdra.
(4.) 11. Amógha Varsha.
(5.) 12. Krishna Déva.
6. 13. Khódvigadéva.
7. 14. Kakkala Rájá, whose title was Srímat-Amogha-Varsha-Kakkaladéva.

[1] *Quære*, a different series.

ART. V.—*Remarks on the Language of the Amazirghs, commonly called Berebbers, by* JACOB GRÄBERG, *of Hemsö, M.A., sometime Swedish and Norwegian Consul for Marocco and Tripoli, Knight of the Royal Sardinian Order of St. Mauritius and St. Lazarus.*

Τι πρῶτον, ἢ τι ὕστατον;—LUCIAN.

THE original inhabitants of Mount Atlas, and of nearly all the provinces of *Maghrib-ul-Aksa*, or the present empire of Marocco, are usually divided into two tribes — namely, the Berebbers and the Shelluhhs, both descended from the ancient Mauritanians and Gætulians; perhaps even from the Libyes of SALLUST. These two tribes differ essentially from each other; and it is not without reason, that those travellers and geographers, to whom we are indebted for the best information with respect to Marocco, have asserted that the Shelluhhs are not Berebbers. The Moors, or Arabian inhabitants of the country, consider them as two nations of a different origin; as well on account of their manners and the diversity of their natural dispositions, as from the entirely distinct profile of the face, and from their dialects, which differ so much, that they cannot converse together without the aid of an interpreter. Mr. JAMES GREY JACKSON, in his *Account of the Empire of Marocco, and of the District of Sus*, confirms this assertion by a list of words of common use in both languages; and, most certainly, they prove nothing less than a common origin. But such differences, radical or accidental, may be met with in almost all the sister languages. It is, for instance, a curious fact, that the very leading Shelluhh words, which Mr. JACKSON quotes as altogether differing from the Berebber, as *woman*, *wife*, *boy*, *girl*, &c. differ just as much, if not more, in the Swedish, Danish, German, and Dutch languages, which, most undoubtedly, are of one and the same origin. This observation holds good even with respect to the Spanish, Portuguese, and Italian languages. What is more certain, and beyond all doubt, is, that the pretended Berebbers and Shelluhhs live separately and that they bear very little, if any, relation to each other. Although their habitations are sometimes very near, they never have any social intercourse; nor does an instance exist of individuals of one tribe having intermarried with the other.

No credible etymology can be given to the name of the Shelluhhs: as to that of the Berebbers, I cannot admit its being derived either

from the Arabic بر *barr*, earth, or بَرِيَّة *bariyat*, desert; nor from بربر *barbara*, to murmur, to speak confusedly, &c. That of *barbari*, as used by the Greeks and Romans, is still less admissible; since the Berebbers call themselves *Barbars*, or Barabbars. This name must, consequently, be a primeval one, either of the tribe, or of the region where they lived; for I cannot suppose that they would have called themselves Barabbars in the sense of *Barbari*. It is, however, a fact, that the letter *b* is never met with in any word of genuine Amazirgh origin. Arabic writers have sometimes given them the name of *'Ajamí*, strangers, uncivilised, not descending from an Arabian tribe, &c.; but, on the other hand, the historians of the conquest of Spain by the Arabs, call them likewise *Barbaros*. Nothing, at least, proves this to be a name given by the Greeks or Romans to a people whom the latter, especially down to the fall of their empire, have, at all times, denominated *Maurusii*, or Mauri. Amidst all these etymologies, I own, that, should I keep to one of them, I would prefer that one which derives the name of the Berebbers from the Arabic بربار *barbár*, a bawler, who makes a great noise in speaking, who speaks like an angry man, &c. GIGGEIUS translates this word by *garrulus*, *strepitum edens*, *vociferans*, *barbarus*, &c., deriving it from بربرة *barbarat*, noise, tumult, racket, or the outcry of a man transported with anger. In fact, the Berebbers make, when they speak, a much greater noise than the Arabs or Moors, who usually speak very low, except when they quarrel, or fly into a violent passion. That STRABO has given the *Mauri*, or *Maurusii*, the name of *Barbaros*, only proves that they did not speak the Greek language.

In short, amidst this chaos of etymologies, that of PROCOPIUS would not, perhaps, be the least plausible one, especially if some Rudbeck or Bayer would take upon himself to identify *barr* with *terrigenæ*, the name which the historian of the Vandal war gives to the ancient inhabitants of *Mauritania Tingitana*. *Berr-berr* might well enough be translated with *terra-terra*—confined to the ground or to the surface of the earth.

The late Danish geographer, MALTE BRUN, in his voluminous *Précis de la Géographie Universelle*, believed that the Berebbers and the Kabáils of *Mauritania Cæsariensis* belong to the race of the Moors; and he would fain have made one single nation out of these two tribes, under the last-mentioned denomination, which would be very well, could we but guess what the author meant by this name

of *Maures*, or Moors: for, in another part of the same work, he says, that the race of the Berebbers is entirely distinct from the Arabs and the Moors, and that they appear to be indigenous to Africa. This is usually the way of reasoning peculiar to our systematising ethnographers.—*Vox et præterea nihil.*

The unfortunate Doctor SEETZEN must have been speaking in jest, when, in a letter directed from Mecca to the celebrated Orientalist, M. VON HAMMER, he attempted to derive the Berebbers from the country of the *Biri*, who inhabit, to the south-west of Sofálah, the mountains of Lupata; and the Maroccan traveller, IBN BATÚTA, a native of Tangier, whom he cites, is no more worthy of credit than the silly compilers who pretend to retrace the Berebbers to the *Barabras* of Nubia, and the Shelluhhs to the *Shillocks* of Habash, or Abyssinia. Those gentlemen agree most perfectly with those who derive the Vandals and the Longobards from Scandinavia, or with those who confound the gipsies with the modern inhabitants of Bohemia and Egypt. At this rate, we must not give up the hope of seeing, some day or other, one of these wiseacres find out the ancestors of the Berebbers in the Burgundian village of *Berberes*. With respect to the Barabras, M. COSTUZ, in his excellent paper on that people, inserted in the magnificent French description of Egypt, has proved that there cannot be the least affinity between them and the Berebbers.

An immemorial and popular tradition, in unison with all the Arabic historians, gives to the western Amazirghs, and chiefly to the Zenálah, the Massmúdah, and other clans of the mountains, Er-Riff, or Lower Atlas, a Jewish origin. But this is not the case with the Shelluhhs, and the inhabitants of the southern provinces, from the river Tensift, down to Dar'ah and Sús-al-Aksa, who regard themselves as descendants from the aborigines of Maghrib-ul-Aksa, or the extreme west of that continent.

The Moors, generally speaking, do not consider the Shelluhhs as a distinct and separate nation. The expression they use with respect to them, "*Their fathers and mothers were not of the same race,*" conveys the idea that they consider them as a mixture of several nations. And this is precisely what ABÚ MUHAMMED SÁLIH 'ABD-UL-HALÍM AL GHARNÁTÍ, in his great history of the kings of Africa, called *Kitáb-ul-Kirtás*, says of the Barguwátah, who most likely are the immediate ancestors of the Shelluhhs. برغواطة ليس لهم اب واحد وام واحدة وانهم اخلاط من قبايل شتي من البربر

" The Barguwátah have not their fathers and their mothers of one race, and they most certainly form mixed tribes (*kabáïls*) different from the Berebbers."

Mr. JACKSON has been induced to believe, that some Shelluhh families might descend from the Portuguese who formerly possessed the western coast of *Al Gharb*, which they abandoned after the discovery of America. The fact is not impossible; but I do not know on what Mr. JACKSON founds his assertion, that the Shelluhhs of Haha are *physiognomically distinguishable* from those of Sús. He ought at least to have explained in what this distinction consisted.

HASAN IBN MOHHAMMED-AL-GHARNÁTÍ, better known in Europe by the name of LEO AFRICANUS, LUIS MARMOL DE CARAVAJAL, and other authors, mention two other Berebber clans called *Hawwára* and *Gomera*, who appear to be Sabean tribes who came from Yemen; although the Amazirgh historiographer, IBN KHALDÚN, says, they were the offspring of BERNAS, or *BERR*, a descendant of MAZIRGH, son of CANAAN, and grandson of HAM, the first ancestor of the Berebbers. The *Hawwárah* still exist in the Maroccan provinces of Er-Riff, Ghart, Shavoïa, and Tedla, although a great part of their ancient abodes is now occupied by other Amazirgh clans, and particularly by the Banú Viryarg'at, the Banú Hamúd, and various tribes of adventitious Arabs. The Gomerah, whom some authors have made worshippers of the moon, only because their name has some analogy with that of the moon in Arabic, are certainly Amazirghs, and still in possession of their ancient inheritance, in the provinces of Er-Riff and Ghart, at a small distance from the Mediterranean, near the Spanish settlement of Pennon de Velez, where there is a mountain, a river, and a large village, all known by the name of Gomera. An English geographer, EMMANUEL BOWEN, has thought he could prove that these Gomerah are descended from GOMER, the eldest son of JAPHET, and that they were of one and the same race with the Cimbri, the Celts, and the Eusks, or Cantabrians, in Europe. It has always been supposed that the last-mentioned people were of an African origin; and what is very remarkable is, that the names of Pennon, Tarsonnel, and Nefgal, three little islands situated near the coast, at a very small distance from Gomera, approximate, in an astonishing manner, to the ancient Welsh language, which is still spoken in the west and south of England, and in Low Britanny in France. The German authors of the *Mithridates* have, moreover, demonstrated, that the now-extinguished language of the Guanchos, in the Canary Islands, had a great connexion with that of the Berebbers. No

doubt it is not by mere chance that one of those islands bears the name of Gomera.

With respect to the language of the Berebbers, or Amazirghs, all the information which I have been able to collect, confirms its presenting a character highly original, coming somewhat near to the Hebrew, and consequently, I think, to the Phœnician. Those natives who inhabit the Magrib-ul-Aksa, call it *Tamazirgh't*, or *Tomzirgh't*, that is, *the* Amazirgh, a denomination of which it has been contended that they know of no etymology. But this is not the case; for, judging at first sight from what we in other respects know of this language, the word *Amazirgh* must signify *noble, distinguished, illustrious, free, independent*, something like the Scythic *Goth*, the Teutonic *Frank*, the Russian *Slavi*, &c. It is, besides, the same word that Leo Africanus, by leaving out the diacritical point upon the ز *za*, has made us read *Amarigh*. The initial or epenthetical ت *ta*, or *tha*, is the feminine article, and the same letter affixed to the end of the word designates the generic termination; so that *Amazirgh*, signifying *a free, a noble*, man, people, language, &c., *Tamazirgh't* will, of course, signify *the noble* woman, nation, tongue, &c. I have not been able to ascertain whether the Berebbers have, at all times, called themselves *Amazirghs;* but, if this be the case, and if these people really are the offspring of Mazirgh, the great grandson of Noah, and at the same time the ancient *Mazyes, Mazisci, Mazyces*, or *Maziks*, mentioned by several Greek and Latin classics, we must acknowledge, in that word, one of those ethnical denominations which always denote a primitive people who believe themselves aborigines of the country they inhabit. In the vocabulary of M. Venture, published by my late lamented friend M. Langlès, we find that *imazirgh* signifies free; *Tamazirgh't*, or *Tam'zirgh't* should then be translated the language or nation of the free or independent. In the *Towarik* dialect spoken at Ghadams, and in the southern mountains of Tripoli, the same word signifies a lord, a master, or bread-giver. Nay, in the Shilhu, or Shelheh dialect, the Arabic title *Sheikh* is rendered by *Amzargh*, as I shall have further occasion to observe. As to the name of the Shelluhs, a Moorish Tálib, who had lived for many years amidst those people, assured me, that the original signification of that word was *an armed man;* but this requires confirmation. After all, this etymology should rather be Arabic than any thing else.

The dialects spoken by the Berebbers and the Shelluhs, have most certainly a great affinity with each other, but none at all with the Arabic, if we except a few words, such as religious, metaphysical, and

technical terms, expressions of new ideas, &c. adopted by that people from their intercourse with the Moorish Arabs. Besides, it is well known, that Sabean, and even Egyptian tribes have, at different times, settled amongst the Amazirghs of western Africa.

Leo Africanus contends, that the Amazirghs, or primitive inhabitants of Maghrib, had no other alphabet than the Latin; but in this he was undoubtedly mistaken, as I shall presently notice. It is true that all the writings the Arabs possess concerning the ancient people of this country have been translated from the Latin, composed in the time of the Arians, and even in earlier ages. The lost books of Livy must have contained, in this respect, facts extremely important; the loss of which is by no means made up by the great, and, on many other accounts, excellent historical work of Ibn Khaldún, who wrote expressly a very copious history of the Berebbers. No doubt, however, the Africans, and especially the Numidians, must have had a peculiar alphabet, and their own writings. Valerius Maximus, relating an anecdote of Massinissa, king of Numidia, seems to place this fact beyond all question. It is, therefore, natural to believe that the Romans, the Christian refugees from Italy, the Vandals, and finally the Arabs, have destroyed these ancient writings in the same way as the Roman Catholic priests destroyed the Runic monuments and writings in the North of Europe. Ibn Rashísh, an African author, affirms likewise, that the ancient inhabitants of Mahgrib had their peculiar language and phonetic-written characters.

At present neither the Berebbers nor the Shelluhs know of any other written character than the Arabic; a fact of which I have been positively assured by one of the most intelligent Jewish doctors I have ever met with; and who was born and had lived many years amongst the Berebbers, and was thoroughly acquainted with their language and with their literary attainments.

I do not know whether there exists any other printed collection of Shilha words and phrases than those published by Shaw, Host, Venture, and 'Alí Bey, to whose vocabularies Mr. Jackson and Mr. Shaler have made but very few additions. But it strikes me, that the best information we possess about this interesting, primeval language, is what M. Venture furnished to the late M. Langlès, which that lamented Orientalist published in the translation of Horneman's *Travels*, from whence the late Professor Severin Vater, has taken the whole account he has inserted in the third volume of Adelung's *Mithridates*, in addition to what Chamberlayne had published since the year 1715, from Jezrael Jones, in his polyglot collection of the Lord's Prayer. This account, however, has no other

object than to analyse the detached Berebber and Shilha words and phrases of that prayer, of which many are pure Arabic; yet this is the only piece of composition from which we may form an idea of the grammatical structure of this language, and make comparisons with other dialects of the same origin, the most remarkable of which are the Showiah, the Zowavah, the 'Adems, the Twaresk, the Tibbú, and the Syowah.

Animated with the desire to fill up in some measure this blank in African ethnography and glossology, immediately upon my arrival at Tangier, in 1816, I set myself to work on the subject. I was, soon after, encouraged in this pursuit by the Royal Institute of the Netherlands, which, at the suggestion of the learned and celebrated M. Willmet, requested me to send them some specimens both of the Berebber and Shelluh languages, more extensive than those already extant. I became, however, soon aware that the business required a vast deal of time, and great carefulness in order to avoid deception. With the design to do something, I lost no time in sending to different stations of the interior, from Teza and Úshdá, down to Agmat and Taroudant, some Arabic sentences, and some paragraphs of a *certain* length, with the request to have them literally translated into the Berebber or Shelluh. But just at the time I began to receive the answers, the plague overran the country, and cut off every sort of communication. I only received the following three specimens, containing, the *first*, a Berebber translation of a fable attributed to Lokmán; and, the *two latter*, five sentences of different Arabian authors, with some Shelluh phrases, which I afterwards had the good fortune to be able to compare with the Amazirgh dialect spoken in the regency of Tripoli.

I.

The fable of Lokmán runs in English as follows:—

"A lion once wished to devour a bull, but not daring to attack him on account of his strength, he resolved to employ stratagem. He, therefore, went out to meet him, and said: 'Know that I have slain a very fat lamb, and I wish thou wouldst come this night and break bread with me.' The bull, having accepted the invitation, they went together towards the place of repast. On their arrival, the bull, perceiving that the lion had prepared a great quantity of dry wood, and several large boilers, ran away immediately. 'Friend,' says the lion, 'why, after coming hither, dost thou flee as if thou wert afraid of some danger?' 'Why,' answered the bull, 'because these preparations are for something more than a lamb.' *Moral.*—The sage

must not trust to the professions of his enemy, nor make himself familiar with him."

Translation, in the Berebber dialect, of the province of Shaous, according to the English[1] pronunciation of the Arabic letters in which it was written :—

Eewan eezim eerâd yathash eewan awfoonas ; wal yoofee mem shasidjoo i maqqoor rg'ifs oolasirg el rg'ifs yethheel it yamaz innaÿas nekinnit rg'arzahh eewan âa'lloosh yaqwan reehh ad rg'oori tansad eeda eethshat rg'oori arg'room ad wees um innayas akhyâr : azdayad yoos rg'ooras yanna isrg'arân aa'ddan aqshooshan maqqoor yarg'ool izdaït. Yannu eezim yarg'ool innayàs meesh yoorg'in targ'oolad innayas aneehh asrg'arân aa'ddan aqshooshan amaqqoor afhhàn yaouleed âa'lloosh yansha yedshran aa'lloosh. Ommoo egattag wunna illan : salaa'glamas wal yattaman akkoo a'a'doonas warrg'ooris izzaddarg'an.

In order to make this specimen more useful, I add the literal sense of each word and phrase as given to me by the person from whom I received the translation.

Eewan eezim	One lion *or* a lion
eerâd yathash	wished to eat
eewan awfoonas	one bull *or* a bull
wal yoofee	and did not find out
mem shasidjoo	how to attack him
i maqqoor	*for* he was too strong (big) for him
rg'ifs oolasirg'	*so* he circumvented him
el rg'ifs	*and* accosted him
yethheel it yamaz	thou must know
innayas	he said to him
nekkinit	I have slain
rg'arsahh	very fat
eewan aa'lloosh	a lamb
yaqwan reehh	*and* I wish thou wouldst
ad rg'oori tansad eeda	to my home come this night
eethshat r'goori arg'room	*and* eat with me bread
ad wees um innayas akhyar	he (the bull) then said to him very well
azdayad yoos	*and* they went together

[1] The method here adopted of writing foreign words in *Italic* characters, may, perhaps, best be ascertained by a comparison of th Arabic words with their originals.—Ed.

rg'ooras yanna	to his home *where* he saw
isrg'arân aa'ddan	a quantity of dry wood
aqshooshan maqqoor	and large boilers
yarg'ool izdaït	he ran away in a hurry
yanna eezim yarg'ool	the lion seeing him flee
ennayas meesh yoorg'in	said to him what fearest thou
targ'oolad	thus to run away
innayas aneehh	*and* he said to him I perceive
isr'garân aa'ddan	quantity of dry wood
aqshooshan amaqqor	*and* large boilers
afhhân yavuleed	*and* I conceive
ooa'loosh yensha	*that* the lamb may be very good
yedshran oo'alloosh	but here is too much for a lamb
Ommoo agattagg	The true mother (moral sense)
wunna illan	of all this is *that*.
s'alad'qlamas	a man who is really sensible *or wise*
wal yattaman akkoo	must not trust himself
aa'ddoonas	to his enemy
wer rg'ooris	nor with him (*or* at his home)
izzaddarg'an	make himself familiar

I shall leave to deeper linguists than I am the task of drawing grammatical inferences from this specimen, in addition to what has been done in so masterly a way by M. Venture, and, still later, by M. Adrien Balbi, in his ethnographical atlas. But, as there are many Oriental linguists who maintain the opinion that the Arabic dialect spoken and vulgarly written in the empire of Marocco, is, with a very few exceptions, the identical idiom spoken and written by the modern inhabitants of Arabia, Syria, and Egypt, it will not be uninteresting to subjoin, in this place, a transcription of the same fable, as pronounced and written by the common Moorish people of Maghrib-ul-Aksa, which I shall, at the same time, put in parallel columns with the foregoing Berebber translation, written with *Maghribín* Arabic letters, as given to me by the above-mentioned person, *Af"keet*, a moslim doctor of divinity, born at Dubdú, the ancient chief town of Shaús, where he had been, during fifteen years, an *'Adul*, or public scrivener.[1]

[1] The words here brought into comparison by the learned author will be found in the Rev. Mr. Renouard's report, third and fifth column; and the want of Maghribín types compels us, though with much regret, to refer only to that transcript, though, in the form of some letters, and in the corrupt accent, differing from the original.—Ed.

With a view to compare this Berebber translation with one made in the dialect spoken at Ghadámis, and by the indigenous Amazirghs of the Regency of Tripoli. I subjoin the following one given to me by a Sheikh of the Banú Walíd, of Ghadámis, who wrote it down in my presence, word for word, from a copy in literal Arabic.[1]

This Amazirgh dialect of Ghadámis, which is generally spoken throughout the inland provinces of the Páshálik of Tripoli, but more particularly by the mountaineers and the inhabitants of Zoagha, Zoara, Nalout, Júj, Lewátah, Ghadámis, Mezda', Djefer, Sokna, and probably also of Audjehah, is called *Ertana* by M. Balbi, because Captain Lyon states that such is the name given to it by the natives. But this word is pure and literal Arabic, and signifies, if written رطانة or ارطانة, neither more nor less than rustic dialect, gibberish, jargon, &c. and, if written رتانة or ارتانة, a mixed or confused language. During my stay at Tripoli, I spoke with a great many natives, as well of the above-mentioned places, as of the mountains Forsati, Ifren, Walan, and Harúdjí, but not one of them was able to assign any particular name to their language. The very intelligent Sheikh of Ghadámis called his dialect عديمس *'Adims*, or اولدعديمس *Ghadamsee tongue*, written with a ع instead of a غ because the guttural sound of this last letter is very little made use of by those people, who pronounce it either as *r* or as the Arabic *'aïn*. On asking this Sheikh what particular proper name his countrymen apply to themselves, like the Shelluhhs and Berebbers of Morocco, the Kabyles of Algiers, the Zowavah of Tunis and the island of Jurbeh, the Mozabis, the Twariks, and the Tibbús of the desert, &c. he could give me no satisfactory answer. He, however, perfectly understood the meaning of the words *Amazirgh* and *Tamzirg't*, which, he assured me, signified a freeborn, self-ruled nation. As to the name of *Targee*, or, as it is commonly written in the plural, *Twarik*, or *Towarík*, he asserted that it signifies a strolling, roving people, who, like a torrent, overrun and scour the country; and, in fact, *Terga*, or *Therga*, is the Amazirgh word for a rapid stream or torrent, as well in its physical as in its moral acceptation. The Arabs, however, pretend to derive this name either from *tárik*, one who travels or roves by night; or from the noun of action to the verb *warak*, which, pronounced *taurík*, would signify *scatter*

[1] See the preceding note; and the second and sixth columns of the report.

about like the leaves of trees, torn off and committed to the whirlwinds of the desert.

II.

The following are the phrases of the dialect spoken by the Shelluhhs in the empire of Marocco, which I have been able to collect, and some of which I have had an opportunity, during my stay at Tripoli, to compare with the 'Adems, or Twarik dialect, spoken at Ghadámis. The words *in Italics* are originally Arabic, or borrowed from that language.

1. ENGLISH.—O thou who seekest after science, be diligent day and night; for science is only acquired by constant application and labour.
   SHILHA.—*Ya taleb-il-'eelm adjhhad* ilaq î'd ad was,
   Gathan oo'ree t'*hhassal*, rg'as il *djhhadd tekrâr*.
   'ADEMS.—*Ya taleb-il-'eelm* fadjtehhad i fadd a saf
   Leean *il-'eelm yehhssal* yestamâr ou *tekrâr*.
2. ENGLISH.—Do not look for a heathcock in the den of a lion.
   SHILHA.—Ad oor alhaftoo shadashan timsalt oggansa eezim.
   'ADEMS.—Walla thetter ee boudjerâd i lash afoor.
3. ENGLISH.—There is no love like the first love.
   SHILHA.—Oor i t'*hhebb* rg'as wunna ee*habb* amazwaru.
   'ADEMS.—Wal yefroo em yefroo amzawar.
4. ENGLISH.—The best science is that which is most useful.
   SHILHA.—*Akheer-el-'eelm* wunnas *estanfa'a*.
5. ENGLISH.—The worst of men is the great scholar, whose learning benefits nobody.
   SHILHA.—I *sharr* eemaddan *il-'eelm* ooris *estanfa'a* eemiddan.

III.

For another specimen of the Shilha dialect, compared with the dialect spoken at Ghadámis and Sokna, I shall conclude these strictures, by submitting to the attention of philologists the following phrases, which were communicated to me by two very intelligent and sensible native Amazirghs — the one born at Tefnú, in the province of Upper Sús, and the other in the city of Ghadámis, both of them excellent scholars, as well in the Arabic as in their own language.

1. SHILHA.—Rljheerad theshashkad ts'akhamee.
   ENGLISH.—I wish thee to come to my house.
   'ADEMS.—Nash f'reeu' tousadol er dadj ennouk.

2. SHILHA.—Ennâ omzarg'.
ENGLISH.—The sheikh said.
'ADEMS.—Ennà omzirg'.

3. SHILHA.—Thamgarth swissis ghaïggai agerennes, soo illis see gannâ.
ENGLISH.—The woman took him upon her shoulders, and flew away into the heavens.
'ADEMS.—Thaltha ahhkamahat okoormanoukeen thekad see d' adjanna.

4. SHILHA.—Oor tesrees aïla ghelkem.
ENGLISH.—She did not pause till she arrived.
'ADEMS.—Oor tadjaz see toodd.

5. SHILHA.—Oor tesrees aila si g'throor see timdint; illân tseggits, servggeen, aman, ezhhâran, igdâd.
ENGLISH.—She did not pause till she came into the city, where there were springs, water, trees, and birds.
'ADEMS.—Oor tadjur se tawadd ghi mezdâa' deen doos thellâ, amàn, sedjàr, djedadd.

6. SHILHA.—Illân tsegits igdad ihh ezhàran ir tessebbahan, Ya Rebbee.
ENGLISH.—There were birds upon trees, which sang, O Lord!
'ADEMS.—Illan doos djedadd ihh nes sedjar g'anat metidj izlee, Ya Rebbi!

7. SHILHA.—Oor radjoo zerrerg' zoon netnee.
ENGLISH.—I never saw the like.
'ADEMS.—Aka leyema i meeni thatha.

8. SHILHA.—Ennayas, Mata temdint?
ENGLISH.—He said to her, What city is this?
'ADEMS.—Enneeas, Soomannas mezdârou'?

9. SHILHA.—Tenneeas, Temdint oor izdâr ladjenat astaksham.
ENGLISH.—She said to him, Into this city the genii cannot enter.
'ADEMS.—Tenneeas, qoda yendsjam ì djanoon tolafan ïa mezdâou'.

10. SHILHA.—Ismennis Aflatoon.
ENGLISH.—Its name is Aflatoon (Plato).
'ADEMS.—Ismannas Aflatoon.

VOCABULARY

OF THE

'ADEMS, OR AMAZIRGH DIALECT,

SPOKEN AT GHADÁMIS, AND OTHER INLAND PROVINCES OF THE BASHÁLIK OF TRIPOLI.

God, the Lord ..... *rebb, Arabic*
our Lord Mohhammed ..... *Sidna Emhhammed, A.*
the Islám ..... *naslaman, A.*
the faith ..... *i deen, A.*
heaven ..... *adjanna, A.*
earth ..... *thammast*
the world ..... *ï dannat*
the sun ..... *thafath*
the moon ..... *thazeeree*
the stars ..... *eerán*
the sea ..... *lebhhár, A.*
the mountain ..... *adrar, ï adwarar*
the desert ..... *themsna tamasna*
the day ..... *asaf*
the night ..... *ifadd*
the darkness ..... *thallasta*
the morning ..... *assallà*
the evening ..... *teets*
the noon ..... *ama'ree*
three o'clock, afternoon ..... *ala'ssàr, A.*
sunset ..... *afanna, afna*
the sultán or emperor ..... *ashleed, adjlid*
the king ..... *amrg'ar*
the bashaw ..... *il bashá, A.*
the bey ..... *il bái, A.*
the sheikh ..... *omzirg'*
man ..... *wadjid*

woman	*thalthá*
boy	*mozaïn*
girl	*tamzeet*
son	*miss*
daughter	*tawadjat*
Jew	*Oodaï, Oodaïn*
white man	*adraf*
black man	*asakeeo*
camel	*allam*
she-camel	*thallamt*
slave	*adjannáoo*
female servant	*thadjannawt*
horse	*adjmár, agmar*
mare	*thadjmart, tagmart*
bull	*abareed*
cow	*thabareet*
mule	*bagh'al, A.*
she-mule	*bagh'la, A.*
ass	*azeed*
she-ass	*thazeet*
a kid	*egh'raïd*
he-goat	*adjour*
she-goat	*theeat, tadjurt*
lamb	*azoomer meteedan*
sheep	*thafali*
ram	*azoomer*
cattle	*ladjallirb*
gazel	*zankads*
dog	*eedee*
bitch	*etee dooth, tedeet*
small dog, whelp	*eédee meteedan*
head	*irg'af*
eye	*aval, teet*
ear	*eesam*
mouth	*afee*
tongue	*eelas, ils*
tooth	*seenan, A.*
lip	*adalis*
chin, beard	*toomart, gh'usmár*
hair	*azaoo*
neck	*thekramt*
breast	*sadarnas*

shoulder	*okooram*
the nape of the neck	*tharg'omt*
the back	*i dafaranas, 'aroor*
arm	*arg'eel*
elbow	*targ'amroot narg'eel*
hand	*afas*
finger	*adad, adeedad*
breasts	*afeef*
belly	*thadist*
anus	*thermatnas*
breech	*enthadoona*
thigh	*tharg'ma*
leg	*adar*
foot	*eewan adar*
knee	*oofadd*
town, country	*mezdâa'*
market-town	*murt*
flower-garden	*themda, thehda*
large garden	*sania, A.*
ship, vessel	*merkab, A.*
habitation, dwelling	*thellee wéïn*
house	*dadj*
wall	*thezaka*
chamber	*beït, A.*
kitchen	*adjureer*
door	*thafart*
roof	*yennadj*
gold	*ararg'*
silver	*ï faddâ, A.*
copper	*onnâs*
iron	*wazâl*
goldweight	*amazgal*
ounce	*thaoukeeat, A.*
lead	*rassas, A.*
gum-arabic	*thamamt natalhh*
honey	*themâmat*
wool	*thoddamt*
wax	*shmu', A., thekee*
bread	*thawadjee, arg'room*
meat	*iksam*
milk	*'haleeb, A., ashfâee*
water	*'man*

date	*feenawdan*
fig	*matkan*
wheat	*irdan, irdsan*
barley	*themreet*
fire	*oofà*
tree	*sadgirat, A.*
fresh butter	*tholassee*
salt butter	*lemâm*
lentils	*a'dds, A.*
onions	*foleel*
turnips	*laft, A.*
calabash	*kibooa*
beans	*bibàwan*
gun, musket	*themakhhalat, A.*
frock, blanket	*albadan*
lagbee, date-wine	*iluqbee, amàn tssdid*
to-day	*asfoo*
to-morrow	*azaka*
yesterday	*dillain*
yes	*eeï, A.*
no	*oor, wer*
very well	*'adjib*
by God	*yallah, A.*
more	*arnaf*
another	*yun eedanan*
near, with, by, at one's house	*oo'r*
much, enough	*hâl*
now, by and by, presently	*eedoo*
how?	*eemik?*
what, why?	*theewee?*
what is this?	*malla wa?*
how much?	*eekyat?*
the air	*lahwa, A.*
the wind	*i adoo*
sand	*themallat*
dust	*thelgh'abrat, A., aqâl*
rain	*anazàr*
cold	*adeefan*
heat	*ayagad*
thunder	*ra'd, A.*
sky, parasol	*sâfa, A.*
year	*asafâs*

month ..... *ooyar*
hour ..... *gadoos*
friend ..... *awadeem*
enemy ..... *'adoo, A.*
after, since ..... *yook teedan*
before ..... *ezret*
with ..... *didj*
good ..... *'adjib, A.*
bad ..... *djaseer*
fair, fine ..... *zeyan, zeïn, A.*
here ..... *katweeda*
book ..... *ooraf*
the book ..... *ï ooraf*
the volume ..... *i djawdn*
the head of the man ..... *irg'af en oodjeed*
belonging to the man ..... *kefeea' eewdjeed*
from the man ..... *sa'ra eewdjeed*
I ..... *nash*
thou, *masc.* ..... *shag*, or *shèg*
thou, *femin.* ..... *sham*
he ..... *netoo*
she ..... *nettath*
we ..... *nakaneen*
you ..... *shegwaneen*
they, *masc.* ..... *nelaneen*
they, *femin.* ..... *ndteen*
I have, *or* near me is ..... *oo'ree*
thou hast, *or* near thee ..... *oo'rik*
he has, *or* near him ..... *oo'ras, oo'r wanat*
she has ..... *oo'r netàt*
we have ..... *oo'r neea'*
you have ..... *oo'r ween*
they have ..... *oo'r seen*
to me, mine ..... *anook*, or *enak*
to thee, thine ..... *eenik*
to him, to her ..... *eendàs*
to us, our ..... *ndnáa'*
to you, your ..... *emdsan*
to them, their, *masc.* ..... *intaneen*
to them, their, *femin.* ..... *intdnint*
my book ..... *ooraf anook*
thy book ..... *ooraf eenak*

his or her book ..... *ooraf eenas*
our book ..... *ooraf nanda'*
your book ..... *ooraf eenasan*
their book, *masc.* ..... *ooraf intaneen*
their book, *femin.* ..... *ooraf nasnat*
give me ..... *akfeeï*
he gave to me ..... *yakfeeï*
he gives to thee ..... *akifeek*
she gives to him ..... *akfas*
I gave to thee ..... *akeekfa*
I gave to her ..... *nash akfeeas*
do make, *impera.* ..... *sekker*
he did, *masc.* ..... *yesker*
she did, made ..... *thesker*
they did, they made ..... *sekrát*
thou didst, *masc.* ..... *sekert*
thou didst, *femin.* ..... *teskirt*
you did ..... *sekarán*
I did ..... *askrda'*
we did ..... *neskerd*
he does or will do ..... *askran*
she does, thou doest ..... *theskerd*
they do, or make ..... *sekran*
you do ..... *taskar*
we do ..... *neskrad*
doing, *singular* ..... *yasekr*
doing, *plural* ..... *asakran*
done, *masc. sing.* ..... *yusakr*
done, *femin. sing.* ..... *tuskar*
done, *plural masc.* ..... *sakard*
done, *plural femin.* ..... *askranat*
speak, *impera.* ..... *esmadjee*
sleep, *impera.* ..... *atás*
sit ..... *afeem*
go ..... *awas*
take away ..... *atkar*
come ..... *eyee, eaï*
welcome ..... *matsarg'oolt*
what do you desire? ..... *dee tafreed?*
whence come you? ..... *ezdeen tabeed?*
thou art my friend ..... *shèg áwadem anook*
and thou also art my friend ..... *walla sheg awadem anook*

I know ..... *nash asnaa'*
I do not know ..... *ad asnaa'*
he knows me..... *netoo yasanee*
he comes directly ..... *eedoo idyoos*
he does not come ..... *agdee tils*
there is nothing..... *wal thawás*
inkstand ..... *thadwat*
pen ..... *nalan*
ink..... *khabar, A., simarg', A.*
old ..... *wusar*
new, or young ..... *muzzin*
afraid ..... *erdjib, A.*
red ..... *zaqarg, zagag*
green ..... *ararg*
yellow ..... *awrarg*
black ..... *sataf*
azure, sky-coloured ..... *yerwas, idjanna*
white ..... *mallal*
brown, red ..... *zaqqag*
blue ..... *agrag*
grey ..... *eeshad*
near, close at hand ..... *yokrab, A.*
far, distant ..... *yoba'd, A.*
small, little ..... *mateed*, masc. *mateet*, fem.
big, great, large ..... *maqoor*
bad, wicked ..... *djaseer*
tired, weary, fatigued ..... *awhhala*
fat, fleshy ..... *karaz*
meagre, lean..... *dai'f, A.*
present, ready ..... *yalla*
sweet, luscious ..... *amam*
bitter, keen ..... *azeed*
high, tall ..... *zadjrut*
low, mean, not high ..... *djezzal*
short, scanty..... *emdjazzal*
long, not short, extensive..... *darg, uzzifan, zadjrut*
broad, very wide ..... *a'reedhál*
beautiful, very handsome..... *sameehh hál*
clean, pure ..... *nateef*
dirty, nasty ..... *mashh*
naked, bare ..... *yazaf*
dressed, clothed ..... *yels*

sweaty, perspiring..... *ya'rag, A*
intelligent, wise, sensible..... *a'aqeel, A*
learned, a scholar..... *ya'roo*
in a hurry..... *yeshrg'ál A*
yet, still, not yet, after all..... *seedoo*
directly, immediately..... *zagreed, A*
take care, beware..... *ishaf*
purchase, *imp.*..... *asa'*
love *imp.*..... *afroo*
light, kindle..... *seefag'*
bring up, fetch down..... *afriu'*
wait, stay, attend..... *agal*
add, increase..... *arnaf*
kiss..... *azmám*
beat..... *awats*
drink..... *asoo*
break..... *araz*
conceal..... *adeef*
sing..... *ilwrahoodj*
seek, look for..... *aftad*
spit..... *soofas*
fear..... *eksad, aksood*
lay down..... *atash*
cut..... *aukads*
tear asunder..... *adán*
dance..... *ishhdad*
burn..... *enakads*
untie, loose..... *ara*
paint..... *amadj*
descend, take down..... *edjer, egz*
exist, be—he existed..... *marwas—yemrawas*
write—he wrote..... *ooraf—yooraf*
hear, listen to..... *astoo, asill*
speak, tell, say, *imp.*..... *anna, ennaï, innee*
fill up..... *adkoor*
kill, slay, put to death..... *anoo, arg'ras, abeed*
enter..... *ootaf*
extend, lengthen..... *azál*
he was..... *yellálh*
she was..... *thellálh*
thou wert..... *thallálh*
I was..... *yellaa'n*

we were ..... *nellâh*
you were ..... *allân*
they were ..... *illaân*
he is ..... *netoo yallah*
she is ..... *natat thallàh*
shut ..... *afr, err*
finish ..... *akamlat, A. fook*
divide, part, share ..... *ezân*
run away, fly ..... *erwal, erool*
smoke ..... *zafoof*
rub ..... *innaï*
recover, be cured ..... *eezeed*
dress, clothe ..... *ilsoo*
swear ..... *eefadd*
plough, till the ground ..... *ehhraz, A. ekriz*
wash—he washes ..... *sirad—yesirad*
bind ..... *afan*
read ..... *a'rat*
eat—he eats ..... *elfroo—yatash*
walk—he walks ..... *sanfâ—yasanfâ*
marry, take a wife ..... *thamlud, ershel*
measure ..... *eggas*
put, set, place, *imp.* ..... *esooras*
praise, commend ..... *emdjar*
mount, go up, rise ..... *iwân*
bear, bring forth, be born ..... *entfal*
remove, put off ..... *itkal*
forget ..... *attaï, etthee*
open ..... *yoor*
speak, talk, utter, pronounce .... *esmedjee*
weep, cry ..... *ezaf*
make water ..... *djewadjan*
fold, bend ..... *asaf*
bear, carry, bring ..... *abd, abad*
take, catch, lay hold ..... *enhab*
borrow ..... *ardsal, ardal*
humble, abase ..... *thatter*
protect ..... *adsan*
leave, abandon ..... *edj, adjee*
fill, satiate ..... *edjoon*
shave ..... *aa'ran*
look, behold ..... *ellam, azalm*

come back, return ..... *akree*
throw down, overset..... *adrân*
laugh..... *das, eedas*
know..... *eesan, isan*
leap, jump ..... *thengaz*
be thirsty ..... *afood*
I am thirsty ..... *nash afoudd'a*
thou art thirsty..... *shèq afoudd*
he is thirsty ..... *netoo yefood*
we are thirsty ..... *nakanee nafood*
you are thirsty ..... *sheqween tafoodan*
they are thirsty..... *neleen foodan*
go out, issue .... *afaa'*
be silent, hold your tongue ..... *efast*
fall ..... *ooda*
turn ..... *abran*
find—he finds ..... *oofoo—yoofi*
he slew, or has slain ..... *yarg'ras*
thou hast killed ..... *sheq thabid*
win, vanquish, overcome ..... *ernee, ernd*
he came ..... *yoosad*
sit down ..... *efeem*
stand on the legs ..... *akar*
do you know the language of Ghadámis (the 'Adems) ? .. } *shèq thasan awál n'Adems*, or, *n'Adeems*
how are you ..... *thelhhabr ennak*
do you come from Ghadámis .... *siman taseed s 'Ademes*
why ? wherefore ..... *yasee? eesee*
how much hast thou received .... *ekeet thafa'd'*
a Christian, or European ..... *eewan ayadaf Rouman*
who is the owner of this ..... *nitoo thilloon*
do you come from the city ..... *tousid s'merdd'a*
I wish you would eat ..... *akfee kaida dattash*
eggs..... *thasadalt*
salt ..... *thessunt, tissant*
leprosy ..... *thamdwart*
a thing, object, or business ..... *kara*
wood..... *asrg'eer*
road ..... *ebrid*
little, not much ..... *iktoo*
silver money, or coin ..... *idrafan n'efaddát*
copper coins..... *idrafan s'nasee*

scissars ..... *thamidass*
knife ..... *thafoozsat*
garment, clothing ..... *sels*
shoes ..... *thergast*
paper ..... *thekard*
what is your name ..... *eemadel esmennek*
pasture ground ..... *saleel*
saddle ..... *aserdj, A. tharikt*
blood ..... *damman, A.*
hide, skin ..... *eelas*
heart ..... *odjam*
by and by, after an hour ..... *yekteedan*
river ..... *wadee, wadï*
a plain ..... *thamrat thettastoo*
bird ..... *adjdeed*
hill, or rising ground ..... *neradj*
stick, cane, staff, cudgel ..... *tabraït*
reed ..... *thag'namt*
board, deal, plank ..... *aloo*
fork ..... *shakoom*
mosque ..... *lamooda, A.*
shop ..... *thahhanoota, A.*
a high mountain ..... *adwarar zadjrutân*
a low mountain ..... *adwarar djezzâlân*
long road ..... *abrid zadjrutân*
short road ..... *abrid djezzâtân*
long journey ..... *athataa'dou zadjratân*
short journey ..... *athataa'dou djezzâtân*
a long wall ..... *thanalee zadjrutân*
a short wall ..... *thanalee djezzâtân*
the body ..... *ï thenzart, tanzart*
the face ..... *ï yanar*
my face ..... *eyanar anook*
eyebrows ..... *infrân*
eyelids ..... *hawadjeb ins, A.*
the pupil ..... *ï amas nawal*
a large nose ..... *thinsart*
I left him ..... *nash edjahht*
he left me ..... *netoo eđjee*
I eat him ..... *nash tashehht*
he ate him ..... *netoo yettashat*
he drinks ..... *netoo yasam*

I have drunk	*nash isoee'*
he beat me, *preterite*	*netoo eewatee*
I beat him, *present*	*nash walahht*
I have swept the room	*nash salsahh ibeit*
I took him	*nash ahhkamahht*
he took me	*netoo yehhkamee*
an ostrich	*aseed*
a skin, or leather	*illam*
a branch of the date tree	*tagareet*
a towareek	*eewan targee*
brother	*nitta*
sister	*ooteema*
father	*haba*
mother	*iemma*
cotton	*tabdookt*
oil	*odee*
stone	*tag'roorg'an*

The Numbers.	*i 'Adredad.*
one	*eewan*
two	*sen*, or *sin*
three	*karad*, or *kerad*
four	*aqaz*
five	*sams*
six	*sez*, or *seds*
seven	*sâ*
eight	*thâm*
nine	*th'soo*
ten	*maraou*
eleven	*eewan dam'raou*
twelve	*sen dam'raou*
thirteen	*karad dam'raou*
fourteen	*aqaz dam'raou*
fifteen	*sams dam'raou*
sixteen	*seds dam'raou*
seventeen	*sâdam'raou*
eighteen	*thamdam'raou*
nineteen	*th'soodam'raou*
twenty	*sendamaraweneen*
twenty-one	*eewan sen dam'raweneen*
twenty-two, &c.	*sen dassendam'raweneen*
thirty	*karada dam'araweneen*

forty	*aqaz d'maraweneen*
fifty	*sams d'maraweneen*
sixty	*seds d'maraweneen*
seventy	*sad'maraweneen*
eighty	*tham d'maraweneen*
ninety	*th'soo d'maraweneen*
hundred	*há*
hundred and one	*eewandahà*
hundred and two, &c.	*sendahá*
hundred and ten	*maravudahá*
hundred and twenty, &c.	*send'marawenendahá*
two hundred	*senhameen*, or *sinend'há*
three hundred	*karada end'há*
four hundred	*aqaza end'há*
five hundred	*samsa end'há*
six hundred	*seza end'há*
seven hundred	*sà end'há*
eight hundred	*tham'end'há*
nine hundred	*th'soo end'há*
thousand	*okukk, ifeed-hámarawed*
two thousand	*sen akakkeen*
three thousand	*karadanekookeen*
ten thousand	*marawed nekukk ifeedan*
hundred thousand	*hánekakkeen*
a million	*merawed ifeedan*

JACOB GRÄBERG OF HEMSÖ, M.A.

SOMETIME SWEDISH AND NORWEGIAN CONSUL FOR MAROCCO AND TRIPOLI, KNIGHT OF THE ROYAL SARDINIAN ORDER OF ST. MAURITIUS AND ST. LAZARUS.

Florence, June 11th, 1831.

Report of the Rev. G. C. RENOUARD, B.D. *on the preceding Remarks of* M. GRÄBERG DE HEMSÖ.

THE literary world, as well as the ROYAL ASIATIC SOCIETY, is much indebted to M. GRÄBERG DE HEMSÖ, late his Swedish Majesty's consul in the empire of Marocco and the regency of Tripoli, for the specimens of the Berber language which he collected during his residence in different parts of North Africa. By extending his views beyond a mere vocabulary, he has afforded means of examining the structure of the language; and, by procuring versions of the same sentences, at places remote from each other, has enabled the student to form some notion of the different dialects into which that ancient and widely extended tongue is subdivided.

That the language of the Berbers is very ancient and very widely extended will, it is presumed, be shewn in the sequel; but before its claims on general attention are considered, it will, perhaps, be asked, "On what grounds can the language of an African people be proposed as a subject of inquiry to a Society which devotes its labours exclusively to Asia?" The answer is obvious: the Berbers, whenever they write, use an Asiatic character; their history is recorded only in an Asiatic language; and they proudly claim for themselves an Asiatic origin. An inquiry, therefore, into the structure and affinities of their language can hardly be considered as foreign to the researches of an Asiatic Society, however we may feel inclined to dispute the antiquity of the Berber genealogies, or suspect that their relationship to the Arabs was not discovered before they became disciples of the prophet.

An apology is also due for laying before the Society the following extracts, instead of the memoir drawn up in our own language, and prefixed by M. GRÄBERG as an introduction to his specimens. Want of leisure, and impediments arising from the prevalence of the plague, and other causes, candidly stated by that gentleman, greatly interfered with the pursuit of his inquiries, so that he was reduced to the necessity of trusting to incompetent authorities, by whose conflicting statements he seems to have been much embarrassed. His memoir, therefore, though bearing marks of extensive research, cannot, as illustrative of his specimens, be put in competition with the statements of those who well knew the people of whom they speak, and give an account

so clear and ample as to remove almost all the difficulties arising from the reports of less accurate inquirers.

The statements here alluded to are those of EL-HASAN IBN MOHAMMED EL-WEZZÁN, EL FÉSÍ,(1) afterwards called YAHYÁ EL ASAD EL GHARNÁTÍ, but better known to us as JOHN LEO AFRICANUS; and those of his intelligent, well-informed paraphrast, DON LUIZ DEL MÁRMOL CARAVAJAL. The former of these writers, who was of a Moorish family established at Granada, and probably descended from the Berber tribe of Zenétah,(2) had travelled far and wide in the country of his forefathers: the latter, also a native of Granada, had passed seven years and eight months of his life as a captive in North Africa; had traversed the Desert with the SHERÍF MOHAMMED'S army as far as Alsákiyah al Hamrá, on the confines of Guinea; had travelled, either bond or free, through Egypt, and the whole of Barbary; and used Arabian as well as European authorities in the compilation of his work, having had, as he informs us,(3) much experience and practice in the African, as well as the Arabic tongue—which, he adds, "are very different from each other." With such qualifications he was well fitted to supply the defects in LEO'S work, and his own is rather, as before remarked, a paraphrase of it than a version. As it is scarcely known in this country, except through the medium of an indifferent French translation, the passages here given will probably be new to many members of this Society; nor will those, it is hoped, to whom they are already known, be displeased at having them again brought under their notice.

A few remarks, however, must be premised, in order to point out some peculiarities in the pronunciation of the African Arabs, and to shew the reasons which can be alleged for maintaining the antiquity of the Berber tongue. In reading works relative to Northern Africa, it must always be remembered that the Maghribíns, or Africans of Arabian origin, frequently pronounce the lengthened elif as *e* in "there," "where," not as *a* in "far," "car," which seems to be its proper sound, and is that usually given to it by Asiatics. The káf, or guttural k, in "kalb," "kamar," "kods," has generally, in Egypt and Barbary, the sound of *g* in "girl," "glad," and is often confounded by the Berbers with the Persian gáf, a letter used by them though unknown to the Arabs. The jím of the latter has, also, both in Egypt and Barbary, very commonly the same sound: thus the common people say gízeh and ginén for jízeh and jinán. The ghaïn is uttered, as, indeed, all the intonations of the North Africans are, so deeply in the throat as to sound more like an *r* than

a *g*; a defect noticed by EL NUVEIRÍ,(4) and therefore of no modern date. Hence many European writers have expressed this letter by *rg* or *gr*, when writing African words in the Latin character. Beréber,* the name given by the Arabs to the original inhabitants of Northern Africa, is, as it may be almost superfluous to remark, a plural of the word Berber, and of nearly the same form as Beráberah, the term by which the modern Egyptians designate their southern and eastern neighbours. The latter are, however, of a race wholly distinct from the Berbers of Mount Atlas; and this, as well as other considerations, renders it probable that the Arabs, notwithstanding their reference of the word Berber to one of their own roots, borrowed it from the Greeks, and used it, in its original signification, as a synonyme of 'ajamí,(5) *i.e.* "whatever is not Arabian."

That the Berébers were established between Mount Atlas and the Mediterranean long before the Arabs invaded Africa, is proved by a peculiarity in their language, the antiquity of which can be clearly established. That peculiarity is the manner in which the feminine gender is distinguished: this is done by merely prefixing and affixing *te*, or *t*, to the beginning, and *et* to the end of the masculine noun. Thus from *elghum*, a he camel, they form *telghumt*, a she camel; from *emshish*, a he cat, *temshisht*, a she cat; from *aghmar*, a horse, *taghmart*, a mare. Now, a glance over the ancient map of Africa will bring the following names under the eye: Dorath, Tubusuptum, Tamugadi, Tagaste, Timphadi, Taduti, Thubutis, Tididitum, Tamuda, Thamarita, Thaluda, Duth, Tocolosida, Thicath, Thebunte, Thasasti, Tasbalta, Timida, Tacatum, Thuzicath; and, if allowance be made for the substitution of *s* for *t*, a change very common in the ancient languages, the number of proper names bearing this characteristic of their Berber origin, might be greatly increased. The modern map furnishes evidence no less copious and incontrovertible, that Berbers were the founders of all the most ancient among the cities now existing in this part of Africa: thus to no other people can we ascribe the naming of Tagawost, Tagodast, Taródant, Tekrít, Tebelbelt, Tednest, Tegdemt, Tegort, Temendfust, Tensift, Tesegdelt, Táfilélt, and many more than it is either necessary or convenient to enumerate. The name last mentioned would give a further proof, if it were requisite, that these words are feminines formed according to the Berber principle, since the adjective derived from *táfilélt*, is *filéli*,† formed by adding to the original word, stripped of its distinctive syllables, the usual termination of derivative adjectives.

* برابر or برابرة plural of بربر † فلالي from تافلالت

This is so remarkable an idiom, that it alone may be thought sufficient to justify the assertion that the prevalence of this language throughout the range of Mount Atlas, from the first dawn of history, can be distinctly shewn; and a more extensive knowledge of its dialects would doubtless give a clue to the meaning of these names which are all, probably, significant terms; just as *tetáwin* signifies "eyes," and the Berbers have a tradition which accounts for it.* The extent of country through which this language is spoken is no less remarkable. It embraces an area amounting to more than one-fifth of the whole Peninsula; for that the Berber language prevails from the confines of Egypt to the shores of the Atlantic, (6) and from the Mediterranean to the borders of Negroland, will be manifest to any one who will take the trouble of comparing together the vocabularies collected in various and remote portions of that vast area, by Jezreel Jones,(7) Dr. Shaw,(8) Hornemann,(9) Venture,(10) Hæst,(11) Jackson,(12) Lyon,(13) Alexander Scott,(14) Chenier,(15) Cailliaud,(16) Pacho,(17) Shaler,(18) Hodgson,(19) Von Minutoli,(20) and Gräberg.(21) From the scanty materials hitherto communicated, it is hardly possible to form any decisive opinion as to the originality or affinities of this language; but an examination of its principal grammatical forms, and several short vocabularies, has led to the conclusion that, with the exception of some remote resemblance in one or two respects to the Arabic and the Coptic, it has no affinity with any other known tongue.

"The Africans," says MÁRMOL (A), "differ much respecting the nations who originally peopled the eastern parts of Barbary (Berberia) and Numidia (Bilédu-l jeríd); some saying they were Asiatics who came by sea from the Morea, where they had attempted in vain to establish themselves; others, that they were Phœnicians driven by the Assyrians out of Palestine: but the most esteemed writers among the Africans affirm, that they who first peopled the eastern deserts of Barbary and Bilédu-l jeríd, and are now called African Berébers (Beréberes), were five nations or tribes of Sabæans, who came with the king of Arabia-Felix (El Yemen), MELIK IFRÍKÍ, from whom Africa Proper (Ifrikiyyah) received its name. These tribes constantly preserve their ancient names, and are called Sanhájah, Musamúdah, Zenétah, Hawárah, and Ghumérah;† and from them the six hundred branches of the African Berébers sprung. From them, also, come

* *Vide* LEONIS Africæ Descript., p. 412. The Latin translator mistaking *tellĕguin* for an accusative case, has coined the puzzling nominative *telteguis*.

† صنهاجه، مصموده، زناته، هواره، وغماره

all the kings and nobles in all Africa; as Ibnu-l Rakík saith in his book, called '*The Genealogical Tree of Africa.*' They are commonly called African Berébers, because they were first settled in Berberia (Barbary); while those who were established in Maghrib-ul-aksá (Tingitania) (22), Bilédu-l jeríd, and the Sahrá (Libya), before the others came, are called Shilóh Berébers. At first they all occupied the plains, living in encampments (adwárs), and being very rich in cattle; but in course of time great wars sprang up among them, and the conquerors remaining masters of the plains, compelled the vanquished to retreat into the mountains and towns, and robbed them of their cattle; so that mingling with the ancient Africans, the Shilóhs, and people of Bilédu-l jeríd (Gætulia), they began, like them, to live in houses, and became the subjects of their own kindred. This is the reason why there are in Africa Berébers who dwell in houses, in the towns and mountains, and others who dwell in tents, in the plains, though they all belong to these five tribes; but such as wander about in the plains, like the Arabs, are considered as the most noble, because they are the richest in grain and cattle, and are the most powerful. Both the one and the other value themselves much on the antiquity of their race, and carefully preserve a knowledge of the tribe from which they spring; and they are much known among the other Africans. Though dispersed through the provinces of Barbary, Bilédu-l jeríd, and the Sahrá (or great desert), they have certain known habitations and places of abode, where the strength of each tribe is found. That of Musamúdah occupies the westernmost part of Maghrib-ul-aksá (Mauritania), and the high lands of the Greater Atlas, which lie between the point called I'd Wakál (or Aït Wakál), where it sinks into the ocean, and the mountains in the province of Heskárah (or Dominete), and in all the plains and declivities, from one end of the chain to the other; so as to be scattered through four provinces out of the seven which now [about A.D. 1570] form the kingdom of Marocco—viz. Háhah (23), Sus, Gezúlah,* and Merákesh. The Masámidah, or Masmúdahs, kept their court at Aghmét.

"The Zenétahs kept their old abiding-places in the plains of Temésenah, which is the last and westernmost province of the kingdom of Fés. These used to be the most powerful tribe, but are so no longer; and they are called Sháwiyahs. Others dwell in the

* قزولة or جزولة, ق and ج being interchangeable letters among the Berbers.

high lands of the greater Atlas which overhang the kingdoms of Fés and Telmisén (Tremecen). They are a warlike people, continually fighting with the Turks, who have, in modern times, seized the last-named kingdom. Others inhabit the provinces of Constantina and Tunis, some of whom dwell in camps like the Arabs; others in houses and villages: but the most powerful and free of all are those of Bilédu-l jerid and the Sahrá.

"The Hawárahs, who are subject to the Zenétahs, constantly occupy the same tracts of country.

"The Sanhájahs extend from the mountains of Barkah to those of Nefúsah and Wénesherísh; and some of them frequent the same country as the Zenétahs.

"The Ghomérahs dwell in the mountains of Atlas Minor, which overhang the coast of the Mediterranean Sea, from the borders of Ceuta (Sebtah) to the eastern boundary of Maghribu-l-aksá (Mauritania Tingitana), where it is contiguous to Maghribu-l-ausat (Mauritania Cæsariensis).

"Three of these five tribes, viz. the Zenétahs, Musmúdahs, and Sanhájahs, have at different times given sovereigns to Barbary, since the power of the Mohammedan Arabs declined."

MÁRMOL also mentions* another tribe of the Berber race (B, C), which does not appear to be a branch of one of the five already named. This tribe is called *Aswágh*, or *Aswák* (24), and consists entirely of shepherds and weavers, who seem to be peaceable in their habits, and more stationary than most of their neighbours. In another chapter,† he discusses the question, whether the Berbers ever had a peculiar written character (25), which, he thinks, they had not; but the passages most immediately relating to the subject of this paper, are those in which he speaks of the inhabitants of the desert, and of the languages spoken by them.

"From SABTAH, son of CUSH (D), and grandson of NOAH, are descended," he says,‡ "the five principal tribes who dwell in the deserts of Inner Libya (*i.e.* the great Sahrá). They are called *Senhégah*, *Wénseris* or *Wensigah*, *Terkah*, *Lamtah*, and *Berdéwah* (26). These are the proper names which they who dwell in these deserts now bear, who were anciently called Sabathæans. Besides these there are other tribes among them, but not so famous nor so numerous.

* Tom. i. fol. 33, lib. i. cap. 25.
† Lib. i. cap. 34, tom. i. fol. 44.
‡ Lib. i. cap. 26, tom. i. fol. 34.

All are very poor and miserable, and live in the same fashion, *i.e.* without order or method. They dwell in tents like the Arabs, and travel on camels from place to place. The *Senhégahs* (27) live on the westernmost shore of the ocean, and extend eastwards as far as the salt-mines of Tegházá (28). Northwards they reach the borders of Sús, Háhá, and Dar'ah, called by the Arabian writers the Remote Sús. On the south, they are bounded by the Land of the Blacks (Bilédu-s-súdán), called Jenéwah, where are the kingdoms of Walátah and Tonbuktú (29).

"The *Wenseris*, or *Wensikahs*, begin westward from the borders of Tegházá, and stretch eastwards to another desert called Khaïr (30). Northwards, they reach as far as the provinces of Sugul-mésah, Tebelbelt, and the Banú Goráï; and southwards, they are bounded by another desert, which lies between them and the kingdom of Gúber, in Negroland (Bilédu-s-súdán).

"The *Terkahs* begin from the borders of the desert of Khaïr, and reach eastwards to the desert called Igidí (31). On the north, they are bounded by the desert of Tuwát (32), and the provinces of Teghorárín and Mezáb; and on the south, by the deserts which surround the kingdom of Aghades (Audaghest).

"The *Lamtahs* have their abodes from the borders of Igidí, and stretch out eastwards to the desert where the Berdáwahs live. On the north, they border on the provinces of Tekort, Wérkelán (33), and Ghadémis (34). Between this land and that of Sugulmésah, are the people called Morábitíns; and to the south, it reaches the deserts which extend as far as Cano, a kingdom of Negroland.

"The *Berdéwahs* hold the parts which lie east of these, and stretch out as far as the borders of Aujelah. On the north, they border on the deserts of Fezzén and Barkah; and to the south, they reach those which are on the borders of Bornó, which is also a kingdom of blacks.

"Aujelah, Sirt, Berdéwah, and Al Wéhét [*i.e.* the Oases], are other inhabited tracts further to the east, on the borders of Egypt. The Africans have some histories, which say that the Senhégahs reigned for some time in Negroland, especially in the kingdoms of Mélí, Tombuktú, and Aghades; and that they who now [circa A.D. 1570] reign in those kingdoms, are descended from them. Each of these tribes has its own sheïkh, who is reverenced and obeyed by them like a prince; and it is a marvel if they leave off making war upon each other concerning their fields."

"The ancient Africans, called Shilóhs,* or Berébers," says MÁRMOL in another place† (E), "though dispersed all over Africa, all speak and write the same language, which is called Kelém Abí Málik (35) —*i.e.* the language of ABÚ MÁLIK, who was the inventor of the Arabic grammar: but they also speak the Barbaresque (Berberisca) language, which is the natural language of Africa, distinct and very different from all others, though it has Arabic words which appear to have been introduced by the Arabs who settled at different times in Africa. This language bears among the Barbaresques themselves three names, Shilhah, Tamázeght, and Zenétiyyah;‡ but the languages of the proper Berébers are, as it were, all one, though they differ in the pronunciation and signification of many words. They who live near the Arabs, and have many dealings with them, use a great number of Arabic words, even of the language of Abí Málik, which is the most noble; and the Arabs, likewise, use many African words in their language. The Ghomérahs and Hawásahs, who live in the high lands of Atlas Minor, as well as they who dwell in the cities on that part of the coast which lies between the Greater Atlas and the sea, speak a corrupt Arabic; but in the city of Morocco, and all the provinces of that kingdom, as well as among the people of the Sahrá, the pure Berber is spoken; and that language is called Shilhah and Támázeght (36) — *i.e.* 'noble and very ancient.' The eastern Berébers, who are on the borders of the kingdom of Túnis, and extend beyond Tripoli, in Barbary, through the desert of Barkah, universally speak corrupt Arabic. They who live between the highlands of the Greater Atlas, and the sea, whether they live in camps or dwell in houses, and the greater part of the Aswághs, all speak the Zenétiyyah language, and likewise corrupt Arabic; so that they who in Africa speak the natural Arabic language are very few."

The specimens forwarded to the Society by M. GRÄBERG are—

1. One of LOKMÁN'S Fables in the Berber dialects used at Khúzt and Ghadémis.

2. Some Arabic sentences, with versions in the Shilhah and Ghadémisí dialects of the Berber.

* شلوح plural of شلحة † Lib. i. cap. 33; tom. i. fol. 43.

‡ الزناتية

To the Berber version of this fable, M. GRÄBERG has added the Arabic text, as given to him by a Fakíh, or man learned in the law, born at Dúbdú, in the province of Kúzt (37), who had practised as "an 'adul, or public scrivener," for fifteen years. As an evidence of the extraordinary ignorance prevalent in Barbary, this document is no small curiosity. These different texts, with an English version of the original, are here divided into short paragraphs, and placed in parallel columns, for the purpose of facilitating collation; the Fakíh's Arabic, reduced to its proper orthography, being placed next to the copy in which his own spelling and vowel points have been carefully preserved.

The Fifth of Lokmán's Fables; with a Version in Barbaresque Arabic, the Berber as spoken at Dúbdú and Ghadémis, and in English.

English Version of the Arabic.	Berberí of Ghadémis.	Berberí of Dúbdú.	The vulgar Maghribín correctly spelt.	Vulgar Maghribín.	Pure Arabic.
A lion	افور	يون ازم	هذاك السّبع	هدك سبع	اسد
once (upon a time)	يتجرت	ارد			مرّة
had a desire	يغر	يتش	بغي	بغ	اراد
to devour	دقش	يوان اوفتس	ياكل	يكل	يفترس
an ox	ابريد	ول يغي مم شسبج	هذاك الثور	هدك الثّور	ثورًا
but he dared not (attack) him	يكست يسز	امقور غفس	ما صاب كيف يعمل	مصب كف يعمل	فلم يجسر عليه
because of his strength	ديوفر		اكبر عليه	كبر عليه	لشدّته
then he went to him		السغ			فمضى اليه

لِيحتَالَ عَلَيهِ	كَيحتَالَ عَلَيهِ يَقبِضُ	كيحتال عليه يقبضه	الغِفس يَتحِل اتيمز	تحدم	to entrap him
قَايِلاً	قَالَ أَن	قال ان	إنياس	اسن	saying
أعلَم					know
أنني قَد					that I now
ذَبحتُ	ذَبحتُ	ذبحت	نكنت غرسخ	نش اغرسع[1]	have slaughtered
خروفًا	لخرف خرف	الخروف خروف	يون أعلش	ازومر	a lamb
سَمِينًا	سمين لهذك خرف	سمين لهذاك خروف	يقون	كرازن	fat
أشتَهِي أن	بش	باي شي	رح	افريع[1]	I wish that
تَأكَلَ	تبت	تبات	تنسد	تتش	thou wouldst eat
عِندِي	عند	عندي	ادغر	غوري	with me
في هَذِهِ	اليل	الليل	ادا	افادو تواجي	in this

English Version of the Arabic.	Berberí of Ghadémis.	Berberí of Dúbdú.	The Vulgar Maghribín correctly spelt.	Vulgar Maghribín.	Pure Arabic.
night		اتشت غر	تاكل	تكل	الليلة
bread		اغرم ادبسم	الخبز	الخبز	خبزا
then he consented	انياس	انياس	قال	قل	فاجابه
to this	عجيب	خير	هو خير	هو خير	الي ذلك
and when	دج	ازديد	حين	حن	فلما
he arrived	نود	يوش	مشي	مش	وصل
at the place	يا ماكان	غرس	الي عنده	لعند	الي الموضع
and saw it	يلمت	يني	يشوف عنده	شف عند	ونظره
then already	افل				اذا قد
had prepared	افور				استعد

الاسد	لعود	الاعواد	اسغرن	سغيرا	the lion
حطبا					wood
كثيرا	بزف	بالزاف	عدن	هلا	much
وخلاقين	والدخاشش	والدخاشيش	اقشوشن	مدي	and cauldrons
كبارا	كبر	كبار	مقور	مقر	large
فولي	ورجع	ورجع	يغول	ليين يكريد	then turned about
الثور	هو	هو		ابريد	the ox
هاربا	بزربه	بالزربه	ازديت	يرول	fleeing
فلما				دج	and when
عاين			ييني	لم	he saw
ذلك					this

English Version of the Arabic.	Berberí of Ghadémis.	Berberí of Dúbdú.	The Vulgar Maghribín correctly spelt.	Vulgar Maghribín.	Pure Arabic.
then said to him	الحالي	ازم	قال	قل	فقال له
the lion	انياس		السبع	سبع	الاسد
why	افور	يغول	ارجع	رجع	لماذا
fleest thou	يسي				وليت
after	دج				بعد
thy coming	توسيد				مجيئك
hither	ترولد				الي هاهنا
said to him	انياس	انياس مبشيغين تغلد	قال اي شي عندك رجعت	قل اشعندك رجعت	قال له
the ox	ابريد	انياس انح اسغرن عدن[5]	قال ان شفت الاعواد بالزاف	قل ان شفت لعود بزف	الثور
because I	نش اسنع[1]	اقشوش امقور[3]	والدخاشيش كبار	والدخاشش كبر	لاني

knew	عَلِمتْ	اخبرت	اخبرت	عَلِمتْ
that	انّ			انّ
this	هَذَا			هَذَا
preparation (is)	اركتو	تولد اعلوش	بولد خروف	الاستعداد
for something	اقد	ينش	مزيان [مازين ?]	لِما هو
larger than	يتكل	يكبرن	ومذبوح	اكبر من
a lamb.	ازومر	اعلوش	الخروف	الخروف
This (is)	وين	ام اقتف	امه كتطلل	هذا
its meaning	يسنو	وني	علي هذاك	معناه
That (it is)		يلن[6]	البعقلة	انّ
not the way	ليسي[9] يسنان	سلعقلنس[8]		ما سبيل

English Version of the Arabic.	Berberf of Ghadémis.	Berberf of Dúbdú.	The Vulgar Maghribín correctly spelt.	Vulgar Maghribín.	Pure Arabic.
of a wise man	عقلا[8]				العاقل
to trust	اقد يصدق	ولديتمن اق	ما يتقي شي	ميتقش	ان يصدق
his enemy	العدونس	عدونس	بالعدو ذياله	بلعد ديل	عدوه
nor to associate	ولديتمن[7]	ورغرس إزدغن	وما يسكن شي	ومبسكنش	ولا يانس
with him.	دجس		مع العدو ذياله	مع لعدوديل	البه

[1] The termination of this word (the first person singular of the preterite tense) in *ain* ع instead of *ghaïn* غ is one of the peculiarities of this dialect; for, like the Maltese and the Hebrews of old, the people of Ghadémis make no distinction between those letters, calling their native place 'Adéms instead of Ghadémis, and dropping the short vowel, as is common in the rapid and guttural utterance of the Africans. Ghadámis, as an Asiatic would pronounce the word, immediately recalls the recollection of Pliny's Cydamus (*Nat. Hist.* v. 5), and ascertains the quantity of the penultima, for which we have no poetical authority. The western Berbers, as before observed, change the *gh* into a strongly guttural r.

[2] This is evidently a compound of *yet jirt*, one time; and the first should probably be spelt يات *yét*, that being the feminine of *yán*, or *wán*, one.

[3] The i in *iwán*, which should be spelt إيوان is an article or preposition.

[4] ريخ connected with افريغ ?

[5] The Arabic adverb عدا through ignorance of the scribe, written at full length, instead of having the *tanwín*, as is usual in scanning.

[6] This word should be spelt ايلن; but of the rules of orthography most Berbers are wholly ignorant.

[7] *Wal*, in this phrase, is the same word as *war* (often pronounced *úr*) in the last but two of the Dúbdú version, the verb in each being the same. The د before يتمن should probably be written ذي. It is the Arabic adjective ذو, ذي, ذا, which is used by the Maghribíns much in the same way as the Chaldee and Syriac ד daleth.

[8] عقلا is a blunder in spelling, the converse of that noted in عدن for it is the Arabic عقلان: سلعقلنس, when analysed, seems to be *si-l 'aklánnes* سِي العقلانس from him that is wise there is no trust in his enemy, &c.

[9] This is probably the Arabic word ليس

Of the two Berber versions, that in the dialect of Ghadémis is evidently from the original of LOKMÁN, of which a literal English version has been here given; the other, in the dialect of Kúzt, or Súbdú, is not so exact, but agrees very nearly with the text in Maghribín Arabic, furnished by the same Fakíh. M. GRÄBERG's punctuation of these specimens has been carefully followed: but as his transcript in the Roman character sometimes deviates from his punctuation of the Arabic text, it is subjoined, together with his English translation of the first Berber version.

1. Version in the dialect of Kúzt.

Íwan ízim irád yathash íwan aúfúnas; wal yúfí mem shasijú i makkur ghifs ulasigh el ghifs yet-híl it yamaz: innayas nekinnit gharsah íwan a'allush yakwan, ríh ad ghurí tansad idà, ithshat ghurí aghrum ad wís um: innayas akhyár: azdayad yús ghuras, yanna isgharán a'ddan, akshúshan makkúr; yaghúl izdaït. Yanna ízim yaghúl; innayás mish yughín, taghulad? Innayas, Aníh asgharán 'addan, akshúshan amakkúr, afhàn, yaúlid a'allush yansha, yejran a'allush.

Ammu ocgattag, wunna illan:

S'ala'klannas wal yattaman akkú a'dúnas, waghuris izzaddaghan.

A lion wished to eat a bull, and did not find out how to attack him; for he was too strong for him: so he circumvented him, and accosted him (thus): "Thou must know," said he to him, "I have slain a very fat lamb, and I wish thou wouldst come to my house this night and eat bread with me." He (the bull) then said to him, "Very well;" and they went together to his house, where he saw a quantity of dry wood, and large boilers. He ran away in a hurry. The lion seeing him flee, said to him, "What fearest thou, thus to run away?" He said to him, "I perceive a quantity of dry wood, and large boilers; and I conceive that the lamb may be very good, but here is too much for a lamb."

The true mother (moral) of all this is, that

A man who is really wise, must not trust himself to his enemy, nor make himself familiar with his house.

2. Version in the dialect of Ghadémis.

Afúr yetijart yefrù d'itch abaríd, yeksat, yúsaz d'yufrú tehdam; asan "Nash aghrasa' azúmer karazan, afrí' thattash 'úrí afádú thawají." Enníyas "Ajib." Daj niwad yamakána, yalamt ifal afúr

soghíran hellan, madíi makrú: nín yekríd abaríd, yerwál. Dij lem elahálí, annías afúr; isí, "Daj taúsíd, thoulad'?" Ennías abaríd: "Nash asana' ara kothú ikdu yetkal azúmer."

Weïn isnú:

Liasí isnan aklan ikdà yusadak al'adúnas, wal d'ittaman dajas.

II.

Sentences and phrases translated from the Arabic into the Shilhah and Ghadémsí dialects, with a literal version in English.

I.

The following Shulúh (1) versions were procured at Tanjah, in the empire of Marocco; those in the Ghadémsí dialect (2) at Tripoli.

Sh. 1. Yá talibi-l ilm, ajhád ilak ídád was, kathan úr í téhassal ghasi-l jihád tekrár.

Gh. 2. Yá tálibi-l ilm, fa'jtehad ifadd asaf; lïanna-l ilm yehassal yestamár ú tekrár.

1. O seeker of knowledge! labour night and day; for it is not acquired without repeated labour.

Sh. 1. Adúr athaftu shadashan timsalt oggansa ízim.

Gh. 2. Wal la theterí bú jerád í lash afúr.

2. Seek not the heath-cock in the lion's den.

Sh. 1. Úr í těhebb ghas wunna íhabb amazwaní.

Gh. 2. Wal yefrú em yefrú amzauar.

3. There is no love like first love.

Sh. Akhéri-l 'ilm wúnnas istanfa.'

4. The best knowledge is that which does good.

Sh. I sharri maddani-l'ilm úris istanfa' i madden.

5. The worst of learned men is he whose knowledge does no good to men.

II.

Sentences and phrases translated from the Arabic by a native of Tefnú, in Upper Sús, and a Berber born at Ghadémis.

Sh. Ghírad theshashkad ts-akhámi.

Gh. Nash' frí túsad er daj ennúk.

1. I wish thou wouldst come to my house.

Sh. Enná amzágh.

Gh. Enná amzígh.

2. The free man said.

Sh. Thamgarth sŭwissis ghaïghaï agerennes, sú illis sí gannah.
Gh. Thaltha ahkamahat okurmanukín thekad sída jannah.
3. The woman took him upon her shoulders and flew to Paradise.

Sh. Úr tesrís aïlá gelkem.
Gh. Úr tajaz sí túdd.
4. She did not stop till she arrived.

Sh. Úr tesrís aïlá gĕthrúr sí timdint; illán tsegits seroggín amán, ezháran, ighdád.
Gh. Úr tajaz sí tawadd ghi mazdáu', dín dús thellá, amán, sejár, jedád.
5. She did not stop till she came to the city, where there were springs, water, trees, birds.

Sh. Illán tsegits igdád ih ez-háran ir tesebbahan; yá Rebbí!
Gh. Illán dús jedád ne-s-sejár ghanát metíj izlí: yá Rebbí!
6. There were birds upon the trees which sang: O my Lord!

Sh. Úr rajú zewegh zun netní.
Gh. Aka lekemá í míni thatha.
7. I never saw the like.

Sh. Ennayas: mata temdint?
Gh. Enniyas: sú mannas mezdáu'?
8. He said to her: what city is this?

Sh. Tenniyas: temdint úr izdár lajenat astaksham.
Gh. Tenniyas: koda yenjan i jandún totafan ïa mezdáu.
9. She said to him: into this city no genii can enter.

Sh. Ismennis Aflátún.
Gh. Ismannas Aflàtún.
10. His name is Plato.

The above translations, which, though defective in some places, are, on the whole, more literal than those given by M. Graberg, are abundantly sufficient to shew that whatever may be the apparent difference between the Berber texts here given, they all belong to the same language; for these translations were made, almost exclusively, by the help of M. Venture's Vocabulary which was formed at Algiers, at a distance both from the Shilhahs and Ghadémís: nor, as the alphabetical part of the Vocabulary is in French, would it have been possible to ascertain how many of the words here used are

wanting in it, without great loss of time and much fruitless labour. When allowance is made for the many orthographical irregularities which occur in a language so rarely reduced to writing, the ordinary interchange of *r* and *l*; j, g, h, and gh; t, th, and ts; m and n; and the difficulty of rightly dividing the words, where the natives of the country themselves are not guided by any fixed rules, it will be obvious that many of the discrepancies which strike at first sight are merely apparent, and such as will disappear when the genius and structure of the language are sufficiently known. Even with the very imperfect means of examining them which we now possess, we may venture to affirm that these specimens are all expressed in a language fundamentally the same, and, as such, would probably be, in a great degree, intelligible to every Berber from one extremity of Northern Africa to the other; especially when we recollect that Sús on the west, and Ghadémis on the east, are not very remote from the utmost limits of that vast portion of the African continent through which this singular but imperfect language is spoken.

NOTES.

As the work of MÁRMOL is not commonly met with in this country, and the passages here quoted are not always very closely translated, it seemed expedient to give the original text.

(A) Las primeras poblaciones que hubo en esta segunda parte del orbe, despues que las aguas del diluvio universal se retiráron, y Dios embío su arco en señal de paz entre él y el hombre, á la tierra, fuéron en Egypto, en Ethiopia, en la tierra de los negros, en los desiertos de Libya Interior, y en la ultima y mas occidental parte de Tingitania: porque segun los escritores antiguos, Mezraym hijo de Cham, y nieto de Noe, pobló á Egypto; Chus, otro hijo de Cham pobló á Ethiopia, y regnó en ella: y Fut, que tambien fué hijo de Cham, pobló la Libya, que antiguamente se llamó Futeya, y es la que hoy llaman la tierra de los negros, donde están los pueblos de Neúba, Zinche, y Geneúa. Sábatha, hijo de Chus, pobló los desiertos de Libya que están entre Numidia y la tierra de los negros: y Tut, otro nieto de Cham, truxo á la Tingitania, los pueblos llamados Tuteyos. Afirman los escritores Africanos haber estado muchos siglos yerma y despoblada la parte oriental de Berbería y Numidia, y entre ellos están diferentes? sobre quien fuéron los primeros que la poblároń: unos dicen que fuéron ciertos pueblos de Asia, que teniendo guerra con sus enemigos fuéron vencidos y echados por ellos de la tierra, y viniendo, huyendo á Grecia (que tambien estaba entónces yerma y despoblada) no se asegurároń allí, y pasáron el mar de la Morea, y desembarcáron en Berbería, y hallando la tierra desocupada y fértil, la poblároń: otros dicen que fuéron pueblos de Phenicia, de Palestina, que teniendo cruel guerra con los Asirios, en tiempo de su monarquía, fuéron

por ellos vencidos, y echados de sus tierras; y no siendo acogidos en Egypto, pasáron á los desiertos de Africa, donde hiciéron sus habitaciones y moradas. Mas los autores de mayor opinion entre los Africanos, afirman que los primeros pobladores de los desiertos orientales de Berbería y Numidia, que hoy llaman Beréberes Africanos, fuéron cinco pueblos (ó Tribús) de Sabeyos que viniéron con Melec Ifriquí, rey de Arabia Félix, de quien tomó nombre la África propria, como se dixo en el primer capítulo de este libro. Estes mantienen todavía sus antiguos nombres, y son llamados Zinhagia, Aluçamuda, Zeneta, Haoara, y Gumera: de los quales proceden seiscientos linages de Beréberes Africanos, y de ellos vienen todos los mas nobles y los reyes de toda África, como lo dice Ibni Alraquiq, en el libro de el Árbol de la Generacion Africana. Pobláron estos cinco pueblos, al principio, la parte oriental de Berbería, y despues derramándose en diferentes habitaciones, se hiziéron señores de la mayor parte de África: son llamados comunemente Beréberes Africanos, porque su primera poblacion fué en Berbería; y á los que estaban en Tingitania, y en Numidia y Libya, ántes que ellos viniessen, llaman Beréberes Xilohes. Quando los cinco pueblos, arriba dichos, viniéron á poblar en Africa, y mucho despues, vivian todos en los campos, en adúares y eran muy ricos de ganados: y andando el tiempo, naciéron entre ellos grandes guerras, de donde resultó que los vencedores, quedando por señores de los campos, hiciéron ir á vivir á los vencidos, á las sierras y a los lugares, privándolos de sus ganados. Los quales mezelándose con los antiguos Africanos, Xilohes, y Getulos, viniéron á hacer su morada en casas, como ellos, y á ser vasallos de sus mismos parientes. Esta es la causa porque hay en África, Beréberes que viven en casas, en las sierras y en las otras poblaciones, y otros en los campos, en tiendas, siendo todos de estos cinco pueblos; aunque los que andan en los campos, como Alárabes, son tenidos por mas nobles, porque son mas ricos de pan y de ganados, y mas poderosos: mas así los unos como los otros se precian de conservar su antigüedad y el orígen del pueblo de donde vienen; y son muy conocidas entre los otros Africanos. Demas desto, tienen sus habitaciones y moradas conocidas, donde está la fuerça de cada pueblo, repartidos por las provincias de Berbería, Numidia, y Libya. Los del pueblo de Muçamuda occupan la parte mas occidental de la Mauritania Tingitania, y moran en las sierras del Atlante Mayor, que caen desde la punta dél, que entra en el mar Océano, llamada Idúacal, hasta las sierras de la Provincia de Escura (ó Dominete), y en todas las haldas dellas, y en los llanos que están de un cabo y de otro de las sierras, donde se comprehenden quatro provincias de las siete del reyno de Marruécos, llamadas Heha, Sus, Gezula, y la propria tierra de Marruécos: los quales tenian su corte en la ciudad de Agmet. Los Zenetes tienen sus antiguas habitaciones en los campos de Temécena, que es la última y mas occidental provincia del reyno de Fez, yestos solian ser los mas poderosos, mas ahora no lo son tanto, y los llaman Xáuyos. Otros moran en las sierras del Atlante Mayor, que caen sobre este reyno, y sobre él de Tremecen; que son gente belicosa, y tienen continuas guerras con los Turcos que han ocupado modernamente aquel reyno: y otros andan en las provincias de los Antina y Túnez, de los quales, unos viven como Alárabes, en los campos; y otros en lugares y casas: pero los mas poderosos y mas libres de todos, son los de Numidia y Libya. Con este pueblo de Zenetes andan mezclados decontino los Haoaras, que son sus vasallos. Los Zinhagias ocupan desde las sierras de Barca á las de Nefuça, y á las de Guenecerís; y algunos andan con los Zenetes. Y los Gomeres moran en las sierras de el menor Atlante, que caen sobre la costa del mar Mediterráneo; y ocupan desde los confines de la ciudad de Ceuta, hasta la última parte de la Mauritania Tingitania donde confina con la Cesariense. Los tres pueblos de estos cinco, que hemos dicho, llamados

Zenetes, Muçamudas, y Zinhagis, tuvieron reyno, en diferentes tiempos, en Berbería, Numidia, y Libya; y esto fué des pues que el poder de los Alárabes Mahometanos declinó, porque ántes no se gobernaban sino por Xeques de los Tribús que llaman Cobeylas.[1]

Primera Parte de la Descripcion general de África, por el veedor, Luis del Mármol Caravajal. En Granada, 1573. Lib. i. c. xxiv. tom. i. fol. 31.

(B) Los Azuagos son unos pueblos que andan derramados por Berbería y Numidia, y la mayor parte dellos, son pastores que guardan ganado; otros hay texedores de lienzos y paños de lana; gente pobre que viven en las sierras, y en las haldas, y cuevas dellas, y por la mayor parte, son tributarios de los reyes, ó de los Alárabes. Estas gentes (segun los escritores Africanos dicen) viniéron antiguamente de Phenicia, y fuéron llamados Mauros ó Mauróphoros; los quales fuéron echados de aguella tierra por Josué, hijo de Nau, quo los consintiendo los Egypcios, pasáron a Libya y despues edificáron la famosa ciudad de Carthago, mil y docientos y sesenta y ocho años ántes del nacimento de Nuestro Señor Jesu Christo, que fué á los tres mil y novecientos y veinte y nueve de la creacion del mundo. Y dende á muchos años (segun dice Ibni Alraquiq) se halló en aquella ciudad, una piedra muy grande en una fuente, con unas letras Phenicias, que decian: "Nosotros somos los que huímos de la presencia del ladron de Josué, hijo de Nau." Quando estas gentes viniéron á África, ya habian reynado en ella, Asclepio y Hércules, que tambien reynáron en España, mil y seiscientos y noventa y tres años ántes de Christo. Despues, siendo destruido Carthago la primera vez, ántes que Didon la reedificase, pasáron estas gentes á la parte occidental de Berbería, con Annone, su capitan; y edificáron las ciudades Libyas, Phenicias, donde moraban quando los Romanos viniéron en África, los quales llamáron aquellas tierras, Mauritanias, del nombre de los moradores dellas, que se llamában Mauróphoros.—Id. ib. c. xxv. tom. i. f. 33.

(C) Los Azuagos son gente belicosa, y de mucho trabajo; y de pocos años á esta parte, viven algunos dellos en libertad, y fuéron un tiempo muy poderosos. Su lengua es Africana Berberisca, y tambien hablan la Arábiga; especialmente los que andan cerca de la ciudad de Lorbus, en los confines de Túnez, porque tratan de contino con los Alárabes. Su principal habitacion es la provincia de Temécena, y la de la tierra de Fez. Los que ahora tienen mas poder, son los que moran donde el reyno de Túnez con fina con la tierra de los dátiles, los quales se atreviéron muchas vezes á hacer la guerra contra los reyes de Túnez; y ultimamente, en año del Señor, mil y quinientos y nuevo, que los Mahometanos contáron ochocientos y noventa y siete, de la Híjara, diéron batalla á Múley Nácer, hijo de Mahamete, Rey de Túnez, que, estando en el gobierno de Costantina, quiso ir a sujetárlos; y le matáron á él, y mas de dos mil de á cavallo, que llevaba. Por esta victoria, comenzáron los Azuagos á tener buen nombre, y á ser reputados; y muchos pueblos de los que estában por el Rey, se pasáron con ellos; y su Xeque vino á ser uno de los mas poderosos señores de África; y le llaman ahora Rey del Cuco; el qual tiene continua guerra con los Turcos.[2]—Id. ibid.

(D) Dicho se ha como Sábatha, hijo de Chus, y nieto de Noe, pobló en los desiertos de Libya Interior, del qual proceden cinco pueblos principales, llamados Zenega, Guanezerí ó Guenziga, Terga, Lempta, y Berdoa. Estos son los nombres proprios que tienen hoy los moradores destos desiertos que antiguamente fuéron llamados Sabatheos: y demas destos, hay otras poblaciones en ellos, que no son tan famosas, ni de tanta gente. Son todos, los unos y los otros, muy pobres y miserables; y viven

[1] See Leo Africanus, p. 10. Elzevir ed. Lugd. Bat. 1632.

[2] Ib. p. 58.

de una misma ma nera, que es sin órden ni razon. Los desiertos de Líbya son todos ásperos y secos, y por la mayor parte, confinan con la tierra de los negros, que (como está dicho) comprehendió Ptolemeo debaxo del nombre de Libya Interior. Tambien llamáron á estas gentes, los Griegos, Nómadas, y los Latinos, Númidas. Los quales viven en tiendas como Alárabes, y andan mudándose de una parte á otra, tras los camellos. Los Zenegas moran [en] la parte mas occidental del mar Océano, y se extienden hacia levante, hasta las salinas de Tegaza: á tramontana, llegan á los confines de Sus y de Hacha [Heha] y de Dará, que los escritores Árabes llaman el Sus Remoto [Sús el aksà]: y hácia medio dia, confinan con la tierra de los negros, llamanda Geneua, donde son los reynos de Gualata y de Tombuto. Los Guanezerís, ó Guenzigas, comienzan, á poniente, des de los confines de Tegaza, y van hácia levante, hasta otro desierto llamado Hair: á tramontana, se extienden hasta la provincia de Sugulmesa, y hasta las de Tebelbeled y Benî Goray: y al medio dia, llegan á otro desierto llamado Guir, que responde [extiende?] hácia el reyno Gúber en la tierra de los negros. Los Tergas comienzan de los confines del desierto de Hair, y van hácia levante, haste otro desierto llamado Iguidí: á tramontana, confinan con el desierto de Tuár, y con las provincias de Tegorarin y de Meszab; y al medio dia con los desiertos que están cerca del reyno de Agadez. Los Lemptos tienen sus habitaciones desde los confines de Iguidí, y se extienden hacia levante, hasta el desierto donde viven los Berdoas: á tramontana, confinan con las provincias de Tecort, Güerquelan y Gadémis: y entre esta tierra y la de Sugulmesa, están los pueblos llamados Morabitines; y hacia el medio dia, llega á los desiertos que van á dar á Cano, reyno de la tierra de los negros. Los Berdoas tienen la parte oriental destos, y se extienden hasta los confines de Aúgela: á tramontana, confinan con los desiertos de Fezzen, y de Barca; y hácia medio dia, con los que caen en los confines de Borneo, que tambien es reyno de negros. Aúgela, Sirte, Berdéoa, y Alquequed [Al Wáhát] son otras poblaciones mas orientales, que están en los confines de Egypto, de las quales se tratará en su lugar. Tienen los Africanos algunas historias que dicen que los Zenegas reynáron algun tiempo, en la tierra de los negros, y especialmente en los reynos de Meli, Tombuto, y Agadez; y que dellos tienen orígen los que reynan ahora en aquellos reynos. Cada pueblo destos tiene un Xeque, el qual, á manera de príncipe, es obedecido y reverenciado entre ellos; y por maravilla dexan de tener guerra, unos con otros, sobre los campos.[1]—Ib. lib. i. c. xxvi. tom. i. fol. 34.

(E) Los antiguos Africanos, llamados Xilohes ó Beréberes, aunque están divididos y derramados en diferentes habitaciones, por toda África, todos ellos escriben y hablan una misma lengua llamada Quelém Abí Málic,(36) que quiere decir, Lengua de Abí Malic, que fué inventor de la Gramática Árabe: tambien hablan la lengua Berberisca, que es la natural lengua Africana, diversa y muy diferente de las otras; en la qual hay algunor vocablos Arábigos, que parece [parecen?] haber sido traidos á ella por la comunicacion de los Alárabes, que en diferentes tiempos, pasáron a vivir en África. Los cinco pueblos de Africanos, de quien se trató en el capítulo veinte y uno [quatro], queriendo sustentar que descienden de Arabia Felix, dicen que su natural lengua era la propria Arábiga, y que despues que moráron en África, comunicando, largos tiempos, con extrañas naciones, la corrompiéron y que los vocablos propriamente Arábigos, que hay en ella, quedáron como por testimonio de su orígen: y ansí la lengua que ahora usan, participa de Arábigo, de Hebreo, de Latino, de Griego, y de la lengua antigua que se debia usar, quando ellos viniéron en África,

[1] Leo. Afric. p. 10.

entre los moradores de ella; porque nadie porná dubda sino que los Africanos antiguos tenian su lengua diferente de la Arábiga; y así tiene la lengua Berberisca tres nombres entre ellos, Xilha, Tamazegt, y Zenetía; que casi son todas una, aunque los proprios Beréberes diferencian en la pronunciacion y en la significacion de muchos vocablos. Los que están cerca de los Alárabes, y comunican mas con ellos, tienen gran número de vocablos Arábigos, y de la lengua de Abí Málic que es la mas noble; y los Alárabes usan de vocablos Africanos en su lengua. Los Gomeres y Haoaras que viven en las sierras del Menor Atlante, y todos los moradores de las ciudades de la costa de Berbería, que caen entre la sierra del Atlante Mayor y la mar, hablan la lengua Arábiga corrupta: y en la ciudad de Marruécos, y en todas las provincias de su reyno, y entre los Númidas y Getulos de la parte occidental de África, se habla Berberisco cerrado; y allí llaman esta lengua, Xilha y Tamazegt, que son nombres muy antiguos. Los otros Africanos Beréberes de la parte oriental, que confinan con el reyno de Túnez, y pasan á Trípoli de Berbería, y se extienden por los desiertos de Barca, universalmente hablan la corrupta lengua Arábiga: los que viven entre las sierras del Atlante Mayor y la mar, que andan en aduares, ó moran en casas, y la mayor parte de los Azuagos, todos hablan la lengua Zenetía; y tambien hablan la Arábiga corrupta: por manera que son muy pocos los que en África, hablan la lengua natural Arábiga, y todos usan en sus escrituras auténticas, de la gramática de Abí Málic, en la qual se lee y escribe comunemente en toda Berbería, Numidia, y Libya.[1]—Id. i. c. xxxiii. tom. i. fol. 43.

(1) The Arabic name of Leo Africanus was found by Casírí in the subscription to a MS. Lexicon compiled by Leo for his own use, and now preserved in the library at the Escurial. (Bibliotheca Arabico-Hispana, i. p. 172, Cod. DXCV.) It is as follows:—

فرغ من نسخ هذا الكتاب مؤلفه يوحني الاسد الغرناطي المدعو
قبل الحسن بن محمد الوزان الفاسي في اواخر يانير عام اربعة
وعشرين بعد الف وخمسماية لتاريخ المسيحيين الموافق لعام ثلثين
وتسعماية لتاريخ المسلمين وذلك بمدينة بلونيا من بلاد اطاليا

(2) This supposition is founded on the judicious conjecture of M. Lorsbach (Leo's *Beschreibung von Africa. Herborn*, 1805, p. 4), that we should read عرف بازناتي instead of عرف بالرياتي in the MSS. described by Casírí (i. p. 34, cod. cxlv.), and referred to as his authority for believing Leo to have been a member of the noble family of Zaïdís. Had Lorsbach, who was a man of great learning and acuteness, lived to complete his commentary on Leo's "Africa," much light would have been thrown upon the history and geography of the country inhabited by the Berbers. His translation alone is almost a comment on the original. The orientalist will observe, that the *elif maftúh* is often expressed in this paper by *é* instead of *á*, in accordance with the Barbaresque pronunciation. Thus, فاس is pronounced Fés; وذّان, مكناسة, and تاماسنة, are Fezzén, Waddén, Maknésah, Témésnah. The Spanish *c* and *z* are sounded like a sharp *s*; hence Fez, Mequinez, Temécena, &c.

[1] Leo. Afric. p. 18.

(3) Habiendo pues salido de la insigne ciudad de Granada, donde es neustra naturaleza, siendo aun mozo de pequeña edad, para la jornada que el Christianísimo Emperador Don Carlos hizo sobre la famosa cuidad de Túnez el año de neustra salvacion mil y quinientos y treinta y cinco, y despues de la felice expugnacion della, seguido las banderas imperiales en todas las empresas de África, por espacio de veinte y dos años, y padecido siete años y ocho meses de cautiverio que estubimos en poder de infieles en los reynos de Marruécos, Tarudante, Fez, Tremecen, y Túnez; en el qual tiempo atravesamos los arenales de Libya, hasta llegar á Acéquia el Hamará, que es en los confines de Guinea, con el Xerife Mahamete, quando traia las armas victoriosas por África, apederándose de las provincias occidentales: y hecho otros viages por mar y por tierra, así en cautiverio como en libertad, por toda Berbería y Egypto; donde notamos muchas cosas dignas de memoria, y que nos pareció se deseaban saber en estas partes. Con este principio, acompañado de la continua meditacion de historias escogidas, Latinas, Griegas, Árabes, y vulgares, destos reynos y fuera dellos, que con mucho trabajo pudimos haber, siendo inclinado á este exercicio, y tomando dellas lo que nos pareció mas al propósito para este efecto; juntandolo con la experiencia y much prática que de la lengua Árabe y Africana (que mucho difieren) tenemos, hecimos esta historia y general descripcion de Africa.—Mármol. *Prólogo.* fol. 1.

(4) "Nuvëirius," says Reiske, in his Annotations on the Historical Work of Abú-l Fedá (*Annales Muslemici*, i. n. 235, p. 134), "eo loco quo de vitiis pronunciationis agit, 'Vitia,' ait, 'quæ in litera R committuntur, sunt sex.' Quidam enim pro ea غ efferunt, ut loco 'Omar,' عمر dicunt عمغ 'Omagh;' . . . vocem رغيف raghíf efferunt غريف gharíf; ita quoque pro فرغت faraghtu dicunt فغرت faghartu." It is evident that, in these examples, ر is substituted for غ as well as غ for ر, and such, no doubt, is the case with respect to the Berbers. Their name or title, Amázegh, or Amázígh امازغ or امازيغ is spelt امازرغ by Venture (*Vocab. MSS.* p. 108), who is one of our best authorities; yet it is written امزيغ by Hœst (*Nachrichten von Marokos*, s. 136), "Amazig," by Leo (p. 18), and "Tamazegt" by Mármol (i. fol. 43. b.); the two latter being, on every account, the safest guides. Perhaps Hœst's method of expressing غ by *rg* occasioned Venture's error. The word is spelt "Amarig" in Leo; but the great similarity between the *r* and *s* in the *black-letter* will easily account for this error: just as *semth* was mistaken by black-letter scribes for *zenith*, the accidental addition of a point having converted *m* into *in*. Tamázaght is the feminine of Amázegh; and probably signifies the "noble tongue."

(5) 'Iráku-l 'Ajamí, the non-Arabian 'Irak, was so called to distinguish it from 'Iráku-l 'Arabí, the Arabian 'Irák; hence, probably, the use of 'Ajam, in the sense of "Persia," and 'Ajamí as "Persian." A want of attention to the true meaning of these words has betrayed some writers into laughable errors: thus, Belló Sultán of Haúsah is made to people Footá (*i. e.* Fúta Toro, or Fúta Jalla, near Sierra Leone) with Sarankaly (*Serákhwulí*, Park's *Serracroollies*, and the *Semcolets* of the French? and *Caragola* of the Portuguese) and *Persians* (Denham and Clapperton's *Travels*, Appendix, p. 166; Clapperton's *Second Journey*, Appendix, p. 337); and Wádáï, in the very heart of Africa, is inhabited, we are told (*Ibid.* p. 335), by "a mixture of Arabs and Persians."

(6) And even beyond them; for an examination of the vocabularies of the

Guanch [Wánah] language, spoken by the original inhabitants of the Canary Islands, one of which, Goméra غمارة bears the name of a Berber tribe, shews that they also were Berbers. (See GLAS's *History of the Canary Islands*. London. 1764, p. 184; and BORRY DE ST. VINCENT's *Essai sur les Isles Fortunées*, Paris, 1803, p. 54). The affinity between the language of the Guanches, and that spoken by the Moors of Barbary, is also mentioned by Sir Edward Scorey, whose narrative was published by Purchas (*Pilgrimes*, vol. v. lib. vii. ch. 12. § 3) in 1626.

(7) Dissertatio de Lingua Shihensi, in Chamberlayne's Sylloge Orationum Dominicarum. Amstel. 1715.

(8) Travels in Barbary. Oxford, 1738, fol. p. 52; and London, 1757, 4to. p. 176. A Vocabulary of the Showiah [Sháwiyah] tongue, referred to in p. 223.

(9) Travels from Cairo to Mourzouk in 1797 and 1798. London, 1802; but more particularly the French translation by M. Langlès. Paris, 1803: to which a good abstract of Venture's grammatical remarks, and a considerable selection from his Vocabulary of the Berber Language is added, p. 413.

(10) His Vocabulary has never been completely published, but copies of it have been communicated to persons interested in those studies.

(11) Efterretningar om Marókos og Fes, kiæbenhaon 1779, 4to. p. 128. Nachrichten von Marókos und Fes, aus dem Dänischen übersetzt. Kopenhagen, 1781, 4to. p. 136.

(12) Account of Marocco. London, 1809, 4to. p. 184; Account of Timbuctoo and Housa. London, 1820, 8vo. p. 366.

(13) Travels in Northern Africa. London, 1821, 4to. p. 314. *Ertánah*, which Capt. Lyon understood to be the name given by the people of Sokná to their language, is, as M. Gräberg remarks, the Arabic word *Retánah* رطانة *i. e.* "a mixed" dialect, consisting of Arabic and some foreign tongue. Ibn Khaldún says this distinctly (*History of the Berbers*, book iii.): ولغتهم من الرطانة العجمية متهمزة بنوعها وهي التي اختصّوا لاجلها بهذا الاسم

(14) Account of Alex. Scott's captivity amongst the Arabs of the Great African Desert, in the *Edinburgh Philosophical Journal* (iv. 230). Most of the words, however, there given are Arabic. Scott's *Schleeh* (p. 233) is certainly Shiléh rapidly pronounced.

(15) Recherches sur les Maures: à Paris, 1787. 3 tom. 8vo. Tom. iii. p. 188.

(16) Voyage à Méroé. Paris, 1826. 4 tom. 8vo. i. 408. Langue parlée à Syouak.

(17) Voyage dans la Marmarique. Paris, 1829. 4to. Vocabulaire du Langage des Habitans d'Audjelah, p. 319.

(18) Esquisse de l'Etat d'Alger, traduit de l'Anglais, par M. X. Bianchi. Paris, 1830. 8vo. Mr. Shaler (p. 308) has reprinted Shaw's, Chenier's (p. 312), Horseman's (p. 314), Aly Bey's [*i. e.* Don Diego de Badia's] (p. 315), in addition to those procured by himself from M. Joseph Ben Zamon and David Bacri (pp. 319, 328). M. Bianchi, probably from an imperfect acquaintance with the sound of the English language, has converted the Showiah of Dr. Shaw into Chouiah, instead of Châouiyah, as, according to his system, it ought to be written.

(19) A paper "on the Berber Language," in the Transactions of the American Philosophical Society. Philadelphia, 1831. 4to. iv. 1.

Mr. Hodgson, who was American Secretary of Legation at Algiers, had the merit of procuring a translation of the Gospels into the Berber language; but being

a novice in Arabic, and having an unlearned master, he was not aware of the proper sound of the letter ث and, therefore, suggested the introduction of two new characters, one of them (*mirabile dictu!*) borrowed from the Greek θ, to mark the sounds of *th* and *ts*, which the Berbers give almost promiscuously to the *Arab* ت and ث. The text, therefore, of his version must be wholly illegible to at least ninety-nine Berbers out of a hundred.

(20) Reise zum Tempel des Jupiter Ammon [*i. e.* Shantaríyah, or Síwah]. Berlin, 1824. 4to. Beilage, p. 313. Verzeichniss von Wörtern der Siwah-sprache. Berlin, 1827. 4to.

(21) Vocabulary of the 'Adéms, or Amázígh dialect, spoken at Ghadémis, and in other inland provinces of the páshálik of Tripoli.

(22) For Tingitania, the term used by Mármol, the Arabian phrase has been substituted. Leo, and his Spanish translator, have applied the Roman names of the African provinces to the divisions established by the Arabs. This is distinctly pointed out by Leo (p. 4–6), and he is followed by Mármol (i. 5, tom. i. fol. 4); but the latter, by including Ethiopia (*i. e.* Nubia) and Egypt, adds two to the four divisions mentioned by the former. They are these.—

1. Northern Africa	= Biládu-l Beráber	=	Berbería.
2. Numidia	= Biládu-l jeríd	=	The land of dates.
3. Libya	= Elsahrá	=	The desert.
4. Nigritia	= Biládu-l súdán	=	The land of the blacks.

The coast was also subdivided by the Arabs, as by the Romans, into four parts:—

1. Barkah	=	Cyrenaïca.
2. Afrikiyyah	=	Africa Propria.
3. Maghribu-l Ausat	=	Mauretania Cæsariensis.
4. Maghribu-l Aksá	=	Mauretania Tingitana.

(23) Háhah should, probably, be spelt Háhá حاحا such repetitions being common in barbarous, and especially in African languages; the substitution of the Arabian termination ه for ا is not unusual among the Arabs, when they give an Arabian form to foreign proper names.

(24) Perhaps the original word may be the Arabic *aswágh*; but "*goldsmiths*," the sense given to it by our lexicons, does not seem applicable to this African tribe. These are the Soaua of Leo (p. 58); so that with regard to this name, his transcribers must have been more than ordinarily careless or unlucky.

(25) Ibn Khaldún (De Sacy, *Chrestomathie Arabe*, ii. 317) seems to assert the contrary; but he is speaking of the Arabic characters used by the Berbers.

(26) Of these, the five principal tribes inhabiting the Great Desert (E-s-sahrá), as being little known to the Arabs, the names do not so frequently occur; and it may be observed, that with regard to the negroes, of whom Mármol knew comparatively little, he had it not in his power to correct the errors in the printed text of Leo. Thus we have (i. c. 13, tom. i. fol. 16, b) Perzegreg for Zegzeg (Leo, ii.), which is, indeed, right in some editions of Leo. With the exception of two, however, these names are found in Arab writers, whose works have been printed; and of the others, one can be expressed in the Arabic character, with little doubt as to its correctness. They are as follows: برداوه لمطة طرقه or صنهاجة وانسقة

and وانشريس The Sanhájah and Lamtah tribes are frequently mentioned by Idrísí (Clim. iii. 1, &c.; Geogr. Nubions. p. 73), and other writers. The Berdánah, or Burdámah, of Ibn Batútá (p. 241; in Kosegarten's version, p. 49) is, perhaps, named from the Berdáwah tribe; and Wánes heríah seems to have been conjecturally introduced by Mármol as an synonyme of Leo's Guansiga, which may have been spelt وانسقة Terga, according to the African mode of pronouncing the Arabic character, will be spelt طرقة and its plural Tawárik طوارق as well as the etymologies and explanations of its meaning given to M. Gräberg and Mr. Hodgson, shews that the Arabs consider it as a derivation of taraka طرق When Ibn Khaldún's *History of the Berbers*, which Professor Lee is now preparing for publication, has appeared, all doubt as to these points, will, probably, be removed.

(27) From the different manner in which Mármol here (i. xxv. tom. i. fol. 34, b) spells Sanhájah—viz. *Zenega*, it is probable either that he was not aware that it is the same word as *Zinhagia*, or that he wished to follow the pronunciation of the desert Berbers. That *j* has often the sound of *g*, has been already noticed.

(28) Tegházá تغازا is mentioned by Ibn Batúta (pp. 231, 232; Kosegarten, pp. 41, 46). It is singular that Professor Lee, following a very incorrect MS. should have printed Teghárí. Any of the early African travellers, who were guided by the ear, and, therefore, could not mistake the sound of the letters, would have shewn that *z*, and not *r*, was the true reading.

(29) Jenáwí, the adjective derived from Jenáwah, occurs in Idrísí (Clim. iii. 1, Geogr. Kab. 74); and is rendered by the Maronites "Genuensi," as they had never heard of Jenéwah, or Jenneh. The *Ghanása* of the same work may also be an error for Ghanáwah; but this is very doubtful. Welátah ولاتة is the Eïwaláten of Ibn Batútá (Kosegarten, 42); and he has also shewn that the old writers were correct in the spelling of Tombuktú تنبكتو

(30) "One desert," says Leo (p. 10), "is called Azaoad [Aswad], from its barrenness and drought; and another Hair [Khaïr], from the *goodness* and temperateness of its air."

(31) Ighid اغيد Pl. ighíden اغيدن en Arabe جَدِي cheorau (VENTURE'S *Berber Vocabulary*, *MSS.* p. 39).

(32) Ibn Batútá passed Tuwáh توات in his way to Sijilmásah from Negroland (Kosegarten, pp. 45, 49).

(33) Wárkelán, the Guargela, or Guargala, of Leo (p. 620), and the Wurglah of Dr. Shaw (b. 67, 68), is mentioned in several places by Idrísí, and in the MSS. always spelt with قاق Its name also occurs in the valuable work of Al Bekrí (*Notices et Extraits des MSS. de la Bibliothèque du Roi XII.* 535, 653); and it appears from M. Quatremère's note, that it is spelt وارکلان وارقلان and ورجلا affording a decisive proof of the permutability of ك ق and ج and of the facility with which, as in the Indian dialects, the final nasal can be dropped.

(34) غدامس the Cydamus of Pliny (vol. v.), of which no mention occurs in the "Nubian Geography," is said by Idrísí, in the original work (Clim. ii. 2.), to be eighteen days' journey distant from the Kabílah, or tribe of Azkár.

(36) Mármol, who probably wrote from memory, should have said Ibn Málik. The work of which he speaks is the celebrated *Alfiyyah* of Ibn Málik, an edition and version of which, by the Baron De Sacy, has just appeared under the patronage of the Oriental Translation Committee.

(36) تامازغت as before remarked, probably signifies "the most noble tongue."

(37) The name of this province is called by M. Gräberg "shaous;" and, incredible as it may at first appear, it is probable that his word is the very word here given, transformed by a series of distortions. Mármol will here, as elsewhere, furnish us with a clue to extricate ourselves from the labyrinth. "Cuzt," he says (lib. iv. cap. 100, tom. ii. fol. 158), the province in which Dúbdú is situate, "contains as much land as the two largest provinces of the kingdom of Fés;" and that it was for that reason, called *Kúzt*, which signifies "much," in the Berber tongue. Kúzt appears, indeed, strictly to signify "*four*," or "*the fourth*;" and being equal in extent to the two largest of the seventh provinces of Fés, might fairly be considered as *one fourth* of the whole kingdom. Its position and boundaries are well defined by Mármol. It was the easternmost province, and measured eighty leagues from the river Gureïgurá to that of Esahá (the Zha of our maps), by sixty from north to south; comprehending the part of Atlas Major lying between those rivers, and a considerable portion of the plains of Biládu-l jerid: but it did not reach the sea. This province is called Khús خوس by Hœst; but so little did he know about it, that he has made it the north-western instead of the north-eastern province, and a marine instead of an inland country. Leo, whose account is almost word for word the same as Mármol's, calls this province Chaus, his mode of expressing Kaúz, or Kúz; and that name was doubtless expressed by M. Hœst in the Arabic character خوس M. Gräberg, who is well acquainted with Chenier's work, found the name there written *Chaus*; and seeing *Chavoye* just above, which he knew to represent (however imperfectly) Sháwiyah, naturally concluded that the first letter was Shín. Chénier's index taught to separate the vowels of the diphthong, and the word, according to the English orthography, could be no other than Shaous!

ART. VI.—*Account of a Ceremonial Exhibition of the Relic termed "the Tooth of Buddha," at Kandy, in Ceylon,*[1] *in May* 1828. *Translated and abridged from the original Singhalese, drawn up by a Native Eye-witness.*—(*Communicated by* Lieut.-Colonel W. M. G. COLEBROOKE, M.R.A.S. &c. &c.)

ON the full-moon day of the month Wesák (Thursday, the 29th of May, 1828), the principal chiefs and other Kandyans, zealous professors of the Buddhist religion, celebrated the festival Dalada Pinkáma, when the following arrangements were made.

The *mandapa*, or pavilion, erected for the reception of the relic and its attendant priests, measured 229 feet by 60; and that part assigned for the place of the relic was adorned with valuable stuffs, embroidered with gold and silver. In the centre of the pavilion was a silver seat, on which was placed a *ransiligey*, or golden frame, containing an artificial flower of gold, of dazzling lustre, and intended to hold the relic; on the right was a large golden *karandu*, or case, set with precious stones, and on the left a smaller one similarly ornamented.

These two cases were ornamented with precious stones, such as rubies, sardonyx, &c. of great value. In front of this was the offertory, decorated with silk and embroidered cloths; and before it were nine veils of various cloths of gold and silver, and rows of frills made of fine cloth. The part of the pavilion appropriated to the priests was decorated with white cloths, and white cocoa-nut leaves.

The pavilion erected for the Europeans was sixty feet by thirty; that for the Singhalese chiefs of the high and low countries, one hundred feet by thirty: both of these were, also, decorated with white cloths and white cocoa-nut leaves.

These pavilions were erected on a plain near the palace, and surrounded by fifty-three arches of honour, ornamented in various ways; besides which, on the arches were erected flag-staffs, designated as follows:—One for each of the *desavoni* of the four Korles, and of Matelle, and one for the *maligáwa*, or temple. These flags were of red, white, and various colours.

[1] The relic consists of a piece of bone which is believed by the people to have been a tooth of Buddha. It is preserved in a gold casket in the temple at Kandy; and, when the relic is exposed, the believers are expected to flock from all parts of the country to worship it and to make offerings. A considerable sum was thus collected on the above occasion from the assembled multitude of devotees.

A proclamation having been made by beat of *tom-tom* for decorating the streets in Kandy, many devout people, with a view of surpassing each other in the beauty of their decorations, embellished the streets most elegantly, and anxiously awaited the first day of the festival. On the morning of this day soldiers were ordered on guard at the corners of the streets and at watch-stations.

At half-past ten, A.M. the officers, chiefs, and *Desaves*, clothed in silk, and decorated with golden chains, proceeded to the temple in which the relic was kept in grand procession, as follows:—

First, a flag belonging to *Gajanaike Nillame*, *Lekams*, and *Desaves*; then *tom-tom* beaters; next musicians; then whip-crackers;[1] then the *Mahá Nillame*, having in his hands a *Katupulle-rattan* worked in gold; the *Matelle Desave*, and *Mahá Gabuda Nillame*, each with a silver dagger in his hand; then followed drum-beaters, trumpeters, and chank-blowers;[2] next, officers in palanquins, attended on each side by public singers; and then the Singhalese chiefs and head men on foot. From the gate of the pavilion to that of the temple, head men of the Desavonis and Rátas, armed with daggers, and the *Múdeliars* and *Mohándirams* of Kandy, dressed in their respective uniforms, were ranged in two ranks. In this order, the procession came to the gate and stopped; when the chief priest of the shrine of the relic brought it forth, and all kinds of music and firing of cannon began, with shouts of the thousands of people assembled there, exclaiming *sádú! sádú!* corresponding with our "amen." These three different and united sounds echoed through the air like thunder. Amidst the rejoicings, the case, or shrine, containing the relic was borne under a canopy towards the elephant trained to carry it; when the many Buddhist spectators of this splendid object were transported with joy, and, with tears trickling down their cheeks, gave a shout so tremendous that the simultaneous discharge of twenty-five pieces of ordnance was inaudible.

Thus the shrine was conveyed with great pomp to the elephant, and handed to the *Mahá Nillame*, who gave it over to the hands of the *Desaves* of *Matelle* and *Udapalata*, who were on the back of

[1] In Ceylon, it is customary for persons of rank, when going into public, to be preceded by a number of men bearing whips, with which they keep up a constant cracking. The lash of the whip is very long, curiously twisted, and tapering to a point; the handle is short and thick. Specimens of these whips are to be seen in the museum of the Royal Asiatic Society.—ED.

[2] The chank-shell, *sankha*, or conch (*voluta gravis*), used by the priests all over India instead of a trumpet. They are esteemed sacred; and there is a regular fishery for them off the north-west coast of Ceylon.—ED.

the elephant, and who, having placed it in the case intended for its reception, dismounted.

The procession was again arranged in the following order :—

1st. Two state elephants; then a flag bearing the device of an elephant, and hand-flags; and then a chieftain and his people.

2d. The great flag, accompanied by a chieftain, with a silver dagger in his hand, and his people.

3d. The sun and moon flag of the great chieftain of the four Korles, hand-flags, a silver cane worked in gold, and the people of that chieftain.

4th. The lion flag and hand-flags of the seven Korles, accompanied by their chieftains and people.

5th. The white flag and hand-flags of the chieftain of *Matelle.*

6th. The silk flag and the hand-flags of the chieftain of *Suffragám.*

7th. The flag and hand-flags of the chieftain of the three Korles.

8th. The peacock flag and hand-flags of the chieftain of *Wallapone.*

9th. The lotus flag and the hand-flags of the chieftain of *Udapalata.*

Then came, in order, the flags of the *Maligáwa; tom-tom* beaters; musicians; drummers and trumpeters; chank-blowers; men bearing torches of various descriptions; an elephant covered with a sheet embroidered in gold; a silver umbrella; a silver shield; an elephant covered with a sheet embroidered in silver; a silver umbrella; a silver shield; an elephant of state covered as the last; a silver umbrella; a silver shield; whip-crackers, followed by officers of state; torch-bearers; then the elephant conveying the relic, over which was spread a flowered canopy; the officers of the temple parading on foot around the elephant, each having a worked *talapát,*[1] or leaf, in his hand.

On the right and left of this elephant were the several great officers of state, mounted on elephants covered with scarlet, embroidered in gold and in silver, with flags, bearing devices, worked on the richest and brightest embroidered silks, with shields of gold, and umbrellas of silver.

Thus the procession, leaving the gate of the temple, proceeded through several streets, and returned to the pavilions on the plain, when the two chiefs who placed the shrine on the elephant took it

[1] The leaf of the great fan-palm (*corypha umbraculifera*), used as a parasol or screen.

off, and handed it back to the *Mahá Nilláme*, who conveyed it to the pavilion. No sooner was this done than different kinds of music, shouts, and the discharge of cannon recommenced. The shrine was then given over to the hands of the chief priest, who carried it to the seat before described; removed the relic from the thirteen gold cases in which it was deposited, and placed it on the golden flower.

The relic was exhibited first to the English ladies and gentlemen, and then to the priests, who, like a poor man finding a precious stone, beheld it with ardent looks and the most inexpressible joy, crying aloud, *sádú! sádú!* and worshipping it. After these and many other ceremonies were performed, the relic was again deposited in the case about the tenth hour of the night.

On the following day, about one o'clock, all the chiefs, clothed in white, proceeded to the place where the relic was. It was then taken out of the case, and the chiefs worshipped it, and offered money, cloth, &c. Vocal and instrumental music, with dancing, then followed. After this, people of the high and low countries worshipped the relic seven days, and made offerings to it; during which time it was guarded thus:—

First, the chief priest, and seven other priests, kept near the seat on which the relic was; these were enclosed with a row of veils; outside of these veils were seven chiefs armed with silver daggers; then another row of veils and guards; then a third row of veils and guards; then a company of Malays; then guards; and, lastly, police officers.

On the night of the third day, about ten o'clock, there were fireworks, rope-dancing, and fencing with swords and shields, &c. &c.

On Thursday, the 3d of June (till which day the relic was exhibited and offerings made), at ten o'clock, the case containing the relic was carried back, with the same procession as before, from the pavilion to the temple, and the celebration ceased.

All the ceremonies that were performed by the chief priest when the relic was taken out, were repeated when it was brought back from the pavilion to the temple.

Kandy, 15th July, 1828.

ART. VII.—*Account of the Province of Rámnád, Southern Peninsula of India. Compiled from the "Mackenzie Collection," and edited by the Secretary to the Royal Asiatic Society.*

INTRODUCTION.

THIS province, the government of which is now administered by the British, formed in ancient times the greater part of the principality, or fiefship, of the *Sétu-pattis*, the chiefs or guardians of the passage leading from the continent of India to the island of Rámeswara, and thence to the opposite coast of Ceylon, called Ráma's Bridge, or Adam's Bridge. These chieftains, dating their authority from the period of the establishment of a place of pilgrimage on the island of Rámeswara, by the Great Ráma, claim an antiquity even higher than that of the Pándyans, or kings of Madura, but to whom, it would appear, that they were, in general, tributary, though now and then asserting and maintaining their independence. Of their history, however, we are not now to speak, but of the province as it was in the year 1814, when the data were taken from which chiefly the following account is compiled. It lies between the ninth and tenth degrees of north latitude, and the seventy-eighth and seventy-ninth of east longitude; is bounded on the north by the provinces of Tanjore and Pudukotta, on the south and east by the sea, and on the west by the districts of Tinnevelly, Madura, and Sivaganga; and comprehends an area of nearly two thousand five hundred square miles. Its general aspect is that of high and low lands, the latter having numerous artificial lakes, constructed for the purpose of promoting cultivation; the former exhibiting a variety of dry grain-fields, while the northern districts abound with extensive groves of Palmyra trees, with scarcely a vestige of jungle. The whole is divided into seventeen districts, comprising one thousand six hundred and sixty-eight towns and principal and subordinate villages, with a population, at the period to which we allude, of about one hundred and fifty-seven thousand.

FORTS, TOWNS, AND VILLAGES.

Rámnád,[1] the capital of the province, has both a fort and a town. The former is a fortification, the sides of which, from north to south, and from east to west, are each about half-a-mile in length, consisting of a single wall, strengthened with thirty-two bastions, built at

[1] Properly, Rámanátha-púram, from Ráma, the god, or king of that name; nátha, a lord, and púram, a town or city.

equal distances from one another, and with one gateway which is to the east. The wall is twenty-seven feet high and five feet thick, without a rampart, but with loop-holes, and surrounded by a ditch. This fort was built upwards of two hundred years ago, by MOGHAVA RAGUNÁTHA SÉTUPATTI, who, at the same time, constructed the large reservoir, or artificial lake, that lies on the N.W. side. About two hundred yards from the gate stands the chieftain's palace, which is a spacious Gothic structure, surrounded by a high wall, within whose cincture is seen a great number of apartments, some of two and others of three stories high, whose fronts and portals exhibit some taste, according to the Carnatic style of architecture. In the grand hall, called Rámalinga Velasam, the chieftain, his wives, and his ancestors, are represented in a highly embellished manner; and, among a variety of other paintings and gildings, finely varnished, is a painting of the battle between the rájás of Tanjore and Rámnád, which happened in the year 1770. In the outer court, at the grand entrance, is the chieftain's kachahrí;[1] on the south side, in the outer court, are large stables for elephants; and, on the north side, stables for horses. On the north-east bank of the reservoir is a small and beautiful Protestant church, with a burial-ground adjoining it, as also a vestry-house. A few yards from the western bank of the reservoir is the burning-place of the chieftain and his ancestors, where several grand tombs are erected to the memory of the latter. On the north side, between the walls of the fort and the reservoir, is a high cavalier, raised with earth, which commands an extensive and delightful prospect of the surrounding plains. A Roman Catholic chapel, which was built by Colonel MARTINEZ, in the year 1799, stands near the south-east angle of the fort, and nearly in the centre stands a small Hindú temple. The principal streets, which are few, are wide and airy; the others, which are numerous, are irregular and narrow. The houses have mostly thatched roofs.

The town of Rámnád is situated east of the fortress, from the gate of which a wide street leads, with two grand rows of bázárs, regularly built. Here a market is held every Wednesday, when the people, from a distance of fifteen or twenty miles, bring in cotton, grain, and other provisions for sale. The town, and its suburbs, including Letchmapúram (a village situated to the north), are about three miles in circumference. At the east end of the bázárs, where a road intersects, crossing north and south, are several detached houses, with gardens surrounding them, and a small mosque. These separate

[1] A hall of justice, an office.

one part of the town from the other. There are, also, two or three other mosques, which, though not conspicuous, are by no means inelegant. Upon the whole, the streets are narrow and ill-contrived; the houses are moderately well built, and are upwards of two thousand three hundred in number; and the population exceeds eight thousand seven hundred souls, consisting of Musalmáns, Bráhmans, and Sudras, and a few native Christians; many of the two former carry on a considerable trade in grain and other articles of import from Travancore, Ceylon, &c. There are no artisans here, excepting gold and silversmiths, braziers, and ironsmiths; the latter, about two hundred families, who are Musalmáns, reside in the town. The east part of the town is inhabited by manufacturers of chintzes and printed cloths.

Letchmapúram is seated east of the large reservoir of that name. It has a handsome Hindú temple, built about thirty-six years ago; and on the north-east of the reservoir stands a spacious and elegant chattiram,[1] or caravansery.

Kámúri, a fort lying thirty-one miles west of Rámnád, and thirty miles south by west of Sivaganga, is seated on an elevated rocky ground on the north bank of the Kúndár river, and commands a most delightful and extensive prospect. It is small, but of some strength, built of stone, of a circular form, with a double enclosure of walls, having an interval between them of about sixty feet; the outer wall is twenty feet high, and about four feet thick, without a rampart or parapet, but has nine bastions: the inner wall is stronger, twenty-five feet high, with a rampart, and seven bastions. On an eminence, to the south-west, is a redoubt. In the inner fort, a granary and magazine still remain; between the two walls, on the western side, is a well of very clear water cut through rocky strata, having steps on the one side descending to the bottom. This work appears to have been performed with great skill, though, no doubt, not without much difficulty, owing to the solidity of the rock.

About one thousand yards from the fort, on the southern bank of the river, the town of Kámúri is seated. A small Hindú temple stands

[1] These chattirams much resemble the ancient hostelries of Europe. They are charitable foundations for the lodging and entertainment of a certain number of guests for a specified time; one day, three days, and sometimes longer. Some are founded merely for the relief of Bráhmans; others, for all classes of the natives; and some, for the accommodation and entertainment of Europeans. The late Rájá of Tanjore had one at which, for the space of three days, any European gentleman passing that way was most sumptuously entertained. Similar ones were also to be met with in other parts of the Carnatic but a very few years ago.—Ed.

on the north side, and a pretty wide street surrounds it. There are many more streets, but most of them narrow and crooked, with low thatched houses built of earth; a few, however, are covered with tiles. Almost in the centre stands a grand terraced house, belonging to a native, the elegance and situation of which afford an agreeable prospect. In the dry season the dust and heat are almost intolerable; and in the rainy season, owing to the black soil, the mire is so deep as to render the streets almost impassable. Some of the inhabitants here are very opulent men, and many of them trade to a considerable extent in cotton, as it is in greater plenty here, and in the neighbourhood, than in any other part of the province. A great market is held on every Tuesday, when astonishing crowds of people come from the neighbouring districts for the purchase of articles to retail in the different villages. Cattle are also brought to this market for sale.

Ármukamkotta is a fort that lies twenty-one miles north by east of Rámnád, on the road towards Trichinopoly, and three miles east of the lake of Rasingamangalam. It stands upon an eminence, having a gentle declivity to a river which runs by it to the north and to the east. This river has an impetuous torrent, and in the rainy season flows up to the walls of the fortress, and, inundating a large tract of land in its course down towards the sea, often proves injurious to the villages situated on it. The fort is denominated after its form of a hexagon, having six bastions at equal distances. It was built about one hundred and ten years ago, and appears, from the accounts respecting it, to have been a place of some importance. It is in good order, has a gate on the west, and a few wells of excellent water, which are now appropriated for the use of the garden that is made in it by the neighbouring villagers: it is otherwise desolate and uninhabited.

At Mangalagúdi is a small ruined fort. This village is situated on the high road from Ármukamkotta, and is chiefly inhabited by Musalmáns, who carry on a little trade. A market is held here every Thursday.

There are several other forts, but all in a ruined state, and almost levelled to the ground.

Tirupallani, a populous village six miles south of the capital, situated on a commanding plain, is highly distinguished as one of the sacred places of Hindú worship; the temple stands on the east side of the village, and a rectangular reservoir is situated opposite to it. Two pavilions are raised on stone pillars; the one adjoining the gate of the temple, the other to the east of the reservoir. The temple is surrounded by a high stone wall. The main street of the village is

about two furlongs in length, and forty feet wide; the south and east streets are inhabited by Bráhmans, and the north and west streets by the people attached to the temple, and other Hindús. This temple is dedicated to the god Jagannátha, and the festivals are celebrated annually in the months of April and July. In the north-west and south-west angles of the village, are two substantial stone pavilions; and, on the north-east side, a reservoir of excellent water. A broad but shallow salt-water lake runs west of the village, which receives the surplus waters that flow from the interior parts of the country, especially from the kalingula, or sluice of the Chakkrakotta lake, the whole falling eventually into the Kottagudi river.

The pilgrims who resort to the temple at Rámeswara to pay their adorations, must, after performing their ablutions in the sea, first come here to worship.

Ádisétu-tírtha is not a village, but a famed place on the coast, lying nine miles south of the capital; it is esteemed holy by the Hindús on account of its *bath*, which was founded by RÁMA, who bathed here, on his expedition to the Isle of Lanka. The men generally bring their wives and families with them; but, in the event of the wife not being present, the priest gives the husband a piece of straw to roll round the little finger of his right hand, as an emblem of the wife. The act of washing here in the sea is a form of penance that they perform, from a general notion that, by doing so, they wash away all their sins. Devotees, and especially those of the Bráhman caste, who go on pilgrimage to the Isle of Rámeswara, must return hither to perform the enjoined rites of devotion, and the priests who attend here make a small collection from them, giving in return holy ashes to rub on their foreheads. The neighbouring villagers assemble here to bathe on certain days of the year; also on the days of the new moon, and particularly at the time of an eclipse either of the sun or moon.

Kílakarai, a populous sea-port and commercial town, situated nine miles south by west of the capital. It is inhabited by Muhammadans, many of whom are opulent, and carry on a considerable trade both by sea and land. The houses and granaries are finely built on the margin of the sea, from which it has a beautiful appearance. The circumference of the town is about two and a half miles; the streets are numerous, but narrow and ill-formed; the houses are low and have thatched roofs. A small Roman Catholic church is situated near the eastern skirts of the town, contiguous to which are the ruins of a Dutch factory. There are about eleven mosques, or rather tombs of some respectable Musalmáns who have died here, a few of which are

very elegant in structure, especially one which stands about the centre of them, the cupola of which is covered with gold. The place abounds with very thick groves of Palmyra trees. It carries on a good sale in Padanír,[1] which the Musalmáns much esteem, and drink to excess. The inhabitants of this town follow almost every trade, and carry on an extensive manufacture of long cloths, both fine and coarse: upwards of a hundred boats belong to this port. The coast abounds with low rugged rocks, which are only seen above water at low tide; it is, therefore, dangerous for the passage of vessels, unless conducted by a pilot who is well experienced in these roads. Vessels pay for their anchorage here as well as in other parts. A sea custom-house is established here.

Muttupetta, a fishing village on the coast, situated nine and a half miles south-east of Rámnád, is chiefly inhabited by Roman Catholics. There is a large Roman Catholic church in the centre of the village, dedicated to the Virgin Mary, and a priest resides here, who is a native of Goa. A few merchants belonging to this place reside at Periapatam, a village situate about one mile to the west. Eleven fishing boats belong to this port, which carry on a pretty good trade both in fresh and salted fish: the Muhammadan inhabitants here are chank fishers. The place is the occasional resort of European gentlemen, who come for the benefit of their health, and to enjoy the sea-breeze.

Vaidálai, a pretty populous village on the coast, situated thirteen miles east of Muttupetta, inhabited chiefly by Musalmáns and Shánárs,[2] the former carrying on a good trade. The houses are poorly built and very irregular. This is a noted place for a superior quality of the Choya-vér, which is the root of a certain plant from which is extracted a red dye. It grows spontaneously in these parts, and on an island opposite to this place. Considerable revenue is derived from it.

Autankarai, a sea-port, situated eleven miles east of the capital, at the mouth of the Vigay river, on the north bank, inhabited by fishermen; it has a spacious and well-built chattiram, surrounded by a strong wall. There are sixteen boats daily employed in fishing, and from this place, and the neighbouring villages on the coast, the town of Rámnád is well supplied with fish. Several vessels frequent this

[1] A sweet beverage extracted from the Palmyra tree, similar to toddy, but with which is mixed a little chunam: when boiled, it becomes jaggry, a coarse kind of sugar.

[2] A caste of Hindús whose particular avocation is the cultivation of the palm and the collecting of the toddy it produces. Many of them, however, apply themselves to other occupations, and some are very opulent.—Ed.

harbour at the proper seasons of the year to receive paddy and chanks for exportation, as well as the Choya-vér, which here also grows spontaneously to a great extent. Oysters are to be had in abundance, and are of good flavour. About two miles on the north-west lies Ullagenkolam. This place is distinguished for the excellent tobacco it produces, which thrives here extremely well, and is reckoned superior to any in the provinces south of Madras.

Dévipatnam — a sea-port and populous commercial town, well known by the name of the Nine Stones — is celebrated for a bath in the sea, that has been held sacred from the most remote antiquity, and is visited every year by a great number of pilgrims. In ancient days, from this place to Darpasenam, commonly called Tirupallani, was one continued forest, called Puráranyam. RÁMA resorted here when on his expedition to Lanka, with a design to kill RÁVANAN, who had seduced away his wife. The priest of RÁMA told him that, in order to be successful in his undertaking, he must worship some image resembling the nine planets, including the sun and moon, in representation of which he planted the nine stones on the sea-shore, and, having dedicated them to the nine planets, worshipped them accordingly with much fervency; since which period the Hindús have a tradition, that by bathing here they will be cleansed from their sins, and that, by visiting so miraculous a place, they will, in like manner, be successful in all their enterprises: it is, moreover, observed, that these stones are an emblem of prosperity to the country, and, in the event of any of them breaking off at the top, it is considered a prognostic of some disaster.

A considerable trade is carried on here; there are about fifty trading boats belonging to the port, which, as well as that of Kílakarai, is plentifully stored with provisions, and is, therefore, considered a place of much importance. In times of scarcity the granaries are thrown open, and a free sale is carried on, conducing greatly to the general benefit of the inhabitants, and to the opulence of the merchants who reside here. About the centre of the town stands a Hindú temple, encompassed by a wall and a wide street, through which the wooden chariot of the idol is drawn at the festival, which is held in the month of March. A large pavilion is built on the west of the temple, on the high road, for the convenience of travellers, where, also, alms are bestowed daily on a small number of Bráhman passengers, who, however, are not allowed to stop longer than one day. This place being a quay for paddy-boats, and other small craft, a sea custom-house is here established.

Rásingamangalam is a large village situated eighteen miles north

of Rámnád, and about one mile east of the large lake of that name, which irrigates an extensive sheet of paddy lands. It is populous, has a few wide streets, and the houses are built moderately well. In the north-east part of the village stands a small Hindú temple, where an annual festival is celebrated in the month of June. To the south-west is a remarkably thick grove of mangoe-trees, affording a pleasant and delightful shade. A small village called Auveranyaindel, lies three miles to the north-east, where a weekly market is held on Thursdays.

Tírupalágudí, lying five miles north of Dévipatnam, is seated below the bank of a lake, and west of the road towards Tanjore. It has a lofty temple almost in the centre of the village, but it is inhabited principally by Musalmáns, who are engaged in the manufacture of long cloths. There is a pavilion on the high road, fronting a reservoir of excellent water, and commanding an agreeable prospect of the sea.

Arnútmangalam is situated two and a half miles to the north of Ármukamkotta, on the road towards Trichinopoly; it is inhabited by a peculiar tribe of Velálars[1] called Arambukutan Velálars; according to tradition, they are a modern people, who, emigrating from the southward, settled here as farmers about four hundred years ago: their manners and customs, distinguishing them from the other classes of Velálars, are very singular. The men marry among their own tribe, and never seek a bride elsewhere. They will on no account engage to hold a situation under any authority whatever, but employ themselves solely as cultivators of the land: they will not make obeisance to the rájá of the country, nor will they pay any kind of formal respect or compliment to any description of persons, but express their humility by rubbing their bellies with their right hand.

Tondé, a sea-port town situated on the road towards Tanjore, is a dependency of Sivaganga. It carries on a good trade with Columbo, and other sea-ports. A few opulent merchants reside here. The houses are low built; the streets narrow and irregular; the inhabitants are principally Musalmáns, but there are also a few Karaiyars; the former are engaged in manufacturing long cloths, and the latter are fishermen. Inland commodities, consisting of grain, tamarinds, cloths, &c. &c. are exported from this place, as also chanks, which are fished in great abundance. It lies eleven miles north-east of Ármukamkotta.

Tiruvádanari, a village of some note from having within it a grand

[1] A caste of Hindús, whose principal occupation is husbandry.

Hindú temple, is situated on the high road which leads from Sivaganga to Tondé, and intersects the road that leads from Sivaganga to Trichinopoly; the temple stands near the west end of the village, encompassed by a high wall and a street: the houses are tolerably well built. An annual festival is celebrated here in the month of April; and a weekly market is held on every Monday. It lies seven miles and a half west-north-west of Tondé.

Kunnangudi, a pretty populous village, has a temple on the west, encompassed by a wall, in which is a well of excellent water. It lies five miles and a half on the north-east of Hanumántagudi. This temple is of great antiquity, and is said to have been built by KARIKALA CHOLA RÁJÁ, while on his religious excursion to Rámés-wara. A grand festival is celebrated here annually in the month of June. The productions are chiefly cotton, paddy, and dry grain.

Kottapatnam is a small sea-port town, situated in the Tanjore country, ten miles north of the Pámbanár, which forms part of the general boundary between Tanjore and this country. Several small detached pieces of land appertaining to the latter are irregularly situated in the Tanjore country. A Bráhman village lies east of the road, and within the town are two mosques. Fine cloths, &c. are manufactured here by the Musalmáns, who carry on a pretty good trade. Chanks are fished in abundance, and a good deal of salted fish is carried from this port to distant markets.

Dévakotta is a populous village, but the streets are narrow, crooked, and dirty. However, it is a place of much importance for trade, and many Hindú merchants reside here.

Sálagrámam is a populous village, situated about a mile east of a large lake on the Sivaganga border, and inhabited by husbandmen, chiefly Velálars. It has two wide streets, and though the houses are neither large nor beautiful, yet, being situated on a high ground, and having an opening at the south and east sides presenting a variety of fields, for the most part of the year in a high state of cultivation, it is very pleasant. A manufacture of brown sugar is carried on here, and a plentiful market is held on every Tuesday. It lies nine-teen miles north-north-west of the capital.

Súranám is a small village inhabited by Roman Catholics, seated below the bank of a lake near the borders of Sivaganga. It is noted for a beautiful Roman church, and is the residence of a priest, who has the superintendence of all the Christian villages in this part. It lies five and a half miles north of Sálagrámam.

Kamenkotta is a populous village situated twelve miles north-west of the capital, and south of the high road leading from Madura to

Rámnád. Opposite this village is a beautiful pavilion seated on the south bank of a large and fine reservoir, which is filled from the river Vigay. This part of the province is richly cultivated in paddy, and has garden productions in great abundance.

Pagalúr is a small village seated below the bank of a large lake of that name, lying seven miles to the west of the capital. It is celebrated as being the place at which a ceremony is performed on the installation of the zemíndár or chieftain of Rámnád. This ceremony is held to be most essential, as the inhabitants of this village are of the original stock from which the guardian of Adam's Bridge was first selected, and therefore they retain the prerogative of bestowing the title of Sétu-patti; the zemíndárs, in consequence, observe to the present day to resort hither to receive the sceptre of authority, according to ancient usage; the ceremony continues for a few hours, and consists of a variety of pompous rites.

Gangakondán, a populous town seated on the eastern bank of the Vigay river, lies ten miles north-west of the capital. It is composed of several irregular streets, and has a very good market on every Sunday, is well stored with grain, cotton cloths, and all articles of provision. Extensive groves of Palmyra trees abound on the northern and eastern banks of the river, the toddy from which is taken to Rámnád for sale.

Ninarkovil is a large village near the confines of the Sivaganga country, seated on a pleasant plain well cultivated with dry grain. It lies about fifteen miles north-west of Rámnád, and is distinguished for the grand Hindú temple that stands in the centre of the village. Two annual festivals are celebrated here in April and July. The place is held in high veneration by the Hindús. There is a large reservoir on the west side of the temple; south of which are several pavilions built for the zemíndár's accommodation, surrounded by a wall. Here is a small manufacture of coarse cloths, which are taken to the neighbouring markets and sold.

Parmagudi, a large and populous town of commerce, is situated on the southern bank of the Vigay river. It lies twenty-one miles north-west of the capital, and through it runs the high road from Rámnád to Madura. It is chiefly inhabited by weavers, and contains upwards of one thousand one hundred houses, for the most part covered with tiles; the streets are numerous, but dirty, and very irregularly formed. Manufactures of the best cloths, silks, muslins, silk carpets of great value, vestures, turbans, women's silk, and coloured cloths, are carried on here, and these articles constitute the best part of its trade. There are several ranges of bázárs, and an annual festival

is celebrated by a contribution raised by the weavers and merchants. A large and spacious stone pavilion, substantially built, is seated near the west end of the town, adjoining which is a chattiram, where alms are daily distributed among twelve poor Bráhmans, or other travellers. Yams thrive here, and are in great abundance. The iron-smiths here are Musalmáns, who are seldom known to follow this trade in other places.

Paindoni is a small village situated about two miles to the south-east, commanding an extensive view of fields of paddy, cotton, and dry grain.

Abramam, a populous and flourishing town on the high road to Madura, seated below the bank of a very large lake, which is named from it, lies five miles north-east of Kámúri, and thirteen miles south-west of Parmagudi. It is inhabited by merchants and tradesmen, who are principally Musalmáns and Chettis.[1] The farmers are Marravars[2] and Velálars, who carry on an extensive cultivation of paddy, which, from the ample supply of water that the lake affords, yields two crops annually. The town is about half a mile in length, divided by two well-formed but narrow streets. On the north side is a well faced with stones, which has a clear spring of excellent water, affording an abundant supply throughout the year, although there are many other wells about it, the waters of which are brackish. The trade is considerable in grain, cotton, and cloths. It is the popular belief, that within an area of two miles in circumference of the town, the bite of a snake, or of any other venomous reptile, has not the usual poisonous effect; and that when bitten beyond the prescribed limits, the patient is taken to a small temple that stands on the eastern extreme of the town, where some water is simply administered to him, when, as the people affirm, he perfectly recovers within a few hours.

Víracholen, a village lying about seven miles north-west of Abramam, is seated on the south bank of the Kredamánadi river. It was anciently the residence of the rájás of the country, in whose days it is said to have been very populous, and it still abounds with remains of antiquity which corroborate the assertions of the people of its having been once a place of grandeur and magnificence, and the residence of the Chola Rájá, from whom it derives its appellation. The present population is very inconsiderable, and consists of Musalmáns,

[1] A caste of Hindús whose principal occupation is merchandise.

[2] A caste of Hindús who appear to be almost confined to this part of the country. There occupation is husbandry. In customs they differ from the Velálars, and most other castes of Hindús, and allow their widows to marry a second, third, or fourth time.—Ed.

Kallaris,[1] Marravars, and a few other descriptions of people. The manufacture is long cloths: on the north side of the village stands a small Hindú temple of great antiquity. There are the ruins of many other edifices in this vicinity.

Shekull, a populous village situated on the high road towards Tinnevelly. It lies below the bank of a large lake of the same name, and is inhabited by Velálars, Marravars, and herdsmen: the road leads through the village; the houses are poorly built.

Kadaládi, a village situated on the road that leads from Kámúri to the sea-coast. It was a place of great note and commerce; and, though it at present shews marks of decay, it preserves some trade, and has a good market on every Tuesday. It lies ten miles nearly west of Shekull.

Tiruchulí, situated about three quarters of a mile south-west of the capital, and seven miles west by north of Abramam, is a large and populous town on the south bank of the Kundár river. Its inhabitants are numerous. It is composed of a few fine and regular streets, with pretty, well-built houses. The north and east suburbs of this village are diversified with small gardens of esculent and other plants.

Arpukotai, lying seven miles west-south-west of Tiruchulí, is a large village inhabited principally by weavers, who are employed in the manufacture of the company's long cloths. The western environs of this village are plentifully cultivated with tobacco—the soil, a black loam, being very favourable for the growth of this valuable production. A weekly market is held on Fridays, which is the chief one in this district.

Pundlagudí, eight miles to the south of Arpukotai, though not a village of great note, is, however, particularised as being the only place where the manufacture of saltpetre is carried on in this district; and also for a layer of white stone, of a brittle nature, which extends from the south of it in a north-westerly direction, as far as Palavanattam. The stones are collected, and burned in kilns for the preparation of chunam or lime, which is esteemed the finest sort that can be had in the province. The ruins of a double-walled mud-fort stand on the west of the village.

RIVERS.

There are many streams in this province that empty themselves into the sea, but none are navigable, and few deserve the name of rivers. They are for the greatest part nothing more than broad

[1] A low caste of Hindús peculiar to this part of India. They are herdsmen and cultivators, and, as their name implies, thieves by profession.—Ed.

brooks or rivulets; some are only drains flowing from the lakes, others spring from the high lands, and both are every where fordable. Running upon a flat and almost level surface, they become broad without having a bed of any depth. These rivulets, in their course, supply several lakes, and the water is reserved for the purpose of cultivation, which, in good years, yields a valuable produce.

Pámban-ár, a rivulet which rises from the high lands east of Kunagudi, in the Sivaganga, enters this province on the west, near the upper frontier, below the village of Perambúr, takes its course easterly about five furlongs, crosses the general boundary, and re-enters Sivaganga; where, for more than three miles, it continues its course, when, touching the boundary south-east of Tirtengúr, and winding along it for about three-fourths of a mile, it re-enters this province. About one mile in its tract it is intersected by a channel which supplies the Mutunád lake. Pursuing its course for a few furlongs in an easterly direction, it separates into two branches, which, after running nearly parallel with each other to the distance of three miles, unite near the junction of another channel, termed the Pámb-ár. Widening gradually in its course, the stream receives another branch below Elapagudi, which flows from the southern kalingula of the Mutunád lake, and proceeds south-east about three miles; touches at the boundary between the villages Payaddakotta and Mudukuvial; constitutes a small part of the northern boundary between this province and Tanjore, and continues its course for three miles, where it intersects a detached piece of land appertaining to Sivaganga; whence, meandering along the general boundary in an east-north-east direction, it separates into five branches, and disembogues into the sea by three mouths.

Vírashelai-ár, a narrow and rapid stream, has its source in the high lands in the vicinity of Prámalli, in the Sivaganga country; and, being fed by numerous jungle streams, passes by Naikupai, supplies the large lake at Tripatú, and, after an easterly course, crosses the high road that leads from Pudukotta to Sivaganga; thence, continuing easterly about a mile, it glides south, and crosses the road from Kunagudi to Tripatú, where it unites with a channel that flows from the northern kalingula of the Tripatú lake, continues its course to Murthen-puliar-kovil, through an entire wood, and traversing in an east-south-east direction four miles, receives a channel from the west,-termed the Tirumunimutu-ár, about one mile south of Nedavakotta, whence it pursues an easterly course through a thick grove of Palmyra trees, widens in its way, and passes by Kullel Yalavenkotta, where it enters this province below the termination of a disputed boundary, and is joined by a channel called

Koatha-ár, west of the village Othayauchí. It then takes a north-easterly course towards Thavakotta, where it separates into two branches, which, uniting about a mile to the east, run north of the fort of Hanumántagudi, and south of the village: it again separates into two branches. The northern one runs easterly three miles, and then separates into two streams, taking an east by south course for ten miles, and falls into the Pámban-ár, below the village Audavatúr; the lower branch assumes the name Paushi-ár, from the village Paushipatnam, which is situated on the coast near the junction of this channel with the sea. The southern branch of the Vírashelai-ár pursues a south-easterly course about seventeen miles from Hanumántagudi; passing by Kumbukotta and Audavatúr, it waters several tanks in its tract; and, crossing a high road that leads to Rámnád, along the sea-coast, discharges itself into the sea.

Munnímutu-ár, a rivulet issuing from the southern kalingula of Kotaivial lake, in the Sivaganga country, takes a south-easterly course, and, passing by Kaurai, Pauvanakotta, and Munní, enters this province on the east by the latter village, and afterwards pursues a south-easterly course eight miles; waters the several lakes in its tract; and falls into the Teruvádánári lake, from whence the surplus water, flowing over the southern kalingula of that lake, in like manner loses itself in other lakes towards the east, the superfluous waters of which still form a pretty wide stream near Thullamurrungur, and running in an open plain, crossing the high road to Rámnád, forms a communication with the sea to the south of Tondé.

Kotaikarrai-ár, a wide and rapid stream formed at the junction of two rivulets that enter this province on the west by the village Kokaárné, waters the large Rásingamangalam lake, the superfluous waters of which are conveyed by a channel that issues from a large and well-built kalingula constructed on the northern bank. This channel runs in an east-south-easterly course five miles, crosses a high road by Ármukamkotta, and glides south-east nearly two miles; thence it pursues an east-south-east course towards Kunnaryaindel, runs south-east from that village about a mile, separates into two branches on the west of the high road, and communicates with the sea by two mouths about a mile distant from each other.

Vigay, a river which rises among the mountains on the south-east of the Dindigal valley. This river runs through the north-east ridge of a chain of mountains that border on the west of the province of Madura. It finally escapes from the mountainous tract which it traverses for about thirty miles, precipitates itself at the foot of the hill of Guntapanaikanúr, passes by Pilmankúnbi, Nuddavakotta, and

Cholavándán, and, being augmented by the waters of other small rivulets, it passes by Thovaramán and Madura; and thence rolling in a considerable body, and traversing these districts in a course nearly south-east, reaches Tripavanam, where it becomes very broad, continues in a winding course, and, being fed by other streams, passes by Mánamadura; then turning south a few miles it proceeds east, and enters this province on the west by the village of Tholachatanúr. Here for about eight miles it forms a part of the general boundary between this province and Sivaganga, in a course nearly due east. This fine river comes with a full swelling stream between Pirmaguda and Yaveneswara, towards Warapuli (where the boundary embraces a small village that stands on the south bank appertaining to Sivaganga); and gliding on south-east three miles, turns east for four miles, when the stream, flowing directly south for three and a half miles, is considerably diminished in its width, and now makes but a poor appearance in consequence of the numerous cuts from it for the purpose of irrigation, and to supply the lakes. The Vigay, now confined in a narrow bed, continues eastward in a winding course for eight miles, and then spreads into a large lake called Periyakolam. A small channel on the north continues easterly; it was recently cut to prevent the injurious consequences of inundations, which are represented to have frequently happened previous to this undertaking. The Vigay, retaining its name, proceeds eastward for six miles, losing itself in a salt-marsh which extends nearly five miles in length, and about a mile and a half in breadth, where, from the saline nature of the soil, a considerable quantity of salt is extracted. At the east end of the marsh the river again reappears, and proceeds in a south-easterly direction about five miles; thence it forms a serpentine course, and communicates with the sea below the village Autankarai. The whole of its winding course is about one hundred and forty miles. The Vigay is the largest of all the rivers in the province, and is represented as possessing the rare advantage of affording water the whole of the year. It generally overflows from about October to December, after which it begins to decrease: the fertility of the provinces of Madura, Sivaganga, and Rámnád, depends upon the overflowing of the Vigay, from which numerous canals and water-courses are led off to supply the several lakes, and for the purposes of irrigation. It is very precarious when the freshes descend in the month of April; the supply is then most carefully reserved for the purposes of cultivation. The lands upon the whole course of the Vigay yield an abundant and valuable produce.

Kredamanadi, a rivulet which has its source from the Vigay,

near Madura, enters the Sivaganga country by Pilliyúr, in the Trippavanam district, winds in a south-easterly direction for about twenty-five miles, watering a great part of that country to the south-west, touches the boundary of Rámnád below the village Víragudi, and continues in a south-easterly course for three miles, passing by Víracholan; it further embraces a portion of the country to the north about a mile and a quarter, and thence forms another part of the boundary for about a mile, whence it glides on in a southerly direction, watering the country in its course for about eleven miles, and receives a small rivulet termed the Purralla-ár, near its confluence with the Ragunát'ha-kaveri.

The Trimangalum river, termed the Kund-ár, is a narrow and rapid stream which, rising among the hills of Annayúr, in the Madura district, enters this province on the north in the Pullimat'ham district, by the village Kurriapatti. It takes a winding course to the east about a mile, and thence turns almost south five miles, and passes by Toapúr and Parenjalli, where it receives the Sheverikotta river, which descends from the mountains in the Tinnevelly country; it widens greatly at the confluence, pursues a south-easterly course, runs between Tiruchuli and Pullimat'ham, washing the western wall of the fort, and continues to proceed to Elipúr, on the north of which it is intersected by a brook from the high lands to the east of Puliarnátham: from Elipúr it winds eastwardly for six miles, and passes by Mandelmánikam, and, gliding on south-easterly two miles and a half, turns due south down to Kámúri, west of a high rocky ground, and runs between the fort and town. To the east of the latter, on the southern bank of the river, is a large kalingula, about one hundred and seventy feet in length, and about seventy feet in breadth; the time of its original construction appears to be unknown; but that it is of a very ancient date is sufficiently indicated by the style and state of the structure, which not only bears every mark of antiquity, but also of frequent dilapidation and repair. It is wholly composed of large weighty masses of rude stones laid upon one another without any regular system, every dependence having been placed upon the magnitude of the materials; hence the power of the great body of water, in its pitch over the work, has frequently occasioned breaches, and also placed the structure in so critical a predicament, that the inhabitants of the country to the eastward, especially in the Shekull and Mútukullutúr districts, sustain the loss of an extensive cultivation, estimated to be about sixty thousand pagodas annually. No anxiety appears to be entertained by the possessors of this province to adopt any measure for restoring so important a work to its primitive state.

A large canal, led off from immediately above the work, termed the Ragunát'ha-kaveri, flows upwards of twenty-four miles through the country to the eastward, being preserved in its course over a fine plane, and affords the means of cultivating the lands upon the whole of its tract, sluices having been constructed for this purpose, most of which, unfortunately, are now in ruins. This channel wastes itself ultimately in the Kullari lake, and the superabundant flow of salt-water issuing from the southern kalingula of this lake, falls into the salt-marsh below the village Vigay, and, cutting through it, assumes the name of Kottegudi-ár, which communicates with the sea, on the west of the spot called Adisétu-tírtha. The Kund-ár, or the surplus water that descends from the kalingula on the east of the town of Kámúri, winds in a south-easterly course for twenty-two miles, runs towards Mukúr, supplying in its tract a few lakes, and disembogues into the sea. It has a wide but shallow entrance, and a heavy shoal renders the free access of boats at the mouth impracticable.

LAKES OR RESERVOIRS.

These are variously named; the larger are called Yéris and Kummis, the lesser ones Yendels. The country abounds with them; several of the large ones are supplied by canals from the rivers, while others of less magnitude are filled by the local rains; the latter do not retain the water for more than three or four months. Although the larger lakes have a source whence they receive a constant and ample supply, yet the advantage of retaining their waters throughout the year is lost, from neglect of the regular system of inspection and repair. The periodical rains usually set in about the months of October and November, and the country then exhibits an almost entire watery surface; the great body of water confined by the embankments of the lakes spreads out to a great extent, often overflowing and destroying the embankments, greatly to the prejudice of the after cultivation of the lands, which depends upon the strength and preservation of these banks. When a general drought prevails, the inhabitants dig small pits in the beds of the reservoirs, whence they obtain a scanty and muddy draught. At this season the people are generally assailed by a disease called Guinea-worm; but they are so much inured to this tumour in their legs, that they think little of it. Of the principal Yéris, the following seem more particularly to deserve description, viz.:

Rásingamangalam, a large lake situated between the smaller lakes Kokaurne and Koshavan; its length from the north bank to the southern opposite extremity being nine miles, varying in breadth from

one to two miles. It receives on the north side the stream of a rivulet that flows from the high lands in Sivaganga, denominated the Kotta-karai-ár, and, on the south-south-west, the waters of the Vigay river. This lake originally watered about five thousand seven hundred and sixty kánis of land.[1] It has two large kalingulas at either extremity; the northern consisting of seventeen arches, and the southern of fifteen; and, besides these, eighteen lesser sluices, built of stone and brick, most of which, as well as the larger kalingulas, are in a dilapidated state, in consequence of which it cannot at present supply water for more than two thousand five hundred kánis. There are six breaches along the bank of this lake, occasioned by the breaking through of the waters during the monsoons, and these not being attended to, it presents much danger to the villages and lands lying below it to the eastward.

Perriakolam; this lake, with which the Vigay river forms a communication, is situated about a mile north-west of Rámnád, and extends in length about seven miles; its breadth varies from three-fourths of a mile to nearly two miles, and, from its greater depth, it has the advantage of reserving its waters for a longer period than the Rásingamangalam. It irrigates an extent of land consisting of one thousand eight hundred and sixty kánis. This Yéri has two large kalingulas; one to the north, consisting of nine arches, the water from which flows to the eastward on a low level, and falls into an extensive salt-marsh. The kalingula to the south consists of seven arches, and the stream from it falls into the Chukrakotta lake, which lies to the south. There are twelve smaller sluices to this lake, three of which are in ruins.

Chukrakotta lake, situated on the south of Rámnád, has a large and substantial kalingula consisting of eleven arches; the surplus water discharged from it forms a canal which flows into a marsh about a mile to the southward. A kalingula on the north consists of five arches only. This lake has twelve other sluices, denominated after the original possessors of the land depending thereon; five of these sluices have been in a state of decay for the last fifty years, and the inhabitants in consequence sustain a very great loss, as they cannot irrigate more than a fourth of the land that was formerly under cultivation.

Kullari lake receives the Ragunát'ha-káveri; it is situated between the villages Tirukoshamangai and Kurkáti, and irrigates about one thousand five hundred kánis of land. This lake has two kalingulas,

[1] About an acre.

and twelve smaller sluices, all of which are in good order: the great quantity of water that flows from these kalingulas spreads over a salt-marsh to the eastward, and from thence, forming a channel, ultimately falls into the sea.

Abramam lake, situated to the north of the village of that name, resembles in form a spur; it is supplied by a channel from the Kredamanadi, and waters about one thousand kánis of land: the bank is very high and substantially built. It consists of very large stones placed upon one another, and seems once to have been much more regular than at present; it has puzzled antiquarians to account for the laying of these enormous stones, as their weight is so great that no means are now known by which they could have been placed there. An odd tradition prevails that this was performed by demons. The bank is so well strengthened that it has never had any breaches, nor is it likely ever to require any great repair.

Several large lakes sustain considerable loss owing to the weak and unsubstantial condition of their banks. The waters from the high lands, and the surplus from the lake of Shekul, form a pretty wide stream, which discharges itself into the sea at Válimukam Bay, which has a good harbour for sheltering the vessels trading along this coast during the period of the land-winds and monsoon. Contiguous to this bay, on the north, is a large lake of salt-water that extends about seven miles to the west, its greatest breadth being a mile and a quarter. Salt is gathered in large quantities here, besides that which is manufactured in the salt-pans; this article is a produce very advantageous to government. Wells and fountains are, for the most part, exceedingly rare in the interior of this country, and the water that issues from them is of a very brackish quality. The sea-coast towns, although situated on vast plains of deep and heavy sand, afford fine wells and springs of clear water. A narrow salt-water lake, called Turrava, extends from the Kottaigudi river, below Tirupallani, to the east eighteen miles, and varies from one quarter to half a mile in breadth, bordering the declivity of a range of sand-hills. This lake has a verdure on its margin, which affords good pasturage for the cattle of its vicinity. On the south side are several thick groves of Palmyra and cocoa-nut trees. At some seasons of the year a dam is thrown across this lake, confining the water to a particular part, and, by letting it off as required, admits of the remaining portion of the bed being cultivated with rice. Another salt-water lake, but of smaller extent, lies to the east of the former, and has a communication with a basin of salt-water contiguous to the sea, east of Pullimat'ham.

HILLS AND MOUNTAINS.

There is not a mountain, hill, or any conspicuous eminence in the whole of this province; yet it exhibits, in several parts of its surface, gentle swells and depressions which give it a pleasing diversity, especially in the tract about Kámúri. In the Pullimat'ham district there are a few low scattered rocks, but of very inconsiderable magnitude. The sea-coast on the south, from Tonitorai westward, abounds with low, rugged rocks, extending into the sea; and these, with a great number of shoals and hidden rocks, render it dangerous for coasting vessels.

WOODS AND JUNGLE.

This country is, for the most part, divested of wood and jungle. Such as does exist is principally composed of the Odunkád, a kind of low thorn-tree, of which there are various sorts; but none of them are of a size to yield good timber. Near the sea-coast towns are extensive groves of Palmyra and cocoa-nut trees. The northern districts abound with the former, the soil being admirably adapted for their growth. Mangoe, Illapay, and other fruit-trees, are scarce throughout the province, and cocoa-nut trees are rare in the interior of it.

TÍRTHAS.

These are certain consecrated spots in the sea, considered as sacred places for bathing, to which the Hindús frequently resort on pilgrimage from all quarters of India, to perform their ablutions, especially at the nine stones at Válimukam and Ádi Sétu-tírtha, which are renowned places of sanctity on this coast. The act of washing in these places is esteemed equally as efficacious for purifying, and absolving from sin, as the far-famed Ganges.

ROADS AND PASSES.

There are several principal roads that lead through this country from the neighbouring districts. The first is a high road that leads from Tanjore by Kottapatnam, proceeds along the sea-coast, and is much frequented by pilgrims who travel to and from the Ganges to Ráméswara. About two miles from Kottapatnam the road leads into the Tanjore country, crosses a rivulet, and proceeds to Sundrapándipatnam. In its progress further, about five miles, it crosses the Pámban-ár (which here forms the general boundary between Tanjore and Sivaganga); and about a mile south, leads near a fine chattiram in the Sivaganga limits; west of Sundrapándipatnam, about two miles, it crosses the Páshi river; and, at a mile further, the Verashelai, and thence passes by Tondé, where several cross roads intersect.

Leaving Tondé, it crosses the Munnimutu-river, and a few other small rivulets, and, at the distance of about eight miles, is intersected by the Kollaikarai-ár, and, passing by Tirupálagudi in its progress, it touches at Dévipatnam, after which, crossing a few brooks, it separates into two roads; the one leading along the coast to Rámeswara, the other, crossing the Vigay river, enters Rámnád, making through the whole of its course a distance of nearly fifty miles. This, although a carriage-road, is very inconvenient, owing to the heavy sand along the sea-coast. The second is a high road that leads from Trichinopoly to Rámnád, *viá* Pudukotta, enters this country on the north by Sheraganúr, passes by Kunnangudi, Mangalagudi, and Tiruvadanari, where it is intersected by several cross roads leading to the coast; thence it touches at the village Arnutmangalam, crosses the Kottaikarai-ár, and leads off on the west by Armukam-kotta to Rásingamangalam, proceeds to Sholandúr, and passing below the banks of two large lakes, touches at Peruvial, near which it is intersected by several water-courses, and latterly passes by Pillengudi on the north bank of the Vigay river to Rámnád. This is one of the grand carriage-roads, but is in a bad state owing to the frequent intervention of paddy fields, which render it alogether impassable in the rainy seasons. A third road, also leading from Trichinopoly, separates into two parts at Tripatúr; the one leads *viá* Sivaganga, and the other by Kaulear-kovil, and these joining at Yellangudi, the road enters this district about one mile and a half west of Ninar-kovil, and, in its progress, crosses the Vigay, passes near a fine pavilion, called Chetti-Mattam, where it joins the high road leading from Madura to the capital, and proceeds along the south bank of the Vigay below Gangakondán, and, re-crossing the river again at three other places, two miles distant from each other, passes by Mothalúr to Rámnád. The state of the road is tolerably good, but much inconvenience is felt by the intersection of the Vigay river at several places. The fourth is a high road that leads from Madura *viá* Mánamadura, enters this province immediately after crossing the Vigay river by Tholashatanúr, and proceeds along the south bank for three miles, touching at Parmagudi, a fine, large, and populous town, where there are two or three substantially built pavilions for the accommodation of travellers. The road runs through the town along the southern bank, about ten miles to Chetti-Mattam, and passes by Wurapilli, in the interval of which it crosses many canals branching from the Vigay, which render the road unfit for carriages; it then leads eastward to Rámnád. The fifth is also a high road that leads from Madura to Rámnád *viá* Ávúr. It enters this country at a village called

Utchampalli, and, in its progress, crosses the Sheverikotta river, near its junction with the Kundár, touches at Tiruchuli, crosses the latter river, and proceeds to Shadapúram, where it separates into two different routes, the one leading to Kámúri, and the other to Abramam: the one that leads to the latter place passes by Ánakolam, Mandelmánikam, and Nártakurchi, next touches at Abramam, and, in its progress to Rámnád, passes by the intermediate villages Perrúnkurnai, Álenganar, Chetra, Wulayar, Yettivial, and Lánthamattam. This road is extremely good, owing to the high and level surface of the country. The sixth, a high road that leads from Madura, Tíruchuli, and Kámúri, to Rámnád, touches at Kámúri, and after crossing the Kundár river on the east of the town, it intersects the high road from Abramam at the distance of five miles. This is also a good carriage-road from the evenness of the country. The seventh, a high road leading from Tinnevelley to Rámnád, enters this province on the west of Kunirajapúram, touches at Narripúr, and, in its way, passes by Sholagudi, when it crosses the Kundár, and proceeds about five miles between a range of sand-hills, touches at Kílashelvanellúr, from which place a road separates to Kilakarai by the villages Kilakedáram and Sivakolam, where it crosses a rivulet and passes by Yérvádei to Kilakarai, and from thence proceeds along the sea-coast *viâ* Mutupetta and Vaidálai, to Pámban, and Ráméswara. The road that continues from Shelvanellur to Rámnád, touches at Kothenkolam, a small village (about two and a half miles distant), and thence at Shekull, three miles from the latter, and passes through Tirukoshamangai, which is seven miles short of Rámnád. The eighth is a sea-coast road leading from Dévipatnam towards Autankarai and Pullimat'ham, where it crosses the ferry to Pámban, and proceeds to Ráméswara, being in this part paved with stones. All along this road are spacious and durable pavilions and chattirams for the accommodation of travellers and pilgrims. Several cross-roads intersect each other in all directions throughout the country, which, though not answering for carriage-roads, are much frequented by a class of people who chiefly trade in salt.

SOIL AND PRODUCTIONS.

The soil in this province is composed of various sorts, and, though generally fruitful, is not without some predominant disadvantages, a proof of which has been experienced by the continual emigration of the inhabitants from this to the neighbouring countries, especially within the last four years, during which period a great scarcity and mortality has prevailed, arising from a failure of rain; and the number of in-

habitants who have abandoned this province from indigence, and its concomitant evils, is estimated to be not less than 150,000 souls, or nearly half its population.

The soil, though not of a very rich kind, yet, aided by enlightened husbandry, may vie in fertility with the best in the neighbouring countries, and produces early and excellent crops of paddy and of dry grain. The most fruitful soil consists of a deep black loam, which is prevalent towards the westward; the culture on these lands yields an abundant crop of cotton and dry grain. Coriander and Kadalai[1] are well cultivated in parts of Abramam and Kámúri. The soil next in quality is a red loam; and, inferior to these, is the black and red, light and sandy soils. Vegetation thrives remarkably upon the latter, which is common about the sea-coast towns, contiguous to which the grounds are inclosed and divided into small gardens. The productions consist of paddy of various kinds, several sorts of dry grain, horse gram, and a variety of other pulse, rape-seed, and oil nuts; cotton in great plenty; and the choya-vér grows spontaneously about the sea-coast and the islands. Besides the latter, there is in the western districts a small production of a thistle-plant, from the flower of which a reddish colour is extracted, and the cloths that are dyed with this are held in high estimation by the natives. The garden productions consist of raggy, beetle, pumpkins, saffron, limes, tobacco, yams, potatoes, cucumbers, sugar-canes, and plantains; the two latter, however, are not only rare, but of a meagre sort. The northern districts, as well as the neighbourhood of several of the seaport towns, are very productive of the Palmyra, from the toddy of which a considerable quantity of coarse sugar is manufactured.

MANUFACTURES, IMPORTS, AND EXPORTS.

As a commercial province, and for manufactures, Rámnád is distinguished beyond many others, and principally for the manufacture of cotton cloths; the first of which is at Parmagudi, where the chief occupation of the inhabitants is making printed cloths, chintzes, silks, elegant silk carpets, red and blue striped cotton carpets, muslins, dúpettas, turbans, dimities, izaries, ginghams, cambrics, &c. Kílakarai and Dévipatnam are fine ports, the trade of which is very considerable; they are consequently the resort of many respectable merchants from all parts, whereby these places have become rich and populous. Kílakarai is reckoned next to Parmagudi for the

[1] A kind of pease, much used in Bengal and Upper Hindústán, and in the south commonly called Bengal gram.

manufacture of fine cloths, muslins, &c. A few other places are noted for long cloths of good quality, viz. Rámuri, Abramam, Arpukotta, Pálayampatti, Kuddeládi, Yekugudi, Punnakolam, Chittarkotta, Numbuthullai, Tindey, and Kottapatnam; and those of a coarse quality, commonly worn by the inhabitants, are made almost in every village in the province. Salt is manufactured in great plenty in the neighbourhood of the sea-coast towns and villages, but it is entirely under the management of the servants of the government. Besides the manufacture of this article, a prodigious quantity of it is gathered from the extensive salt-marshes, in which, on the evaporation of the water, a thick incrustation of salt, very white and fine, is left on the surface. Except at Pundlegudi, saltpetre is nowhere manufactured in this province.

The chank fishery commences in April on the eastern coast of Rámnád, and continues till the month of September; and, on the southern coast, from October, continuing till March. It is usually rented by the zemíndár at not less than six thousand pagodas annually. The chanks fished on the eastern coast are reckoned better than those of the southern. A comparative rate has long been established at one hundred and thirty-five chanks per star-pagoda, while those of the southern-coast are sold at one hundred and sixty-two per pagoda. The number of chanks annually fished amounts to upwards of a million. The country arrack is distilled in several places throughout this province.

The imports are shawls, woollen cloths, wheat, sugar, sugar-candy, pepper, nuts, nutmegs, cinnamons, cloves, cardamums, mace, brimstone, quicksilver, iron, pearls, corals, and a variety of precious stones; teak-wood, black, and Ceylon wood; red and yellow ochre; and, in the time of scarcity, grain is imported hither from the western, as well as from the Tanjore countries. The chief trade of this province consists in the exportation of manufactured cloths of various kinds. The chanks are taken to Bengal, and the choya-vér to the northern countries; and, during a plentiful season, paddy, and other grain, are also exported. Salt is the principal commodity of export to the inland countries.

ART. VIII.—*Letter from the Right Hon. Sir ALEX. JOHNSTON to the Secretary to the Royal Asiatic Society.*

SIR, *Great Cumberland Place, Feb.* 14, 1836.

In reference to the statement, published in the last Number of the Society's Journal, of the allusion which I, as Chairman of the Committee of Correspondence, had made in my Report, at the last Anniversary Meeting, to the account given by Dr. ROBERTSON in the Appendix to his *Historical Disquisition on Ancient India*, of the opinions of Mr. BAILY and Mr. PLAYFAIR, as to the extreme age of the Hindú astronomical tables, I have to request, with a view of affording the readers of the Journal the most recent information upon the subject, and thereby preventing them from drawing any erroneous inference from the supposed antiquity of those tables, that you will be so good as to publish in the Journal the following statement of the very scientific and very able opinion of the celebrated M. LA PLACE, as to the real age of the same tables. It is copied from HARTE's Translation of LA PLACE's *Système du Monde*, pp. 220, 221, 222. (Dublin, 1830.)

" In Persia and India," says LA PLACE, " the commencement of astronomy is lost in the darkness which envelopes the origin of these people.

" The Indian tables indicate a knowledge of astronomy considerably advanced, but every thing shews that it is not of extreme remote antiquity. And here, with regret, I differ in opinion from a learned and illustrious astronomer, whose fate is a terrible proof of the inconstancy of popular favour; who, after having honoured his career by labours useful both to science and humanity, perished a victim to the most sanguinary tyranny, opposing the calmness and dignity of virtue to the revilings of an infuriated people, of whom he had once been the idol.

" The Indian tables have two principal epochs, which go back, one to the year 3102, the other to the year 1491, before our era. These epochs are connected with the mean motions of the sun, moon, and planets, in such a manner that, setting out from the position which the Indian tables assign to all the stars at this second epoch, and reascending to the first by means of these tables, the general conjunction which they suppose at this primitive epoch is found. BAILY, the celebrated astronomer already alluded to, endeavours, in his

Indian astronomy, to prove that the first of those epochs is founded on observation. Notwithstanding all the arguments are brought forward with that perspicuity he knew so well to bestow on subjects the most abstract, I am still of opinion that this period was invented for the purpose of giving a common origin to all the motions in the heavenly bodies in the zodiac. Our last astronomical tables, being rendered more perfect by the comparison of theory with a great number of observations, do not permit us to admit the conjunction supposed in the Indian tables; in this respect, indeed, they made much greater differences than the errors of which they are still susceptible, but it must be admitted that some elements in the Indian astronomy have not the magnitude which they assigned to them until long before our era; for example, it is necessary to ascend 6000 years back to find the equation of the centre of the sun. But, independently of the errors to which the Indian observations are liable, it may be observed that they only considered the inequalities of the sun and moon relative to eclipses, in which the annual equation of the moon is added to the equation of the centre of the sun, and augments it by a quantity which is very nearly the difference between its true value and that of the Indians. Many elements, such as the equation of the centre of Jupiter and Mars, are very different in the Indian tables from what they must have been at their first epoch.

"A consideration of all these tables, and particularly the impossibility of the conjunction at the epoch they suppose, prove, on the contrary, that they have been constructed, or at least rectified, in modern times. This also may be inferred from the mean motions which they assign to the moon with respect to its perigee, its nodes, and the sun, which, being more rapid than according to Ptolemy, indicate that they are posterior to this astronomer; for we know, by the theory of universal gravitation, that these three motions have accelerated for a great number of ages."

I have the honour to be, sir,

Your most obedient servant,

(Signed) A. JOHNSTON.

PROCEEDINGS

OF THE

ROYAL ASIATIC SOCIETY.

SATURDAY, MAY 16, 1835.

A GENERAL Meeting was held this day; the Right Hon. C. W. WILLIAMS WYNN, M.P. President, in the Chair.

The following donations were laid upon the table:—

From the Baron C. D'Ohsson, F.M.R.A.S.

His "Histoire des Mongols, depuis Tchinguiz-Khan jusqu'à Timour Bey, ou Tamerlan. Par M. le Baron C. D'Ohsson. Avec une Carte de l'Asie au XIII^e. Siècle. Amsterdam, 1834." 4 vols. 8vo.

From Alexander Raphael, Esq. M.R.A.S.

Preces S. Niersis Clajensis Armeniorum Patriarchæ viginti, quatuor Linguis. Venetiis. 1823. 16mo.

From Dr. David Burnes.

Travels in Bokhara, containing the Narrative of a Voyage on the Indus from the Sea to Lahore, with presents from the King of Great Britain, &c. &c. By Lieut. Alexander Burnes, F.R.S. Second edition. London, 1835. 3 vols. 12mo.

From M. Bazin, aîné.

Tchas mei Hiang, ou Les Intrigues d'une Soubrette. Comédie en prose et en vers, traduite du Chinois. Par M. Bazin, aîné. Paris, 1835. 12mo.

From the Zoological Society.

Transactions of the Zoological Society of London. Vol. I. Part III. London, 1835. 4to.

From Professor L. A. Sédillot.

Introduction au Traité d'Astronomie d'Aboul Hhassan Ali, &c. Paris, 1833. 8vo.

An Extract from the Moniteur, containing a review of the above. 8vo.

Notice du Traité des Connus Géométriques de Hassan Ben Haithem, &c. Paris, 1834. 8vo.

Traité des Instrumens Astronomiques des Arabes, composé au Treizième Siècle par Aboul Hhassan Ali, de Maroc, &c. Traduit de l'Arabe par J. J. Sédillot. Tome Premier. Paris, 1834. 4to.

Notice sur les Vies et les Ouvrages de M. le Baron Dacier, M. A. Rémusat, et M. Champollion le Jeune. Par M. le Baron S. de Sacy. Paris. 8vo.

From Professor Eugène Burnouf, F.M.R.A.S.

Commentaire sur le Yaçna, l'un des Livres Religieux des Parses, ouvrage contenant le Texte Zend expliqué pour la première fois, les variantes des quatre Manuscrits de la Bibliothèque Royale, et la version Sanscrite inédite de Neriosengh. Par Eugène Burnouf, Membre de l'Institut, &c. Tome I. Paris, 1835. 4to.

From the Directors of the Manchester Mechanics' Institution.

Catalogue of the Library of the Manchester Mechanics' Institution.
Report of the Directors of the Institution. Feb. 26, 1835. 12mo.

From J. C. Loudon, Esq.

His Arboretum Britannicum.

From C. T. Beke, Esq.

His Views in Ethnography, &c. 12mo.

From D. J. J. Schmidt, F.M.R.A.S.

His Grammatik der Mongolischen Sprache, verfasst von J. J. Schmidt. St. Petersburg, 1831.

Mongolisch Deutsch Russisches Woerterbuch nebst einem Deutschen und einem Russischen Wortregister. St. Petersburg, 1835. 4to.

From M. Julien Desgardins.

Rapport Annuel sur les travaux de la Société d'Histoire Naturelle de l'Ile Maurice, 1833 & 1834. MS.

From Sir Charles Forbes, Bart.

A Duplicate of a Petition to the House of Commons from Natives of Bombay, and others, Christians, Jews, Chinese, Parsees, Muhammedans, and Hindús, upwards of 4000 in number; the whole of whose signatures are attached, written on twenty-five skins of parchment, and extending to the length of fifty-four feet ten inches, by twenty-five inches in breadth. The Petition is in the English, Gujaratee, and Mahratta, respectively, and is dated Bombay, Jan. 25, 1831. It prays for a reform in the judicial regulations of the government at Bombay; the more impartial administration of the laws; that natives may be freely admitted to civil and judicial offices; and that the diffusion of the English language among the natives may be more generally encouraged by the British government. It was sent home to Sir Charles Forbes, Bart. M.P., and Joseph Hume, Esq., M.P., and was presented to the House of Commons on the 1st September, 1831.

A printed copy of the above-mentioned Petition, and also of one dated 31st December, 1829, and signed by ninety-five of the principal Hindús, Parsees, and Muhammedans, of Bombay, the original of which was presented to the House of Commons at the same time with the former.

The impression of a Seal adopted by Bomanjee Hormarjee, Esq. of Bombay, transmitted to him by Sir Charles Forbes, Bart.

From the Right Hon. Lord W. H. C. Bentinck.

A Guide to the Commerce of Bengal, &c. By John Phipps. Calcutta, 1823. 4to.

A Selection of Papers from the Records of the Board of Customs, relating to the Bengal Salt Revenue. Calcutta, 1833. 8vo.

Useful Tables; forming an Appendix to the Journal of the Asiatic Society. Calcutta, 1834. 8vo.

A Review of the External Commerce of Bengal from 1813–14 to 1827–28. By H. H. Wilson, Esq. Calcutta, 1830. 8vo.

A Report upon the Inland Customs and Town Duties of the Bengal Presidency. By C. E. Trevelyan. Calcutta, 1834. 8vo.

A Series of Treatises on the Principal Products of Bengal. No. 1. Indigo. By John Phipps. Calcutta, 1832. 8vo.

The Hooghly River Code, &c. By Charles L. Smartt. Calcutta, 1833. 8vo.

Answers to a Series of Queries, &c. proposed through the Committee of Correspondence of the Royal Asiatic Society of Great Britain and Ireland. By John Bell, Esq. MS. Folio.

From John Bell, Esq.

A Comparative View of the External Commerce of Bengal, during the years 1829–30, and 1830–31; accompanied with Tables illustrative of the extent of Trade carried on with each country separately. By John Bell, Esq. Calcutta, 1831. 8vo.

From Sir Charles Forbes, Bart.

Part of one of the arms of the colossal stone figure of *Jayad Rat'hah*, from the cave temple in the Island of Elephanta.

From the Editor.

Cochrane's Foreign Quarterly Review, No. I., March 1835. London. 8vo.

From the Author.

Specimen of a Poem, in Three Books. 16mo.

From Sir Whitelaw Ainslie, M.D.

His "Historical Sketch of the Introduction of Christianity into India, and its Progress and present State in that and other Countries; preceded by a brief Account of the religious Opinions of some of the Heathen Philosophers before and after the coming of Christ." London, 1835. 8vo.

Thanks were ordered to be returned to the respective donors.

A paper by John Edye, Esq. on the Sea-Ports, and the Resources of the Forests, on the Coast of Malabar, was read to the meeting.*

Thanks were returned to Mr. Edye for his communication.

SATURDAY, JUNE 20, 1835.

A GENERAL Meeting was held this day; the Right Hon. C. W. WILLIAMS WYNN, M.P. President, in the Chair.

The following donations were laid upon the table:—

From the Royal Academy of Sciences, Berlin.

Abhandlungen der Königlichen Akademie der Wissenschaften zu Berlin, 1828, 1829. Berlin, 1831–32. 4to.

From Major W. R. Pogson.

His "Effusion; forming an epic poem, &c." Serampore, 1834. 8vo.

* Printed in Vol. II. of the Society's Journal.

From the Academy of Sciences, Dijon.

Mémoires de l'Académie, &c., année 1834. Dijon, 1834. 8vo.

From Messrs. Sherwood and Co.

Todd's Cyclopædia of Anatomy and Physiology, Part I. 8vo. London, 1835.

From the Geological Society of London.

Its Proceedings, Nos. 38 and 39.
List of Members (two copies).

From Professor A. Jaubert.

His "Eléments de la Grammaire Turke, &c." Deuxième ed. Paris, 1833. 8vo.

From the Madras Literary Society, and Auxiliary Royal Asiatic Society.

Its Journal; edited by J. C. Morris, Esq. F.R.S. Secretary, &c. Vol. I. Madras, 1834. 8vo.

From the Asiatic Society of Bengal.

Essay towards a Dictionary, Tibetan and English. By Alex. Csoma de Körös. Calcutta, 1834. 4to. (Three copies.)
A Grammar of the Tibetan Language, in English. By Alex. Csoma de Körös. Calcutta, 1834. (Three copies.)

From the Committee of Public Instruction at Calcutta.

Futawa Alumgiri; a Collection of Opinions and Precepts on Mohammedan Law. Vol. IV. Calcutta, 1833. 4to. (Arabic.)
Ashshurh-ool Moognee; a Commentary on the Moojuz-ool Kanoon, known by the name of the Sudeedee. Calcutta, 1832. 4to. (Arabic.)
The Hidayah, with its Commentary called the Kifayah; a Treatise on Mohammedan Law. Vol. IV. Calcutta, 1833. 4to.
The Raghuvansa, or Race of Raghu; a historical Poem by Kalidasa: with a prose Interpretation. Calcutta, 1832. 8vo.
Lílávatí; a Treatise on Algebra and Geometry. Calcutta, 1832 8vo.

From His Excellency M. Henri de Struve.

A lithographed fac-simile of a Tibetan MS. called, The Holy Book of the Great Means of Redemption; or, the Immense Antiquity of Primitive Wisdom.

From Lieut.-Colonel Francklin, M.R.A.S.

Copy of an Ancient Inscription on the Bheem Serigka Laût at Lowreah in Chumpanum; with a pencil sketch of the pillar.

From Simon Casie Chitty, F.M.R.A.S.

His "Correct Outline and Classification of the Tamul Castes." Colombo, 1831. 12mo.

From Colonel Harriot, M.R.A.S.

A Sanskrit MS. entitled D'arani, or Bod' Marag.
Yusuf va Zuleikha (attributed to Firdausí). Persian MS. (imperfect.)

From John F. Davis, Esq. M.R.A.S.

An English and Japanese, and Japanese and English, Vocabulary; compiled from native works by W. H. Medhurst. Batavia, 1830. 8vo. Lithog.

From John R. Morrison, Esq. C.M.R.A.S.

His "Chinese Commercial Guide." Canton, 1834. 8vo.
The Chinese Repository. Vol. III. Nos. 1 to 5. Canton, 1834. 8vo.
The Oriental Christian Spectator. Vol. V. No. 12. Bombay, 1834. 8vo.

From Sir Charles Forbes, Bart.

The skeleton head of an alligator.

Thanks were ordered to be returned to the respective donors.

A paper on the Origin and History of the Parawas, by Simon Casie Chitty of Ceylon, a corresponding member of the Society, was read to the Meeting; and thanks were ordered to be returned to him for his communication.

SATURDAY, JULY 4, 1835.

A GENERAL Meeting was held this day; the Right Hon. Sir ALEXANDER JOHNSTON, Vice-President, in the Chair.

The following donations were laid upon the table:—

From Lieut.-General Benjamin Gordon (late Forbes), M.R.A.S.

A plaster cast of a Hindú deity, the original of which was found, with various others, in the river *Abakan*, in Siberia.

From the American Philosophical Society of Philadelphia.

Transactions of the Historical and Literary Committee of the American Philosophical Society. Vol. I. Philadelphia, 1819. 8vo.

From the Geological Society of London.

Its Transactions. Vol. III. Part 3. Second Series. London, 1835. 4to.

From the London Institution.

A Catalogue of the Library of the London Institution; systematically classed, &c. Vol. I. 1835. (Not published).

From the Cambridge Philosophical Society.

Its Transactions. Vol. V. Part 3. Cambridge, 1835. 4to.

From Don Juan de Silva, C.M.R.A.S.

Specimens of precious stones, corals, clays used in paint, &c. from Ceylon.
A Ceylonese iron pen, or stylus.
Six coloured drawings of idols worshipped in Ceylon, with descriptions.

From Colonel Thomas Gordon, C.M.R.A.S.

A Turkish MS. entitled, "The Crown of Histories." By Saad ud dín Effendi. Large 8vo.

From the Rev. C. Gutzlaff of Canton.

His translation into Chinese of an European work on Geography and Astronomy. 8vo.

From J. C. Loudon, Esq.

His "Arboretum Britannicum." Nos. VI. and VII.

From Oswald Charles Wood, Esq. M.D.

His Translation from the German of the Chevalier von Hammer's History of the Assassins. London, 1835. 12mo. (Dedicated to the Royal Asiatic Society).

The thanks of the Society were ordered to be returned to the respective donors; and, in the case of Dr. Wood, they were made special, for the honour he had done the Society in dedicating to it his translation.

John Shepherd, William Newnham, and Charles Philip Brown, Esquires, were elected Resident Members of the Society.

The reading of a paper,* by George Earl, Esq., being a narrative of a voyage made by him, in 1834, from Singapore to the coast of Borneo, was commenced; and the thanks of the Society ordered to be returned to him for his communication.

SATURDAY, JULY 18, 1835.

A GENERAL Meeting was held this day; the Right Hon. C. W. WILLIAMS WYNN, M.P. President, in the Chair.

The following donations were laid upon the table:—

From the Linnean Society of London.

Its Transactions. Vol. XVII. Part II.

From J. R. Morrison, Esq. C.M.R.A.S.

The Chinese Repository. Nos. VII. and VIII.

From Bábu Krishna-Chandra Ghosha.

His "Selection of Anecdotes, moral and entertaining." Translated into Persian from the English. Calcutta, 1832. 8vo.

From John F. Davis, Esq. M.R.A.S.

Yuen jin pĕ choong keŭ; the Hundred Plays of *Yuen*: in Chinese. 31 vols. 8vo.; including a volume of plates.

Tracts, principally on European Geography and Astronomy. Translated into Chinese by the Rev. C. Gutzlaff. 8vo.

A History of England, in Chinese; with maps and plates. Translated by the Rev. C. Gutzlaff.

From the Asiatic Society of Bengal.

Index to the Asiatic Researches. Calcutta, 1835. 4to.
Journal of the Asiatic Society of Bengal, Nos. 34, 35, and 38.
Useful Tables, &c. Second Part.

From Professor C. M. Frœhn, F.M.R.A.S.

Notice Chronologique d'une Centaine d'Ouvrages, &c. St. Petersburg, 1834. 4to.

A Chronological Description of certain Armenian Historical MSS. &c. (Russian.) St. Petersburg, 1834. 4to.

* Published in the present Number of the Society's Journal.

Über die Ghemalige Mongolische Stadt Ukek in Süden von Saratow und linen dort Unlangst Gemachten Fund: von C. M. Fræhn. St. Petersburg, 1835. 4to.

C. M. Frælinii de il-Chanorum seu Chulaguidarum Numis Commentatio. Petrop. 1834. 4to.

Two Plates on Oriental subjects.

From James B. Kell, Esq.

His pamphlet "On the Appearance of Cholera in Sunderland in 1831." Edinburgh, 1834. 4to.

From Professor Bianchi, F.M.R.A.S.

His "Dictionnaire Turc-Français." Tome Prémier. Paris, 1835. 8vo.

From the Author.

Some Considerations on the Political State of the intermediate Countries between Persia and India, with reference to the project of Russia marching an army through them. By G. Stirling, Esq. London, 1835. 8vo.

From the Right Hon. Sir R. J. Wilmot Horton, Bart. M.R.A.S.

The Ceylon Almanack, and Compendium of Useful Information, for the year 1835. Colombo, 1835. 8vo.

From Mr. H. Martyn, of Batticotta, in Ceylon, through the Right Hon. Sir Alex. Johnston.

Two terrestrial Globes, made and delineated entirely by himself: with the names of places, &c. on one written in English; on the other, in Tamil.

From Cavelly Venkata Ramaswámi, C.M.R.A.S.

Plan of the Town of Madras and its Limits, as surveyed by Captain W. Ravenshaw; to which is added, all the improvements and alterations to the present time. Compiled by C. V. Ramaswámi, Pundit. 1834.

Thanks were ordered to be returned to the respective donors.

The following gentlemen were elected Resident Members of the Soeiety:— Arthur Mills Raymond, Esq., Charles Grant, Esq., Henry Pownall, Esq., and Walter Elliot, Esq.

The reading of Mr. Earl's Narrative of his Voyage from Singapore to the Western Coast of Borneo, was concluded.

The President announced that the meetings of the Society were adjourned till December.

JOURNAL

OF THE

ROYAL ASIATIC SOCIETY.

ART. IX.—*Historical Sketch of the Kingdom of Pándya, Southern Peninsula of India, by* HORACE HAYMAN WILSON, Esq. *Boden Professor of Sanskrit, Oxford.*

THE following sketch of the history of the principality of Pándya, one of the earliest political divisions of southern India, was compiled several years ago, from documents contained in the manuscript collections of the late Colonel MACKENZIE. It was prepared before the completion and publication of my catalogue of those collections, and it was my intention to have revised it at some future period, with the assistance of such further materials as a more thorough examination of its authorities might have supplied. At the same time, I commenced similar epitomes of the history of the other chief states of the Peninsula, purposing in like manner to give them the benefit of future revision and comparison with additional sources of information. Time, however, passes away, and I have not had any opportunity of carrying my intentions into execution. When such an occasion may offer is still uncertain, and I have thought, therefore, that it may not be unacceptable to the ROYAL ASIATIC SOCIETY to be put at once in possession of what I have effected, at least as far as relates to the kindom of Pándya. From my subsequent investigation of the MACKENZIE Collection, I do not expect that any material accession to our knowledge of the remote condition of the Pándya kingdom will be derived from it; but, at any rate, so much as is here supplied will, in the mean time, contribute to throw some light upon a dark period of Pándya history, and may pave the way for its more complete and more successful elucidation.[1]

The historical traditions of the south of India divide the extreme southern portion of the east part of the peninsula, which is termed Drávira Désa, into three principalities, or those of Pándya, Chola,

[1] A list of the authorities will be found at the end of this paper.

and Chéra. The first of these is the subject of the present inquiry. The early existence of the Pándya kingdom we learn from classical authorities.[1] At the beginning of the Christian era, the Regio Pandionis, of which Madura was then and ever afterwards the capital, appears to have comprehended the greater part of the southern portion of the Coromandel coast, and to have extended across the peninsula to Canara and Malabar, and southward to the sea. It was subsequently confined to narrower limits by the independence of Malabar and the rise of the state of Chéra to the west, by the growth of the principality of Rámnád to the south, and the aggrandisement of the Chola sovereignty to the east, till it sank, in modern times, into the petty government of the Náyaks of Madura. At various periods of its history it may be presumed, the following definitions of its limits have been laid down by native authorities. One account places Raméswara on the east, Kanya Kumári on the south, Satyamangalam on the west, and the river Palar on the north. Another, which seems the more accurate, makes the Valar river the northern boundary, and Paruvali the western; but agrees with the preceding in carrying the Pándya territory to the sea, both to the south and east, including, consequently, the present Rámnád, and part of Tinivelly.

The Coromandel provinces on the eastern peninsula, from the Godaveri to Cape Comorin, are described in all the traditionary accounts of this part of India, as one vast tract of forest to which

[1] The author of the *Periplus of the Erythrean Sea*, particularises Nelcynda, or Neliceram; Paralia, Malabar, or Travancore; and Comari, Cape Comorin; as ὑπὸ τὸν Καισαλία Πανδίονα, under king Pandion. Dr. VINCENT conjectures, that the king of Madura had extended his power from the eastern to the western side of the peninsula, and was master of Malabar when the fleets from India first visited the coast (vol. ii. 401). He also thinks it likely that the power of Pandion had been superseded in Malabar between the age of the Periplus and Ptolemy; for Ptolemy reckons Aii next to Limurike on the south, and takes no notice of Pandion till he is past Cape Comorin (ibid). The conjecture derives very strong support from the traditions of these countries. It may be supposed that the embassies sent by Pandion to Augustus, as noticed by classical authorities, and which there is no reason to call in question, arose out of the ambitious extension of the territories of the Pándya prince: two occurrences of this nature are noticed, one the 18th year after the death of Julius Cæsar, which reached Augustus at Tarracona; the other six years afterwards, when that prince was at Samos. Et quidem duplex erat illa ad Augustum legatio, cujus utriusque tempus habemus exploratum; prior bello Cantabrico quam Tarracone Augustus accepit, teste Orosio (vi. 21). Secundam deinde legationem anno Varr. 734, assignat Dio (l. liv.), quo tempore Sami hyemavit Augustus. Hos vidit, ni fallor, legatos, Nicolaus Damascenus, Antiochiæ Samum, ut videtur, petentes, teste Strabone (l. xv. p. 719).

[2] Ætate et Auctore Peripli Maris Erythrei, 105.

the name Dandaka, or Dandakáranya was applied. It was in these thickets that Ráma and Sitá resided during their exile, that he commenced his warfare against the Rákshasas, or savages and fiends, who divided with hermits and sages the possession of the wilderness, and that Sitá was carried off in resentment of Ráma's successful attacks upon the wild tenants of these shades. After the subjugation of the savage inhabitants of Dandakáranya and the conquest of Lanká, various individuals from the north, it is said, attracted southwards by the performance of pilgrimage to the scenes of Ráma's triumphs, were tempted, by the unoccupied state of the country, to settle themselves and their families upon the undisputed territory. They accordingly cleared and cultivated different tracts, and thus laid the foundation of future principalities. To such circumstances the Pándya kingdom owed its rise. An adventurer, named Pándya, of the Velálar, or agricultural tribe, first established himself in that portion of the south to which his name was afterwards assigned.[1] This happened, according to the authority followed, in the last *yuga*, or *age*, in which seventy-two princes are enumerated as ruling over the kingdom. Other accounts, however, do not name the founder of the monarchy, but pass over some indefinite interval to the reign of Sámpanna Pándya, whose son, Kúla Sék'hara is, in all the lists, specified as the first king of Madura, from his being regarded traditionally as the founder of that city. It is from this prince that seventy-two kings are enumerated in the list above referred to.[2] Another list,[3] said to be taken from the *Madura Purána*, but, if so, not very accurately compiled, reckons seventy-five princes from Soma Sundara, the third of the preceding list, to Kuna Pándya, who appears to be its seventy-third. Another list limits the number of kings from Kula Sék'hara to Kuna Pándya to thirty,[4] whilst it is stated generally, in a different authority, that the whole number of Pándya kings who preceded Kuna Pándya, amounted to three hundred and fifty-seven:[5] it is evident, therefore, that beyond mere

[1] No notice of any of the kingdoms of the south could consistently occur in the Rámáyana. MANU speaks of the Dráviras as degraded Kshetriyas, but makes no mention of Cholas or Pándyas. Both Chola and Pándya are respectively mentioned in the Mahábhárata, but their origin is not there described. The Harivansa and Agni Purána, make Pándya, Chola, Kerala, and Kola, great-grandsons of Dushyanta, of the line of Puru, and founders of the regal dynasties named after them. The descendants of Dushyanta, however, as specified in the Vishnu Purána, do not include these personages, and their insertion seems to have been the work of the more recent authorities. The Harivansa, with no little inconsistency, places the Pándyas and Cholas amongst the Kshetriya tribes degraded by Sagara. The Padma Purána has a similar addition to the list of those tribes in the Rámáyana.

[2] List of authorities, No. 1. [3] List, No. 3. [4] List, No. 2.

[5] Rájá Cheritl. List, No. 5.

names, and those, perhaps, more fanciful than historical, we are not likely to derive much satisfactory information from these conflicting statements. It may, indeed, be observed of such lists,[1] and they are numerous, that they bear their own refutation when they assert very high antiquity. The names are from the first Sanskrit; but, according to the most able scholars in the languages of the Dekhin, there was a period which preceded the infusion of Sanskrit[2] into the dialects of the south, and the princes of those periods were, of course, not designated by exotic appellations. Either, therefore, the first names of the lists are modern fabrications, or the lists ascend to a comparatively recent date. There can be no doubt, that in examining local lists of Hindú kings in the peninsula, both sources of error, or misrepresentation, are to be taken into account.

The objection advanced against these lists applies equally to all the written records, and is alike fatal to the extreme antiquity of the events which they narrate. The meagreness and inconsistency of the various sources of information might throw a suspicion upon the existence of the Pándya monarchy at any remote period, did not classical writers bear testimony to the celebrity even of its capital city, at the very commencement of our era. How long before this it was founded we have scarcely any means of conjecturing, but the traditional history of the Chola dynasty records the disappearance of that race, as independent princes, to have occurred in consequence of the marriage of a Chola princess with Vara-guna Pándyan, whom it calls the forty-eighth Pándya king. In our lists, however, he appears to have been the twenty-second or twenty-ninth, and supposing the union of the Chola and Pándya sovereignties to have been thus effected before the reign of AUGUSTUS, and the number of preceding reigns not very erroneous, we may conjecture the appearance of the Pándya principality as an organised state, and the foundation of Madura to have happened, about five or six centuries anterior to the Christian era.[3] Of the events that have befallen the kingdom during the long period that has since elapsed, very few are attributed to remote times, and of them the authenticity may be

[1] Besides those comprised in the Mackenzie Collection, BUCHANAN has published several. (Travels in Mysore). Some of his and those of this collection are the same, having been procured at the same places.

[2] ELLIS and CAMPBELL. Introduction to CAMPBELL's Telugu Grammar.

[3] It is not improbable that some centuries preceded the foundation of Madura, during which the first settlers were occupied in clearing the ground and erecting habitations, and forming themselves into organised states. According to the Puránas, as estimated by HAMILTON, ten centuries were thus occupied; but this seems to be more than requisite, and perhaps five would be nearer the truth, placing the first events in the south about one thousand years before our era.

doubted. Such as they are found, however, in the only records that remain we shall proceed to detail them, omitting the most extravagant fictions, and curtailing the most tedious of those which we select.[1]

According to the *Madura Purána*, the residence of the Pándya kings was for many ages at a place called Kurk'hi, not improbably the Kolkhi of the Periplus, a city subject to the Pándya king, as the author observes, and, perhaps, as D'Anville notices,[2] still to be traced in the appellation Kilkhar, or Kilakarai,[3] on the Coromandel coast, opposite to Rámeswaram. One of the Pándya monarchs, named Sámpanna Pándya, invited the Chola and Chéra princes to

[1] The authority followed in the first part of the ensuing detail is called a translation of the *Madura Purána* (List of Authorities, No. 7); it appears to be a translation of the Tamil work called *Tiruvalaiyádal*, which is also designated sometimes as the *Madura Purána*. This is the work of Parunjoti Tamburan, a Pandaram, or Saiva priest, who is said to have written it in the reign of Hari Víra Pandyan, in the Salivahan year 973 (A.D. 1051). It relates the sixty-four miracles or frolics of Sundaréswara, the tutelary divinity of Madura; and is, in fact, but a translation or paraphrase in Tamil of a Sanskrit local legend, entitled *Hálásya*, said to be a section of the *Skanda Purána*, a source always assigned in the Dekhin to detached local compositions, to which the composers wish to affix the authority of Pauranic sanctity. The Skanda Purána being a Saiva Purána, is the ready resource of that sect, and is made the parent of a much more numerous offspring than legitimately belong to it. The *Hálásya* is of this description; but if the date of its Tamil representative be correctly given, it is of use in fixing that of Kuna Pándya, with whose reign it closes. The collection contains two MSS. professing to be translations of the *Madura Purána*: they do not exactly agree, however; and one is much more brief than the other, whence it is possibly the translation of an abridged work, the abridgement not adhering, with inviolable fidelity, to its original, as is usually the case amongst Hindú writers. The MSS. are Nos. 7 and 8 of the List of Authorities. The account of the work and its author, is from a MS. list of Tamil authors, and the catalogue of Tamil books. Another MS., No. 11, which has been also consulted, is entitled a translation of the Pándya Rájákal; the original of this is a Tamil prose work, sometimes attributed to the three most eminent of the first professors of the Madura college Narakira, Bána, and Kapila. The accuracy of this notion may be questioned, as it rests solely upon the work closing with the reign of Vamsa Churámani, under whom these writers are said to have flourished; and it is contradicted by the tenor of the last sentence, which speaks of the literary institutes first promulgated by, or exemplified by these teachers having been communicated to their disciples, and thus handed down through consecutive generations. The work itself agrees closely with the *Madura Purána*, and is, therefore, probably, as well as it, a branch from the same Sanskrit stem, the *Hálásya Máhát'mya*, which work is also in the collection, and has been compared with the translations.—Mackenzie Collection, I. p. 91, cxxi.

[2] D'Anville Antiquité Geographique, 122. Also Vincent's Periplus, ii. 443: the general identity is beyond question by its being then, as now, the scene of the pearl fishing.

[3] See Journal Royal Asiatic Society, No. V. p. 169.

the wedding of his son. On their way to Kurkhi they were caught by violent rains, and compelled, by the flooded state of the country, to remain encamped on one spot for a month, in memory of which event the Pándya king built a city there, naming it Kalyána-pur, which was for some time the capital of his son and successor, Kula Sék'hara.

Kula Sék'hara, in the commencement of his reign, built a new city about two leagues to the north of Cape Kumari, which he named after himself, Kula Sék'hara Pattan: he resided, however, at Kalyána-púr. It happened that a merchant returning from a journey to Malayálam, or Malabar, lost his way in the forests of Chandragiri, the hilly district west of Madura, and its vicinity. Whilst exploring his track alone he discovered an ancient temple, dedicated to Siva, as the Mula Linga, or Choka Náyaka, and Durga, as Minákshi Amman. The temple had been erected by Indra when performing penance in the Dandaka forest, for the expiation of the sin of murdering Vritrásura, who, although a demon, was a Brahman. The merchant, himself a devout worshipper of Siva, paid his homage to the deity, and was, in consequence, favoured with a personal communication, directing him to announce the discovery to the Rája, and the will of the god, that a city should be founded on the spot. The same injunction was conveyed in a vision to the prince, and the concurrence of these intimations established their divine origin. Kula Sék'hara accordingly repaired to the place, cleared the forest, rebuilt the temple with great architectural magnificence, constructed a splendid palace for the royal residence, and founded an extensive and stately city. The gods beheld the progress of his labours with interest, and, on their completion, a shower of nectareal dew descended from heaven, spreading a sweet film upon the ground, which gave the appellation Madhura (sweet) to the new city. The stately monuments, of which the vestiges are still to be seen in Madura, are the work of much more modern times; but the classical authorities already referred to, establish, for that city, an existence of venerable duration. The gradual transfer of the Pándya capital from a southerly to a more northerly site, is in harmony with the tradition of the country being first cleared and cultivated by pilgrims to Rámeswaram. It may be here observed, that the prevailing form of the Hindú religion in the south of the peninsula was, at the commencement of the Christian era, and some time before it, most probably that of Siva, as, besides the positive testimony of these legends, the name of the cape, Komári, or Kumári, the virgin, is, as a mythological appellative, restricted to Durgá; and that it was in this place a mythological name is proved

by the author of the *Periplus*,[1] who states, that persons purposing to lead a religious and widowed life bathe at Comar, because, as the history relates, a goddess formerly used to perform her ablutions monthly at this spot.

The second Pándya prince is named Malaya Dhwaja, of whom his extreme devotion to the tutelary divinities of his capital is the only peculiarity recorded.[2] In return for his attachment, the goddess Minákshi herself became incarnate as the daughter and the successor of this prince.

Múmulai Tadátaki, the new queen of Madura, was a warlike princess. She subdued, it is said, the whole of the peninsula, and carried her arms over northern Hindústan to the Kailása mountains. Here her victorious career terminated in an event more glorious than her preceding triumphs. She was opposed by no less a person than the god Siva, by whom she was defeated and taken prisoner. It was now her turn to vanquish: the god became enamoured of her charms and allowed her to return in liberty to Madura, whither he followed her and obtained her hand.[3] Having assumed a human form of great beauty, the god was known by the title Sundara (the handsome)

[1] Ἀπὸ δὲ ταύτης ἐστὶν ἕτερος τόπος τὸ Κομὰρ λεγόμενον· ἐν ᾧ τόπῳ φρούρια ἐστὶν, καὶ λιμήν· εἰς ὃν οἱ βουλόμενοι τὸν μέλλοντα αὐτοῖς χρόνον ἱεροὶ γενέσθαι, χῆροι μένουσιν αὐτοῦ, ἐκεῖ ἐρχόμενοι ἀπολούονται, τὸ δ' αὐτὸ καὶ γυναῖκες· ἱστορεῖται γὰρ τὴν θεὸν ἐκεῖ ἐπὶ μῆνας κατά τινα χρόνον ἐκεῖ ἀπολιλοῦσθαι.

PAOLINO says, the convent and the custom still existed in his time.—VINCENT PERIPLUS, ii. 443. See, also, VIAGGIO DI FRA BARTOLOMEO.

[2] The traditions of the south, however, make him a more important character, and consider him as the father of Chitrángadá, the wife of Arjuna. This opinion is grounded on a section of the Sabhá Parvan of the Mahábhárat, where Sahadeva, whilst performing his military career in the Dekhin, is described as having an interview with his father-in-law Malaya Dhwaja, king of Pándya. This section, however, is perhaps peculiar to the copies of the Mahábhárat, current in the Peninsula, as it has no place in a fine copy in Devanagari character, in my possession. In the first chapter, too, it is there said that the father of Chitrángadá is Chitraváhana, king of Manipur, to which Arjuna comes on leaving Kalinga. The Telugu translation of the Adi Parvan agrees in the names of the parties, but places Manipur south of the Kávéri. How far, therefore, it is safe to identify Malaya Dhwaja with Chitraváhana, and Manipur with Madhura, must depend upon the verification of the authenticity of different copies of the Mahábhárat. The result of a careful collation of seven copies at Benares, examined at my request by Captain Fell, may be regarded as fatal to the identification, not one of them containing the section in question, or the name of Malaya Dhwaja. The Bhágavat calls the bride of Arjuna, Ulúpí, the daughter of the serpent king of Manipura.

[3] The legend relates, that the princess was born with three breasts; the centre one was to disappear when she met with a suitable spouse, and, accordingly, vanished upon her encountering Sundaréswara. Images of the goddess, with three breasts, are still seen amongst the sculptures at Madura.

Pándyan; and although it does not appear how he attained the privilege of giving a cognomen to the emblem of himself, worshipped in Madura, yet the Múla Linga is most commonly known by the name of Sundaréswara, the god of Sundara, which it shares with that of Choka Náyaka.

That this tradition is not wholly without foundation is established by several circumstances, if we look to its implied rather than to its literal import. It is not improbable that the worship of Siva was introduced into the peninsula from northern Hindústan some few centuries before the Christian era, and that, in the reign of one of the early princes of Madura, it was established in that city. The tradition which peoples the peninsula from the north of India, and the existence of the Saiva faith there, coeval with the era of Christianity, are fully in harmony with the account given of Sundara Pándyan. In further confirmation of the native country whence the Tamil faith was derived, it may be observed that Sanskrit, which, in Drávira Désa, as in every other Hindú country, is the language of religion, is always called by Tamil writers Vádá Mozhi,[1] the northern speech, and, finally, the learned writer from whom the remark is taken, observes, that the literature and religion of the Brahmans were brought by them into the peninsula from northern Hindústán.[2] Whether this occurred at so early a period as the one now under discussion may be doubted, although some of the circumstances we have adverted to are in favour of the supposition. That there are, on the other hand, reasonable bounds to its antiquity cannot be disputed; for, besides the inference derivable from the traditions relative to the colonisation of the peninsula, we have the testimony of Menu,[3] that the Draviras were classed with the impure, or outcast tribes, when those institutes were compiled; and, even in the Mahábhárat, the people of the southern countries appear to be considered as scarcely Hindús.

Sundara and Minákshi, after a reign of some thousands of years, resumed their celestial characters, and returned to heaven. They were succeeded by their son, Wugra Pándyan, who, as the offspring of Siva and Dévi, was, of course, an incarnation of Kártikéya. Eastward of Madura is the mountain Tiruparumkunru,[4] whence fell a

[1] Ellis's Dissertation on Malayalam, p. 3, note.

[2] Ibid. p. 26. [3] Book x. 5.

[4] The most famous place under this appellation, Subrahmanya Kshetram, or Tirt'ha, is in the province of Canara. A hill to the south of Madura, denominated, from ideas connected with this superstition, Skanda Malai, the Mount of Skanda, another name of Kártikéya, or Subrahmanya, has suffered a very curious change, Skanda Malai being converted into Sicander Malai, the hill of Secander, or Alexander. Les naturels croient que le médecin ordinaire d'Alexander le Grand y a

stream, named Sarovara Vaikál. Agreeably to the system of local adaptation which seems to have especially prevailed in the Dekhin, and which transferred the names of sacred places in the north of India to others in the south, this mountain became another Kailása, and the stream, another Ganges. The scene and chief actors being thus identified, we are not to be surprised that the birth of Wugra should have been here attended with the circumstances narrated by the Puránas of the birth of Skanda, or Kártikéya, and that this site acquired the honours of a Tirt'ha, or place of pilgrimage, under the presidence of Subrahmanya,[1] another name of Kártikeya, who was, from a remote date, a favourite deity with the nations of the peninsula.

Wugra Pándyan, being of such exalted origin, was engaged in conflicts proportioned to his rank, and, after subduing the kings of earth, waged war against the king of heaven. Indra, being discomfited by him, was compelled to grant the showers which he had forborne to shed upon the Pándya kingdom. Wugra was married to Kántimati, the daughter of the Chola king, and by her he had Víra Pándyan, who succeeded him.[2]

Víra Pándyan was killed, whilst hunting, by a tiger: he left many sons by the women of his household, and one, the youngest, by his queen, whom the ministers placed under the tutelage of the Chola monarch, to secure him from the treachery of his elder brothers. When old enough he was conducted to Madura, and installed; upon which, his brothers fled to Chera; they do not seem to have given him any subsequent molestation. This prince was named Abhishéka Pándyan; he was succeeded by Vikrama, of whom no traditions are given; and he by Rájá Sekhara,[3] in the time of which latter, it is said, the Chola prince led an army of Samánals, or Buddhists, against Madura. He was defeated; but no consequences of his repulse are recorded. The next sovereign of Pándya-désa is named Kulottunga,

été enterré. Langlès, ii. 11. A native account says it is the tomb of Alexander himself; an idea, no doubt, introduced by the Mohammadan Fakirs, of whom many reside on this hill, and attach a profitable sanctity to the small tomb, once a temple of Skanda, now the shrine of Secander. To the Hindús it is equally sacred, as it is said to contain in one of its caves an image of Skanda, which they go to worship.

[1] This appears, however, from some accounts, to be the same as Skanda Malai (MS. No. 80), which is three or four miles south-east of Madura.

[2] One account, the Rájá Cheritra, vol. vi., makes great confusion with this prince and his predecessors. It calls him Alaka, and makes him the father of Minakshi, married to Chokanath, and of Alyarasani, married to Arjuna. At the same time he is described as the son of Malaya Dhwaja, and grandson of Sundara, an order of descent very different from all the other authorities.

[3] All the lists agree in inserting Vikrama's name. The translation of the *Tiruvaleyádal* omits him making Rájá Sek'hara the son of Abhisheka.

in whose reign we have abundant legends illustrative of the might of Choka Nátha, but nothing that can be conjectured into history. He was succeeded by his son, Anantaguna, in whose reign the kingdom was again invaded by the Samanál; but, with the aid of Siva, the assailants were repulsed. On this, as on the former occasion, the heretical invaders are conducted by the Chola monarch, whose seat of empire is called Kánchí, or Conjeveram. That the territories of the Chola prince lay higher north than the modern Tanjore there is probable evidence in other manuscripts, as, also, that Conjeveram was included within his dominions. That it was the ancient capital of Chola is, however, quite irreconcilable with all the local accounts which have been procured of that empire, and the foundation of Káńchí itself appears from them to be an event of comparatively recent occurrence. The same accounts, however corroborated by the vestiges of Bauddha architecture, found still abundantly at Conjeveram, attest the prevalence of that faith there for some considerable period. This might have been the case at the time the legendary tales which profess to record the Pándya history were compiled; and hence, these supposed religious aggressions emanating from the Chola monarchs of Conjeveram. That frequent contests between the Chola and Pándya princes occurred in remote periods there is no reason to doubt; but it is not quite so certain that the particular occasions are specified with much accuracy, or that hostilities, embittered by religious differences, disturbed the tranquillity of the Dekhin some centuries before the Christian era.

Ánantaguna was succeeded by his son, Kula Bhúshana, in whose reign, it is said, in the Pándya Rájákal, that the Pándya kingdom was invaded by Kiráta Rájá, sovereign of Chédí, but it can scarcely be supposed, that by this is intended the country usually identified with Chédi, or Chandail, in central Hindústán. The appellation, Kiráta, assigned to the Rájá, indicates a mountaineer, the wild inhabitant of thickets and fastnesses, subsisting by plunder and the chase; and in the Tiruvaleyádal, the invader is designated with more consistency, as the Sétu Raya, the prince of Marawa, the district lying east of Madura along the sea-coast, and which would, therefore, appear to have been an independent principality in ancient as well as modern times. The minister, Sundara Sumantra, had been provided with funds to levy a force to oppose the invaders, but he appropriated the money to the worship of Sundaréswara, and the invaders had nearly reached Madura before any troops were collected to resist them. In this predicament the minister had recourse to the god, and a miraculous host, representing the contingents of the fifty-

six kingdoms of India, was immediately created for the defence of the kingdom. Against such combatants no chance of success remained for the invaders, but Kiráta; or the Marawa Rájá, was removed even without their aid. He was killed by a lion sent by Siva,[1] and, upon his death, his followers fled in confusion to their native haunts. The result of this invasion was, therefore, only an accession of honour and devotion to Sundaréswara and Minákshi-Dévi.

In the reign of this prince another marvel is recorded, which merits notice only so far as it accords with the general traditions of the origin of Conjeveram. Kántára Kháta Chola is said to have cleared the woods which covered that part of the peninsula; built the city of Kánchí on the site; and erected the pavilion and temple of Ekámbaréswara and Kámákshi-Dévi, the forms in which Siva and Durgá were worshipped at that city until very recent periods. In recompense of this prince's devotion, Siva conferred upon him aerial locomotion with the speed of thought, and thus enabled him to transport himself every morning to Madura, to pay his homage at the supreme shrine of Sundaréswara — a rather indifferent compliment to his own tutelary divinity.

Kula Bhúshana left two sons, Rájendra and Rájasinha, of whom the first succeeded to the throne. The Chola prince of Kánchí, Kantára Kháta, or, as he is named in the Madura Purána, Kandavetti, proposed an alliance with Rájendra, by giving him his daughter in marriage, to which the Pándya prince assented, and sent his brother, Rájásinha, to conclude the negociation with the Chola prince. The ambassador, however, prevailed upon that monarch to wed his daughter to him instead of his brother, and to co-operate with him in an attempt to drive Rájendra from the throne. The confederate princes marched towards Madura for that purpose; but they were encountered by the Pándya king, defeated, and taken prisoners. Rájásinha was detained in confinement during the rest of his life, but the Chola monarch was released and dismissed with civility to his own dominions.

Saundarya Páda Sek'hara, the son of Rajendra, succeeded his father. Like his predecessors, he is said to have been engaged in hostilities with the Chola monarch; and, whatever we may think of the circumstantial details of these repeated conflicts, it seems not at all improbable that a struggle for supremacy in the peninsula did

[1] The scene of this event is laid by the *Tiruvaleyádal*, in the forest Tirupúvanam, at a place dedicated to Siva, as Purána-lingam, ten miles south of Madura.

exist, at a remote date and for a long period, between these rival dynasties, which terminated in the temporary ascendency of the Pándya monarchs. On this occasion it is related, that the Pándya king was forced to fly before his invaders, but their prince was drowned in the pursuit of his defeated foes, and the kingdom of Madura was thus preserved from foreign subjugation. Of course, the accident was not a mere casualty, but was brought about by the seasonable interference of the tutelary deities of Madura. Saundarya Páda died soon after his return to his capital, or, as it is said of every Pándya prince, he went into the *adytum*, or inner chamber, of the temple of Múla Linga, and was united to the god. If we do not suppose that this was a contrivance of the priests to get rid of those princes of whom they were tired, or with whom they were dissatisfied, we must conclude the ceremony to have been part of the religious institutes of the kingdom, and that the princes and persons of note were carried to the temple, to die in the presence of the tutelary gods, in the same spirit as that which, in Upper Hindústán, conveys the expiring individual to breathe his last upon the banks of the Ganges.

Varaguna, the son of the last prince, succeeded. His reign contains the usual proportion of marvels; but nothing of a historical character in the authorities hitherto followed. This omission is the more remarkable, as the Chola records ascribe the disappearance of the series of their princes to the transfer of the kingdom to Varaguna, by his marriage with a Chola princess, as has been noticed above;[1] and the union of the two principalities under a common sovereign appears to have actually occurred about the period at which this prince may possibly have reigned. The fact is supported by another authority, however, and a cheritra, or history of Varaguna,[2] states his repulsion of an invasion by the Chola king, Karávar Chola, his subsequent conquest of that kingdom, and its annexation to the Pándya monarchy. A celebrated poet, named Bána, or Pána-patra, is said to have flourished in this prince's reign.

Vara Rájá, or Rájá Rajendra, succeeded Varaguna. In his reign a ridiculous legend is narrated, which so far merits recapitulation, that traces of it are frequent in the sculptures still visible at Madura.

[1] According to the *Chola Désa Púrvika Charitra Vyakhyanam*, Váraguna was the son of Balachandra Pándyan. His wife was the daughter of Kulottunga Chola. Their descendants occupied the united Pándya and Chola kingdoms, for twelve generations and five hundred and seventy years.

[2] List, No. 13.

At Kuruvaituri, west of Madura, a rich farmer had twelve sons, who spent their time in various sports, and especially in the chase. They one day attacked a wild hog and his family, killed some, and pursued the rest to the vicinity of a holy sage engaged in profound meditation. Having disturbed the abstraction of the sage, he cursed them, denouncing their future birth as hogs themselves. On their humiliation, however, and earnest prayers for forgiveness, he so far modified his imprecation as to make the temporary degradation the means of future honour and fame.

The twelve youths being reborn in their porcine capacity, lost their tender parents by the spears of Rájá Rájendra and his fellow-sportsmen, whilst they were yet too young to provide for their own subsistence. Their pitiful state moved the compassion of Choka Náyaka and Minákshi Amman, who happened to be in the forest during the chase, and they determined to act as the parents of the porkers. Minákshi officiated as their nurse, in which character figures of her occur, and Choka Náyaka as their tutor. One effect of this divine protection was to humanise their bodies, so that they became men with the heads of pigs, in which combination their statues are sculptured.[1] Another consequence of their fortunate destiny was their deriving from their preceptor profound conversancy with arts, sciences, and letters, and their consequent advancement to the ministerial administration of the affairs of the Pándya kingdom.

The reign of Rájá Rájendra is followed by an interval which is imperfectly filled up in most of the authorities by a mere string of names. The enumeration does not exactly agree in all cases; but in those which are the most authentic, it appears to extend to twenty-four or twenty-five princes. If we allow twenty years to a reign, and admit the accuracy of the enumeration, we should place the prince who succeeds these shadows in the second century of the Christian era: at the same time, as the data are altogether insufficient, it is obvious, that any conclusions advanced must be subjected to a considerable latitude, and that, consequently, the real date of Vamsa Sek'hara's accession cannot be determined with any degree of accuracy. It is quite sufficient to bring it within some moderate limits, and to place it not only upon this computation, but on various other grounds, in the early centuries of our era.

[1] They are described as occurring in Tirumalla Náyak's *Cholitri*, by Mr. BLACKADER, Archæologia, vol. x. 457; and his description is translated in LANGLÈS' Monumens de l'Hindoustan. Instead of ministers, however, Mr. BLACKADER calls them princes of the palace; and M. LANGLÈS converts them into *huissiers de la chambre*.

At whatever period it may have occurred, the accession of Vamsa Sek'hara seems to have been the result of some political disorganisation of the Pándya kingdom, as the different authorities concur in considering him as the founder of a new dynasty. The *Madura Purána* describes him as the first prince who reigned after the recovery of Pándyam from the waters which had deluged the world, and as receiving from Múla Linga, instructions for the readjustment of the limits of the kingdom; in which latter account the different authorities concur. They also agree in representing him as the founder of the fort and palace of Madura, of various temples and public buildings, and as the restorer or enlarger of the ancient city. It is not improbable, that the extensive remains of these buildings still in existence, and calculated by their massiveness to defy the unassisted effects of time, are, in part, relics of the works of Vamsa Sek'hara. The fort of Madura is at present about three miles and three-quarters[1] in circumference, and includes the ruins of the palace, the temple of Choka Nát'h, and the Choltri of Tirumalla Náyaka. The latter is a modern building: and the same period witnessed considerable additions to the palace, which, probably, occasioned the mixture of Indian and Saracenic architecture observed by Daniel; as, in the fifteenth and sixteenth centuries, the latter seems to have been introduced from Persia by the Mogul emperors, and engrafted upon the square and massive, although florid, style, which may be regarded as exclusively Indian. This style is evident in the pagoda of Choka Nát'h and its adjoining arcades, and bears testimony to their claims to very respectable antiquity. Vamsa Sek'hara is said to have also re-established, or possibly he introduced, the practice of carrying the god abroad, on particular festivals, in large cars magnificently ornamented, and dragged by the people.[2]

The reign of Vamsa Sek'hara was also distinguished by an event which led to important consequences to the literature of the Peninsula, and which is one reason for placing his reign in the earlier ages of Christianity. This was the foundation of a College at Madura, for the cultivation, it would appear, of profane literature and the Tamil language. The different authorities agree in this account, dividing the merit of the act between Vamsa Sek'hara, and his son and successor, Vamsa Churámani, also called Champaka, who, probably, completed what his father only commenced.

[1] HAMILTON's India, vol. ii. p. 469.

[2] Le Père BOUCHET au Père ***, Lettres Edifiantes, vol. xiii. p. 126; BLACKADER, Archæologia, vol. x.; DANIEL's Oriental Scenery; and LANGLÈS' Monumens de l'Hindoustan, vol. ii.

The professors of the Madura college were at first forty-eight in number, called the *sangattár*, or assembly. The chief of these were Narakíra,[1] Bána, and Kapila, of whom no works remain. These received instructions in the *Sútras*, or rules, of the Dravira language, it is said, from the god Siva himself, who appeared amongst them as the forty-ninth professor, and enabled them to expound and propagate the primitive institutes of the language, which are invariably attributed in the Dekhin to the Muni Agastya. The cultivation of the Tamil language, as has been noticed above, is supposed by Mr. Ellis to have preceded that of Sanskrit in the south; and this would be a circumstance in favour of the early existence of the *sangattár*, for it could not have been long after the Christian era that the fables of Northern India were domesticated in the Peninsula. However, the opinion evidently is correct only within certain limits. The Sanskrit language, in prayers, hymns, and legends, must have accompanied the introduction of the Saiva faith anterior to the Christian era, and must have been cultivated as far as it was connected with religion. Its profane literature, and even its Pauranic mythology, may have subsequently become objects of study; and they apparently superseded the cultivation of the native tongue, till the eighth or ninth century after Christianity, when its revival was effected, as we shall hereafter have occasion to notice.

The prominent figure which Agastya is thus made to assume in the literary history of the south of India, attaches an interest to his existence which, it is to be apprehended, will scarcely derive much satisfaction from the accounts of this sage which are recorded. In the first place, a high antiquity must be assigned to him on the authority of the *Rámáyana*, the oldest work, after the *Vedas*, perhaps, in the Sanskrit language. His migration to the south is there detailed;[2] and, disregarding the fabulous motives assigned for his residence there, it seems not a forced conjecture to infer his being a chief agent in diffusing the worship of *Siva* in the Dekhin. Neither this remote date, nor his character as a foreigner, renders it likely that he was the first Tamil teacher; and if we are not allowed to suppose that this character originated in his legendary reputation, we must conclude that the author of the various works attributed to Agastya

[1] I have already observed the *Pándya-Rájákál* is ascribed to them, apparently erroneously. To Narakíra is assigned the tale of *Alakésa*, or king of Alaká, and his four ministers; but the style is unfavourable to its supposed origin,—Tamil works being difficult in proportion to their antiquity, so that the oldest are now unintelligible to ordinary scholars.—Kindersley's Hindú Literature, p. 47.

[2] In the Aranya Kándam.

was a different individual, although of similar name. There are still many works current attributed to Agastya, besides his grammatical aphorisms. These consist of poems in praise of Siva, and a number of medical works.[1] It is not very probable, however, that the appropriation is generally correct.[2] At the first institution of the Madura *sangattár*, it would appear that some dispute arose immediately between the professors and the Saiva priests, connected, not impossibly, with that contention for pre-eminence of knowledge which has ever prevailed in the Tamil countries between the Brahman and inferior castes.[3] The priests, however, proved the more powerful; and a reconciliation took place between them and the literati of Madura. At least. we may thus interpret the legend of Narakira incurring the wrathful glance of Siva, and only escaping being burnt to ashes in the flames emanating from the eye in the forehead of the god by plunging into the holy pool Pattamári, and there composing the Andádi Pányam, a poem in honour of Siva. After this event the parties continued upon good terms; and Siva presented to the professors a diamond bench of great critical sagacity, for it extended itself readily for the accommodation of such individuals as were worthy to be upon a level with the sages of the *sangattár*, and resolutely detruded all who pretended to sit upon it without possessing the requisite qualifications. In other words, the learned corporation of Madura resembled learned bodies in other countries, and maintained as strict a monopoly as they possibly could of literary reputation.

[1] One of these, the *Agastyar Vaidya Anguru*, is cited by Dr. AINSLIE, Preface to the Materia Medica of Hindústán.

[2] In a manuscript account of Agastya, in the Collection, List, No. 14, thirty-eight works attributed to him are said to be still current. His grammar is, however, said to be lost, in consequence of a curse denounced upon it by Tulagappyam, the disciple of Agastya, according to some legends. In a MS. written by an intelligent native, and already referred to under the title of *Chola Púrvika Charitra Vyákhyanan*, it is said, that the reputed invention of the Tamil language by Agastya is very improbable, as; in the medical works uniformly ascribed to him, the style indicates a very confined possession of the language; and as to the *Agastyam*, or Grammatical Institutes, said to be lost, there is little reason to suppose it was ever written, as least by Agastya, as he never mentions it, although he states in his *Gnyánam*, or work on theology, that he has written a lack of sentences on theology, an equal number on alchemy, and two lacks on medicine. These inferences are scarcely questionable, as applied to an Agastya of, perhaps, the eighth or ninth century; but the traditions that ascribe the introduction of letters and religion amongst the people of Drávira to an earlier teacher of that name, do not seem to have originated wholly in imagination.

ELLIS on the Málayálam Language, p. 26.

The foreign transactions of Vamsa Sek'hara's reign were limited to a war with Vikrama, the Chola prince, who besieged Madura, but was repulsed with the aid of Siva. The son of this prince was more fortunate; and he was engaged in disputes of no more serious a nature than those which were engendered by the rivalry of his literary dependents.

From Vamsa Churámani,[1] we have again a considerable interval without the specification of events as well as names, until the reign of Kuna Pándyan. There are, however, one or two legends which are variously appropriated, and which may, therefore, be employed to fill up the chasm.

The fifteenth prince from Vamsa Churámani is called in the lists Kulása, who was also a patron of literature, and a man of letters himself. This latter character induced him to treat a man of great acquirements, named Yeddakattan, with disrespect. Yeddakattan complained to the deity Sundaréswara, and, withdrawing from Madura to the north of the Vaiki river, was followed by the god, and by the professors of the college. This desertion bringing the king to a sense of his improper conduct, he had recourse to prayer and solicitation, and appeased the offended god, and the more irritable poet; and the temple and college recovered their inmates.

Kulása was succeeded by his son Arimerddana, celebrated for his illustrious minister Mánikyavásaka, who was especially instrumental in re-establishing the Saiva worship, and expelling the Bauddhas. The authority of that MS. which appears to be the abridged *Madura Purána*, associates this minister and this king; but the larger work relates the marvels usually narrated of Mánikyavásaka, of Tennaven Paramaráya, minister of Vamsa Sek'hara, identifying these two persons. There can be little doubt, however, that Mánikyavásaka, whether he were a political character at all, was long subsequent to Vamsa Sek'hara; and it is only a question, how much more modern he may be regarded. He is anterior, it appears, to the reformers of Kuna Pándyan's reign, by the testimony of both our authorities and others, of which one places him A.D. 490, and another states his work to have been written above a thousand years ago.[2] In his life, it is particularly stated that the sectaries he combated were Bauddhas, not

[1] With whom the *Pándya Rájakál* closes, as observed above. So does the translation of the *Tiruvaleyádal*; but the original descends to Kuna Pándyan, as does the *Hálásya*, filling up the interval, however, with mere names. MS., No. 8, gives the substance of their contents.

[2] Life of Mánikyavásaka, MSS. No. 15; List of Tamil Authors, MSS. No. 9; Vadur Sthala Máhátmyam; Mackenzie Collection, vol. i. p. 201.

Jains, who were the heretics of Kuna Pándyan's reign; and these concurrent considerations warrant the inference, that he may be placed with safety between the fifth and eighth century of the Christian era. We need not detail the marvels recorded of him, as that has been fully and correctly done by a European writer already.[1] His works, which are said to be very difficult, are the *Tiruvásagam* and *Tiruchittambala-kavi*, poems in praise of the Saiva worship.[2] The scene of his contest with the Bauddhas was at the temple of Chidambaram, and his opponents chiefly teachers from Ceylon,[3] the king of which country, it is said, was present at the controversy. The Bauddha disputants, it is asserted, were converted to the orthodox faith, and no persecution appears to have ensued.

Another barren series of names occurs between Arimerddana and Kuna Pándyan, who appears as the twelfth successor of that monarch. According to some traditions, the date of Kuna Pándyan is called 950 of Salivahana, or A.D. 1028;[4] but there are several reasons for supposing this to be erroneous. The *Madura Purána*, and its original, the *Hálásya Máhátmya*, come down to the end of this prince's reign; and they are attributed to the reign of Hari Vira Pándyan, in 973, giving an interval of but twenty-three years for their composition, and for the bold assertion of marvels which it could not be supposed they would venture to advance at a period so close to the realities thus distorted. Either their date, therefore, is erroneous, or that of Kuna Pándyan is incorrect; but there is every reason to suppose they are not much misplaced, as the zeal of the Saiva priests and writers to whom these and other compositions of the same period are evidently to be assigned, was, no doubt, particularly active in and about the ninth century. Again, the chief instrument in the religious revolutions of the Pándya state that occurred in this reign was a Saiva priest, Gnyána Samandar,[5] whose works, and those of his first converts and disciples, Appa and Sundar, are well known in the south, and are uniformly referred to the ninth century;[6] whence it follows that we must place Kuna Pándyan about that time. The date derives some confirmation from its agreement

[1] SONNERAT's Voyages.

[2] Account of Tamil Works, No. 9; and List of Tamil Authors, No. 10.

[3] Life of Mánikyavásaka. [4] List of Tamil Authors, No. 10.

[5] WILKS, on the Authority of a MS. in the Mackenzie Collection, calls him a Pándaram, or Sudra priest of Siva (vol. i. p. 156). This does not appear, however, from any of the MSS. consulted on the present occasion. Gnyána Samandar Charitra, Mackenzie Collection, vol. i. p. 203, App. xix.

[6] They are joint authors of the *Tévaram*, hymns in honour of Siva.

with the period when the Jain religion, of which Kuna Pándyan was a votary, had grown into credit in the neighbouring regions.[1]

Whatever may have been the date of this prince, it appears that prior to his reign two events of some importance had occurred in the Pándya kingdom, which are, not improbably, connected, although the connexion is not adverted to in any of the native accounts. These are the abolition of the *sangattár*, or Madura college, and the establishment of the Samanal religion.

The abolition of the *sangattár* is narrated in the usual marvellous manner.[2] A candidate for the honour of a seat on the bench of professors, appeared in the person of Tiruvalavar, a Pariah priest of Mailapur,[3] and the author of an ethical poem. The learned professors were highly indignant at his presumption, but, as he was patronised by the rájá, they were compelled to give his book at least the trial. For this purpose it was to find a place upon the marvellous bench, which the professors took care to occupy fully. To their astonishment, however, the bench extended itself to receive the work, and the book itself commencing to expand, spread out so as to thrust all other occupants from the bench. The rájá and the people of Madura witnessed the scene, and enjoyed the humiliation of the sages; and the professors were so sensible of their disgrace, that, unable to survive it, they issued forth, and all drowned themselves in a neighbouring pool. In consequence the establishment was abandoned.

If we contemplate this event in a literary view alone, we need not be at a loss to understand it. The first professors were eminent in Tamil composition, for the cultivation of which the college appears to have been founded. The members, however, had subsequently, in all probability, directed their attention more to Sanskrit composition, and had, at all events, neglected the cultivation of their native literature. That the latter was the case, is evident from the remark of Avayar, that the old Tamil was preferable to the new;[4] indicating that, even in the ninth century, the dialect had been so far neglected as to have become partially obsolete. With Tiruvalavar, however, circumstances changed. The old system was subverted, and a new impulse was given to the study of Tamil, which produced, in the

[1] The earliest Jaina inscriptions of an authentic character that have been found are those of kings of Húmchi, dated Salivahana 804, 819, 820, &c. To them succeed the grants of the Belal kings in the eleventh and twelfth centuries.

[2] Account of the Madura Sangattár, vol. 16.

[3] St. Thomé. Possibly, therefore, something of an attempt to propagate Christianity is here blunderingly and imperfectly narrated.

[4] Asiatic Researches, vol. vii.; Dr. JOHN on the Life and Writings of Avayar.

course of the ninth century, in the Pándya and Chola kingdoms, a number of the most classical writers in the Tamil tongue.[1]

The date at which the subversion of the college occurred, is another subject of inquiry, and, if we trust to the tradition which connects it with Tiruvalavar, we must identify it with the period of his existence. Other legends make him a brother of *Avayar;* but, as this family story is altogether fabulous,[2] no stress need be laid upon the assertion. The MS. list of Tamil authors states his work to be 1600 years old; and Mr. KINDERSLEY, who has translanted a prose version of part of it,[3] mentions that the original is understood to have been written fourteen hundred years ago. He also notices the extreme difficulty of the style, from which a high antiquity may be inferred; and, from these considerations, we may conclude that the age of Tiruvalavar may have been between the sixth and ninth centuries.

As far we can judge from the extracts of the *Kadal*, which have been translated, we have some reason to suppose that their author was not a very orthodox member of the Hindú faith. He appears to have advocated moral duties and practical virtues above ceremonial observances and speculative devotion, and so far trespassed upon the strict law. By his allusions to the heaven of Indra, and to various parts of the regular pantheon, as well as the respect he inculcates to Brahmans and ascetics, he does not appear to have been a seceder or a sectary. How far, therefore, he contributed to the introduction of the Jain, or Bauddha faith, into the Madura monarchy, may be doubted, although the diffusion of his doctrines was calculated to undermine the Brahmanical system. At any rate, it is agreed that the kings of Madura had adopted sectarial principles, and that Kuna Pandyan was a follower of the Samanal doctrines, intending by those the Jain faith; although the term will apply also to that of Buddha, with which there is equal reason to identify it.

Some traditions assert that this heresy was introduced from Ceylon. In that case it was the faith of the Bauddhas. The same also aver, that when the heretics were banished they were exiled to that island,—a legend leading to the same conclusion. On the other hand, the expulsion of the Bauddhas from India appears to have been the work of earlier periods, whilst the remaining records of the kings of

[1] As Gnyána Samandar; Appa and Sundara, above noticed; Avayar herself, and Kamban, the translator of the *Rámáyan*.

[2] It is detailed at length by Dr. JOHN.

[3] Extracts from the *Tiruvalavar Kadal*, or *Ocean of Tiruvalavar*.—KINDERSLEY's Hindú Literature. See also Extracts from the same, or *Tiruvalavar Koral*, by Mr. ELLIS; Mackenzie Collection, vol. i. p. 232.

Húmchi, and the Belal princes, shew that in Mysore the Jain religion was established at this period; and at Madura, the first converts of Gnyána Samandar are usually considered to have been Jaina authors. We may, therefore, consent to call the religion of Kuna Pándyan, Jaina; but the truth seems to be, that neither Jaina nor Bauddha doctrines ever gained an extensive footing in the southern divisions of the Peninsula, which have maintained from the earliest to the latest periods an undeviating fidelity to the worship of Siva and the Lingam.[1]

Kuna Pándyan was married to Váni Daswani the daughter of the Chola Rájá, who was a devout worshipper of Siva.[2] She invited Gnyana Samandar, a famous teacher of her sect, to Madura, and an opportunity soon occurred of gaining for him the countenance of the Rájá Kuna, who was attacked by a fever which resisted the drugs and spells of his Jaina priests. Gnyána Samandar undertook his cure, engaging to make his success a test of the superiority of his religion. His opponents accepted the challenge; and the medical skill of the Saiva surpassing their expectations, they found themselves vanquished. Attributing the success of Gnyána Samandar to magic, they proposed other tests, to which he readily agreed. Leaves, with the sacred texts of their respective parties were thrown into the Vaiki, under a stipulation that the sect should triumph whose *mantra* floated upwards against the current. The Saiva charm prevailed: it ascended the river to a place called Tiruvedaka, where Siva, in the form of an old man, took it out of the water, and brought it back to Gnyána Samandar. In commemoration of the event, a city was founded on the spot to which the leaf was borne, and a temple was

[1] Some of the traditions of the Jainas assert, that Chamunda Raya, who erected the image of Gomatéswara, was minister of Raksha Malla, a king of Madura, in the year of Kali 600. This account is rendered suspicious by the antiquity of the date, even if we suppose the Kali, or fifth age of the Jainas, to be intended, by which the date will be reduced to about thirty years B.C. Besides, in the published account of this place and image by Colonel MACKENZIE, the country of the minister and king is not mentioned (A. R. vol. ix. p. 262), except in a general way, as lying in the south. Chamunda Raya, in another place, is called a king of one of the Chola or Belala races (p. 246). There is nothing in the local traditions of Madura to warrant the assertion. The princes of the name of Malla, it may be observed, reigned in the Carnatic and Mysore in the eleventh and twelfth centuries; and an inscription of a grant by Raksha Malla, printed in the *Asiatic Researches* (vol. ix.), is dated Sal. 1090, or A.D. 1173 (p. 431).

[2] In an account of the Gopuram of the Bauddha temple at Púdcovally, this lady is named Mengayakarasi, and called the daughter of Kerikála Chola, who ruled, it is said, A.D. 478.

erected by the king to Tiruvedaka Nát'h. The Samanal were persecuted and hanged, or banished, to the number of eight thousand. Kuna Pándyan, who before his conversion was deformed, as his name implies (Kuna meaning "hunch-backed"), no sooner received the initiatory *mantra* of the Saiva faith, than he became erect and straight, and thenceforth assumed the name of Sundara (the "handsome") Pándyan. Gnyána Samandar was established as the chief pontiff of the religious faith which he had restored; and he seems to have instituted a peculiar hierarchy which still subsists, several convents being found in the south of India tenanted by Brahmachárís, or cœnobites, of the Saiva persuasion, whose spiritual head bears the hereditary title of "Gnyáni Siva Áchárí."[1] The chief and primitive establishment of the order is said to have been founded at Tinnivelly, but it has since been destroyed. It is asserted, that there have been one hundred and thirteen successions of the chiefs of this religious order; a series which would reasonably allow a period of ten or eleven centuries since its first establishment, and so far corroborates the view of Kuna Pándyan's date in the eighth or ninth century of the Christian era.[2]

The approximation thus made to modern times, is not attended with any great improvement in historical precision. The great outline is clear enough, but the details continue imperfect. In the ninth and tenth centuries, the Chola princes extended their power throughout a great portion of the Peninsula, and overshadowed the splendour of the neighbouring kingdom of Pándya. To them succeeded the Belala princes of Mysore, before whose ascendency the ancient honours of Pándya, and the later glories of Chola disappeared. The decline of the Belalas failed to restore the older dynasties to their pristine authority, as, during the period of their depression, the provinces and chieftainships, once attached to these states, had taken advantage of their

[1] Account of the Gnyana Siva Áchárís, MSS. No. 17. Colonel WILKS, as observed before, identifies these with the Pándarams, or Jangamas, but this is very questionable. They do not seem to be known as a religious order above the Ghats. In the Carnatic the name has been adopted within the last fifty years, I understand, by a set of Saiva teachers, who officiate as the priests of the blacksmith caste.

[2] Mons. LANGLÈS (Monumens de l'Hindoustan, vol. i. p. 98) observes of Kuna Pándyan, that his expulsion of the Samaneans must have happened after the middle of the twelfth century. His authority is the History of the Danish Missions; and the grounds of the estimate are not stated. The same work says Kuna Pándyan was the three hundred and fifty-ninth king of a dynasty of three hundred and sixty-two; it seems, therefore, that the compilers of the Danish History, have had no better guides than those we have access to, and that, consequently, no particular weight attaches to their deductions.

weakness to assume independence. This disorganised condition of the southern states was perpetuated by the confusion and alarm incident upon the Mohammedan aggressions which began in the fourteenth century, and which were followed close by the extended dominion of the Vijayanagar kings, whose officers finally established themselves, in the beginning of the sixteenth century, in the seat of the Pándya monarchs. Their history has been recorded with something like accuracy and consistency, and sheds a ray of light upon the close of the Madura chronicles. But, before we particularise the events ascribed to these princes, we must advert to the transactions which fill up, however imperfectly, the interval between the reign of Kuna Pándyan and supremacy of the Náyaks of Madura.

According to one authority, which brings down the Pándya history from the earliest to the latest periods,[1] the first series of monarchs, consisting of seventy-two princes, was followed by another of twelve, with the last of whom, Kodocola Pándyan, the succession of Pándya princes of the ancient royal family, ceased. According to the legend, this king unjustly condemned to death a merchant of Congeveram, whom business had brought to Madura. Upon hearing of his fate his wife followed him to that city, where, ascending a funeral pile, she denounced an imprecation upon the place and its sovereign. In consequence of this denunciation, Madura was shortly afterwards almost wholly consumed by fire, and the king and all his family perishing in the flames, the Pándya dynasty was destroyed.

The twelve princes of this list apparently commence with Kuna Pándyan, under his new title of Soma Sundara, and should, therefore, advance to the eleventh century at least; but it may be doubted whether it is very accurately compiled. A distinguished name in Tamil literature is that of a Pándya prince, who is sometimes called Hari Víra, and at other times Ádi Víra Pándyan. He is the reputed author of various translations from Sanskrit,[2] and is said to have flourished in 973 of Sáliváhana, or A.D. 1041; and his name is not found in the list here referred to, or in any subsequent ones, although there is no great reason to question the correctness of his supposed era. There are, indeed, corroborative proofs of its accuracy. A history of the kings of Konga, after that country had become subject to the Chola princes, gives an account of a war between Víra Pándyan

[1] Account of the Pándya Rájás who reigned at Madurapuri, No. 28. See List, No. 1, series 2.

[2] The Kási Khanda of the Skanda Purána, the Kurma and Linga Puránas, and the Naishadha.—*List of Tamil Authors.*

and Divya Ráyá, in which the former was defeated and taken, and had his ears cut off. And in the next reign, the Chola army advanced to Madura and took the city, the Pándya prince saving himself by flight. He was restored subsequently by the Chola monarch, on account of the relationship subsisting between them, but appears thenceforward as a subordinate and tributary prince. These events are placed by the Konga history[1] in the end of the tenth century, which is as near to the traditionary accounts of Hari Víra's date as we can well expect. Perhaps it is not very unreasonable to connect the tradition above cited of the conflagration of Madura, with the account of its capture in the Konga history, and to infer that they both relate to the same events; or the occupation and partial destruction of the capital, and temporary subversion of the state by foreign invasion, in the beginning of the eleventh century.

The history of the kings of Pándya relates, that the overthrow of the dynasty was succeeded by an interval of anarchy, the duration of which is not specified. At the close of the period the throne was taken possession of by an adventurer, the son of a Bráhman by a dancing girl, and a native of Kolam, near Madura, who assumed the name of Chandra Kula Dwípa.[2] He was succeeded by fourteen princes, in the reign of the last of whom the province of Madura was first assailed by the Musalmán arms; an occurrence which enables us to form some estimate of the dates of preceding transactions.

The first Mohammedan invasion of the Dekhin occurred in the reign of Alla-ad-din in 1293. The first army that crossed the Krishná[3] was led by Kafur, or Malek Naib, in 1310–11; and, as he carried his conquests to Rameswar, the work cited may possibly refer to this incursion. According to another authority, the event was dated in 1325, which is sufficiently near, unless, which is not improbable, the allusion blends the first and second invasion together, in which last Mujáhid Sháh,[4] in 1374, overran the countries between Vijayanagar and Cape Comorin, and advanced to Rameswar. In either case we have a period of less than three centuries assigned to fifteen princes, which would leave no very disproportionate average for their reigns, except that, as the whole season was one of tumult and disorder, and as the rulers were usurpers and intruders, they must claim considerably less than the average duration which might be assigned them in tranquil times, and under long prescriptive sway.

[1] Konga Désá Rájá Cheritram, translated from the Tamil, 18.

[2] List, No. 1, series 3.

[3] Scott's History of the Dekhin, Introduction, p. xlii. [4] Ibid. vol. i. p. 42.

Any deduction to be made from the average duration of the reigns in question, may partly be filled up by the period of anarchy which succeeded the destruction of Madura. How long this continued does not appear; nor, indeed, can its existence to the full extent of the authority here followed be admitted. The sovereign of Madura, deposed by the Chola prince, was subsequently restored by him; and in the inscriptions of the Belala race, in the eleventh and twelfth centuries, it is said, they made the kings of Madura their tributaries.[1] It is probable, therefore, that legitimate princes of the ancient house continued to sit on the throne of Madura, some time after the capture or conflagration of their capital, till, weakened by foreign aggression and domestic disobedience, they finally yielded to the enterprise of an adventurer, and the establishment of a new dynasty.[2]

The invasion of the Musalmáns was attended with the downfal of the usurping dynasty; and, after a short interregnum, a prince, descended from the ancient rájás, was placed upon the throne with the assistance of the Canara people, it is said; but, probably, the Ráya of Vijayanagar is intended, to whom, at an early period of that empire, or shortly after the middle of the fourteenth century,[3] the Pándya kingdom probably became tributary. The prince placed upon the throne was named Soma Sek'hara, and he was followed by a

[1] As late as the reign of Vira Narasimha (1149 to 1172).

[2] Toward the end of the thirteenth century, MARCO POLO calls the king of that part of the Peninsula opposite to Ceylon, and the site of the pearl fishery, Sender Bandi. Il (Re) principale che è capo della provincia si chiama Sender Bandi, nel suo regno si pescano le perle. MARSDEN conjectures Chandra Bandi may be understood to signify the "slave or servant of the moon," 627, note 1257; but the Madura records furnish us with a much more obvious derivation. The king Sender Bandi may possibly be the Chandra Pándi, or Pándya of the text. If this is not thought satisfactory, it may be a slight corruption of the hereditary title of the prince of Marwar, in whose boundaries the pearl fishery lies, and who has been for a long period past entitled the Sétu Pati, or Lord of the Bridge; the ridge of rocks between Rameswar and Manar.

[3] One account (Sketch of Madura History, No. 19) says, the country was governed from 1370 to 1402 by Mysore viceroys, when two chiefs, named Ellakana and Mathuna, held it till 1448; then resigning it to a prince of the old dynasty. That the Mysore or Belala princes exercised a supremacy over Pándya, is unquestionable, but it must have been earlier than the period here mentioned, as by the first date (1370) the Belala power had been overturned. The authority exercised by them and the Vijayanagar kings, too, did not, probably, involve the removal of the native princes; and this probability is converted into certainty, as far as affects the latter, by the appearance of inscriptions in the name of Víra Pándyan, one of which is dated 1402 Sal., in the fifth year of his reign, and a subsequent one in the fifteenth, or Sal. 1412 (A.D. 1490); a short time, therefore, before the final eradication of his family.

series of seventeen princes to Chandra Kumára Pándyan, when an officer of Krishna Ray established the line of Telinga princes, generally termed the Naiks (Náyakas) of Madura, and abolished the shadow of authority retained by the Madura kings over a portion of the ancient kingdom, now restricted almost to the boundaries of the capital.

Besides the earlier encroachments made on the east and north by the Tanjore princes, and on the west by the Belal rájás, the interval that elapsed between the Musalmán invasion, and the establishment of the Vijayanagar Náyakas on the throne of Madura, had witnessed the separation of the southern provinces from the ancient dominion of the Pándya kings; and, particularly on the eastern coast, the extensive districts of Rámnád and Marawa, became, and ever afterwards continued, independent of the Pándya sovereignty, of which, for many ages, they had formed important divisions.

After the establishment of the chiefs of Marawa or Rámnád, as independent princes, adulatory ingenuity was employed to devise for them an honourable origin. The founder of the family was accordingly made contemporary with Ráma, who having, after his conquest of Lanka, erected a *linga* on the small island opposite Manar, which was thence denominated Rámeswar, consigned the hereditary charge of the deity and temple, and superintendence of the pilgrimage, to the Ádi Setu Pati, or first lord of the causeway.[1] The effort to aggrandise the ruling family here ceased; and, during an uncertain and protracted interval, the supposed descendants of this chief continued, it is admitted, dependents and servants of the Pándya monarchy. A few years after the irruption of Mujáhid Sháh, or about 1380, the governor of Rámnád threw off his dependance on Madura; and his successors extended their authority to the neighbouring provinces, since called the Great and Little Marawas. Family dissensions, fostered by the Náyakas of Madura, or Tanjore, subsequently divided these districts into separate chieftainships; and the aggression of their neighbours, as well as their domestic feuds, prevented the power of the Setu Pati from ever acquiring a permanent or consolidated form. The Telinga princes of Madura, and the Mabratta rulers of Tanjore, claimed, and occasionally exercised, the supreme authority; and latterly, the Nawábs of the Carnatic assumed a sway which in general was little more than nominal. Finally, the Madras presidency collected the tribute of the two

[1] General History of the Kings of Rámnád, or the Setu Pati Samasthánam, 20; Memoir of the Setu Pati, 21.

Marawas from the year 1792, and in 1801, by treaty with the Nawáb of Arcot, obtained the complete sovereignty.[1]

The Setu Pati was not the only prince who, in this distracted state of the kingdom committed encroachments on its territorial possessions; and even the adjacent province of Tinnivelly was detached from its connexion with Madura, under the administration of the Náyaks. This dependency was, however, recovered; but it subsequently was occupied by an independent Poligar, till the Nawáb of the Carnatic extended the pretensions of his authority over this part of the Peninsula, which, along with the rest of his rights, were converted into substantial possession by the British government. Besides Rámnád and Tinnivelly, a variety of petty chieftains assumed independence; and, upon the occupation of Madura by the first Náyak, five Rájás are said to have combined to revenge the wrongs of the ancient dynasty of Madura. These petty chiefs were the ancestors of some of the Poligars of the south, who gave so much trouble to the British forces in the middle of the last century. Others originated with grants made by Viswanáth Náyaka, about the middle of the sixteenth century, to the rebel leaders who had co-operated with the Vijayanagar arms in the final overthrow of the Madura monarchy.[2] Of these petty chiefs living by plunder and violence, the native lists enumerate seventy-two in the Tinnivelly and Trichanapali districts. Their numbers must, of course, have been subject to perpetual fluctuation, and increased or diminished with the absence or existence of any one preponderating power amongst them. The nature of their habitations, in the bosom of unhealthy and almost inaccessible wilds, gave, however, a certain security to their existence; and the efficiency of the native government was never such as to accomplish their suppression. Through a period of three centuries, therefore, the southern portion of the Peninsula was parcelled out amongst a number of petty chiefs, scarcely to be dignified even as commanders of banditti;[3] their predatory followers preferring a system of insidious

[1] HAMILTON, vol. ii. p. 473.

[2] MUTIAH'S History of the Náyakas of Madura, 22.

[3] The state of the countries, and the characters of their Collaries and their other inhabitants, are well described in ORME'S History; and their unaltered condition, at a period a little subsequent, is concisely and clearly described by FULLARTON. The extent and dreary aspect of the thickets, as well as the ferocious manners of the people, are also the subject of frequent and interesting description by the members of the Catholic missions, which were sent to this part of India between the end of the seventeenth and the middle of the eighteenth century. See Lettres Edifiantes et Curieuses, vols. x. to xv. The Collars have several peculiar customs contrary to those

pilfering to open plunder, and rarely venturing, without decided superiority of number or position, to face an enemy in the field. Too indolent to till the soil, too insecure to desire fixed property, they lived by hunting and robbery, and were, therefore, but little disposed to check the luxuriance of rank vegetation, which yielded them at once subsistence and shelter. It is not surprising, therefore, that the countries which the Poligars occupied should have been overrun with inhospitable and noxious forests; and, it may be concluded, that had not a wise and powerful policy interfered to enforce the habits of social life, the fine districts to the south of the Kaveri, most admirably fitted by nature to support an industrious population, would have reverted to the state in which tradition describes them long anterior to Christianity, and would once more have become a suitable domicile for none but the goblins of Rávana, or the apes of Hanumán.

The princes of Vijayanagar had established their supremacy over most of the countries south of the Krishná river before the sixteenth century, but they appear in general to have left the native princes in possession of their local sovereignties, and to have contented themselves with enforcing an acknowledgment of their paramount dignity, and exacting in times of emergency pecuniary and military aid. Such was the case with the Pándya and Chola kingdoms, which were

of the Hindús, particularly the frequency of remarrying allowed to the women, either upon voluntary separation from their husbands, or their death. This custom exists with very few exceptions (MS. Accounts of the Collaries, 25, 26). The pre-eminent power and stability of the *tondiman*, as the principal Poligar chief is called, has introduced a bias to Hindú habits; and his wives having sometimes been known to sacrifice themselves on the funeral pile, the fashion has gained ground in his dominions. The Collars are chiefly worshippers of Siva and Kálí. They are not very rigid in their diet, drinking spirits and eating flesh and fish. The lax observance of the Hindú practices, which prevailed formerly amongst these tribes to a greater extent than at present, may partly furnish a reason to believe that the extensive proselytism effected by the Madura missionaries in these districts was not altogether a fiction. It appears, indeed, that amongst the thirty thousand Christians under the Madura mission, was included a considerable portion of the *calaris*, or thieves. "Je me mis sous la conduite de ce guide qui me fit bientôt quitter le grand chemin pour entrer dans le pays de la *caste des voleurs*. On la nomme ainsi parce que ceux qui la composent faisoient autrefois métier de voler sur les grands chemins. *Quoique la plupart de ces gens-là se soient faits Chrétiens*, et qu'ils ayent aujourd'hui horreur de l'ombre même du vol, ils ne laissent pas de retenir leur ancien nom, et les voyageurs n'osent encore passer par leurs forêts. Les premiers missionaires de Maduré furent *assez heureux de gagner l'estime de cette caste* de sorte qu'à present il n'y a guères de lieu, ou nous soyons mieux reçus et plus en sureté que dans leurs bois."—Du Père MARTIN au Père le GOVIEN, Decembre 1700, vol. x. p. 160.

governed in the reign of Krishna Raya of Vijayanagar by their own kings. A war broke out between Víra Sek'hara, the Chola, and Chandra Sek'hara, or Chandra Kumára, the Pándya prince, in which the Madura monarch being worsted, he was compelled to fly his country, and, in this distress, had recourse to Krishna Ráya for protection and assistance. An opportunity of this nature was not likely to be disregarded by the Vijayanagar court, and Nágama Náyaka, overseer of the royal cattle, was despatched with a considerable force to reinstate the Madura prince, and punish the ambitious presumption of the sovereign of Tanjore. The task was easily effected; and Chandra Sek'hara seated on the throne of his ancestors. His restoration, however, was but nominal, as Nágama Náyaka retained the sovereign authority in his own hands, keeping the king of Madura in confinement, and disregarding the commands and menaces even of Krishna Ráya, who found his successful general converted into a rebel.

The valour and conduct of Nágama Náyaka rendering the officers of Vijayanagar reluctant to undertake his chastisement, he seemed likely to maintain his newly acquired authority in perfect impunity.[1] To the surprise of the Vijayanagar court, however, an antagonist to Nágama was found in the person of his only son, Viswanát'h; a son whom he had performed a pilgrimage to Benares to obtain, and whom he had left for education, or who had not improbably been detained as a hostage, at Vijayanagar. As Viswanáth Náyak had given many proofs of his military talents, and as his professions of loyalty were credited, he was accordingly intrusted with the unnatural duty of revenging his prince upon a father, and marched with a strong force against Nágama. The father was defeated and taken prisoner, and, according to one account, delivered to Krishná Raya by Viswanáth, who replaced the legitimate king of Madura on the throne, and returned triumphantly to Vijayanagar, where, in consideration of the merits of

[1] The materials for the history of the Náyaks of Madura, although not very full, are, as far as they extend, satisfactory. They are, 1. A History of the Modern Kings of Madura, by TRIUVERCADU MUTIAH, an ingenious native of the Carnatic, an amusing account of whose studies, written by himself, is published in the *Asiatic Annual Register*, for 1801; 2. A History of the Telugu Rulers of Madura, translated by Mr. WHEATLEY from the Tamil; and, 3. A Sketch of the History of Madura, to the reign of Trimal Náyak, Nos. 19, 22, 23. A fourth account (24) is confined to the affairs of the descendants of Vijaya Ranga Choka Nát'h, who died in 1731. It is drawn up by the representative of the family, Vijaya Kumára Viswanát'h Bhangaru Trimala Náyak, the great grandson of the last Náyak of Madura.

the son, the father was forgiven. The king of Madura soon after dying, and leaving no heir, Viswanáth Náyak was installed by the sovereign of Vijayanagar as feudatory prince of Madura. Another history of Madura, however, omits these circumstances, and describes Viswanáth as the officer sent to the assistance of the Pándya prince, and the usurper of the independent sovereignty. At any rate, it is evident from the tenor of both accounts that Viswanáth Náyak first established this dynasty, and that his assumption of the regal authority was acquiesced in by the court of Vijayanagar, too much occupied in watching the proceedings of their new neighbours of Bijapur[1] to attend to the affairs of the more southern districts.

After the inauguration of Viswanáth Náyak, he proceeded to strengthen himself in his new government; and, with this view, having enforced the cession of Trichanapali from the Chola Rájá, he improved the fortifications of that stronghold, and built a palace in the fort for his reception. He then directed his attention to the settlement of Tinnevelly and the southern districts, the depopulated parts of which he distributed amongst his adherents, chiefs of the Totia caste, to the number of seventy-two, who were the progenitors of the petty chiefs subsequently known as Poligars. This measure, however, and resentment for the extirpation of the ancient royal family, seem to have aroused the remaining chiefs of that principality to arms, and a force, led by five rájás connected with the Pandya dynasty, opposed the further progress of Viswanáth. The quarrel was, however, decided by the personal conflict of that chief with Agra Pándyan, who was selected as the champion of the enemy, and was killed in the combat. According to one of our histories, Viswanáth survived his victory but a short period, dying of his wounds on the ensuing day. According to another account, he recovered, and continued to reign long enough to extend and consolidate his power.[2]

[1] Established as an independent state in 1489 by Yúsuf Ádil Khán.—SCOTT, vol. i. p. 207.

[2] Although the two histories agree in the main facts, they differ considerably in the details, and especially in the chronology. MUTIAH's account places Viswanáth's accession, A.D. 1560, the other, A.D. 1431. The former of these best agrees with Krishna Raya's date, and with the previous history of Madura: it may be about forty years too modern. MUTIAH's history enumerates but eleven princes between 1560 and 1742, or one hundred and eighty-two years; the other names fourteen princes in three hundred and seven years,—the former giving about seventeen, the latter twenty-two years to a reign. But this proportion is too much, as three of the fourteen princes are three brothers who reigned consecutively, and the average of whose reigns could not, therefore, have exceeded half this number. We shall

The second prince of Madura, Peria Krishnapa Náyak, the son of Viswanáth, succeeded his father. He extended the authority of the new family towards the south, reducing to subjection the Poligar of Permagúdí: he enlarged and beautified Tinnevelly, and built a village to the south of Palamcota, called after his own name Kistnapuram. And here, as well as near Tinnevelly, he built a temple of Siva, and a range of dwellings for the residence of Brahmans, attaching to both liberal endowments.

The third prince of this race was the son of the preceding, Peria Virapa Náyak, who emulated his father in extending the authority of Madura, and in founding temples and endowing religious establishments.

The succession of the Náyaks is here differently stated, Mutiah's History passing to a second Krishnapa Náyak, calling him the son of the last prince, whilst the other account states that Peria Virapa Náyak left three sons, Viswapa, Kumára Krishnapa, and Kastúrí Rangapa, all of whom succeeded in regular order to the government. The last was succeeded by Krishnapa, who was the son of the second brother, Kumára Krishnapa, and until whose reign no particular transactions have been thought worthy of being recorded.

The most remarkable incident of this reign was the formal acknowledgment of the Poligar of Rámnád, as the sovereign of the eastern coast. This event must have taken place at the end of the sixteenth century; and the accounts of Marawa assert the independency of the founder of the sovereignty about two centuries sooner. They agree, however, with the histories of Madura, in admitting, that about this period Wodeya Déva was recognised by the king of Madura as the legitimate ruler of Rámnád, and warden of Ráméswar; and there can be little doubt, therefore, that the power of the Marawa rulers first assumed a consistent form at the period here described. They were not, however, entirely independent, as, although authorised to extend their authority over their refractory and predatory neighbours,

have a more probable result, if we suppose the number of princes to be, including Nágama, fifteen, and the number of years two hundred and twenty-two, from 1520 (for Krishna Raya ruled from 1509 to 1530) to 1742, which will give us something less than fifteen years to a reign. Colonel WILKS says, the dynasty of the Náyaks of Madura was founded by Nagana Naid (or Naik) about 1532, in the reign of Achyuta Deva, with the aid of a colony of Telingas, which seems to have been planted in the country some time before by the government of Vijayanagar. The descendants of those are the Poligars of the present day, who are undoubtedly of Telinga, not Tamil, origin (vol. i. p. 54, note). Their introduction is differently stated in the authorities followed in the text.

they were required to pay tribute to the Madura government; and they were especially enjoined to give protection to the pilgrims to Rámeswar against the Colars and Marawars, who had been accustomed to plunder and harass these devotees upon their passage, so as almost to have deterred the people of other parts of India from undertaking so perilous a journey.

Virapa Náyak succeeded his father. According to one account, Trichanapali was first attached to the government of Madura in his reign, having previously belonged to the state of Tanjore, from which it was obtained by exchange, the fort of Vellam being ceded to that state in lieu of this citadel. The transaction is uniformly so described; but it is referred by other authorities to the reign of Viswanáth, the first Náyak, as already noticed, or to that of Tirumalla Náyak, the successor of Virapa.

The accession of Tirumalla Náyak, the son and successor of the last prince, brings us to a period of chronological certainty, and is placed by the different authorities within two or three years of the same date, or 1621, 1623, and 1626. The reign of this prince was long and flourishing, and the public edifices erected during his sovereignty still furnish splendid proofs of his wealth and magnificence.

The affairs of Rámnád form the most important transactions of this reign. Kutan Setupati, the son of Wodeya Deva, who had succeeded his father, left, upon his death, four legitimate sons, and one illegitimate. Of the first, the third son succeeded his father, but the fourth, Ádi Náráyan, disputed his possession of the country, and, with the assistance of his son-in-law, Tiruvadeya-vanni, a man of great military enterprise and ability, appears to have deposed his brother, and made himself master of Rámnád. The illegitimate son of Kutan, named Tumbi, had recourse to the court of Madura, and easily prevailed upon Tirumalla Náyak to send an army under his general, Rámápya, to put him in possession of what he claimed as his inheritance, a portion of the Márawa principality. Whilst Tiruvadeya-vanni lived, the troops of Madura were successfully resisted; but, upon his dying of the small-pox, a casualty ascribed to the incantations of his enemies, Rámápya overran the country, and taking Ádi Náráyan prisoner, carried him to Madura, where he was detained in close confinement.

Tumbi Setu Pati was now sole master of Rámnád, but the people contemning the baseness of his birth, withheld obedience to his orders, and, breaking out into open rebellion, he was glad to seek safety again in the court of his patron. The eastern districts were now without a ruler, and the same dangers that formerly prevailed

once more obstructing the pilgrimage to Rámeswar, the Brahmans and religious mendicants solicited the restoration of Ádi Náráyan to the government, as calculated to re-establish order and security in the country. Tirumalla complied in some degree with their request; but, acting upon a maxim which has constantly influenced eastern politics, as well as those of more civilised regions, he gave to Ádi Náráyan, with his liberty, but a third part of his patrimony, leaving another third in the hands of Tumbi, and conferring the rest on Danu Kánta, the son-in-law of Ádi Náráyan.

This division of the Marawas, although it laid the foundation of future partitions, did not at that time long continue. Tumbi contrived to put his brother to death, but soon after dying himself, his portion was seized by Vijaya Raghunath, the adopted son of Ádi Náráyan, who, likewise, gained possession of the state of Danu Kánta upon his death, and thus re-united the three governments under one head. This prince, although he extended his authority over the adjoining districts, continued obedient to the authority of Tirumalla; and, upon the invasion of Madura by a formidable army from Mysore, was highly instrumental in their repulse, leading, with an activity which received the acknowledgement of the Náyak, a considerable force to the assistance of his lord paramount, and mainly enabling him to defeat and expel the invaders.

Although the fortress of Trichanapali was the chief stronghold of the kingdom of Madura, the city of Madura appears to have been the favourite residence of Tirumalla Náyak. We have already ascribed to a much older prince the original construction of the fort, the temple, and palace, of which such stately vestiges still exist. There is no doubt, however, that they owe much of their present form to the taste of Tirumalla Náyak, and the palace of Madura especially shews indications of modern architecture; at the same time, the more celebrated building, still in good order, the Choltri of Tirumalla Náyak, known to be his work, is an edifice purely Hindú, and blends the square and massive character of the general structure with the singularly minute decoration, and luxuriantly fantastic developement of the details. The Choltri is a chamber of an oblong square form, the flat roof of which of long stones, rests upon one hundred and twenty-four pillars of stone twenty feet high, and placed in four rows. The pillars are curiously carved with different figures representing stories connected with the Hindú religion, the peculiar legends of the *Madura Purána*, and the persons of the founder, and his predecessors. One pillar represents Tirumalla Náyak himself, with six of his wives, and a number of the women of his haram. The Choltri, it

was said, was begun in the year 1623, the second year of the founder's reign, was finished in twenty-two years, and cost above a million sterling. It was built, it is asserted, to receive the Lingam of the great temple ten days in every year, the Brahmans agreeing to bring their divinity forth upon condition of Tirumalla Náyak's providing a suitable place for his temporary accommodation. Besides this Choltri, the same prince is said to have completed three other great works — a pagoda; a tank, three quarters of a mile square, twenty feet deep, and faced with stone; and a grand palace ornamented with black granite pillars, some of which are twenty feet high cut out of one stone.[1]

The reign of Tirumalla Náyak was of considerable duration; one account says forty years; another, thirty-six; and the lowest computation, therefore, brings it to the year 1657,[2] when he was succeeded by his son Vírapa, a prince of an effeminate and indolent disposition, and who, accordingly, was unable to repress the incursions of the Mysoreans, under so active a prince as Kanti Deva Nana Raj. They took several places in the western districts during this reign from the Madura Náyak.[3]

Chokánath Náyak succeeded his father; he was a prince of some conduct and enterprise, and rendered himself formidable to all his neighbours. He first turned his arms against Vijaya Rághava, king of Tanjore, whom he defeated and put to death, taking prisoner his ally, Surya Deva, the Setupati, and assisting Kilavan, the cousin of the captive prince, to become master of Rámnád. He then invaded the kingdom of Mysore, expecting to reduce it under his authority, but the events of the war reversed his expectations, and inflicted severe losses on the government of Madura.

The son of the late king of Tanjore, Chengamál Dás, had made his escape from the fort of Trichanapali, where he had been confined.

[1] BLACKADER's Account of the Buildings at Madura, Archæologia, vol. x. Views of the Choltri, &c. have been given by DANIEL, and LANGLÈS' Monumens de L'Hindoustan.

[2] It must have been in the early part of this reign that the Portuguese Jesuits, under ROBERT DE NOBILIBUS, established the Madura mission, although a liberal benefactor to the Brahmans; therefore, Tirumalla Náyak could not have been a bigot. There were two Christian churches in the city of Madura.—*Lettres Edifiantes*, xiii. 130.

[3] As Denaikan-cotta, Satyamangal, and other ta'alluks.—WILKS, i. 54. These aggressions are dated 1653 in the History of Mysore, but, as it is said, they were taken from Vírapa, Naik of Madura; and, as the character of this prince renders such an event probable, it is most likely that Colonel WILKS's date is a few years erroneous.

His escape was effected probably with the aid of Rustam Khan, a Mohammedan chief, who had been a favourite of Chokanáth, and who commanded the garrison under the orders of Mudala Rudra Náyak, the brother of Chokanáth, an extravagant and indolent prince, who lavished on his personal gratifications the sums destined for the pay of the troops. Taking advantage of their discontent, Rustam Khan liberated himself from all controul, and made himself master of Trichanapali. This event, with the escape of Chengamál Dás, encouraged the Rájá of Chenji to advance to Srirangam, whilst the rájá of Mysore on that side now became the aggressor. In this state, Chokanáth found some difficulty in preserving the shadow of his former power, and his enemies retained the superiority for a considerable period, the Mysoreans occupying even the capital, Madura, it is said, for three years.[1] It was probably to purchase their retreat that Chokanáth ceded to Mysore the districts of Errúr and Darapur.[2] Having thus got rid of one of his most powerful enemies, and being vigourously reinforced by Kilavan Setupati, he next dispersed the troops of Chengamál Dás, and reoccupied Tanjore. He finally recovered Trichinapali from Rustam Khan, who lost his life in the defence; and the Chenji Rájá retreating to his own capital, Chokanáth remained in the tranquil possession of his patrimonial possessions. He soon, however, lost his acquisitions in Tanjore, the fugitive prince, Chengamál Dás, having recourse to the Mahratta chief, Ekaji, for assistance. That adventurer, who commanded at Bangalore, under the nominal authority of the Mohammedan court of Bijapur, readily undertook his protection.[3] The confederates marched to Tanjore, and soon expelled the forces of Madura. The Mahratta, presently usurping the sovereignty of Tanjore, was not at leisure to prosecute his success against Chokanáth; and these princes very shortly afterwards entered into a mutual confederacy to oppose the incursions of Sevaji.[4] These events, which are usually placed between 1675 and 1680, are

[1] MUTIAH'S History. The fact is confirmed by the *Lettres Edifiantes*. One, dated 1719, observes of the Christian Churches at Madura,—Ces Eglises furent tout à fait renversés lorsque la ville fut prise et ruinée en partie par le Roi de Mayssur. Vol. xiii. p. 131.

[2] WILKS, i. 58.

[3] This is rather differently narrated in the Pratapa Vamsavali Bhosla. There it is said the Prince of Trichanapali applied to Shahoji for assistance against Vijaya Rághava, prince of Tanjore. That Shahoji enabled the Rájá of Trichanapali to repel his enemy and capture Tanjore, but that he then appropriated the conquest to himself, expelling his ally from the country, and leaving it under the administration of his son, Eekaji.

[4] WILKS, i. 78.

in perfect conformity with the period of the reign of Choka Náyak as stated in the authorities we have followed, and which date its termination in 1685 or 1687.

Chokanáth Náyak was succeeded by his son, Ranga Krishna Múto Virápa, who died young, after a reign of seven or eight years, leaving his wife pregnant with a son, afterwards named Vijaya Ranga Chokanáth Náyak. During his minority the regency was exercised by Mangamal, the grandmother of the prince, a woman of great talents and manly spirit. One account describes her as preserving her authority until 1712, but another[1] states, that when the prince was thirteen years of age, the commander of the forces, Kasturi Ranjya, excited an opposition to her which ended in his seizing the reins of government, and in her confinement until her death, which speedily followed. We know, however, that in 1700, she was regarded as the ruler of Madura for her grandson, although the administration of the affairs of the state was in the hands of a governor, or regent, who exercised unlimited authority.[2]

The reign of Vijaya Ranga Chokanáth Nayák was not distinguished by any remarkable event. He died in 1731,[3] leaving no child; he was, therefore, succeeded by his wife, Minákshi Amman, who adopted Vijaya Kumára, the son of Bhangaru Trimal Nayak, a descendant in a direct line from a younger son of Tirumalla Náyak. This adoption was enforced by the law of the country, so that Minákshi Amman was in fact only regent during Vijaya Kumára's minority. The adoption was generally acceded to by the ministers and men in authority, but it was disputed by Bhangaru Tirumalla Náyak, the father of the youth: he claimed the inheritance to the throne, and his claims were powerfully supported by the activity and influence of his years and rank. The parties are described in one account as having come to an indecisive engagement; but it is admitted that the matter was, with much less policy, referred to the Nawab of Arcot, who sent his son, Sufdar Ali, and Chanda Saheb, with an army to hear and decide the disputed question. The cause was discussed at Trichanapali, and the general bias leaning to Bhangaru Tirumalla Náyak, he was

[1] MUTIAH's History.

[2] "Cette Princesse Mangamal, qui est comme depositaire de la couronne, fait élever avec un grand soin son petit fils, prince agé de quatorze ou quinze ans, à qui le royaume appartient, et confie, cependant, tout le gouvernement de l'état au Talavay, ou Prince Regefft."—*Lettres Edifiantes*, x. 171. The letter is dated Avour, in the kingdom of Madura, 11 Dec. 1700.

[3] MUTIAH says 1734, Orme (1, 38), 1736; but our date is confirmed by MSS. which, as a family account of such recent events, seems to be the best authority.

placed on the throne, presenting three lacks of rupees to his Mohammedan friends, and acknowledging himself the tributary of the Nawab of Arcot.

The same means that had secured a favourable award for the successful candidate, were now employed to procure a reversion of the sentence, and a nazzer of a crore of rupees, it is said, prevailed on Chanda Sahib to undertake the cause of the Ráni. These negociations becoming known to Bhangaru Náyak, he quitted Trichanapali, and endeavoured to secure himself in Madura and Tinnivelly, but he was unequal to oppose the troops of the princess, aided by the Mohammedan arms, and, after a few unsuccessful skirmishes, he fled to Sivaganga, where the ruling Setupati, Katta Deva, received him and assigned him some lands for his subsistence. The zeal which Chanda Sahib had displayed in behalf of Minákshi Amman, and the success with which it had been attended were calculated to inspire confidence as well as gratitude; and it was under these impressions that the princess granted free access to the citadel of Trichanapali to her defenders. The further precaution, however, was taken, of exacting an oath from Chanda Sahib, that he would not avail himself of this facility to the detriment of his ally. No obstacle, however, was likely to deter this ambitious prince from securing a post of such importance to his meditated schemes of aggrandisement; and, consequently, in despite of oaths and protestations, he presently seized upon the citadel of Trichanapali, and threw Minákshi Amman into prison, in which the queen, overcome by shame and despair, swallowed poison and died, thus terminating the series of the Hindú sovereigns of the Pándya kingdom. Bhangaru, with his son, the cause of these dissensions, continued some time under the protection of the Sivaganga Poligar. They and their descendants were from time to time encouraged by the Nawábs of the Carnatic to expect their restoration to the possessions of their ancestors, but there is no reason to suppose such hopes were ever held out to them in the spirit of sincerity, and it is certain that they bore no fruit. The family remained some time at Vellikurchi, afterwards at Rámnád, and were thence obliged to take refuge amongst the Poligars. After the war with Tipú they returned to Vellikurchi, where they have continued to reside.

It is unnecessary to follow further the history of Madura, as it becomes, from this period, a portion of that of the British empire in India.

LISTS OF THE PÁNDYAN KINGS.

	No. 1. Vamsavali, Vol.	No. 2. Vol.	No. 3. Madura Puráns, Vol.	No. 4. Madura Puráns, Vol.	No. 5. Hálásya.
1	Kulasékhara.	Kulasek'hara.		Kulasek'hara.	Kulasek'hara.
2	Malaya Dhwaja.	Malaya Dhwaja.		Malaya Dhwaja.	Malaya Dhwaja.
3	Sundara.	Minakshi and Sundara.	Soma Sundara.	Sundara.	Sundara.
4	Vira.	Wugra.	Wugra.	Vugra.	Wugra.
5	Abhisheka.	Vira.	Vira.	Vira.	Avhisheka Vira.
6	Vikrama.	Abhisheka.	Abhisheka.	Abhisheca.	Vikrama.
7	Rájásek'hara.	Vikrama.	Vikrama.	Vikrama.	Sek'hara.
8	Anantaguna.	R. Sek'hara.	R. Sek'hara.	R. Sek'hara.	Kulottunga.
9	Kulabhara.	Kulottunga.	Kulottunga.	Kulottunga.	Anantaguna.
10	Varaguna.[2]	Anantaguna.	Anantaguna.	Anantaguna.	Kulabhushana.
11	Rájá Rájá.	Bhushana.	Kulabhushana.	Kulabhushana.	Rajendra.
12	Rájá Gambhíra.[5]	Rajendra.	Rajendra.[4]	Rajendra.	Rajésa.
13	Chitra Virta.	Sundareswara Pada Sek'hara.	Tari Rájá.	Rajésa.	R. Gambhira.
14	Chitra Guna.	Varaguna.	Udalura.	R. Gambhira.[5]	P. Vamsapradi-paka.[5]
15	Chitra Dhwaja.	Rájá Rájá.	Gambhira.	P. Vamsadípa.	Puruhutajit.
16	Chitra Guna.	Vamsa Sek'hara.[3]	Vengi Ádi.	Purandarjit.	P. Vamsa Pataka.
17	Chitra Vikrama.	Vamsa Churamani.	Purandara.	P. Vamsa Vataka.	Sundarapada.
18	Rájá Martanda.	Kula Sek'hara.	Kumára.	Sundarésá Pada Sek'hara.	Varaguna.
19	Rájá Chudamani.	Arimerddhana.	Vangeya.	Varaguna.	Rájá Rájá.
20	Rájá Sundara.	Chokanath.	Eradana.	Rája Rájá.	Chitra Ratha.
21	Rájá Kulottunga.	Virabhadra.	Sundarésá Pada Sek'hara.	Suguna.	Chitra Bhushana.

22	Rájá Sirogicha Gambhíra.	Vira.	Varaguna.	Chitra Viratha.	Chitra Dhwaja.
23	Rájá Gambhíra.	Prakrama.	Rájá Rájá.	Chitra Bhushana.	Chitra Verma.
24	Pándya Vansa Dípa.	Suravhi.	Suguna.	Chitra Dhwaja.	Chitra Séna.
25	Purandara Sundara.	Kunkuma.	Chitra Ratha.	Chitra Vermá.	Chitra Vikrama.
26	Pándya Vamsa Dhurandara.	Karpura.	Chitra Bhushana.	Chitra Sena.	R. Martanda.
27	Jannadeswara.	Karunya.	Chitra Dhwaja.	Chitra Vikrama.	R. Churamani.
28	Pandu Sek'hara.	Puruskottama.	Chitra Verma.	Rájá Martanda.	R. Sardula.
29	Varaguna.	Chatursasana.	Chitra Chera.	Rájá Churamani.	R. Kulottama.
30	Rájá Sardúla.	Kuna, or Sundara.	Chitra Vikrama.	Rájá Sardúla.	Ayodhana Pravina.
31	Rájá Kulottama.		Rájá Martanda.	Rájá Kulottama.	Rájá Kunjara.
32	Ayatana Pravína.		Sardúla.	Pravína.	R. Bhayamkara.
33	Rájá Kunjara.		Kavi Rájá.	K. Kunjara.	Wugrasena.
34	Pravíra Rájá Bhayancara.		Kulottama.	R. Bhayamkara.	Mahasena.
35	Varoonajana.		Tunda Pravina.	Wugra Sena.	Satrunjaya.
36	Satrunjaya.		Rájá Kunjara.	Satrunjaya.	Bhimaratha.
37	Viravudanda.		Rájá Bhayamkara.	Jayamgonda.	Bhima Paracrama.
38	Viraparakrama.		Rudrasena.	Parakrama.	Pratap Martanda.
39	Pratapa Martanda.		Satrunjaya.	Pratap Martanda.	Vikrama Kanchuki.
40	Vikramakaryaka.		Vinatar.	Vikrama Kunchuka.	Yuddha Kolahala.
41	Samara Sek'hara Kolatala.		Viraprakrama.	Samara Kolahala.	Chaturi Vikrama.
42	Antala Vikrama.		Pratapa Martanda.	Atula Vikrama.	Atula Kirtti.
43	Antala Kirtti.		Vikramakanchuki.	Atula Kirtti.	Kirtti Bhushana.
44	Vamsa Sek'hara.[6]		Samara Kolahala.	Kirtti Bhushana.	Vamsa Sek'hara.
45	Pratapa Surya.		Yatula Vikrama.	Vamsa Sekhara.	Champaka.
46	Vamsatulaja.		Yatula Kirtti.	Vamsa Churamani, or Chanjpaka.	Pratápasurya.

LISTS OF THE PÁNDYAN KINGS (*continued*).

	No. 1. Vamsavali, Vol.	No. 2. Vol.	No. 3. Madura Puràna, Vol.	No. 4. Madura Puràna, Vol.	No. 5. Hálásya.
47	Nipu Marundari.		Kirtti Bhushana.	Pratapa Surya.	Vamsa Dhwaja.
48	Chola Vamsottaraca.		Vamsa Sek'hara.	Vamsa Dhwaja.	Vamsa Bhushana.[7]
49	Kula Churamani.		Vamsa Churamani.	Marutakan.	Loma Churamani.
50	Rájá Churamani.		Surya Vanjival Dhwaja.	Chola Vamsantaca.	Kula Churamani.
51	Vamsa Siromani.		Marutaka.	Chera Vamsantaka.	Rájá Churamani.
52	Pándya Gambhíra.		Pratapa.	Pándya Vamsésá.	Bhupa Churamani.
53	Kuvalatuja.		Sovilanki.	Vamsa Siromani.	Pándya Kulésá.
54	Vamsa Vibhushana.		Suvangi Sandha.	Pandyeswara.	Arimerddhana.
55	Kulésa.		Vamsa Sek'hara II.	Kulodhwaja.	Kunapandya.[8 9]
56	Chola Churamani I.		Vamsa Siromani.	Vamsa Vibhushana.	
57	Chola Churamani II.		Pandeswara.	Chola Churamani.	
58	Rájá Churamani.		Kulutoja.	Kula Churamani.	
59	Bhupa Churamani.		Vamsa Bhushana.	Rájá Churamani.	
60	Kulésa II.		Chola Churamani.	Bhupa Churamani.	
61	Arimarundana.		Kula Churamani.	Kulésá.	
62	Sek'hara Nát'ha.		Rájá Churamani.	Arimatun.	
63	Vira Bhagu.		Bhupa Churamani.	Jagannath.	
64	Vikrama Bhagu.		Kulésa.	Virabahu.	
65	Pracrama Bhagu.		Marutan.	Vikramabahu.	
66	Durmada.		Jagannath.	Pragramabahu.	
67	Karunya.		Virabhagu.	Suradamaran.	

68	Sarvasasana.		Vikramàbhagu.	Bahubala, or Vaguvalen.
69	Sandhatum.		Prakramabhagu.	Kunkumatanya.
70	Nagarika.		Suratamara.	Karpura.
71	Chencalneelyetta.		Vaguvalatu.	Karunya.
72	Vetteya Vinata.		Kunkumatennen.	Purushottam.
73			Karpura.	Satrusadhana.
74			Karunya.	Kuna Pándya, or Sundara.
75			Purushottama.	
76			Chitra Satana.	
77			Kuna, or Sundara.	

[1] Nos. 3 and 4 should be taken from the same authority by the title, but they do not agree; the second is really from the Teruvaleyadul, which is usually called the Madura Purána.

[2] Varaguna is too early in this list by five or six at least.

[3] This list omits here between thirty and forty names, whence it is so much briefer than the rest.

[4] We have here eight kings between Rajendra and Sundarapada; the two next have but five. With this correction the three agree tolerably well as far as they go.

[5] The names of the Chitra family appear transposed in No. 1, as compared with 4 and 5, else they nearly agree.

[6] Differs from the rest in not following Vamsa Sek'hara by Champaka, whom it seems to omit altogether; else the three first lists agree tolerably well.

[7] The Hálásya here omits seven or eight names.

[8] The same here omits ten or eleven names.

[9] All the lists, except the first, here close, and with the same prince, or Kuna Pándya, with whom the next series, from the same authority, seems to begin. According to the Vamsavali, the seventy-two kings here enumerated reigned in former ages.

[10] In these lists the names are often the same though differently written or expressed. Thus, Antala Kirtti (1), Yatula Kirtti (3), and Atula Kirtti (4), are the same name; and Samara Kolahala (1, 3, 4) means the same as Yuddha Kolahala, "the exulter in battle."

Continuation of List Nos.

SERIES II.

1. Soma Sundara.
2. Karpura Súndara.
3. Kumára Sek'hara.
4. Kumára Sundara.
5. Shamuk'ha Noya.
6. Sasiverna.
7. Paruva Mantra.
8. Pararaja Sena.
9. Mugaratoja.
10. Satrubhayamkara.
11. Satru Sama.
12. Kodocola, or Kodungal.

Kali, 305. Interregnum.

SERIES III.

1. Chandrakula Dípa.
2. Pulikodi Paruta.
3. Minkodi Paruta.
4. Magaratuja.
5. Martanda.
6. Kuvalayana.
7. Gunalaya.
8. Virabagu.
9. Satru Samkara.
10. Vira Verma.
11. Vernakulottanga.
12. Rájá Martanda.
13. Kulaverddhana.
14. Varapunyachari.
15. Kulaverddhana 2d.

Invasion of Bahádur Sháh.

SERIES III.

1. Somasek'hara.
2. Soma Sundara.
3. Rájá Rájá.
4. ————
5. Rájá Kunjara.
6. Rájá Sek'hara.
7. Rájá Verna.
8. Bharata Rájá.
9. Kumara Sena.
10. Bhímasena.
11. Pralupa Rájá.
12. Varaguna.
13. Kumara Sundara.
14. Varatunga.
15. Kulottunga.
16. Sundara Kesara.
17. Chandra Kumara.

Expelled by Virasek'hara, king of Chola.

Restored by Nagama Nayak.

Here begin the Nayaks of whom we have three Lists, one of which is the present.

	Nayaks of Madura, List 1; or, the Vamsavali, Vol.	Mutiah's List.	3. From the History.
1	Viswanath.	Viswanath.	Viswanath.
2	Perya Kistnapa.	Mootoo Kistnama.	Peryakistnapa.
3	Perya Virapa.	Virapa.	Perya Virapa.
4	Viswapa.	Krishnappa.[2]	Viswapa.
5	Perya Virapa.	Mootoo Virapa.	Kumara Kistnapa.
6	Perya Kistnapa.	Terumalla.	Kasturi Rangapa.
7	Kasturi Rangapa.	Mootoo Virapa.	Mootoo Kistnapa.
8	Mootoo Kistnapa.	Chokanath.	Mootoo Virapa.
9	Mootoo Virapa.	Ranga Crishna Mootoo Virapa.	Terumalla.
10	Terumalla.	Vijayaranga Chokanath.	Mootoo Virapa.
11	Chokanath.	Minacshi Ammaul.	Chokanath.
12	Kistna Mootoo Virapa.		Kistna Mootoo Virapa.
13	Vijaya Ranga, as a minor.		Vijaya Ranga, under the regency of Mongamal.
14	Ditto, as of age.		Ditto, of age.
15	Mangamal,[1] his widow.		Minackshi Ammal, his widow.
16	Vijaya Kumar.		Vijaya Kumára.

[1] Should be Minakshi.

[2] MUTIAH omits the three brothers of Virapa, and goes to his nephew. He omits, also, the regency of Mangamal, and the last prince. These five, added to his eleven, the three lists agree.

List of the Manuscript Translations referred to in the preceding Accounts with reference to the Pages, &c. of the Appendix to the Description of the Mackenzie Collection.

1. Vamsavali of the Chola, Chera, and Pándya Dynasties, extracted from a MS. in the possession of Kalinga Raya: and translated from the Tamil by R. CLARKE, Esq. cxxviii. vol. i. art. 1.
2. Genealogy of the Pándya Rájás from the Madura Puranam, composed by PARUNJOTHI. Translated by SRINAVASIA BRAHMAN. Ibid. i. 12.
3. Origin of Madura, with a List of the Kings (List No. 2), and the Limits of the Country. Translated from a Tamil MS. communicated by Mr. HURDIS, by SRINAVASIA. Ibid. i. 9.
4. List of the Kings of Pándya from the Teruvaleyadal, or Madura Purána. Extracted and translated by KAVELE VENKATA LAKSHMYA. MS.

5. List of the Kings of Pándya, extracted from the Hálásya Mahatmya of the Skanda Purana. MS.
6. Rájá Cheritee; or, Actions of the Vadaka Rájás of Tanjore, Trichanapali, and Madura. cxxviii. i. 8.
7. Madura Puranam; or, Teruvaleyadal of Paranjoti Tamburan. Translated from the Tamil by a native interpreter. Tamil MSS. or class 3, No. 33. cxciv.
8. Puranam, or Ancient History of Madura. Tamil MSS. or class 3, No. 28. Ibid.
9. An Account of the most esteemed works in the Tamil language; from a paper communicated by Mr. COCHRANE.
10. Description of the Dravida country, confined almost to notices of Tamil authors. MSS. class 3. cxcvi.
11. Pándya Rájá Kal; a History of the Kings of Pándya Desa. Translated from the Tamil. MSS. class 3, No. 27. cxciv.
12. Account of a hill called Tripurankodum and Skander Mally. MSS. class 3, No. 80. cxcvi.
13. Varaguna Cheritram; a History of Varaguna. MSS. class 3, 26. cxciv.
14. Life of Agastyer. Translated from the Tamil. MSS. class 3, 4. cxcii.
15. Life of Manukyavasager. By VEDANAIK VIDHAGAMA SIROMANI. Class 3, No. 3. cxcii.
16. Account of the Sanketar, or Madura College. Translated from a Tamil MS. communicated by MINACSHI NAYAH. cxxviii. i. 13.
17. Account of Gnyana Siva-achári. By NITAL NAINA. Class 3, No. 9. cxciii.
18. Konga Desa Rájá Chentram; a History of the kings of Congo. cxxx. vol. iii. 6.
19. Sketch of the History of Madura. cxxxii. vol. iv. 17.
20. History of the Kings of Rámnád. Translated from the original of Soma Sundara Pilla, by CAVELLY VENKALL RAMASWAMI. cxxxii. vol. iv. 21.
21. Some account of the Setupati, or Rámnád Poligan. Translated at Simoga, by C. O. RAMASWAMI. Ibid. vol. iv. 20.
22. Chronological and Historical Account of the Modern Kings of Madura. By MOOTIAH. Ibid. vol. iv. 4.
23. History of the Telugu Rulers of Madura. Translated by Mr. WHEATLEY. Ibid. vol. iv. 5–16.
24. Account of the Rájás who held the Government of the Samsthan of Madura. By Vijaya Kumara-viswanatt Bhanganu Terumala Naih Gouroo; or, the representative of the family of Terumal Naih. Class 3, 82. clxxxxvi.
25. Account of the Colars. By MINAKSHI NAYAH of Madura. Class 3, 81. Ibid.
26. Account of Malanaudoo, and other places in the Calari country. Class 3, No. 37. clxxxxiv.
27. Memoir of Tinnavelly. cxxii. vol. iv. 2.
28. Rájá Cheritra; or, History of the Princes of the South. Translated from the Tamil by SRINAVASIA.

ART. X. — *Process of making Crystallised Sugar from Toddy, or the Juice of the Cocoa-nut Palm, on the Island of Ceylon.* Communicated by Lieut.-Colonel COLEBROOKE, *Royal Artillery*, M.R.A.S. &c. &c.

THE toddy is collected in vessels perfectly clean, into each of which a small quantity of the *ál*, or banyan-tree is put, to retard fermentation, and correct astringencies. Before the liquor begins to ferment, it is strained through a clean cloth, and boiled in a pan of brass, or other metal, until the impurities rise to the surface, when they are carefully skimmed off. When the liquor has lost its watery colour, and become a little reddish, it is poured into another pan, and boiled over a strong fire, the scum being again taken off as it accumulates. The fire is then gradually diminished, until a white scum appears on the surface, and increases to a froth. The liquor then becomes adhesive, and of a consistency to be removed from the fire, which is ascertained by allowing a little of it to cool, and by drawing it into a thread between the finger and thumb. If the thread does not break when drawn to about an inch in length, the syrup is removed from the fire, poured into another vessel, and left to cool till it is little more than lukewarm. A little crystallised *jagrí*, or course sugar-candy, is then mixed with it, and the whole is poured into a fresh vessel, having an aperture and stopple in the bottom, so accommodated as to allow the uncrystallised part to ooze out. Crystallisation is completed in about a week, when the stopple is removed to allow the remaining fluid to escape, and, at the end of another week, the crystallised sugar is taken and placed near a fire in a *góní*, or sack. The expense of manufacture is about one penny and one-eighth per pound, exclusive of the cost of vessels.

ART. XI.—*On the Introduction of Trial by Jury in the Hon. East India Company's Courts of Law, by the late* RÁM RÁZ, *Native Judge in Mysore, Member of the Royal Asiatic Society, Author of the "Treatise on Hindú Architecture," &c. &c. &c.; addressed to* H. S. GRÆME, Esq., *late Member of Council at the Madras Presidency.*

Read at a General Meeting of the Society, on the 16th Jan. 1836.

[IT will be of use to the future historian of British India, to know the precise periods at which the British government granted to the natives of the Island of Ceylon, and of the different parts of India, those rights which are alike calculated to elevate both their moral and their political character; and, also, to be enabled to refer to the opinions which were entertained at the time upon the subject, by the people of the country. One of the most important of these rights was that of sitting upon juries, and of being tried by juries of their own countrymen. It is, therefore, thought advisable to record the period, and to give some account of the circumstances under which the British government granted this right to the natives of the Island of Ceylon, and to the natives of the different parts of India; and, also, to give a copy of a paper written to Mr. GRÆME, the late Governor of Madras, by RÁM RÁZ, who was native Chief Judge of the Mysore country, and one of the most enlightened of the Hindú inhabitants of the peninsula of India.

In 1806, Sir ALEXANDER JOHNSTON, the late Chief Justice, and President of His Majesty's Council in Ceylon, after much communication upon the question with the natives of every caste and religious description on the island, formed a plan for granting the right of sitting upon juries, and of being tried by juries of their own countrymen, to all the natives of Ceylon. In 1808, having previously made a journey by land from Cape Comorin to Madras and back again, for the purpose of obtaining local information respecting the people and the country, and having, while on his journey, become thoroughly acquainted with the religious feelings and views of the natives of that part of India, he submitted his plan officially to the governor and council of Ceylon. In 1811, having been sent to England officially by the governor and council of that island, in order to explain the nature of the measure to his Majesty's ministers, and to induce them to sanction it; and having, with their approbation, got a charter under the great seal

for the purpose, he carried his plan into complete effect throughout the island of Ceylon. In 1817, when about to return to Europe, having, at the request of the late Sir THOMAS MUNRO, met him in the Peninsula, and explained to him the nature of the measure, and of the moral and political effects which it had produced on Ceylon, was authorised by Sir THOMAS to state to his Majesty's ministers, that he thought the measure perfectly applicable to the natives of the rest of British India. In 1825, in consequence of the communications which he had in 1817 with the late Sir THOMAS MUNRO, and being now in England, he proposed to the President of the Board of Control, to extend, as was subsequently done by act of Parliament, the right of sitting upon juries, and of being tried by juries of their own countrymen, to all the natives of British India who live within the local jurisdiction of his Majesty's three supreme courts. In 1827, Sir THOMAS MUNRO, then governor of Madras, having heard from Sir ALEXANDER the circumstances under which the legislature had passed that act, formed the resolution, as appears by his minutes of June of the same year, of extending this right to all the natives living under the Madras government. Sir THOMAS having died soon after, Mr. GRÆME, who succeeded him as temporary governor of Madras, acting upon the enlightened and honourable principles of Sir THOMAS, passed in council, and published the regulation of 1827, for gradually extending this right, under certain modifications, to all the natives living under the presidency of Madras. About the same time, RÁM RÁZ, one of the natives whom Mr. GRÆME had consulted upon the occasion, wrote, for his information, the paper of which the following is a copy; and which, whether considered as evidence of the thorough knowledge he had acquired of the English language, or as a proof of the correct views which he took of the question, does him the highest credit, and shews the advantage which may result, and the useful information which may be acquired in India, from consulting the natives upon every question which relates to the improvement of their moral and political situation.]

TO THE HONOURABLE H. S. GRÆME, ESQ.

&c. &c. &c.

HONOURABLE SIR,

WHEN I had the honour of visiting you a few days ago, you were pleased to express a wish that I would state to you in writing my opinion as to the expediency of introducing the mode of trial by jury, in criminal cases, which occur in the provinces subject to this

presidency. I have afforded the several points connected with the subject the best consideration I am capable of, and am happy to say, that the result is in perfect concordance with the view I had always taken of this matter. It is, undoubtedly, a measure the best calculated to answer the ends of justice, as well as to raise the character of the natives of this country; and no difficulty whatever presents itself, to my observation, as an impediment to its being carried into immediate execution.

I do not now exactly recollect the particular points on which you required information, but I shall consider the subject with reference only to the following: 1st. As to what is the general notion of my countrymen in regard to the proposed measure; 2dly. Whether the Hindú law contemplates any mode of trial similar to the one now under examination; 3dly. Whether such a mode of trial is open to corruption; 4thly. Whether there is any difficulty or inconvenience to be experienced by the persons called upon to sit as jurors in giving their attendance; 5thly. Whether such jurors will feel any religious scruples in finding a verdict against a Bráhman; and, lastly, whether they are likely to be possessed of such a retentive memory as to recollect all the circumstances of a case during the trial, especially when the case is of a complicated nature, and one in which a great number of evidences may have been adduced, and what means can be adopted for preserving such recollection in the jurors.

In regard to the general notion of the Hindús with respect to the proposed measure, it must be confessed, that there are some among them who might look upon it as an innovation upon the customs and usages of their country; but the enlightened portion of the Hindú community certainly give it all the credit it deserves; and so perfectly conscious are they of the beneficial effects that are likely to arise from it, that they are actually filled with gratitude towards their rulers for the extension to them of a privilege which has hitherto constituted the pride and "the bulwark of the rights of Englishmen." Where could we, indeed, find an individual who has any notion of national honour, that would prefer to receive his sentence from the hands of a Mahomedan law-officer in the pay of government? If it be granted that Hindús are not dead to such feelings of honour, this consideration alone must remove every idea that Hindús would ever be inimical to the adoption of the measure proposed. It is true, that when the act of parliament regarding the appointment of native juries in his majesty's courts in India first reached this country, some aversion was manifested by a few individuals at Madras to the adoption of the system; but then it must be considered that men are

naturally slow in adopting new principles or systems, however irrefragable or judicious they may be: nothing which has had the smallest symptom of novelty has ever met with the general approbation of mankind at its very first appearance. Such approbation has always been the result of time and experience. That the excellence of the system proposed is now fully appreciated, is evident from the alacrity and willingness with which my countrymen now enter upon the functions of jurors in the supreme court of judicature at Madras. Having thus far shewn the impossibility of Hindús entertaining any notion unfavourable to the mode of trial by jury, I shall now proceed to consider the next point, namely, whether the Hindú law contemplates any mode of trial similar to the one in question.

In order to a right determination of this point, it may, perhaps, be necessary to inquire into the details of the constitution of the Hindú courts, as laid down in books of authority. *Sabhá*, in Sanskrit, signifies a court, an assembly, a meeting. It is derived from *sa*, together, and *bhá*, to shine; and is applied to an association of respectable persons. *Sabhás* are divided, according to some, into four sorts, namely, *apratishthita*, temporary; *pratisthita*, permanent; *mudrita*, confirmed; and *sástrita*, constitutional. The first comprehends all assemblies occasionally convened for the purpose of deciding causes and disputes referred to them; the second includes all the established village and town-courts; the third is held by a chief judge, duly appointed by the king; and, in the last, the king presides in person.

In the *Smriti Chandrica*, a work on Hindú law of great celebrity both in the northern and southern parts of India, are enumerated fifteen different descriptions of *sabhás*, courts or assemblies. They are as follows: — 1. *Aranyasabhá*, an assembly of foresters; 2. *Sárthikasabhá*, that composed of merchants; 3. *Sénikasabhá*, the members of which were appointed from among military men; 4. *Ubhayánumatasabhá*, that chosen by the parties themselves; 5. *Grámavásisabhá*, composed partly of the villagers and partly of strangers, or of civil and military persons together; 6. *Grámasabhá*, a village court in which the *Mahájenams*, or heads of castes, are assembled to settle disputes arising in the village; 7. *Purasabhá*, a town or city court; 8. *Ganasabhá*, an assembly composed of all the four classes indiscriminately; 9. *Srénisabhá*, an assembly composed of all the inferior classes, or castes, such as washermen, barbers, &c. for deciding causes among their own tribes; 10. *Chaturvidyásabhá*, that composed of persons learned in all the four *sástras*; 11. *Vargasabhá*, an assembly of irreligious men; 12. *Kulasabhá*, a meeting composed of persons of the same family;

13. *Kulikasabhá*, in which the relatives of the plaintiff and defendant meet to discuss the matter; 14. *Niyuktasabhá*, a court held by a deputy, or chief judge, regularly appointed by the king with the *sabhásads*, or assessors. This was sometimes called *mudritasabhá*, as it was presided by the *prádvivák*, or chief judge, in virtue of the king's *mudra*, or seal, with which he was entrusted; and, sometimes, also, *prádvivákasabhá*, after the name of the presiding officer; 15. *Nripasabhá*, or king's court, which is also called *sástrita*, because the king was assisted by persons skilled in *sástras*, and all decisions passed here were final. Of these fifteen descriptions of courts, the first three are called *apratishthita*, unsettled, because they were only occasionally held, and were liable to be removed from place to place; and all the rest, excepting the two last, are called *pratishthita*, fixed or permanent. An appeal lies from an inferior to a superior court in regular succession, or directly to the king's. The popular courts above described, from the number of persons of whom they were composed, and the facilities which they must have afforded in ascertaining the facts they were called to judge, present something like a jury, and appear to have produced all the advantages peculiar to that mode of trial, without the delay and vexation attending the forms introduced in more regular courts. But I am unable to ascertain to what extent the inferior courts took cognisance of criminal matters; there seems to be less doubt, however, as to their power in trying civil causes without any limit. They often appear to have acted as mediators between the parties who could not proceed to higher tribunals without passing the lower.

As to the organisation of the two last-mentioned courts *sástrita* and *mudrita*, and the duties of the officers of whom they were composed, abundant information is to be gathered from our law books; but I will only quote a few extracts which bear on these points, from *Vijnyánéswaríyam*, a commentary on the Institutes of *Yájnyavalkya*, which is consulted as the highest authority in southern India. This work, according to the practice of Hindú writers on law, is divided into three heads; namely, *áchára*, ceremonial rites; *vyavahára*, municipal law; and *práyaschitta*, expiations and purifications. The *vyavahára kánda*, or that part which treats of municipal law, opens with the following texts of *Yájnyavalkya*:—

1. "Let the prince investigate judicial disputes, accompanied by learned Bráhmans, in conformity to law, avoiding anger and avarice."

2. "Persons skilled in theology, well versed in law, who are addicted to truth, and make no distinction between an enemy and a

friend; these (and such as these) ought to be appointed as assessors (*sabhásads*) by the prince."

3. "A Bráhman, experienced in all institutions, shall be appointed with the assessors (*sabhya*), by a prince who is engaged in other affairs, and not able personally to conduct judicial investigation."

4. "The prince shall examine causes in succession, attentively fixing his mind and adhering to law and the opinion of the chief judge (*pradviváka*)."

5. "On the assessors (*sabhya*) who deviate from law through fear, favour, or hope of reward, punishment shall be inflicted double that to which the parties are liable."

It appears from the first, second, third, and fourth texts, as explained by VIJNYÁNÉSWARA, that the king, with learned Bráhmans, the chief judge (*prádviváka*), and the assessors (*sabhásads*), constituted the *sástrita*; and that the Bráhman, accompanied by the assessors, formed the *mudrita*, court. The commentaries explain,—they who sit in the court are termed *sabhásads*, assessors, or judges; they ought to be selected from the sacerdotal class, for KÁTYÁYANA says—"He shall be accompanied by assessors (*sabhya*) who are eminent, twice born, and well versed in the art of reasoning." The term being in the plural number, the number of assessors ought to be three, at least, as MANU has declared: "In whatever place three Bráhmans, skilled in theology, meet with the very learned Bráhman appointed by the king, the wise call that assembly the court of Brahmá *with four faces*." But VRIHASPÁTI says—"The court in which seven, five, or three Bráhmans, learned in theology and skilled in law, sit, is equal to an assembly for the performance of a sacrifice." The distinction between the Bráhmans mentioned in the first text, and the assessors *sabhásads*) described in the second, is pointed out by KÁTYÁYANA, who says,—"A king who investigates causes, accompanied by his chief judge (*pradviváka*), his ministers (*mantri*), his domestic priest (*purohita*), and assessors (*sabhásads*), shall, by the power of virtue, obtain bliss in heaven." VIJNYÁNÉSWARA further observes, that the Bráhmans mentioned above are not constituted (*anyukta*), and the assessors are constituted members of the court (*niyukta*), as it is declared, "Whether constituted members (*niyukta*), or not constituted members of the court (*anyukta*), they who know the law or fact ought to declare it;" and the commentator explains the passage by remarking, that the king should be admonished in the event of his acting contrary to justice by the constituted members of the court, and that, if they do not, they incur guilt, for KÁTYÁYANA says—"The assessors who follow him who commits injustice become sharers

in his guilt." But those who are not constituted members of the court, adds the commentator, incur guilt either by not giving information, or by not stating the truth, but not by not admonishing the king. The term "and such as these," in the second text, is explained as denoting a certain number of merchants of whom the court may be composed for the satisfaction of mankind.

The Bráhman mentioned in the third text, acted, in the absence of the king, as chief judge or magistrate, together with the assessors and Bráhmans. It does not appear by what name this officer is designated; but a competent knowledge of the law and established usages, an unblemished character, and a descent from a respectable family, are the qualifications required in the person holding the office; for KÁTYÁYANA says, "He must be capable of restraining his passions, well born, serious, not rash and violent. He must be in awe of the next world, benevolent, dexterous, and free from wrath." Where there is not an intelligent Bráhman to be procured, says the commentary, a *Kshatriya*,[1] or *Vaisya*,[2] may be appointed, but never a *Sudra*;[3] for the same author says, "A *Kshatriya*, or *Vaisya*, learned in law, may be employed where there is not an intelligent Bráhman; but a *Sudra* is by all means to be avoided."

The officer mentioned in the fourth text is the *prádviváka*, a term explained in the commentaries as signifying one who examines the pleading, and interrogates the parties in the suit; for VYÁSA says — "He who inquires into disputes with attention, accompanied by the assessors, by reason of his investigating suits, is called *prádviváka*." His duties were somewhat analogous to those of the English judges, whether the king presided or not; but, when the king was not present, he sometimes presided in the king's court, and, according to the opinion of his assessors, determined finally all civil suits, whether original or in the last resort. All criminal cases, however, were either tried before the king personally, or referred to him for confirmation; for the *prádviváka* is not authorised to inflict any punishment beyond reprimand. The duties of *sabhásads* are to judge of the facts and law of any case, whether the king, the *prádviváka*, or other officer, presided in the court. But there is a doubt whether, in criminal matters, the *subhásads* merely returned a verdict on the case, and the king, or the *prádviváka*, passed the sentence; or, whether the former, or the Bráhmans, mentioned before, explained the punishment, and referred it to be confirmed and executed by the royal authority.

[1] A man of the second, or military, tribe of Hindús.

[2] A man of the third, or mercantile, tribe.

[3] A person of the fourth, or servile, tribe.

The Pandits are inclined to think that the king, or *prádviváka*, merely carried the sentence into execution; many passages, too, which I have consulted on the subject shew that the king may set the sentence aside at pleasure. There is a text quoted in the *Smriti Chandrika*, however, which clearly points out the functions of the several members of the court. "The chief judge interrogates, the king executes; the *sabhyas*, or assessors, judge of the facts (*kárya pravartaká*), and the law determines the punishment." But some explain the word which I have translated *judge of the facts*, judge of the whole matter, and make it comprehend both the law and the facts. Be this as it may, it is clear on the whole, that the *sabhásads*, or *sabhyas*, so far as regards their verdict on the case, resemble the juries of the English court.

I hope I have shewn, by what precedes, that the Hindú law does contemplate trials similar to that of the English by jury, though differing in form and some non-essentials. Some might be disposed to think — and I have heard some persons maintain — that, as the *sabhásads* of the Hindú courts were composed of Bráhmans, the jurors should be selected from among that class. But this is not correct; for it is expressly ordained by MANU and others, that protecting mankind shall be the duty of a *kshetriya*; and VIJNYANÉSWARA, in the course of commenting on the first text of *Yajnyavalkya*, quoted above, interprets the word, *nripah*, prince, as "not applicable to a *kshetriya* only, but to persons of any class of people in whom sovereignty rests." This exposition is founded on natural reason; why then may we not, in like manner, explain the following text which describes the qualifications of the *sábhásads*, or assessors, as applicable to all classes of people, who are possessed of the abilities required. We cannot so explain it, the objector says, because the commentator interprets it differently, that "although it is only mentioned that they must be skilled in theology, yet they ought to be Bráhmans, for KATYÁYANA uses the epithet 'twice-born.'" Now, the term, *dwija*, "twice-born," may signify any of the three higher classes, viz. Bráhman, Kshatriya, and Vaisya; so that still the exposition of the text, as relating exclusively to Bráhmans, is objectionable. Moreover, the commentator explains the term "such as these," in the foregoing text, as implying "a certain number of merchants, of whom the court may be composed, for the satisfaction of mankind," and quotes a passage from KATYÁYANA to the same purport in support of this interpretation; which clearly shews that the office of *sabhásads*, or assessors, was never intended by the legislature to be confined to Bráhmans alone, but to all the three higher

classes, at least, who were the most respectable in the age in which the law was promulgated. But, in a worldly point of view, it must be remarked, that society has now assumed a different character from what it originally bore; many of the priestly class have abandoned their sacerdotal functions, and follow secular professions; while *sudras* have become more enlightened than formerly, follow the professions ordained for higher classes, and, in most respects, are in better circumstances than their priests generally are. In this state of the community, I do not see any objection to the juries being selected from all the respectable castes of Hindús; that is, Bráhmans, Kshatriyas, Vaisyas, and Sudras, indiscriminately, as is now done in the supreme court at Madras. These classes do not shew the least scruple to associate together, on a footing of equality, in temporal matters.

A few words with respect to the courts at present existing, or which have lately existed, under Hindú dynasties, would, perhaps, be desirable. I have not been able to obtain much detailed information on the subject; but, as far as I could collect, there is every reason to conclude, that popular tribunals once prevailed all over India, and still exist in many parts of the country. In the commencement of the Mahratta power in the Dekkan, a supreme court was established in the capital of the empire, presided by one of the eight *prádhuns*, or ministers, in his capacity of *nyáyatthipati*, or judge; and this office, though usually held by Bráhmans, was not altogether confined to that class of people. This court was abolished after the usurpation of the royal power by the prime minister, or, as he was commonly called, the *péshwa*. Latterly, the administration of justice and the collection of revenue were united into one department. Almost all the civil affairs, such as loans, contracts, inheritance, &c. were decided by the awards of *panchâyet*, or arbitrators, regularly summoned from among the classes of merchants, and all criminal cases were determined by local authorities, excepting such as were capital, which were regularly referred to the head of the government, who alone retained the power of inflicting capital punishments and heavy penalties.

Nearly the same mode of administering justice is said to prevail at the present day in the dominions under the Rájá of Mysore. I am personally acquainted with several instances in which the *faujdár* at Bangalore, an officer who, as his name implies, must have originally belonged to the army, but at present acts as collector and judge of an extensive district, summoned an assembly called the *panchâyet*, composed of all classes of people indiscriminately, to attend at his

kachahrí[1] for the purpose of deciding civil causes. Adultery, rape, &c. are commonly tried by a similar assembly of the people, often of the same class as that to which the offender belongs.

A digest of Hindú law, entitled *Saraswativilása*, attributed to PRATÁPARUDRADÉVA, one of the princes of the Kalinga dynasty, who reigned in the commencement of the fourteenth century of Salivahana,[2] attests the existence of regular courts in his dominions; and it is well known, that the rájás of Vijayanagara established tribunals, and administered justice under certain modifications, according to law, in their once flourishing empire; and it was under the auspices of its founder, that the *Mádaviyam*, a commentary on the Institutes of PARÁSARA, and *Dattamimansa* a tract on the law of adoption, were composed. That it appears that, after the destruction of the Vijayanagara empire, the viceroys of Madura and Trichinopoly abolished the courts which existed during the prosperity of the government to which they were tributaries; and though they substituted in their place some mode of judicial investigation, not exactly according to law, yet the memory of some of the princes of this dynasty is still held in high estimation for their justice and equity.

The constitution of the courts in the south under the Chola monarchs must have been strictly conformable to law, for the *Vijnyaneswariyam* is supposed to have been the standard of justice which they established throughout their kingdom; but these institutions did not survive the dynasty under which they were reared. The present Rájá of Tanjore[3] has for some years past established four different descriptions of courts, called *pratishthita sabhá, adhyaksha sabhá, mudrita sabhá*, and *uttara sabhá*, which have jurisdiction over the fort of Tanjore and the villages attached to it. The proceedings are conducted partly according to the Hindú law, and partly according to certain regulations framed in imitation of the practice of the Company's courts. The officer who presides in the *pratishthita* court is not a Bráhman, but a Mahratta of a different class. The *sabhásads*, or assessors, are said to act both as jurors, in finding a verdict, and as expounders of law, in passing sentence. In so limited a jurisdiction as that of Tanjore, cases of capital crimes must seldom occur. It was once the custom in Tanjore to refer most civil cases that were brought before the rájá to the *mahájenams*, or the assembly of the inhabitants

[1] A hall, or court of justice.

[2] The era in general use throughout the south of India. The king whose name it bears, commenced to reign A.D. 78.

[3] Sirfujee Rájá.

of the village in which the cause of action arose; and their decisions, if approved by the rájá, were carried into execution. Much can be gathered in this way to prove the existence, in this country, of trials similar to that now proposed to be introduced. The *Asiatic Journal*, Vol. XXIII. No. CXXXV., from page 329 to page 339, in speaking of the judicial system observed in the Dekkan, adverts to decisions by PANCHÁYET, through whom a tolerable dispensation of justice among the people is said to have been effected. I have known several instances in which the trial of civil causes established in the Company's territories, subject to this presidency, has given more satisfaction to the parties than they might have otherwise had; and I can safely say, that it has produced all the benefits contemplated wherever the parties had recourse to the system, and made a judicious choice of an honest and respectable body of inhabitants for the purpose. But, after all, it is, I presume, altogether unnecessary to trace through the books on law and history for a pattern of any measure that is newly proposed for the good of the public. It is for the government to alter, improve, or originate such measures, from time to time, as are best calculated to forward the due administration of justice; and when the objects contemplated by such measures are known to the people, it is impossible they can dislike them on the flimsy ground of their not being sanctioned by former usages and customs.

With respect to the third point, namely, whether such a mode of trial is open to corruption, much need not be said, unless it be maintained that the generality of Hindús are of such a moral turpitude as to be dead to every sense of honour and shame. But this I hope will never be proved; for, without any partiality to my countrymen, I can boldly affirm, that the Hindú character exhibits as much nicety and exquisiteness of good feelings as that of any other enlightened nation in the universe. That there are bad and good, however, in every community, cannot be denied; but it will always be for those authorities by whom the juries are summoned, to select men of probity and unimpeachable character for the purpose. With regard to the Muhammedan law officers now employed in the several courts, I really do not see that they are less liable to be betrayed into corruption, if possible, than a body of Hindús chosen to sit as jurors. Corruption proceeds from avarice, or an inordinate and mean love of lucre, which very often overcomes every moral principle; and as that passion, when once indulged, has no bounds, the certainty of a fixed salary from government can prove but a feeble check against it, if those nobler principles of man do not intervene and make him look down upon all that is mean and worthless.

The Hindús, it is true, have been represented on various occasions as a race of people almost incapable of correction or amendment. They are, indeed, described as being devoid of all religious and moral feelings, sunk in ignorance, and addicted to all the vices that degrade human nature. But those European writers who have ventured to give them such an indiscriminate character, evince a degree of injustice and partiality in their assertions that would be hardly credible to those of their own countrymen who have more liberal views, and who have had better opportunities of ascertaining the fact. The works of these writers have, no doubt, contributed materially to raise the current of prejudice in the minds of Europeans in general against the natives to such a pitch, that it is hardly possible to anticipate a period, however distant, when experience and a closer connexion with the inhabitants of the eastern world will dispel the gloom which prejudice has shed around them, and bring them out in their native colours to the view of their European rulers. We are aware, however, that Europeans in general, from the nature of the situations they hold in India, as well as from their different religious principles, manners, and customs, cannot so nearly associate with their Hindú brethren, and, consequently, do not, unfortunately for India, possess such frequent opportunities of learning their real character. A thorough knowledge of the manners, feelings, and principles of a people can be acquired only by a free and unreserved intercourse with them, and a perfect acquaintance with their literature and science; but these opportunities and facilities, so essential to form a judgment of the people of this country, must have fallen to the lot of very few Europeans. It were vain, therefore, to look into the disagreeable picture drawn by superficial observers for any thing like a resemblance; they could, at best, only have copied their outline from a distant view, and painted it with the colours of their own imagination. It is uncharitable, indeed, to attach obloquy to a whole people from a few solitary instances of depravity, and to carry our prejudice against particular individuals and sects into the general body to which they belong; but that such has been the case with many cannot be denied. How absurd would it be, if the natives of this country were to judge of the character of the English people from the principles of the generality of that class of them who come out to this country as soldiers and sailors? And yet the inferences which most European writers have drawn regarding the native character appears to be founded on no better grounds. It is to be hoped, however, that at no distant period the more curious and impartial portion of Europeans will undertake to develope, from their

own personal experience, that with which their prejudiced countrymen have hitherto endeavoured to amuse the public at the expense of all that is dear to a nation, and consult the valuable productions of those great men, whose extensive knowledge of the manners, customs, and literature of this country, so eminently qualified them to form a more accurate opinion on the character of the people. The dread that I shall be charged with too great a diversion from the main purport of my letter, in vindicating the character of my countrymen, prevents my treating more largely upon this head. I shall, therefore, proceed to consider the fourth point, namely, whether there is any inconvenience or difficulty to be experienced by those who are called upon to sit as jurors in giving their attendance.

Hindús, as well as Muhammedans, are, it is true, generally very loath to travel or be absent from their homes, unless some pressing avocation or imperious necessity renders it unavoidable; but travelling in the present case, which is, indeed, the only inconvenience or difficulty that I see likely to be experienced by distant residents that may be called upon to attend as jurors at the sessions, will, I venture to say, be felt pleasant from the consciousness of the preference shewn to them in their being selected to perform the proud office of judges on the acts of their countrymen. But, as it is proposed that such travelling expenses shall be reimbursed to them, and as provisions may be made to avoid a person being summoned on jury oftener than once in two years, even that inconvenience or difficulty can be hardly felt; and I must not, at the same time, do my countrymen the injustice to believe, that they would not very willingly sacrifice a small portion of their ease and convenience, and even undergo some small expense to the service of the government under which they thrive, as the price of that protection and support which they obtain from them.

The fifth point which now follows to be considered is, whether Hindú jurors will feel any religious scruples in finding a verdict against a Bráhman. The Hindú law, it is true, does not subject the Hindú Levites to the same punishments and penalties as it does the other orders of Hindús; but few persons will be found in this part of India who can be so superstitious as not to perceive the injustice of that part of their law which, fortunately for the community, has long been superseded by other systems, and now remains a dead letter in their code. After all, the infliction of punishments and penalties rests with the court—the jury have nothing to do with them; they are merely called upon to declare, whether the person accused (be he a Bráhman, a Kshatriya, a Vaisya, or a Sudra) is *guilty*, or *not guilty*, of the crime with which he is charged. No

part of the Hindú law, with which I am acquainted, interdicts their freely declaring their opinion as to a Bráhman being guilty of a crime which he may, from evidence, appear to have actually committed. And this knowledge, moreover, on the part of the Hindú jurors, that the culprit will be convicted, if culpable of it, without even the instrumentality of a native jury, must remove any disinclination on their part to find a verdict against a Bráhman.

As to the sixth and last point, namely, whether native jurors are likely to be possessed of so retentive a memory as to recollect all the circumstances of a case which is of a complicated nature, and in which a great number of evidences may have been adduced, and what are the means to be adopted for preserving such recollection, I shall only advert to the many differences and disputes that are almost daily decided and disposed of by arbitration among the Hindús. Many of these cases are of a very complicated nature; and the native arbitrators do not find any difficulty in keeping in recollection all the circumstances connected with them. And in cases where that difficulty is likely to be felt, notes may be taken down by the jurors of the particular facts and evidences; or, if the judge will give himself the trouble of summing up the evidences, and make the case appear to the jury in all its different bearings, as is done by the judges of the supreme court, all objections upon this point must vanish.

In conclusion, I must beg to apologise for my inability to treat the subject in the manner it deserves. It were desirable, indeed, that the task had been consigned to abler hands. I have merely given my own free and unbiassed opinion on the several points about which you were pleased to question me, and have stated all that has occurred to me regarding them. Soliciting the favour, therefore, of your kind acceptance of this my humble attempt to handle a subject far above the reach of my limited acquirements,

I have the honour to be, honourable Sir,

Your most obedient and humble servant,

Madras, May 10, 1828. RÁM RÁZ.

ART. XII.—*No. II. of* Mr. WATHEN'S *Ancient Inscriptions.*[1]

स्वस्ति १ जयत्याविष्कृतंविष्णोर्वीराहंक्षोभितार्णवं १
दक्षिणोन्नतदंष्टायविश्रांतभुवनंवपुः ॥ १
श्रियमुपहरताद्वःश्रीपतिःक्रोउरूपोविकयविशदंदष्ट्राप्रांत
विश्रांतिभाजं १
अवहददयदष्टाकृष्टविस्पष्टकांउप्रतनुविसजययंथिवद्यो
धरित्रीं ॥ २
करिमकरमकरिकांकितजलनिधिरशनांवशीकरोत्व
वनिवधूं १
जगदेकमल्लभूपतिरकलंकयशोंबुराशिवलयितभुवनः ॥ ३
स्वस्तिसमस्तभुवनसंस्तूयमानमानव्यसगोत्राणांहारीतिपुत्रा
णांकौशिकीवरप्रसादलब्धश्वेतातपत्रादिराज्यचिन्हानांस
प्तमातृकापरिरक्षितानांकार्तिकेयवरप्रसादलब्धमयूरपि
ङ्कुंतध्वजानांभगवन्नारायणप्रसादासादितवरवराहलां
ङ्नेक्षणक्षणवशीकृतारातिराजमंउलानांसमस्तभुवनाश्रय
सर्वलोकाश्रयविष्णुवर्धनविजयादित्यादिविशेषनाम्नांरा
जरत्नानामुद्भवभूमिः १
कवलितनललक्ष्मीर्दुर्जयौर्जित्यहारीविहतपृथुकउंबाउंब
रोमौर्यनिर्जित् १

[1] See Royal Asiatic Society's Journal, Vol. ii. p. 376.

निजभुजबलभूम्नोत्पाटयन्राष्ट्रकूटान्गिलितकलचुरि
श्रीरस्तिचामुष्यवंशः ॥ ४
तज्जेषुराज्यमनुपाल्यगतेषुराजखेकोनषष्टिगणनेषुपु
राभयोयं ।
तद्वंशजास्तदनुषोऽशभूमिपालाःक्ष्मांदक्षिणापथजुषंबिभ
रांबभूवुः ॥ ५
दुष्टावष्टब्धायांवकतिपयपुरूषांतरांतरितायांचामुष्यकुल
संपदिभूयश्चामुष्यवंश्यस्य ।
कंदःकीर्तिलतांकुरस्यकमलंलक्ष्मीविलासास्पदंवज्रंवैरिम
हीभृतांप्रतिनिधिर्देवस्यदैत्यद्रुहः ।
राजासीज्जयसिंहवल्लभइतिख्यातश्चरित्रैर्निजैर्यीरेजेचिर
मादिराजचरितात्कंठाःप्रजानांहरन् ॥ ६
येराष्ट्रकूटकुलमिंद्रइतिप्रसिद्धंकृष्णाख्यस्यसुतंमत्तशते
भसैन्यं ।
निर्जित्यदग्धनृपपंचशतोबभारभूयश्चामुष्यकुलवल्लभरा
जलक्ष्मीं ॥ ७
चदुलरिपुरूरगपदुभटकरटिघटाकोटिघटितरणरागः ।
सुकृतहरचरणरागस्तनयोभूत्तस्यरणरागः ॥ ८
तत्तनयःपुलकेशीकेशिनिषूदनसमोभवद्राजा ।
धातापिपुरीवरपतिरकलितखलकलिकलंकलः ॥ ९
वयमपिपुलकेशिक्ष्मापतिंवर्णयंतःपुलककलितदेहाः
पश्यताद्यापिसंतः ।

सहितुरगगजेंद्रयामसारंसहस्रद्वयपरिमितमृत्विक्साद्व
काराश्वमेधे ॥ १०

तत्तनयः । नलनिलयविलोपीमौर्यनिर्याणहेतुः
प्रथितपृथुकदंबस्तंबभेदीकुयारः ।
भुवनभवनभागापूरणारंभभारव्यवसितसितकीर्तिः ।
कीर्तिवर्मानृपोभूत् ॥ ११

तदनुतस्यानुजः । सर्वद्वीपाक्रमणमहसोयस्यनौसेतुबंधैरु
ल्लंघ्याब्धिंव्यथितपृतनारेवतीद्वीपलोपं ।
राज्यश्रीणांहठपतिरभूद्यश्चकालचुरीणांबभ्रेभूमिंसहससक
लैर्मंगलैर्मंगलीशः ॥ १२

ज्येष्ठभ्रातुःसतिसुतवरेप्यर्भकत्वादशक्तेयस्मिन्नात्मन्यकृत
हिधुरंमंगलीशःपृथिव्याः ॥
तस्मिन्प्रत्यर्पयदथमहीयूनिसत्याश्रयेसौवामुष्यानांकइव
हिपथोधर्म्यतःप्रच्यवेत ॥ १३

जेतुर्दिशांविजितहर्षमहानृपस्यदातुर्मनोरथशताधिक
मर्थयेद्यः ।
सत्यादिसर्वगुणरत्नगणाकरस्यसत्याश्रयत्वमुपलक्षणमे
वयस्य ॥ १४

अडमरीकृतदिग्वलयोर्दितद्विडमरोपरिगीतमहायशाः ।
मृडमरिष्टकृतंमनसोद्वहन्नडमरिक्षितिपोजनितत्सुतः ॥ १५
सुतस्तदीयोगुणरत्नमालीभूवल्लभोभूद्भुजवीर्यशाली ।
आदित्यवर्मार्जितपुण्यकर्मातेजोभिरादित्यसमानधर्मा ॥ १६

तत्सुतोविक्रमादित्योविक्रमाक्रांतभूतलः ।
ततोपियुद्धमल्लाख्योयुद्धेयमसमोनृपः ॥ १७
तज्जन्माविजयादित्योवीरानेकांगसंगरे ।
चतुर्णमिंउलानामप्यजयद्विजयोपमः ॥ १८
तद्भवोविक्रमादित्यःकीर्तिवर्मातदात्मजः ।
येनचामुष्यराज्यश्रीरत्नरायिण्यभूद्भुवि ॥ १९
विक्रमादित्यभूपालभ्रातामीमपराक्रमः ।
तत्सुनुःकीर्तिवर्माभून्मृत्प्रासार्दितदुर्जनः ॥ २०
तैलभूपस्ततोजातोविक्रमादित्यभूपतिः ।
तत्सूनुरभवत्तस्माद्भीमराजारिभीकरः ॥ २१
अय्यणार्यस्ततोजज्ञेयद्वंशस्यश्रियंस्वकं ।
प्रापययन्निववंशंसववृतेकृष्णनंदनां ॥ २२
अभवत्तयोस्तनूजोविजयविहासीविरोधिविध्वंसी ।
तेजोविदितादित्यःसत्यधनोविक्रमादित्यः ॥ २३
चेदीशवंशतिलकांलक्ष्मणराजस्यनंदनांनुतशीलां ।
वोंथादेवोंविधिवत्परिणिन्येविक्रमादित्यः ॥ २४
सुतमिववसुदेवाद्देवकीवासुदेवंगुहमिवगिरिजापिदेव
मर्धेंदुमौलेः ।
अजनयदथवोंथादेवतस्तैलभूपंविभवविजितशत्रुंविक्र
मादित्यनाम्नः ॥ २५
अरिकुंभिकुंभभेदनरिपुदुर्गकवाटभंजनप्रभृतिः ।
सहजबलस्यहरेरिवबालक्रीडाभवद्यस्य ॥ २६

किंच । राष्ट्रकूटकुलराज्यसंभवौ ।
र्ऊर्जित्याच्चरणाविवप्रचलितौसाक्षात्कलेःक्रामतः
क्रूरौबद्धशरीरकौगुरुजनद्रोहप्ररोहाविव ।
कालात्रवंडितराष्ट्रकूटककुलश्रीवल्लिजातांकुरालूनायेने
मुखेनकर्करिरणस्तंभौरणप्रांगणे ॥ २७
इत्थंपुरादितिसुतैरिवभूतधात्रींयोराष्ट्रकूटकुटिलैर्गमि
तामधस्तात् ।
उत्पृत्यमाधवइवादिवराहरूपोबभ्रेचामुष्यकुलवल्लभराज
लक्ष्मीं ॥ २८
हूणप्राणहरप्रतापदहनोयात्रात्रसन्मारवश्चैद्यछेद्यखिलक्षमा
जयनयव्युत्पन्नधीरुत्पन्नः ।
येनात्युग्ररणायदर्शितबलप्राचुर्यशौर्योदयःकारागारनिवे
शितःकविवृषायंवर्णयिन्घूर्णते ॥ २९
भंभभरभादभवद्भूपालाद्राष्ट्रकूटकुलतिलकात् ।
लक्ष्मीरिवसलिलनिधेःश्रीजाकध्वाइयाकन्या ॥ ३०
चामुष्यवंशांबरभानुमालीश्रीतैलभूपालउपायतैनां ।
तयोश्चलोकाभ्यदययायोगःसचंद्रिकाचंद्रमसो
रिवासीत् ॥ ३१
श्रीतैलभूमिपालाच्छ्रीजाकध्वासमजीजनत् ।
श्रीमत्सत्याश्रयंस्कंदमंबिकात्र्यंबकादिव ॥ ३२
विद्विषद्गोत्रवित्रासीदेवोविबुधसंमतः ।
दिवीवभुवियोधत्तेसर्ववर्णधरंधनुः ॥ ३३

अपिच । यस्पप्रतापज्वलनेनदग्धःप्ररोहतीवारिगण
स्यवंशः ।
बाणैःप्ररूढांकुरजालकल्पैर्दिशांविजेतुःपथिसंनिविष्टैः ॥ ३४
तस्यानुजःश्रीदशवर्मनामातद्वल्लभाभाग्यवतीतिदेवी ।
तयोरभूद्विक्रमशीलशालीश्रीविक्रमादित्यनृपस्तनूजः ॥ ३५
असौनिजज्येष्ठपितुःपरोक्षंबभारवारांशिवृतांधरित्रीं ।
भुजेनकेयूरलतामिवोच्चैर्विदारितारातिकदंबकेन ॥ २६
ज्योत्स्नेवाच्छसुनिर्मलानिशिसरस्तीरेषुहंसाकृतिःकाशस्तोम
समासरित्सुगगनेगौराभ्रवृंदद्युतिः ।
कीर्तिर्यस्यतदुद्यमोचितशरच्चिन्हायमानारिपून्नित्यंभाव
यतीत्थमन्यसमयेप्यामासविद्वेषिणी ॥ ३७
वर्णाश्रमाणांस्थितयेस्थितोपियश्चाकरोद्वर्णविशेषहानिं ।
स्वकीर्तिभिर्व्याप्तदिगंतराभिस्तथापिलोकेमहनीयएव ॥ ३८
त्यागादयोयस्यगुणाःप्रसिद्धाःसंख्यामतिक्रम्यसदाप्रवृत्ताः ।
यःसज्जनानांहृदयानिबध्वासमाचकर्षस्वसमीपदेशं ॥ ३९
तदनुतस्यानुजः ।
यस्याखिलव्यापियशोवदातमकांउदुग्धांबुधिवृद्धिशंकां ।
करोतिमुग्धामरसुंदरीणामभूत्सभूपोजगदेकमल्लः ॥ ४०
सदावनस्थःपटुविक्रमाढ्योमदांगन्धेभघटाविपाटी ।
धरोर्जितप्रस्फुरितप्रभावोरराजयोसौजयसिंहराजः ॥ ४१
यत्रप्रसीदतिसमस्तजगद्धरण्येन्यउच्चकुरंतकमपिक्षिति
पाःसकोपं ।

यस्मान्मनोरथपथातिगमर्थमर्थीसिंप्राप्यसंस्मरतिनस्मसु
रद्रुमाणां ॥ ४२
अगमदखिलधात्रीयेनराजन्वतीत्वंनिवसतिनृपलक्ष्मीर्य
स्यशुभ्रातपत्रे ।
ससकलनमितारिक्षोणिभृन्मौलिरत्नद्युतिसंवलितपादो
गंउरोगंउभूपः ॥ ४३
अदोषाकरसंगोपिविनापिसुखदूषणं ।
सद्भूतिभूषणेयश्चसंप्राप्यजगदीशतां ॥ ४४
सतुश्रीपृथ्वीवल्लभमहाराजाधिराजपरमेश्वरपरमभयहा
रकसत्याश्रयकुलतिलकसमस्तभुवनाश्रयचामुष्याभरणश्री
मज्जगदेकमल्लदेवःश्रीमद्वल्लभनरेंद्रदेवःकुशलीसर्वानेवयथा
संबध्यमानकान्राष्ट्रपतिविषयपतियामकूटकायुक्तकनि
युक्ताधिकारिकमहत्तरादीन्समादिशत्यस्तुवःसंविदितंय
थास्माभिःशकेनृपकालातीतसंवत्सरशतेषुनवसुषट्चत्वारिं
शदधिकेष्वंकतःसंवत् ९४६ रक्ताक्षिसंवत्सरातर्गतेवशाख
पैर्णमास्यामादित्यवारेयंचंद्रमिलाधिपतिंबलवंतंचोलंनि
र्घाघसप्तकोकंणाधीश्वराणांसर्वस्वंग्टहीत्वाऽत्तरदिक्विज
यार्थंकोल्हापुरसमीपसमावासितनिजविजयस्कंधावेरप
गलटिविषयांतःपातिमुदुनीरयामजातायकौशिकगोत्रायब
ह्वृचशाखायब्रह्मचारिणेश्रीधरभट्टपोत्रायरेवणार्यभट्टपुत्राय
वासुदेवार्यशर्मणेयजनयाजनादिषट्कर्मनिरतायवेदवेदांग
पारगायपउदोरेद्विसहस्त्रांतःपातिकरटिकण्णुत्रिशतमध्ये

माउभूरूरूयामःसधान्यहिरण्यादेयःनिधिनिधानसमेतःरा
जकीयानामनंगुलिप्रेक्षणीयःसशुल्कःसर्वकरबाधापरीतः
सर्वनमस्योयहारोदत्तः । तस्यचाघाटा ।
पूर्वतःजालिहादुनाममामः ।
दक्षिणतःउनहस्तिनीममामः ।
पश्चिमतःवबुलिखेटनाममामः ।
उत्तरतःगोवंतिनाममामः ।
एतेषांचतुर्णांग्रामाणांमध्येपूर्वप्रसिद्धस्वकीयसीमासहितः
चतुराघाटविशुद्धःसयुष्माभिरागामिभिरस्मद्वंश्यैरन्यैश्चभू
मिपालैःपालनीयः ।
तथाचोक्तंभगवतावेदव्यासेनव्यासेन ।
बहुभिर्वसुधादत्तारांजभिःसगरादिभिः ।
यस्ययस्ययदाभूमिस्तस्यतस्यतदाफलं ॥
अपहरणेपिचदोषस्तेनैवोक्तः ।
स्वदत्तांपरदत्तांवायोहरेतवसुंधरां ।
षष्टिवर्षसहस्त्राणिविष्ठायांजायतेक्रिमिः ।
विंध्याटवीष्वतोयासुशुष्ककोटरशायिनः ।
कृष्णसर्पाहिजायंतेब्रह्मदेयापहारकाः ।
सुवर्णमेकंगामेकांभूमेरप्येकमंगुलं ।
हरन्नरकमाप्नोतियावदाभूतसंप्लवं ।
अन्यायेनहृताभूमिरन्यायेनतुहारिता ॥
हरतोहारयतश्चदहत्यासप्तमंकुलं ॥ रामभद्रेणाप्युक्तं ॥

सामान्योयंधर्मसेतुर्न्नृपाणांकालेकालेपालनीयोभवद्भिः ।
सर्वानेतान्भाविनःपार्थिवेन्द्रान्भूयोभूयोयाचतेरामभद्रः ॥
मद्वंशजाःपरमहीपतिवंशजावापापाद्पेतमनसोभुवि
भाविभूपाः ॥
येपालयंतिममधर्ममिमंसमस्तंतेभ्योमयाविरचितोंजलि
रेषभूर्द्धि ।
श्रीमद्राजाधिराजराजचूडामणेःश्रीमज्जयसिंहदेवस्यदानिः ॥
शासनाधिकारिमहाप्रचंउदंउनायकश्रीमत्प्रोणार्यप्रतिबद्ध
लेखकमाइअय्येनलिखितंमंगलंमहतीश्रीश्रीश्री ९

MR. WATHEN'S TRANSLATION OF THE PRECEDING INSCRIPTION.

Abstract Translation of an Inscription on Copper Plates found in the Fort of Miruj. Dated, sáka 946, *or* A.D. 1025.

OM PROSPERITY!

"STANZA."

"*Invocation.*"

1. In adoration of the Varaha Avatar.

2. May Vishnu, who in the shape of a boar upheld this world, preserve you!

"DESCRIPTION OF THE DONOR'S FAMILY."

Jagadeka Malla Rájá, descended from the Chámushya family, was a renowned and celebrated king.

He is deservedly commemorated by the whole earth, the asylum of the world. He was the first of the rájás, named Vishnu Vardhana Vijayáditya,[1] &c.

The renown of this Chámushya family exceeds that of Nala Rájá. By this dynasty have the rájás of the Kad'amba[2] race been destroyed, the sovereigns of the Maurya dynasty conquered, and the Ráshtra-Kúta rájás eradicated; by this race was acquired the kingdom of the princes of the Kulachheri dynasty.

Fifty-nine princes of this race, ancestors of that king (Jagadeka Malla), reigned in former times. Subsequently sixteen rájás in succession ruled the southern country; of such celebrity is this family.

Inimical rájás for some generations seized the kingdom of the Chámushya dynasty; but, in later times, a rájá of the same race, called Jayasinha-Vallabha, became sovereign, more beloved by his subjects than former kings.

[1] This passage in the original refers to the Chámushya family, describing it as the source of illustrious princes, celebrated by the appellations, Vishnu Vardhana, Vijayáditya, and the like. In this, and several other places in this inscription, the abstract translation is extremely compressed.—H. H. W.

[2] Which reigned at Banavasi, near Sunda. *Vide* WILKS's *Mysore Translator*; see, also, Introduction to Mackenzie Collection, xcviii.—H. H. W.

Who, conquering Krishna Rájá's son, Indra, of the Ráshtra-Kúta family, caused to be burnt five hundred rájás, and restored the fortune of the Chámushya race.

His son was Ranarága, a most virtuous and religious prince.

Whose son was Pulakesi, valiant as Vishnu, sovereign of Dhátapipura.

This rájá, whilst performing the Aswamedha[1] sacrifice, gave to priests two thousand villages, with elephants and horses; of such extreme liberality was his disposition.

From him arose Kirtivarma Rájá; superior to Rájá Nala; destroyer of the rájás of the Maurya and Kad'amba dynasties; who first caused the land to become well inhabited: whence his fame.

After him his youngest brother, Mangalisa, reigned: a great hero, who having sent his troops on ships, as over a bridge, across the sea, conquered Revanti-Dwipa.[2]

As his elder brother's son was young, and not of age to sustain the government, until he was of sufficient maturity he held the government; but his nephew, Satyásraya, becoming of sufficient capacity, returned it to him; for which of the Chámushyas ever deviated from rectitude?

Satyasraya became a great hero: he had a son called Nadamari, who resembled him in valour.

His son was Aditya-Varma, magnificent as the sun.

Whose son was Vikramaditya, an heroic conqueror of this earth.[3]

From him a son, called Vijayaditya, warlike as Arjuna.[4]

His son was Vikramaditya; his brother Bhima-parákrama's son, Kirtivarma, next reigned, by whose policy the kingdom of the Chamushya dynasty was greatly enlarged.

From him arose Tailabhupati, whose son was Vikramaditya, whose heir was Bhima Rájá, dreaded by his foes.

His son was Aryanarya[5] Rájá, who married the daughter of Krishna Rájá as Vishnu married Lakshmi.

Of these was borne Vikramaditya, who married Votha-Devi,[6] of Shisupala[7] Rájá's family, the daughter of Lakshmana Rájá.

From these two proceeded Taila-Bhupa Rájá, as Krishna from Devaki and Vasudeva, as Kartikeya from Parwati and Mahadeva;

[1] Sacrifice of a horse. [2] Query—The Isle of Rawan, Ceylon?

[3] One descent is here omitted, viz. Yuddhamalla.—H. H. W.

[4] The descent is here something different in the original, Vikramaditya, Kirtiverma or Kirttivermmá.—H. H. W.

[5] Ayyanárya.—H. H. W. [6] Vonthá.—H. H. W.

[7] Lakshmana is the name, not Sisupála: his title is Chedísá, king of Chedi, of which, in the days of Krishna, Sisupála was king.—H. H. W.

valiant as Indra, who, with ease, conquered in battle Karkara and Ranastambha, rájás both of the Ráshtra-kúta race. He recovered the Chamushya kingdom from the Ráshtra-kúta kings, as Vishnu, in the shape of a boar, saved this earth from the Rakshasas.

Who destroyed the rájás of Huna Desa. In whose praise priests are constantly employed.

There was a daughter of Bhambhaabhara Bhupála Rájá, of the Ráshtra-kúta family, named Jakadhwá, as Lakshmi, from the ocean; to her was married Taila Bhupa, of the Chamushya race.

Their conjunction was for the happiness and benefit of mankind; from these arose Satyásraya, as Skanda from Parwati and Mahadeva, who enjoined to the four castes the observance of their respective customs.

The youngest brother of this Srí Satyásraya Rájá was Srí Dasavarma: his wife, was Bhágyavatí Deví; to them was born a son, called Vikramáditya, who was equal to Vikrama himself in valour.

This Vikramáditya Rájá,[1] of his own prowess, succeeded his uncle in the government.

After him his youngest brother, Jagadeka Malla, reigned, with whose fame the world is filled. A sole hero on this earth.

To him succeeded Jayasinha Rájá,[2] whose renown and prowess is most celebrated.

He being prosperous,[3] proclaims to all those in authority, Ráshtrapatis,[4] Desapatis,[5] heads of villages, who are Swatadhikarí,[6] and to whom authority has been granted to such chief persons, and all others.

Let these my acts be known to all of you! In Saka 946,[7] the year called Raktakshi, during the full moon of Vaisakha on Sunday, (having defeated the powerful Chola Rájá, the king of Chandramila, and having seized the kingdom of the seven rájás of the Konkana, being, with his victorious army, on his march to conquer the northern countries in his camp at Kolapura,) to Vasudevaraya, of the Kausika race; Rigvedi-Bramachari, the grandson of Sridhara Bhatta, and son

[1] Dasaverma, therefore, was not king.—H. H. W.

[2] Nothing about succession appears in the original, and the term seems to be an epithet of Jagadekamalla.—H. H. W.

[3] The prince is here called Jagadekamalla, Vallabha-karendra-déva.—H. H. W.

[4] Governors of provinces. [5] Governors of districts.

[6] Who are hereditary officers, or *watandárs*.

[7] This is worded, "so many years of King Shaka being gone;" in numerals, Samvat 946. Samvat seems used merely as year, and the Pandits say it is frequently thus applied to Shalívana's era."

of Revanárya Bhatta, of the village Mudunira, in Palagati Desa, a sacrificer and performer of the six Sacerdotal rites, fully acquainted with the Vedas and Sastras; to such a Bráhman, in the Pardori district of two thousand villages, in the Karaticannu, three hundred villages, situated in such district, the village of Mandhabhúrúru, with its grain, gold, hidden treasure, and mines, is given by me as Agrahara.[1] No one of this kingdom can even hold up a finger against such village; this, with its property, all taxes, dues, &c. being remitted, being henceforward to be respected by all, is hereby granted.

Its bounds, east, Jálihádu village; south, Unahalli village; west, Vavullikheta village; north, Govanti village, with its land-marks, with respect to those villages.

These villages you and your successors are to enjoy. I, and my successors, and others, must continue this grant!

"USUAL EXTRACTS FROM PURANS."

Then:—

The chief gem among mighty kings, Srí Jayasinha Rájá,[2] hath bestowed this village on a holy priest.

The chief justice, Srimata Pronarya, caused this writing to be composed, and Maiyya wrote it. Be propitious!

Translated by W. H. WATHEN.

LIST OF KINGS IN NO. II.

1. Jagadeka Malla, of the Chámushya, or Chowhan race, and of the Vaishnava sect.

Vishnu Vardhana Vijayáditya, a race who ruled in the Circars.

Fifty-nine rájás, ancestors of Jagadeka Malla, ruled, in ancient times, in the north, and subsequently sixteen in the south.

From this race is sprung:—

1. Jayasinha Vallabha.
2. Ranarága.
3. Pulakesi, who reigned at Dhatapipura.
4. Kírtivarma I.

[1] A religious grant.

[2] Jayasinha is only another name, or epithet, of Jagadeka Malla, apparently.—H. H. W.

5. **Mangalisa, who sent an expedition beyond the seas to Revanti Dwipa.**
6. **Satyásraya I.**
7. **Nadamari.**
8. **Aditya Varma.**
9. **Vikramaditya I.**
10. **Yuddhamalla.**
11. Vijayáditya.
12. Vikramáditya II.
13. Kírttívermá II.
14. Kírttívermá III.
15. Tailabhúpati I.
16. Vikramáditya III.
17. Bhíma.
18. Ayyanárya.
19. Vikramáditya IV.
20. Tailabhúpa II.
21. Satyásraya II. (Sáka 834.)

—.*Dasavarma.

22. Vikramáditya V.
23. Jagadeka Malla.

—.*Jayasinha, the granter; the grant made on his return from conquering the king of Cholamandala.

ART. XIII.—*Remarks on the Yih-She, a Historical Work of the Chinese, in Fifty Volumes, by the Reverend* C. GUTZLAFF, *of Canton, &c. &c. &c.*

Read February 6, 1836.

THOUGH the Chinese never instituted Olympic games, at which their orators, poets, and historians, might challenge competitors and receive the applause of the nation — though they never knew that liberty, which, while disenthralling the human mind, extends the sphere of thought and research,—they only want orators, in order to equal the most celebrated nation of the west, not in classical productions, but in prolific and elaborate volumes.

To a European reader, Chinese historical works present few attractions, if he be not an enthusiastic Sinologue. They are monotonous, intricate, and barren of those events which possess a stirring interest; yet, when one is acquainted with localities, and deeply concerned in the rise and progress of so great a nation, — in one word, if we commence the perusal of the Chinese records with the patriotic feelings of a Chinaman,—they have inexpressible charms, far greater than the history of the Peloponnesian war, though traced by a master hand.

We refrain here from offering any general remarks upon Chinese history, but confine our notice to one particular work, which we believe to be little known in Europe.

The *Yih-She* 史繹 or *Explanatory History*, published in the ninth year of KANG-HE (A.D. 1670) in fifty volumes. It argues greatly in favour of a new, rising dynasty, that such a compilation, for it is nothing else, was published so early. It contains the sayings of the greatest statesmen and sages, so that every Chinese breast, in perusing it, must be warmed with noble enthusiasm. He is here taught to despise barbarians as an inferior class of beings, and to look back with pride on past ages; yet, when he reflects, that rulers of barbarian origin presented him with these invaluable documents, he will either bewail the degeneracy of the present generation, or begin to believe, that other nations can at least appreciate the treasures of Chinese literature.

It is less the history of human actions than of mind. Instead of finding here details of wars and bloodshed, as in other historical

works, we see only the maxims of sages recorded. In order to enhance their excellence, they are contradistinguished to the remarks of parasites and worthless statesmen. But the author of this compilation has wisely abstained from collecting his materials from works of a later period, when the Chinese ceased to think for themselves, because their ancestors had arrived at the acme of wisdom. His extracts, therefore, which he has divided into one hundred and sixty books, end with the *Chow* dynasty; for from this moment, as some admirers of antiquity would make us believe, originality in thinking and acting ceased, or was unworthy of the notice of the philosopher. Thus, several centuries before the Christian era, the Chinese, dazzled by the splendour of the genius of their ancestors, trembled at the idea of differing from them; improvement was considered as innovation, and an apparent progress in knowledge, real retrogression.

This work treats of the origin of the world more fully and satisfactorily than we have met with in any other historical notice; however, *Lĕĕ tze* and *Yhrae nan tze*, both of the number of the *Shih tsze* (ten philosophers), expatiate upon a subject of which they confessedly know nothing. The existing chaos, the mutual operations of the *Dual* principle, *Yang* and *Yin*, and the readiness with which they explain the creation of a spiritual and material world, furnish ample proofs of their inventive genius, which substitutes opinions for facts. But they are nothing when compared with the whimsical cosmogony of the *Woo Yun leih neën ke*, which boldly relates, that at the death of PWAN-KOO, a creature of the *Yin Yang*, his breath was changed into wind and clouds; his voice into thunder-peals; his right eye became the sun; his left, the moon; his members, the four poles, and the five mountains; his blood and humours, streams and rivers; his sinews and arteries, the terrestrial globe; his flesh, land and acres; the hair of his head and whiskers, the stars; the hairs of his skin, plants; his teeth and bones, metal-rock; his marrow, pearls and precious stones; his flowing perspiration, rain; and the insects which stuck to his body, the black-haired people (Chinese?) What a worthy grandsire! not only the inventor of a pigmy race, but likewise the progenitor of a world; and all this not during his life, but after his death! But, after a good deal more nonsense, it is consolatory to read, that YANG-TSZE considers early history as a mere fable. A series of inventions, from the finding out of fire to the knowledge of astronomy, is solely ascribed to emperors, whose long-lived reigns furnished them sufficient leisure for deep research. That destructive deluge, however, which the Chinese only record as a fact, without entering upon its extent and duration, seems to have swept away

civilisation from the earth. By what manner, however, the sayings of the antediluvian sages were preserved, they are unable to tell; yet the Chinese, we believe, of all nations of the world, not only boast of the longest line of rulers, but also of the most perfect system of political economy.

Notwithstanding all this, the celebrated YAOU at his accession to the throne, found the country in a state of barbarism. To reclaim it from this savage condition, he not only uttered wise maxims, but, advised by SHAN, a man whom he had raised from the lowest degree, he took effectual measures to civilise the people, and establish that constitution, which the Chinese pretend to maintain until now. This is, then, doubtless the most ancient constitution framed by mortals, which, after a trial of more than three thousand years, is still considered the best. It needs neither reform nor revision, but stands unrivalled as a sacred code, destined to reform all barbarians; and whilst spreading true civilisation, eradicates all causes of war and bloodshed.

For the sake of our countrymen, we should wish to copy a good deal of this stupendous political fabric, in order to benefit Europe by sage remarks; but, we fear, that, blinded by barbarian conceit, they would view the best maxims either as commonplace truisms, or consider them as inapplicable to the government of a state.

Religion was, at the same time, not forgotten. Instead of confining the worship to a few single objects, or engrossing the whole mind by superstition, the founders of the Chinese dynasty placed heaven and earth at the head of the deities, and embodied rivers, mountains, valleys, &c. in their demonology. Adding to this a great many sages and demi-gods, they shewed a formidable host of idols to the votary; but, to relieve him from that anxiety which so multifarious a service must surely create, their worship consisted in voluntary and slight ceremonies, which, in the present age of improvement, might as well be performed by steam. Yet the knowledge of the true God was not yet so entirely extinct, that there should not have been left some faint traces amongst the rubbish of a degraded and brutish mind. Whoever wishes to know what the Chinese retained of the patriarchal creed, has only to read the passages in the *Yih-She*, which refer to SHANG-TE, the supreme emperor, the most sublime and impressive of all the ancient writings. The nation would not be in that degraded condition in which we find it now, if these notions had been retained; but, alas! the officious commentators view this deity as an indefinable nonentity.

The change of dynasty, called forth by the wickedness of the

reigning princes, might have furnished a dangerous precedent to each revolutionary character, to drive the legitimate prince from the throne, if the Chinese writers had not counteracted the love of innovation. The successors of the great YU, who constitute the celebrated *Hea* dynasty, had degraded themselves by the lowest vices, and were, in the eyes of the nation, unworthy of the throne upon which their hereditary rights had seated them. KEĚ-WANG, the last of this line, in whom all the wickedness of his predecessors seemed to be united, had no redeeming virtue, and could not naturally reign over a nation, which looked up to YAOU and SHUN as the great patterns of their princes. CHING-TONG, then a popular character, and one of the tributary princes, at once resolved to free the nation from such a monster; but to do this with good grace, he appeals to SHANG-TE for the justice of his cause, and first obtains the suffrages of the people, ere he opposes the legal authority. The *Yih-She* has nearly a whole volume upon republicanism, as we would term it. The new candidate for the crown considers himself as a simple shepherd of the flock entrusted by SHANG-TE to his care. Though he is responsible to SHANG-TE for the behaviour of the people, and has to expiate their sins and transgressions, he is otherwise a mere cipher, and the people are all in all. Long before the French revolution, mankind might already have learnt the sovereignty of the people from the *Yih-She*, so comprehensive are CHING-TANG'S views upon it; but when the nation flocked to his standard, and the KEĚ mercenaries had fled or deserted the royal banner, CHING-TANG is conscious that he is a monarch, whose sovereign will must never be disputed. The vicarial office in which he feels himself placed by heaven, to act as intermediator, not solely for the Chinese, but also for the barbarians of the whole globe, appears to have been first fully understood by CHING-TANG. Since that, the Chinese emperors have continually considered themselves as celestial representatives, armed with the terrible power of executing heaven's vengeance on earth.

One of his long line of successors, WOO-TING, who bewailed the ruin to which the dynasty of SHING or YIN hastened, was anxious to counteract it; but feeling himself inadequate to such a high task, he looked for an able coadjutor. He saw a man in a dream, but not finding his resemblance among the crowd of courtiers and ministers, whom he called before him the next morning, he had a likeness of the apparition drawn; and when the original was found, he proved to be a man of very low degree. But the prince perceived, through the coarseness of his appearance, the great spirit which animated this humble man. The *Yih-She* preserves the whole conversation which

took place at the first interview. If the minister be called here the whetstone for the weapon, the rudder for the boat, the genial shower for the grass, we feel the justness of the comparison. But the minister gives a repartee as clever as the flattering address of his majesty: he was not merely an able spokesman; he acted up to his principles, carried reform according to the model of the ancient kings, and perceived with pleasure, that six of the surrounding barbarian nations were so prostrated by the transforming influence of the administration, that they immediately sent their tribute-bearers to the Chinese court.

Though the *Shang* family lived so long, and reigned over the country, the family which was driven from the throne could never forget the insult offered to them. Even the assiduous endeavours of an accomplished minister could not re-establish the authority of the laws. At the same time, the family of *Chow* rose to eminence. Its origin is very remarkable, and we relate it in the words of the *Yih-She*. The consort of TE-KWUH, an emperor antecedent to YAOU, went out, and observing a large footstep of a man, she trod into it playfully. After a while she bore a son, and, viewing the child as very ominous, she put it into a ravine, where horses and cows used to pass; yet these animals carefully avoided treading upon the child. She then exposed it in a forest; but there were great crowds of people collected. She, therefore, threw it into a ditch, which soon was frozen over; but there came birds that covered the babe with their wings. The cruel mother seeing this, repented, took the child up, and nourished it. When still a boy, he shewed the intelligence of an adult; when he played, he used to plant trees, hemp, and pulse. Having received the name of *Peën* (the rejected) by his mother, who had exposed him, he exhibited, when grown up, great skill in agriculture; and the people soon looked upon him as a pattern, as well in the cultivation of the ground, as in the bringing in of the harvest. He was, therefore, under YAOU, made minister of agricultural industry, and gradually rose to the dignity of a tributary prince, whose posterity afterwards laid claim to the Chinese throne. The father of WOO-WANG, who drove the *Yin* from the throne, had married LE, a very intelligent princess. While she was pregnant with that prince she never listened to obscene talk, nor ever uttered a bad word. When sleeping, she always lay straight; she sat and stood erect; in her food she never indulged a vitiated taste; whatever was not cut nicely, she did not eat; and even did not sit down upon a couch which was not well arranged. Thus she brought forth a child, whose symmetry of form, and well-balanced endowments, far surpassed those of common mortals. In a word, he was a perfect

model of a Chinese automaton of etiquette—a child of CONFUCIUS's ideal perfection—another CYRUS, as we find him in the *Cyropædia* of XENOPHON. We should like to see a comparison between the Persian and Chinese; and recommend to the author of such performance the *Yih-She*, where he will find an ampler store of eulogies than even in the mellifluous language of the western historian.

It will, after these remarks, be unnecessary to say, that WOO-WANG never committed any error; his wisdom was so far famed, that the surrounding barbarians made him the arbitrator of their disputes, and relied on his power to subdue and quell rebellion. He once asked a nobleman of high rank, what were the principles upon which a kingdom ought to be ruled? The man answered, to love the nation, and nothing else. *Query*, What is to love the people? *Answer*, Benefit them, and do not injure them; contribute towards their perfection, without ruining them; make them to live, and to avoid their death; give to them, and do not take away from them; cause them to rejoice, and do not afflict them; render them cheerful, and do not arouse their anger. This is the principle of ruling a kingdom. To gain the affection of the people, it is only necessary to love them. The prince further asked, "What is the government of a virtuous prince?" and received for answer: "His administration is equitable; his officers are not burdensome; the duties he levies, small; what he himself spends, is little; he does not injure the public weal by his private interest, nor indulge the worthless, nor punish the innocent; not guided either by his pleasure or displeasure, he confers favours, or executes punishment; he considers it wrong to raise clever men who have committed errors; in his palace, he listens not to the talk of worthless women; in the higher ranks, he suffers no intrigues; in the lower grades, no covert lurking to do mischief; he does not keep minions at court with whom to squander money; nor does he erect terraces and pleasure-grounds, to oppress the people; nor does he encourage works of sculpture, engraving, and gilding, in order to delight the eye and ear; the officers of government will have no hoards amassed by corruption and extortion, and there will be no starving people in the country. This is the way in which an excellent prince rules over the country." WOO-WANG said, "Excellent!"

If we commenced to cite the advice given in the *Yih-She* to the princes about the burial of the dead, the time of mourning, and other rites and ceremonies, which are all requisite to a good government, we might be edifying, though not interesting. We can only remark, that there is much common sense in many of the conversations, which,

like PLATO's dialogues, are carried on to a great length. At the same time, there is much formality and affectation even in the rounding of periods, and the most trivial expressions. Few French writers could bring so many antitheses together, nor write with such measured elegance, if we may thus call an artificial style. These Chinese dialogues are, moreover, in one or two points, very different from the Greek. The system of the Chinese philosophers is a gross materialism, devoid of poetical powers; their sphere of thought extends to the visible world; here they live, and no metaphysical subtility troubles their head. They prefer the useful to the speculative; good government, which, in their opinion, is the sole source of individual happiness, forms the incessant theme of their discourses. Repetitions are, therefore, very frequent, but they recur in a variety of expressions. If any body takes the trouble of collecting the thoughts which are expressed in so many words, he finds, that, after summing up the total, he has had a scanty gleaning. Persons who are conversant with the multifarious systems of philosophy in the west, consider, of course, Chinese genius very barren; but a Chinese, if acquainted with the numberless host of opinions protruded by the brain of western barbarians, would decry every thing not strictly accordant with the sentiments of his sages as miserable nonsense. As far, however, as we are informed, no foreigner has attempted to communicate their philosophy to the Chinese; for Buddhism is a system of superstition, and this is the only production of foreign minds which has obtained currency in China. The Greeks consulted the Chaldeans and Egyptians, but the Chinese did not apply to any nation for instruction; what, therefore, they possess is original, and, as such, highly deserving our attention.

The *Chow* dynasty, of which WOO-WANG was the founder, is the golden age of Chinese history. During its reign, those philosophers lived who became the teachers of all ages, and who are until now the political guides of a late posterity. Every true Chinaman dwells with delight upon those times, and recalls to his mind the golden age of his ancestors. The minute detail of all events which occurred; a careful enumeration of the tributary states which then existed; of the wars they constantly waged; the lives of the great ministers and sages, who then flourished, fill more pages than the voluminous writings of PLUTARCH.

It is one of the fundamental principles of Chinese philosophy, that virtue is deeply implanted in the human breast: for the general corruption of manners, which prevailed during all ages, the Chinese worthies cannot well account, but refer their followers to high anti-

quity, when all people were virtuous. As, however, the virtuous inclinations of mankind, in spite of daily experience, remain, in their opinions, the same, it is, they say, the most easy thing in the world to render a whole nation, though degenerated, virtuous. A prince, a minister of state, a single individual, has only to be virtuous himself, and the whole nation, in observing it, will become so in a moment. The superior man moves with his virtue heaven and earth: by it he transforms the universe, without the least exertion. He averts calamities, conciliates the blessings of heaven, and becomes the arbitrator of human destiny. But the blessings he imparts to the world are not confined to this short span of life; on the contrary, long after his death, his virtue proves efficacious. CHING-WANG, the successor of WOO-WANG, had an instance of this great truth. During one year of his reign, storm and rain never ceased; the grain did not grow, and the trees were thrown down. With fear the prince opened a box, containing the records of his ancestor, and examined them. Here he became acquainted with the profuse virtue of CHOW-KUNG. This was the name of his uncle. He went to meet him during the night; and, shedding tears, prevailed upon him to return to his country, from which he had been banished by intrigue. Heaven then answered his prayer: the grain grew, the trees stood erect, the whole empire was re-established; and all this on account of the abounding virtue of CHOW-KUNG, which was powerful enough to work such amazing changes!

Yet, notwithstanding this universal excellency, mankind, they say, still need reform. That this is a measure absolutely necessary; but a man must reform himself, then his family, and afterwards the state: wherever the natural progress of this reforming system is interrupted, the Chinese sages despair of success, and assert, in the face of the whole world, that reform begins at home. Though this may appear a great heresy, there is not one dissentient voice in the whole *Yih-She*, or even a hint at reversing this order of reform.

According to the institutes of the Chow dynasty, the sovereign is lord spiritual and temporal of the empire. He has the power not only of appointing governors to the various functions of the empire, but also to regulate the ritual — in other words, the national religion. As Heaven's vicegerent he naturally possesses unlimited power, and ranks above many of the minor deities who have only a local sway. Every idol which his majesty sanctions, every hero he canonises, becomes, from that moment, an object of adoration to the people; but he may, also, degrade those who were exalted, abolish the sacrifices which were formerly offered to them, and entirely interdict the

worship. The power of the Chinese monarch, therefore, extends into the spiritual world; and it is really a pity that he has no means of informing himself whether his commands, addressed to one or other of these ethereal beings, have been obeyed or not. Of one thing, however, he is certain, and this is surely a great consolation, that all his orders, whether directed to *hades*, or the inhabitants of this world, ought to be implicitly obeyed; and, being sure of this, he hesitates not to note down upon his records that they have been obeyed. His imperial majesty is most liberal with the canonisation patent; and never scruples, if a handsome sum is paid down, to confer honours upon the dead, and to raise them up one, two, perhaps ten degrees, according to the amount of the fee. All, moreover, is so excellently regulated, that every reference can be given in the imperial red-book, as far as the rank of the deceased is concerned.

As there are so many rites, the observance of which is absolutely necessary for the maintenance of the state, the Chow sovereigns were also the grand masters of ceremony. These are so numerous, that they occupy a good deal of study and exhaust the mind; yet their being arranged in regular order, and classified with admirable skill, leaves to the performer only some difficulties, and greatly facilitates the duties of the grand-master. Happy were the Chinese monarchs who could train their subjects like machines, control every step, rectify the gait, direct the motions, and make a puppet even out of the very soul of man! No Prussian serjeant could ever, in the least degree, equal this imperial master when he drills the recruits; yet the Chinese autocrat has the mortification to find out that the ponderous code of rites is mostly a dead letter, whilst a drill-serjeant does not utter his commands in vain.

After much dry detail about bowing and prostrating, burying and marrying, the author of the *Yih-She* has inserted several popular odes or songs, which are descriptive of the manners and the political state of the country. The generally received opinion that the first literature of a nation is poetry, is not found to be applicable to the Chinese. It is true, the poetry which has been preserved is of very ancient date, yet if the words were a little altered it would be nothing but prose. There is no flight of thought, no bold conception, no dazzling imagination, but homely herbs, and spring, with its willows and flowers, all blossoming and laughing, whilst the tall, reclining bamboo nods his assent to this checkered group. In the mean while the superior, man, steals along under the fluttering of birds, where the field-rat walks in solitude; below him are the rushes, above him the bamboo; he rests himself, and falls into a slumber,

and naturally dreams, but the interpretation of the dream is more wonderful than the dream itself. A gentle shepherd enumerates speedily afterwards the number of herds of bleating cattle under his charge, who have an equal share of sleep and dreams. But the prince raises his eyes to the galaxy in the heavens, and bewails the calamities, rebellion, mortality, and starvation, with which heaven has afflicted his people. Reflecting upon the miserable state of the country, he clearly perceives that the wrath of heaven has fallen upon the nation, because the sacrifices to the various deities were neglected, and that even SHANG-TE, the supreme emperor, was offended. In awful suspense he awaits the decree, and it is like the crush of a thunder-clap which resounds in his ear; but, whilst looking up to heaven, he sheds tears, and his mind is pacified. The latter part of the song was probably sung at the sacrifices, or during the processions on solemn occasions. But his solemn addresses are not confined to a single object of adoration; no! ancestors, penates, and deities of various description, share in the invocation.

Many of these odes are difficult to be understood, because they refer to some remarkable event of which the history is now lost; authors introduce us into the domestic life of the Chinese, which, notwithstanding the great lapse of time, is still nearly the same. When we now consider that these odes were composed by a contemporary of Homer, we must admire their simplicity, and only regret that they are too brief, and leave a great deal to be guessed at. It is, however, extraordinary, that there is scarcely any thing about feats of valour, conquest, a gloriously won battle, a defence of the liberties of the nation. These things have no charms for the Chinese; they only praise the hero who wages war in order to pacify the world and to punish the wicked; and even he is not much the object of eulogy from authors, if he exhibit no wisdom in his administration. We have neither epic poems nor didactic poetry. Chinese genius delights in abrupt verses.

In China a man is not born a poet, but raises himself to inspiration by close study; and thus it happens that little boys begin to rhyme as soon as they can tolerably compose a few lines in prose. However, it ought to be remarked, that there is little difference between Chinese prose and verse; the former, if well-written, must have the rhythmus and cadence which almost resembles the feet of blank verse. Yet it is by no means a neglected part of literature; there have been real poets who copied nature, but they laboured under very great disadvantages. Originality is, with us, a quality which every true poet must possess; with the Chinese, on the contrary, every standard rhymer has

his *Gradus ad Parnassum*, from which he must choose his expressions, in order to please, or even to claim the poetical laurels. The ancients have wisely provided for posterity even in poetical diction, and whoever has learnt the most by heart naturally succeeds the best. After all, the poets in the celestial empire might greatly profit by applying some of the poetical rules of western barbarians to their own compositions.

The feudal system, which had existed in China from the very foundation of the empire, was sanctioned by WAN-WANG, who distributed the country amongst his own family, and the descendants of the former dynasties. These princes, however, like those of the Germanic body, made themselves independent, and henceforth continual war and bloodshed, raised by their ambition, filled the country. But whilst many generals obtained laurels in these civil wars, there were, also, men whose sole object it was to re-establish peace, and who travelled about to dissuade the tributary princes from indulging any longer in their passions. The *Yih-She* faithfully records their arguments; the sentiments, though often theoretical, are noble; but the effect produced was slight. To revenge injuries, to regain what had been lost, to acquire new territory, to oppress others,—all this engrossed the minds of the petty rulers, and made them impenetrable to admonition. Yet the Chinese sages constantly aim at curbing the passions and subjecting them to reason.

KWAN-TSZE, a philosopher and statesman of those times, was requested, when at the court of Tse, to explain the nature of a pastoral government. He who wishes to act like the shepherd of his people, he said, must lay up stores in the four seasons. If a country is rich in goods, foreigners will repair to that country. A small country thus rising will attach the people to the soil. When the magazines are full they will attend to the rules of etiquette. Well provided with food and raiment, they will guard their honour and avoid disgrace. If the superiors pay respect to the institutions of the country, the relationship between mankind will be firmly established. Promote decorum, justice, integrity, and modesty, and the royal law will be effective. Be careful in framing the criminal code to reduce the punishments; and cause the statutes of the realm to be obeyed by operating upon the public spirit; and, in order to make the people docile, you have to inculcate the worship of demons, gods, and deities, hills and rivers.

The Chinese philosophers preferred the court to any other abode. If they had a number of followers, they either requested the prince to pay them a salary, or to place them in office. Thus the maintenance of our celebrated philosophers was a heavy burden, and whilst they

taught the prince how to rule the nation by virtue and virtue alone, they emptied his coffers.

Their discourses were not confined to the principles of liberty: they never dreamed that monarchy or even despotism was hurtful to a country; but they put the weal and wo of millions into the hand of a single individual, and taught him to follow the principles of justice, to love and cherish with paternal tenderness the whole nation, and to watch their interest whilst sacrificing his own. We do not suppose that they themselves could find any better form of government than that of a family upon a large scale; the means to establish this was implicit obedience on the side of the children, and patriarchal kindness and dignity on the other. As far as the theory, there is nothing more natural, amiable, and appropriate; but, when it is found, on trial, that the qualifications, which are the *sine quâ non* of success in giving strength to such a patriarchal government, are wanting in the ruler as well as the subject, patriarchal affection degenerates into tyranny, and filial love into slavish fear. The statesmen who promulgated these principles often assured the princes, that, having fully adopted them, it would be as easy to rule the empire as to turn the finger in the palm of the hand; but they were unable to establish this bold assertion by facts; hence the disrepute into which they often fell, and the desire of that corrupt age to continue in the old crooked way, and to shut the ear against all exhortations.

Execrable as the murder of a prince by the hands of his subjects is, there are instances of this kind in Chinese history; and the sages often refer to them, in order to strike terror into their stubborn pupils. In some passages this sacrilegious and nefarious act is even palliated, under the plea that it was perpetrated in the hope of stopping the effusion of blood, by delivering one crowned head to capital punishment. That this is treading on very slippery ground, and opening the door to assassination is self-evident, and no fine-spun sophism can counteract the horror felt in reading of such infernal acts.

We are by no means to wonder that the *Yih-She* dedicates so many pages to that prince of literature, CONFUCIUS. His slightest words and actions are represented with a dignity due to the founder of every useful institution in China. A whole volume contains his *Memorabilia*, which strongly remind us of XENOPHON'S work upon SOCRATES. The contents, however, bear little resemblance to each other. CONFUCIUS shines as the counsellor of princes. His disciples receive instructions in political economy, and in all the branches of science, which, according to Chinese notions, form the minister of state. They are almost all candidates for office, eager to prove, by

their administration, that they had fully imbibed the doctrines of the sage. CONFUCIUS, like most wise men, made little progress amongst his contemporaries; but his long-lived fame far exceeds that of any other philosopher. Whilst the works of other sages are either buried in oblivion, or studied by few scholars, his writings have been, and are still, read by millions, recited by all classes and ranks, and considered as infallible by the third part of the human race. What would the Greeks have given to acquire such lasting renown! The few individuals who followed the precepts of their immortal teachers, did homage to their memory; but the bulk of the nation never reduced philosophical opinions into practice. They were forgotten and discarded, and other systems equally ephemeral rose upon their ruins. CONFUCIUS, however, has continued an object of the deepest veneration; his doctrines are looked upon as the standard of actions, as the law by which both the nation and government are to be guided. If we inquire into the reason of this extraordinary circumstance, we shall find, that there never rose one Chinese who had either the wish or talent to supplant KUNG-FOO-TSZE. Every accomplished scholar who had sufficient penetration to perceive the defects of the idol of his countrymen, thought it far more advisable to honour him as his master, and to add, as a commentator, to his celebrity, than to establish a system of his own. MANG-TSZE (MENCIUS), who lived only two centuries after the sage, is a remarkable instance. Though gifted with a mind superior to that of his predecessor, he only expatiated upon the principles of the prince of letters, whilst he contributed greatly to extend the range of thought and moral observations. Many sages joined in the praises; the first literary characters followed the beaten track; and the authority of KUNG-FOO-TSZE was established beyond contradiction. From that moment it would have been dangerous to attempt improvement by obtruding other opinions upon the people. Yet, notwithstanding these uniform endeavours to fight under one master, and to promote one's own interest by spreading his renown, the tenets of the Confucian creed could not have maintained their sway, if they had not been so well adapted to the character of the Chinese nation. There is a practical tendency in all his sayings; a plausible originality and depth of thought; his maxims are venerable, because the ancients once lived happy by following them. They are, besides, no new-fangled opinions, but the wisest men professed and were actuated by the same. Thus did antiquity, as well as coincidence of opinion, point them out as the only true principles, a deviation from which must lead to error. In spite, however, of all these advantages, their celebrity would only have remained partial, if government,

highly interested in maintaining them, had not adopted direct measures to inculcate their study. In other countries a philosopher, however learned in abstruse science, however versed in metaphysical speculations, is commonly a poor man; in China, on the contrary, an intimate acquaintance with the Confucian system is almost the only way to honours and emoluments. The great reward held out to the successful student is the most powerful stimulant to exertion; and as self-interest might suffer by not adhering to the sage, nobody hesitates one moment whether he shall declare himself a votary and worshipper of his sentiments, or lead the life of a poor and despised mortal as an independent dissenter.

The compiler of the *Yih-She*, however, is not so bigotted as to omit the opinions of a contemporary of KUNG-FOO-TSZE, though they little accord with each other. A whole book records the reveries of LAOU-KEUN, the founder of the *Taou* sect. This *Taou*, *reason* or *principle*, is an indefinable something of which he supposed himself to perceive the existence, but was unable to find out its nature; but it is independent of matter, imperceptible to the senses, and penetrating all the recesses of the universe. Heaven and earth could not exist without the *Taou*; neither sun, moon, nor stars, give their light; even the rains and dews could not fructify the soil; the *Taou* alone can give increase. It has been thought that LAOU, whilst speaking in this manner, was dwelling upon the unknown God; we believe he felt the power, but this feeling remained inexplicable; hence the many confused expressions and contradictions we meet with in his writings. Anxious to give his abtruse reasonings a practical tendency, he applies the principles of his system to the administration of government, but the application is very lame and generally far-fetched. His endeavours to prolong life to an indefinite space appear to have been always frustrated, for people died notwithstanding the precaution taken according to the rules of longevity. Much that his followers found in his book was the work of their own imagination. The idolatry they advocate is as gross as that of Buddhism; their recommendation of a retired life, in order to arrive at perfection and obtain immortality, has found few followers, for the Chinese do not value a contemplative life; and, as the alchemy which LAOU-KEUN is said to have instituted only impoverishes the adept, the gain-seeking Chinese find little to admire in *Taouism*. His doctrines are disregarded and little known; and this Platonic-Chinese school has fallen into disrepute. It is the mysticism of Paganism, and too refined to be intelligible to the common people.

The compiler of the *Yih-She* having complained about the abstruse

doctrines of the *Taou* sect and consigned them to contempt, dwells with delight upon the words and actions of CONFUCIUS's disciples, of whom there were a great many. Most of them rose to high offices, as their master had foretold, and exemplified more or less his maxims. The two volumes which treat about them are, perhaps, the most instructive and interesting of the whole. How various soever their talents and inclinations, they were all warmly attached to their master, and vied with each other to render his name illustrious. The school never died, but often fell under the wrath of weak princes, who preferred either Buddhism or Taouism to the Confucian principles, and occasionally persecuted the learned sect. They have frequently been accused of heartless indifference and pride, an imputation which is too true amongst their late posterity to admit of any refutation.

We cannot here enter upon the works of the *Shih-tsze*, or Ten Philosophers, who, more or less, advocated the Confucian principles. They, also, lived in the golden age of Chinese literature, but wrote more independently than later authors. This we defer to a more convenient opportunity, and to an ampler disquisition. The *Yih-She* recounts their opinions with the minuteness of a critic, and leaves it to the judgment of the reader either to accept of, or to reject, their profound cogitations.

When the compiler has walked through the whole field of literature, he suddenly stops at the reign of CHE-HWANG-TE, the founder of the TSIN dynasty, that enemy of learning and opposer of the Confucian system. He has performed his task; one great period of Chinese literature is passed, and a new generation rises at the accession of the HAN family to the throne. After some further notices upon music, geography, astronomy, such as they were in ancient times, he gives a definition of names and things, which all contribute to illustrate ancient history. Thus fifty volumes are filled with various matter, which we do not hesitate to pronounce the quintessence of Chinese literature.

We have only given a cursory view of a book which we hope will be very soon known in Europe. In our humble opinion, no collection is so well calculated to initiate a foreign reader in the very spirit of Chinese literature, as the *Yih-She*: both for style, arrangement, and perspicuity, it has few equals; and though it would not be acceptable in a translation, extracts, made with judgment, might not only be pleasing, but also instructive.

ART. XIV.—*History of Tennasserim, by* Captain JAMES LOW, *Madras Army*, M.R.A.S., &c. &c.

(*Continued from page* 54.)

CHAPTER IV.

TRADE OF MERGUI, TAVOY, AND MARTABAN — IMPORTS AND EXPORTS OF THE CEDED TERRITORY.

A THINLY peopled country can only carry on an advantageous commerce under the following circumstances. It must be an emporium to which the commodities of various nations are sent, not for its consumption, but to be shipped to other ports; or it must yield produce which is denied, or scantily allowed, by nature to other regions, and which can be raised and manufactured by the industry of a few.

Now, Tennasserim, it has been shewn, is a very thinly peopled country. Nor does it come under either of the above descriptions in a manner sufficient to warrant our giving it the name of a commercial territory. But, lest general assertions should be objected to, it may be proper to enter on a few details.

The trade on the Tennasserim coast is almost exclusively maritime. There was, indeed, formerly an internal traffic betwixt the provinces bordering on Ava to the north-east and south-east; but it fluctuated, and was, besides, confined to what is now the Burman half of Martaban. The Siamese court is too jealous of its subjects and its neighbours to admit of an extensive over-land trade, even were such suited to the wishes of the Burmans. This would facilitate emigration, open a door to spies, and might injure the royal monopoly at Bankok. They have, however, allowed a few small parties to come over the passes to trade since the British took possession of the coast. It is probable that these were merely sent to aid their officers in gaining information of the state of affairs there. While Siam continues to exhibit a decided aversion to any free and manly mercantile alliance with any European power, it is highly improbable that she will throw open the passes over her mountains.

Before the British had formed permanent settlements in the straits of Malacca, European or country ships might have found an occasional cargo at Mergui and Tavoy; but since the native trade of the Peninsula and of the Straits has been drawn to Penang and Singapore, and can be most cheaply carried on to these ports in Chinese junks and Malay práhus, the regular trader has found it unnecessary to go further in search of the cheap produce of these countries. The

wood-trade is, perhaps, the only branch of commerce calculated to attract shipping; but it is chiefly confined to Rangoon: and, perhaps, while the supply there can always be made, by a stretch of Burman authority, to exceed the demand, the forests of Martaban will not be greatly encroached upon. Sapan-wood, were it not an article of limited consumption, might induce country vessels to visit Mergui. Hitherto the quantity has been confined to a cargo for a vessel of about three hundred tons.

MERGUI.

The Tannau people carry on a brisk petty commerce with the ports lying betwixt it and Rangoon. They also occasionally visit Penang, the Nicobar Islands and Atcheen, Chittagong and Dacca. They exchange their own produce for betel-nut; raw and wrought silks; white muslins; crockery; woollens in small quantities, and chiefly coarse and of a green colour; petroleum, from Rangoon; cutlery; Chinese umbrellas, which, although made of black varnished paper, are yet very useful guards against sun and rain; a little opium and gambier; and several other European and Indian articles of little value. To the Nicobar Islands they take rice, arrack, tobacco, black and blue cottons (which last come from Penang), and rolls of silver-wire. They receive in exchange betel-nut, tortoise-shell, occasionally a little ambergris, a few pearls, and, not unfrequently, goods which the natives have got from the wrecks of vessels. The Mergui boats are of various dimensions, and are generally built of sassafras or some other durable wood.

TAVOY.

The natives of this place are more adventurous and richer than the Merguiers, and trade to the same places. Their boats vary from two up to forty-five tons' burden. These are seldom decked; yet, as they rarely venture out during the south-west monsoon, and the sea is very smooth in the north-east one, they serve every intended purpose.

The rivers and creeks which run up at short intervals on a long line of coast into the heart of the primeval forests, yield every possible facility for procuring ship-timber.

In rating the size of the native vessels, as above, it is not intended to assert, that larger ones have not been built by the people of this coast. They are not, like the Chinese, bigoted to one invariable model; and they could, under European superintendence, build a ship of any reasonable size.

A sloop or cutter of fifty tons' burden has been built, decking and rigging in the native way included, for five hundred rupees.

The imports to Tavoy are chiefly cotton from Martaban and the Straits of Malacca; tobacco from both of these places, and from Rangoon; earth-oil from the latter; piece-goods, cutlery, iron in bars, China ware, European and Bengal articles, brought from Penang in Chinese junks; gunpowder, fire arms, muslins, betel-nut prepared for chewing, raw sugar, and spices.

The exports consist of the articles described under the head, "PRODUCE OF THE PROVINCE."

Before the conquest of the Tennasserim coast, its governors were too much in the habit of constituting themselves the chief merchants; but they, as well as the court of Ava, had, perhaps, more liberal ideas on trade than their neighbours, the Siamese. A deputation from Tavoy, expressly with the view of encouraging trade, visited Penang a few days only before the account reached that place of the war having broken out. They were received with attention by the governor, the Hon. Mr. PHILLIPS; and after having witnessed a review of the troops with great apparent satisfaction and surprise, they were informed, to their great consternation, that the British and Burmese were at war. They were sent back under the escort of a gun-brig; and it was, perhaps, to the impression made on them by the sight of British troops under arms, that the speedy surrender of Tavoy was owing.

Formerly all trading vessels arriving at Tavoy paid a sum of one hundred ticals each, as a port duty, and, afterwards, seven per cent on goods disposed of. On leaving the port, the *myúwún* expected a handsome present. Vessels belonging to the country paid dues in proportion to their burden.

Tavoy is the only place on the Tennasserim coast that can afford to export grain, the average exportable quantity of which is rated at eight hundred koyans;[1] and this would appear to be less, by upwards of nine hundred koyans, than the quantity required to supply the deficiency caused by the consumption of rice exceeding the produce in the provinces of Mergui and Martaban.

YÉ.

The trade of this place may be considered as included in that of Tavoy.

MARTABAN.

The produce of this country has been already described. The imports are nearly the same as those of Tavoy and Mergui. A great

[1] See page 26.

deal of internal petty traffic is carried on by boats of from one to ten koyans' burden. These boats are seldom decked; and are, therefore, either covered in with date-leaf roofs, or are furnished with movable coverings, made of mats or leaves.

Every family, so situated as to have access to the main rivers or to their branches, is supplied with one boat or canoe at the least. The canoes, and even boats of four and six koyans' burden, are framed out of single trees. The trunk is cut to the proper length, and then smoothed with the axe: one side is slightly grooved. By the slow application of fire to this side, the trunk opens gradually until it becomes wide enough to form the hull and part of the sides of the intended boat. The upper parts are composed of thin planks, or of the central fibre of the leaf of a large species of the palm (termed by the Malays, who also adopt the practice, *sambier*). These are sewed together by strong twine, this last being often formed from the strong fibres of the climbing plants. The seams are seldom caulked with any thing better than dammer,[1] and frequently with clay. These boats are often unsteady; but they sail fast. One of fifteen koyans requires about fifteen men as a crew for a voyage from Mergui to Rangoon.

In 1825, the number of native boats in Martaban amounted to about two hundred large and three hundred small, exclusive of the coasting práhus, the number of which was not ascertained.

The northern and eastern parts of Ava, the country of Laos, and the districts or provinces inhabited by the Shăăn tribes, also the confines of China and Yunan, are accessible from Martaban.

A caravan used to arrive at the latter place annually, in times of peace, from the country of Shaumpé, inhabited by the Shăăn race, and one occasionally from Laos. These consisted in general of about fifty merchants. Martaban, therefore, has the advantage of Tavoy and Mergui, both of which are *politically sealed* on the land side. These merchants conveyed their merchandise on the backs of horses, mules, and small oxen. It consisted of lac; a great variety of medicinal drugs, or roots and barks; swords; long knives; manufactured cottons and silks; raw silk; sugar candied; yansong, or earth-nuts; blank books, made of very thick and blackened paper prepared from the inner bark of a tree; ivory; rhinoceros' horns; and other less valuable articles. They took in return salt, spices, cotton, quicksilver (used copiously by them in medicine, especially in leprous complaints), red-lead, sulphur, assafœtida, borax, alum, chintzes, and

[1] A preparation of resin and oil.

piece-goods, coriander and other seeds, coarse broad cloth, and various European articles.

The Martaban native traders visit Penang occasionally. They also visit Mergui, Tavoy, Rangoon, Rakhein, or Arracan, the Nicobar Islands, and, but rarely, Acheen.

EXPORTS.

The average of a late general estimate, from authentic documents, for one year, gives—

	Rupees.
Imports	650,000
Exports	175,000

leaving 475,000 rupees as the balance of imports over exports; a drain which the natural resources of the country alone could not support.

Under the Burman government, bullion was not allowed to be exported.

It is evident from the above statements, that this coast has a long course to run before it can be enabled to supply exports to balance imports; and that much of the ability of the natives to meet the latter with bullion, depends on the accidental stimulus of a civil and military expenditure.*

MANUFACTURES.

Tennasserim affords but a brief catalogue of manufactures. That of cloth may be ranked as first; and this is confined to the supply

* Prices of bázár articles in 1825.

	Rupees.	
Oil of sesame, per Ava picul[1]	70	
Eight guntangs,[2] or one basket of sesame-seed	7	
Areca-nut, per Ava picul	70	to 100
Tobacco Do.	70	
Gambier Do.	50	to 100
Pepper Do.	50	
Lac Do.	100	
Cocoa-nuts, per hundred	12	
Salt, per picul	6	
Wax, per Ava cattie[3]	1½	
Indigo ley, per picul	20	
Ivory, per cattie	3	
Cotton, per picul	13	
Rice, per koyan[4]	50	
Silk thread, per cattie, seventy ticals' weight	50	

[1] *Picul*, a weight containing 100 catties; estimated at 125 Dutch, or 133⅓ English, pounds.—MARSDEN.

[2] Nearly equal to 1½ gallon.

[3] *Cattie*, 22½ dollars weight, vide p. 45.

[4] *Koyan*, vide p. 26.

of only part of the demand for it, since considerable quantities of English and Indian cotton-cloth are imported. In the subjoined note will be found a list of the different sorts of cloth used on the coast. The weavers are almost exclusively women. There were about six hundred, chiefly Tavoy debtors, who sell their services until they can redeem themselves; and a certain sum is struck off monthly, according to the ability of each to earn his livelihood. In the town of Tavoy, however, the cloth is considered inferior to that of Ava. Of late years, piece goods, in imitation of Burman manufactures, have been sent out from England. As they are cheap, the natives buy them; but they complain, that the colours are not durable, except the yellow. But the respectable natives will not buy these goods because they are cheap and worn by the vulgar. Besides, they say that they can wear one of their own cloth for a year, while the European article only lasts a few months; and this circumstance, after the novelty has worn off, may make them reject an article only inferior in this respect to their own. The Burman loom is simple, but the cloth generally not more than two cubits broad, and that made by the *Kareans* only one cubit.

There will hardly, perhaps, be found a house (part of the inmates being females) throughout these provinces which has not a loom in it, and I have seen three or four at work under one roof. They learn to spin from infancy. It is evident, therefore, that these people are not dependent on foreign supplies, and that their home manufacture of cloth can only be supplanted by a careful attention to furnish them with a better, more durable, and cheaper sort.[1]

DYEING.

The Tennasserim people acknowledge that the Malays surpass them in the knowledge of this art, and follow them where they

[1] Cloth manufactured on the Tennasserim coast:—

	Ticals. Rupees.
1. Lekyeit, 20 to 25 cubits long, 3 broad; party-coloured, waved, cross stripes: used by both sexes for a lower dress ..... The yúllekheit, or the drilled sort, is best.	30 to 50
2. Chetkyeit-pacho, 19 to 20 long, 3 broad; silk, striped ..... The plain sort is called balla.	25 to 28 & 35
3. Loun-acher, a silk cloth, waved and checkered, of 25 threads	35 to 40
4. Lo-un-ngache; another sort worn by men.....	40 to 80
5. Wen-kaba; silk, waved and party-coloured	25
6. Kivet-thaup; checkered	15
7. Pacho-achein; silk, ribbed, and party-coloured; same length as No. 6: worn by both sexes	30

can. The following rules have, therefore, reference chiefly to the Malays: —

BLUE.

Dye the cloth or thread of a light blue (*vide* the next process); then take one catty of kheit or mallan (thick lac) and boil it in one guntang of water until two-thirds have evaporated; take of the juice of the makhanapen (*Mal. Assum Jarva Mudah*) one half catty, and mix it with one chupa[1] of water; throw into it a piece of alum about the size of an areca-nut. Saturate the cloth repeatedly until the colour becomes good, — drying always in the shade.

LIGHT-BLUE.

Dye the cloth first with indigo alone.

YELLOW.

About two chupas, by measurement, of the choppings of turmeric, or of the heart of the jack[2] (*Artocarpus integrifolia* of MARSDEN), are mixed with one guntang of water, by measurement; the whole is boiled until about one half of the liquid has evaporated; a small piece of *tawas*, or alum, is then put in and allowed to dissolve; the thread is then immersed and dried alternately, until a proper colour is obtained. To fix the colour more, the thread is again immersed in an infusion of turmeric.

TO DYE RED.

A lie is prepared with ashes of the Ramei Popei (*Kayú Kadúdu Mal.*), and of this take 2½ parts by weight; of the leaf of the Ramboon-ben (*Mal. Assam Simpor*), one quarter part; and of the *nangchí*, or hnanzí, or sesame oil, one quarter part: with this mixture a quantity of thread, about half a catty's weight, is well saturated, and then dried in the sun. The process is to be repeated thirty times with fresh lie and ingredients, taking care to dry the thread each time as above directed: next wash the thread well in clear running water. To fix the colour, take a quantity of *nyobei* wood (*Mal. Kayú Mangkúdú*, the *Morinda citrifolia* of MARSDEN), pound it, and infuse in water for a few hours; immerse the thread or cloth, and then dry it in the sun; repeat the operation until the colour becomes brilliant. Finish by washing in pure water.

[1] *Chupa*, the shell of the cocoa-nut; a measure estimated at two and a half pounds avoirdupois.—CRAWFURD.

[2] This yields the finest dye. It is only employed amongst the Burmans to dye cloth used for religious purposes.

TO DYE BLACK.

They use the following substances:—*Mé*, or indigo, (of that liquid sort used and manufactured by Chinese, Indo-Chinese, and Malays.) Of this they take a quantity, equal to one chupa by measurement; the rinds of four unripe cocoa-nuts (*aungsí-nú*), pounded and mixed with about four guntangs of water, and about two handsful of slaked lime; mix all of these ingredients well together in a vat until the bubbles which arise look black; let the vat remain quiet for a night: the thread or cloth is then to be fully saturated with the supernatant liquid, and dried in the shade, and the operation is to be repeated until a good colour is obtained.

GREEN.

Dye first of a light blue; chop a piece of the wood *kidderang* (one cubit long, ten inches in girth,) into small pieces; boil these in one guntang of water, until one half has evaporated; take it off the fire, and put into it a bit of alum (about the size of a nut); immerse the thread or cloth three several times, drying betwixt each immersion in the shade. To fix the colour, take two chupas, by measurement, of the leaf of the *assum kandes* (perhaps the *Garcinia* of MARSDEN); pound the leaves, and mix them with a decoction of one half chupa of turmeric; saturate the cloth four several times, drying in the shade after each time.

The Tennasserim people are considered better artists in general than the inhabitants of Pegu and Ava.

CHAPTER V.

REVENUE.

It is not here intended to enter into very minute details respecting the revenue at present derived from this coast. It is chiefly proposed to describe, as briefly as possible, the sources from which the Burman government drew revenue, although it would not, perhaps, be easy to shew the precise amount derived from each source. Where the rulers were despotic — where offices were sold, and delegated power proverbially unstable — and where the necessities of the state, and the cupidity of men in office checked enterprise, and were met by the obsequious and abject submission of the lower orders, whose time and labour were not at their own disposal, and whose

energies could not have always been willingly lent, the rent must have fluctuated greatly in its amount.

A knowledge of the Burman system of taxation may prove instructive, but cannot be looked upon as a guide in framing financial regulations on a scale suited to British ideas. The Burman revenue of these provinces was derived, in a great measure, even under the most favourable circumstances, from imposts, and exactions of the most impolitic nature or injurious tendency. Thus, forced conscriptions were ordered, and large compensations in money taken in lieu of service. Rice and other kinds of produce, were exacted from the grower at the capricious valuation of a *myú-wún*, and sold by him at his own prices. Property was occasionally confiscated for pretended crimes, or on false accusations; fines were levied for misdemeanors; contributions of grain or money were made on feigned or real grounds, and bribes were accepted to screen delinquents.

It is the policy of the court of Ava never to allow a new governor of a distant province to proceed to his destination until he has delivered up his nearest relatives as hostages for his good conduct and fidelity. He well knows, that after this has taken place, any delinquency on his part will inevitably seal the fate of these pledges.

Hence it happened, that during the British war with Ava, so few of the Burman chiefs came over to the former. Many held out to the end of the war under circumstances where submission would not have been discreditable: but the *Golden Feet* will not admit any middle line of duty in such times.

MINGÍ ÚJINNA, who was the *myú-wún*, or governor, of Martaban when it was attacked by the British troops under Colonel GODWIN, did not display any heroism, for he was carried out of the place in a state of intoxication by his people, and left the *bogyaup*, or general, to defend it.

ÚJINNA was then, I was told, nearly seventy years of age, which may appear some excuse for his conduct. He did not, however, submit, but held out, along with scarcely one thousand men, during the whole of the war; sending detachments occasionally from his post in the jungle to annoy his enemy.[1]

The government of a Burman province consists of the chief and two members of his council. But the first is the responsible person. When one of their governors happens to fall under the displeasure of the court, he has friends who give him early intimation, and, probably, they are purposely informed of his danger. His object, then,

[1] He has since, it is reported, been decapitated by an order from Ava.

is to send handsome presents to the king and his officers; which plan, unless his conduct has been daring and flagrant, generally proves successful. When actually dispossessed for peculation, he instantly expends, in a similar manner, a large portion of his gains to avert any investigation into his administration. The subject, therefore, has little chance of redress, since this connivance of the government at malversation is evidently one of the contingencies on which it relies for realising the revenues of distant provinces.

A governor is generally appointed for three years; and, as he receives no salary, his emoluments consist of what remains of the revenue after satisfying the rapacity of his court.

Stating the case generally, the Burman government levied on this coast the accustomed assessment of ten per cent on all of the products which have been here described. It followed, in this instance, the rules which have been derived, according to the prevalent belief, from the reputed code of MENU. But a tenth of the produce of corn land is far below what a government may, with propriety, require, when it is the *actual proprietor of the soil;* and it may be too high a rate for land which can only be cultivated with such kinds of produce as require a long time, and the application of considerable capital to mature. One tenth appears an equitable *tax* on the corn produce of private landed property. But it has been found, that the cultivators of this coast are willing to pay twenty per cent for the exemption they enjoy from the infliction of the operation of Burman finance.

The Indo-Chinese nations have on principle, or an affected regard for it, seldom disturbed the operation of this nominal assessment, because their actual power gave them the command of the purses of their subjects in many other ways.

The Tennasserim governors seem to have exacted a tenth on agricultural produce of every description; a rate which must have fallen very unequally, since each species of cultivation required a different amount of capital and risk. A farmer who, after eight years of outlay of capital, unproductive until the expiration of that period, should be required to pay ten per cent on the produce of his plantation, would have just ground to complain that a grain-farmer, whose returns were immediate, and whose risk and capital were small, should only be obliged to pay at the same rate.

It does not appear that any estates were exempted from this rate of taxation. The ryot had, in general, a prescriptive right to the field or garden around his cottage. The right to cultivate a certain spot became, in fact, equivalent to a proprietary one. Hence it may be concluded, that the land on the Tennasserim coast, exclusive of cer-

tain tracts termed crown lands, is real *heritable*, if not *personal*, property.

The villages are not walled in, and but rarely well fenced around: occasionally a straggling bamboo fence may be observed.

As the ryots on this coast have now been set free from the indefinite exactions to which they were exposed under Burman rule, the corn assessment has been raised to twenty per cent, and that of other landed produce to twenty-five per cent.

The sources of revenue remaining to be noticed, are as follow: —

A POLL-TAX.

This was an arbitrary tax, and was regulated by the necessities of the chief of the individual province. It, of course, fell heaviest on the rich. In Tavoy town, the average rate was about four ticals a year for each householder. The unmarried had feudatory or mere service to perform in stead.

The Karians pay a poll-tax now which averages 3000 rupees per annum; and certain fishing villages have been likewise assessed, it is reported, on the ground, that they do not contribute to the cultivation of grain.

FARMS OF LUXURIES AND CONNIVANCES.

Under these heads may be included the gaming-farm; the sale of opium; arrack; and preparations of hemp or ganja.

Gaming is forbidden by the Burman laws; yet the passion for it, when so strong as it may be found amongst the Burmans, and other people of Tennasserim, would have required greater virtue or tact in the rulers than actually existed to have arrested and subdued it by moderate measures. They, therefore, took the direct course; and, when desirous of checking it, made the penalty a capital punishment. In general it was connived at, and a tax was levied on gaming licenses.

The abstract question respecting the consequences likely to arise from licensed gaming-houses being permitted in our eastern settlements, admits of much discussion, and cannot be decided on in a general way. Reference ought to be had to the numbers, means, and habits of the people. No moralist could be expected to lend his sanction to the practice of such a pernicious vice under common circumstances; but rulers should be swayed by the results of experience, and be guided, in some degree, by the light which a study of the human mind is calculated to throw on such subjects. They are to reflect well, whether, in putting down and trying to extinguish the disposition to gamble, which roots itself so deeply in the minds of demi-

savage people, they are not, at the same time, diverting the passions into some more dangerous channel.

It is quite obvious, that where this passion actuates all ranks, nothing but a most efficient police, like that of the most irresponsible governments which modern Europe has seen, could serve to restrain it. But, as the British constitution and laws do not admit of inquisitorial proceedings, and as economy is required in expenditure, it follows, that no efficient check has been, or is likely to be, opposed to gaming. Since the farm was prohibited in the Straits' settlements, gaming has increased in a double ratio; dissolute characters have greatly multiplied; the native police servants have been bribed to connivance with the money which government would otherwise have received; and the apprehension of offenders has been rendered more difficult. Where one or two Chinese had the licenses, their local knowledge and means rendered it exceedingly difficult for persons to gamble privately; so that natives of bad characters, who frequented the licensed gaming-house, from no other being open to them, came immediately under the scrutiny of the police officers. If, then, it can be shewn that crimes have increased since the abolition of the gaming farms, policy alone may require their restoration.

In the Straits' settlements, it is the Chinese who are the principal gamblers. The Malays, however addicted to the practice, feel more ashamed of indulging in it openly; and it is chiefly confined to those who are locomotive.

In Tavoy, however, the indulgence is ardently sought for and pursued to an extreme. I have witnessed in 1824–25, at the licensed gaming-house there (which was kept by a Chinese), persons of both sexes, from the unreasoning age of ten or twelve years up to that of mere decrepitude, crowding in after the evening's bázár, and staking the whole of their day's earnings at the hazard table; and men have been known to stake their wives and families on a throw of the dice. Such a scene was never, perhaps, witnessed in any part of the Straits: the men only play there. The China renter at Tavoy paid, at the period above alluded to, a monthly sum to government of 1820 Madras rupees, or 21,840 rupees a year. The duty seems to have decreased since, and to have averaged from 1400 to 1600 rupees monthly. At Mergui, perhaps, 300 rupees may be taken as the average; and at Amherst, including the Yé district, 1800 rupees.

OPIUM.

The use of this, and of every intoxicating drug, is strictly prohibited by the Burman penal code. During some reigns, the law

was enforced with savage rigour; and offenders had melted lead poured down their throats, or suffered violent deaths in other ways. But it depends greatly on the character of the reigning prince how far the laws are to be straitened or left in abeyance. If he is a rigid Buddhist, little mercy is shewn. If he is ambitious of popularity or of conquest, the law is allowed to lie dormant, or to be relaxed. During the late war it was scarcely in operation; and, it is believed, was often purposely infringed in order to conciliate the soldiery. The farms of this article now yield, on an average, at Mergui and Tavoy, about 1200 rupees monthly. In 1827, the farm at Tavoy yielded 967 rupees on an average, monthly. The opium cost to the renter 80 rupees a cake.

ARRACK.

The Burmans, the Peguers, and most of the independent tribes termed Kayen, or Karean, are acquainted with the mode of distilling a spirit from rice. In a house in a remote Karean village, I was presented with a cup of weak spirit just taken from the receiver. The still was managed by the family. It consisted of an earthen boiler, to which was luted an oval-shaped earthen vessel tapering to a small aperture, whence proceeded a tube which, with the condenser, were cooled by water being allowed to drop on them. The Bali language is the vehicle of the prohibition to drink ardent spirits or wine; and it is also that of the different modes by which these can be prepared from various substances, such as grain, fruits, and barks.

Hemp, and date, or cocoa-nut juice fermented, were clandestinely farmed out. It is believed, that much hemp in that state, called *bhang* in India, is used by the Burmans. It is, perhaps, the most deleterious drug, rated under the title of *luxury*, which the people use.

Toddy, or the juice either of the cocoa-nut tree, or of that species of marsh-palm, termed *Nípah* by the Malays, is sold in a fermented state; and, as it is exceedingly cheap, a man may become intoxicated to the height of his ambition for the value of one half-penny. Its effects are long felt.

Compensations for crimes and assaults, and fines for misdemeanors, were fertile sources of emolument to a Burman chief; and this last circumstance must always have prevented him from taking wholesome measures for removing incitements to lawless acts, since his own interest was affected.

Such a state of things was debasing to the rulers, and pernicious in its consequences to society. The poor man could not pay enough,

and suffered the full penalty of the law, while the rich one bought a speedy immunity.

Treason, however, was an unpardonable crime; and a murderer did not escape. A reference to the short chapter on Burman laws will shew the general rate of fines for offences. The rates vary according to the circumstances affecting the population of each individual province. The present revenue from fees may be averaged at 7000 rupees a year.

Shops were taxed at various rates. In Tavoy, the tax was farmed out to three of the principal shopkeepers, each paying, it was said, about fifty rupees only. I did not learn what retailers paid. Women chiefly conduct the business of retail. They are of all ages, and many are pretty far advanced in life before they take to shop-keeping; and have lost the charms calculated to blind a purchaser to defects in their goods. But they are blessed with the full and ready use of their tongues. The bázárs are now farmed out for about 200 rupees a month.

Net fishing-boats, if in good repair, were taxed three ticals each; but if employed in line fishery, only one tical. A drag or floating-net was taxed five ticals, and a fishing-stake twelve ticals.

Fish are most abundant and cheap at Mergui, twenty different kinds, at the least, being procurable in the bázárs. Ten rupees were afterwards levied for each fishing-stake; and this tax is now in force.

In Tavoy, a tax on the transit of goods by land was collected at certain favorable spots;[1] but its amount was a mere trifle, scarcely exceeding a few hundreds of rupees.

The Betel-leaf farm at Tavoy, yielded about nine hundred sicca rupees monthly.

COLLECTION.

The Burman government collected the revenue at the least possible expense. An officer with twelve or fifteen assistants, or peons, traversed each district at stated periods, ascertained the quantity of land in cultivation, and the quantity of produce likely to be derived from each species of soil.

A tenth of the estimated produce (where the actual quantity could not be ascertained) was transmitted, at the expense of the cultivators, to the chief town of the province.

As all the rice lands, which were long under cultivation, had been measured, and little addition was made from year to year, the produce from season to season did not vary very considerably.

[1] Myá-ú, Kyamyagí, Kamyagni, Chinchei.

rop is not here subject to great fluctuations, being always
ıpplied with water; but the produce of dry land cannot be
n with certainty. Fruit-trees may be stated to yield only
ɔps in three years. In one out of the three years a very
op is generally looked for, if not a total failure. The same
ıpplicable to cultivation in the Siamese and Malayan parts
lacca peninsula. This is probably a provision of nature to
ne too speedy consumption of the vital principle of plants in
·imates, where vegetation is exceedingly rapid, and is never
and suspended as in colder latitudes. Drought acts, in some
, like cold in arresting the progress of the sap, but it differs
.ıe latter in this respect that, if protracted, it dries up the sap
y, while cold retains it only in a state of quiescence.

one-third of the grass produce of corn land is a fair *rent* for a
.ɔrd to receive, the exaction of only one-tenth would seem to
e in favour of Burman forbearance. But it is, in reality, a high
when coupled with forced services, conscriptions, contributions,
all the nameless ways by which an arbitrary government can
nburse itself for any ostentatious act of generosity.

A capitation-tax was one of the means above alluded to. It fell
aviest on the rich; but householders when assessed, as it sometimes
ıppened, at one-third of a tical monthly, were obliged to sell their
ervices to enable them to pay it. Thus, a large portion of the popu-
ation were in a condition of demi-slavery. A person paying thirty
ticals yearly was exempted from all duties and taxes.

The following will be found a pretty correct estimate of the average revenues of this coast:—

	Rupees.
Amount of the 20 per cent assessment on grain at Mergui, Tavoy, and Amherst	85,000
Ditto, 25 per cent on other landed produce, such as fruits, roots, garden plants, &c.	25,000
Gaming, opium, arrack, betel, toddy, and bhang farms[1]	90,000
Birds' nests	20,000
Fines and fees levied in the judicial department, at 10 per cent.	6,000
Elephants' teeth	1,000
Salt, at 25 per cent	4,000
Balachong (Caviare) 15 per cent	2,000
Dammer torches, 20 per cent	400
Items, duties on fishing stakes, fishing villages, &c.	600
Capitation, or commuted tax on the Karians	3,000
Rupees	237,000

[1] In 1827, the Tavoy farms yielded 5284 rupees monthly.

The probable maximum cannot well be rated higher than two lacs and fifty thousand rupees, and the minimum cannot be less than 230,000 rupees.

The various sources of revenue have, perhaps, been improved and experimented on to the fullest extent of which they are at present, at least, capable, under the able and energetic superintendence of the civil commissioner, Mr. MAINGY. If they can be brought to meet the expenses of governing and protecting them, much will then have been effected. But this will require time and peace.

COINS, WEIGHTS, AND MEASURES.

The standard currency of this court, since it came under British protection, has consisted of the various coins used at the Indian presidencies.

The Burman coins are of a very indefinite nature, and always contain various portions of alloy, with the exception of that bearing the Ava government stamp, which is purest.

MERGUI.

The Mergui coins are the same as those at Tavoy.

TAVOY.

At the conquest, the currency here consisted chiefly of silver ticals which were much debased; and the lower denomination was composed of large tin pieces of different values.

Gold is never converted into money. That of Bengal, in shape of mohurs, was much prized during the war, each mohur selling at a price of one-third, at least, beyond its intrinsic value. They were melted down by the Burmans to form trinkets.

1 Spanish dollar was then, and is probably now, equal to		84 kabean, or tin pices.
1 Sicca rupee	ditto	44 kabean.
1 Madras ditto	ditto	40 ditto.
1 Large kabean	ditto	12 small ditto.

The natives prefer the Spanish dollar (a predilection in which they are not singular), and Indian rupees to any other coins. They are good judges of the purity of the precious metals; and they are adepts at an adulteration of their own clumsy currency. As far as trade is concerned the latter circumstance is of little consequence, since that is chiefly a bartering one.

MARTABAN.

The Rangoon currency is here common. It consists of the *tical*, and of small pieces of silver of various shapes and weight, and generally greatly debased. They have no tin coins here, or any coins composed of a metal inferior to silver. The rupees which were in circulation in the native town soon after its capture, were speedily melted down and converted, with the addition of an unknown quantity of alloy, into the shapeless coins alluded to. The *sarráfs*, or money-changers, generally gave in exchange for a rupee about three times its weight of the debased metal. The gold mohur sold often for twenty Madras rupees, and even so high as twenty-five rupees. The women are the principal *sarráfs*. After rain, many persons may be seen washing in platters the rubbish of the streets, or of ruined buildings, in the hope of finding bits of silver. A good deal has been got in this way.

The following may be taken as a general scale for the coast. It may be remarked, that the Burmans prefer selling by weight instead of by measurement:—

1 Kyíng-wen equal to .... 2½ Penang catties, or 22½ dollars weight.
1 Akwetase ditto ..... 25 Ditto, or 10 vis.
1 Tra, or Ava picul .....250 Ditto, or 100 vis.

The Ava government sends from the capital sets of standard weights for the use of the provinces. These are of different shapes and denominations according to the reign during which they are cast. The metal is a sort of bronze. The present are termed *To allé*, or Lion weights. In the former reign they were termed *Hangsa allé*, or Humza weights, and represented that famous goose of the Indian mythology

No. 1. To Allé, equal to..... 20 ticals (a tical is equal to 10 dwts. 10 grs. 75 dec.)
No. 2. Ditto, ditto ..... 10 ditto, ditto.
No. 3. Ditto, ditto ..... 4 ditto, ditto.
No. 4. Ditto, ditto ..... 2 ditto, ditto.
No. 5. Ditto, ditto ..... 1½ Madras rupees wt.
No. 6. Ditto, ditto ..... ½ Madras rupee, and 3 annas wt.
2 Tablé, ditto ..... 1 tammú (or 12½ Penang pices wt.)
2 Tammoo, ditto ..... 1 tamat.
4 Tamat, ditto ..... 1 tical.
100 Ticals, ditto ..... 1 tabísa, or 2½ Penang catties.
1 Teiya, or Ava pical, ditto ..100 tabísa, or 250 Penang catties.

WET AND DRY MEASURES.

1 Tadaum, equal to	1 basket (or 8 guntangs of Penang, or 64 lb. weight of grain), about 36 Madras seers.
1 Naseit, ditto	½ basket.
1 Tazeit, ditto	¼ ditto.
1 Tabee, ditto	1/16th ditto.
1 Tazle, ditto	1/32d ditto.
1 Talamé, ditto	1/64th ditto.
1 Talamía, or a handful	1/128th ditto.
100 Tadaum, ditto	1 teiya, or koyan.

The cubit is in general use, but it varies. Cloth, and other goods, are often measured in the bázár by the woman's cubit, being the length from the elbow to the point of the middle finger: but it is evident that a buyer may be a great gainer by such a mode.

WEIGHTS AND MEASURES.

1 Tadaum, equal to	1 cubit of 18 inches, on an average. It is the only cloth measure.
1 Thandaum, ditto	22⅝th inches.
This measure is, also, termed *méndaum*, or the royal cubit, because it is used in measuring crown lands, and ground used for public purposes.	
7 Thandaum, ditto	1 tada.
1 Tathoa, or span, ditto	The space betwixt the point of the thumb and that of the middle-finger when extended.
1 Tinyo, ditto	The space betwixt the point of the thumb and that of the fore-finger when both are extended.
1 Tamei, ditto	6 inches English.
1 Tadein, ditto	2 statute miles, and two furlongs English.
10 Tadein	1 day's journey, or 22½ miles.

LABOUR.

The price of labour varies a little at each of the settlements on this coast. Seven ticals may be reckoned the average monthly hire of a labourer for a month. When Tavoy fell, six Madras rupees a month was a common rate when the labourer was not taken to a distance, and seven rupees when he had to leave his family. The men who carried my baggage, and that of my party by land, from Tavoy to Martaban, in 1825—a distance of 245 road miles—were paid

at this rate; and, it will be recollected, that they had to return to Tavoy. The present established rate is about ten rupees a month.

In Martaban, in 1824–25, the rates were nearly as under:—

For a head ship-carpenter, per month, 15 ticals.
Inferior workmen, from 7 to 10 ticals.
Burman chiefs, paid 5 ticals.
Daily hire of a common labourer, one-fifth part of a Spanish dollar.
A woman received one half of a man's hire.
Ironsmiths, 20 ticals.
Silversmiths, 30 per cent on the value of the metal worked up.

These rates, when compared with those in India, may be considered very high, and operate as a bar to many speculations which the capitalist might otherwise be disposed to enter into. The urgency of the demand for labour on the one hand, and the ease with which a subsistence can be had without any great exertion on the part of the labourer, on the other, will account for the fact.

Three rupees a month will amply provide for the mere maintenance of a common Burman. Rice 1½ rupee; ngapoou, or balachong, fish, vegetables, and condiments, 2½ rupees. But, with a family, say a married couple and two children, six rupees will barely suffice to feed, clothe, and house them.

CHAP. VI.

GEOLOGICAL APPEARANCES AND GENERAL FEATURES OF PORTIONS OF THE MALAYAN PENINSULA, AND OF THE COUNTRIES LYING BETWIXT IT AND EIGHTEEN DEGREES NORTH LATITUDE.[1]

It is with extreme diffidence that I venture on this subject, as it is one which cannot be fully elucidated without a much more extensive research than I have had it in my power to make, and a higher degree of geological knowledge than I possess.

The countries alluded to have not hitherto been geologically described, and as political circumstances preclude British research from a wide portion of those interesting regions, I trust to the results of my personal investigation being received with indulgence.

[1] This paper was printed in a less correct form in the Transactions of the Physical Branch of the Asiatic Society of Calcutta. Several errors occurred in it, owing to my absence having prevented me from correcting the press. A few additions have since been made. This will, perhaps, be considered a sufficient excuse for thus reprinting it.

The grand general features of the Indo-Chinese regions seem to be alternate ranges of hills stretching nearly north and south, and conforming occasionally to the general direction of peninsular tracts, and of valleys of various breadth, through which flow large rivers.

The principal ranges are, that which divides Asam from Ava, then the Siamese and Ava range, next the Siamese and Cambojan, which are from fifty to sixty miles asunder, and, again, the Cambojan and Anam range. The continuity of these appears to be most liable to interruptions as they approach the south; and none of them, as far as my information extends, can be compared in height to the secondary ranges of those lofty Himalayan mountains, from which they are evidently offsets. The broadest valley seems to be that of Ava, and the narrowest the Cambojan one. The general inclination to the south of the whole of the regions lying betwixt Bengal and the sea of Kamscatka, is apparent, from the course of the rivers being in that direction. From regions contiguous to the sources of these rivers, the tide of population which overspread the southern plains appears to have flowed,—a position which might be illustrated by the affinities of languages.

The Indo-Chinese ranges are, in so far as we yet know, covered by deep forests. It is only, therefore, in the ravines formed by torrents, and on the face of an occasional precipice, that their structure can be conjectured; and these facilities are available at but a very few points, owing to the wildness of the countries in which they occur, and of the barbarous hordes which roam over them.

To begin with that part of the Malayan peninsula lying in about four degrees south latitude, and keeping on the west coast. This point is in the Perak country, which is governed by an independent Malayan chief in alliance with the British. From this last circumstance we may hope in time to gain a more perfect acquaintance with its geological peculiarities.

Close to the entrance of the Perak river are the Dinding Islands, hilly, with rocky shores. Granite seems to be here the prevailing rock. The plains of Perak are chiefly alluvial, up to the line where a marked ascent towards the central range is discernible, and which may, perhaps, be averaged at fifteen miles from the sea. The range in question is a portion of the great north and south one, which divides the Malayan peninsula longitudinally. The rivers to the eastward of it consequently disembogue themselves into the Gulf of Siam, while those to the westward enter the Bay of Bengal and the Malacca Straits. This range, generally considered, lies nearer to the
t than to the east coast of the Peninsula. Where it bounds Perak

on the east, it is both lofty and, in so far as observed, continuous. Gold has been found in the beds of some of the mountain tòrrents which join the Perak river. From specimens of ores of gold, found in the hills east of Malacca, it would seem that the matrix is most frequently quartz. That the Malacca peninsula was the golden Chersonese of the ancients, cannot now be proved; but it yields at this day gold in sufficient abundance to render this position probable. The granite formation appears to predominate amongst the Perak hills; and in it are found the veins of tin from which the Dutch formerly derived much profit, and which now yields valuable supplies of that metal.[1] The mines must be very rich, since, even at this period, the native workman seldom digs above ten or twelve feet below the surface, and often contents himself with merely washing the soil taken from the beds of rivulets, and separating the oxide of the metal in the shape of a black sand. The oxide of antimony is also obtained, it is said, and manganese occurs in large quantities amongst the hills; but no information exists of the rocks with which they are associated. Lime is also, according to native information, obtained, but its nature and locality have not been ascertained. From some native accounts also it seems not improbable that coal will be discovered in this track. Perak is a fine country, watered by a river of a very picturesque nature; and it contains a considerable population of Chinese and Malays. From Perak, northward to Penang, the coast is level, with a few detached hills not characterised by any peculiar feature, which might contrast them with those we have been describing. Penang, it is well known, exhibits an almost exclusive granite formation. The granite is, for the most part, gray, and decomposable, generally flaking off by exposure. It protrudes at the summit of the hills, and may be found lining their base. In some spots its debris is found to be mixed with tin ore in the shape of fine grains. Mica occurs occasionally in pretty large masses; and white quartz, regularly crystallised, is found sparingly. On the shores of several of the small islands lying off it on the south-east, conglomerate, tinged with oxide of iron, is found as well as the usual granite:

That part of the great peninsular range in the latitude of Penang is much broken; but many of the hills are of considerable height. The loftiest one, visible from Penang, may, perhaps, be stated at four thousand feet. They are almost all rich in ores of tin; and, were

[1] It is believed that three thousand piculs of tin can be obtained yearly from this country.

European scientific men permitted to explore them, we might expect to derive interesting results from their labours. A table land of considerable elevation, and covered with grass, is reported to lie about north-east of Penang, in the centre of the great range. The jealousy shewn by the Siamese has hitherto prevented Europeans from visiting it. Marble is reported to be found in this direction; but no specimens have been obtained. The Malayan inhabitants are all friendly to the British.

That portion of the Keddah coast facing Penang, has evidently, in many parts, been rescued from the sea. The period when this happened is not traditionally known, although it is conjectured that it is not very remote. Mounds of sea-shells are found about two miles inland. There are detached hills on this part of the coast which contain tin.

The Keddah Peak (termed by the natives Gúnong Cherai) is an object of considerable geological, as well as geographical, interest. Its height has not been correctly ascertained. It may, perhaps, be stated at three thousand feet, at least, above the level of the sea, which washes part of its base.

The summit has not been reached, as far as is known, by any European, although perfectly practicable. This has been greatly owing to the jealousy of the Siamese. From specimens of rocks and ores brought from this hill by intelligent natives, who were sent by me to explore it, I am enabled to state with some measure of confidence, that it principally consists of the usual granite of this coast. On the sea face is a cliff washed by a waterfall, where large crystals of white quartz are got. Similar crystals were brought to me from a spot near the peak. The summit is a granite rock, with a flat termination of a few square yards bare of vegetation, and accessible with difficulty. This mountain contains gold; and tin-ore was formerly obtained in large quantities from it. Various ores of iron were brought to me from it; and it is probable that many other valuable minerals may yet be found there. It abounds with all the valuable woods of this coast, amongst which are several kinds of fir. The inclination of the hill is apparently to the east; and there is a very remarkable break (of six or seven hundred feet, judging by the eye and telescope, at the distance of ten miles) in the rock, east of the peak, which may have been caused by an earthquake.

The latter phenomenon, it may be remarked, is not followed by such violent effects on this coast as on the Island of Sumatra, and on Java. The existence, however, of hot springs in various parts of the central range, indicates the prevalence of mineral substances, of which

specimens have not yet been obtained, and which are generally found in volcanic tracts.

Advancing northwards from Gúnong Cherai, and passing the mouth of the Keddah river, which takes its rise in the central range and fertilises an extensive track of rich soil, the first object which attracts the attention, is the elephant rock, a short distance north from Keddah. It is a dark mass of granite, seemingly, and it shoots very abruptly out of the forests to the height, perhaps, of four hundred feet.

The coast continues low to the northwards of this point. Turning to the Lancavy Islands, we find granite still prevailing; but here, in the "bird-nest rocks," we are enabled to note the southern termination in this line of the limestone formation, which has been traced by me up to the northern boundary of the Martaban province. It is believed that detached lime rocks abound in the central range; but they are not connected with this formation in so far as we yet know. The first decided indication of the presence of lime was observed in a perforated rock, lying off the north-east side of Pulo Trotto.

The calcareous rock is here much tinged by oxide of iron, and mixed up with different earthy substances. The strata are inclined to the west, at an angle of about thirty degrees.

Several miles north of this point the Trang rocks begin. The first of these was visited by me; but it merits much narrower inspection than time permitted me to make.

It is a huge mass of heterogeneous rock rising out of the sea to the height of about three hundred feet. Its shape approaches to an oblong square; and it is rendered inaccessible by cliffs. The whole seems inclined at a slight angle to the south.

From the decomposing nature of the surface, it would be no easy task to arrive at a speedy conclusion respecting its whole structure. It appears to rest on a granite base, covered by various admixtures. The superincumbent mass is heterogeneous — limestone in various stages; veins of quartz, and ores of iron are most prominent; calcareous incrustations line the hollows of the cliffs; where also the agaric mineral abounds: and the cliffs are, in some places, curiously marked by broad, vertical, riband-like streaks, varying in colour according to the strata from which the water, containing the colouring matter, has flowed — white, black, dark-bluish, and slate colours, are most frequent. At the south end, about half way up the cliff, there are magnificent natural arches. The grotesque calcareous stalactites, which depend just over the entrances to these, give them, as a whole, the aspect of a decayed Gothic ruin.

A cavern has been formed quite through the north end of the rock by the action of the sea below, and the gradual decay of the structure above. Stalactites abound here.

Our boat carried us into the centre of this cave: it is gloomy; but the roof is, perhaps, fifty feet high, and dome-shaped though rugged. Here were observed flimsy ladders of flexible cane stretched betwixt projections of the rock; and, on emerging from the cavern, similar ladders were observed to have been arranged up the face of the cliff, in a zig-zag manner — here, fastened to a jutting point of rock, there, reeved through a perforated angle. These had been thus placed by adventurous Malays, in quest of the edible birds' nests. Their trade is more dangerous than that of the samphire gatherer, or the Hebridian birder; but it is more profitable than either. Several of the birds' nest islands, in this line, have been so tortuously hollowed out by the slow operation of ages, that, previous to going in, the nester fastens to the entrance the end of the clew he takes with him, that he may not lose his way. On these occasions they use dammer torches. The eye of the swallow which builds these nests, must be peculiarly formed to enable it to work and nestle in such a labyrinth, where almost total darkness prevails.

A pocket-compass was placed close to that part of the cliff which seemed most strongly impregnated with iron, but it was not affected.

Near, and to the north of this rock, is a very rocky island, termed Ká Pesa by the Siamese, because, in their legends, it is related, that an undutiful son having denied assistance to his parents out of the profits of a successful voyage, the gods sent a storm which drove his vessel to sea, where it was transformed into this rock.

The general structure nearly corresponds with that of the rock just noticed; but it has a most singular aspect, from a series of peaks which rise from it—bleak and striated, and which, on a near approach, resemble the chimneys of glass manufactories. The geological features of this island may be best seen at the north end, where large masses have fallen from the cliffs. Here granular magnetic iron ore, imbedded in a calcareous and micaceous gangue, was found in considerable quantity. A nearly similar sort of iron ore abounds on the high ground on the main land, at the entrance of the Trang river.

These rocky islands are adorned by numerous beautifully flowering shrubs and trees, and are frequented by the white sea pigeon[1] (*Columba littoralis*), and by birds of passage. A coarse coral bottom

[1] This pigeon lives on fruits, particularly that called marian, or *kyan keo*, and various kinds of the wild Indian fig.

prevails around each; but the depth suddenly increases at the distance of two or three hundred feet from the shore. Oysters are abundant. At the north side of the narrow entrance to Trang harbour, in north latitude 7° 20′, is a remarkable calcareous rock, with several caverns in it. The carbonate of lime, in conglomerated masses, or in stalactites, is here much purer than that found amongst the islands just described. Several of the stalactitic masses are bell or fungus-shaped, the apex upwards, and when struck are found to be remarkably sonorous. These are all tinged with iron.

Pulo Tilibon, which forms the northern side, exhibits granite and iron-stone, with veins of quartz in it. It should seem that the lime formation becomes more compact and pure, as it is followed in a northern direction.

The rock in question contains a detached portion, having a stratified appearance, and inclining to the south-east at an angle of about thirty-five degrees. In one of its caves were observed twelve human skulls laid out in a row. They were those, the Siamese said, of Burmans, who were slain in those wars when they attacked and destroyed Tilibon. Part of the stockade, which surrounded the town, was yet standing when I visited the spot in 1824, about fourteen years after its destruction. The thick planks, or beams, were quite sound, and very hard. The tree from which these durable walls had been obtained, is the *Mai-ke-um* of the Siamese, and the *Kayú gittah* of the Malays.

The Trang river is broad, with a high ridge running at right angles to it, on the west side of the entrance. Granite rocks here protrude through the soil, which is red and ferruginous. The shore is overspread with lumps of micaceous iron glance, very fusible. The iron is in small rounded particles, black, but yielding a reddish streak, and when reduced to powder, adhering to the magnet. The matrix is a brown ochre, which soils the fingers. The quartz, which is found imbedded in the granite of this coast, is generally very lamellar, and the plates transparent. There are several hills discernible from this place; but little information was obtained regarding the great range. The young Rájá of Ligor informed me, that the pass betwixt the hills is difficult; but, as he rode his elephant the whole way on several occasions, his account, no doubt, is exaggerated.

Most of the small islands, lying betwixt Trang and Junk-Ceylon, seem, for the greatest part, composed of granite. It prevails in the latter island; and here again tin appears in proximity to, or interspersed in it, and its débris.

A range of hills, the highest of which will not, perhaps, be found

to exceed one thousand feet, stretches longitudinally through the island, with one large break in the middle. The island was probably once joined to the main land, since the *Papra Strait*, which separates the two, is narrow and rocky. The island, when I visited the interior in 1824, had a population of six thousand souls (Siamese).

The tin formation seems to run in a continuous line, from the southern extremity of the Peninsula up to about fifteen degrees north latitude. Beyond this point neither Burmans nor Siamese have discovered any mines; but, as the countries lying on both sides of the great belt of mountains are, perhaps to a distance of twenty miles, respectively, from the skirts of the latter, inhabited by wild tribes of Karians, uninterested in the search for metals, it is probable that tin does exist in these latitudes. It shews itself again in Thaumpé, one of the provinces of the Shán, as the Burmans term the inhabitants, and lying, if dependence may be placed on the distances given to me by natives of the country, in about twenty degrees north latitude, and longitude ninety-nine degrees. The natives call themselves Plau.

There the tin-ore occurs in beds of streams mixed with sand. The natives do not dig mines to get at it, owing, perhaps, to its being of little value at such a distance from the coast. They have, however, by their own accounts, valuable lead-ores, which they reach by deep shafts.

In Captain FORREST's time, when Junk-Ceylon was visited by numerous native traders, the mines yielded an average annual quantity of five hundred tons of tin. But, as the population has been reduced to about six thousand souls, and as the Siamese have mines closer to their capital, a very small supply only is now taken from the island. Perhaps, it may be rated at one hundred bahars of 446 lbs. averaged each. A Chinese smelter informed me, that he could afford to produce tin at a cost of one-half at the utmost of the market rate. The miners dig pits of from twelve to twenty feet deep; but seldom venture a lateral shaft. The ore is generally in round or oblong masses, with well-defined crystals, and in a matrix of quartz, or bedded in masses resembling half decomposed granite, yet of considerable hardness.

The furnace in which the pounded ore is smelted, is made of a compact of clays and earths, is oblong in shape, and about three feet high. Alternate layers of ore and charcoal are put into it, and the usual horizontal tube-bellows of the Chinese is kept incessantly at work during four complete days (of twenty-four hours) and one night, when the furnace is cleansed. After some hours labour the tin makes

its appearance, and is run into moulds; and the furnace is fed with more ore and fuel.

The Bay of Phúnga, which stretches north-east from Junk-Ceylon, is remarkable for the magnificent rocks with which it is studded. At the distance of ten miles, they appear like huge artificial pyramids; but, on a near approach, their outlines change to columnar, or massive. The principal rocks occupy a line of about ten miles, in a north and south direction. The northern extremity lies behind the town and valley of Phúnga; the southern rests in the sea, about four miles from the mouth of the Phúnga river. Their direction, therefore, is nearly that of the Trang rocks. The part of the range lying in the sea, consists of numerous detached rocks of different elevations, and mostly inaccessible. The height does not in any instance, I should state, exceed five hundred feet, and seldom falls short of two hundred. One of them has a very columnar aspect, which might lead a distant spectator to suppose it was basaltic. They are all, however, composed of, I suppose, primary limestone; for, like the rocks which have been already described, they exhibit no traces of organic remains. Some of the specimens of stalactite, which were presented to the Asiatic Society of Calcutta, were taken from one of a series of grottoes in and near the base of one of the Phúnga rocks. These caverns are about six feet above high water mark. The roofs are low, and seldom exceed ten feet in height; and they look as if supported by the natural pillars of spar, which have been gradually formed by filtration from the top. Several of the stalactites have barely reached the floor; others touch it; and a double formation is going on. The sides of the grottoes are lined with the same calcareous spar.

There is an insulated rock near this spot, which is perforated by a grand natural tunnel. To the top of the arch, the height is about twenty feet; and grotesque-shaped stalactites depend from above the entrances from the roof. A boat can get within the arch.

The valley of Phúnga is about three miles long by one, on an average, in breadth, being oval-shaped, and widest near the sea. It is hemmed in, to the east and west, by rocks and hills. Those on the west are least abrupt, and seem mostly granitic; those on the east have a very picturesque appearance; and, where the river washes their base, present perpendicular cliffs of four and five hundred feet. They are even more purely calcareous than the rocks at sea; for many look, at a short distance, as if formed of chalk. This they owe to the agaric mineral. Tin abounds in the granitic hills in the vicinity of this valley. The great hill range of the Peninsula was not observed from this point, owing to the intervening rocks. But the Siamese

chief informed me, that it must be crossed in the route thence to the opposite coast of the Peninsula. No information could be expected from him as to the rocks associated there. The population here is about eight thousand souls, including six hundred Chinese, and about one hundred Siamese priests of all ages.

Passing to the northward of Junk-Ceylon, the coast is bold for the distance of a degree; and lying about thirty miles off this line, are numerous calcareous perforated rocks, frequented by the edible birds' nest gatherers.

From all accounts obtained from native travellers — from personal observation when sailing up the coast, and with reference to the narrowness of this part of the Peninsula — it has appeared to me, that the great central range is here of less width than at any other point. That this circumstance, as some have imagined, should give any colour to the supposition, that any internal navigation is, or could be, rendered practicable betwixt the Bay of Bengal and the Gulf of Siam, ought not hastily to be admitted. Before me are native plans, in which the hills are laid down as continuous. At any rate, the inclination of the countries towards the Gulf of Siam on the one side, and the Bay of Bengal on the other, is so great as to prevent the rivers which flow over them from being navigable to good-sized boats, beyond, perhaps, ten or twelve miles from their mouths.

The sources of two rivers may, indeed, lie within a few miles of each other, on opposite sides of a hill or a range; yet the spot where they respectively lose the name of mountain torrents, and become navigable, may be very widely asunder. It is true, that by running up the Kra, or any other stream, in a boat, a traveller may get within two or three days' march of the place of embarkation on a river on the opposite coast: and this is all that can, with our present information, be admitted. All the rivers on this coast are deep at their mouths; but, with the exception of the Tennasserim and Tavoy rivers, which incline to the northward, and avoid the hills, they suddenly contract and grow shallow. Tin abounds betwixt Junk-Ceylon and Mergui.

The coast of Tennasserim, from 10° to 12° 30′ north, is shut out from the ocean by high and generally rocky islands.

Those which form the west side of Forrest's Straits, up to the north point of Domel, in 11° 3′ north (instead of 11° 21′ as he gave it), are well wooded, and are chiefly composed of granite. Domel is a fine island, twenty miles in length, by twelve, or thereabouts, in breadth, with a rocky coast. On sailing past a spot described and sketched in Forrest's work, and at which he mentions having taken in marble

ballast, I could only find a great quantity of large, smooth boulders of quartz, which had been associated with slate; for, upon inspection of the coast, thick strata of soft, black slate, with veins of quartz, were discovered. The slate had, in some places, an admixture of iron-ore.

In coasting Domel, the hills on the main land are distinctly perceivable. The highest point was conjectured to be about three thousand feet high. These hills, in all probability, belong to the great range. The highest peak of St. Matthew's Island may be nearly as high.

All the islands in this chain examined shew bold coasts towards the sea.

There is a considerable opening north of Domel, where a distinct archipelago of bleak and rocky islands begins, and stretches north and south. The belt is formed of four or five parallel rows of islands, and may be twenty miles in breadth. They are not laid down in the charts. Our vessel passed amongst them in coasting; and as the numerous dangerous rocks with which this hitherto unexplored track abounds, rendered it necessary to anchor frequently, opportunities offered for visiting many of the islands. The channels are, for the most part, deep, and a vessel of two or three hundred tons can scarcely find anchorage near many of the islands when within half a cable's length of them.

Their formation is primitive. The granite is occasionally associated with black shistous strata, or sandy slate. The specimen sent, among others, to the Asiatic Society of Calcutta, was taken from a vertical stratum, of exceedingly indurated shist, tinged by oxide of iron. Lime-rock was not observed to prevail; but several of the islands seem heterogeneously composed. Occasionally quartz, white and tabular, was seen to pervade in broad veins the granitic rocks.

Several "birds' nest" rocks are scattered amongst this group, and it may be inferred that they are calcareous. Pearl oysters are occasionally picked up. The pearls got from them are seldom of much value. If pearl beds of any desirable extent do exist, the practice of diving for them, as at Ceylon, might be applied with advantage. The whole of the islands noticed are destitute of any fixed population; but there is a tribe, termed Chalome and Pase, the families of which rove about collecting the birds' nest, the dammer, the beche-de-mer, conch slugs, wax, scented woods, tortoise-shells, and other products of the islands. They live in covered boats, and appear inoffensive; readily bartering the above articles for such merchandise as the Burmans bring to them.

Leaving this coast for a space, and crossing the Peninsula, it will be my endeavour to give as brief an account of such geological and mineralogical notices as have been obtained respecting Siam.

The sea which washes the shores of the Peninsula on the east side is studded with numerous islands, bold, and, for the most part, rocky. The edible birds' nests being here procurable from the caves, it is probable that lime abounds in the rocks. Along the shores of the Chúmp'hán and Chaiya districts, ferruginous strata are prevalent, and loadstone is said to be procured from them.

At Ban taphan nae, nearly in the latitude of Old Tennasserim, are the only gold mines now worked in Siam. The gold is either in the shape of dust, or found in a reddish earthy matrix. To get this last kind of ore, pits of no great depth are dug. The ore is merely submitted to the agency of fire. It is not believed that these mines yield annually more gold than would be valued at perhaps about 15,000 rupees. But, as the miners (about from two to three hundred, it is understood) only mine during three months in the year, and as they go very clumsily and unskilfully to work, the real value of these mines remains unknown. Mr. CRAWFURD observes, that "the Bang tapan gold is said to be nineteen carats fine."—*Embassy to Siam.*

A diligent author,[1] who visited Siam, observes of the Siamese, that "neither their mines of tin, nor those of copper, lead, or gold, have experienced the benefits of the industry and intelligence of the Chinese."

Previous to opening a mine, the Siamese propitiate the spirits of the ground and of the stream, by the sacrifice of cattle and poultry, and by offering up these and fruits on temporary altars. This custom is equally observed by Chinese and Malayan miners, on opening gold or tin mines. With respect to the Siamese, the practice is a direct breach of the primary ordinance of their faith, "not to kill that which has life;" and points to a period when they worshipped *Genii Loci*, and other imaginary *Dewtas*. Cornelians are found, it is said, on this coast.

Proceeding northward, till within about a day's coasting of the Siam river, a hill, termed K'hau Deng, or "the red hill," appears on a point of land. The coast is covered with ferruginous earths and strata; but of these no specimens have been obtained. Close to this place, and stretching for the distance of ten or twelve miles northward of it, is a very remarkable range of pyramidal hills and rocks, termed by the Siamese, Sam ṭáe yát, or "the three hundred peaks." They

[1] Mr. CRAWFURD.

vary in height from an hundred to, perhaps, twelve hundred feet; some rise from the sea, others are scattered on the main land.

This account I give from native information, although European navigators have incidentally alluded to them. They take from hence a kind of *hone* (perhaps an iron ore), varying in colour from black to white. The valley of Siam is chiefly alluvial, within the scope of the annual inundations of its river. The first rocky formation of any consequence northward of Bankok, the capital, is at Prabát, three days, by water, north-east of the old capital, and where there is a famous impression of a foot of Buddha. The Siamese priests have long imposed this sculpture on their followers, who never doubt their assertion, that the legislator alluded to stamped the impression with his own foot.

This Prabát has been made on the solid rock (a granite, if my information is correct), which protrudes at top, and a stair has been cut out of the rock to ascend by. A copper-ore is said to be found on the flat grounds near this place. About fifteen or sixteen miles above Prabát, there is a low hill called Phra Chaiya, where granite, according to my information, prevails, and where the natives fancy they can trace on the face of a rock, the lineaments of Buddha. Iron-ores are found here. At Napphabúrí, on the south of the road to Laos, large quantities of a very white argillaceous earth are obtained; and red ores of sulphur are said to be brought from this quarter. At Khorát they use, it is said, a plum-pudding stone, or breccia, for building; and at Napphabúrí, in this quarter, they find yellow, red, and white ores of arsenic (*Realgar?*) a metal which enters largely into the Siamese pharmacopœia. The range of hills, stretching north-east from a point in about north latitude sixteen degrees on the east bank of the river of Siam, yields ore of iron in great abundance; and the Chinese have, therefore, established a manufactory of iron at T'hasúng, a town lying on a branch of the river. They manufacture various coarse articles of cutlery, which are rejected by the Siamese themselves in favour of foreign importations of that metal. Iron mines exist also at Sokkothai, higher up the river, at Khánsawan Phítsílók, and in the provinces of Prahéng and Tak, as also observed by Mr. CRAWFURD. The range of hills dividing Siam from South Laos, is continuous, according to every account I have received from native travellers, who invariably go most of the journey by land. They affirm, that there is no water communication across the country; so that the river Anam, laid down by some geographers,[1] appears to have no existence.

[1] PINKERTON and others.

The Me Nam, or great river of Siam, has been traced by me, in native maps obtained from people of Laos, up to about twenty-one degrees north latitude, where are high hills abounding in hot springs. P'hokhau Lo-ang Prabang, a hill many days to the northward of Lanchang, in South Laos, yields, it is said, gold and precious stones, silver, copper, tin, and cinnabar. LOUBERE observes, in his *Historical Account of Siam*, that the copper-ore of this country hardly yields one ounce of metal out of five cwt. of it. It may be the Mohang Leng of DU HALDE, where, he observes, were to be found "gold, silver, copper, tin, and red sulphur." At Chantabún, on the east coast of the Gulf of Siam, granite is believed to be the prevailing rock, and quartz-crystals, Ceylon diamond, and coarse rubies, cat's eyes, and other precious stones, are collected, it is reported, in the vicinity. Steatite is found in Ligor.

Mr. CRAUFURD, in his *Embassy to Siam*, assigns the following localities to several rocks and minerals in Siam, and on its coasts.

GRANITE, SMALL GRAINED AND GRAY, AT PULO UBI-I, OR THE KO TAM BUNG OF THE COCHIN-CHINESE.

Granite and quartz, at Hwi-su-I, in latitude 12° 38′ north; longitude 101° 30′ east.

Primitive granite and quartz, at the Ká Si Chang Islands.

Seinite granite at Condore-I, latitude 8° 40′ north; longitude 106° 42′ east.

SANDSTONE AND CONGLOMERATE.

At the chain of islands, next to Ká Doot Island east; and at Pulo Panjang, on the west coast of the gulf.

LIME.

Granular; also, dolomite, at Ká Si Chang Islands, on the east coast of the gulf.

GOLD.

Bang Tapan, in latitude 12° north.

COPPER.

In the upper parts of Siam, Pitsiluk, Lakonsawan, Raheng, and Metak; and at Lonvo and Nukburi, in latitude 15° north.

LEAD.

At these places; also at Pak nek, in the country of the Lawa, on the north frontier, where 2000 piculs are procured, it is stated, annually.

ZINC AND ANTIMONY.

At Pitsilok Lakonsawan, Raheng, and Metak, and at Rapri, east of Me Nam.

TIN.

At Champoon.

IRON ORE.

At Pulo Panjang, east coast, also, jaspar; and at the four places above stated.

PRECIOUS STONES.

Sapphires, oriental rubies, and the topaz, at Chantabun, in an alluvial soil.

We now return to Tennasserim. The high islands fronting Mergui are, apparently, of primitive granite; and King's Island, with most of the lesser islands in its neighbourhood, present bold granite cliffs to the sea.

The hill, on which the town stands, consists of granite, decomposed at the surface, with much quartz interspersed in veins. The ochrey appearance of the soil, in some places, indicates the presence of iron; and tin ore is found in the streams at the base of the hill. Lead ore is reported to exist in the upper parts of this province. The rocks on the island forming the west side of the harbour are strongly impregnated with oxide of iron. In the vicinity of the town, argillaceous petrifactions are found. The clay contains some lime; but no marks are discernible near Mergui of lime rocks. Some petrified crabs were obtained. The province of Mergui, or Tannau, abounds with tin ore, especially to the southward; but as water is either scarce or brackish at many of the mines, workmen object to visit them.

The sea, northward of Tavoy, is pretty free of islands. Gray granite is the prevailing primitive rock throughout the province of Tavoy.

There is a low range of hills, which stretches north and south, close along shore, and shuts from the sea a great portion of the province. Nearly opposite to the town of Tavai, on the west bank of the river at Kamau, is an elevated ridge of several miles in length, which is almost wholly composed of iron stone of different degrees of compactness. On the surface, the soil and gravel are reddish; but on a high part of the ridge is a rock very hard and fine-grained, but not striated, and of a blackish colour. It is strongly impregnated with iron, and so magnetic, that a piece newly detached, and of a pound in weight, held a piece of iron, nine grains in weight, in suspension. It was with much difficulty that a few specimens could be broken off

with an iron crow. This rock might, from its black appearance, be supposed of meteoric origin. But it is evidently connected with the ferruginous strata beneath, and seems not to contain any nickel.

Tavoy is a very hilly province. The first range connected with the great centre belt, lies about ten miles east from the town. Hence, to the main range there is a succession of north and south ranges, gradually increasing in height, and having very narrow valleys betwixt them. Through these valleys flow rapid streams, which, after pursuing the direction of the valleys to various distances, find outlets, and, then turning westward, flow through level tracks until they reach the sea. The route by the Nayé Daung Pass into Siam, lies about north-east from Tavoy. I performed the journey to the summit of the pass in 1825, and on foot, as the road is impassable either to elephants or horses. Indeed, the only paths, in some places, are the beds of mountain torrents. A dense jungle covers the face of the country, precluding the probability of satisfactorily pursuing geological pursuits. The tin mines, lying three miles off the route, were visited by me. They do not here deserve that title, as the Tavoyers merely wash the sand of the streams, and collect the fine black particles of ore. A large quantity of tin might, however, be obtained. The ore often contains a very small proportion of gold. The temperature of the air is found to be about sixty-four or sixty-five degrees until eight or nine o'clock A.M., and that of the water sixty-eight degrees (Fahrenheit's thermometer), so that the workmen never begin their labour until that hour. As the population does not extend beyond the first range of hills, and the mines are buried in the forest far beyond these, the men are exposed to the attacks of elephants and other wild beasts which here abound.[1]

Other mines of tin lie at Papú and Pallo, on the southern coast below Tavoy, and a meagre, black, and slightly sparkling ore, believed at first to be of antimony, but apparently only manganese, has been obtained from the province; but of its locality I am not aware.

Frequent vertical or inclining strata of hard slate, and sandy slate, are found at intervals to lie across the path; but wherever a bold cliff appears, scarcely any thing except granite is visible.

At Laukyén, fifteen miles north-east from Tavoy (a halting place, or circular cleared space of the forest), and lying a few hundred yards on the east of the route, my guides shewed me a hot spring in the almost dry bed of an occasional torrent.

[1] Three dollars and one sicca rupee's weight of ore yielded three dollars and a half rupee's weight of tin.

The adjacent strata were, after many hours' labour, laid bare, and specimens were taken from the spot where the water bubbled up. The rock appears to be a transition slate, passing into limestone (for it effervesces slightly with an acid), and having thin films of pyrites betwixt the cubical portions which compose it. The water raised the thermometer to one hundred and forty-four degrees. The gas which escaped was not inflammable. The pebbles around were incrusted with a calcareous salt. The water has no peculiar taste. There is a mound on the eastward of the spring; but no volcanic indications were perceived in any direction. Another hot-spring lies betwixt Peinbyú and Taung Chín, to the southward of Tavoy Town, and is reported to be sulphureous.

The great Tennasserim river was crossed in this route in a track where either perpendicular cliffs of granite or wooded hills hem it in on both sides. Its bed is strewed with large blocks of the same primitive rock. By leaping and stepping from one to the other of these, we crossed to the east bank. The breadth of the channel was found to be one hundred and fifty feet, fifty of which only were, on the 16th of February, 1825, covered with water. It is quite impassable in the rainy season. From the appearance of the stream here, I should be inclined to fix its source somewhere about sixteen degrees north. The road distance to the top of the Nayé Daung Pass is about sixty miles: in a direct line, it is about fifty miles. It was found impossible to march early in the morning, owing to heavy dews and mist; and the whole day was often employed in getting over ten or twelve miles,—so difficult was the march rendered by the necessity of crossing (often twenty times in a day) mountain torrents, and the streams they feed, and of ascending rugged beds of streams and ravines, where the guides were not unfrequently at fault. A considerable tract of table-land was passed over during the route. The average temperature of Fahrenheit's thermometer[1] was at sunrise sixty-four, and at mid-day seventy-four degrees; but it was once sixty-two at the former period, and occasionally seventy degrees at the latter.

The rocks at the pass could not be well examined, owing to the thick jungle; but the surface is evidently a decomposing granite. From this elevation, which ought not, perhaps, to be rated higher than three thousand feet, four very distinct and higher ranges of hills were seen within the Siamese frontier on the east, while the lesser ranges on the Tavoy side could be easily traced.

[1] The month was one of the hot and dry ones.

From the view here obtained, perhaps we may allow forty miles at the least for the breadth of the whole space, in this latitude, occupied by hills. The ranges are as nearly as may be parallel to each other.

In my overland route to Yé, the surface was rarely found to exhibit any other than the granite formation: quartz was occasionally abundant.

At En bien, near Kalíng Aung, on the left of the road, and in the middle of a circular level spot in the jungle, is a curious hot well, or pool. It was found to be quite marshy all around, although it was visited in the hottest period of the year. It was not without difficulty that it could be reached near enough for examination, both from the heat under foot and the treacherous nature of the soil.

The pool is about forty feet in diameter. By throwing a bottle attached to a rope, allowing it to fill and grow heated, and pulling it suddenly back, the temperature was found to be one hundred and four degrees of Fahrenheit; but four degrees more may be allowed for accidents. Not a rock or pebble could be seen near the well. A bleak, and on the surface, sharp, disintegrated, and scraggy, granitic rock lies a short distance to the northward of it.

The water has not been examined by tests. From this hot fountain, down to the stockaded town of Yé, in the small province of that name, the country falls rapidly (to the south). A few detached hills are perceived at intervals; and on the east of the route, a low granite range stretches northward, resting on the south at Tavoy Point, and to the north, in Martaban province.

The low hill, on which the stockaded town of Yé stands, exhibits no peculiar features to attract a geologist — granite decomposed at the surface, is most prevalent, I believe.

On the route from Yé to Martaban were perceived, in the dry beds of rivers, massive strata of striated clay-slate of a fawn colour. These strata are either vertical, or dip at a considerable angle: Martaban, and the adjoining countries, would well reward the labours of a geologist. As the Burman war was being carried on when the former was visited by me, it was not without the imminent risk of being cut off, or of being made a prisoner by the enemy, then encamped on the north side of the river, that I was enabled to explore the country up to about north latitude 18° 20′.

A geographical sketch of this province has been already offered; for, without some idea of the localities of a country, the future geological traveller may find his plans prove abortive.

The numerous detached and insulated rocky hills which are scat-

tered over the plains, and the many islands which stud the expanded San-lún, together with the dark and towering Siamese hills in the back-ground, produce scenery of a very impressive kind.

The ranges of hills in this province betray granite as their chief ingredient; but the detached and very abrupt rocks and hills, of elevations of from two hundred feet to eight hundred feet, which shoot up from the plain, have, in so far as examined by me, been found to be invariably composed of limestone. The limestone is in various stages, from an earthy and gritty kind up to hard marble; and the cliffs on several of them have the same marked features which the Trang and Phúnga rocks display, being streaked with red, brown, and white, and evidently suffering a rapid decomposition. The plains on which these are based, are covered generally by an alluvial soil; but in some places, it is dark and porous, like the cotton ground of India. The sub-stratum in the lower parts is commonly a stiff clay; but towards the Siamese range the soil becomes more friable, tinged with oxide of iron, or mixed with débris of rocks, and resting on gravel in large round masses. Here, on the banks and on the low islands, the Kayen tribes cultivate cotton, indigo, tobacco, and pulses. Potter's earth is obtained in abundance near Martaban. Of this, most of the utensils known by the name of Pegu jars, were formerly made.

On the low range of hills on which Martaban stands, granite, perhaps, predominates; but at the town many slaty and sandy strata, having an inclination of about thirty degrees, here tinged with oxide of iron, there intermixed with slightly calcareous and other matters, and quartz, are observable. At Málamein, a breccia is found, which has been used in the construction of the pagoda there. This substance hardens so much by exposure, that it will last for ages, as it has here done. On the high grounds, which occasionally flank the river, the surface is tinged red by iron-ores.

About fifty miles by water up the Attarám river, and within about two miles of its eastern bank, stands Seinle-daung, one of the singular limestone rocks just alluded to. About mid-way betwixt it and the river, and on a swampy plain, slightly inclined to the river, I visited a singular hot fountain (for it is of too peculiar a nature to be merely termed a spring). The Burmans call it, *Ye-bú*, "hot water." The orifice is nearly a circle, the diameter of which is about thirty feet. The rim is of earth, and only raised about a foot above the surface of the water. Not having been prepared for such an interesting object, no line had been provided; but the depth is, no doubt, very considerable. The water was so clear, that the green calcareous rocks

which project from the sides were quite distinct at a depth of twenty feet at least. A strong bubbling appears near the middle. A thermometer, propended from a bamboo, was dropped into the water, and, after a space, quickly withdrawn. An allowance of two degrees being made for loss of heat in the removal, the temperature by Fahrenheit's thermometer was found to be one hundred and thirty-six degrees, which is twelve degrees hotter than the Bath waters.

Had any volcanic indications been observed in the vicinity, the circular formation of this well might have induced a belief that it had once been a crater. A visitor to this place ought to approach it with caution; since part of the water near the edge is covered with weeds, which so resemble the surface of the bank, that a person might unthinkingly step on them to his inevitable destruction. He would faint instantly from the heat and sink. Although the wells on the plains were all nearly dry at the period when this fountain was visited,[1] yet it discharged twenty gallons, on the least computation, in a minute, and towards the east side. The leaves and branches which had fallen near were incrusted with a calcareous deposit, and the bottom of the rivulet was covered with a flaky calcareous substance. No specimen could be obtained of the rock, as it lies far below the surface; but from the greenish hue perceived in it, we may suppose it to partake of the nature of the specimens brought from Laúkyén hot-spring, in Tavoy. I drank some of the water, and was not afterwards sensible of any peculiar effect from it. Upon subsequently exámining it with the obliging assistance of a medical gentleman[2] at Martaban, it was found to be a chalybeate, and to contain lime in combination with some other earth or earths. The tests are enumerated below.[3] This fountain lies on the route to Siam; and from many cocoa-nut trees scattered about it, it is evident, that though now a jungle, the plain

[1] I was favoured on this occasion with the company of Lieut. GEORGE, M. N. I., and Mr. ADAMS, of the Marine Service.

[2] Mr. BROWN, A. S., M. N. I.

[3] 1st. Tincture of catechu precipitates a dark brown substance; hence the presence of iron is inferred.

2d. It does not blacken paper dipped in a solution of lead.

3d. No precipitate is caused by dropping into the water a solution of nitrate of silver.

4th. When mixed with a solution of turmeric (in equal proportions), no sensible change of colour is induced.

5th. When mixed with an equal quantity of lime water, a light, white precipitate, is formed, which does not effervesce with muriatic acid.

6th. The concretion found on the leaves and common pebbles effervesces strongly with muriatic acid, indicating the presence of lime in the water.

once supported a numerous population. Near Yé, on the sea-shore, there is a pond to which the Burmans ascribe marvellous virtues. It is said to grow quite red occasionally. Probably iron-ores are abundant there.

Betwixt this place and Málamein, on the east bank of the same river, stands the very majestic lime rock, P'habaptaung, the base of which is washed by the stream. It has been perforated quite through by a rivulet. The limestone composing it takes a fine polish; and large stalactites depend from the roof of the grand arch overhead. It, like the rest of the rocks examined, shews no traces of organic remains.

In rowing up the San-lún, or main river, the first objects which attracted my attention were the Krúkla-taung rocks, being a continuation of the great lime formation. The river at one spot is hemmed in betwixt two rocks, and, being thus narrowed, rushes through with considerable impetuosity. The rock on the north-west bank overhangs its base, the latter being washed by the river. On a sharp and, one should suppose, almost inaccessible pinnacle, a small pagoda has been built, producing a pleasing effect to the eye of a distant observer.

The cliff I conjectured to be two hundred and fifty feet high. The rock consists of a gray and hard limestone. The cave bears no marks of having been a work of art. The Burman priests, who inhabit a village on the opposite bank, could not afford me any information respecting it. No inscription was discovered on the rock.

Opposite the small Khyen village of Míchan-taung, which lies on an island, is a singular rocky hill, the base of which is washed by the river. It may be six hundred feet high; and it has a black and scorched appearance. It is almost bare of grass, with only a few trees on it. These grow in the hollows and crevices. It might be taken for basalt or granite at a short distance; but, on a close inspection, is found to consist of a black limestone, breaking off into cubical fragments. The ascent is abrupt and difficult, and the tread of the feet is succeeded by a hollow sound, as if the hill was but one vast catacomb. Several pits, having circular orifices, and of about three feet in diameter, were observed in the ascent. They are of considerable depth; for stones thrown into them were heard for about twelve seconds rebounding in their descent to the bottom. On looking down these, large fungus-shaped stalactitic masses were observed hanging from the sides. Near the summit of the hill, the ridges of the rock are so angular and sharp, that scarcely one of my people escaped being badly wounded in their feet.

Leaving the Míchan-taung, and proceeding up the San-lún river, the low rocks, observed on the banks, exhibit coarse black limestone. The high cliffs further removed, shew the more advanced stage of the lime formation. At Ka Kayat stockade, close to the hills, the granite again begins; and here were found, scattered about, smooth quartz and other pebbles of several pounds in weight, which had been used, after their ammunition had failed, by the Burman garrison when defending themselves from the attacks of the Siamese. Baskets, full of these pebbles, were arranged along the palisade inside. Several specimens of regularly crystallised quartz were here picked up.

The geology of Ava is little known, nor has any one of the many who accompanied the troops up the Irawadí favoured the world with a connected sketch of the rocks observed on its banks. That the lime formation will be found to extend up to Asam, there is every reason to believe, both from the accounts received, and because it is known, that carbonate of lime, in shape of the finest marble, and also alabaster, in a pure state, are very common in the country; thus countenancing the position taken up in another part of this paper, that the lime formation gradually becomes more compact and pure, as it bends to the north. Dr. HAMILTON observes, that "at Prin he saw part of the chain of hills which forms the northern boundary of Pegu, and that there sandstone and limestone were observed in flags." In Thaumpe, a Shan district, they have lead, iron, tin, some silver, it is said, and limestone.

From all that has been here stated, it should seem, that granite forms the basis of all the continuous ranges of hills on the coasts just described; that a bold and marked lime formation runs parallel to these ranges, but that this is occasionally interrupted, as far as can be judged of from an examination merely of the surface; that schist is of very frequent occurrence; and that tin, in the shape of an oxide, and invariably associated with the granitic hills, or formed in their vicinity (and supposed to extend up to twenty degrees of north latitude, if not beyond it), and iron, in various states of combination, are the principal metals throughout this wide range.

CHAPTER VII.

RELIGION.

THE inhabitants of this coast, with the exception of the majority of the Karean tribes, are Buddhists; but, so far as my own observation

extended, it does not appear that the Burmans are such pious worshippers as the Peguers and Siamese.

It is not intended here to treat the subject at length, but only to notice some of its most prominent features.

It is believed by the people of Laos, that Buddha was venerated most especially at the pagoda called Nang Rúng, lying north-west of Che-ring Mai, and before his dogmas found their way into Ava and Pegu. This religion may have been brought over-land from India to Laos, and also by sea. A learned Singalese priest of Buddha[1] informed me, that it passed from Pegu to Camboja; but he did not know the precise date.[2] Several *phúngies*, or priests, in Martaban related to me, that in the year 1869 of their era (about A.D. 1325) two priests of Buddha, called AUTHERATHÍ and SANATÍ, arrived in the Burman territory from Secho (Ceylon). They were succeeded in their spiritual dignities by SHEN BAUDDHA GOTHA, a personage of remarkable sanctity.

The *phúngies* of this coast are illiterate and ignorant, and have very little useful information to communicate. They have no sacred works (as far as my inquiries went) of any established authenticity in the Mon language; although this cannot be a cause of surprise, when it is known that the Mon priesthood has been superseded by that of the Burmans. No monumental inscriptions, either, could be discovered of sufficient antiquity to assist inquiry. All those examined by me refer to the building of a temple, the casting of a bell, or to pious vows.

It can hardly be doubted that the doctrines of Buddha have had some influence in softening and refining the manners of the Peguers and Burmans. Previous to its introduction, these nations must have been savage in the extreme; for they have left nothing to shew that they cultivated the arts, or were acquainted with letters.

There are several neat pagodas on this coast: that of Martaban is the largest; but none of them can be styled grand, when compared

[1] This man, whose name has escaped my recollection, was formerly a Buddhist priest at Penang. He afterwards travelled over many Indo-Chinese regions, and was even politically employed by the supreme government.

[2] He stated, that about the year 800 of our era, the Buddhist annals were preserved at Satthúm, in Pegu; that the Burmans renewed their acquaintance with these records about the same period; and that a holy Bráhman came there from Pachím Shú Nagam to gain sacred knowledge; hence he went to Lanca, or Ceylon; and from that island found his way to Camboja. The above period is about eighty-nine years previous to the first payment of tribute by the Cambodians to China.—RÉMUSAT.

with the Shúí Dagaun at Rangún, or Shúí Modo at Old Pegu. The Mergui pagodas are not higher than the generality of such buildings in Ava and Pegu. Close to the principal one, which is of a chaste outline, is a long brick building, shaped like many Roman Catholic chapels to be seen in various parts of India. It is encircled by upright stones about three feet high, and set in pairs. These front respectively to the cardinal points and their chief subdivisions; and are essential, according to Buddhist ideas, towards constituting it as a fit building in which novitiates are to be ordained for the priesthood.

TAVOY.

The Tavoy pagodas are numerous, but they are, for the most part, diminutive. The chief ones are Shejen Daweh, lying about twelve miles from the town; Shen Maupthí, south of the town; Shyen Moh, at Tavoy Point; Natchantaun-men, or Majam, on the north-north-west bank of the Tavoy river, and surmounting a small hill; and Mendat P'hría, on the south bank of the Taung-byaup river. The three first are the most ancient: the small one, called Heinze, is also considered of some antiquity. There is a large kyaum, or monastery, a few hundred yards in front of the north gate of the town wall, called Chankyé Kyaum: it is kept very clean. The only object of curiosity here is an impression on stone of one foot of Buddha. The emblems engraved on this slab were found to correspond very closely with those enumerated in the Siamese Bali ritual; and to differ only in being fewer in number than the latter.

As I had the honour of lately transmitting to the Royal Asiatic Society of Great Britain and Ireland a dissertation explanatory of these emblems, they need not be here recapitulated. The original intention seems to have been to embody in one grand symbol all the objects most especially venerated by the votaries of Hindúism. The natives reckon fifty pagodas and temples of every description within the province.

One report assigns to the Arracanese settlers the erection of the Shyen Moh pagoda; but another gives it to DAMAH SÚRYA, that reputed king of Ceylon who raised a sacred edifice there on Adam's Peak. Others affirm, that CHESÚ, seventh king of Pagan Myú built it. Its claim to antiquity is all it has to boast of, as it is a very paltry pyramid. It lies at the Pagoda Point of the maps.

MARTABAN.

.is province the Malamein P'hra is the most ancient pagoda. w in a ruinous state, but, when entire, may have been three feet in height from the lowest platform. The lower stories ›vered with brushwood when visited by me in 1825, which ed the assent to the upper swell of the building. It seems to een partly built of brecchia, and partly of bricks. Although ›vince affords both granite and marble for architectural pur- yet they appear never to have been used in constructing reli- piles: this, at least, is the only instance where stone of any 'as found by me so employed. The brecchia, it is well known, first like a slightly indurated clay, but it soon hardens by ex- :e. Granite is used for making steps leading up to pagodas and ms, for foundations of buildings, and for hand flour-mills.

Few of the pagodas on this coast are gilded; they are carefully e-washed at stated periods in the populous districts. The attach- it to *high* places among the Buddhists is here conspicuous; and sites of many of the pagodas are often, therefore, very beautiful.

The *phúngies* are always too numerous for the duties they have perform; and yet they shew little inclination to improve this sure, or that also allowed them by their exemption from the toils the world, in the cultivation of letters or science. Few of them nderstand the Pali language, although it is the vehicle of their eligious doctrines. They recite, parrot-like, the set lessons of heir ritual; and run over their creed in a monotonous tone, and with ludicrous volubility. The women are very attentive to their discourses, which are chiefly Burman versions from the Pali. Processions consisting entirely of women, like those of the western ancients, may often be seen proceeding towards the pagodas or kyaums. The women are gaily dressed, and carry on their heads baskets and lackered ware vessels filled with fruits, flowers, rice, and confections, as offerings for the shrine of Buddha, or as presents to the priests. The latter receive their share without the slightest acknowledgement, since it is they who by acceptance of it confer an obligation. The female votaries kneel before the image of Buddha; raise their folded hands to their heads; and repeat, after the precentor, certain Bali formulæ, the purport of which they do not comprehend further than that it is either supplicatory or deprecatory.

Those men who affect peculiar sanctity allow their naturally scanty beards to grow, and are strict observers of forms. They carry the ›ary of one hundred and eight beads, to each of which appertains a

Bali formula. The less sanctimonious abbreviate these lessons, and recite them in a rapid, yet low and drowsy, chime.

There are female devotees, or nuns, who dress in white cotton cloth, and who live close to the courts of the kyaums or pagodas. But they are always past that stage of life at which superstition makes a renunciation of the world seem meritorious, and which might cause their presence to be dangerous to the cold professors of celibacy within the walls.

These monasteries are, however, useful institutions with reference to the state of society on this coast. In return for the liberality of the people, the priests instruct their children in reading, writing, and figures; and if a boy (for girls are not admitted) shews a disposition for study, he may continue at school until he has learned all that his masters can teach him. Girls are often taught at schools superintended by women. Young women are frequently taught to write and read by their mothers or relatives. When a parent takes his child to school, he makes a present to the priests as an initiatory fee.

The elder scholars invariably instruct the younger. The kyaums are spacious buildings, and contain galleries and rooms in sufficient numbers to admit of accommodation apart from the priests for any number of boys. The scholars all read at once, and nearly at the full stretch of their voices; so that the din is equal to that proceeding from a village school in a retired district of the United Kingdom. The days of the full moon and her quarters are holidays.

The ceremony of initiation into the priesthood is attended with some formality and expense; but this last does not fall on the individual entering it if he is poor, as a collection is made from guests and friends to defray it. Captain Symes has described the mode of initiation with a fidelity which requires no amendment.

The alabaster images which abound in every province of the empire are manufactured in one of the upper provinces. The priests enjoy the revenue of the ground lying within the walls of their respective monasteries. The space so included is sometimes extensive, and is always well stocked with the best descriptions of fruit-trees. When their kyaums or pagodas require repair, the surrounding inhabitants voluntarily assist in the work.

The *phúngies* of Martaban, and, perhaps, those of Tavoy and Mergui, are not generally very rigid observers of the moral precepts of Buddha, when they can transgress with impunity or without detection; nor are they so well informed as the Siamese priests. Those living under British rule have been relieved from many checks on their conduct; and it may be presumed, that their influence will

diminish as their reputation lessens. The support of the state has been withdrawn from, or rather it has ceased to uphold to the letter, the former ecclesiastical discipline; for no European government could tolerate it to the full extent as an integral part of the law. A lack, on the part of the priesthood, of chastity, is not now punishable with death; and any breach by them of the moral or religious code, which does not outrage the law as now established, is only cognisable by public opinion, and only punishable by tacit disgrace and neglect.

There are many sceptics amongst the Burmans; but that the mass of the people, as has been affirmed by persons who had not sufficiently reflected on the subject, are indifferent to religious topics, is a contradiction of daily experience. He who has ever beheld the venerable Shúí Modo rising in dusky majesty over the plains, where once a numerous population bowed to the sceptre of Pegu; who has viewed the yet more splendid, though less ancient, Shúí Dagaung at Rangoon, casting from its golden surface on the adorers below the rays of the luminary which shines its prototype; or who has felt how intimate a connexion exists betwixt the ideas, sympathies, character, and social habits of the Burmans and Peguers and their belief,—must acknowledge that these people are bound by religious ties of no slender texture.

Thus it is that so few proselytes have been made to the Christian or Muhammedan faith in Pegu, Ava, and Siam. Perhaps the number of Burman Musalmáns in Rangoon may amount to one thousand, and in Tennasserim to three hundred.

The Buddhists of the Malayan archipelago may seem exceptions to this remark, since they were, with apparent ease, converted to Islámism. But here the tribes were, for the most part, small and scattered; and their new instructors were merchants who, while they bore along with them the torch of reformation, not to burn or alarm but to enlighten, opened to the convert new and vivid sources of enjoyment, which he was solicited, not compelled, to use.

The Burman pagodas are certainly deserving of attention and respect, as structures interesting to the philosopher, moralist, and antiquary; for they stand forth the undisputed copies of a very ancient and now almost neglected style of architecture, and materially tend to confirm the supposition of Maurice, that the circular temples in England, the remains of which attract attention to this day, particularly that of Stonehenge, were originally dedicated to the Buddhist worship

CHAPTER VIII.

LAWS.

The Burman code of laws has, to all appearance, been founded on some version of the reputed code of MENU; but it may be supposed, that as the latter was framed for a race of men differing in many essential points from the Burmans, it must have undergone several modifications when it was adapted to them: or, at least, whatever may be the actual letter of the Burman code where it follows that of MENU, yet, in practice, deviations from it are frequent.

On this question, however, my information is very limited, as no opportunity has offered for minutely examining the Burman code.[1] The following remarks, therefore, chiefly refer to what was observed by me while on the Tennasserim coast. It is to be hoped that more light will be thrown on the subject by others more favourably circumstanced.

It is notorious, that the utmost venality and perversion of justice prevailed at the *rhúm*, or court of civil and criminal law; and that the perpetrator of any crime, treason perhaps excepted, might buy himself off, if able.

Murder is punished with death; and the execution takes place at the *kathé laup*, near the place where the dead are burned. One man seizes the culprit by the hair, which is worn very long, and the executioner severs his head from his body by the stroke of a sword; or, the offender is made to kneel down, and to incline his neck. His hands are pinioned behind his back; a man stands behind with a spear in one hand, which is held close to the culprit's back, while with the other hand he holds the rope tied round his (the culprit's) waist. After the head is severed from the body, the man who holds the spear gives the body a kick forward. Reprieved criminals, or those who have been pardoned, are the executioners. They are tattooed on the cheeks in a peculiar circular manner, to denote that they are crown slaves. One of these may escape duty, if he can obtain another to act for him, paying five rupees as his fee. Occasionally, as a refinement on cruelty, the criminal has his breast and bowels cut open; or a mark is put on his breast, and people are

[1] Translations of parts of this code, or of digests of it, have, I understand, been made by Mr. BLUNDEL, of the Penang Civil Service, and Lieut. SHERMAN, of the Madras Army.

stationed at a distance to shoot at it. A murderer's family become slaves to the state.

If a man kills deliberately any man of rank and authority, it frequently happens that his whole family suffers the penalty of death; the women and female children are knocked on the head with clubs; male children above the age of seven years are beheaded, and if under that age, they suffer in the same manner as the women and children.

The Burmans assign as a reason for this law, that the children shall be deprived of an opportunity of revenging the death of the criminal.

A traitor, or a conspirator against the king or a man of rank, is blown up by gunpowder: near relatives suffer the same fate with him. They are all shut up in a house, called *núi laumdei*, filled with straw and other combustibles and gunpowder. The powder is fired by a fusee.

If one man intentionally hurts or beats another severely, he pays a fine of not less than fifteen ticals, or more according to the rank of the person injured; if very severely, and a limb is broken, forty ticals; and if the complainant's life is endangered, he pays, at most, eighty ticals. If a man in a scuffle with another, both being unarmed, or both having arms, kills him, he must pay, at most, three hundred ticals. For an assault not followed by wounds, thirty ticals, if the assailant should have dragged the complainant by the hair; but if he should not have dragged him by the hair, though blood may have been spilt, he will only have to pay fifteen ticals.

It may here be noticed, that, amongst the races inhabiting the Burman dominions, the greatest insult which can be offered to any one, is to pull the long lock of hair depending from the top of his head. A Chinese is disgraced if his que is cut off; and, amongst all of the Indo-Chinese nations, nothing gives greater offence than the laying or placing of any one's hands on the head of another. For the same reason, they dislike to have people walking over their heads, or to have two-storied houses.

Many of the women go cropped; but long hair is most fashionable; and they are equally disgraced if their hair be cut off for any offence. Blows given on the face are considered as insulting in the second degree; about twenty ticals are exacted for such.

A person who has kicked another on the breast pays fifteen ticals.

If, in an assault, the ear of the person assaulted be split, the offender pays ten ticals.

This specification has arisen, perhaps, from the custom of the

Burmans, while fighting, of biting an adversary, in which they are as great adepts as any gouging American back-settler can well be. A blow on the back, or on any part, not before stated, is generally compensated for by a fine of seven or eight ticals.

Theft is a very prevalent offence; and is punished by fine or imprisonment, or by stripes; sometimes by the three together.

The punishment is increased, even to death, on a second or third offence. Branding on the breast and forehead is an additional punishment also inflicted on thieves and on deserters from the army. It is done by tatooing with an iron instrument, and applying a red, blue, or black powder to the wounded parts.

Thieves take advantage of a dark night, when the torrents of rain which fall on the leaf-covered houses, prevent their being heard. They likewise begin operations, by planting small stakes in certain directions to deter pursuit. These are of bamboo, hardened by fire, and are so sharp, that they will penetrate the sole of an English shoe; housebreakers are generally armed with a *damyaun*, or small knife.

A person having stolen fruit, must pay back double the quantity to the person from whom he stole it. A person convicted of robbing a house, must pay seven times the value of the articles so stolen, and return the articles. The judge will determine what other punishment he shall undergo. If he shall have stolen the following articles, he will pay five times their value, besides restoring them, if not made away with; viz. gold, silver, precious stones, cloth, ploughs, sugar-cane, horns, fishing-nets, rice, maize, indigo, cotton, brass, iron carts, goats, sesame. If the property of a chief has been stolen, and the thief is caught, he must pay ten times its value. If flowers have been stolen during night, one hundred times their value will be paid to the owner; if onions, ten for one: but if these things were stolen during the day, five for one must be paid.

Flowers, it may be remarked, are here sold in the bazars. They are bought chiefly for offerings at the pagodas. Ten for one will be paid by a thief who steals horse-tails (such as are used for adorning the heads of spears), or spears or hatchets, or gongs, or springs for catching mouse deer; quail springs, thirty for one; a buffalo, fifteen for one; a cow, thirty ticals; a duck or fowl, one hundred for one; pigeons and decoy king-fishers, five ticals for one; for a full grown elephant, two hundred ticals; a half grown one, one hundred and fifty; a young one, fifty. The chief and the owners of the stolen articles share these fines betwixt them.

ADULTERY.

The Burman law does not appear to recognise any right by which a man may avenge himself on the paramour of his wife. The freedom enjoyed by Burman women certainly contributes to weaken the temptations to which they are exposed, and, on the whole, to render them chaste.

As they share with the men most of the common occupations of life, their loss is felt principally with reference to this circumstance. An injured husband, in general, therefore, believes himself sufficiently satisfied if he can make the offending parties reimburse him for his loss. The offence is frequently commuted for sixty ticals, the common fine; and, if the woman be desirous of returning to her husband, and he be willing to receive her, they may again cohabit. Of this fine, thirty ticals are taken by the party aggrieved, and the Burman governor takes the remaining thirty.

If a poor man shall be convicted of adultery with the wife of a rich man, he is obliged to pay double the fine which would be imposed on the rich man, were he to be convicted of the same offence with a poor man's wife.

The rich, however, may be sentenced to pay according to their means, and at a much higher rate. But, if a man in the lower rank of life is unable to pay, he is liable to be whipped and gonged through the town; women have their faces blackened, and are then gonged through the town in a state of half nudity. A woman, when guilty a second time, is liable to be branded.

If a man takes improper liberties with another's wife, and in his presence, such as pulling her by the arms, or pushing her about, he will be fined fifteen ticals.

Incestuous intercourse is punished by banishment.

Priests who offend against chastity are liable to be punished with death.

If a priest shall have rescued a condemned person on his way to execution, and have conveyed him to the pagoda or monastery, his life may be spared.

INHERITANCE — TAVOY.

Property is thus distributed on the death of the head of a family.

The widow has the life-rent, but she forfeits her right by a second marriage: she may, while a widow, divide the property, whether consisting of goods and chattels, of money, or of land, amongst the children. The eldest son takes the largest share; the youngest son or daughter the next, or two shares to each; and the rest of the property

is shared according to seniority, amongst the other children. A bachelor may give his property to whom he chooses. If he die intestate, his real property descends to his nearest male relatives, and in the failure of males, to the nearest heirs female.

In Martaban, it depended on the chief what division should be made of the property of a man deceased; one-fourth of the amount only was in many instances given. This went to the widow. If there was no widow, but children, the eldest got one-half of the above share, or that which remained, after expenses and debts had been paid, and the government demand had been satisfied; the second child got one fourth part of this; the third, one-eighth, and so on.

But, in fact, whatever rules or laws were made for the distribution of property, they were seldom very punctually attended to; and, unless the deceased individual was a man of rank, the local chief of any Burmȧn government in Tennasserim used his discretion in apportioning it, taking care to pay himself handsomely for his self-constituted post of executor.

(*To be continued.*)

ART. XV.—*An Essay descriptive of the Manners and Customs of the Moors of Ceylon, by* SIMON CASIE CHITTY, *Maníyagar of Putlam*, M.R.A.S., &c.

THE several ceremonies and external observances of religion practised by the different castes of Tamils or Hindús, having been made the subject of a former Essay, my present intention is to particularise those which are peculiar to the Moors, as far as they have come within the reach of my observation; and also to note the striking similarity they bear to the ceremonies of the Jews. I shall first, however, offer a few preliminary remarks on their origin, and on the etymology of the various epithets by which they are commonly designated and distinguished among other tribes of natives.

We have no authentic records extant respecting the origin of the Moors, and, therefore, it is not possible to trace it with accuracy. What has been offered on the subject by European writers, appears to have its foundation in nothing but the vague, and often distorted, traditions circulated among the natives themselves. According to one of these traditionary accounts, the Moors who reside on the coast and the interior parts of Ceylon, equally with those on the Coromandel coast, are descended from a tribe of Arabs of the posterity of HASHEM, who were expelled from Arabia by their prophet MUHAMMAD, as a punishment for their pusillanimous conduct in one of the battles in which he was engaged against the partisans of ABÚ JAHEEL, and who afterwards founded a colony at Káilpatnam, and from thence moved in successive emigrations towards this island, and along the borders of the peninsula of Hindústan, as far as Rámeswara.

In the Tamil language, the Moors are usually denominated by the term *Jónakar*, and they do not object to it. If this should be their proper appellation, it completely overturns the preceding idea of their Arabic origin; because it can hardly be reconciled to a passage in the *Mahá Bharata* (the date of which the learned orientalist, WILFORD, fixes at 3200 years before Christ), where the Jónakar are mentioned as then existing in India, and serving in the armies of the contending princes: besides which, in the classification of the several tribes of Hindús, in the *Nigandu Súlamani*, they occupy the thirty-seventh place in alphabetical order. Independently of the two latter inferences, drawn from works of no little authority, their cast of features and modes of life, added to the circumstance of their speaking no other language than the Tamil, will sufficiently prove their origin

from the latter nation, or, at any rate, from a branch of it; and, I should suppose, that mingling afterwards with the Arabs, Moguls, and Patans, by intermarriages, they gradually degenerated from the parent stock, and became constituted into a separate and distinct body, by adopting the tenets of Islámism.

The Singhalese impose on the Moors the title of *Marakalaya*, or boatmen, which is very probably derived, either from the circumstance of their having had formerly at their command the export of the commodities of Ceylon; or from their crossing over to the island in boats from the opposite shore, when they made their settlement.

Mr. Boyd, one of the reputed authors of the *Letters of Junius*, in his account of the embassy to the court of Kandy, describes the Moors under the name of *Cholias;* and Sir Alexander Johnston designates them by the appellation of *Lubbes*. These epithets are, however, not admissible; for the former is only confined to a particular sect among them, who are rather of an inferior grade; and the latter to the priests who officiate in their temples; and also as an honorary affix to the proper names of some of their chief men.

Before quitting the subject of their origin, I must add, that the title Moor, or Moro, appears to be equally inapplicable to this race; for Dr. Guthrie, in his *Geographical Grammar*, states, that this appellation was originally bestowed on the Saracens who invaded Spain, the greater part of them having come from Mauritania, in Africa; though, in modern times, it has been rendered a common epithet for Muhammadans of all sects and countries, who are settled in Hindústan, and on the coast of Barbary.

Having thus endeavoured to trace the outline of the origin of the Moors, as well as their name, I shall now proceed to delineate their rites and ceremonies, as already proposed in the commencement.

Among the Moors, the term marriage is usually expressed by the Arabic word *Kávin*, and its synonyme *Nikah;* and is by them considered the most essential of all objects. They are, therefore, taught to look on it as a matter of strict obligation, and as a foretaste of the joys of the sensual paradise which Muhammad has promised to every one of his true followers; and they consequently bestow great attention in the performance of the various festive and pompous ceremonies which precede and accompany the celebration of the solemn contract.

According to one of the precepts of Muhammad, a man who has no means to support a wife, or to pay her dowry, cannot enter into the conjugal state; and, in that case, he is strongly recommended to retire from the world, and employ himself wholly in exercises of

devotion and mortification. He, however, allows children under the age of ten years to enter into matrimonial engagements; but, to the credit of his followers, very few instances of the kind occur; and where they do, it is invariably found among the admirers of the enthusiastic opinions of the Imam, ABÚ HANIFA, and the sect denominated *Hanafi*, not unlike the voluptuous Epicureans.

It is somewhat singular, that among most nations of the world, the bridegroom or his parents solicit a marriage; but among the Moors alone (though it is stated as otherwise in Article LXIV. of their special laws concerning matrimonial affairs), the bride, but most commonly her parents, are accustomed to anticipate it. So, when a man has a daughter who has attained the period when persons of her sex are usually disposed of in marriage, he (often without consulting her in the least) fixes his choice on some youth, and sends a deputation of his friends to ascertain, through them, if his parents are disposed to meet his wishes. Having satisfied himself that the proposal is not likely to be rejected, he proceeds to negotiate in person. When the ordinary salutations have been interchanged, he informs the young man's father of the purport of his visit; who inquires what portion he purposes giving to his son on account of *kaikúli* (or present for marrying his daughter), and what portion to her for *chídánam* (properly, *stridhanam*, or dowry). He then names a certain sum for *kaikúli*, and half as much for *chídánam*, besides household goods, cattle, and land; and if these terms are approved of, they mutually fix upon a day for the betrothing.

As the day appointed for betrothing approaches, many preparations are made by the parents on both sides. The father of the future bridegroom invites his friends and relations, and the chief of the village to whom he is subject (who is styled *markair*), to attend and accompany his son. Accordingly, when the day arrives, they assemble; the youth is attired in his best apparel, and conducted with every mark of distinction which his rank and condition will allow, attended by music and every demonstration of joyousness, to the house of his future bride. As the party approaches the gate of her dwelling, her father advances to meet his destined son-in-law, and sprinkles his clothes with rose-water, which is considered as doing respectful and kind honours to him. A party of old matrons then come out with a basin of water infused with turmeric, mixed with bits of cusa-grass and cotton-seeds, and whirl it round his head three times. This is called the ceremony of *álatti*, and is supposed to prevent any mischief befalling him from the invidious look of the populace during his progress. The father then conducts him and his

attendants into a *pandal*, or bower, decorated with white cloth and cocoa-nut blossoms, previously erected for the purpose in the garden, and makes them all sit on carpets or mats spread on the ground. When the party have refreshed themselves by masticating betel, some elderly person amongst them introduces the subject; and after an infinity of questions on both sides, the betrothing takes place by drawing up an indenture, styled *módra kadattam*, or ring-contract, which is worded as follows: — "In the year of the Hegira ——, and on the 11th day of the month of Jamadilawal, A, the son of B, of Calpentyn, consents to take unto him as his spouse, C, daughter of D, of the place aforesaid, paying her for the portion of her virginity the sum of two hundred ounces of gold of the land of Misr,[1] as is ordained by the law. And the said D, on these conditions, solemnly promises to pay him a sum of five hundred rds. as a free-gift, besides one house and garden, one shop, two cows, one chest, one lamp, one bowl, one ewer, one rice-stand,[2] one betel-plate, and one gold ring weighing one pagoda. And of the said sum of five hundred rds., the said A acknowledges to have received this day two hundred and fifty in advance. Witnesses, E, *Head Moorman;* and F, *Priest of the Temple.*" Previously to the signing of this contract, the father of the female brings and places before the assembly, in different trays covered with white cloth, the part of the sum alluded to in the contract; and also three pearls, three coral-beads, one pagoda, one hundred betel-leaves, and an equal quantity of areka-nuts cut into small slices, together with a gold ring. The *lubbe*, or priest, takes up the ring, and having held it out to the assembly that they may severally touch it, as the Tamils do their *táli*, he puts it on the finger of the bridegroom, uttering, at the same time, the following words, *Bismilla hi irrahiman nir rahím* (In the name of the most merciful God), which is responded to by the assembly, as follows: *Alhumdu lillahi rabbi lálamín, &c.* (Praise be to God, the Lord of all worlds, &c.) The contract being signed by the bridegroom and bride's father, is delivered to the priest, who is required to file it among the records of the temple. Thus, the betrothing is accomplished; and the bride's father distributing betel to the assembly, and besmearing their breasts with pulverised sandel (which is the signal for them to withdraw), they take their leave.

The custom of paying a sum of money to the bride, as the price

[1] The Arabic name for Egypt, corresponding with the Mizraim of the Scripture, and Misrast'han of the Puránas.

[2] A small round table with three feet, and a span high, on which the Moors place their rice-plate while eating out of it.

of her virginity, is not peculiar to the Moors alone, but belongs also to the Jews, among whom it was fixed at two hundred zuzims, or fifty shekels of silver; but if the bridegroom's circumstances would not admit of this, he accommodated it by other means. Of this we may adduce instances in Scripture from the earliest times; for Jacob served fourteen years for his two wives;[1] David gave one hundred foreskins of the Philistines for the daughter of Saul; and Hosea bought his second wife for fifteen pieces of silver, and an omer and a half of barley.[3]

To return from this digression, it often happens that between the time of betrothing and the solemnisation of marriage, there elapses a a considerable interval, during which the bride's father is obliged to send occasionally some trifling present to the bridegroom; but a short time prior to the marriage, he is expected to send a costly one, consisting of divers sorts of cakes and confections, and a number of balls of sugar, eggs, and plantains, to which is added, one hundred betel-leaves, one thousand areka-nuts, one hundred quarts of milk, and a cup of pulverised sandal-wood. These presents are commonly called *Sír;* but the last, by way of eminence, *Peram Sír*, or "great sír." They are conveyed in trays, borne upon men's heads, under a canopy of white cloth, and accompanied with *tom-toms*,[4] and other sorts of music. If it does not suit the convenience of the bride's father to send these presents, he can adjust it by paying a sum of money in lieu; but should he neglect to do either, such an omission would occasion disputes, and, in all probability, ultimately tend to break off the match. It may not be improper to mention here, that in Article LXVI. of their special laws, it is stated, that after the betrothing has taken place, if the parties disagree, and are not willing that the union should ensue, the presents that have been interchanged between them are reciprocally restored: but this is not the case in this part of the country, for the bride is not obliged to restore any thing to the bridegroom, even though she should have been the cause of separation; but, on the other hand, the bridegroom must restore to her every thing he may have received, and if he should have been the party disagreeing, must make some considerable additions besides.

Although the Moors ridicule their Tamil neighbours for consulting the Bráhmans regarding propitious days or hours for the celebration of particular events, yet they observe as *nahas*, or ominous, several days, during the lunar months, on which they will never solemnise a

[1] Genesis, xxix. [2] 1 Samuel, xviii. 25. [3] Hosea, iii. 2.
[4] A kind of drum.

marriage or perform any other ceremony whatever. The days thus set apart by them, and the reasons they assign for their proscription, are as follows:—The 3d day of the moon, ADAM was expelled from Paradise; the 5th, JONAH was swallowed by a whale; the 13th, ABRAHAM was thrown into the fire; the 16th, JOSEPH was lowered into a well; the 21st, JOB became afflicted with disorders; the 24th, ZACHARIAH was murdered; and the 25th, MUHAMMAD had his front-tooth broken by a sling. Their marriages are commonly celebrated during the months of January, April, June, August, October, and November, excluding all the *nahas* days above specified.

Previous to the solemnisation of marriage, the parents of the parties erect a *pandal*, or bower, near to their respective dwellings, supported upon twenty-one poles, more or less, according to their own fancy; but, as an even number is considered ominous of future evil, they always take care to avoid it. Like the Tamils, they also have a particular pole placed in the east corner, called *kanni kál*, or virgin pole, and the erection of it is attended with many ceremonies. It is generally well washed, and then besmeared with pulverised sandal wood and turmeric, and perfumed with burning incense before it is put into the ground; and, when placed in the hole destined to receive it, they throw in a piece of gold, a pearl, a coral-bead, and some paddy, all tied in a piece of silk, together with a pot of milk. After the pole has been thus set up, another pot of milk is poured on the top of it in such a manner that it shall run down on the floor of the *pandal;* and, by this observance, they intend to symbolise the future prosperity of the intended union. It is thus the prosperous condition of Canaan is expressed in the Scriptures, as a land "flowing with milk and honey."[1]

After the setting up of the virgin pole, the others are also fixed, and the whole being complete, the *pandal* is ornamented with white cloth, cocoanut-flowers, green leaves, &c. In the *pandal*, at the bride's house, a magnificent seat, in the form of a throne, is set up for the bridegroom, which is adorned with artificial flowers of various descriptions, and neatly interspersed with tinsel, and other glittering substances, presenting a very imposing sight amid the light of a multitude of lamps, which are placed around it on the bridal night. These preparatory ceremonies being concluded, a day is fixed on which invitations are sent to all the friends and relations on both sides; not confined, however, to those who live in the place, but extended to whomsoever may have given invitations to them on similar

[1] Joshua, v. 6.

occasions. The assembly is first formed in the *pandal*, at the house of the bridegroom, generally about mid-day, where they are sometimes treated with a collation, and where they remain until the evening, when the bridegroom is brought into the *pandal*, shaved and washed, and, in the presence of the assembly, is attired in his bridal clothes; his outer garment being a white gown, with long sleeves, reaching from his collar-bone (where it fits close) to his ankles; the waist is confined by a richly embroidered sash, in which is placed, on one side, a silver sword or dagger; a scarf is loosely thrown over the shoulder, and he has on a turban formed of a riband worked with gold-thread; in the front is a plate of gold, with an ornament of the same metal on the right side, called *maantuli*, resembling a cockade: but this latter addition is confined to the higher classes. Several chains are hung round his neck, and rings put upon his fingers; the rims of his eyelids are marked with black, and his nails dyed yellow with an infusion of the *marutondi* leaves.[1] When it has been announced that every thing is ready at the bride's house for his reception, he sets out in procession either on horseback, in a palanquin, or such other conveyance as he may have the means to afford, accompanied by all sorts of music, and preceded by a number of white umbrellas, flags, and other insignia of his tribe. Should he in his progress pass the house of a relation, the females of the family shout, and present him with a cup of bruised plantains and milk,[2] in token of respect, besides performing the whimsical ceremony of *álatti*, already described. As soon as he reaches the street where the bride's house is situated, a cloth is spread for him to walk on, and, when he arrives at the *pandal*, the females there assembled shout several times, and sometimes the friends of the bride's father fire a *feu-de-joie* to welcome his arrival. Proper seats having been assigned for the bridegroom and his friends, the first thing which is done is to cancel the ring contract executed on the occasion of betrothing, and to draw up the following in place of it, viz.: "In the year of the hegira, on the fifth day of the month of *Rabil-awal*, A, son of B, acknowledges to have this day received from D, the father of C, (whom he this day accepts for his spouse, by paying her the sum of two hundred ounces of gold of the land of *Misr*, for the portion of her virginity,) the balance due to him from the sum of five hundred rds, which he, the said D, did promise to pay him on the day of marriage, on account of the free gift. And the said A moreover acknowledges to have received the land

[1] *Lawsonia inermis.*

[2] The flavour of which is very like strawberries and cream.

goods, and chattels, enumerated in the ring contract, and he hereby releases the said D from all further obligations. Witnesses, E, *Head Moorman;* and F, *Priest of the Temple.*"

During the time the men are thus employed, the bride is preparing her toilet. Her hair is neatly braided in a knot behind, adorned with very handsome sprigs of gold flowers, set with precious stones; and long pins, in the form of arrows, are passed through the knot cross-ways. She wears ear-rings, and another ring is passed through the nose, set with pearls;[1] many gold chains are suspended round her neck; her arms are decorated with bracelets, her fingers with rings, and her feet and toes with divers tinkling silver ornaments.[2] Her outer garment is of silk or embroidered, and envelopes her entirely, and her eyelids and nails are dyed as before-mentioned. This dress is very becoming, but their females not usually being seen, the bride remains in an inner apartment with her friends and female relatives, totally secluded from the sight of the assembly of men without. After the contract is signed and delivered to the priest, the latter deputes a person, who stands in such a relation to the bride that she need not appear veiled before him, to ask her whether she is contented to accept A, the son of B, for the sum of two hundred ounces of gold, as the portion of her virginity. On her answering in the affirmative, the priest makes her father formally declare his consent in the hearing of the assembly, without which no marriage is legal. The priest and the bridegroom afterwards undergo the rite of purification by washing their mouths, and being seated near to each other, the priest rehearses a *súrat*, or passage from the koran, which chiefly expatiates on the origin and institution of marriage in the persons of ADAM and EVE, and on the blessings which attended the earthly career of ABRAHAM and SARAH, of JOSEPH and ASENATH, of ALI and FATIMA, from a strict observance of domestic virtue; and, lastly, counsels the party about to enter into the conjugal state, to follow their laudable example. The priest then mutters some mystical prayer in the ear of the bridegroom, making him repeat it after him, but inaudibly, and, at the conclusion, demands of him, three several times, whether he wishes to marry C, the daughter of D, for the sum of two hundred ounces of gold, as the price of her virginity. Having answered, "Yes; I do," each time, the priest lays hold of his hand, and, looking at the assembly, declares,—"All ye, the Mussulmáns here assembled, bear witness, that in presence of me, the priest of E, *Head Moorman*, and G and H, chief men of the place, A, the son of

[1] Isaiah, iii. 21. [2] Isaiah, iii. 18.

B, has accepted for his lawful spouse C, the daughter of D, for the sum of two hundred ounces of gold of the land of Misr, for the portion of her virginity." In this stage of the ceremony the bridegroom rises and salutes the assembly, who return it either by a compliment, or a present of a ring. The priest then leads the bridegroom into the bride's apartment, and joining his little finger with hers, pronounces a benediction, which the people outside repeat with loud cheers, and thus the rite of marriage is concluded; but a contribution of money is made among the guests, prior to their separation, for the benefit of the bride's father; after which some refreshment is usually offered, or a little betel.

In imitation of the Tamils, who tie a *táli* round the neck of their brides, the Moors hang a gold string, either on the marriage night, or some days afterwards, according to their convenience; it is done by the sister of the bridegroom, after being consecrated by the solemn imposition of hands.

On the 7th, or the 21st day after the celebration of the marriage, the ceremony of bathing is also observed with but little variation from that of the Tamils. Prior to the ceremony, the bridegroom's mother takes to the bride's house a quantity of turmeric, a box of odours, a can of *Gingely* oil,[1] some *Illippa* seeds,[2] one hundred betel leaves, and one hundred areka-nuts, with a suit of wearing apparel, and leaves them there. The bride and bridegroom then make their appearance, and sit down by each other on a raised seat; he first rises, and dipping his fingers into the oil, anoints her head, and she in return does the same to him. This unction having been accomplished, they all retire to a room where water has previously been placed in different vessels for bathing, and, during the time they are bathed, the female cousins, on the maternal side, act many wild and ridiculous scenes, and throw limes and pellets of clay at the bridegroom. The bride is then attired in the dress brought by her mother-in-law, and they return to the seat in the *pandal*, where he takes some betel, areka-nuts, cakes, pieces of gold coin, and ties them in one corner of his scarf, and which he presently unties and throws on his wife's head, and takes from her hand the scrolls of betel leaves which she has been holding.

This practice of throwing cakes and money somewhat resembles that which is observed by the Jews, when they throw pieces of money, mingled with wheat, which is gathered up by the poor.

The Moors abstain from fish-diet for a certain period after marriage; on the day, therefore, that by custom they may resume it, a

[1] *Sesamum Indica.* [2] *Bassia Longifolia.*

party of their friends assemble to partake of an entertainment; and from this time the parties become independent of their respective parents.

No ceremonies take place subsequent to the latter-mentioned until the period when the woman proves pregnant. When far advanced an entertainment is given, at which she is arrayed in her wedding garments and exposed to view, which is called "displaying her jewels." On the birth of the infant (the expenses attending which are defrayed by the parents of the woman) the females, who will have already assembled, shout, if a male, seven times; if a female, nine times. When the umbilical cord is cut, the midwife washes the child[1] pronouncing the creed, *Láhi láha illallah Muhammed resúl ullah!* (There is no other God but God, and Muhammed is his prophet!) and each of the relations at this time throw into the basin a piece of money, which is the perquisite of the midwife.

On the seventh day their children are named; the father gives a name, which the priest confirms by calling the child three times by it, and exclaiming, *Allahu Akbar! Allahu Akbar! Allahu Akbar!*" (the Lord is exceedingly great!) when those who are present offer up a prayer of thanksgiving, and take their leave.

In the Koran, as explained in the *Suhubul-i-mán*, the parents are enjoined to have the child's head shaved on this occasion, and also to make an offering of a camel, a ram, or a cock, according to their ability, which bears a striking affinity to the rules prescribed to the Jewish woman after child-bearing.[2]

Another occasion on which they make a sort of rejoicing is on the 14th day, when a child is invested with arm-rings; and, when the first teeth appear, cakes, decorated with the kernel of the cocoa-nut, cut in the shape of small teeth, are distributed. This observance notifies also the time of weaning, and may, therefore, bear some distant resemblance to the feast Abraham made on the weaning of his son Isaac.[3]

With a female, the next thing to be observed is the boring of the ears, and, with a male, that of circumcision. In the former case, they erect a *pandal*, as on other festivals, and invite their female friends; the girl is dressed gaily, and seated higher than those assembled, and after having masticated betel, the operation of boring is performed, and a wire passed through the ears. During the operation they make a great noise with cymbals and tom-toms; and, when concluded, some trifling present is made to the parents, who distribute a small

[1] Ezek. xvi. 4. [2] Lev. xii. 6, 7, 8. [3] Gen. xxi. 8.

quantity of soaked rice, mixed with sugar, and the cocoa-nut kernel, or rice, simply boiled with milk.

Among the Moors, the men never bore their ears, and, therefore, THÜMBERG, when describing "that their ears are commonly decorated with long earrings," must have confounded them with the Tamils, amongst whom (as among the Athenians) it is a mark of nobility to have the ears bored or perforated.

According to the ordinance of Muhammed, a boy ought to be circumcised on the eighth day, as among the Jews,[1] but they commonly defer the performance of this rite to the tenth or eleventh year, and sometimes longer.

It must be observed, that great show attends the performance of every thing connected with the native character, whether joyful or not, and that pomp is the first thing thought of in the celebration of all that relates to them. In the case of circumcision, it is announced as a great event, a *pandal* is erected, friends invited, &c. &c. and, on the day appointed, the head moorman and priest also attend, when the boy is dressed up, and placed on an elevated seat, merely to display his clothes. His first visit is to the mosque to say his prayers, whither he is taken in procession, under a canopy, with such appendages of honour and distinction as may be due to his rank; he is then promenaded through the street, and, should he pass the house of a relative, all the women shout, and he is regaled with bruised plantains and milk. This perambulation generally takes place at night by torch-light, and, as it would be inconvenient to circumcise the boy then, it is deferred until the next evening, when the same persons assemble, and the operation is performed by a barber. Loud shouts and discordant music is continued during the time, so as effectually to drown any noise the boy may make. A plate being set before the assembly, money is collected, which, with the habiliments of the boy, become the perquisite of the barber, besides what the parents may also give him. No entertainment is given on this occasion; but, some days afterwards, a small repast is spread in commemoration of the event, consisting chiefly of rice-puddings, gruel, and *gingely* oil.

The difference that exists between the Jews and Moors in the ceremonies attendant on circumcision, appears chiefly to be, that the former observe a vigil on the night before the operation, and that they admit of god-fathers and god-mothers, besides which, the parent himself sometimes circumcises his own child.

The Moors, also, practise many superstitious ceremonies on their

[1] Gen. xvii. 12.

daughters attaining the age of puberty; but they so nearly resemble the ceremonies of the Tamils, that I shall not enter into this tedious narration, but close with a description of their funeral observances.

In the Muhammadan religion, it is inculcated as a duty incumbent on all Mussulmáns to bury their dead, and, consequently, like the Jews, they are very punctual in this respect. As soon as a man or woman departs this life, the relations and friends being assembled, join in loud lamentation over the deceased; the women particularly, who, in mournful ditties, detail the virtuous qualities and actions of the deceased, and it would be considered a great misfortune not to be bewailed in this manner: it would appear from the Scriptures, that the Jews also entertained some such notion regarding it.[1] When these mournings have abated, the corpse is made ready for interment, the feet are tied together, and also the hands, and the face is turned towards the *kibla*, or the temple of Mecca. They burn a lamp constantly at the head, and a large quantity of frankincense, until every preparation is made ready for removing the corpse to the place of inhumation.

When a sufficient number of persons have assembled to form a funeral procession, the body is again washed with warm water, to which they pay much attention, carefully cleaning the nails, painting the rims of the eyelids with a clay called *sirma*, said to be of Mount Sinai, and strewing sandal-wood powder, camphor, and rose-water, on the face; when they dress it with a cloth about the waist, and a long cloak reaching to the toes. If the dead person be a male, a turban is put on the head, and afterwards wrapped in a large sheet over all. It is then placed on a bier covered with white cloth, strewed with flowers and green leaves, when it is borne to the mosque with every appendage due to the rank of the deceased, the mourners chanting their creed all the way. On reaching the mosque, the bier is set down on the ground, and the priest repeats a long prayer, in which some of the bystanders join; after which the corpse is taken from the bier, and lowered into the grave with the face downwards. The assembly then recite a prayer, and throw earth on the body, as is the custom of Christians; saying, "You were taken from the earth; you go to the earth; and you shall come out of the earth." The grave is then filled up, and piled in the usual form. The person who washed the corpse at the house, pours three pots of water over it, and places two pieces of plank, with a flag on the top, at each end, throwing over it some slips of *piranda* creepers, probably in imitation of the Jews, who, plucking bits of grass three times, and

[1] Amos, v. 16; Jer. ix. 17; Job, iii. 8; xxvii. 15.

casting it behind them at the conclusion of the burial, said, "They shall flourish like the grass of the earth."[1] The priest afterwards, placing himself at the head of the grave, rehearses a series of prayers called *Talkim*; and then the bread which is carried with the funeral procession, is distributed among the poor.[2] The mourners, having pronounced the *fatiya*, prepare to return to the house; but, after advancing seven paces, they make a stand, and again pronounce the *fatiya*, looking towards the place of interment. The vessels in which the bread and incense were carried, precede the mourners homewards; which, when seen by the females at the house, is a signal for them to retire. The former having reached the dwelling, the priest again pronounces the *fatiya*, and, making a *salaam* of condolence, all return to their houses.

On the third day, the relatives of the deceased invite the priest, and other officers of the temple, and having caused them to offer up prayers to the manes of the deceased person, give them an entertainment, which is repeated on the fifth and seventh days likewise.

On the fortieth day, they observe a ceremony called *kattam*. Some relations of the deceased proceed to the tomb, and cover it with a white cloth, burning incense near it. They then send a tray of cakes to the temple, where the priest and a number of people have assembled to offer up prayers for the rest of the departed soul; which being concluded, they all go to the house of the deceased, and partake of an entertainment which has been already prepared for them.

The custom of giving repasts after a funeral was common among the Jews; and JOSEPHUS, *de Bello*, relates,[3] that ARCHELAUS treated the whole people magnificently, after he had completed the seventh day's mourning for his father.

It is not to be supposed that the Moors take no further notice of the dead after the conclusion of the ceremonies I have described; for they entertain the poor on every anniversary of the day whereon the person died, and also on the festival called *Vrát*, which is held in remembrance of the dead.

[1] Psalm lxxii. 6. [2] Job, iv. 17. [3] Lib. iii. cap. 1.

ART. XVI.—*Land Tenures of Dukhun*[1] (*Deccan*), *by* Lieut.-Colonel WILLIAM H. SYKES, F.R.S.

Read, 20th February, 1836.

PATEEL'S OFFICE AND TENURES.

IN fulfilment of the expectation promulgated in the Fourth Number of our Quarterly Journal, I do myself the honour to submit to the Society the conclusion of my notices of Land Tenures in Dukhun, embracing the holding of that important functionary, the Pateel (usually called Potail), or headman of towns and villages. This office, together with the village accountants, are, no doubt, co-eval with those of the Deshmook and Deshpandeh, already described.

The derivation of the term Pateel is obscure, but it is usually considered to be a Mahratta word. It has, however, been suggested to me by natives, that it is possibly founded on the Sanskrit word Puttuh,[2] "Deed," "Lease;" the Pateel, in former times, having been the official granter of vacant lands in his village by deed or lease. Within the limits of my inquiries in Maharashtra, I did not find the term Gàora applied to the pateel; but, where the Kunree language prevails, head men of villages are still called Gàor. Pateels have been considered by some European writers identical with the personages called in Sanskrit, Gramadeekaree;[3] but I was informed by Brahmáns, that the term is descriptive of the lord or master of the village, equivalent to the present Surwa Eenamdar, rather than Pateel, the word "*Gram*," meaning "village," and "*Adeekar*," "bearing royal insignia," being "pre-eminent."

Originally the Pateels were exclusively Mahrattas, but sale, gift, or other causes, have included many other casts; a very large majority of the Pateels, however, is still Mahratta.

Of such importance, and so profitable was the right, or in such estimation was the dignity of Pateel held anciently, that the princes, and great feudal chiefs of the Mahratta empire, established themselves wholly, or in part, in the office in various towns or villages. Holkar, for instance, at Munchur; Seendeh (Scindiah), at Jamgaon; the Nagpoor Bhoslch, at Ahmednuggur; the Power family at Multun and

[1] In this article Colonel Sykes' mode of spelling Indian terms and proper names has been followed.—ED.

[2] पट्ट

[3] ग्राम अधिकार

Kuweeteh, &c. &c. There are traditional accounts even of a share of the Pateel's office having been sold for 7000 rupees. The office was hereditary; and the free lands attached to it, together with the numerous rights and emoluments, were alienable, by sale or gift, at the pleasure of the holder. Even the hereditary lands of extinct families became the property of the Pateel, together with all waste lands, excepting in some villages where such lands were appropriated by the village corporation; *the government distinctly sanctioning the exercise of such powers, whether by the Pateel or the village authorities.*

I am, fortunately, enabled to satisfy the Society that these assertions are not lightly made, by laying before it a copy of an important and curious document in the Mahratta language, being an award of a numerous assembly of the public authorities, Deshmooks,[1] Deshpandehs,[2] Pateels, &c. of six districts, comprising thirty villages in the Soobah of Joonur, at which also the Punt Prudhan, one of the great officers of the Rajah of Sattarah's court, assisted. The object of the meeting was to give judgment in long-continued disputes respecting shares in the office of Pateel of the village of Kuweeteh, and to define and attest its various dignities, rights, and emoluments. The paper is dated Sukkeh, 1646, A.D. 1725, and is, consequently, 111 years old. It measures 15 feet 3 inches long, and is $11\frac{8}{10}$ inches broad. Independently of its involving proofs of hereditary rights in land, and of the great power of Pateels in granting titles to land, and in fixing a permanent assessment, it defines so perspicuously and minutely the dignities and emoluments of the Pateel's office, and throws so much light upon various characteristic usages and customs of the people, that a close translation of the paper will probably be acceptable to the Society. With respect to my copy in the Mahratta language, of the original document, I cannot dispose of it more judiciously than by begging of the Society to place it in its archives.

I will reserve some observations on the document for the close of this communication; but a preliminary explanation is called for of a word in frequent use in the original. I allude to the word Mokuddum. The term is applied to the Pateel's office. It is an Arabic word, meaning "chief," "head," "leader," and is properly applicable to an individual only. The equal right of inheritance in Hindoo children to the emoluments and advantages of hereditary offices, the functions of which could be exercised only by the senior of the family, rendered a distinctive appellation necessary for this person, and he

[1] Civil governors of districts.

[2] District accountants.

was called Mokuddum. The sale of parts of the office of Pateel, however, to other families, the heads of which would also be "Mokuddum," rendered the qualifying adjective necessary in all writings, of half-Mokuddum, quarter-Mokuddum, &c. &c., according to the share each family held in the office. Thus, His Highness Seendeh (Scindiah) is six-sevenths Mokuddum at Jamgaon; the other Mahratta sharer, one-seventh. A Moosulman at Nandoor is one-quarter Mokuddum; and two Mahrattas are respectively one-half and one-quarter Mokuddum. Having premised this much, I shall proceed to translate the document. It is headed Muhujur Nama Aaj Kurrar; literally, "A list of those present by agreement; or, a statement of the proceedings and award of an assembly." After the usual invocation to the deity, it commences as follows: —

Dated the 11th of the month, Rubee Ool Awul Sukkeh 1646 (A.D. 1725), Krodee[1] Nama Suwut Sureh, Marghswur (November and December), 13th of the light half of the moon (Monday). On that day, the following Deshmooks, Deshpandehs, and Mokuddums, and Lineages,[2] or families of different villages, of the Soobah of Joonur, of auspicious origin,[3] being assembled at the place of meeting, Kuweeteh (Kowta), Turruf Pàbul, of the above Soobah agreeably to the following list.

TURRUF PÁBUL.

Names of Mokuddum, and Chowghleh,[4] and Koolkurnee,[5] of the villages of Jategaon, Mookhuee, Hewreh, Teetweeh, Kanoor, Booma-Jatehgaon, Sehj'un, and Loonee.

TURRUF KHEIR.

Names of Mokuddum, Choughleh, and Koolkurnee, of the town of Kheir, and villages of Takeedwaree, and village of Chaus, and Mokuddum of Waphgaon.

TURRUF RANJUNGAON.

Mokuddum, &c. of the villages of Ranjungaon, Dihtun, and Wareh.

TURRUF MAHLOONGEH.

Mokuddum, &c. of the village of Mahloongeh, and town of Munchur.

[1] The name of the year.

[2] Goht.

[3] خجستہ بنیاد Khujusteh Bunyăd.

[4] Pateel's assistant.

[5] Village accountant.

PERGUNNAH PARNAIR.

Mokuddum, &c. of the villages of Parnair, Takleh, Neegooz, Awaree, Bhoeeree, Gharkundee, and Lonee.

PERGUNNAH CHAKUN.

Mokuddum, &c. of the villages of Neegooj, Bhoseh, Koorlee, Allandee, Peempulgaon, and Bohree.

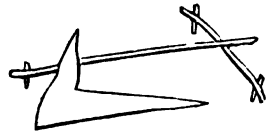
In the presence of the above Mokuddum, &c., whose signatures[1] are attached. Annund Rao, son of Sumbajee Pateel Power, half *Mokuddum* of the village of Multun, of the pergunnah of Kurdeh, and Kundojee, son of Wittojee Pateel Kandulkur, and Sooltanjee Wulud Sonjee Pateel, bin Heerojee Pateel, Goreh; Mokuddums of the village of Kuweeteh, Soorsun, Kumas, Ashreen, Myalluff Sun 1134 (A.D. 1725). On this date, the two last Pateels above-named gave a deed of agreement to Annund Rao Powar, to the following effect: that, "the Mokuddumee of the village of Kuweeteh belongs to us; that formerly Sooryajee, son of Kumlojee Pateel Waagdureh, had disputes for two generations with our ancestors for a share in the Pateel's office of Kuweeteh; but could not succeed in making good his claims. At this period the village was in arrears, on account of the Jummabundee,[2] with Khan, Wallashan Amanoola Khan Jageerdar.[3] The village had fallen into decay, and the ancestors of us the two Pateels, Khandulkur and Goreh, were unable to make up the deficiency (in the revenue to the Jagheerdar). In this helplessness, our ancestors fell upon the neck of Sooryajee, son of Kumlojee Pateel Waagduree, and importuned him till they obtained the sum of 1112 rupees, with which the balance due to the Dewan[4] was paid; and a deed of contract[5] of right to a *third* share in the rights and authority of the Mokuddumee was given, dated, Sukkeh 1628 (A.D. 1707), Weeyeh Nama Suwut, Surreh, Srawun (July, August), 2d of the dark half of the moon (Wednesday), of which the following is a copy: 'We, the Mokuddum Weetojee, son of Tabbajee Pateel Kandulkur, and Neerojee, son of Sohn Pateel Goreh, to Sooryajee, son of Kumlojee Pateel Waagduree, of the village of Kuweeteh Turruf Pabul Soobah Joonur, of auspicious origin, Soor Sun Sub-

[1] The signature of the Pateels and cultivators is the drawing of a plough. The names of the Mokuddum would have lengthened this communication so much that I have omitted them.

[2] Government assessment. [3] The chieftain who held the village in feoff.

[4] Minister of state. [5] Tuhnama.

bah[1] Ashreen Mya Ulluff Sun 1116 (A.D. 1707), have given this deed of contract. Your family and ours for two generations have been quarrelling about the Mokuddumee, and we have all been injured. At the present time there are large arrears due by the village on account of the assessments, and the village has not the means of paying them. In consequence, we have importuned you, and, in conjunction with all the families,[2] or lineages, of the village, have made this contract[3] with you; that as we are now two brothers, as it were, in the office of Mokuddumee, you shall be the third brother, and we will equally enjoy all the rights, privileges, fees, eenams,[4] &c. &c. of the office, and perform the duties of the Pandreh[5] together, preserving to us only *precedence;* and any one who molests you in these rights shall be abhorred of the families (or different lineages), and shall be amenable to the Dewan for breaking the contract. To this effect we have written and signed this contract; the Mokuddum of the Kusbeh[6] of Kurdeh being present in the public office[7] when we received from you 1112 rupees, with which the deficiency to the Jagheerdar was made good, and the remainder shared agreeably to the several rights of individuals. You, therefore, to your children's children, are to enjoy the third share of the Mokuddumee, Eenam, emoluments of Pandreh, and the Maan,[8] Paan.[9] Formerly, you damaged and injured the Mokuddumee; we have now made you our brother: and so let it be.



(Signed with a plough.)[10]

"' Witnessed by the Mokuddum and Koolkurnees of the villages of Kurdeh, Kanoog, Anjunapoor, near Serroor, and by the Deshpandeh of Pabul, the Mokuddum of Indooree; the contract being in the hand-writing of Nanoo Bawajee Koolkurnee of Kuweeteh.'

[1] Name of the year. [2] गोत Goht. [3] Tuh.

[4] Land in free gift. [5] Public service, or village corporation.

[6] Market town. [7] Chawree. [8] Dignities.

[9] Complimentary presents of areca-nut and leaf of piper betel.

[10] A plough is the signature of a cultivator.

" Although the above contract was given, disputes continued between the Waagduree family and ours; and Sooryajee, son of Kumlojee Pateel Waagduree, was not permitted to share in the office of Pateel. On this he went to Multun, and related to you[1] all the circumstances of the case; stating, that in consequence of the opposition of Kanulkur and Goreh, Pateels of Kuweeteh, he could not obtain his rights; that he had scarcely the means of living; and that he fell upon your neck, begging of you to become his brother, and received 200 rupees in money and a mare, for which he gave to you his third share in the Mokuddumee, Eenam, Maan, Paan, Ukulwajeema,[2] Oopuyeendra,[3] black and white; and made you his brother. In consequence of this agreement between Waagdureh and you, disputes originated between you and us. Sooryajee Pateel Waagdureh died, and his son, Kumlojee Pateel, together with his nephew, son of Nundajee Waagdureh, were taken by you to Sattarah (to court), and obtained an order for the Pateels, Kanulkur and Goreh, to appear there. In the Durbar,[4] the Rajuh Sree, Punt Prudhan[5] investigated the affair. Ryajee, son of Jackojee Goreh, Deshmook of Joonur, being present, it was determined, that the Mokuddumee, &c. &c. should be divided into three shares; and the minister gave orders to the Deshmook to go to the Pandreh to assemble the families, and have a deed of agreement, in the presence of the heads of villages, granted by the Pateels; and the disputes terminated. At this period we acknowledged we had become amenable to the Surkar,[6] by the opposition here made to your enjoying the rights of the third share in the Pateel's office on account of Waagdureh. From poverty we were unable to pay the fine, the consequence of our having broken the contract. From our importunities, you arranged this matter with the Dewan for us, and we returned to our village. The minister having given orders to Ryajee Goreh Deshmook, and to Narrain Deshpandeh, to settle the affair. We and our brotherhood, and all the chief people of the village, together with the Bulloteh,[7] being of one heart, gave to you a Razeh Nama;[8] namely, that Kumlojee, Pateel Waagduree, having a third share in the Mokuddumee of the village of Kuweeteh, which he gave to you, and that on this account the third share is yours. To assure it, we have given a Razeh Nama.

[1] Annund Rao Powar, Pateel of Multun, the complainant.
[2] Perquisites. [3] Profits and fees. [4] Prince's court, or levee.
[5] The prime minister. [6] Government.
[7] Village artisans, or crafts. [8] Deed of acknowledgement.

"To confirm this, the Goht[1] should have assembled; but, owing to our neglect, the Goht did not assemble, and no Muhujur[2] took place. After this, Rajuh Sree, Punt Prudhan, in his circuit, came into this country to the village of Khoord Wagoleh. The whole of the authorities of the Soobah were assembled. You and ourselves were also there; and the dispute respecting the third share of the Mokuddumee was brought before the presence of the minister. He having called the Deshmooks and Deshpandehs, the Mokuddums, and the several Gohts of this Soobah, before him, examined the affair personally from the beginning, and took letters of agreement and *securities* to the following effect."

Here follow the names of the numerous securities for Kanulkur and Goreh, Pateels, that they will be responsible for those Pateels fulfilling the conditions of the Muhujur Nama, or award. In a parallel column are the securities for Powar, the whole properly signed and attested.

In this manner, the Punt Prudhan having taken the necessary papers, gave them to the assembled Deshmooks, Deshpandehs, and Goht (heads of families), to determine on them, giving directions to inquire into and ascertain the Eenam, Ukulwajeema, Oopuyendra, black and white, of the disputed Mokuddumee, and to arrange and define the shares agreeably to the several rights of individuals.

In obedience to this order, the Deshmooks, and Deshpandehs, and Goht, came to the village of Kuweeteh, and, having made the necessary examinations of the Pandreh and the Bulloteh, determined that the Waagdureh Pateel had a right to a third share in the Pateel's office, rights, and emoluments, and of these he had been deprived; and of his third share he had given three parts to the above-mentioned Powar, making him his brother. But that, in consequence of the opposition and quarrelling of the Pateels, Kanulkur and Goreh, the Powar derived no advantage from it. In consequence, the Goht *divided* the shares of the Eenam, Maan, Paan, Ukulwajeema, Oopuyendra, Sir Pao, Holeechea Polee,[3] and other dignities; together with the sites of houses, Meeras fields, the profits of Gutkool (or lands of extinct families), and other profits, black and white, into *three parts*, in the following manner: *First*, Kundojee Wullud, Wittojee Pateel Kanulkur, Mokuddum of the village of Kuweeteh, to have the following Maan, or dignities; that is to say, Adehmaan, or premier dignities, *three*, namely:—

[1] Different lineages or families. [2] Confirmed award. [3] Hereditary lands.

1. Holee, chee Polee.[1]
2. Bait.[2]
3. Guhoor.[3]

The second sharer is Annund Rao, son of Sumbajee, Pateel Powar, Mokuddum of the village of Kuweeteh, three premier dignities, or Adehmaun; namely:—

1. Sir Pao.[4]
2. Seeralshet.[5]
3. Wowalnee.[6]

The third sharer is Sooltanjee Wullud Sonjee bin Peerajee, Pateel Goreh, Mokuddum of the village of Kuweeteh, three premier dignities; namely:—

1. Teelah Weereh.[7]
2. Dusreeya, chè Wajuntur.[8]
3. Poleeya, chè Byhl.[9]

The three Pateels are to stand second in sharing (Mudeel maan) in the above dignities, in the following order:

Kundojee, son of Wittojee, Pateel Kanulkur:—

1. Sir Pao.
2. Teelah Weerah.

[1] The right to be the first person to throw into the fire a sweet bread cake at the burning of the Holee, at the vernal equinox: highly prized.

[2] Precedence in paying respects to superiors, with the village present.

[3] Precedence for the Guhoor, which is a figure of Parwutee, the wife of the god Shewuh, under this name, made by the Koonbees, or cultivators themselves, and worshipped in their houses at two or three periods in the year; and which figure, on the close of the worship, is carried in procession and thrown into water. The Guhoor is probably viewed in the character of the Ceres of the Greeks.

[4] Precedence in receiving presents from the government at the liquidation of the revenue settlements.

[5] The worship of the image of somebody, whose memory is associated with an absurd story, and which image is carried in procession. The dignity consists in having precedence for this image.

[6] Precedence in having a light waved round the head by all the village women at the Dewalee, or feast of lights. It is looked upon as a ceremony insuring good fortune.

[7] Precedence in having in ceremonies and entertainments the spot (Teelah) put on the forehead, and in receiving the betel-leaf (Weerah).

[8] Precedence in having the music which is played to the Pateels at the Dusruh, a great festival in October.

[9] Precedence for the bullocks of Goreh Pateel on the day the cattle are released from labour, painted, their horns gilded and ornamented, and then worshipped, and led in procession. It occurs in August or September. The Greeks had a similar ceremony.

3. Seeralshet.
4. Deepwalee, chee Wowalnee.

Annund Rao, son of Sumbajee, Pateel Powar :—

1. Holee, chee Polee.[1]
2. Dusreeya, chè Wajuntur.
3. Poleeya, chè Byhl.

Sooltanjee, son of Sonjee, Pateel Goreh.

1. Guhoor.

The three Pateels are to stand third in sharing the above dignities (Mageel maan), in the following order :

Kundojee, son of Wittojee, Pateel Kunulkur :—

1. Dusreeya, chè Wajuntur.
2. Poleeya, chè Byhl.

Annund Rao, son of Sumbajee, Pateel Powar.

1. Teelah, Wurah.
2. Guhoor.

Sooltanjee, son of Sonjee, Pateel Goreh.

1. Sir Pao.
2. Holee, chee Polee.
3. Seeralshet.
4. Deepwalee, chee Wowalnee.

In the *rights* of the Pateel's office, Kundojee, Pateel Kanulkur, is to share, as follows :—

1. The dried cocoa-nuts, arising from bazar duties, &c. to be brought *first* to Kundojee Pateel's house, and divided into three shares.
2. Kundojee is to have a pair of shoes from the shoemaker yearly.
3. He is to have the Soogreh[2] and Khun.[3]
4. Two bundles of wood from the Mahrs on festival days.
5. Three pots of water daily furnished by the village waterman (Kohlee).

[1] The Holee is a great festival celebrated during several days, about *the time* of the vernal equinox. It has partly the character of the festival in honour of Cybele, and partly that of the greater Dionysia of the Greeks.

[2] A small pot from the potmaker.

[3] A cubit of cloth from the weaver the day the sun returns north.

Annund Rao, son of Sumbajee, Pateel Powar, is to share the rights of the office of Pateel, as follows :—

1. The Bytuk,[1] Phuskee, and Sooparee, levied on market-days, to be brought *first* to the house of Annund Rao, Powar, and then divided into three shares.
2. One pair of shoes from the shoemaker.
3. Soogreh and Khun.
4. Two bundles of wood from the Mahrs on festival days.
5. Three pots of water daily from the village waterman. (Kohlee.)

Sooltanjee, son of Sonjee, Pateel Goreh, is to share in the rights of the Pateel's office, as follows :—

1. A present of two sheep from the village, on the festival of the Dusra, to be brought first to his house, and divided into three shares.
2. A pair of shoes from the shoemaker.
3. Soogreh and Khun.
4. Two bundles of wood from the Mahrs.
5. Three pots of water daily from the village waterman.

There are also Sumuheek Maum, or extra dignities and rights; namely, "The village shoemaker has to furnish yearly four pairs of shoes: of these three only have been allotted; the fourth pair will be taken by each Pateel in succession, agreeably to precedence."

The Pateels are to have a right to the skins of their own shaft-bullocks, belonging to their carts, when they die.[2]

The Pateels are to have sites for their houses, as follows: Kundojee, son of Wittojee, Pateel Kanulkur, has a site for a house, measuring in

Length	36	cubits,
Breadth	24	cubits,
Total ...	864	Ghurb Haat, or square cubits.
From this $\frac{1}{3}$, or	288	are to be taken, leaving for
Kanulkur	576	square cubits as a site.

[1] The Bytuk is the fee of a pice (about a half-penny) paid by sellers not belonging to the village, for permission to sit in the market and sell their articles on market-days. The Phuskee is a handful of grain, or of greens, taken from each seller of those articles; and the Sooparee is the betel-nut taken from the grocers on market-days.

[2] The skins of all cattle dying in the village belong to the Mahrs, or outcasts. An exception is made in favour of the Pateels.

Two sites for houses belonging to Sooltanjee, son of Sonjee, Pateel Goreh; namely:—

One site.	Length	15 cubits,
	Breadth	9 cubits,
		135 Ghurb Haat, or square cubits.
Of this ⅓ is taken for the Powar		45 square cubits;
	Leaving	90 square cubits.

One site.	Length	8 cubits,
	Breadth	7½ cubits,
		60 Ghurb Haat, or square cubits.
Of this ⅓ is taken for the Powar		20
	Leaving	40 square cubits.

Sites for the Powar	288	square cubits from Kanulkur,*
	45	from first house of Goreh,
	20	from second house of Goreh.
Total	353	square cubits for Powar.

SUMAEEK MAUN, OR EXTRA RIGHTS AND DIGNITIES CONTINUED.

1. A quarter of a Kutcha (or small) seer of oil, due from each oil-mill daily, to be allowed to accumulate at the oil-mills, and to be shared agreeably to individual rights.

2. All *sheeps' heads*, and other offerings at the shrine of Sree Bowanee,[1] in the days of pilgrimage, to the shrine, to be shared equally by the Pateels.

There is Eenam Jumeen, or free-gift land, attached to the office of Pateel, half a Chahoor and twenty Beegeh. Of this, Kanulkur, half Mokuddum, has a quarter of a Chahoor[2] and ten Beegeh, on the Thul, or estate called Cheenchurn, equal to thirty-five Tukkeh. Of this, a third share for Powar is eleven and a half Tukkeh, and eight Rookeh, leaving twenty-three and a quarter Tukkeh and four Rookeh for Kanulkur.

[1] The Bellona of the Hindoos.

[2] Chahoor and Tukkeh, and fifty other terms, &c., are names applied to lands of *variable* superficial extent, and are not, therefore, reducible to an English standard.

Sooltanjee Wulud Sonjee, Pateel Goreh; his Eenam, or free-gift land, as follows:—

Tukkeh of the Seend Paatee Thul,[1] or estate	25
Tukkeh of the field (Teekah), called Gooruw	10
Total.....	35

Of this, one-third share for Powar is eleven and a half Tukkeh and eight Rookeh, making twenty-three and a quarter Tukkeh and four Rookeh for each Pateel.

Over and above this, there are the following Meeras, or hereditary lands, of Jeeraeet.[2]

Meeras land belonging to Kanulkur Pateel, viz.:—

Tukkeh of the Cheenchurn Thul[3].....	15
Tukkeh of the Oodar Shait Gutkool[4]	18¾
Tukkeh of the Gaon Tekur[5].....	1½
Total.....	35¼

A third share of this for Powar is 11¾ Tukkeh, leaving to Kanulkur 23½ Tukkeh of hereditary land.

Meeras or hereditary land, belonging to Goreh Pateel, viz.:—

Tukkeh of the Guruw Teekeh Thul of 20 Tukkeh	10
Tukkeh of Oodar Shait Gutkool[6].....	18¾
Total.....	28¾

Of this, Powar's third share is nine and a half Tukkeh and four Rookeh, leaving to Goreh nineteen Tukkeh and eight Rookeh; the allotment of hereditary land to Powar being:—

Tukkeh from the land of Kanulkur	11¾
Tukkeh and four Rookeh from the land of Goreh	9½
	21¼ and four Rookeh.

The total hereditary lands belonging to the three Pateels being sixty-four Tukkeh.

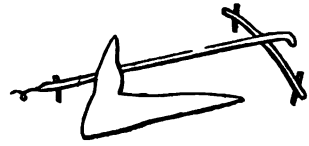
In this manner, the Maun, Paun, with Ukulwajeemah, Eenam, sites of houses, hereditary estates, and other emoluments and advan-

[1] Name of the estate. [2] Field-land, in contradistinction to garden-land.
[3] Hereditary estate, so called. [4] Land of extinct families.
[5] Abandoned sites of houses in the villages.
[6] Name of the estate which belonged to an extinct family.

tages, black and white, are to be shared and enjoyed agreeably to the several shares. Moreover, Kanulkur and Goreh are ordered by the Goht to give a third share of their brother's house to Powar. On this, we (Kanulkur and Goreh) petitioned that it would grieve our brothers; and as increased settlement in the village is desirable, we give instead thereof the site of the neighbouring house of the deceased, and Gutkool Neemba Tamboolee (pan-leaf seller), in length sixty cubits, and in width sixty cubits. The neighbour on the east being the weaver; on the west is the bazaar; on the north, the house of Pool Koonbee; and on the south, the road. Should at any future period a claimant appear for the site above mentioned, we will satisfy him, and you will be free from trouble in it; and on such an agreement we have given you this site. You are to build on it at your pleasure; and, as the children of one mother, Kanulkur, and Goreh, and Powar, and Waagduree, are to be united in the service of the Pandreh,[1] and Powar has to give one-fourth of his share to Waagduree, and arrange with him, in a suitable manner, with regard to all emoluments and profits; and the three other parts of this share of the Mokuddumee are to be enjoyed by himself and his children's children. And for the future, in case of acts on the same mode as formerly, he, the perpetrator, will be out of his cast, and will be amenable to the prime minister. For this purpose, this Mahajurnama (or proceedings and award) has been written and signed.

Taza Kulm, or postscript. The relations of the parties are to continue to enjoy their ancient rights.

(Signed with a plough.)



This is the hand-writing of Gopal Mahadeo and Wittul Moreswur, Koolkurnees of the village of Kuweeteh.

SECURITIES FOR KANULKUR.

1. Kubjee Pateel, son of Tubajee Pateel.
2. Muhojee Pateel, son of Surtojee Pateel.
3. Soobanjee Pateel, son of Sewjee Pateel.

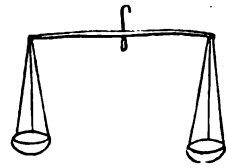
[1] The village community; meaning here, "united for the public good."

4. Dumojee Pateel, son of Muhojee Pateel.
5. Renojee Pateel, son of Maljee Pateel.
6. Donjee Pateel, son of Seetojee Pateel.
7. Soobanjee Pateel, son of Bhewjee Pateel.

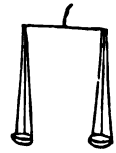
SECURITIES FOR GOREH.

1. Sooryajee, son of Heerojee Pateel.
2. Kanojee, son of Malojee Pateel.
3. Kumlojee, son of Bopajee Pateel.
4. Kanojee, son of Kewjee Pateel.
5. Sumbajee, son of Hurjee Pateel.
6. Awjee, son of Tookjee Pateel.
7. Soobanjee, son of Huryajee Pateel.
8. Sonjee, son of Suntojee Pateel.
9. Kherojee, son of Hurjee Pateel.
10. Bapojee, son of Yemajee Pateel.
11. Maljee, son of Shawjee Pateel.
12. Trimbukjee, son of Kherojee Goreh.
13. Kerojee Goreh.

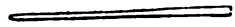
Mohturfa, or tradespeople, who are witnesses. Ragojee, son of Weesajee Bihree Shaitee.[1] His signature, Taagree, or a pair of scales.



Ruhman, son of Neezam Bhaee Bheeradur, Mahjun, or banker. His signature, banker's scales.



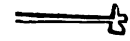
Casee, son of Yemajee, oilman, Maitree, or head of the oilmen. His signature, a Padbur, or crowbar.



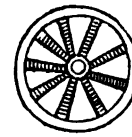
[1] Head of the shopkeepers.

Soobanjee, son of Ragojee Bargowrah. His signature Huteear, or weapons.

Mahajee, son of Sartyajee, silversmith. His signature, Hutawrah, a hammer.



Muleek, son of Shaimun Tambolee, or paan-leaf seller. His signature an Atkeh.[1]



THULWUHEE, OR THE POSSESSORS OF THULS,[2] VIZ. OF MOONJUL THUL.

1. Jmarjee, son of Kundojee Neemeh.
2. Phoolajee, son of Ragojee Neemeh.
3. Chapajee, son of Mudrojee.
4. Ramjee, son of Sobajee.
5. Gondjee, son of Myajee.
6. Yemajee, son of Kalajee.
7. Tanojee, son of Malojee.
8. Maljee, son of Suntojee.
9. Dewjee, son of Bawajee.
10. Mulhurjee, son of Kehrajee.

THULWUHEE[3] OF WEECHKEH THUL.

1. Roopajee, son of Puddojee.
2. Saiteeajee, son of Byerjee.
3. Hurjee, son of Hussojee.
4. Ramjee, son of Pursojee.
5. Dewjee, son of Mahadjee.
6. Simtojee, son of Mahojee.

[1] A box with divisions, in which paan-leaves are kept.
[2] Hereditary estates.
[3] Hereditary owners of the estate called Weechkeh.

OWNERS OF THE POKLEH ESTATE.

1. Mukkajee, son of Somajee.
2. Gondjee, son of Mudojee.
3. Saljee, son of Deoojee.
4. Junnajee, son of Payajee.

OWNERS OF THE THAMDURRA ESTATE.

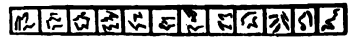
1. Maljee, son of Kelojee.
2. Kumlojee, son of Bahdurna Guruw.[1]
3. Tahjun, son of Neejam.

Suckmajee, son of Abajee Waloo.
Sahoojee, son of Jaitjee Gajeh.
Soobanjee, son of Gungajee Powar.
Pursojee, son of Gungajee Mookehkur.
Kundojee, son of Kehrojee Raeeleh.
Byerjee, son of Muhojee Keeteh.
Weetojee, son of Dhaoojee Deegut.
Moolajee, son of Sahoojee Dorka.
Soobanjee, son of Hoolajee Khareh.

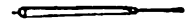
BALLOOTEH, OR VILLAGE ARTISANS AND HEREDITARY OFFICERS.

Beekhan, son of Shaimun Moolana, or Moosulman priest. His signature, a Tusbee, or rosary.

Dad Bhut, son of Treembuk Bhut Johsee (village astrologer). His signature, a Punchung, an almanac.



Ragojee, son of Nagojee Sootar (carpenter). His signature, a Keenkreh.[2]



Muljee, son of Roopajee, Sohar (ironsmith). His signature, a Sandus, or pair of pincers.

[1] Person attached to the temple. He may be a Shudrah, as well as a Brahman.
[2] A gimlet worked by a bow.

Soobanjee, son of R
or weapons.

Mahajee, son of Sarty
a hammer.

Muleek, son of Shaik
signature an Atkeh.[1]

THULWUHEE, OR THI
OF MO

1. Jmarjee, son of Kund
2. Phoolajee, son of Rag
3. Chapajee, son of Mudr
4. Ramjee, son of Soba
5. Gondjee, son of My
6. Yemajee, son of Kal
7. Tanojee, son of Mal
8. Maljee, son of Sunt
9. Dewjee, son of Bawa
10. Mulhurjee, son of Kel

THULWUHEE[3] OF W

1. Roopajee, son of Puddojee.
2. Saiteeajee, son of Byerjee.
3. Hurjee, son of Hussojee.
4. Ramjee, son of Pursojee.
5. Dewjee, son of Mahadjee.
6. Simtojee, son of Mahojee.

[1] A box with divisions, in which pa
[2] Hereditary estates.
[3] Hereditary owners of the estate call

...ng concluded this important document, previously to offering ...strative remarks upon it, I will add one other document, ... less important, the translation of one of the original title-... which hereditary property was given in land by the Mokud-...ateel, or Pateels of villages, or, in some cases, by the village ...nity.

...slation of a Meeras Putrah (letter of inheritance) granted by ...kuddum of the village of Multun, dated 1814, month of June,

... May the Divinity be propitious, Meeras Putrah, or letter ...itance, Sukkep[1] 1736 (A. D. 1814), Bhawnam Suwuntsur, ...f Asher (June, July), the fifth of the dark half of the moon. ...[2] (A. D. 1814), on that day the Mokuddum, chief sharers in ...ul's office and authority, and all the principal persons of the ... of Multun, Pergunnah, Kurdeh, Surkar, Joonur, being as-... of the Chowree,[3] their names as follows:—

... Sree Eshwunt Rao Powar, Pateel, half Mokuddum of the ...llage.

..., son of Naryainjee Bargul; Chougleh,[4] present for him,

... Bhushet of the above village.

... Mahuleh of the above village.

...m of Kundojee, chief of the shopkeepers.

...on of Kundojee, Pateel Geeteh.

... of Bhewjee Seendeh.

... of Gungajee Torreh.

...Gowendjee Thorat.

...Myajee Guikowar, gardener of the above village.

...obanjee, Pateel, Dunwut.

..., Guruw of the above village.

... Bhaweh.

...wjee Mahwleh.

...rus Waahaab, gardener of the Muhjeen.

...Torkur.

...you Koosajee, son of Ranojee, Pateel Thorat of ...e, having come and presented a petition if a ... (Meeras Putrah), were granted for lands in the ... you would labour and secure their prosperity: ...our petition, we give to you a *Chowar*,[7] namely,

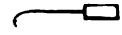
[1] The Moosulman era. [3] Public office.
...istant. [5] Quarter Mokuddum.
...ertain extent of land.

Soobanjee, son of Luckwurta, Pureet (washerman). His signature, a Mogree, or mallet.[1]

Muheemajee, son of Teemajee, Durna Guruw (attendant in the village temple). His signature, a Jehgut.[2]

Kundojee, son of Buckojee Salwah, Koombhar (pot-maker). His signature, a Thaptee.[3]

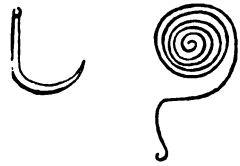
Mudojee, son of Gungajee, Chambar (shoemaker). His signature, an Eengah.[4]



The Mahrs, or village watchmen. Two shares for Tooknac.

1. Gunnac, son of Jacknac, Mahr,[5] one share. His signature, a Weela and Dor.

2. Tooknac, son of Sutnac, Mahr. Their signature, a Weela (sickle) and Dor (a rope.)



[1] Clothes are not washed in India by the hand, but are beaten with a mallet, or beaten against a stone.

[2] A kind of little gong, used in the temple.

[3] A kind of modelling instrument, used by pot-makers.

[4] An instrument for smoothing leather.

[5] One of the principal duties of the low caste Mahrs is to bring wood and grass; whence their signature of a sickle and rope.

Having concluded this important document, previously to offering any illustrative remarks upon it, I will add one other document, scarcely less important, the translation of one of the original title-deeds by which hereditary property was given in land by the Mokuddum, Pateel, or Pateels of villages, or, in some cases, by the village community.

Translation of a Meeras Putrah (letter of inheritance) granted by the Mokuddum of the village of Multun, dated 1814, month of June, July.

Sree. May the Divinity be propitious, Meeras Putrah, or letter of inheritance, Sukkep[1] 1736 (A. D. 1814), Bhawnam Suwuntsur, month of Asher (June, July), the fifth of the dark half of the moon. Sun 1224[2] (A. D. 1814), on that day the Mokuddum, chief sharers in the Pateel's office and authority, and all the principal persons of the villages of Multun, Pergunnah, Kurdeh, Surkar, Joonur, being assembled at the Chowree,[3] their names as follows:—

Rajah Sree Eshwunt Rao Powar, Pateel, half Mokuddum of the above village.

Nagojee, son of Naryainjee Bargul; Chougleh,[4] present for him, Yemajee Bhoshet of the above village.

Darkajee Mahuleh of the above village.

Sewjee, son of Kundojee, chief of the shopkeepers.

Mullarjee,[5] son of Kundojee, Pateel Geeteh.

Appajee, son of Bhewjee Seendeh.

Beekajee, son of Gungajee Torreh.

Assojee, son of Gowendjee Thorat.

Ranojee, son of Myajee Guikowar, gardener of the above village.

Balojee,[6] son of Soobanjee, Pateel, Dunwut.

Gopal Rao Mulkar, Guruw of the above village.

Ballajee Bajee Rao Bhaweh.

Kublajee, son of Bhawjee Mahwleh.

Kundojee, son of Nurus Waahaab, gardener of the Muhjeen.

Suntoo Krustnajee Torkur.

We being present, you Koosajee, son of Ranojee, Pateel Thorat of the village of Lowkee, having come and presented a petition if a letter of inheritance (Meeras Putrah), were granted for lands in the above village, that you would labour and secure their prosperity: Having approved of your petition, we give to you a *Chowar*,[7] namely,

[1] The Hindoo era. [2] The Mooselman era. [3] Public office.
[4] Pateel's hereditary assistant. [5] Quarter Mokuddum.
[6] Quarter Mokuddum. [7] A certain extent of land.

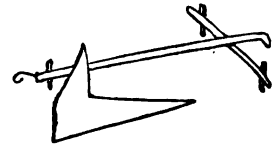
twelve *Rookas* of land, from the two Chowars of the Thul, or estate, called Sandus; the four land-marks[1] or limits of which are,—first, on the east, the field called Juwadee cha Mullah; on the west, it is bounded by the sheem, or limits of the lands of the hamlet of Garkol; on the south, by the fall of water from the hill at the milk bush,[2] upon the rock in the field called Urdurrah; on the north, by the Nullah, or watercourse, where it forms an island, by separating into two streams: these are the limits. The line of your Chowar runs from the Nullah outside the garden, dividing the field into two parts, and terminating on the watercourse of the upper well. The mango trees within your limits, namely, two mango trees, you are to enjoy.

In consequence of the distance of your field from the village, you have prayed the Pandreh[3] to assist you with water. Taking this into our consideration, we have resolved that the *Malee* (gardener) of the garden before mentioned, shall permit you, without impediment, to water two Beegehs of your Chowar.

We, the village authorities, have granted you this from our free will and pleasure; and you and your children's children are to enjoy this right of watering two Beegehs. As a site for a house, we grant you land in the village, from east to west, fifty haths (cubits) long; and, from north to south, thirty cubits broad: the house of Jugdullah bounding it on the west; opposite, on the north, the house of Jangreh; on the south and east, the two houses of Molador: such are the limits of this site. The price of the land of this grant is one hundred rupees, which we, having received, grant to you this field and site for your house. Including the well, the permanent assessment is fifty rupees yearly; and upon this there will be no other charge, beyond the rights of the Hukdars,[4] and the pay of the Koolkurnee (village accountant), agreeably to the usage and practice of the village.

And, that your family and children's children may enjoy the above lands, this letter of inheritance is given and signed.

Signed with a plough.



Witnessed by Appojee, son of Balcojee, the silversmith.

[1] चतुरसीमा Chutoorseema. Sanscrit. [2] Euphorbia tetragona.

[3] Village authorities, or community.

[4] Persons having trifling hereditary fees, or rights on the village lands.

Ramchundra Boodeeram, Dukshneh, astrologer, and half sharer in the office of village accountant.

Ruckmanjee, son of Towjee, the carpenter.

Sooban Khan, son of of Sahib Khan, the Moosulman priest.

Mahadjee, son of Muckajee, the ironsmith.

Essojee, son of Dackojee, the potmaker.

Unwunt, son of Tookajee, the oilman.

Koesajee, son of Savjee, the barber.

Kondajee, son of Dackojee, the washerman.

Weetojee, son of Oodajee Guruw, in charge of the temple.

Byajee, son of Maljee Naik, Ramosee.[1]

Balajee, son of Newjee, the shoemaker.

Manaknac and Ooknac, Mahrs, or village watchmen of boundaries.

Buckoo, son of Museh Raoot, Maang.[2]

This letter of inheritance is in the handwriting of Ramjee Myral Boolek, astrologer, and Koolkurnee (accountant) of the village.

The above documents present some features sufficiently prominent and remarkable. The Eenam, or free gift lands held in tenure of the office of Pateel, were alienable with part of the office; the Meeras, or hereditary private lands, were equally so. The lands and sites of houses of extinct families, were appropriated by the Pateels, or the village community, without the interference of government. A permanent hereditary right, subject to the land-tax, in fact a freehold, or, as the Meeras Putrah forcibly expresses it, a right to "children's children," was given in land by the Pateels, duly witnessed by the village authorities; and the so much desired permanent assessment was fixed in the deed of inheritance; and these were not isolated cases, or local peculiarities, but were solemnly acknowledged by the chief authorities of districts so extensive as to be equal to several English counties, and, with the full participation of the Prime Minister of the Rajah of Sattarah. Had government claimed the lordship of the soil, could it possibly have sanctioned such absolute and unrestrained disposal of it as we see in these documents; and I have seen scores of others similar to the Meeras Putra. It is idle, therefore, to talk of hereditary occupancy: the holders of land in Dukhun were as free to dispose of it as an English gentleman would be of his estate, burdened, of course, with land-tax, county rates, parish assessments, &c., &c., for the nonpayment of which his property would be liable.

[1] A thief by profession; he is either hired, or has lands given to him to protect the village.

[2] The lowest of all the casts; he is the executioner, and skins beasts, &c., &c.

twelve *Rookas* of land, from the two Chowars of the Thul, or estate, called Sandus; the four land-marks[1] or limits of which are, — first, on the east, the field called Juwadee cha Mullah; on the west, it is bounded by the sheem, or limits of the lands of the hamlet of Garkol; on the south, by the fall of water from the hill at the milk bush,[2] upon the rock in the field called Urdurrah; on the north, by the Nullah, or watercourse, where it forms an island, by separating into two streams: these are the limits. The line of your Chowar runs from the Nullah outside the garden, dividing the field into two parts, and terminating on the watercourse of the upper well. The mango trees within your limits, namely, two mango trees, you are to enjoy.

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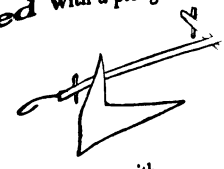

Witnessed by Appojee, son of Balcojee, the silversmith.

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[3] Village authorities, or community.

[4] Persons having trifling hereditary fees, or rights on the village lands.

government grain cess
Pateels, Koolkurnees,
seers for every forty-
es, or cultivators, gave
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oonbees had to give six
s, for every forty-eight
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some villages, only two

rights, emoluments, and
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oney instead of free-gift
ortion of grain from each
anjungaon, Turruf Ran-
lands, but have a salary
n upon every forty-eight
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, fifty rupees salary, and
and one seer of grain

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dnuggur collectorate,
twenty-eight seers of
of land under culti-
ated by the fact, that
nder cultivation; the
057 seers of grain,—a
twenty-five persons. At
nging to the well-known
two seers of grain for every

livisible by sale or gift,
proprietary; although

res. [3] 45 acres.

The case was the same in Dukhun. A meerasdar fell into arrear with his land-tax and village rates. He sells his lands to pay them, or he abandons his lands; but the moment he can pay up his arrears, he has, or I should rather say, *had* the *right* to resume them. The assumption that the lordship of the soil is in the government, has occasioned the monstrous injustice of the dispossession of all the land-holders of Dukhun of their franchise. Happily, from the paternal character of the government, it has had few practical consequences, beyond the abrogation[1] of the rights of the Pateel, and his degradation to the level of other cultivators. It has dispossessed also the village authorities, and the Pateel, of the power of appropriating or selling the lands of extinct families, together with waste lands, similar to the common lands of an English village, the right to which is so tenaciously held by our peasantry; from our ignorance, also, of the details of the tenures and duties of the several hereditary officers, it has occasioned some untoward modifications of the relations of these parties to each other, and to the government. It has been the misfortune of our government in India, that its legislative experiments (always, I believe, made with benevolent views), have rarely been founded on that basis, without which there can be no safe legislation; namely, statistical details.

From the first document we learn that the Pateels were responsible to government for the village revenue, as it is seen that the Pateels, Kanulkur and Goreh, were obliged to sell a third share of their office to make good arrears. We learn, also (but the fact obtains universally), that the village settlement was Mouzewar,—that is to say, government fixed its annual payments at a definite sum, without reference to agricultural details or village arrangements, with which government did not interfere.[2] This was called the Tunkha, which means an *assignment;* and the term is still preserved in the village accounts I examined, even under the Ryotwar system, to remind collectors, I presume, that in former times the village paid only a fixed sum, without the interference of his multiplied agents.

Independently of the fees and advantages of the Pateel enumerated in the "award," a close inspection of village accounts enabled me to determine that he had many more of considerable value. In all villages he had a certain proportion of all the grain raised on the village lands: this was called Googree.

[1] This abrogation has not taken place in native states, nor in Jaghree, or alienated villages in our own states.

[2] Villages were assessed at a fixed sum in England in Edward the Third's time.

At Parnair, Pergannah Parnair, in the government grain cess (which is over and above the land-tax), the Pateels, Koolkurnees, heads of trades, and bankers, gave only two seers for every forty-eight seers of grain raised, whilst the Koonbees, or cultivators, gave four seers. The above personages were also free with respect to contributions of Kurbah[1] and grass, whilst the Koonbees had to give six bundles of Kurbah, and forty bundles of grass, for every forty-eight seers of grain raised. In the Sherusteh Butta, or customary percentage on assessments, the Pateels paid, in some villages, only two per cent, the Koonbee paying four per cent.

Although the "award" gives a list of the rights, emoluments, and fees of the Pateel, it is to be understood they are neither uniform in number nor value throughout Dukhun. The Eenam lands held by the Pateel vary exceedingly in extent in different villages; and in some villages the Pateel has a salary in money instead of free-gift lands. The Googree, or right to a certain portion of grain from each cultivator, I believe to be universal. At Ranjungaon, Turruf Ranjungaon, the Pateels are destitute of Eenam lands, but have a salary of fifty rupees instead, and six seers of grain upon every forty-eight seers raised in the village lands. As a contrast to this at Wamoree Turruf Rahoree, Ahmednuggur collectorate, the Pateels have three hundred and sixty Beegehs[2] of Eenam land, fifty rupees salary, and eighteen rupees per annum, for a Turband, and one seer of grain from each Beegah under cultivation.

At Wangee, Pergunnah Mundroop, Poona collectorate, the Pateels have each sixty Beegehs[3] of free land, a salary of fifty rupees, and two hundred and twenty-four seers of grain for each hundred and twenty Beegehs of land under cultivation.

At Kurjut, Pergunnah Kureh Wulleet, Ahmednuggur collectorate, the Pateel has free land and one hundred and twenty-eight seers of grain from every hundred and twenty Beegehs of land under cultivation. The value of this right may be estimated by the fact, that in 1827 there were 8491 Beegehs of land under cultivation; the Pateel, therefore, was entitled annually to 9057 seers of grain,—a sufficiency for the permanent support of twenty-five persons. At Pullooj, a village near Punderpoor, belonging to the well-known Appa Desaee Nipankur, the Pateel had two seers of grain for every rupee of assessment.

The office of Pateel being alienable and divisible by sale or gift, we, consequently, find different castes in joint proprietary; although

[1] Stalks of the Andropogon Sorghum. [2] 270 acres. [3] 45 acres.

in ninety-nine instances, probably, out of the hundred, it is still in the hands of the original possessors, the Mahrattas. At Wamoree, a Brahmun and six Mahrattas are joint Pateels; at Ahmednuggur, a Brahmun and Mahratta hold the office; at Nandoor, a quarter share belongs to a Moosulman, and the other three-quarters to two Mahrattas, in the proportions of one-half and one-quarter. At Jamgaon, his Highness Seendeh has six-sevenths of the office, the other seventh remaining with the ancient Pateel, *who has precedence*. At Dytnah, I met with the anomaly of a Mahratta female in exclusive possession of the office of Pateel, the duties of which she executed personally; and she had all the rights and emoluments, excepting the Sir Pao, or presents for dress. She was a widow and childless; and her deceased husband was the last of an ancient family. She was permitted by the Jagheerdar to adopt a child, who would succeed her. At Wangee, Pergannah Mundroop, Poona collectorate, the Pateel's office is held by two shopkeepers (Lingaeet Wanees), who exclusively worship the Leeng[1] of Mahadeo, and reject the superiority of the Brahmun hierarchy. The office so filled is of rare occurrence. In the hilly tracts along the Ghauts, the Pateels are frequently Kohlees.

With regard to the duties and obligations of the Pateel, it has been shewn, that he was personally responsible for the government revenue; he superintended the police of the village, regulated its internal economy, and presided in all village councils; he had power to fine and imprison, and to seize all offenders: but it is not quite clear by what civil or military means he was to effect these objects.

Independently of the facts relating to property in land, the "award" adverts to several customs, and Hindoo religious and other festivals, not less curious than interesting, particularly the festivals; for many of them bear considerable affinity in their details to similar institutions amongst the Greeks: and some light might be thrown on the relations of the ancient inhabitants of India with western nations, were some of our zealous young orientalists in India, fresh from their classical associations, to furnish the public with minute accounts of the ceremonies at present practised at the different festivals; not taken from Sanscrit works, but noted down from personal observation, and chiefly from the rural or Shoodreh population (who are mostly worshippers of Mahadeo), in Western India. One of the items of the "Award" will assist to disabuse the European world of its belief in the anti-carnivorous propensity of the Hindoos, as special

[1] Phallus.

provision is made, that the sheeps' heads offered at the shrine of Bowanee shall be shared equally among the Pateels.[1]

As auxiliary to the Land Tenures of Dukhun, I have thought it might be acceptable to shew the distribution of the lands of a village, and the village expenses. The following are copies of the original papers in the Mahratta language, and are selected from a small village to spare lengthened details.

[1] I must not omit to notice the characteristic signatures of the different witnesses. Those who could not write, it may be well supposed, could yet draw the symbol of their occupation — a plough for a cultivator, a gimlet for a carpenter, and a rope and sickle for the grass-cutter; but why the astrologer should draw an almanac for his signature, and the Moosalman priest a rosary for his, both being persons able to write, is not quite so intelligible.

Lands belonging to the Village of Ambolee Turruf Warruh Pergunnah, Kher Soobah Poona, exhibiting the distribution thereof, Fuslee, 1280.

	Kundees. Maunds. Pyhlees.	Kundees. Maunds. Pyhlees.	Kundees. Maunds. Pyhlees.
Total lands of the village	0 0 0	0 0 0	15 0 0
Tupseel, or detail. Sostee Meerasdar, or hereditary lands	0 0 0	6 6 0	0 0 0
Woktee, or Ooktee, lands rented by the year	0 0 0	0 19 0	0 0 0
Deshmooks Eenam, or free land	0 0 0	0 13 0	0 0 0
Baboo Rao, Esba Rao, Rajba Rao, Mancojee Rao, Pateel and Baboo Rao, Seendeh, Deshmook, and Pateel; viz.	0 0 0	0 9 0	0 0 0
Pateels Eenam	0 5 0	0 0 0	0 0 0
Do. Passoree	0 4 0	0 0 0	0 0 0
Dewustan, temple of Bab Deo	0 1 0	0 1 0	0 0 0
Ballooteh, or village artisans; viz.	0 0 0	0 10 6	0 0 0
Koomar, or potmaker	0 1 6	0 0 0	0 0 0
Turrah, or Kohlee, waterman	0 1 6	0 0 0	0 0 0
Purheet, or washerman	0 1 6	0 0 0	0 0 0
Sootar, or carpenter	0 2 0	0 0 0	0 0 0
Chamar, or shoemaker	0 2 0	0 0 0	0 0 0
Nahwee, or barber	0 2 6	0 0 0	0 0 0
Mahrs, or village watchmen, Hurkee and Arhowlah; viz.	0 0 0	0 6 6	0 0 0
Hurkee, *i. e.* Eenam, or free land	0 2 6	0 0 0	0 0 0
Arhowlah, or quit-rent land	0 4 0	0 0 0	0 0 0
Ghaee Rân, or cattle pasture, with Donghur, or hill land	0 0 0	1 16 0	0 0 0
In dispute between the villages of Eeram and Ambolee	0 0 0	2 10 0	0 0 0
Uncultivated land	0 0 0	1 9 0	0 0 0
Total	0 0 0	15 0 0	15 0 0

There are 20 Maunds (properly Mun) to a Kundee; each Maund of 12 Pyhlees; each Pyhlees of 4 Seers; a Seer of Bajree (Panicum Spicatum, the grain cultivated in this village) weighs 2¼ lbs. avoirdupois; the utmost capability of the lands, therefore, was to produce 32,400 lbs. avoirdupois of grain; the division of the lands being by its productive power, and not by its superficial extent.

Gao Khurch, or Village Expenses of the Village of Ambolee, &c. Fuslee, 1230.

	Rupees. Quarters. Annas.	Rupees. Quarters. Annas.	Rupees. Quarters. Annas.
Dewusthan, or religious establishments; viz.	0 0 0	0 0 0	10 1 0
Sree Beema Shunkur	1 0 0	0 0 0	0 0 0
Gram Dewtah, or village gods	4 1 0	0 0 0	0 0 0
Sree Babdeo	2 2 0	0 0 0	0 0 0
Oil for Marwutees temple	0 2 0	0 0 0	0 0 0
Guruw, or sweeper of the temples and trifles	2 0 0	10 1 0	0 0 0
Grant to the Mahrs for a propitiatory sacrifice in August — September, called Mahr Bhadwee	1 0 0	1 0 0	1 0 0
Hukdar Khurch, or rights of ancient hereditary officers; viz.	0 0 0	0 0 0	25 0 0
Deshpandeh, or district accountant — money	10 0 0	0 0 0	0 0 0
Toop, or clarified butter, one seer, at two seers per rupee	0 2 0	10 2 0	0 0 0
Sir Pateel Eswunt Rao Dabaree; viz.	0 0 0	10 0 0	0 0 0
Bhet, or present at meeting	1 0 0	0 0 0	0 0 0
Mahr Rapta, in lieu of service of Mahrs to him	1 0 0	0 0 0	0 0 0
One seer of Toop, or clarified butter	0 2 0	0 0 0	0 0 0
Nugd, or ready money	7 2 0	0 0 0	0 0 0
Sir Desaee Eswudah Baee Chaskar — money	2 0 0	2 0 0	0 0 0
Naikwaree, Fee to Sonjee Naik Moorkootee	1 0 0	1 0 0	0 0 0
Aplad, or bounty for the Deshpandees descendants by female line	1 2 0	1 2 0	0 0 0
Koolkurnee, or village accountant; viz.	0 0 0	0 0 0	17 0 0
Ready money	15 0 0	0 0 0	0 0 0
Khazduz, or paper	1 0 0	0 0 0	0 0 0
Kilkoe, or trifles	1 0 0	17 0 0	0 0 0
Dhurmadeo Wurshasun, or yearly charity to holy men; viz.	0 0 0	0 0 0	5 1 0
Gram Johsee, or village astrologer	1 0 0	0 0 0	0 0 0
Hur Dixit, a Brahmun	0 2 0	0 0 0	0 0 0
Aba Bhat Guwdee, a Brahmun	0 1 0	0 0 0	0 0 0
Balum Bhat Kondorekur, a Brahmun	0 1 0	0 0 0	0 0 0
Sree Weeshoo, the God at Chass	0 2 0	0 0 0	0 0 0
Sham Bhat Gowundee, a Brahmun	0 2 0	0 0 0	0 0 0
Sree Ram Chundreh, the God at Warrah	1 0 0	0 0 0	0 0 0
Seemeca Gosaiwee Jonurkur, a Mendicant	0 2 0	0 0 0	0 0 0
Aba Bhut Atree, a Brahmun	0 2 0	0 0 0	0 0 0
Moroo Bullar Johesee, an astrologer	0 1 0	5 1 0	0 0 0
Bazar Butta, or customary per centage on village revenue, paid to government	10 0 3¼	10 0 3¼	10 0 3¼
Rupees. Grand total of village expenses	68 2 3¼	68 2 3¼	68 2 3¼

The above sum is raised from the cultivators, over and above the Tunkha, or government assigned revenue upon the village.

In concluding this paper, I will beg the liberty to say a few words respecting the orthography of oriental words in my last paper on Tenures, published by the Royal Asiatic Society. Reading the Deva Nagree, Persian, and Mahratta characters, it has been my practice of late years, when wishing to put an oriental word into Roman letters, to place the Oriental word before me, and then to use such letters to express it in English, as I thought, would enable an Englishman, utterly ignorant of the pronunciation of Oriental words, to come nearest the native orthoëpy. I have adopted this plan in my publications since 1824, and the plan was pursued in my last communication to the Society. It pleased the executive body of the Society to adapt the orthography of all Oriental words used by me to Sir WILLIAM JONES's system; and, therefore, I think this explanation necessary, as I might be otherwise exposed to severe comment, for the discrepancies between the orthography in some of my former, and even contemporaneous publications.

AN HINDÚ SEAL.

S. Straker, Lithographer, George Yard, Lombard St. London.

ART. XVII.—*Translation of an Inscription on an Ancient Hindú Seal, by the late* Sir CHARLES WILKINS, LL.D., *&c.; with Observations by* Professor WILSON.

THE accompanying plate is a representation of the cast of an ancient seal, in the possession of the late Sir CHARLES WILKINS, the circumstances of the discovery of which will be best explained by the following letter:—

"*Grove House, Hampstead, July* 1, 1806.

"The impression of a Hindú seal, which Captain COLEBROOKE had the honour of laying before Mr. WILKINS to be deciphered, was found by him at Asseer-ghur, a fortress belonging to DOWLUT-RAO SCINDIA, eleven miles and three-quarters north, 9° east of Burhanpoor; in latit. 21° 27′ north, and forty-eight miles east of the meridian of Aurungabad.

"As it was taken from a chest containing property of SCINDIA, Captain COLEBROOKE conceived it to have been the impression of his family seal; but the Mahratta vackeels (to whom it was shewn) professed themselves totally ignorant of it. He then became anxious to have it deciphered, but could not succeed, although it was shewn to several pundits who professed a knowledge of the Sanskrit. Captain COLEBROOKE afterwards made a fac-simile of the impression, and sent it to the Asiatic Society in Bengal; but he has not learned whether they succeeded in deciphering it.

"On his return to the Carnatic, it was shewn to people from every part of India without success. By some it was said to be the Devanagari character; and by others, that it resembled the inscriptions on the seven pagodas near Madras. The failure of Captain COLEBROOKE's endeavours to get a translation of the seal, determined him to lay it before Mr. WILKINS, as the only probable chance he would ever have of obtaining a knowledge of its allusion.

"J. COLEBROOKE,

"CAPTAIN HON. EAST INDIA COMPANY'S SERVICE; LATE DEPUTY "ADJUTANT-GENERAL NIZAM'S SUBSIDIARY FORCE."

The difficulty of deciphering the characters upon the seal, which, although evidently Devanagari, are of an ancient and obsolete style,

was overcome by the usual acumen and perseverance of Sir CHARLES WILKINS; and the following are a transcript of the inscription in more modern characters, and a translation which, shortly before his death, he had prepared for publication in the Journal of the Royal Asiatic Society.

INSCRIPTION IN MODERN CHARACTERS.

चतुस्समुद्रातिक्रान्तकीर्त्तिःप्रतापानुरागोपनतान्यराज
वर्णश्रमव्यवस्थापनप्रवृत्तचक्रश्चक्रधरइवप्रजानामर्त्ति
हरश्रीमहाराजहरिवर्म्मीतस्यपुत्रस्तत्पादानुध्यातो
जयस्वामिनीभट्टारिकादेव्यामुत्पन्नःश्रीमहाराजदित्यव
र्म्मीतस्यपुत्रस्तत्पादानुध्यातोहर्षगुप्ताभट्टारिकादेव्यामु
त्पन्नःश्रीमहाराजेश्वरवर्म्मीतस्यपुत्रस्तत्पादानुध्यात
उमागुप्ताभट्टारिकादेव्यामुत्पन्नामेहाराजाधिराजश्री
ईशानवर्म्मीतस्यपुत्रस्तत्पादानुध्यातोहर्षिणीभट्टारि
रकामहादेव्यामुत्पन्नोपरममहेश्वरमहाराजाधिराज
श्रीसर्व्ववर्म्माहोवरिः

TRANSLATION.

"The fortunate great king HARI VARMMÁ was a prince whose fame extended beyond the four oceans; by whose glory and kind treatment other sovereigns were subdued; whose armies were engaged in establishing the religious orders of the tribes; and who, like the wielder of the discus, was the dispeller of the people's sufferings.

"His son and successor, born of her Majesty, Queen JAYA SWÁMINÍ, was the fortunate great king, DIVYA VARMMÁ.

" His son and successor, born of her Majesty, Queen HARSHA GUPTÁ, was the fortunate great king, ISWARA VARMMÁ.

" His son and successor, born of her Majesty, Queen UMAGUPTÁ, was the great king of kings, the fortunate ISÁNA VARMMÁ.

" His son and successor, born of her Majesty, the great Queen HARSHINI, was the supreme great lord, the great king of kings, the fortunate SARVA VARMMÁ."

In this translation, it is only necessary to advert to the expression, *Tat pádánudhyáta*, and to the last word, which appears to be *Hovari*. The former of these is nothing more than a paraphrastic phrase for " successor :" it means, literally, meditating upon his (the father's) feet; denoting either the disposition of the son to imitate the paternal example, or to refer with reverence to the memory of his sire. It is by no means uncommon, and occurs in various inscriptions. (See *Journal of the Royal Asiatic Society*, vol. iii. p. 97, श्रीमदकाल वर्षदेवपादानुध्यात &c.)

The last term is not so easily explained. It is omitted altogether in the translation, and I cannot offer any probable conjecture of its signification. It is clearly *Ho-vari* (होवरि:); and, if correct, which is questionable, must have some local or technical purport: it cannot be part of the preceding term, which is as clearly the name of the rájá, SARVA VARMÁ.

The seal records the names of five princes, HARI VARMÁ, DIVYA VARMÁ, ISWARA VARMÁ, ISANA VARMÁ, and SARVA VARMÁ; but as neither date nor place is mentioned, it adds little to our knowledge of Hindú history. It is of more value to Indian palæography; for the characters are, in most cases, the same as those of Inscription, No. 2, on the Allahabad Column (*Journal of the Asiatic Society of Bengal, March* 1834). The characters of that inscription, as is noticed by Captain TROYER, offer a great similarity to those of the Gaya inscription, deciphered many years ago by Sir CHARLES WILKINS, and published in the first volume of the *Bengal Asiatic Researches*, vol. i. p. 279. They are also, as he remarks, still more like those of the inscriptions on the rocks of Mahamalaipur, explained by Mr. BABINGTON (*Transactions of the Royal Asiatic Society*, vol. ii. plates 13, 14); and, finally, many of them are identical, as Mr. PRINSEP has shewn, with the Tibetan letters (*Journal of the Asiatic Society, March* 1834, p. 115). The characters of the seal, therefore,

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ART. XVIII.—*Observations on some Ancient Indian Coins in the Cabinet of the Royal Asiatic Society, by* Professor WILSON.

HAVING found in the cabinet of the Society several of the coins which have lately been the subject of so much interesting and intelligent research in India, I have selected the accompanying for publication in the Society's Journal; for, although of themselves, and in my hands, they may not add much that is of importance to our knowledge of their origin, yet, as they are in a tolerably perfect condition, they may contribute, by a comparison with others of the same class instituted by the talented individuals who are engaged in the inquiry, to facilitate the deciphering of the legends which they offer, to determine their affinities, and to ascertain their history.

The first is a coin, of which it is remarked by Mr. PRINSEP, that it is by far the most common that is discovered in the Punjab, and in Afghanistan.[1] It was the first coin found in India on which Greek characters were made out. The legend, however, although Greek, has afforded no very exact intimation of the origin of the coin, as it has not included a proper name. In the present specimen this is also the case. The inscription on the reverse is very distinctly Βασιλεων Σωτηρ Μ; and, compared with other specimens, the entire legend is Σωτηρ Μεγας Βασιλευς Βασιλεων.[2] Mr. MASSON, by whom many of these coins have been found, has conjectured that the legend might be read Σωτηρ Ηεγας, making Eegas, or Sotereagas, the name of a prince.[3] But besides the objection to this reading, founded upon the letters themselves, it is to be observed, that some of the coins omit Μεγας, and present the legend Σωτηρ Βασιλευς Βασιλεων,—a form decisive of the reading and of its import. Mr. PRINSEP was at first inclined to consider these as the coins of the Bactrian king, Eucratides.; but in his latest notice he has left their appropriation undecided.[4] The device on the reverse, a mounted horseman, with fillets floating from his head-dress, as well as the Greek inscription, associate these coins unquestionably with the Bactrian coinage.

A similar device, or that of a horseman in the same attitude, occurs upon several coins found in Afghanistan, upon which the name of a prince, Azos in Greek, and Ajo, or Ayo, in the Bactrian alphabet

[1] Journal of the Asiatic Society of Bengal, June 1835, p. 345.
[2] Ibid. vol. ii. p. 411, plate xiv. fig. 9, 10.
[3] Ibid. vol. iii. p. 193, plate x. fig. 26, 27.
[4] Ibid. June 1835, p. 345, plate xxiii. fig. 26.

deciphered by Mr. PRINSEP, is very distinctly read; and he therefore places the present medal immediately subsequent to the coins of Azos. The name of this prince, he conjectures,[1] may represent the Sanskrit Aswa, the name, according to Colonel TOD, of a Yavana tribe, one of four which overturned the Greek kingdom of Bactria.[2] The word Aswa, however, as applied to an individual, does not occur alone; but in composition, as Kuvalayáswa, Yuvanáswa, Aswapati, and the like; and I should, therefore, suggest a different original, or, *Aja*, equally a Sanskrit word, and occurring as a proper name, it being the designation in the Pauranic lists of kings, of the father of DASARATHA, and grandsire of RÁMA. The form of the word, both in Greek and Bactrian characters, agrees better with Aja than with Aswa, the *j* being represented necessarily in the former by *zeta*, whilst, in some instances, in the latter, it is the very letter, the very word itself, or, Ajo. The question is of more importance than mere nomenclature, for, if Aja be the word, we have a Hindu prince ruling over a part at least of the Bactrian dominions. That the prince, whose name appears on these coins, was a Hindu, is confirmed by the prevailing devices, which are those of Asiatic animals, the elephant, camel, lion, and Brahmani bull. It is a singular circumstance, that the head of the prince is never represented; figures occur, but for whom designed is doubtful; their costume and attitudes, especially that of sitting, are, however, clearly Asiatic. There is every reason, therefore, to refer these coins to an Indian prince, although, occasionally, their devices are Grecian or Roman, as, in one, we have a female figure with a shield, Minerva with the Ægis, and, in another, a soldier trampling on a prostrate enemy.[3] These, however, may have been retained from coins previously current, or may have originated in the fancy of the Bactrian artists, who were either Greeks or their scholars, as appears from the inscription. Perhaps an inference may be drawn in favour of the latter, as the genitive plural of Βασιλευς, Βασιλευων, instead of Βασιλων, or Βασιλεων, is an unusual and questionable form. It is clearly so impressed upon the medal, which is herewith engraved.

The second figure represents a coin, of which another specimen[4] has been engraved. There are also three other delineations of a coin, with a similar figure on the obverse, but differing in the reverse.[5]

[1] Journal of the Asiatic Society, November 1835, p. 639.

[2] Annals of Rajasthána, vol. ii. p. 5.

[3] Journal of the Asiatic Society, June 1835, p. 344, plate xxiii. fig. 14, 18.

[4] Asiatic Researches, vol. xvii. plate i. fig. 17.

[5] Ibid. vol. xvii. plate i. fig. 18.; and Journal of the Asiatic Society, November 1835, p. 636, plate xxxix. fig. 29, 30.

The characters on these coins are the same as those of the Allahabad column, but they are not sufficiently distinct to be satisfactorily deciphered. Those on the reverse of our figure are, no doubt, intended to be the same as those on the similar coin engraved in the Asiatic Researches. They do not, however, enable us to proceed with confidence further than the progress then made, the first letters, Srí praka, श्री प्रक though the remainder might be conjectured into something like Prakrama gupta. The characters in our engraving, it may be remarked, do not very exactly represent those of the coin. The adjunct "Gupta" occurs in the Allahabad inscription, as in Chandragupta and Samudragupta, and those names, and others, compounded with the same attribute, appear on several coins,[1] especially of those which appear to belong to a common family, denominated by Mr. PRINSEP the Kanoj series, from their being most frequently found in the ruins of that city. That this was the site of a dynasty of princes who bore the name of Gupta, and reigned, probably, in the early centuries of Christianity, we know from the Puránas. The Vishnu Purana, says, "the Guptas of Magadha, will rule the countries along the Ganges to Prayaga;" and the Váyu Purána has, "Princes of the Gupta race will possess all these countries, the provinces on the Ganges, Prayaga, Saketa, and Magadha," or, in other words, Oude, the Doab, and Behar; the coins and the Puránas thus mutually confirming each other's testimony.

The coin which should have been placed next in succession, but which is the fourth from the top of the plate, is valuable, as proving, that the rude outlines on a coin, which is not unfrequently met with,[2] are intended to represent the figures, which are borne by the coins termed Indo-Scythian, a rájá sacrificing on the obverse, and a sitting female figure on the reverse. Unfortunately, the distinctness of the execution is limited to the figures, and does not include any letters which might assist in completing an imperfect inscription found on one of the coins of this family, in a form of Nagarí, much more modern than that on the preceding coin, the second of our plate. In the specimen referred to,[3] Srí Yag श्री यग was legible; and, as in the ancient alphabets, the *o* is placed altogether above the consonant, as well as the *e* and *ei*, we might convert the second term into Yogé, the first part of Yogéswari, a name of Durgá, whom the seated female represents: this is, of course, to be received

[1] Journal of the Asiatic Society, November 1835, p. 643.

[2] Asiatic Researches, vol. xvii. plate i. fig. 22; and plate ii. fig. 44–47.

[3] Journal of the Asiatic Society, vol. iii. p. 317, plate xxi. fig. 9.

as a mere conjecture, the value of which future discoveries may determine.

The two remaining coins are selected as good examples of a totally different style of coin from either of the preceding, belonging to a class which Mr. PRINSEP calls Saurashtra, great numbers of them having been found in Gujerat, and the west of India,[1] In coin number four, (the third in succession) of our plate, the characters on both faces are very distinct. The obverse offers a peculiarity not observable on any other of the class, an inscription on the right of the head, looking like corrupt or mutilated Greek. None of the specimens engraved or described by Mr. PRINSEP have any characters in this situation; one has some apparently on the left of the head,[2] which, he conjectures, not improbably, may be part of the word Kodus, Κωδες, a name very legibly impressed upon three coins found in India,[3] of the same size and metal as the Saurashtra coins, and having a head somewhat similar on the obverse. The character of this head, as observed by Mr. PRINSEP, is rather Persian or Arsacidan than Bactrian; but he has classed them with the latter, from their being found in the same locality, and bearing a Greek inscription alone. It may be suspected, also, that there is some connexion between Kodus and the Persian word Khoda, whether it has been used to denote "God," or has been applied, like the Sanskrit "deva," to a mortal divinity—a king. The Saurashtra coins, however, differ from the coins of Kodus, by the characters on the reverse, which, although they offer some of the elements of both the ancient and modern Devanágari, are peculiar, and hitherto undecipherable. Besides these letters, the reverse presents a singular symbol, intended, as has been conjectured, not without probability, to represent a *chaitya*, or Buddhist mausoleum.

These coins appear to degenerate into others of a ruder fabrication,[4] which are said by Lieut. BURNES to be popularly termed in Guzerat, *Gadhia ka paisa*, ass money; or, rather, Mr. PRINSEP observes, "the money of Gadhia, a name of VIKRAMÁDITYA, whose father, JAYANTA, one of the Gandharbas, or heavenly choristers, is reputed to have been cursed by INDRA, and converted into an ass." As Mr. PRINSEP presently refers to Colonel WILFORD's Essay on the Æra of Vikramáditya[5] for this story, he leaves it uncertain whether this legend is actually

[1] Journal of the Asiatic Society, December 1835, plate xlix. fig. 1–9.
[2] Ibid. December, plate xlix. fig. 1.
[3] Ibid. June 1835, plate xxv. fig. 11–13.
[4] Ibid. December 1835, p. 684, plate xlix. fig. 13–15.
[5] Asiatic Researches, vol. ix.

current in Guzerat. From WILFORD's statements, indeed, it would appear that it was familiarly known all over the West of India; but there is no saying what dependance is to be placed on his information. Dr. HUNTER heard it in Ujayin,[1] but its currency in the west, and connexion with these coins, may be worthy of further inquiry. Of one which was sent to me as having been found at Mandavi, it was said that the natives called it the coin of VIKRAMA's father; but my informant took no notice of any local appellation of the coin itself. WILFORD refers also to the Agni Purána for the legend of Jayantás metamorphosis; but no such story is contained in the Purána; and it is clear from this and other citations, that the work which WILFORD consulted was either a sort of supplement to the Agni Purána, or a local and unauthentic compilation. It is of the more importance to notice this, because it has induced Mr. PRINSEP to attach more weight to some of Colonel WILFORD's inferences than they appear entitled to, and to think it possible that GARDDABHA RÚPA, and his son VIKRAMA, might have had something in common with BEHRAM GOR and YEZDEJIRD, kings of Persia at the end of the fourth and beginning of the fifth century. If, however, the tradition be good for any thing, it is evidence of the existence of a prince denominated, perhaps, from some peculiarity, GARDDABHA, the ass, who, as the father of VIKRAMÁDITYA, must have reigned some sixty or seventy years at least before the Christian æra; and, consequently, if the coins be his, they must, in their perfect form at least, have been in circulation long before the time of BEHRAM GOR.

There is some reason, indeed, to place them still earlier. In the drama of the Mrichchakati, or, as I have rendered it, the Toy-cart, the scene of which is laid in Ujayin, an unlucky gamester enters, and says, "I am beaten by an ass, as it were by a she-ass, just broke loose from her halter." The passage puzzles the Pundits, but the commentator explains Gaddahi, the Prakrit for Garddabhi, a she-ass, to mean also a sort of money, the stake that has won the gamester's cash, the she-ass that has kicked him. This explanation is singularly verified by the fact, that the name Gadhia is still applied to an ancient coin, and, if the date, assigned on reasonable evidence to the author of the drama, King Súdraka, be correct, we have in it a proof that this money was current about a century earlier than VIKRAMÁDITYA, or a century and a half prior to our æra. This date would be very compatible with, and is indeed corroborated by, the apparent connexion that subsists between these coins and the coins of some of the

[1] Asiatic Researches, vol. vi. p. 35.

Arsacidan kings of Persia. The determination of this question is of some interest not only in the political but the religious and literary history of the West of India, shewing, if the period of the currency of the coins be correctly estimated, that, in the country along the Indus, an ancient form of the Devanagari alphabet, the religion of the Buddhists, and the supremacy of Persian princes, co-existed above a century before the æra of Christianity.

Art. XIX.—*Supplementary Note to the Historical Sketch of the Kingdom of Pandya, by* H. H. Wilson.

Shortly after the paper which the Royal Asiatic Society has thought worthy of a place in the present Number of the Journal, the Historical Sketch of the Kingdom of Pandya, was printed, I procured a copy of a valuable work recently transmitted to England from Madras, "Oriental Historical Manuscripts in the Tamil Language; translated, with Annotations, by William Taylor, Missionary." The most important of the manuscripts, now first published by Mr. Taylor, relate to the subject of my Sketch, and constitute materials highly essential to the elucidation of Pandyan history. The chief of them, the "Madura Sthala Purana," is clearly the same as one of my authorities, the "Madura Purana;" and it seems likely that the "Pandion Chronicle," and the "History of the Karnata Governors of Madura," which are also amongst Mr. Taylor's translations, may be identifiable with documents in the "Mackenzie Collection," of which I have made use.

There is, accordingly, a general conformity, as close, perhaps, as could be well expected between the details of Mr. Taylor's authorities and those which I have given; but his conclusions, and those which I have hazarded, do not always coincide. We are most at variance with regard to the chronology of Pandyan history; Mr. Taylor being disposed to assign to persons and events a much higher antiquity than I have ventured to ascribe to them. I am not about to vindicate my views: they are now more fully before the public than they were in the introduction to the "Mackenzie Collection," to which Mr. Taylor necessarily confines his observations; and some correcter notion also may be entertained of the particular authorities which I have taken as my guides. With the present Sketch, and the benefit of Mr. Taylor's translations and remarks, those who are inclined to decide between us are in a condition to form a judgment for themselves.

I should not, therefore, have thought it necessary to have adverted particularly to Mr. Taylor's publication, had it not comprised a statement which it is necessary to correct, that a candid comparison between our deductions may be instituted. Mr. Taylor observes in the preface to his second volume, referring to the notice of Pandya prefixed to the Mackenzie Collection: "One position, relating to the remote origin of the Pandion kingdom, being that to which the most

decided objection was felt, as opposed to several authorities, having been traced to its source, was found to have *no warrant or existence in the manuscript on which its authority was made to rest*; and there must, consequently, have been a mistake in the information on which Mr. WILSON necessarily depended, from his admitted want of acquaintance with the Tamil language." On this statement, I have, by the way, to remark, that the assumption of my depending upon "information," implying, it is to be inferred, verbal information, is gratuitous and mistaken. I trusted to translations—written translations alone; never to verbal information or interpretation. The translations were the work as frequently of European as of native scholars, as specified in the list attached to the Sketch; and in the instance of the authority on which my statement depends, was the performance of R. CLARKE, Esq.

But, which is matter of more moment, Mr. TAYLOR'S assertion, that the position is *without warrant or existence in the manuscript on which it rests*, is not only unsupported, but is even contradicted by the proof which he has himself adduced in a subsequent part of his work. The position to which he alludes is the statement, that according to some accounts, "the founder of the Pandya kingdom was one Pandya, a native of Oude;" and for this he says there is no warrant in the authority from which he supposes it to have been derived. All that he discovers in the text is, that in the manuscript "*Madura is merely said to have been founded by an agricultural Pandion from the north.*"[1] Such is his interpretation of the original and it is very possible that he may be correct; but, with such a passage actually in the original text, he is surely not justified in asserting, that there was *no* warrant nor existence whatever for the statement I had advanced, when, upon his own shewing, expressions so *very similar in their bearing do exist, and warrant, if not the precise words, yet a very similar sense.* Madura and the Pandya kingdom are essentially the same; and whether it was founded by a native of Oude, named Pandya, as I have it, or by an agricultural Pandion from the north, as Mr. TAYLOR states, does not appear to me to be so exceedingly different, that, where the latter occurs, it can be said that there is no warrant for the former. The difference, as far as it extends, appears to be that of translation; and the question of accuracy depends upon the relative competency of the translators. Admitting, however, that Mr. TAYLOR'S version is correct, it does not follow that there were no traces whatever of such an interpretation

[1] Historical Manuscripts, Appendix II. p. 39. Note.

as I have followed, and which, though not perhaps literally, is substantially the same with his own. Authorities may differ as to the period of this event, and its share in the establishment of the kingdom of Madura; but their weight is in favour of a colonisation from Northern India. That "Pandya of Oude," or "a northern Pandion," had any personal part in the settlement of the country, is equally improbable.

I am too well pleased to see topics of this nature become the subject of discussion at all to take any exception to Mr. TAYLOR'S arguments: our only chance of coming at the truth is by independent investigation, and a comparison of separate results. I have no purpose, therefore, to impugn his deductions; but I may be allowed to question the value of one of his authorities to which I think he ascribes more weight than it deserves. It is the manuscript in his first volume which he calls "The Supplementary Manuscript;" and which he regards as trustworthy.[1] I place no great reliance on any of the manuscripts which profess to record the ancient history of the Peninsula, especially in periods of remote antiquity; but there are greater sobriety, consistency, and air of likelihood in some than in others; and in those of the best description, there is a general conformity with each other, or with classical Hindú tradition, which indicates their having been compiled with some conscientiousness and care. The "Supplementary Manuscript" possesses no such characteristics: it is exceedingly jejune and incoherent. In the first sections, the accounts which it gives of the connexion and intercourse between the Pandya princes of Madura, and the Pandavas of Hastinapura, although suggested by some of the adventures of Arjuna, as described in the *Mahábhárata*, are wholly incompatible with the details found in that poem. The names of the first dynasty of Madura kings differ from those of every other list yet met with; and there is nothing in the meagre notices of them which gives them in a greater degree the character of realities. Twenty-four princes are enumerated as reigning from the beginning of the Kali age to the year 1183. To this dynasty succeeds VIKRAMÁDITYA, a prince whom all tradition places in the year of Kali 3044. Having thus so widely antedated the reign of VIKRAMÁDITYA, the compiler of this document is obliged to extend it in proportion; and, accordingly, it is made to continue until the year of Kali 3179, or nearly 2000 years. We then have the reign of SÁLIVÁHANA for 990 years, and that of BHOJA for a century. In all this interval, or 3086 years, we have notice of only twenty-eight princes of Madura, and

[1] Vol. ii. p. 75.

names of no more than five. Then commences a Pandya dynasty, in the appellations of the first of which, SOMA SUNDARA, and of his successors, we first meet with any agreement with other and more detailed accounts. Here then we may admit some approach to accuracy; but for all that precedes, the "Supplementary Manuscript" is worthless. The best that can be said of it is that it is a blank, as five names are a very unsatisfactory provision for the record of 3000 years. Notwithstanding, therefore, Mr. TAYLOR's favourable opinion of the "Supplementary Manuscript," I cannot think that it is to be relied on for an insight into the dark periods of Pandya antiquity; and I am satisfied, that he will find at Madras, amongst the original manuscripts of the Mackenzie Collection, many documents much more worthy of his industry and acquirements.

ART. XX.—*Register of Temperature of the Air from the 6th of June to the 6th of July* 1833, *in a Choppered Tent,*[1] *cooled by Tatties,*[2] *at Kurrim Khan, thirty-six miles above Kalpí, on the river Jumna, kept by* Captain T. S. BURT, *Bengal Engineers.*

IN order to know the hourly alternations of heat, during the hottest part of the year, in a tent in the Mufassil, or Upper Country, of the Bengal Presidency, I kept a register in the months of June and July; and the accompanying is the result, shewing the hourly differences; likewise the average heat during the month, which was less than 88°, or not a higher temperature than that of a bungalow, or brick habitation, at Cawnpore at that season. However, the changes are more sudden and oppressive in a tent than they are in a house, on account of the thinness of its walls.

Various duties prevented me from making a greater number of hourly observations than appear in the Register; in the preparation of which, as I had no assistance, I can rely on its accuracy, in as far as the degrees, having been all observed on the instrument, were thence set down, instead of being interpolated, by taking means of the adjacent lateral columns, which process, although frequently adopted, not seldom leads to an incorrect result.

The greatest heat was 99½° at two P.M. on the 25th of June; the least heat was 80¼°, taking the same hour on the 12th; the thermometer was only told off to degrees of Fahrenheit, but it was a good instrument.

N.B. The tens of degrees are not repeated after their first notification in each daily column, which will be easily understood, if read horizontally. For instance, taking the first line, second column, for 3°·5 read 83°·5, because 83° precede it. The same remark applies to the right hand column of "Daily Means," except that it is to be read vertically.

[1] *Choppered Tent.*—A tent surrounded with an outer covering of straw thatch-work laid on bamboo frames, which furnish the roof, as well as sides of the tent, with shelter against heat and rain.

[2] *Tattie.*—A thin bamboo frame-work nicely fitted into door-ways of houses or tents, and inclosing the dried root of a fragrant grass, thinly distributed all over it, in a parallel and vertical order, so as to allow of the trickling down of fresh water, which is thrown upon it from time to time, by a *bhistí*, or water-carrier, in order to cool the interior of the habitation, which is effected by the evaporation caused by the exterior air passing freely through the tattie to the interior of the house or tent.

REGISTER.

Date.	Hours A.M.								Hours P.M.											Daily Means.	Daily Difference.	+ or −	No. of Daily Obs.	Wind, Rain, &c. &c.
1833.	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11					
June 6	..	..	..	..	..	..	..	..	83°	3·5	3°	4·5	5°	5°	3·5	..	..	..	..	83°785	°		7	Wind, strong N.W. Dusty *tufts*,[1] at 5 P.M. from N.W.
.. 7	..	..	..	..	..	..	82·5	3	91	81	3·5	8	1	0	7	..	..	..	..	1·800	1·985	−	9	Do. N.W. Thunder; rainy *tufts*, at 3 P.M.
.. 8	..	..	..	..	..	80·5	2·5	1	3	5	6	6	9	6·5	6	..	..	..	..	4·550	2·750	+	10	Do. N.W.
.. 9	..	..	..	..	..	91	3	85·5	6·5	8	3·5	3	4	1·25	79·5	9·5	81	78·5	..	4·173	·377	−	13	Do. Do.
.. 10	..	..	..	89	96	5	5	1·25	1	89·5	90	87	7·5	4·5	7	45	..	..	..	2·790	5·617	+	13	Do. Do.
.. 11	..	..	..	..	..	90	85	4·5	3	3	2	1·5	2	1	..	4	1·5	79	..	3·041	6·749	−	12	Do. Do.
.. 12	.	..	..	86·5	3·5	1·5	79	80	4	0·5	0	0·5	4·5	2	92	88	7·5	9·5	..	3·933	·892	+	15	Do. Do.
.. 13	..	..	87·5	6	3·5	5·5	5	4	2·5	2	2·5	4·5	96	..	2	6	6·5	7·5	..	94·066	10·133	+	15	Do. West. Rain storm, at 7 P.M.
.. 14	..	..	92	..	81·5	4	..	4·5	4	..	4	4	6·5	93·5	2	85·5	8	9	..	86·807	7·259	−	13	Do. Do.
.. 15	..	..	..	84	6	8	5	5	..	5	6	..	6	4	..	9	90	86·5	..	6·208	·599	−	12	Do. Do.
.. 16	..	..	..	86	3	1·75	4	6	..	..	..	9	6	4	3·5	5	4	..	..	4·750	3·458	−	11	Do. Do.
.. 17	..	..	..	..	..	84	3·75	6	5	5·5	5	4·5	5	4·25	5·5	7*	6·75*	..	..	5·187	·437	+	12	*Thermometer in the Bungalow.[2]
.. 18	..	..	..	..	..	87*	5	5	6	8	7·5	8	5·5	7	5	7	90	89	8	7·000	1·813	+	14	*Do.
.. 19	..	82	..	..	..	5	4	6	7	..	7	7	91	87·5	..	..	..	..	..	6·277	·723	−	9	
.. 20	..	..	..	..	..	86	5	3·5	5	7	9	..	4	9	3	4	4	7·5	9	79·714	6·563	−	13	Wind, N.W. *Tufts*, at 3 P.M.
.. 21	84·5	..	3·	4·5	2·5	3·5	4·5	4	..	3·5	4	6	92	4	3	4	4	4	..	87·562	7·848	+	16	Do. N.W. A.M. S.W. at 7 P.M.
.. 22	..	..	..	..	83·5	3·5	2·5	7	2·5	3	3	3	2	1·5	5·5	8	7	7	..	4·214	3·348	−	14	
.. 23	..	..	..	83·5	5	2	4	6	6·5	5	4·5	..	4·5	9·5	..	4·5	..	..	..	5·000	·786	+	11	Do. South.
.. 24	..	..	..	..	91	83·5	4	..	..	5	7	6	5	..	..	..	93	2	3	7·950	2·950	+	10	Do. Do.
.. 25	..	..	..	96	2	80·5	7	8	90·75	9·25	2	..	..	2	2	..	89·5	90·75	..	91·354	3·404	+	12	Do. Do.
.. 26	..	..	..	85	5	..	6	7·5	8	90·5	5·5	9	4·5	5·5	..	..	4	0	..	0·675	·479	−	12	Do. Do. at 10 A.M. Rain at 3 P.M. West.
.. 27	..	..	..	..	..	87	6	7·5	91	2	6·5	3	1	89·5	3·5	7	7	4	..	88·646	2·029	−	13	Do. Do. and S.E.

..	28	..	84·5	..	5	..	..	7	..	..	..	..	..	..	..	..	..	..	..	..	5·500	3·348	−	3	
..	29	..	..	..	..	..	..	..	82·5	..	3	3	4	3	..	..	..	1	5	..	3·062	2·438	−	8	
..	30	..	..	..	87	6	..	92	86	7·5	..	7	5	7·5	..	..	..	5	..	..	8·111	5·049	+	9	Variable; showers; and river rising.[3]
July	1	..	..	..	..	84·5	4	4	3	5	..	6	..	3·5	7	..	1·5	..	4	..	4·250	3·861	−	10	Do. N.W. Rainy *tufán*, at 4 P.M.
..	2	..	..	..	..	88	3·5	4	5	7·5	..	5·5	4	8·5	7	..	6	5·5	4	..	5·708	1·458	+	12	Moon seen at 5 A.M. eclipsed apparently about 3-8ths. N.B. Set in a cloud at 5½.
..	3	..	..	..	..	83	3	..	7	5·5	..	6	5	..	..	..	5·5	8	7·5	..	5·611	·097	−	9	Wind, N.W.
..	4	..	..	83·5	..	..	3	..	..	..	..	5	..	6·5	..	..	5	..	7	..	5·000	·111	−	6	Do. West. *Tufán*, at 7 P.M. West.
..	5	..	..	..	81·5	..	..	4	..	5	6	5	7	..	..	..	..	3	3·5	..	4·375	·625	−	8	Do. North. Do. at 3 P.M. North.
No. of Obs. of Particular Hs.		1	2	4	12	16	23	25	25	24	21	28	23	26	21	17	18	22	20	3	331				
Hours.		5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	85·950				
Hourly Means.		84·500	3·250	6·500	·333	5·875	·163	·350	·230	·968	·870	6·070	·065	·577	·477	·970	·475	7·307	·262	90·000	85·645				
Hourly Diff.		1·25	3·25	·167	·458	·712	·187	·120	·738	·098	·200	·005	·512	·100	·493	·495	·832	·045	2·738						
+ or −		−	+	−	−	−	+	−	+	−	+	−	+	−	+	−	+	−	+						

85°.797 mean heat for the whole month.

T. S. BURT.

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[1] *Tufán.*—A sudden storm of wind, and dust; and generally, but not always, accompanied by rain, prevalent in the Duáb, and other parts of India, a little before the setting in of the rains.

[2] *Bungalow.*—A house built of bricks, baked or unbaked, generally having a thatched roof, as above noticed.

[3] *River rising.*—The river Jumna (with most other Indian rivers, I believe) rises at first slowly, and afterwards rapidly, for some time previous to the commencement of the rainy season. This is accounted for by the melting, at this the hottest part of the year, of the snows in the upper regions, which supply the rivers. I have known the Jumna to rise as much as eighteen feet in one night, apparently from this cause; but I have reason to think, that its increase must have been assisted by some heavy falls of rain, which probably occurred without our knowledge, somewhat higher up the country than where we were situated.

ART. XXI.—*Extract of a Letter from* BRIAN HOUGHTON HODGSON, *Esq. M.R.A.S. to Sir* GRAVES HAUGHTON, *pointing out some Misapprehensions which had occurred in printing "Quotations in Proof of his Sketch of Buddhism."*

"THE 'Quotations in Proof' are tolerably correct, except the misapprehension about the statement of the authority for each quotation. I stated each authority at the *end* of the quotation for which it vouched: the publishers have assumed that I did the reverse, and have given the name of the work quoted in each instance *first*, and *then* the quotation. Hence, when the publishers come to the end of section (for instance, the Swábhávika tenets), the authority for the last quotation under this section is made to *do preface* for the *next section*, or Aiswarika: and so also in the Karmika and Yatnika sections.

"Thus, page 299, the authority for the 13th quotation of this head (Swábhávika) is a *comment* on the Púja Kánd, which work itself vouches for the preceding, or 12th quotation. *Et sic de cæteris.* Page 303, Quo. 3, after 'Karmika system,' has no authority: the quotation in my copy is vouched for by a comment, and stated thus: 'Comment on Quotation 2:' *i.e.* on the Racha Bhagavati. This explains the authority for quotation 4, viz. 'Another Comment on Quotation 2. Page 305, seventh line from bottom, read 'coil' for 'evil.' Page 311, for 'Comment on Quotation 20,' read 'Comment on Quotation 19;' *i.e.* on the Sádhana Mála, which vouches for quotation 19. Page 312, for 'Adhi Sanga,' read 'Adi Sangha.' Note 2, of the same page, for 'Sanghi,' read 'Sangha.' *Et sic passim.*"

PROCEEDINGS

OF THE

ROYAL ASIATIC SOCIETY.

SATURDAY, DECEMBER 5, 1835.

A GENERAL Meeting was held this day; the Right Hon. Sir ALEXANDER JOHNSTON, *Vice-President*, in the Chair.

The following donations were laid upon the table:—

From the Geological Society of London.

Its Transactions. Vol. IV. Part I. 1835. 4to.
Its Proceedings, Nos. 40, 41. 1835. 8vo.

From the Royal Society.

Philosophical Transactions for the year 1835. Part I. 1835. 4to.
Proceedings of the Royal Society, Nos. 19, 20, 21. 1835. 4to.

From the Royal Society of Literature.

Its Proceedings. Vol. I. No. 6. 1834. 8vo.

From the Author.

Mode d'Expression symbolique des Nombres employé par les Indiens: par M. Jacquet. (From the Journal Asiatique.)

From the British Association for the Advancement of Science.

Report of the Fourth Meeting, &c. Edinburgh, 1834. 8vo.

From the Royal Astronomical Society.

Its Memoirs. Vol. VII. 1835. 4to.

From the Lords Commissioners of the Admiralty.

Baily's Account of the Rev. John Flamsteed, the first Astronomer Royal, &c. London, 1835. 4to.

From the Geographical Society of Paris.

Bulletin de la Société de Géographie. Tome Deuxième. Paris, 1834 8vo.

From Miss Emma Roberts.

Her "Scenes and Characteristics of Hindostan; with Sketches of Anglo-Indian Society." London, 1835. 3 vols. 12mo.

From the Author.

A Summary of the History of the East India Company. By Capt. Thornton, R.N. London, 1833. 8vo.

From the Trustees of the British Museum.

List of the Additions made to the Collections in the British Museum in the year 1833. London, 1835. 8vo.

From the Author.

Comprehensive Synopses of the Elements of Persian and Hindústáni Grammar. By Wm. Andrew, A.M. London, 1830. 8vo.

From the Author.

A Practical Essay on the History and Treatment of Beréberi. By J. G. Malcolmson, of the Madras Medical Establishment. Madras, 1835. 8vo.

From the Editor.

Les Aventures des Kamrup. Publiées in Hindoustani par M. Garcin de Tassy. Paris, 1835. 8vo. (Two copies.)

From C. P. Brown, Esq. M.R.A.S.

A Painting of a Telugu Lady of Rank; and one representing Ganésa dancing: the latter copied from a bas-relief of the same size at Colipilly, on the Godavery.

From Manockjee Cursetjee, Esq. M.R.A.S.

The Seventh and Eighth Reports of the Proceedings of the Bombay Native Education Society. Bombay, 1833–1835.

From Professor Rosellini, C.M.R.A.S.

I Monumenti dell' Egitto e della Nubia, &c. Parte Seconda. Monumenti Civili. Tomo II. Pisa, 1834. 8vo.

Plates to the above. Parts XI. to XIX. inclusive. Imperial folio.

From the Bahama Society for the Diffusion of Knowledge.

Its "Journal," No. 1. May, 1835. 8vo.

From l'Abbé J. A. Dubois, F.M.R.A.S.

Annales de la Propagation de la Foi, Nos. 39, 40, 41, 42. Paris, 1835. 8vo.

From Professor F. Erdmann, F.M.R.A.S.

His "Numi Asiatici Musei Universitatis Cæsareæ Literarum Casanensis. Vol. I. Parts I. and II. Kasan, 1834. 4to.

From the Author.

An Examination of the Ancient Orthography of the Jews, &c. Part the First; containing an Inquiry into the Origin of Alphabetic Writing: with which is incorporated an Essay on Egyptian Hieroglyphics. By C. W. Wall, D.D. London, 1835. 8vo.

From C. J. Richardson, Esq.

His "Plan of the Parliamentary and other Public Buildings adjacent to Westminster Hall, &c." August, 1835. Lithog.

From the Royal Academy of Sciences at Lisbon.

Historia e Memorias da Academia Real das Sciencias de Lisboa. Vols. I. to XI. Part I. inclusive. Lisbon, 1797–1831. 4to.

From Señor da Costa de Macedo.

Noticias para a Historia e Geografia das Nações Ultramarinas. (Published by the Royal Academy of Sciences.) Lisbon, 1812–1826. 4 vols. 4to.

Memorias para a Historia das Navegaçones e Descobrimentos dos Portuguezes: par Joaquim José da Costa de Macedo. 4to.

From M. E. F. Mooyer.

Altdeutsche Dichtungen. Aus der Handschrift herausgegeben von Dr. N. Meyer und E. F. Mooyer. Leipzig, 1833. 8vo.

Twenty-five Coins, chiefly Indian; sixteen of silver, the rest copper, &c.

From Professor C. F. Neumann, F.M.R.A.S.

Synodalrede des Nerses von Lampron, Armenischen Erzbischofs von Tarsus in zwölften Jahrhundert. Translated from the Armenian by C. F. Neumann. Leipzig, 1834. 8vo.

Marcions Glaubensystem. Translated from the Armenian. By the same. Leipzig, 1834. 8vo.

P. Premare, Marshman, and A. Rémusat; Würdigung der Verdienste dieser Sinologen um die Chinesische Grammatik. By the Same. München. 1831.

From J. R. M'Culloch, Esq.

His "Dictionary, Practical, Theoretical, and Historical, of Commerce and Commercial Navigation." Second Edit. London, 1835. 8vo.

From John Tytler, Esq. M.R.A.S.

A Translation into Arabic of the Anatomist's Vade Mecum. Edited by John Tytler. 4to.

The Aphorisms of Hippocrates; translated into Arabic. Edited by the same. Calcutta, 1832. 8vo.

List of Sanskrit Books for sale at the Government Education Depository: 8vo.

From Brian Houghton Hódgson, Esq. M.R.A.S.

A complete copy of the *Sata Sahasrika Prajna Paramita*, or *Raksha Bhagàvati*; an original work on the *Bauddha* Philosophy and Religion. In Sanskrit MS. comprising Twenty-six Parcels or Volumes.

From the Bombay Branch, R.A.S.

MS. Copies of Nine Ancient Inscriptions.

From J. C. Loudon, Esq.

His "Arboretum Britannicum." Nos. VIII. to XII.

From John F. Davis, Esq. M.R.A.S.

A Chinese Lady's Shoe.

A Felt Hat worn by the Chinese.

The Chinese *Swan-pwan*, or Counting Apparatus.

From Cavelly V. Lutchmiah, C.M.R.A.S.

Two Bauddha Images, in Copper, found in the earth in the Chittoor District.

Five small Gilt Images of Deities from Rangoon.

From C. P. Cooper, Esq. M.R.A.S.

The following Works, published under the patronage of His Majesty the King of Bavaria :—

Monumenta Boica. 30 Vols. 4to. Monachii, 1763—1834.

Denkschriften der Königlichen, Akademie der Wissenschaften zu München. 9 Vols. 4to. München, 1809—1825.

Neue Philosophische Abhandlungen der Baierischen Akademie der Wissenschaften. 7 Vols. 4to. Munich, 1778—1797.

Ephemerides Societatis Meteorologicæ Palatinæ. 12 Vols. 4to. Manheim, 1783—1794.

Acta Academiæ Theodoro-Palatinæ. 11 Vols. 4to. Manheim, 1766—1794.

Beyträge zur Geschichte und Literatur, vorzüglich aus den Schätzen der Königl. Hof-und Centralbibliothek zu München. Munich, 1803.

Abhandlungen der Baierischen Akademie über Gegenstände der schönen Wissenschaften. Vol. I. 8vo.

Geschichte der Königl. Baierischen Akademie der Wissenschaften. 2 Parts. 8vo. 1784—1807.

Physikalische Abhandlungen der Königl. Baierischen Akademie der Wissenschaften. Part. I. Munich, 1803.

Thirty-one Tracts on Natural History, &c. Munich, V. Y.

From Professor Wilken, F.M.R.A.S.

Mirchond's Geschichte der Dilemiten. Von F. Wilken. In Persian and German. Berlin, 1835. 4to.

From George Earl, Esq.

A Chinese Felt Hat.

Thanks were ordered to be returned to the respective donors; and, on the motion of the Right. Hon. the Chairman, they were made special in the case of Miss Roberts and Brian Houghton Hodgson, Esq.

The reading of a paper[1] by Professor Wilson on the kingdom of *Pándya*, was commenced; and the thanks of the Society were ordered to be returned to him for his communication.

[1] Printed in the present Volume of the Journal.

SATURDAY, JAN. 2, 1836.

A GENERAL Meeting was held this day; DAVID POLLOCK, Esq. in the Chair.

The following donations were laid upon the table:—

From the Author.

The Romance of History. India. By the Rev. Robert Caunter, B.D. London, 1836. 3 Vols. 8vo.

From the Author.

Notice sur quelques Procédés Industriels connus en Chine au XVI^e^ Siècle. Par M. Ed. Biot.

From Lieut.-Colonel Sykes, M.R.A.S.

Hi "Description of a New Species of Indian Ants;" and his Paper "On the Atmospheric Tides and Meteorology of Dukhan (Deccan).

From the Royal Society of London.

Philosophical Transactions of the Royal Society for the Year 1835. Part. II. 4to.

From Dr. Middeldorpf.

Codex Syriaco-Hexaplaris. Edidit et Commentariis illustravit Henricus Middeldorpf. Berolini, 1835. 4to.

From the Royal Geographical Society of London.

Its "Journal." Vol. V. Part. II. 1835.

From Lieut.-Colonel Miles, M.R.A.S.

Fifty-one Gold, Silver, and other Coins, of Bactria, Persia, &c.; and Eleven Casts of scarce Coins.

Thanks were ordered to be returned to the respective donors.

The reading of Professor Wilson's Paper on the kingdom of *Pándya* was continued.

SATURDAY, JANUARY 16, 1836.

A GENERAL Meeting was held this day, at Two o'Clock; Sir GEORGE THOMAS STAUNTON, BART., F.R.S., *Vice-President*, in the Chair.

The following donations were laid upon the table; and thanks were ordered to be returned to the respective donors:—

From Major T. S. Burt, M.R A.S. &c.

Christianity; a Poem: in Three Books, with Miscellaneous Notes. By the late W. Burt, Esq. Edited, together with a short Memoir of the Author, by his nephew, Major T. S. Burt, &c. &c. London, 1835. 12mo. (Dedicated to H.R.H. the Duchess of Kent).

From the Geological Society of London.

Its Proceedings, Vol. II. No. 42.

From J. C. Loudon, Esq. &c. &c.

Arboretum Britannicum, Nos. XIII. and XIV.

From the Imperial Academy of St. Petersburg.

Mémoires de l'Académie Impériale des Sciences de St. Petersbourg. VI^me^ Série. Tome Sec. 6^me^ Liv^n^ & Tome Trois. 1^er^ Liv^n^. 1834–5. 4°.

Recueil des Actes de la Séance Publique de l'Académie, &c. Dec. 1834. 4°.

From Dr. C. Leemans.

Horapollinis Nilöi Hieroglyphica. Edidit Conradus Leemans. Amstel. 1835. 8vo.

From Professor Othmar Frank, F.M.R.A.S.

Die Philosophie der Hindú. Vaedanta-Sara von Sadananda, Sanskrit und Deutsch, &c. Von Dr. O. Frank, Munich. 1834. 4to.

Ueber des Bild das Weltbaumeisters, Visvakarman, in einem der Felsentempel bey Illora in Indien. Von Othmar Frank. 4to.

From Lieut.-Colonel Francklin, M.R.A.S.

Two illuminated Sanskrit MSS., beautifully written in a very small character, on rolls of fine paper little more than an inch in breadth, and several feet in length; one being the *Bhagavat Gíta*, the other the *Durgá Mahátmya*. Each of the MSS. is enclosed in a small box, for the convenience of being carried about the person; a practice which is prevalent among the Hindús, who look upon such transcripts of their sacred writings, not precisely in the character of charms or amulets, but as spiritual mentors, to which they can at all times refer for consolation or advice.

From Charles Purton Cooper, Esq., F.R.S., M.R.A.S. &c. &c.

Sur la Ville de Damme au Moyen-age. Par L. A. Warnkoenig. Pamph.

From Lieut.-Colonel M. E. Bagnold.

A human hand, and a piece of beef, preserved by means of a preparation of vegetable tar found on the borders of the Red Sea in the vicinity of Mocha; and a specimen of the tar.

The Secretary read a letter referring to the above, addressed to him by Col. Bagnold, from which the following passages are extracted:—

"During my residence as Political Agent on the Red Sea, a conversation with some Bedouin Arabs, in the vicinity of Mocha, led me to suspect that the principal ingredient used by the ancient Egyptians in the formation of mummies, was nothing more than the vegetable tar of those countries, called by the Arabs, *katrán*. My first trials were on fowls and legs of mutton; and which, though in the month of July, and the thermometer ranging 94° in the shade, succeeded

so much to my satisfaction, that I forwarded some to England; and have now the pleasure to send for the Society's information and inspection, a human hand, prepared four years ago by my brother, Capt. Thomas Bagnold.

"The best informed among the native Arabs think that large quantities of camphor, myrrh, aloes, and frankincense, were used; these specimens will, however, prove that such were by no means necessary; as the tar, when applied alone, penetrates and discolours the bone.

"The only use now made of this tar in Arabia, is as a plaister or ointment for sore backs of horses and camels; rot in the feet of sheep; and, lastly, in the preparation of the heads of criminals sent from the distant provinces to the seat of government. The tar is obtained from the branches of a small tree, or shrub, exposed to a considerable degree of heat; and found in most parts of Syria, and Arabia Felix."

The Secretary then read the following letter addressed to him by Brian Houghton Hodgson, Esq. the Hon. East India Company's Political Resident in Nepál:—

"*Nepál, April 2d*, 1835.

"My dear sir,—Through Dr. Wallich I have recently had the honour to transmit to you a copy of the *Sata Sahasrika Prajna Paramita*, or *Raksha Bhagavati*, as it is more commonly called here; and, in the course of the year, I trust to be enabled to send to you copies of the nine works denominated the *Nava Dharma*. They will be followed by despatches of the other Pauránika and Tántrika books of the Saugatas, of which the names are enumerated in my Sketch of Buddhism.

"It is my hope and my ambition to be able to deposit in your archives a complete series of these original Sanskrit depositories of Bauddha philosophy and religion; in the conviction that in them *only* can be traced with success the true features of a system which is far too subtle and complex to be apprehended through the medium of such languages as those of the Tibetans and Mongolians;—and which system demands our best attention, not less on account of its having divided with Bráhmanism the empire of opinion for ages, within the limits of India proper, than for its unparalleled extension beyond those limits in more recent times, and up to the present day. It is probable, that, during four or five centuries at least, Buddhism was as influential within the bounds of the continent of India as Bráhmanism; and, it is certain, that the period of its greatest influence there was synchronous with the brightest era of the intellectual culture of that continent. The Bráhmans themselves attest, again and again, the philosophical acumen and literary abilities of their detested rivals; and, upon the whole, I fancy it can hardly be too much to assert, that, until the speculations and arguments of *Sákya*, and his successors, are as well known to us as those of *Vyása* and his, we must remain, with respect to the knowledge of the Indian philosophy of mind, and its collateral topics, pretty much in the condition which we should be in, with regard to the same sciences in Europe, were the records of Protestant sagacity obliterated, and those of Catholic ingenuity alone left us to judge of and decide by.

"As to the importance of a knowledge of the speculative tenets of Buddhism, with a view to complete the history of Indian philosophy and intellectual

culture, there may be some difference of opinion; but there can be none respecting the desirableness of drawing from *original* and adequate sources our notions of that existing system of faith which, for the number of its followers, surpasses every religion on the face of the earth. Not to mention that the researches of every year furnish us with fresh presumptions in favour of the former prevalence of Buddhism in wide regions where it is now superseded by Islámism, or by Christianity. The works which it is my purpose to deposit copies of in the library of your Society, constitute such original and adequate sources of information respecting the *Saugatas*. They are all written in the Sanskrit language, are of vast extent, and embrace numerous treatises belonging to the *Tántrika*, as well as the *Pauránika* class. Till very recently, works of the former order were withheld from me, owing to religious scruples; but I have, within the last year, procured several, am daily obtaining more, and am now of opinion, that nearly the whole contents of the immense *Kahgyúr* and *Stangyúr* collections of Tibet may yet be had in the original Sanskrit in Nepál. Such being the case, I do not intend (unless the Society express a wish to that effect) to continue the transmission of the Tibetan series; nor to make any additions to those volumes of the *Yúm* division of the *Kahgyúr*, which were sent to you along with the *Suta Sahasrika*, in the original Sanskrit, because I am quite confident the Tibetan translations are infinitely inferior to the Sanskrit originals; and because there are as yet no Tibetan scholars in Europe.

"The general opinion amongst Europeans seems to be, that the *Bauddha* sages committed their doctrines to the Pâli language rather than to the Sanskrit,—an opinion founded, as I presume, upon the fact, that the *Buddhist* works extant in Ceylon are in the Pâli, as well as those of the Indo-Chinese nations, so far as the latter are not avowed translations therefrom into the vernacular tongues. But before I can subscribe to the opinion adverted to, I must see Pâli works produced, comparable in importance and number with the Sanskrit records of Buddhism that have been procured in Nepál; and, in the mean while, it appears to me most extraordinary that the philosophers of *Ayodhya* and of *Magadha*, the acknowledged founders of *Buddhism*, should be presumed by us to have postponed Sanskrit to Pâli; whilst, on the other hand, I can easily conceive, that as the new opinions spread into the remote Dekkan, and thence to Ceylon, their propagators should have facilitated their operations by means of Pâli* translations. In a word, I believe the Sanskrit books of Nepál are the only original treatises on Buddhism yet discovered by us, or now extant; and I think I do not exaggerate the importance of those treatises when I say, that through them only shall we be enabled either to complete the history of Indian philosophy, or to elucidate the real nature of those religious

* Pâli, or high Prákrit, a Bhásha merely, though a refined one, and easier than Sanskrit. Strongly as the spirit of proselytism possessed the earlier *Buddhists*, nothing can be more natural than the supposition that they employed that Bhásha to *spread* their doctrines: nothing, to my mind, mor[illegible] that the eminently learned founders of Buddhism [illegible]use system in works composed in the Bháshá [illegible] they had the powerful and universal Sanskrit a[illegible]

doctrines which constitute the faith of the Indo-Chinese, Ceylonese, Tibetans, Mongolians; as well as of the bulk of the Chinese, of the Japanese, of the various nations usually called Tartars; and, lastly, of the Himálayan mountaineers of India."

The Right Hon. Lord Auckland, Governor-General of India, Major George Willock, K.L.S., and George Earl, Esq., were elected Resident Members of the Society. Señor da Costa de Macedo, Perpetual Secretary of the Royal Academy of Sciences at Lisbon, was elected a Foreign Member.

The certificate of one candidate for membership was read a first time.

The paper read at this meeting was an extract of a letter from the late Rám Ráz, Native Judge of Bangalore, on the introduction of trial by jury into the Hon. East India Company's courts in India, addressed to H. S. Græme, Esq., Acting Governor of Madras.*

The thanks of the Society were ordered to be returned to Mr. Græme for his valuable communication.

SATURDAY, FEBRUARY 6, 1836.

A General Meeting was held this day; the Right Hon. Sir Alexander Johnston, *Vice-President*, in the Chair.

The minutes of the last meeting were read and confirmed.

The following donations were laid upon the table:—

From Sir George Thomas Staunton, Bart., V.P.R.A.S.

His father, Sir George Leonard Staunton's original credentials to the Emperor of Japan and the King of Cochin China, authenticated under the great seal of England, and the sign manual of King George the Third. In a letter, accompanying this donation, addressed to the secretary, Sir George mentions that these documents were intended to have been presented at the courts of Japan and Cochin China, immediately after the termination of the embassy of Earl Macartuey to the court of Pekin. The unexpected breaking out of the war with France, however, rendering it necessary that H. M.S. *Lion*, in which the mission was to sail, should return to England, the opportunity of opening a diplomatic intercourse with those interesting countries was unfortunately lost, and has not since been retrieved.

Lois Fondamentales du Code Pénal de la Chine. Traduit du Chinois, par Sir G. T. Staunton, Bart., mis en Français, avec des Notes, par M. Felix Renouard de St. Croix. Paris, 1812. 2 vols. 8vo.

Description du Royaume de Camboge. Traduit du Chinois, par M. Abel Rémusat. Paris, 1819. 12mo.

La Cinese in Europa, ossia Storia d'una Principessa Cinese del nostro Secolo scritta da lei medesima, e publicata dall' Abate Pietro Chiari. Genoa, 1779. 2 vols. 12mo.

* Published in the present Volume of the Society's Journal.

A parallel drawn between the two intended Chinese Dictionaries of Morrison and Montucci. London, 1817. 4to.

Vignettes to Macartney's Embassy. 4to.

Icones Selectæ Plantarum, quas in Japoniâ collegit et delineavit Engelbertus Kæmpfer. London, 1791. Fol.

Reise der Englischen Gesandtschaft an den Kaiser von China, in den jahr 1792 und 1793; von Sir George Staunton; übersetzt von J. C. Hüttner. Zurich, 1798. 2 vols. 8vo.

From the Publisher.

History of Upper and Lower Canada. By R. Montgomery Martin. Mortimer, Wigmore Street. London, 1836. 12mo.

From Rájá Kalí Krishen Bahádur, C.M.R.A.S.

His "Collection of Pleasantries; or, Fables and Stories, translated from English and Persian into Urdu and English." Calcutta, 1835. 16mo.

From John F. Davis, Esq., M.R.A.S.

Two Lithographed Drawings representing the forcing the Passage of the Bocca Tigris, in China, on the 7th and 9th of Sept., 1834, by H. M. S. Imogene and Andromache, from observations made on board the Andromache during the action with the forts. By W. Skinner, Esq., R.N.

From Professor Rosellini, C.M.R.A.S.

I Monumenti dell' Egitto e della Nubia. Plates to the work. Parts XX., XXI., XXII., XXIII., XXIV. Imp. fol.

From Robert Russell, Esq.

A Collection of Two Hundred and Fifty coloured Etchings descriptive of the Manners, Customs, and Dresses of the Hindoos. By B. Solvyns. Calcutta, 1799. Folio.

From Dr. W. Montgomerie, of the Hon. East India Company's Medical Establishment.

Two Chinese Coins of *Gevan-Tëek* and *Kae-Ting* (A.D. 1100 and 1225), found at Singapore. In a letter to the secretary, Dr. Montgomerie expresses his opinion that these coins shew the probability that the Chinese traded to Singapore at an early period.

Thanks were ordered to be returned to the respective donors.

A paper by the Rev. C. Gutzlaff, of Canton, on the *Yih-she*, or Explanatory History of the Chinese, was read to the meeting; and the thanks of the Society were ordered to be returned to him for his communication.[1]

[1] This paper is printed in the present Number of the Journal.

SATURDAY, FEBRUARY 20, 1836.

A GENERAL Meeting was held this day; the Right Honourable Sir GORE OUSELEY, Bart, in the Chair.

The minutes of the last meeting were read and confirmed.

The following donations were presented:—

From the Royal Academy of Sciences at Turin.

Memorie della Reale Accademia delle Scienze di Torino. Tomo XXXVIII. Torino, 1835. 4to.

From J. C. Loudon, Esq.

His "Arboretum Britannicum," Nos. 15, 16.

From the British Association for the Advancement of Science.

Notices of Communications to the British Association for the Advancement of Science: at Dublin, in August, 1835. London, 1836. 8vo.

From the Medical and Physical Society of Calcutta.

Its "Transactions." Vol. VII. Calcutta, 1835. 8vo.

From the Asiatic Society of Bengal.

The *Mahábhárata*. Vol. I. Calcutta, 1834. 4to. (Sanskrit.)
Journal of the Asiatic Society of Bengal, Nos. 42, 43, 44. 1835.

From M. Adrian Balbi, F.M.R.A.S.

Essai Statistique sur les Bibliothèques de Vienne, &c., par A. Balbè. Vienna, 1835. 8vo.

From Professor Garcin de Tassy, F.M.R.A.S.

His "Abrégé du Roman Hindoustani, intitulé la Rose de Bakawali." (Extrait du Nouveau Journal Asiatique.) Paris, 1835.

From the Royal College of Surgeons.

Descriptive Catalogue of the Physiological Series of Comparative Anatomy contained in the Museum of the Royal College of Surgeons in London. Vol. III. Part I. London, 1835. 4to.

Richard Hope, Esq. was elected a Resident Member.

David Urquhart, Esq. addressed the meeting at some length on the great encouragement given to the cultivation of European literature and science by the present Sultán of the Ottoman empire; suggesting that a Branch Royal Asiatic Society should be formed at Constantinople; and stating his readiness to receive the Society's instructions to that end, as he was about to proceed to Turkey as Secretary of Embassy.

The Right Hon. the chairman expressed his concurrence with Mr. Urquhart's suggestion; and added, that he hoped the Oriental Translation Committee would

be able also to establish a branch in the Turkish capital, as, by that means, a very advantageous reciprocity of benefits might be secured to both countries in the mutual interchange of translations from the works of each nation.

The Right Hon. Sir Alexander Johnston eulogised Mr. Urquhart's zealous endeavours to promote education in Turkey; and observed, that the Society was much indebted to that gentleman for coming forward that day, hurried as he knew Mr. Urquhart was by other business, to offer his aid in the extension of the sphere of the Society's usefulness and influence.

Lieut.-Colonel Sykes, by permission of the Council, read to the Meeting his paper on the Land Tenures of the Dekkan; being a continuation of his notices on the same subject, published in a late Number of the Society's Journal.

The thanks of the Society were ordered to be returned to Colonel Sykes.

SATURDAY, MARCH 5, 1836.

A GENERAL Meeting was held this day, at Two o'Clock; the Right Honourable C. W. WILLIAMS WYNN, M.P., *President*, in the Chair.

The minutes of the last meeting were read and confirmed.

The following donation was laid upon the table:—

From Capt. H. L. Davy, of the Bengal Military Establishment.

A Javanese MS. containing Rajo Kopo Kopo, Joogool Moodo, and Soory Aalum. Small folio.

The Akbar Námah. Persian MS. 2 vols. Small folio.

Copies of seven Inscriptions in Javanese; with the English translations of three of them.

Thanks were ordered to be returned to Captain Davy for the same.

The bequest of the late Major David Price, of the following Oriental MSS., principally Persian, was also laid upon the table:—

Mujmil ul Hikmat; a Compendium of Philosophy. Persian: imperfect. 12mo.

The Works of Sa'dí. 12mo.

'Ishkíyah-i Amír Khosrú. 8vo.

Preface to the Sháh Námah, &c. 8vo.

The Korán. Arabic. 8vo.

Gulshan-i 'Ishk; a Poem. Hindústání. 4to.

Kitáb-i Munáját; Book of Prayers, &c. 8vo.

Ferishtah. Folio.

Rasálah-i Káinát; a Treatise on Natural History, Geography, &c. By Khalíf 'Alí Khán Ashk. Hindústání. 8vo.

The Bústán of Sa'dí. 4to.

Akhlák-i Násirí. 8vo.
Akhlák-i Násirí. (Another copy.)
The Poems of Khákání. Folio.
Ta'bír Námah; a Work on the Interpretation of Dreams. 8vo.
Abú 'l Fazl's History of the Emperors, Báber, Homáiún, and Akbar. Folio.
'Ajáib ul Makhlúkát; the Wonders of Creation. Persian. 8vo.
Poems of Jámí. 8vo.
The Subhah of Jámí.
Risálah-i Mákúl u Mashrúb; a Treatise on Dietetics, in Persian verse. 12mo.
Nal u Daman; a Persian Poem by Faizí. 8vo.
Díwán-i Mír Razí ud-Dín. 12mo.
Díwán-i Riází. 12mo.
A Treatise on War: translated from the French into Persian. 4to.
Volume of Prayers. Arabic. 8vo.
Díwán-i Mír Ahsan. 8vo.
Tohfat ul 'Irákain; a Poem by Khákání. 8vo.
A Treatise on Chess. Imperfect. 4to.
Ismá'íl Námah, and Timúr Námah. 8vo.
Majma' ul Inshá; a Collection of Letters.
The Khulásat ul Akhbár. Folio.
Masnaví Jalál ud-Dín Rúmí. 4to.
Another MS. of the preceding.
The Mahábhárata: Persian translation. 2 vols. Folio.
The Rauzat us-Safá. 2 vols. Folio.
The Poems of Nizámí. 8vo.
Táríkh-i Tabarí. Folio.
Mu'áliját-i Dárá Shekóhí. Vols. II. and III. Folio.
Abstract of the History of India. Persian. 8vo.
Complete Letter-Writer. Persian. 12mo.
Accounts of Tipú's Military Expenditures. 4to.
Regulations of Tipú in the Treasury Department. 4to.
Poem on Tipú's War with the Mahrattas. Hindústání. 4to.
Account of Mysore; drawn up by order of Tipú Sultán.
Tipú's Inscriptions on Seals, Signatures, &c. &c. 4to.
Copies of Letters.
Díwán-i Háfiz, with the Bústán of Sa'dí written on the margin. Folio.
Kissah-i Rizván Sháh: a tale in Hindústání. 8vo.
'Ayyár-i Dánish. 8vo.
Habíb us-Siyar. Folio.
The Jehángir Námah. 8vo.
Common-Place Book of Persian Poetry. 12mo.
Inshá-i Herkern. 8vo.
Rauzat-us Safá.
A Work on Military Exercises, &c. Persian. 8vo.
A Volume of Medical Prescriptions, &c. Persian. 8vo.
An Ámad Námah, or Persian Grammar.

A Translation from the Turkish of the History of the Capture of Constantinople, &c. Persian.

History of the Nabob of Oude and his Government. 8vo.

The Sháh Námah. Folio.

Commentary on the Mesnaví of Jalál ud Dín Rúmí. 8vo.

Selection of Ghazals, from various Persian Poets. 4to.

Poem on the Conquests of Mohammed. 4to.

Tafsír of the Korán. By Mauláná Nafi Allah al Káshí. 2 vols. Folio.

Abwáb ul Junam: the Gates of Paradise; a Collection of Moral Tales. 8vo.

Abú 'l Fazl's Lives of Báber, Homáiún, and Akbar. Folio.

Siar ul Nabí. Small folio.

Portfolio of loose Papers, Letters, &c. 8vo.

Life of the Prophet, &c. Small folio.

Moral and Religious Work. By Hussain Ibn Álim ibn Abú-l-Hassan. 12mo.

Another MS. of the above.

A Controversial Work. Persian. 12mo.

Ferhang-i Rashídí. Folio.

A Work on the Traditions. By Mohammed Tálik Káshifí. Folio.

The Right Hon. the President announced, that the late Lieut.-Colonel James Tod had bequeathed to the Society all his books, MSS., and Coins, on Oriental subjects, of which the Society did not possess duplicates.

Thomas Miln, Esq., and John Mathison, Esq., were elected Resident Members.

A selection from the MSS. presented to the Society by Captain James Low, comprising Notices of the Trade and Manufactures, Laws and Religion, of the Burmese on the Tennasserim Coast, was read to the Meeting.

SATURDAY, MARCH 19, 1836.

A GENERAL Meeting was held this day, at Two o'Clock; the Right Hon. C. W. WILLIAMS WYNN, M.P. *President*, in the Chair.

The following donations were laid upon the table; and thanks ordered to be returned to the respective donors:—

From Mauluví Muhammad Isma'íl Khán, Astronomer to His Majesty, the King of Oude.

A Treatise on Geometry. Persian MS. 8vo.

From the Society for the Encouragement of Arts, &c.

Its "Transactions," Vol. L. Part 2. London, 1835. 8vo.

From Lieut.-Colonel W. H. Sykes, M.R.A.S.

His "Abstract of the Statistics of Dukhan (Deccan), 1827–1828."

From Dr. John Scott, M.D., M.R.A.S.

Storia Universale dell' Indostan dall' anno 1500 avanti G. C. epocha la più remota della sua memoria infino all' anno 1819 dell' era nostra, compilata da Leopoldo Sebastiani. Roma, 1821. 8vo.

Novum Systema Ethices, seu Moralis Philosophiæ, ex optimis Anglis auctoribus in Compendium redactum. Studio ac sumptibus Leopoldi Sebastiani. Romæ, 1819. 8vo.

Novum Testamentum Domini nostri Jesu Christi. Interprete Leopoldo Sebastiani. Londini, 1817. 8vo.

From E. W. Power, Esq.

The Book of Common Prayer: translated into Singhalese. Ceylon, 1831. 8vo.
The Holy Bible: in Singhalese. Ceylon, 1834. 8vo.

From M. Guizot, Ministre de l'Instruction Publique (in the name of the French Government).

Voyage dans l'Inde; par Victor Jacquemont, pendant les années 1828 à 1832. Publié sous les auspices de M. Guizot. Paris, 1835. 4to.

From John Forbes Royle, Esq., F.L.S.G.S., M.R.A.S.

His papers on the following subjects:—On the *Lycium* of Dioscorides, from the Transactions of the Linnean Society; and on the *Benthamia fragifera*. (From the Transactions of the Horticultural Society.)

On the Cultivation of Tobacco in India; and On the Cultivation of Tea in the Northern Provinces of India. (From his "Illustrations of the Botany, &c. of the Himalyan Mountains.)

Colonel Sir John Burke, Bart, John G. Matheson, Esq., Edward Colebrooke, Esq., and John Fraser, Esq., were elected Resident Members of the Society.

On the table was placed, for the inspection of the Meeting, arranged in a series of cabinets, a very extensive collection, made by John Forbes Royle, Esq., comprising upwards of a thousand specimens, of the vegetable and mineral productions of India; consisting of seeds, woods, barks, resins, gums, earths, metals, &c.

The Right Hon. Sir Alexander Johnston, Chairman of the Committee of Correspondence, after alluding to this collection, called the attention of the Meeting to a suggestion in connexion with it which he had recently had the honour to submit to the Council of the Society, on the part of Mr. Royle and the Right Hon. Holt Mackenzie, having for its object the formation of a Committee of Agriculture and Trade, in relation to the east; and stated, that the Council had referred this proposal to the Committee of Correspondence with a view to their reporting upon it. The Committee conceived, that the best way of proceeding would be to lay the whole plan before the Society at its General Meeting; and the Council having sanctioned this procedure, Mr. Mackenzie, whose extensive knowledge of the capabilities and wants of India were so well known, had kindly promised to read a paper, which he had been requested to

draw up on the subject, by which the Meeting would be made aware of the great utility, theoretically and practically, which would doubtlessly result from the adoption of the suggestion in question.

The Right Hon. Holt Makenzie said, he should have great pleasure in reading the paper alluded to; but he could have wished his right honourable friend had not been pleased to notice him in so flattering a manner. He had volunteered to draw up a few general observations to assist Mr. Royle, as the avocations of that gentleman pressed hard upon his time; but he begged the meeting would consider them as merely subsidiary to the remarks which Mr. Royle would have to offer. The right honourable gentleman then read the following paper:—

"The attention of the government and of individuals has long been directed to the means of enlarging the resources of British India, of extending the materials of useful arts, and of adding to the wealth and comfort of the people, through the introduction into its agriculture and commerce (I would include in the former term the labours of the garden), of new or imperfectly known articles, and through the improvement of its staple commodities by new modes of culture or preparation. Nor has the object of enriching the vegetable kingdom of this and other countries, by contributions from the great store-house of the east, been neglected. In both ways many important results have been attained. Yet, when we contemplate, in the most cursory manner, the vastness of the countries embraced by the inquiry, the diversity of their physical circumstances, the variety of their productions, and the extent and activity of the demands to be supplied, it is difficult to resist the conclusion that much remains to be undertaken. Even if we confine our view to that portion of the field which has been explored by the botanist, we may see reason to infer, that what has been accomplished in the practical application of his science, should be regarded chiefly as an encouragement to exertion, not deemed a motive to repose as from finished labour: for, whil it proves the importance and practicability of the work, it by no means indicates any essential curtailment of the scope of future inquiry and enterprise. We may not, indeed, anticipate the recurrence of any such surprising effects on the commerce and general economy of the civilised world as have followed in some memorable instances. We may not look for another root like the potato, with which to feed millions. We may not find any unused plant from which to strip leaves that shall so captivate the taste of man as the tea or the tobacco. It may be true that there is no unknown berry to be gathered that shall compete with the coffee in strengthening, supporting, and stimulating, without intoxication. And it is abundantly likely that all the commodities which are in general use by Europeans, and their descendants, will, with more or less rapidity, follow them into whatever region they may occupy, without any special aid to individual enterprise. But it would be strangely to misinterpret the past if, from its fertility, we were to infer the barrenness of the future. No where, indeed, can nature be exhausted: and, in the direction to which we now point, there lie before us new regions to be subdued, and rich, though hitherto neglected, harvests to be gathered. A slight glance at the different works that have been published, and reports made on the subject of the agriculture, commerce, and botany of India, those especially which have recently been given to the world by Mr. Royle, by

whom the subject of applied botany has been more particularly studied, will be sufficient to satisfy us on this point. Not only does there appear to be an almost boundless variety of things yet untried or imperfectly examined (Mr. Royle is prepared to submit to the Society more than a thousand specimens), but the circumstances of almost all the staples of India are such as to suggest, in the strongest possible manner, the expediency of adopting measures for their improvement. With the exception of indigo, they generally exhibit a very marked inferiority in quality to the analogous productions of other countries; an inferiority which more than counterbalances their comparative abundance and cheapness, and which there seems to be no sufficient reason to attribute to any unavoidable circumstance of soil or climate: if, indeed, there be any variety of soil and climate not to be found in so vast and diversified a region as that embraced by the British empire in the east. It must be needless to say a word of the great benefit to be derived from such an improvement as may reasonably be hoped for in these productions, when all the causes of their inferiority are fully developed, and the means of correcting it adequately tried. It must be no less superfluous, on this occasion, to specify the various productions now unknown, or little used, which may eventually be brought into use, or to detail the various beneficial interchanges of productions and processes which may be effected between the different portions of an empire on which it may, without exaggeration, be said, that the sun never ceases to shine, when the necessary knowledge is rendered easily accessible to those who have practically to apply it. Nor could I, with propriety, dilate on the probable consequences of the application of chemistry to the agriculture and the arts of a country in which they have scarcely yet been made objects of scientific investigation, and in which the energies of nature are so wonderfully and fearfully exerted. These subjects will, hereafter, be much more fully and ably discussed by others. My present purpose is merely, in communication with Mr. Royle, to offer some suggestions as to the mode in which the Society may importantly contribute to further the great objects in question. If our suggestions have the good fortune of being approved, the Society may expect to receive, at an early period, from Mr. Royle, and probably from other members, a series of papers, developing, in detail, the resources of India, and the means of improving and extending them, and many valuable materials, now lodged with little advantage to any one, in the India-House, will, I understand, be readily and liberally placed at its disposal. These communications it would be out of place now to anticipate. Enough has been said, if, indeed, any thing need be said, to satisfy the Society that there will be no want of important subjects to engage its attention when bent in the direction to which we point. We would not, indeed, confine our views to India alone. If that country may profitably borrow, it may also, doubtless, beneficially contribute. At the present moment, especially, when the slave population of the West India islands is about to assume the character of free men, it cannot be uninteresting to consider how far they may advantageously receive from the free cultivators of India, and the islanders of the Indian Archipelago, the arts and arrangements by which they provide for the wants and regulate the relations of social life. The analogies of climate, and the moral position of the emancipated negro, equally suggest the speculation. The practical consequences may be most

important. On the one hand, those beautiful countries may present a delightful picture of rising prosperity and social happiness, if the negro, sharing fairly in the produce of his labour and secured in the possession of his property, shall be urged to healthful exertion by the stimulus of innocent desires, and the excitement of honest ambition. On the other hand, they may sink under the very luxuriance of nature, if the torpor of the slave shall survive when the obligations of servitude have ceased. A still wider field for the application of this principle may possibly open on the Continent of America; and, if our first thoughts be directed to our fellow-subjects, we shall not, therefore, be indifferent to the prosperity of other countries. The vast continent of South Australia, much of it probably possessing climates resembling those of India, and all of it likely to be nearly connected by commercial relations with that country and with China, is fast opening to the enterprise of the mother country: and every where the well-directed combinations of capital, and the energies of skilful industry, aided by machinery, and guided by science, are creating new sources of production, and combining new elements of wealth. It seems clear, then, that by whatever means the natural resources of India are called forth, and her great capabilities developed, the practical result cannot fail to be of high importance. We may reasonably infer, that measures calculated to promote these ends require only to be properly understood to command a proportionate interest. And, with this persuasion, it has appeared to us that the Society may, most beneficially for the country, and honourably for itself, undertake the task of directing the inquiries, of suggesting the experiments, and of collecting, digesting, and promulgating the information necessary to their attainment.

"The most important of the objects to be aimed at appear to be the following:—1st. To ascertain what articles, the produce of India, now imported into England, are of inferior quality to those produced in other countries, to investigate the causes of the inferiority, and to explore and suggest the means of removing it. 2dly. To ascertain what articles now in demand in England, or likely to be used if furnished, but not yet generally forming part of our commerce with India, could be profitably provided in that country, or their place advantageously supplied by other things belonging to it; to take measures for making known in India the wants of England, and in England the capabilities of India; and to suggest and facilitate such experiments as may be necessary to determine the practicability of rendering the resources of the one country subservient to the exigences of the other. 3dly. To ascertain what useful articles are produced in countries possessing climates resembling those of the different parts of India which are not known to that country, and *vice versâ*; to consider the means of transplanting the productions and transferring the processes of one country to another, and to encourage and facilitate all useful interchanges of that nature. 4thly. With the above views, and for the sake of general knowledge and improvement, to consider how the statistics of Indian agriculture and arts (including climate, meteorology, geology, botany, and zoology), may be most conveniently and economically ascertained and recorded; and to encourage and facilitate all inquiries directed to those objects.

"It will at once occur to the mind, how great a detail is required for the accurate and complete solution of the questions involved in the above general

sketch. It must be remembered, too, that the solution, to be practically useful, must be sufficiently precise to justify the prudent speculator in acting upon the principles which the scientific inquirer may suggest. And this detail of inquiry is to be applied not to one, not to a few, but to a vast variety of productions, to be raised under a very great variety of circumstances. I need scarcely urge, that for the developement of the necessary facts we cannot reasonably look to works of general science. They would never be bought; and, what is almost as bad for an author, they would never be read if it were attempted to give them the minuteness of detail which is required for the practice of the husbandman or the speculations of the merchant. He whose business it is to traverse the world must leave to others the task of subduing its several minuter divisions. On the other hand, we can scarcely hope that treatises on individual articles, excepting, possibly, the few that have already long been cultivated by European colonists, will either be written in sufficient number, or attract sufficient attention, if left to the common market of literature. Yet the guidance of science is quite indispensable to the completeness, if not to the accuracy, of the communications of practical men; especially when we desire to make allowance for differences of circumstances, to distinguish apparent and unimportant from real and essential differences; or to detect the equivalents by which nature often provides for seeming imperfection or deficiency. And a thousand valuable facts are daily lost, merely because they happen to be observed detachedly, for the want of some common centre to receive the contributions of individual observers, and of some systematic plan for combining the particulars that lead to a common result. They are not attended to, or are not reported, because the importance of the inferences to be drawn from them is not known, or because the means of easy communication are denied. In the present case, the mere circumstance of local position is the cause of serious difficulty. Distance necessarily infers a proportionate hinderance to full and easy communication; and the obstacle must be felt with peculiar force when the matter of investigation is very detailed in its nature, and when the desired result is to be attained by a tentative process; especially if, as in the case of Indian products destined for Europe, the experiments by which the result is to be determined must be conducted in a different country from that to which the primary undertaking belongs. Now, for the practical application of the science of the botanist, a great many minute particulars are necessary, especially when the object is to provide for the demands of the merchant, depending on nice shades of quality, and necessarily regulated by a keen advertence to relative prices. We may fill our gardens and greenhouses with beautiful shrubs and flowers, thinking little of the expense, since the superfluous wealth of the rich can scarcely be applied to a more innocent or elegant luxury; and there is, generally speaking, no measure of the value of the return but the taste of the individual who follows the pursuit. But in the commercial economy of nations, a different principle can alone lead to important results. Cost of production is the primary consideration in the market; and every error that enhances the price of any article designed for general consumption, necessarily destroys or restricts the utility of the supply, especially when the source of supply we desire to open is exposed to competition from other quarters. It is obvious, too, that many of the things very necessary to be known in prosecuting the

objects in question, can only be ascertained by experiment; and if within the limits of the same country — and that a country of comparatively small extent, and abounding in the means of communication — the necessity or expediency of associations to facilitate the diffusion of matters so ascertained has been recognised and felt, the inadequacy of the unaided labours of individuals to gather and promulgate the result of experiments conducted in distant parts of our Indian empire, or in separate quarters of the globe, will be readily acknowledged. Further, it is to be recollected, that we have to contend with difficulties arising out of differences of language, aggravated by varieties in the measures of quantity and value, and by the comparatively low state of knowledge among many of those from whom we have to derive our information, or to whom we must direct our instructions. It is justly remarked by Mr. Royle, that little is known in India of what is required here; and little is known here of what India does and can produce. He has no less justly observed, how imperfectly the various circumstances that determine the geography, or affect the qualities, of plants, have been attended to in past efforts of improvement. He has truly stated, that from failures arising out of the errors of practical men, erroneous deductions have been drawn, tending, in many instances, injuriously to discourage enterprise, and, in some cases, to throw discredit upon science, when the real circumstances ought only to have suggested the necessity of directing enterprise by knowledge, and of following, in practice, the principles which science has established. On the whole, the conclusion seems to be inevitable, that, for the successful prosecution of the objects above contemplated, it is in the highest degree desirable that some new scheme should be instituted, which shall collect, digest, and combine the necessary facts in both countries; which shall open to the men of science new sources of information, and new channels for the diffusion of their speculations; and which shall give to the men of enterprise new facilities for the prompt ascertainment of all the particulars on which they may desire to be informed. This task the Society may, we think, with great advantage undertake; forming, as it naturally does, a recognised medium of communication between India and Europe, and commanding a ready access to all the classes, in both countries, by whose co-operation the work in view is mainly to be advanced. That it may prosecute the undertaking in the most efficient manner, it has occurred to us, that it should appoint a separate committee, to be denominated "The Committee of Agriculture and Trade," or with any other designation that may seem to be more appropriate. It would be an idle presumption to attempt specifically to define the course of proceeding which such a committee might most advantageously pursue. An important step would be the mere specification of the most important desiderata, and the preparation of such forms as would enable correspondents readily to communicate to us the facts we desire to have recorded. Judging from the communications which we have had with various gentlemen on the subject, I should hope that the very fact of its being instituted would immediately elicit many valuable communications. Mr. Royle, as I have said, has a vast store of materials which he is ready to place at our disposal; and there are two very important suggestions of that gentleman which would immediately command the attention of the committee. First, that we should procure from India, and lodge in our museum, for the purpose

of having them carefully examined and analysed, specimens of the various articles which are employed in any of the arts, or which form the objects of traffic in that country, with their names, uses, origin, and prices; and with notices of any other particulars which may be interesting, in a scientific or literary view, or important to the manufacturer or the merchant. Secondly, that we should send to India, for the purpose of distribution there, good specimens of the principal staples of English commerce, those especially derived from tropical countries, with distinct notices of any circumstances relating to each, that may appear calculated to guide the speculations, or excite the curiosity, of the landowners, cultivators, merchants, and manufacturers of that country. The extensive collection to which I have already referred, would enable the committee at once to act upon the first of these suggestions; and this is only one of many advantages they may expect to derive from the services of Mr. Royle. No serious difficulty, I imagine, would be experienced in obtaining the necessary reports on the qualities and value of such of the articles as we might desire to have analysed or examined; and thus much useful information might be straightway communicated to gentlemen in India, to which at present they have no ready means of access. The gentlemen of the India House appear readily to recognise the benefit to be derived from the proposed measure, in furthering objects to which the Court of Directors and his Majesty's government have at various times directed their attention; and their accumulated materials would doubtless be placed at our disposal. We might confidently anticipate the co-operation of many gentlemen belonging to this city, or connected with other places, having commercial intercourse with India, in supplying information, or, what is scarcely less important, in suggesting points of inquiry. The agricultural and other societies in India, would assuredly combine their labours with ours; and our numerous countrymen, who are scattered over the east, would doubtless gladly receive any suggestions we might convey to them of the matters to which we might desire them to turn their attention, and would freely contribute the facts falling under their notice, which we might wish to have recorded. Gradually we might hope to find in the native officers, and other well educated gentlemen of the country, valuable auxiliaries both in prosecuting inquiry and in instituting experiments. By a well organised system, it might probably be found practicable, with little or no expense, to collect and digest materials for a statistical account of the whole of British India. The vast regions of Central Asia might at no distant period be explored by Moslems or Hindús instructed to observe accurately, and possessing facilities of observation which no European traveller can possess; and places barred against the steps of the European would be readily accessible to them. By tracts and translations we might spread abroad much useful knowledge, the more likely to be prized, because it would directly administer to some want, or satisfy some desire. By the transmission of specimens and models, we might address the senses and excite the curiosity even of the illiterate. And extending the bounds of knowledge, we should, at the same time, enlarge the means of enjoyment; adding, from day to day, fresh links to that chain of mutual benefits which best binds the subject to the sovereign state, and most surely contributes to confirm the relations of peace among nations. It is delightful, indeed, to think what an amount of benefit may be conferred, without cost to the giver, by

the distribution of a single new plant of general utility; and how extensively and easily the wealth of nations may be thus advanced, and the bonds of mutual good will strengthened. There is something very touching in the kindly pride with which the great Baber speaks of his having given to India fruits formerly unknown to it. Our empire surely ought daily to be made felt by similar benefits; extensive in proportion to our superior means, and to our boast of better knowledge.

"Such are some of the reflections that have occurred to me. Mr. Royle's collection will speak for itself. It will suggest conclusions much more cogent than any general reasoning; and the particular detail which that gentleman proposes to afford, cannot fail to supply any omission of mine in exhibiting the nature, extent, and interest of the field it will be the duty of the committee to cultivate."

In the course of reading the above paper, Mr. Mackenzie paused to remark on the single article of cotton. It had become, he observed, almost a necessary of life to a large proportion of our manufacturers; and it was fearful to think how much we depended for it on a single source of supply. The thought had struck him forcibly when lately passing through the manufacturing districts of Yorkshire and Lancashire; and, observing the apparent prosperity which was every where displayed, he learnt, that the activity of the demand had reduced the stock in hand to what would suffice for the consumption of a few weeks only. He had that very morning (he added) been looking into a valuable work, "Baines's History of the Cotton Manufacture," some particulars in which it might be useful to notice. The facts stated relative to the soil and climate adapted for the different kinds of cotton, would be seen to afford a strong presumption that India would not be found wanting in any essential requisite for the production of the best, provided our cultivators emulated the care of the Americans in the choice of soil, in the use of manure, in the selection and change of seed, in planting, weeding, thinning, and pruning, so as best to give health to the plant, and, at the same time, to prevent the waste of its vigour in the production of useless foliage; and if they did not spoil their harvest by carelessness in gathering, cleaning, and packing it. The vast extent to which cotton has long been grown in India, and the exquisite beauty of some of its manufactures, are only, he remarked, additional reasons for prosecuting inquiry, it being still true that, in regard to the mass of the cotton produced, the processes of that country were, compared with those of America, very rude and inefficient. The activity of the Americans in meeting the demands of commerce was no less worthy of praise and imitation. It was stated, that in the year 1784, an American vessel arrived at Liverpool, having on board about eight bags of cotton. These were seized in the belief that cotton was not a product of the United States. Now, in 1832, the cotton wool exported from that country exceeded 322,000,000 lbs., of which more than 228,000,000 was brought to Great Britain. The total produce was stated to be about 400,000,000 lbs. What had been accomplished by the tyrant of Egypt, however much his sordid policy might be condemned, was, likewise, deserving of remark, the cultivation of cotton, of excellent quality, having there rapidly extended. And, it was a curious fact, that the native

country of the sea island cotton was supposed to be Persia. Mr. Mackenzie also remarked upon the almost certain prospect there was of our being able to draw from India a considerable supply of tobacco, referring to a paper published by Mr. Royle, for some interesting observations relative to the soil, climate, and culture, on which the quality of the article depended; and observing, that the apprehension of encroaching on the province of that gentleman, prevented him from enlarging on the mistakes into which practical men appeared to have fallen in the management of that and other things.

It having been stated by Lieut.-Colonel Sykes that the oil-seed of India had been found to be of superior quality, Mr. Mackenzie observed, that the fact had also been mentioned to him; and further, that he had been informed, that a single firm had, by speculation in rape-seed, realised a profit of 40,000*l.*

Mr. Royle—The subject will, perhaps, be best introduced by your being informed how it first attracted my own attention; as I am in hopes, when you learn that it is in consequence of the information I obtained by attending to the suggestions of others that I make the present proposal, you will be induced to think more favourably of the probable results of its adoption by yourselves. I was written to, at first privately, and afterwards officially through Dr. Wallich, by my late friend, Dr. John Adam, then Secretary to the Medical Board of Bengal, to turn my attention to the *materia medica* of India, in order to ascertain whether the public service might not be rendered less dependent upon the supplies from Europe, either by substituting articles indigenous in the country, or cultivating exotics in the most suitable climates of the plains and mountains of Northern India.

The subject proposed was sufficiently extensive, and the means of investigation apparently but limited. Dr. Fleming's valuable *Catalogue of Medicinal Plants and Drugs* contained but a small portion of those enumerated in the Persian catalogue called *Ulfaz Udwiyeh*, translated by Mr. Gladwin; and Sir Whitelaw Ainslie's extensive and very valuable work on the *materia medica* of India, having been compiled in the Peninsula, it was doubtful whether the same articles were procurable in the north as in the south, and, if so procurable, by what means they were to be obtained, as there was reason for thinking, that the same names were not always applied to the same things. I, therefore, had recourse to the native works on this subject, which, I learned, were both numerous and comprehensive.* But here the difficulties were still greater; for it was impossible to ascertain, with precision, what was generally described under an Arabic name, though assisted by its synonymes in Persian, Hindee, and frequently metamorphosed Greek, as well as by a comparison with other articles, which, unfortunately, were in general as little known as those they were intended to elucidate.

In this dilemma, the only resource was to get acquainted with things, in order to have an idea of the import of words. I, therefore, directed specimens

* *Mukhzun-ul-Udwiyeh*, *Toohfut-ul-Múmineen*, *Ikhtiárát Budia*, and the *Taleef Shereef*. The last has been translated by Mr. Playfair, Superintending Surgeon, Bengal Service.

of every article in the bazárs to be brought me, whether found wild in the country, or the produce of agriculture — whether the result of home manufacture, or of foreign commerce — whether of the animal, the vegetable, or mineral kingdom — whether useful as food or as medicine, or employed in any of the numerous arts which minister to the wants or comforts of man. I determined, as these were brought me, I would make a Catalogue of the whole, with their various synonymes, inserting, whenever it was possible, their natural history and English names, so as to connect the knowledge of the west with the products of the east. It will require little to convince the Society, that when I commenced I was perfectly unconscious of the nature of the task I had undertaken, or the extent of the labour I had voluntarily incurred. That this was not of a trifling nature, will be evident by merely examining my Catalogue of articles described in Persian works, many of which I was, of course, unable to obtain.

Such was the origin of this collection in the remote station of Saharunpore, one thousand miles north-west from Calcutta, and almost the last of our stations in that direction. It was added to at Delhi and Agra, as well as in my progress down the river at Allahabad, Mirzapore, Benares, Patna, and completed as much as time would allow during my short stay in Calcutta.

In coming before you, therefore, I cannot regret either the labour or time which both this Catalogue and Collection have cost, as they give me the advantage of recommending you, to do only that which I myself have done, and of shewing you, that if a single individual, with no exclusive attention to the subject, but while his time was fully occupied with medical duties, and the investigation of the natural history of the country, has been able to bring together so many articles from one part only of India, what may be expected from the attention of the Society, when turned to the three presidencies, as well as to other parts of Asia? It was to shew you, that there is nothing visionary in this project; to convince you of the extent of the field of investigation; to speak to your eyes, while Mr. Mackenzie satisfied your understandings; that the Collection has been laid open for your inspection, and not, be assured, for the purposes of display.

This is neither the time nor place for shewing the results which have been obtained with respect to the extent and resources of the Indian *materia medica*. It will be enough at present to state, that they seemed sufficiently satisfactory to the Medical and Physical Society of Calcutta, to induce them to adopt my suggestion of forming a museum for themselves of the articles in use as medicines by the natives of India; a resolution upon which, I believe, they are now acting.

It will, perhaps, be objected — and nothing is ever proposed to which objections are not made — that the majority of articles here exhibited are probably of little value. This may possibly be true; but I am very certain, that among them there are many very energetic as medicines, and others valuable in some of the most useful arts. Indeed, it would be extraordinary if it were not so, considering the perfection of many of these arts in so early civilised a nation as the Hindús; where, from the processes being as simple as they are effectual, we may infer the intrinsic goodness of the materials which are employed.

Of this we shall be better able to judge when the more remarkable substances are subjected to examination, which may be done with greater facility than is at

present apparent, either by taking them according to their uses as food or medicines, or their employment in the several arts; or, if we choose, by arranging them under the several heads of woods, barks, roots, seeds, &c.; or, preferably, according to their chemical nature, whether this be fecula, fit for food, as that afforded by the several cultivated grains, of which nowhere is the variety greater than in India; or in stems, as the sago-palms; or in the curcuma or arrow-root of India, yam, sweet potato, salep, or arum; saccharine principle, as in the sugar-cane and palm-trees; gums and mucilages, as in the acacias, and a variety of other plants; gum-resins, resins, varnishes, oils, either fixed or volatile, with fatty substances, as that yielded by the phulwa (*Bassia butyracea*) of Almora; together with the vegetable acids, as citric and tartaric; or the alkalies, as pearlash and barilla. If we want fibre fit, from its tenacity, for rope-making, we shall find a multiplicity of substitutes for the hemp, and, indeed, the hemp itself. If we want astringents for tanning, we shall find no lack of barks, woods, and berries, with the required properties. If we desire to aid the dyer with fresh tints in varying our ever-changing manufactures, those who have witnessed the rich colouring and gay variety of an Indian festival, or Hindú bathing ghaut, will require only their recollections to assure them, that nature is not less bountiful in the east than elsewhere. If we add to these an examination of the several ores of the metals, as iron, copper, and lead, together with the varieties of coal which we know to abound in India, and without alluding to the digging for diamonds, or the washing for gold, which would look more specious on paper than prove profitable in speculation, we shall find that some new mineral is yearly added to the list of Indian products; as, magnesia at Madras, alum in Nepál, and manganese at Ajmere: while we have yet to consider many valuable products from the animal kingdom, as hides, horns, elephants' teeth, wax, musk, &c., it might almost be said, that India is yet a region of unexplored mines in all the kingdoms of nature. In inviting you, therefore, to explore so fair a field, I do so with the utmost confidence, that, if the vigour of our proceedings be at all commensurate with the variety of products, many years will not elapse before we have to congratulate ourselves on the result of our proceedings. If, while making the above classification, we were to arrange in the same way those substances which now form the commerce of the world, and place them in columns parallel to those which are the products of India, we should see at a glance the proportion which these bear to the whole; and, ascertaining where we had an opponent to rival, or a blank to fill up, obtain, with a knowledge of its present resources, an idea of the future prospects of India.

Among the articles alluded to, I know we shall find many that are sufficiently well known, and which would require no further notice at first, except that of ascertaining the names by which they may be obtained in different parts of India, as well as the parts of the country where they are severally produced. Of others, which are less known, or which might be sent us with their Indian names and uses, we should ascertain their natural history name; and when of a nature to require it, have subjected to analysis by men of science, which would determine whether they were not analogous to something already in use from other parts of the world. Finally, we might have their properties, as fitting them for different trades and manufactures, reported on by practical men. Occupying by character,

a high position in society, forming by local position, a link that was much wanted in the communication with the East, I think, that by depositing in your museum specimens of such articles as were approved, incorporating in some easily accessible publication the information you obtained, as well as concentrating that which is at present diffused either in published works, or in the records of the East India House, you would not fail to attract the attention of the merchant and the better-informed planter of the East. While you informed the one what he could procure, you would teach the other both how and what he should produce; thus increasing the comforts and resources of the natives of India, you would, at the same time, give an impulse to both their internal and external commerce.

That there is nothing chimerical in this expectation, I think we may be convinced by looking to the rise and progress of the trade in indigo, opium, silk, &c. The *lac*, also, which, though long known to the natives, and described in their books, we find Mr. Brown, resident at Cossimbazar, stating, in 1792, that if "the board shall think proper to send a few maunds of *lack* to Europe, it can be procured in Calcutta."—*Orient. Report*, ii. p. 580. The annual consumption in England is now estimated at 600,000 lbs.; in some years, upwards of 20,000 maunds have been exported from India of the lac and its resin. This, the *shell lac* of commerce, was, actually, at one time, charged four times the duty laid upon the article of which it is only the refuse. (*Maculloch's Com. Dict.*) For a long time "it was nearly useless, and sold for 25*s.* to 30*s.* per cent; but a cheap menstruum having been discovered for its solution, it entered into the fabric of hats, and rose to 10*l.* and 11*l.* per cwt. It now continues in constant demand, and the price is about 6*l.* or 7*l.* per cwt. Catechu, also (the *terra japonica* of commerce), was so much neglected from want of knowing its properties, that the price was as low as 2*s.* per cwt. Some enterprising individual discovered its uses in dyeing a peculiar brown upon cotton, and the price rose to 7*l.* per cwt. The quantity imported then became larger; the price fell to 12*s.* to 14*s.* per cwt. But a patent has been obtained to make use of it in tanning, and the price is very steady at 40*s.* per cwt. Bengal safflower is another great article of commerce; ten years since Turkey safflower was only known, and now the East Indian alone commands the market."* (Private letter from an esteemed friend who has authenticated the information by consulting with the brokers). Rapeseed, also, or, at least, an oil-seed so analogous as to pass for it in the London market, and belonging to the same tribe of *Cruciferæ*, has been, of late, imported in such large quantities, as I am informed by Mr. Mackenzie, to have yielded to one house a profit of 40,000*l.* Flax, or linseed, till lately unknown as an Indian export, but for which a higher price is now given than for that from Russia: of the Indian, I am informed by Colonel Sykes, ten bushels were imported in 1832; 2163, in 1833; 2826, in 1834; and nearly 10,000 tons in 1835. Some kinds of Indian iron have long been famed, and specimens lately brought from the Peninsula were highly approved of by the manufacturers at Sheffield; but I was little prepared for any being of so superior a quality as is implied in the following extract obtained from the best authority:—"Bombay,

* Colonel Sykes has been informed that 6484 cwt. were imported in 1834.

9th Nov. 1835. (Intelligence received by the steamer, Hugh Lindsay). A small quantity of iron manufactured in this country (India) has been brought here from Komptah (on the Malabar coast), and rupees 59 per candy (746¾lbs.) have been refused for it, while at this date, English iron was selling at rupees 22½ per candy, and Swedish, at rupees 48 to 49 per candy."

Considering the recent progress of these articles, there is nothing improbable in supposing that many more may be added to the Indian list of exports, especially when we see the true hemp-plant abundant in the plains and mountains of N. India, and used in the latter for the manufacture of sackcloth and ropes for crossing their rivers. Is it not probable that some enterprising individual will ascertain whether it cannot be manufactured at as cheap a rate as the *sunn*, which is now cultivated for the purpose, but yet so inferior in strength? If we look to the commercial history of rhubarb, we find that the best, though produced in Tartary and Tibet, traverses all Asia, to be sold in Europe under the names of Turkey and Russian; while the Siberian frontier-town of Kiakhta is twice as far, even from the Eastern limits of the true rhubarb country, as are the British territories in Upper Assam; while there is very good rhubarb within the Himalayas, and some of very excellent quality near its frontiers: is it not reasonable, therefore, to suppose that India may soon export some of the superior, instead of only the inferior, kinds of this drug? The recent extension in the uses, and, consequently, commerce, of caoutchouc, induces a hope that advantage will now be taken of the suggestions of Dr. Roxburgh, in his account of the caoutchouc of *Ficus elastica*, and other plants (*Fl. Ind.* iii. p. 541), as has already been done with respect to that of *Urceola elastica;* and, that as shell-lac, caoutchouc, flax, and rape-seed, have so recently become extensive articles of export, so it will be with other resins, more astringents, and not a few oil-seeds.

Such have long been my opinions respecting the importance of an extended examination of the products of the East; but, it was only after an accidental conversation with the Right Hon. Holt Mackenzie, than whom no one knows better the wants and capabilities of India, that I was induced, in the letter from which extracts have been read, to add to Mr. Mackenzie's proposal of an agricultural committee, mine of an examination, and the formation, of a museum of Indian products, otherwise it is probable, that fully as my time is occupied, the Society might never have heard of this proposal.*

* It may be noticed as singular, that on the day (the 19th March) this paper was read to the Society, the following notice was given in the *Athenæum*, in the review of Balbi's "Literary Statistics of Austria:"—In the year 1819, the present emperor projected the technological museum, which is now one of the most interesting objects in Vienna. This collection, of all the products of industry, arrayed according to the provinces, their successive stages of manufacture, and their several improvements during the last sixteen years, is justly regarded as one of the most useful institutions of modern times. It is divided into three great classes—*natural productions*, manufactured articles, and models."—*Athenæum*, 1836, No. 208. The recent determination of the government to form, in this country, a museum, to be attached to the Board of Works, as applicable to the arts, of soils, rocks, and minerals, with models of mines, and the machinery attached to it, are strong confirmations of the utility of such institutions being generally recognised.

I refrain, on the present occasion, from detaining you on the assistance we are likely to derive from natural history, in revealing to us a number of useful products, as I hope other occasions may offer when, entering into details, I may be able to prove, that there is an immense mass of little known objects which are all within the reach, or may easily be made so, of the Indian cultivator, which contributing, in the first instance, to the increase of his resources, may, eventually, become articles of external commerce. The correct analysis of minerals will as surely increase the value of those already known to exist in India, as geological survey will disclose others, probably not less valuable. The physical properties of plants, as connected with their structure and natural affinities, is a subject which has been so fully elucidated by the celebrated De Candolle, as not to be omitted by any one desirous of applying the science of botany to practical purposes. But as this is a subject not generally well understood, it may be permitted to adduce a few examples of what is meant.

As instances of natural families, the Grasses, Palms, and Fir tribe may be mentioned as sufficient to recal the general resemblance which exists between the different individuals of these families, respecting which, we are not surprised to learn, that in India, as in Europe, the first yield grain fitted for food, and the last turpentine and tar in the Himalayas, as in other parts of the world. But, when proceeding, we find there is a considerable number of such natural groups which possess a like accordance of properties with structure, we are immediately sensible of the importance of the inferences which may be deduced, as for instance: — The *Terebinthaceæ* afford resins combined with fragrant essential oils, whether we find them in the South of Europe, Arabia, India, China, or South America, as the balm of gilead, the myrrh, bdellium, frankincense, Chio turpentine, mastich, one of the kinds of the Chinese varnish, as well as that of the Burmese. Of the *Dipterocarpeæ*, one yields a kind of dammer; another, East India copal; and a third, the camphor of Sumatra. The Laurels give us the camphor of China, cinnamon, cassia, sindoc, Malabathrum-leaf in India, and bay-leaf in Europe. The *Mallow tribe* abound in mucilage, and, from the tenacity of the fibre of their bark, are employed for rope-making in the West Indies and China, as well as in India; while the Gossypiums every where yield cotton. Of the *Tiliaceæ*, the *jute* (*Corchorus*) is imported into England from India as a substitute for hemp, so the bark of a species of Grewia is employed for rope-making in the Himalayas, as that of Tilia is in Europe. Several of the milky-juiced families, as *Apocyneæ*, *Asclepiadeæ*, *Euphorbiaceæ*, and *Urticeæ*, yield caoutchouc in India, as in America, and all contain plants which are remarkable for the tenacity of their fibre. The *Meliaceæ* possess febrifuge properties, as displayed in the *rohuna* (*Soymida febrifuga*) of India, the Khaya of the Gambia, and the Cedrela of India, as of Java. Mahogany is yielded by one of this family, as are the *Toon* and *Chikrassee*, valuable woods in India. The *Rubiaceæ* contain the Cinchonas, as well as other plants employed for their febrifuge properties by people having no connexion with one another, as in North and South America, and East and West Indies. The family is named from *Rubia*, of which one species yields the *Madder* of Europe, and, another, the *Munjeth* of the Himalayas. The *chaya* (*Oldenlandia*) of the Peninsula, with *aal* and *ach* (*Morinda*) of Northern India, are all rubiaceous plants, having their roots employed as red

dyes. The *Mimoseæ* exude gum, and secrete astringent matter in their bark and wood, on the west coast of Africa, in Nubia, New Holland, and India. Catechu, which has lately been applied to tanning, is yielded by a plant of this group. *Cæsalpineæ* afford us Log-wood, Brazil-wood, and Sappan-wood, all alike used as red-dyes. Among the *Papilionaceæ*, we find all the legumes used as food in various parts of the world, as peas, beans, chick and pigeon-peas, gram, and horse-gram of India. The *Rosaceæ* afford us all our best fruits, as the apple, pear, quince, medlar, peach, nectarine, apricot, plum, and cherry; and the *Labiatæ*, most of our odoriferous and sweet herbs, as lavender and rosemary, thyme, sage, savory, marjoram, and mint. Among medicines, we find the bitters known in India by the names *Cheretta* and *Kurroo*, yielded by the *Gentianeæ*, as gentian is in Europe. The *Nima* is as bitter in the Himalayas, as quassia is in South America, and both belong to *Simarubeæ*. Several species of *Guttiferæ* yield gamboge. The *Convolvulaceæ* are employed for the same properties as are the jalap and scammony from other parts of the world; while the *Solaneæ* are universally known for their narcotic properties, as exhibited in several solanums, the henbane, datura, and deadly nightshade.

There are, no doubt, exceptions to the almost general law of the accordance of properties with structure, but the agreements are so numerous, that in no other way can we get so much assistance, or so readily find a substitute for a medicine, or an equivalent for an article of trade, as by seeking for them in the families which are known to produce substances of similar properties in other parts of the world. The importance of attending to the natural families of plants will be readily acknowledged when taken in this point of view, or in that of their geographical distribution, of which the practical application will be subsequently noticed, more especially when it is known that there are few families of plants of which there are not Indian or Himalayan representatives.

Such being the prospects of extending the number of Indian products by the aid of natural history, it is time to proceed to another branch of the subject, that is, improving the quality and increasing the quantity of the different substances which now form the staple articles of Indian commerce, and which are chiefly the produce of the different processes of agriculture. The primary necessity of attending to the nature of the soil is too generally acknowledged to detain us on the present occasion, further than to wish, that the principles which have been observed in Europe in their analysis and description, were more generally followed in the account of experiments in India, while the numerous spots of barrenness which so frequently occur in India in the midst of surrounding fertility, offer subjects of inquiry to the chemist, and the suggestion of suitable manures. Agriculture, though usually practised as an art, is a science so entirely dependent upon the laws of vegetable physiology, and the effects produced on the growth of plants, and the formation of their secretions by the several stimulants of light, heat, air, and moisture, as well as the nature of the nutriment afforded by the soil, that we cannot hope to succeed in improving old, or introducing new cultures, without understanding the subject, as well in its general bearing as its special application.

The nutriment absorbed by the roots, passes up the stem along the woody fibre, but chiefly in the young wood, and is exposed in the leaves to the influence

of light, heat, and air: about two-thirds of the moisture taken up is now evaporated and exhaled; the remainder, of course, becomes inspissated. Carbonic acid is formed, which, along with that absorbed from the earth and atmosphere, is subsequently decomposed, when the carbon is fixed and the oxygen exhaled. Other decompositions, also, and fresh unions probably take place among the elements of air, water, and carbonic acid, when the elaborated sap begins to descend chiefly by the bark, and is diffused through the system, during which the processes commenced in the leaf are completed in the formation of the different secretions which render plants, and their products, so useful to man. Whether these be those which are most general, and supposed by De Candolle to contribute more especially to the nourishment of the plants themselves, and which contain oxygen and hydrogen in the same ratio as in water, as gum, fecula, sugar, and lignine, and some of which are convertible into one another; even the last, though containing a larger proportion of carbon, has been so changed by a graduated exposure to heat, as to allow of saw-dust being made into a nutritious substance. Or the substances which depend more on the vital powers peculiar to each plant, as those containing a higher proportion of oxygen, as many of the acids; or those with an excess of hydrogen, as oils and resins; or those which contain nitrogen, as albumen, gluten, caoutchouc, &c.

Of the excretions, we need only allude to that from the roots, as this is hurtful to the plant itself; but which the fibrils of the root escape from in their search for fresh sources of nutriment; this excretion not being so injurious, if it be not beneficial to other plants, is supposed to explain the benefit of the rotation of crops.

Fixed to the soil, and subjected to the atmosphere, without the will to choose or the power to reject, we need not be surprised that, dependent as are the secretions of plants on the vital powers peculiar to each, that they should yet, in their proportions and quality, be much under the control of physical causes. Hence, as the quantity of nutriment supplied by the roots must depend on the state of the soil, so will the rate of evaporation on that of the atmosphere; and, as the deficiency of light blanches and dulcifies the green parts of plants, so does its excess enable them to secrete aromatic and powerful-smelling products. So it has been observed that a rich and highly manured soil, high temperature, and a moist atmosphere, have a tendency to encourage the production of leaf-buds, and the growth of the parts of vegetation, as the stem, branches, leaves; while a contrary state of things, or a due supply of nutriment in a dry and heated atmosphere, with a full exposure to light, favour the formation of the organs of reproduction, as flowers and fruit, and the secretions which are dependent on the perfection of the seed. It is not, therefore, enough to attend to the nature of the soil, as we see it so essential to ascertain the state of the atmosphere, in order that the exhalation from the leaves be in due proportion to the absorption by the roots, and the several secretions elaborated in due proportions by the proper influence of light and air. Hence it necessarily follows, that the processes of agriculture and gardening in one soil and climate, may be those unsuited to another, though the country may upon the whole, be very favourable to the product required. Thus, if in a mild temperature, and not over productive soil, we require to stimulate a plant with richness of manure; this will probably be detrimental where high temperature is added to moisture of soil and climate; but, it may

happen, that the same products will be obtained by diminishing the supply of nutriment by the roots, or favouring the escape of superabundant moisture in the leaves by a free exposure to light in a more dry and open atmosphere. But, as the comparative moisture and dryness of the atmosphere are only to be ascertained by hygrometrical observations, which have only been partially made in a few parts of the world, we need hardly be surprised that the subject has been neglected both by cultivators of the west, in the accounts they have published, or the planters of the east, in the processes which they have followed, though this is not less essential than attention to the soil or temperature, which have been thought more so, perhaps, from being more obvious; while light, being equally diffused in similar latitudes, has probably had less influence on any erroneous inferences that may have been deduced. Accordingly we find, that where nature happens not to have made the due allowance between the richness of the soil and that of the atmosphere for the plant experimented upon, men of mere routine, by simply adhering to the practices of other places, have failed in a culture, when, if the play of vital functions, as controlled by different physical states, had been considered and accounted for, the result would probably have been very different. Therefore, though we may pronounce with positiveness on the results of a successful, it is difficult to form any conclusive opinion respecting those of an unsuccessful experiment.

In India, failure seems generally to have been caused by n excess of nourishment in too rich a soil or too hot an atmosphere, or from a due want of correspondence between the richness or poverty of a soil, and the moisture or dryness of the atmosphere. But of this, the Society will probably be best convinced by adducing examples of some of the mistakes which have been committed. First, with respect to the cultivation of cotton, when attempted, with the Barbadoes and other American cottons, in the neighbourhood of Calcutta, and on Saugur Island. I have seen it stated, that India was unfavourable for the production of cotton, because the plants grew well, and formed plenty of leaves, but produced very little cotton. Here, it is evident, the vegetative powers of the plant were developed at the expense of the reproductive, probably from too rich a soil, or a moist climate combined with a high temperature; but Dr. Roxburgh ascertained twenty years ago, "that this cotton succeeds better in the more elevated, drier, and less fertile soil of Coromandel than in Bengal, where the plant grows to a great size, yields less cotton, and the cultivation is very generally relinquished, though there must be many situations near the mountains of our northern frontier where it would thrive."* Tobacco-seed, again, of the best quality was sent by the Hon. the Court of Directors of the East India Company, to be distributed in every part of India. Cultivators, however, seem unfortunately to have been found only in southern parts, which were certainly not the most eligible sites to make experiments upon Virginian seed, or even upon that from Cuba, Vera Cruz, or Cumana; for though tobacco is exported from these very hot places, it is grown only on the sides of the mountains, where a very little elevation suffices to produce considerable variation of climate, especially with respect to the circulation of air, which, as we have seen, so materially influences the evaporation from

* Flora Indica, vol. iii. p. 187.

the leaves of plants and their secretions. Accordingly, this tobacco, cultivated apparently in too rich and moist a soil or climate and warm temperature, grew so luxuriantly as to be boasted of by the grower as being twice the size of the country plant; in attaining size it had also acquired coarseness of fibre and rankness of flavour, so as to be pronounced, on its arrival here, to be of little or no value. An instance, the reverse of this, may be adduced in the mountain rice, which from growing at a considerable elevation in the Himalayas, where the mean temperature is not greater than in many parts of England, was supposed might be suited to the climate of this country; but it was forgotten that this rice, though never irrigated, is generally sown in May, when some showers fall; and in the following month the rains come on, when, for three months, the mountains are enveloped in mists and cloud, and, even when no rain falls, the atmosphere is in a very humid state, though of moderate temperature. In connexion with rice, I may mention a fact, which will shew that even the most intelligent may make mistakes, when they will not take the trouble of understanding the subject in which they make experiments. Thus, a gentleman, wishing to improve the cultivation of rice in India, which he thought, from the specimens sent to this country, must all be inferior to the American, actually sent some bags of American rice to his correspondents in India, which, in the process of cleaning, had been deprived of the embryo of the future plant, for which the rest of the seed is only intended as nourishment during the process of germination. I will not detain you further with such instances, though these might be indefinitely multiplied; but I may adduce one from another kingdom of nature, where an equally inconclusive experiment was pronounced to be a failure. This was in the case of the cochineal insect, of which the *Grana sylvestra* variety was introduced from Rio Janeiro into Calcutta, and not the *Grana fina*, from Mexico. The insect was found fault with as being too ravenous, and its produce as very inferior in quality; and the inference has been drawn, that India is unsuited to the production of cochineal. If the Mexicans had been anxious to improve the breed of their horses, and had imported the vicious *tattoo* of India, instead of the noble Arab of the desert, the inferences from failure in their first attempts would have been equally legitimate.

If we now turn our attention to the results likely to ensue from a more extended application of the principles we obtain from scientific investigations to practical purposes, I think the prospects are most encouraging, with the wide-spreading territories and diversified soil and climate of the British dominions in the east. Time will not allow that I should detain you with even the shortest notice of what has been done elsewhere; but it is impossible to help alluding to the cultivation of the beet-root in France, and the manufacture of sugar from it, as to one of the triumphs of science;* or to the improvement of agriculture in

* Owing to the kindness of Professor Wheatstone, of King's College, I am enabled to refer to M. Biot's investigations in vegetable physiology, which display, in a striking point of view, the practical bearing of the most abstract scientific investigations. M. Biot, in his experiments on the refraction of a ray of polarised light in vegetable solutions of different densities, discovered that the beet-root yields from eleven to fourteen parts in one hundred of the same kind of sugar as the sugar-

this country, in consequence of the joint aids of chemistry and vegetable physiology; or to the increase in the produce of every orchard and potato-field, in consequence of the scientific experiments of Mr. Knight. The mere mention of the gardens round London will immediately recal how vividly they glow, both in the earliest spring and latest autumn, with the vegetable treasures of congenial climates; and many years have not elapsed, since almost every rare plant was supposed to require heat.

If we now consider, as cursorily as may be, what has been done in India by the application of science to practical purposes, I fear it will not be allowed that the results have been very extensive; but I do not think it has been from any want of advice or example in those who have qualified themselves by study for the responsible office. I would mention only the unceasing efforts of the venerable Carey, who, through a long life, applied his science to suggestions for the improvement of the agriculture of India. The numerous papers of our illustrious Director, and especially the "Remarks on Bengal Husbandry," shew how keenly he was alive to the importance of applying his varied acquirements to practical purposes. I would particularly call attention to the last chapter, where many substances are mentioned as likely to become articles of commerce, which have actually become so within the last few years. The works of Dr. Hamilton, both published and unpublished, are full of practical information. Lastly, if we consult the papers of Dr. Roxburgh and his principal works, "The Coromandel Plants," and "Flora Indica," we shall find all full of practical inferences drawn from his scientific investigations; whether we consult his remarks on the cultivation of the sugar-cane or of pepper, the substitutes for indigo or for hemp, or his recommendations respecting the manufacture of barilla.*

From the improvements which have taken place in the manufacture of particular articles, there is reason to hope for the best results with respect to that of

cane, and the parsnip fourteen parts in one hundred. "The great quantity of sugar obtainable from the latter root, gives M. Biot occasion to suggest, that as the manufacture of beet-root sugar can only be carried on profitably during a few months after the crop; and as the root is required to be gathered in the sowing season, when agricultural labour is expensive, and horses, &c. difficult to be obtained, sugar might be manufactured from the parsnip in the seasons of inactivity. And the author concludes his memoir, published in the *Annales de Chimie*, for Jan. 1833, in the following words: 'Ces applications sembleront, peut-être, des consequences assez inattendues des expériences qui les ont fait naître; mais toute détermination positive des sciences est susceptible de progrès et d'utilité, fut ce éloignée. Une observation microscopique, une propriété d'optique, qui ne semble d'abord que curieuse et abstraite, peut devenir plus tard importante pour nos intérêts agricoles et manufacturiers.'"

* Dr. Roxburgh's works have had less influence than they would have had, had they not been scattered through various publications not easily accessible; while his most popular work, the "Flora Indica," remained in MS. for twenty years, and was only published in 1832. It is interesting to find him stating the following facts, in a letter dated, Samulcotta, 25th August, 1788: "Since the end of 1781, I have been stationed here; and as soon as I became acquainted with the seasons, soil, and produce of the country hereabout, I formed an idea that pepper and coffee would

others. Indigo will strike every one as the most remarkable instance; and of this Mr. Colebrooke says, "the spirited and persevering exertions of a few individuals have restored this commerce to Bengal, solely by the superior quality of their manufacture; for, as regards the culture, no material change has been made in the practice of the natives." * Opium, so long considered necessarily inferior, if it was East Indian, has been of late years produced of a very superior quality, as is evident by the quantities of morphia yielded by different kinds as given by Dr. Smyttan: Bengal, 3; Malwa, 6; Turkey, 6½; and some from Bareilly as high as 8½ per cent. Specimens of all these should be somewhere deposited for the inspection of those interested in the subject, whether physician, chemist, or merchant.† East India tobacco also, always accounted so inferior as to be sold for about 2*d.* a pound, either for re-exportation or employment in making the inferior kinds of snuff, has, within the last year, been imported of so improved a quality, as to be sold in the London market for 7*d.* and 8*d.* a pound. I may mention also the case of the late Mr. Hughes, of the Tinnivelly district, who, I learn from the Right Hon. Sir A. Johnston, to a superior education added excellent natural abilities. To his intelligence, therefore, we may safely ascribe a fact known to many, that his cotton and his senna have long and always brought the highest prices in the London market. With respect to cotton, I received a letter from a friend at Liverpool, dated 25th Nov. 1834, informing me, "that last week four bales of Bombay cotton were sold here at a higher price than the bulk of American cotton. Of the total import of cotton into Great Britain this year, expected to amount to 930,000 bales, about 700,000 are from America. The present market price for this, excepting some 20,000 or 30,000 bales of a very superior quality, called Sea Island, is 8½*d.* to 11½*d.* per lb., but the four bales from Bombay, grown in one of the Company's experimental gardens, sold last week at 11½*d.* A very good judge of cotton here thought it not quite equal to Mr. Hughes' Tinnivelly cotton; but either is enough for the fact, that cotton can be grown in India fully equal, or rather superior, to the bulk of the American cotton: and from Mr. Hughes continuing to grow the finer kinds, the inference is, that it pays as well as (or probably better than) the

thrive as well in this Circar as in any part of Asia. My natural turn for Botany, Agriculture, and Meteorological observations, enabled me to form the idea upon pretty certain grounds." And, in another letter, we find him, on discovering the pepper in this very country, congratulating himself to a friend: "Now judge to yourself how right Doctor Russel and I have been, in conjecturing that the climate, &c. of the Circars would be favourable for the culture of black pepper."—*Oriental Repertory*, vol. i. pp. 3 and 13.

* Bengal Husbandry, p. 155.

† Since this paper was read, I have been informed by Mr. Harpur Spry, F.G.S. of the Bengal Medical Service, that the opium cultivation has been extended to the Cawnpore district; and the opium produced there "has been reported by the person appointed to test the drug, as the best quality of all that is received at Benares." "The cultivation was attempted a few years since, and proved a failure; but owing to the exertions and good management of Mr. Reade, the deputy collector, the Indian government is said to have derived a net profit, in the first year (1833), of 50,000 rupees; the second year, 75,000 rupees; and last year, the quan-

common kind." With respect to the quantities imported (the same gentleman continues), "some here view, almost with alarm, the present state and future prospects of cotton, and think the subject worth the attention of government. From the great increase of consumption, estimated at 6 or 7 per cent more than last year, and from the imports this year, being only about the same as last, our stock on 31st Dec. next, for the *kingdom* will probably be smaller than we have had for the last seventeen years, and reckoning it, by the rate of consumption, smaller than for very many years. It is expected to be less than 150 bales, or equal to about eight weeks' consumption. On 31st Dec. 1825, we had enough for thirty-eight weeks' consumption; since then it has been gradually reduced to sixteen weeks in 1831; fifteen in 1832; thirteen in 1833; and this year we expect to eight weeks." Regarding sugar, I may state, that at a sugar concern established at Bankipore, within twenty miles of Calcutta, by Dwarkanath Tagore, with buildings and machinery on the principles most approved of in the West Indies and the Mauritius, and superintended by a West India planter, some sugar was manufactured which brought a high price in the London market; and, after careful examination by competent judges, was pronounced "fully equal to any sugar brought to the London market." This fact, therefore, will be sufficient to prove, that it may be produced of the best quality in India; but owing chiefly to the unproductiveness of the cane-liquor in Bengal (which is stated in a communication I have seen, by Mr. N. F. Fergusson, to be one-third of the strength of that in the West Indies), every one who has attempted the manufacture of sugar has failed,—an additional argument (but such is unnecessary) against the injustice with which the produce of the East is treated in comparison with that of the West Indies. The subject requires too great a variety of considerations to be dwelt upon at present. I may only suggest the propriety, nay necessity, of a series of well-ordered experiments in different soils in the different climates of India on the different varieties of cane. The importance of this will be evident, when it is recollected that Dr. Roxburgh has stated that near Samulcotta, in the Rajamundry district, the juice is one-fourth richer than in Jamaica.* Dr. Hamilton ascribes to the goodness of the soil, "the produce being so high

city was expected to be 200 maunds; and it will go on gradually increasing."—(*Private Letter to Mr. Spry.*) At Saharunpore, still further to the north-west, I myself made some opium in 1829, which was submitted by Mr. Mackenzie, then Territorial Secretary, to the Medical Board, of which one specimen was pronounced, "perhaps equal, but certainly not superior to," and others, "resembling in almost every particular," some of an improved quality made by Capt. Jeremie the previous season in Behar, which the Medical Board, however, had "no hesitation in considering equal, if not superior, to the finest Turkey that comes into the market at home." It was on these grounds, and from the superior quality of the opium cultivated in the Himalayas, that I, two years since, published the opinion, that "if it were an object to make the best opium for the European market, there is no doubt, that Malwa, and the north-western provinces, would be best suited for the experiment."

* See Papers on Culture, &c. of Sugar in British India, App. iii. p. 4; also in Tennant's Indian Recreations, vol. ii. p. 41, quoted, "Bockford in his Indian Recreations," by Baron Humboldt, in Political History of New Spain.

in the Dinajpore district." With respect to the varieties of cane, it is well known that the best kinds are not always cultivated; and when they are so, are sold to be eaten by the natives, and not expressed for their juice. Mr. Spry informs me, that the Otaheite cane was introduced by Captain Sleeman into the Calcutta Botanic Garden, where it was cultivated by Dr. Wallich, and subsequently sent to Captain S. at Jubbulpore; and after being distributed by him and cultivated in the district, it was found that the natives gave for this new variety of cane, one-half or two-thirds more than for that which was commonly cultivated in the country. A good soil, with free exposure to light and air, in not too moist an atmosphere, would appear to me essential for securing the richest secretion of saccharine principle.

That I may not be accused of dealing only in theoretical declamation, I trust it may be allowed me to bring forward a few instances where I have successfully reduced some of these principles to practice. Of these, I will mention the *senna* as a tropical, and the *henbane* as a European plant, both which were cultivated in the Saharunpore Botanic Garden, and nearly in the same field; but the former, in the rainy season, and the latter, during the cold-weather months. Both were subjected to experiment in the general hospital of Calcutta, when the late Dr. Twining pronounced the extract of henbane to be of "most excellent quality, and the senna leaves as "equal to the best he had ever seen." The last being an extensive article of commerce might be cultivated in every part of the plains of India, as Tinnivelly and Saharunpore are separated by a breadth of territory of 20° of latitude; and where the henbane was grown, other European herbaceous drugs might, no doubt, be cultivated with equal ease. The turpentine of *Pinus longifolia*, called *gunda-biroza* in the bazars, may be adduced as a native product which was turned to useful purposes. This, of a thick, white, honey-like appearance and fragrant odour, was employed by the natives only for its resin after the oil had been dissipated and wasted by heat, as is the mercury when used by them for smelting gold. By adopting a very simple still, the resin was obtained equally good for the purposes of the natives; while the oil of turpentine, a more valuable product, distilled over: this being sent to Calcutta, was pronounced of "very superior quality."

Of substances which, on theoretical grounds, it was conceived could be produced in India, even after repeated failures, the tobacco and cotton may be mentioned. The former, owing to the kindness of Mr. W. Johnson, of the East India House, I had very good grounds for forming a correct opinion upon; and though the majority of cases were failures, seeing that the faults were those of over-luxuriance, and that it was not "a puny seedling to be nursed into healthful existence, but the gross-feeding weed luxuriating in rankness, which was to be reduced to more moderate dimensions, and starved into fineness," I felt confident that superior tobacco could be produced in India, and was much gratified at being informed by Mr. J. that the superior kind already alluded to had actually arrived. Cotton, also, for which the upper provinces, Malwa, Cutch, and Guzerat, appeared most favourable, seems to confirm the views on which the opinion was formed, as indicated by the above Bombay cotton selling higher than the great bulk of American cotton. Without leisure for further inquiries, I have only accidentally seen, in the *Asiatic Journal*, for February, 1836, at a

meeting of the Agricultural Society of Calcutta, the president stating, "From the trials already made, and results obtained, there could be little doubt as to the success attending the introduction of a superior description of cotton. On the same occasion, Mr. Willis stated, that he had examined a few specimens of cotton at the request of Messrs. Gunter and Hooper, grown in some part of the upper provinces, and said to be the produce of Upland Georgia seed, of which the staple was excellent." Some parts of India resembling Egypt in many points of vegetation, I thought we might, with a little care, grow cotton as fine as the Egyptian; and Mr. W. Johnson informs me, that Egyptian seed, sown in India, has given the best returns. Malwa, and the table land of Bundlecund, are the other sites apparently suited to the cultivation of cotton, not only because they are already great cotton countries, but as it is said to prefer a volcanic soil, the decomposed trap-formation is the nearest approximation, and, in many parts, it is called "black cotton soil;" the supply of nutriment by the roots not appearing to be deficient, the elevation of the country warrants our inferring, that, other things being the same, the greater rarity of the atmosphere will favour exhalation, and, through checking the excessive growth of the parts of vegetation, assist the formation of cotton.

The discovery of the tea-plant in Upper Assam, will, I hope, be allowed to be a strong confirmation of the theoretical grounds on which its cultivation was recommended in different parts of the Himalaya, both by Dr. Wallich and myself. I did so chiefly on the great coincidence in latitude, as well as in many points of climate, but principally in the great resemblance in the vegetation of parts of the Himalaya with that of the tea countries, as far as we are acquainted with these, and the finding in the former many plants which are not known to exist elsewhere, except in China and Japan. With respect to the tea, I may also add, that the opinion of Mr. Loddiges, Dr. Hooker, and especially of Mr. Reeves, which I did not hesitate to adopt, after examining the plants in Messrs. Loddiges extensive nursery, of there being two distinct species of *Thea*, yielding the black and green teas, has been fully confirmed by Mr. Gordon's last visit to China, as may be seen in the March Number of the *Asiatic Journal*.

I do not adduce these as instances favourable to my own views, but as results which have been and may easily be deduced by any one who will take the necessary trouble of studying, in their present advanced state, the sciences which give the most important aid in enabling us to form correct opinions on the cultivation and acclimatation of plants in new situations. I mean meteorology and the geography of plants; the latter of which has been so much advanced by our illustrious countryman, Mr. Brown, Baron Humboldt, and Professor De Candolle, whence we learn how much the several families of plants affect particular climates in different parts of the world, and we have seen how much peculiarities of climate affect and control the growth of plants, and the formation of their secretions. So much are the several sciences and their branches connected with, and dependant on one another, that we should have made little progress in drawing general inferences respecting the causes influencing the geographical distribution of plants, had we not had a correct nomenclature and improved systems of classification. Without chemistry we should have known little of vegetable

physiology; and it is only from the comparatively advanced state of meteorology that we are enabled to appreciate the effects of climate on vegetation.

But it is the combination of favourable circumstances which render the present times so eligible for the proposed examinations, and for the improvement in India of old cultures, as well as for the introduction of new plants. How much a single specimen or the act of one individual may change the face of a country, or influence the tastes or comforts of its inhabitants, we may see, in numerous cases; as, for instance, the eggs of the silk insect were brought in a cane by two monks from China to Europe; all the weeping willows, as, probably, all the Lombardy poplars, have originated from single stocks introduced from Persia; all the coffee of the West Indies is said to have been derived from a single plant from the hothouses of Amsterdam, presented to Louis XIV.; while the rice of Carolina is said to be the produce of a small bag of paddy presented by Mr. C. Dubois, treasurer of the East India House, to an American trader.—(*Oriental Repert.* i. p. 2.) India, has in like manner, benefited by the introduction from the new world of the potato, maize, tobacco, guava, pine and custard-apples, &c. That such benefits may be much multiplied I feel well assured, if, instead of decisions on isolated facts, or deductions from empirical attempts, unless the accident of success, or the causes of failure, be explained, we make our experiments only after concentrating to one focus the inferences deducible from several sciences. The difficulties hitherto attending such attempts do not seem to be owing so much to a lack of useful suggestions, as a want of animation in those most interested in their adoption. But, as the dawn of a growing interest seems to be displacing the universal apathy respecting Indian affairs, it is probable that some attention may be excited, and enough be induced to combine in its support,—some from philanthropic motives, others from a sense of duty, and many, no doubt, will wish to see India benefited that themselves may be enriched. From its favourable position, the Society could get much valuable information, as well as material, which, by co-operation with the Agricultural Society of Calcutta, and the Madras and Bombay Literary Societies, might be usefully diffused throughout India. Experiments would, no doubt, also be instituted in the several local societies, as well as in the Hon. Company's Botanic Gardens; and those of Calcutta and Saharunpore are one thousand miles apart. From the patronage which the Directors of the East India Company have always bestowed on botany, we have now a good general idea of the vegetation of a great part of India, especially from the munificent donation to the Linnean Society of the *Herbaria* formed by several botanists in different parts of India, arranged and distributed with incalculable labour by Dr. Wallich. The west of India is not included in this; but the collection formed by Colonel Sykes, of which I hope some account may be published, will fill up this chasm, and leave central India as alone unknown. The better knowledge, also (though a multitude of points still require filling in), which we now have of the temperature of different parts of India, chiefly owing to the exertions of Mr. James Prinsep, as shewn in the Journal of the Asiatic Society of Bengal, of Mr. Goldingham for Madras, and Colonel Sykes for Bombay, will enable us to combine vegetation with climate, and give us the best data for comparing the different parts of India with analagous countries in other

quarters of the world. By grouping together those which most nearly correspond in climate and natural productions, I think it would not be difficult to shew, that we might find valuable products suited to each and all the different parts of India.

To how great an extent this may be effected, either by adopting the practices or introducing the plants of other countries, we can only be fully sensible by studying the geography of plants in all its bearings, but especially in connexion with climate. A few instances of the objects and tendencies of this part of botany will, perhaps, not be considered out of place.

The peculiarities of the tropical zone, we well know to be brightness of light, great heat, and moisture, with considerable uniformity of all throughout the year. These are all favourable to the developement of vegetation, which is accordingly characterised by vastness; the foliage, by richness; and the inflorescence, by brilliancy of colouring. Hence, the proportion of trees is great, and their flowers of a size and richness which, in colder climates, are only the appanage of humbler plants; as may be seen in the noble Amherstia, the wide-spreading bombax, or glowing erythrina. Seeing how much vegetation is influenced by different physical states, we may conclude, that there are particular sets of plants fitted by nature for the peculiar circumstances in which they are to be placed. Thus, every one who has visited tropical countries knows how the position of their lowest coasts may be recognised by the forests of tall palms shooting like distant masts above the surface of the sea; while the coasts, on near approach, are found lined with mangroves. The very mention of the clove, the cinnamon, nutmeg, ginger, plantain, and pepper, recal ideas of high temperature, with rich vegetation; but these all belong to separate families of plants which prevail in equatorial regions, and perfectly characterise tropical vegetation: but they do not do so more than some others which are less generally known, as *Anonaceæ*, *Dilleniaceæ*, *Guttiferæ*, *Dipterocarpeæ*, *Sapindaceæ*, *Meliaceæ*, *Bignoniaceæ*, *Ebenaceæ*, *Sapoteæ*, *Cycadeæ*, *Bromeliaceæ*, *Pandaneæ*, and many others. As tropical climate is not terminated by an abrupt line, but, according to the influence of local causes, extended into higher latitudes, so does it carry with it the peculiarities of tropical vegetation. Thus, if the country be open towards the equator, the equinoctial rains will be blown with the periodical winds to much higher latitudes than where a mountain range intervenes, or the course of the winds be diverted by a high and shelving coast. Thus, India, open to the south, is deluged by the periodical rains; while Egypt, in the same latitude, owes its fertility only to the overflowing of the Nile. The same effects may ensue, if the same causes operate, along a valley or a mountain range. Thus, Humboldt has shewn that, in the basin of the Ohio, *Gleditsia monosperma*, the *Catalpa*, and *Aristolochia sipho*, extend three degrees further north than on the coast of the Atlantic. So, along the base of the Himalayas, where there is considerable moisture of the soil, a vigorous vegetation has sprung up, which adds to the humidity of the atmosphere, as well by the exhalation from its leaves as in consequence of the prevention of free evaporation from the ground; while a greater equality of temperature is preserved, as well from the umbrageous covering preventing the ready absorption of heat by day, as it does free radiation during the night. Hence, along this tropic-girt base we find greater equality of temperature, with

more uniform moisture, than in the open plains, and in it many plants extending several degrees further north than they do in any other part of India; as, the species of *Cinnamomum*, which yields the *tej-pat*, or bay-leaf of India, the *Malabathrum* of the ancients; also the long-pepper. So we have *Shorea robusta*, one of the *Dipterocarpeæ*, yielding a kind of *dammer; Embryopteris glutinifera*, affording the fruit called *gab*, which the boatmen of Bengal use for paying their boats, and preserving their nets; together with the *Semecarpus*, or marking-nut; and the catechu-yielding acacia; with many gigantic climbers. And, though the geologist may be interested in seeing a pine growing alongside of a palm, the agriculturalist will notice the excellence of the rice cultivated in some of these valleys, as well as that the plantain is found wild; and that the banana, jack-fruit, and guava, succeed nearly as well as in Bengal; and be led to infer, that though the plains, from their great heat, may be unsuited to the education of the silk-worm, it might yet be successfully reared in these cooler and more sheltered valleys,—a conclusion which I believe the result would perfectly justify.

It must be noticed, also, that though the different families of plants occur in the greatest numbers in particular countries and climates, yet they frequently send their representatives into very distant regions. Thus, we have in the south of Europe, either indigenous or introduced, a laurel, a palm, a myrtle, oleander, vitex, calotropis, and a few acacias, all which belong to families occurring in the greatest numbers in tropical countries. So, some of those which form the largest trees of equinoctial regions occur in European countries as annual herbs; as of the *Malvaceæ*, the huge silk-cotton-tree in the former, and the humble mallow in the latter; of *Verbenaceæ*, the teak in India, and the vervein in Europe; of *Rubiaceæ*, the cinchona in South America, and the weak rubia in Europe.

It is, therefore, necessary to be cautious in drawing practical inferences, and incumbent on us to ascertain the state of a plant, in comparison with the general character of the family, as also the numbers in which particular kinds of plants occur in particular situations; so that we may know whether we are drawing our deductions from what is the rule, or what may be only an exception.

As the diminution of temperature in the atmosphere is very gradual, according to elevation, so is the disappearance of tropical forms as we ascend up mountains: hence, we find such plants diminishing in number and size as we ascend either the Andes or the Himalayas. Their existence at considerable elevations, may probably be favoured by the range of the thermometer being less on mountain tops than on plains, even where the mean temperature is the same; and, perhaps, the effect of the extremes of temperature may be less injurious when transmitted through a more rarefied medium. But in mountains under the influence of tropical rains, a peculiarity of circumstances occurs analogous to that so well described by Baron Humboldt in the Andes, as the region of clouds; so in the Himalayas, the thermometer does not vary ten degrees during three months, at seven and eight thousand feet of elevation; and even when rain does not fall, there is constant humidity, from the air charged with moisture in the heated valleys rising to and depositing it on the cool mountains. The cloudiness, at the same time, preventing the full influence of the sun's rays, and at night the radiation from a mountain ridge bearing but a small proportion to the mass of the atmosphere, comparative little cooling takes place, and the ther-

mometer is but a few degrees cooler in the morning than it was on the previous evening: so that the same equability which we have observed at the base of the mountains, is observed, from the operation of other causes, to take place at considerable elevations. This being combined with moisture, we have two of the characteristics of a tropical climate, and find that, in such circumstances, a less degree of heat is essential for the maintenance of plants otherwise indicative, though only annuals, of a tropical vegetation. Of these may be instanced one of the *Scitamineæ*, the family to which the ginger and cardamom belong, at as great an elevation as nine thousand feet, with balsams, bigonias, cyrtandraceæ, a Smithia, cassia, &c.: even a bamboo is found as high as ten thousand feet; but its annual stems are yearly levelled by the falls of snow, while the roots are protected by their subterranean situation from the great changes of temperature. We need not be surprised, therefore, that rice should be cultivated at such elevations even without the assistance of irrigation.

But luxuriant vegetation is not confined to tropical countries, as we know from the beauty and variety of scenery in temperate climes, dependent on an entirely different set of plants. Among these, the pines are conspicuous; and the *Amentaceæ* give the greatest variety of trees, as oaks, chestnuts, birches, hornbeams, hazels, poplars, and willows; with elms, maples, rhododendrons, and the walnut, which, though found in southern latitudes, are only so in mountainous situations, and all in the Himalayas. But these are not more indicative of moderate temperature than are many other families of plants; as the gentians, primroses, saxifrages, ranunculuses, valerians, bell-flowers; rosaceous family, *Cruciferæ*, *Caryophylleæ*, and *Umbelliferæ*. As elevation produces the same effects on temperature as increase of latitude, we find in the Himalayas a climate so suited to these, that they form the most numerous portion of its flora. Among them, also, occur several of the plants of China and Japan, as well as of North America; and on the northern face, several of those of Siberia. Many of the lofty peaks being covered with snow for nine months in the year, which melts only when the sun has the greatest power, we may suppose the brightness of light in this thin and rarefied medium, at this period of the year, to be an equivalent for the uninterrupted sunshine of polar regions during the same months; and the climate as suited to the growth of plants, which can scarcely be distinguished from some brought from Melville Island. A dwarf willow and birch, with a rhododendron, forming the ligneous vegetation of high latitudes, so does a species of the first, with rhododendrons, occur at the highest elevations in the Himalayas, though the birch exists only as a tree within the limit of forest. In the same way that we have seen tropical families sending a few species into temperate climates, so do those, which are characteristic of the latter, send their representatives into the midst of tropical vegetation; but these, with the exception of the multiform willow, are only annuals which spring up, flower, and seed, during the cold-weather months in India; as one or two gentians; *Anagallis*, of the family of primroses; *Silene conoidea*, and *Saponaria vaccaria*, European species, in corn-fields; together with *Ranunculus sceleratus* and *aquatilis*, which, growing in, and in the vicinity of, water, are able, from its equalising effects, to bear great vicissitudes of atmospheric temperature.

But as these occur only in the cold-weather months, or from October

April, so does the cultivation in these months in the plains of India correspond with that of the summer months of higher latitudes; consisting of wheat, barley, flax, Indian rape, peas, beans, and gram (the *Pois chiche* of the south of Europe), perhaps, in the very same fields where, in the rainy season, had been cultivated rice, sorghum, and other tropical grains. In the Himalayas, the season of cultivation varies according to the elevation and the influence of local circumstances, wheat and barley being sown either in the autumn or earliest spring, and reaped in May or June, before the accession of the rains, when, perhaps, in the same terraces rice is immediately sown. At higher elevations, or in those beyond the influence of the rains, the seasons are the same as those of Europe, and the harvest, like that of the rice, is in autumn: hence we can understand the native soldiers who first accompanied Captain Webb in his survey of these mountains, expressing their astonishment, by saying, that they had done that which their fathers had never heard of, eaten new rice and new wheat both in the same day.

Such are a few general views respecting the geography of plants in connexion with climate, and with reference to cultivation. Between the extreme points of a tropical and a polar vegetation, we might shew a series of gradations, and find an equivalent for each within the limits of British India: but these would lead into unnecessary detail; and the object has, perhaps, been sufficiently gained, if I have been successful in shewing in what way the distribution of plants is connected with the improvement of the resources of a country, particularly when we wish to acclimate the productions of other climes in one like India, which embraces within its limits so great a diversity of climates.

Of this, even the most sceptical may be convinced, if it be considered, that, suited as are Ceylon, and the southern extremity of the Peninsula, for cinnamon, nutmeg, cacoa; and the coast of Malabar, for pepper, cardamoms, coffee, and teak,—they are not more so than are Bengal, and the lower provinces, for their rich cultivation of rice, indigo, and silk; with ginger, turmeric, long pepper, and betel-leaf, luxuriant bamboos, and the bread-like plantain, ever-useful cocoa, and slender areca. The northern provinces having a less rich soil and drier climate, may boast of their wheat, barley, and potatoes at one, and rice and sorghum at another season, as well as of their fitness, together with Malwa, Bundlecund, and parts of the Peninsula, for the production of cotton, tobacco, and opium; while sugar, numerous oils-seeds, and substitutes for hemp and flax, are produced in nearly every part. Almost every jungle is occupied by the lac insect, and a kind of kino is yielded by the dhak butea. The most barren hills afford olibanum, and the most arid-looking plains will nourish the gum secreting acacias, and the mouhwa, or bassia, of which the flowers are fermented into a spirit, the seeds expressed for their oil, and the wood valued as excellent timber. Even in the western desert, the lakes yield salt, and their shores are lined with plants, which are burned for barilla. The mountains, though their bases are lined with a tropical and unhealthy jungle, abounding in valuable timber, have, at certain elevations, a delightful climate, and productions analogous to European countries: here we may soon hope to see the tea-plants a thriving culture, and the hemp turned to useful account; and, though the cold and bleak tops of these mountains, and the plains on the northern face, appear barren and unprofitable, here their lakes abound with borax, and their valleys with vines; and, in

addition, we have spikenard and rhubarb from the vegetable, with musk from the animal, kingdom.

In conclusion, I need hardly remind the Society, that, in pursuing such investigations, we are only following out the course pointed out by the illustrious founder of the first Asiatic Society, who directed, that within the geographical limits of Asia their inquiries should be extended to "whatever is performed by man, or produced by nature." In taking, also, a survey of soil and climate with their products, before we determine for what culture they are best suited, we take no new, though neglected, course, but are acting in conformity to the advice of, if not the oldest, certainly the most eloquent, writer on agriculture, whose words I cannot do better than quote:—

> At prius ignotum ferro quam scindimus æquor,
> Ventos, et varium cœli prædiscere morem
> Cura sit, ac patrios, cultusque, habitusque locorum,
> Et quid quæque ferat regio, et quid quæque recuset.

To the literary members of the Society I would beg permission to suggest, that, in forming a collection such as I have proposed, they will find many interesting subjects of inquiry in the several substances which formed articles of the ancient commerce of the world, of which several remain still unknown. As their knowledge of oriental languages will give the only clue to many of the names, and explain the changes which some have undergone, so will the steadiness of nature be the best security in leading to satisfactory results. Many of these substances seem to have been better known two or three centuries ago than they are at the present time. This seems to have been chiefly owing to the chain of communication having been broken by the flight of commerce from the Red Sea and Persian Gulf, to round the Cape of Good Hope. It will not fail, also, to strike as remarkable, that famed as India was in former times for the richness and variety of her products, she should now be chiefly noted for their inferiority when these come into competition with those of other parts of the world. This, it strikes me, was owing to what is no where better known than to the members of this Society, and that is the early cultivation of the mind and the advancement of science among the Hindus, which must have greatly influenced agriculture, as well as all the other arts of life. Since, then, if India has not retrograded, she has certainly remained stationary, while the rest of the world has been advancing and applying every fresh acquisition in science to the improvement of the varied arts and manufactures of civilised life. In proposing, therefore, that we should examine the products and inquire into the processes of the east, and, in like manner, apply to their improvement the science of the west, I think I am taking the most legitimate and only satisfactory means of attaining the object in view, that is, the improvement of the resources of India.

It may appear to many who conceive natural history to consist in the coining of names, the pinning of insects, or the pasting on paper of plants, that I rate too high its capabilities, but as I use the word in its most extended signification, as embracing a survey of the soil with the state of the atmosphere, an examination of the structure and physiology of animals and plants, with the analysis of minerals, I feel I shall be able to maintain the positions I take up. Even the

above offices, if they have no other effect than to give us a name which may be every where understood, and, when correctly applied, unchangeable, or afford us the means of comparing nearly allied objects from different parts of the world, they are like the location of words in a dictionary, or the minute inquiries of statistics, necessary means to very valuable ends. If we, therefore, do not mistake the objects of science for the application of its principles, we shall find reason, I think, to conclude, that it is not science which is so much to blame for want of practical applicability, as the want of it in those who make the objection, and who, unacquainted with a subject, and unable or unwilling to take the trouble of drawing the legitimate inferences, seem to satisfy their consciences by depreciating the value of facts, because they are scientifically, that is, correctly, ascertained.

The thanks of the Society were unanimously voted to the Right Hon. Holt Mackenzie and Mr. Royle, for their valuable communications; and the meeting was adjourned to the 16th of April.

SATURDAY, APRIL 16, 1836.

A GENERAL Meeting was held this day; Sir GEORGE THOMAS STAUNTON, Bart., *Vice-President*, in the Chair.

The minutes of the last meeting were read and confirmed.

The following donations were laid upon the table:—

From Lieut.-Colonel Francklin, M.R.A.S.

An Engraving from a Portrait of Sir William Jones. In frame.

From Sir George Thomas Staunton, Bart. P.V.R.A.S.

His pamphlet, entitled "Remarks on the British Relations with China, and the proposed Plans for improving them." London, 1836.

From C. P. Cooper, Esq. M.R.A.S.

Flandrische Staats, und Rechtsgeschichte bis zum Jahr 1305, von L. A. Warnkönig. Erster Band. Tübingen, 1835. 8vo.

From J. C. Loudon, Esq.

His "Arboretum Britannicum," Nos. XVII. XVIII. XIX.

From the Société de Géographie de Paris.

Bulletin de la Société de Géographie. Deuxième Série. Tome IV. Paris, 1835. 8vo.

From Professor Humbert, F.M.R.A.S.

His "Arabica Chrestomathia Facilior." Vol. I. Paris, 1834. 8vo.

From Professor Wilson, M.R.A.S.

His " Notes on the Indica of Ctesias." Oxford, 1836. 8vo.

From Lieut.-Colonel John Briggs, M.R.A.S.

The Calcutta " Reformer" Newspaper, for 1833 and 1834; and Thirteen Numbers of the " Enquirer ;" both edited by native gentlemen of Calcutta.

Ten Numbers of the Cape of Good Hope Literary Gazette, published at Cape Town, in 1835.

Catalogue of the South African Public Library. 1834. 8vo.

From the Royal Academy of Sciences at Lisbon.

Memorias da Academia. Tomo XI. Part II. 1835. 4to.

From Mahárájá Kalí Krishna Bahádur, C.M.R.A.S.

Kula Pradipa; or, the Lamp of Pedigree of Hindús among the writer Class. Calcutta, 1832.

Sketch of the Solar System, intended for the use of Schools: the same in Urdee; Diagrams of the Orrery, in Bengalí; and simple Illustrations of Eclipses of the Sun and Moon, in Bengalí and English. All lithographed at his own private press.

From G. K. Pollock, Esq.

An Image of Krishna playing on his pipe to the Gopees, or milk-maids, carved in wood, in a gourd-shaped case.

From Sir Graves C. Haughton, Librarian, R.A.S.

The Exposition of the Védánta Philosophy, by H. T. Colebrooke, Esq., Director of the Royal Asiatic Society, vindicated: being a Refutation of certain published Remarks of Colonel Vans Kennedy, President of the Bombay Branch Royal Asiatic Society. By Sir Graves C. Haughton, Knt. &c. &c. London, 1835. 8vo. (Extracted from the Asiatic Journal.)

Thanks were ordered to be returned to the respective donors.

Jerome W. Knapp, Esq. was elected a Resident Member of the Society.

Professor Horace Hayman Wilson read his Analysis of the Bráhma Purána, prefaced by introductory remarks on the Pauranic writings.

The thanks of the meeting were returned to the Professor for his interesting communication.

PROCEEDINGS

OF

THE ANNIVERSARY MEETING

OF

THE ROYAL ASIATIC SOCIETY,

HELD ON SATURDAY, THE 7TH OF MAY, 1836.

THE Thirteenth Anniversary Meeting was held this day at One o'Clock; the Right Honourable C. W. WILLIAMS WYNN, M.P., the President of the Society, in the Chair.

The Minutes of the last Meeting were read and confirmed.

The SECRETARY read the Annual Report of the Council. (Vide p. lxi.)

ANDREW MACKLEW, Esq. read the Report of the Auditors on the Accounts of the Society for the year 1834. (Vide p. lxvii.)

HENRY S. GRÆME, Esq. moved that the thanks of the Society be returned to the Auditors for their services; and that their Report, together with that of the Council, be received and printed in the Proceedings of the Society.

Seconded by Sir WHITELAW AINSLIE, and carried unanimously.

Sir ALEXANDER JOHNSTON, Chairman of the Committee of Correspondence, read the following memorandum, enumerating the principal subjects which had engaged the attention of the Committee during the past year.

The Committee of Correspondence have directed their inquiries during the last year to the five following points:—

1. To the different systems of agriculture which prevail in the different parts of India.

2. To the nature and uses, in food, in manufactures, and in trade, of all the different vegetable productions of different parts of India.

3. To the nature and uses, in food, manufactures, and trade, of the different descriptions of quadrupeds, birds, and fish, in India.

4. To the nature of the intercourse which prevails at present between the different ports in India, the islands of Socotra and Zanquebar, and the different ports of Arabia, between Muscat and Mocha.

5. To the manner in which the proceedings of the Society are likely to be affected by the measures which have been adopted by the legislature and the local governments for the moral and political elevation of the natives of India; and for the establishment of a free press amongst them.

Sir ALEXANDER then observed, in substance, as follows:—

By the statement which I have just read, the Meeting will perceive that the Committee of Correspondence have, during the last year, directed their attention to objects which are of importance; first, to those persons who are willing to employ their capital, their talents, and their knowledge, in the agriculture of India; secondly, to those who are willing to engage in undertakings for facilitating the intercourse between England and India, through Egypt; and, thirdly, to those who are anxious, as all the Members of this Society must be, to consider the effect which is likely to be produced upon the success of the Society, by the moral and political changes which have recently taken place in the situation of the people of India.

With a view to the first description of persons, the Committee has directed its researches to the state of the agriculture; to the nature and use in food, manufactures, and trade, of the different vegetable productions; and to the history of the quadrupeds, birds, and fish, in every part of British India. The respect which is always paid by the Hindús to the memory of such of their countrymen as devote themselves to the improvement of agriculture; the privileges which are enjoyed by such of the castes as are devoted to agricultural pursuits; the manner in which the ox, considered as the main instrument of agriculture, is protected, as well by their religious as by their legislative institutions; the large sums of money, and the great mass of human labour, which have at all times been employed by their sovereigns in forming tanks, in raising mounds to direct the courses of rivers, and in making the necessary arrangements for irrigating every portion of the country which can be cultivated, shew the constant attention which the Hindús have, from the earliest periods of their history, paid to the agriculture of their country, and lead one to infer, that they must possess great practical knowledge relative to the mode of cultivating that country. The Committee have, therefore, with this view, requested the Members of the Hindú Society of Literature, at Madras, to obtain for them information upon this subject from such of their countrymen as are the most thoroughly acquainted with the merits and defects of the different systems of agriculture which prevail at present in different provinces; and are happy to say, that they have already received from some of the Members of that Society a very curious and valuable report upon the subject, and that all the other Members have shewn upon the occasion, not only a desire to promote the objects of the Royal Asiatic Society, but also the greatest anxiety to improve the condition of all the proprietors and cultivators of land.

As British India extends over twenty-eight degrees of latitude, and twenty-five degrees of longitude; as the land in different parts of it rises from half an inch to twenty-seven thousand feet above the level of the sea; as in the northern division of it there are extensive plains, and in the southern there is a chain of mountains running from one extremity of the Peninsula to the other,

and dividing it into two separate climates, each modified, as to its temperature and productions, by the greater or lesser height of the mountains, and by the nearness to or distance of those mountains from the sea, it is obvious that such a country is calculated to produce, either in one province or another, all the various vegetable productions which grow in any country situated within the tropics. Under this impression, I have for many years* been anxious to obtain an accurate account of all the vegetable productions of that great empire. Although, as appears by the collection in the Museum, the Committee have been able to obtain some specimens of those productions, yet it must be acknowledged, that its endeavours have not hitherto met with the success which was expected. Now, however, I feel confident, that the Committee will, with the assistance of Mr. Mackenzie and Mr. Royle, speedily attain the objects which they have in view. Mr. Mackenzie, with the mind of a real statesman, while in India, where he filled a high situation with honour to himself and benefit to his country, acquired very valuable information relative to its vegetable productions. Mr. Royle has shewn, by the result of his labours, and by the popularity of the work which he has published since his return to England, that he devoted, while in India, his attention to the collection, not only of such information as is valuable to the theoretical botanist, but also such as is practically useful to all who take an interest in the agriculture, the manufactures, and the commerce of Great Britain and India; and he is thereby enabled to point out with certainty, not only the particular soil and temperature in India, in which all the different vegetable productions of that country may be reared to the greatest advantage, but also the several parts of British India, in which the vegetable productions of all the other tropical countries may be introduced with every prospect of their growing. These two gentlemen, some months ago, wrote a letter to me, as Chairman of the Committee of Correspondence, pointing out the advantages which would accrue to Great Britain and India, if the Society would, at the present moment, take efficient means for procuring from India information as to the vegetable productions of every part of that country, I immediately, being myself fully convinced of the importance of their suggestion, after communicating with the then Deputy, but present Chairman of the Directors, and with the members of Glasgow, Liverpool, and Manchester, the three towns in England which are the most interested in the Indian trade, submitted to the Council the propriety of their carrying the suggestion of Messrs. Mackenzie and Royle into effect. The Council having approved of what I advised, directed me to point out to them the best means of obtaining the object I had in view. I requested Mr. Mackenzie to draw up a paper upon the subject, which he did; and I further submitted to the Council the propriety of allowing that paper, and one from Mr. Royle, explanatory of the specimens which he meant to produce on the occasion, to be read at the following Meeting. This having been done, and Mr. Mackenzie's and Mr. Royle's papers having been circulated, and the

* In 1810, Sir Alexander Johnston, with this view, advised the establishment of the Royal Botanical Garden, at Columbo, in the Island of Ceylon, and that of Committees composed of leading merchants and manufacturers in London, Liverpool, and Glasgow.—See the Papers upon this subject.

Council having pointed out the mode in which it is proposed to carry Messrs. Mackenzie and Royle's plan into effect, I have only to add, that this plan is of the greatest importance to the welfare of the people of Great Britain, and that of the natives of India; and that I, therefore, trust the Society will be able to take the lead in adopting such measures as may be necessary upon the occasion.

The late Baron Cuvier, when in England some years ago, asked me to assist him in procuring a knowledge, through the Royal Asiatic Society, of the different animal productions of India. In consequence of the communications which I had at the time with him, the late M. Jacquemont, previous to his departure for India, was sent over to this country, in order that he might collect information upon the subject from this and other Societies in England; and he afterwards carried out such instructions as were requisite to enable him to collect, while in India, the local information which Cuvier required. Although the results of Jacquemont's labours are valuable, as the Society must know, from the work of which it has received a copy, and of which the publication does so much honour to the French government, his premature death in India, before he had completed the object of his mission, prevented the Committee from obtaining from him all the information which it wished to procure. It has since, however, endeavoured to obtain from persons competent to the task, such a set of instructions as may enable, as well the natives as the Europeans to whom they may be directed, to procure for it the most accurate information relative to all the animal productions of India; and I am happy to say, that Sir William Jardine, who is so well known by his zeal and his talents for the study of natural history, has undertaken to frame such a set of instructions. I have no doubt, that with the assistance of Colonel Sykes, who is so thoroughly acquainted with the natural history of the Dekhan; with that of Mr. Hodgson, who is equally well acquainted with the natural history of Nepál; and with that of the governors of the respective presidencies in India, the Committee will be able to lay before the Society, at an early period, some very interesting information relative to the animal productions of British India, including the different descriptions of fish in the Indian rivers, and in the Indian seas.

M. Vallenciennes, a friend of the late Baron Cuvier, and the gentleman who is completing Lacepede's celebrated work on fish, when in England, drew up, at my request, a set of instructions, which the Committee sent out to India, and which will enable it to obtain an account of all the fish which are found in the Indian rivers and Indian seas; the value of which may easily be estimated, when we consider that it will embrace the history of the fish in the innumerable mountain torrents which flow down both sides of the Ghâts to the sea; the history of those in the three great rivers, Brahmapútra, Ganges, and Indus, and in all their tributary rivers and streams, in the north; of those in the rivers Tapti, Nurbaddah, Godaveri, Kistnah, Kaveri, and Kolerun, in the south; of those in the backwater running by Cochin; of those in the Gulf of Menar; and of those in all the different seas which wash the shores of the Peninsula and the coast of Bengal, from the mouth of the Indus, in the west, to the Straits of Sincapore, in the east; and that, although not above forty

descriptions of fish have been found in all the different rivers of France, upwards of two hundred and seventy kinds have already been found and described by Hamilton in the Ganges alone.

With a view to the second description of persons, the Committee has referred for information to all the Hindú, Persian, Arabian, and Portuguese works which throw any light upon the intercourse which has been carried on, from the earliest period of history, between any port on the north-west coast of India, and any port on the southern coast of Arabia, and on either side of the Arabian Gulf.

Although the Committee have derived much useful information from these sources, they expect to derive still more through the present Imám of Muscat, who possesses a vigorous understanding, and who, by his ability, has acquired either a direct or an indirect influence over every port on the southern coast of Arabia, from Muscat to Mocha, who has laid open the trade of the Island of Zanquebar to traders of every nation, and who has afforded British subjects great facilities for making establishments on that island.

With a view to the third description of persons, the Committee have considered the effect which is likely to be produced on the minds of the natives as to the Society, by the two circumstances which are calculated to bring about the greatest change in their moral and political feelings: the first, that of their being declared capable by law of holding all civil situations under the British government; and, secondly, that of the press having been declared by law to be perfectly free throughout British India.

The admission of the natives of India to sit upon juries, to act as justices of the peace, and to hold all judicial, revenue, and political situations under government, must increase their desire for acquiring knowledge, and for referring to the proceedings of a society whose office it is to circulate useful information amongst them. The establishment of a free press throughout India must facilitate and expedite any communications which the Society may wish to make to, or receive from, the natives of India. It is enabled to circulate its proceedings, in print, by a post which travels night and day at the rate of four miles an hour, amongst a hundred millions of people, and through an empire which extends from the banks of the Sutledge, north, to Point de Galle, south; and from Surat, west, to Nepál, east.

It is, therefore, obvious, that the admission of the natives of India to the rights which have been mentioned, and the establishment among them of a free press, are calculated to assist the Society in all the great objects which it has in view.

Lord Auckland, the present Governor-General of British India, as soon as he received the appointment, informed me, that he was convinced of the moral and political importance of the Asiatic Society to the British interests in India, and that he was desirous to become, as he has since, a Member of the Society. The present Chairman of the Court of Directors, who, by virtue of his office, is now a Vice-Patron of the Society, has always felt the value of the Society; and both these gentlemen, from the influence which they have necessarily a right to exercise in the government of India, are enabled to afford the Society the greatest assistance. From all these circumstances, I feel myself authorised

to state, that the Society, so far from shewing any symptoms of decay, has acquired such a character as proves that the British public are convinced of the practical utility, and of the moral and political importance, of its proceedings.

The SECRETARY read the following Minutes of a Committee appointed to report to the Council on the practicability and expediency of carrying into effect the recommendation of the Committee of Correspondence, for the formation of a Committee of Trade and Agriculture.

"The Committee having considered the suggestions recently submitted to the Council by the Chairman of the Committee of Correspondence, on the part of the Right Hon. Mr. Mackenzie, and Mr. Royle, as detailed in the papers read at the General Meeting of the Society, held on the 19th ult., have unanimously agreed to report as follows:—

"Your Committee believe it to be almost unnecessary for them to express their entire concurrence in the persuasion, that the successful prosecution of the objects specified in the papers above mentioned would be attended with many and great national advantages, by whatever agency that end might be accomplished. But they deem it their duty further to submit their opinion, that in no way can those objects be pursued with so much prospect of benefit, as through the instrumentality of the Royal Asiatic Society. By it, they trust, the necessary combination of scientific knowledge with practical skill and local experience, would be abundantly secured; that the information accumulated would be gathered into a common store, and freely communicated to all that have an interest in its use, as a common good, to be cultivated by each for his own and the general advantage, according to his opportunities, skill, and enterprise, without any partial favour or jealous exclusion. By it the interests of India and of England, which, properly understood, are identical, would be uniformly regarded in their due connexion; the talent and the knowledge of our fellow-subjects in India, of whatever race or persuasion, would be enabled to take their just position, in spite of the disadvantages of distance and difference of language; the inconveniences inseparable from the circumstances of the two countries, would be, in a great measure, counteracted through the influence of personal attachments; the ties of personal affection and long-established intercourse would be renewed, confirmed, and extended. By it those countless, minute particulars, which constitute an essential part of the knowledge of a country, and the ignorance of which so distinctly characterises, and so seriously embarrasses, the researches of a stranger, would be readily supplied; and lastly, innumerable channels of information might at once be opened, of which others would have painfully to seek the sources by a tedious research. While thus persuaded of the superior advantages that belong to the Royal Asiatic Society, as the instrument of accomplishing the proposed task, your Committee are equally convinced (the very nature of the undertaking affords sufficient grounds for the opinion), that, for its successful accomplishment, it is exceedingly desirable, if not indispensably necessary, that some new arrangement should be adopted similar to that which has been suggested. The matters proposed for inquiry fall, indeed, your Committee conceive, clearly within the scope of

vestigation embraced by the general scheme of the Society. But, for their full development, and especially for their beneficial application to practical purposes, a division of labour, and a distinct course of proceeding and correspondence appear to be essential. With this view, it appears to your Committee that the simplest and most effectual plan will be to establish a separate section of the Society, under the designation of the Commercial and Agricultural Section, conducted by the Council, as the affairs of the Society are now conducted, and open to all the Members of the Society; but holding separate meetings, and with a separate record of its proceedings. This implies the necessity of employing some additional establishment. Your Committee would hope, that the Society might obtain gratuitously the services of some gentleman, willing, in the character of Joint-Secretary, to superintend, or aid their Secretary in superintending, the proceedings and correspondence of the new section. But it will be indispensably necessary, that a duly qualified person should be engaged on an adequate salary as Assistant-Secretary, or Head Clerk; and to meet this, and the other expenses of the Section, your Committee are of opinion, that, on the lowest estimate, provision must immediately be made for a charge of not less than 200*l.* per annum—and this without reference to the necessity which must soon arise of providing additional accommodation for the reception of the articles to be added to our Museum. Your Committee regret to state, that the present condition of the funds of the Society is such as to afford no surplus for this purpose. On the contrary, some aid to our resources is urgently needed to enable the Society adequately to provide for its present wants; and although it may be hoped, that his Majesty's ministers will recognise the peculiar claims of the Society to the favour of government, more especially when it proposes to extend its labours into a new and extensive field, fruitful, we confidently trust, of much national benefit; yet your Committee does not feel itself at liberty to rely on any such contingency against the pressure of an immediate and certain expense. Your Committee has reason to think, that some accession to the number of your Members, and consequently some addition to your funds, might be expected to follow a resolution to prosecute the researches and experiments in question, by a new Committee or Section. Already, they understand, the matter has excited considerable interest,—an interest which could not fail to increase as the subject became better understood, and as the practical benefits of the scheme were gradually developed here, and in India. But on this head, too, your Committee cannot venture to recommend that the Society should anticipate the result by any new pecuniary engagement. It remains only that an appeal should be made to the liberality of the Members of the Society; and your Committee accordingly beg leave to propose, 'That, it being necessary to raise the sum of Two Hundred Pounds, to enable the proposed Committee of Commerce and Agriculture to commence operations until permanent assistance is obtained from government, gentlemen who feel disposed to contribute to this Fund, will be pleased to subscribe their names and contributions.' Should this resource fail, deeply as your Committee must lament that the Society should be compelled to leave to others the honourable and beneficent enterprise, to which they have been urged by such powerful considerations, they must yet be under the painful necessity of recommending, that the prosecution of the scheme be at least postponed. Your

Committee trust that it does not exceed the limit of its duty, in suggesting that this occasion may be taken of urging upon his Majesty's government, and the Hon. the Court of Directors, the claims of the Royal Asiatic Society to some support from the public purse. If the Society be justified in offering itself as an useful instrument to encourage and improve the arts, sciences, and literature of British India, analogies will not be wanting to justify its expecting some contribution from the public revenues, to the funds necessary to the effectual prosecution of those objects;—and the Society may advance, in favour of its pretensions, many peculiar considerations derived from the position of its Members, and from the moral, political, and economical circumstances of the people for whose benefit their labours are mainly designed."

The Right Hon. HOLT MACKENZIE rose to propose a vote of thanks to Sir ALEXANDER JOHNSTON for his very able Report, and to request him to reduce his observations to writing, in order that they might be printed in the Journal. He said, that the agreeable duty which had devolved on him was of a twofold nature; and, in making a few remarks, he would reverse the order in which he had mentioned them, and take the last part first. On it, however, he should have little occasion to delay, as the high character of Sir Alexander's communications was fully known to the Members of the Society, and properly appreciated. It was a deep conviction of the great importance of his observations, which led to the natural desire of having them printed and made public, for the information of all. He thought it unneccessary to dwell on the point, and would proceed to the other part of his duty—the vote of thanks. He thought that the Society was called on to express its gratitude to Sir Alexander on double grounds; first, for the valuable and interesting information which he had communicated; and next, for his conduct as an efficient and active agent in that branch of the Society on which their well-being mainly depended—the corresponding department. Should he feel inclined to particularise any quality which, more than another, characterised Sir Alexander Johnston in his office, he would name the conciliatory tone which he invariably employed. To this he added a strict impartiality, which disarmed jealousy. All men of talent, in the republic of letters, were affected by an extreme sensitiveness and susceptibility, requiring a most delicate management; but the happy tone which Sir Alexander adopted, placed at their ease all those with whom he held communication. The only reason why no other allusion should be then made to that gentleman's claims on the Society's gratitude, was the fact of his having made mention of the individual who then addressed them. When he took charge of the motion he did not anticipate such a compliment; and it was only the fear that the remarks he was then making might be attributed to gratitude that prevented his going on. In conclusion, he would propose the motion in proper form—"That the thanks of the Society be given to the Right Hon. Sir ALEXANDER JOHNSTON, and that he be requested to reduce his Report to writing."

Seconded by Colonel LITTLER, and carried unanimously.

WILLIAM STANLEY CLARKE, Esq. rose to move a vote of thanks to the Council for their services during the past year. Allusion had been made to the

recommendation passed last year, "that the chairman, for the time being, of the Hon. the Court of Directors of the East India Company, be requested to accept the office of Vice-Patron of the Society." As he was the humble individual who had been the first to receive that honour, he could not allow this opportunity to pass without returning his thanks to the Society for the distinction which had been conferred upon him.

Colonel STROVER seconded the vote of thanks to the Council, which was carried unanimously.

The Right Hon. the PRESIDENT then rose and said, that, in the next place, it naturally became his duty to submit to the Meeting such observations as occurred to him, on the annual proceedings of the Society. He, in common with every member present, experienced a lively pleasure in witnessing the continual progress of the Society towards the accomplishment of the great objects it had in view. In the increased attendance of members, it was impossible not to perceive an increased interest in the proceedings of the Society. Their sphere of usefulness was widely increasing, and it might be expected to become still more extended. Those persons, who spent their life in India, would communicate the knowledge they had acquired there, not only on subjects of general literature, but also on the customs, habits, manners, and agriculture of the East. He felt particular gratification in congratulating the Meeting on the proposal made to the Council for establishing a Committee of Agriculture and Trade, in relation to the East. That suggestion came from persons of such eminence, and so intimately connected with the government of India, that it was doubtful whether the proposed plan did not acquire as much importance from the high station of the movers, as from its own intrinsic worth. The manner in which the natives of India were now considered in this country, was another source of gratification. More correct ideas were now formed of their capacity, disposition, and acquirements; and, he need scarcely remind the meeting, that to obtain such accurate ideas was a chief object of the Society. But though the plan above alluded to would certainly be the means of introducing into India the useful discoveries of Europe in arts and sciences, still the encouragement lately given by Parliament, to a more extended and unrestrained intercourse with the East, would be found far more efficacious. Whatever attempts might be made by the Society to forward this object, they must still be inferior to the results arising from individual enterprise directed towards individual interests. He thought he did not assert too much when he named this the commencement of a new era; and as the proposal relative to Trade and Agriculture must produce increased means of acquiring information on the capacity of the different nations of the vast empire of India, he hoped it would meet with encouragement, not only from the Society, but from those engaged in commercial pursuits with the East. In leaving this subject, which had called for congratulation, he must advert to another which did not present an equally pleasing aspect. He meant the intention of discontinuing the printing of works for India at the public expense. Many of the gentlemen present had seen the able remarks of the Sanskrit Professor at Oxford, Mr. WILSON, on the subject. He perfectly agreed in the views taken by that learned person. He agreed also in the views of the

Bengal government for spreading the English language among the natives; but he must say, that that object could only be attained by promoting the cultivation of the native languages. Nothing was more likely to produce a feeling of repugnance to such a plan, than to withdraw the encouragement already given to the cultivation of the native languages. He was not sanguine as to the introduction of the English language into the East; but this attempt at forcing the natives to adopt it, would, in his opinion, produce a complete reaction, and defeat the plan. When he considered how attached the people of India were to their own language, it was not probable, that, out of compliment to their rulers, they would all at once adopt another. A striking example of the truth of his observations might be found in the case of his own country, Wales. Though she had been united with England, and faithful to her, for six hundred years, the native language was still retained there in union with that of England. If any thing could militate strongly against the introduction of the English language into Wales, it would certainly be an attempt to put down the Welsh. Poland was another instance of what he alleged. Nothing had generated greater acrimony and ill-will than the order to put down the Polish language. It was considered a mark of servility and a badge of slavery; for they were reminded of their degradation in every little act of life, and were thus made to feel it the more acutely. He considered, therefore, that the attempt to suppress the native languages in India could not be deemed a wise one. Those persons who had been associated with him in the duty, had waited on the President of the Board of Control, the Chairman and Deputy-Chairman of the Hon. the Court of Directors of the East India Company, and made the representations on the subject which had been suggested; and the answer given by these gentlemen led him to hope that the application would be attended with good effect. In conclusion, he congratulated the meeting on the fulness of the attendance; and trusted that every one would promote the interests of the Society by influencing his friends to become members. Their funds, though in a less unfavourable state than last year, were still inadequate for all the objects of the Society; and no question was brought before the Council, on which they were not cramped in their deliberations by the consideration of their inability to afford any additional expense.

Sir GEORGE STAUNTON in rising to propose a vote of thanks to the right hon. gentleman who had just sat down, did not think it necessary to expatiate on his merits and services. They were well known to all. He could not, however, deny himself the gratification of pointing out two instances which had occurred that season. The first was, when at the head of the deputation he waited on the Chancellor of the Exchequer, to lay before him the claims of the Society to some public building, in which accommodation could be afforded them for the museum; and the other, when he waited, as had been already stated, on the President of the Board of Control, the Chairman, and the Deputy-Chairman of the Court of Directors of the East India Company, to state the evils which must arise in a moral point of view to the natives of India, if the intention of discontinuing all encouragement to the cultivation of the native languages was persisted in. He could not say what the result of that statement

might be; but the able manner in which the President had brought it forward, had evidently a great effect on the eminent persons who were addressed. As some members had thought, that, in consequence of the Council proposing an additional subscription, the Society was in a declining state, he wished to express his opinion, that it was perfectly equal to carry into effect the different objects at which it aimed. The cause of the proposition made by the Council, was not that the Society was declining, but that its range of action was enlarged. Should the application which had been made turn out a failure, the Society would continue to publish those invaluable contributions, which it would receive, under the efficient management of the Secretary. In his opinion, the Society contained within it no seeds of decay; though it did not certainly occupy so high a station as if it possessed additional funds.

Sir RALPH RICE rose to second the motion. He felt that there was little necessity for him to occupy the time of the meeting in dwelling on the character and services of their able President. That gentlemen who had spent the greater part of their lives in India, and owed to it nearly all they possessed, should feel an interest in the Society, seemed natural and easily accounted for; but the Right Hon. President had no such motive to exertion, and therefore the Society owed him the more gratitude. One part of that gentleman's speech was highly gratifying to him; namely, the part which alluded to the attempt to put down the native languages. He could himself also answer for the force of the example derived from Wales; for, if there was one thing which the Welsh loved far above all others, it was the sweet sound of their own language.

Sir GORE OUSELEY submitted the motion to the meeting, and it was carried unanimously.

The PRESIDENT returned thanks.

WILLIAM STANLEY CLARKE, Esq. requested permission to make a supplementary observation. The deputation which had waited on the Chairman of th Court of Directors had been spoken of. He could venture to state, relative to that deputation, that the Court of Directors were as anxious as any one could be for the moral improvement of the natives; and would be well pleased to forward the great objects of the Society.

Colonel FRANCKLIN rose to move, that a vote of thanks be given to Mr. HENRY THOMAS COLEBROOKE, a gentleman endeared to them all for h many amiable and excellent qualities. He regretted that the unfavourable state of that gentleman's health would, for the future, deprive the Society of his active services; but he would still continue to take the warmest interest in its welfare.

Dr. TAYLOR, in seconding the motion, took occasion to remark on the increasing attention paid in Great Britain to Oriental literature. Some years back, when he was at Trinity College, Dublin, no more than seven or eight candidates generally made their appearance for the Hebrew premium: now there were between thirty and forty. The same change would be found to have occurred in England. The attention to the study of the Semitic languages had

increased tenfold at Oxford. He believed Professor Wilson had a good class in Sanskrit. He mentioned this fact in connexion with the motion, as it would, he doubted not, afford gratification to the older members of the Society to learn, that in retiring from the field of Oriental literature, they left younger labourers behind them.

Sir ALEXANDER JOHNSTON rose and said, that it had always been an object of the Society to bring before the British public a knowledge of the intelligence and talents of the natives of India. He had some years ago had an opportunity of doing so with respect to the Hindú natives of India, at an Anniversary Meeting of this Society, at which the late Ram Mohun Roy had attended. He now begged leave to do so with respect to the Muhammedan natives of India, in consequence of the attendance at the Meeting of MAULAVÍ MUHAMMAD ISMAÍL KHÁN, astronomer to his Majesty the King of Oude, and ambassador from that sovereign to his Majesty the King of Great Britain. That gentleman had called on him, soon after his arrival in England, to learn the best means of acquiring astronomical information, and had been referred by Sir Alexander to Sir James South. Sir James was much struck with the extent of the scientific information possessed by the Maulaví, the more so, because all his acquirements had proceeded from Muhammedan instruction. Sir Alexander concluded by moving, that the thanks of the Meeting be returned to MAULAVÍ MUHAMMAD ISMAÍL KHÁN, for the favour of his attendance that day; which was carried unanimously.

Sir GORE OUSELEY intimated this to the Maulaví; who returned thanks in Hindústání.

Sir GORE OUSELEY interpreted. He said the Maulaví was very grateful for the honour done him; that in reality he knew nothing, but that the approbation of the Society would be a great encouragement to him to acquire knowledge; that he had concluded by using a quotation from a Persian classic, to the effect, that "were every hair on his head a tongue, that would not suffice to speak his gratitude."

SAMUEL DYER, Esq. proposed a vote of thanks to the TREASURER, for his great attention to the interests of the Society.

W. NEWNHAM, Esq. seconded the motion; which was passed unanimously.

J. ALEXANDER, Esq. felt greatly indebted to the Meeting for the compliment which they had just paid him. He wished to urge particularly the necessity of increasing their funds. Every thing depended on the parent Society; and if the funds were not sufficient, it would fall into disrepute, and lose its independence.

Sir CHARLES FORBES moved a vote of thanks to Captain HARKNESS, the Secretary of the Society, for the zeal, ability, and unwearied exertions, he had displayed in favour of the Society. In corroboration of the arguments used against depriving the natives of India of their language, he might adduce the order given by Napoleon to put down the Dutch language: from the moment

when the decree was promulgated, a bitter hatred arose on the part of the Hollanders against him. The attempt was a fruitless one, and ought never to be made.

The motion was seconded by Captain SHEPHERD, and carried unanimously.

Captain HARKNESS felt extremely gratified; his humble endeavours, he thought, were but little deserving the kind notice that had been taken of them.

Major MOOR moved a vote of thanks to Sir GRAVES HAUGHTON, the Librarian.

Major BURT seconded the motion; which was carried unanimously.

Mr. WYNN said, that he had received a letter from Sir Graves Haughton, regretting, that, owing to the influenza, he could not attend. Those who had witnessed the interest which Sir Graves took in the Society's welfare, must appreciate the value of his services.

The Meeting then proceeded to ballot for the Officers and Council for the ensuing year, Colonel STROVER and RICHARD TAYLOR, Esq. being nominated scrutineers. On the termination of the ballot the President announced, that all the Officers were re-elected; and that the following gentlemen were elected into the Council in the place of the eight who had retired:—the Right Hon. Lord William Henry Cavendish Bentinck, M.P.; the Right Hon. Lord Teignmouth; the Right Hon. Holt Mackenzie; Henry S. Græme, Esq.; Colonel James Law Lushington, C.B.; Henry St. George Tucker, Esq.; Francis Warden, Esq.; and Thomas Weeding, Esq.

The next General Meeting was announced for the 4th of June.

THIRTEEENTH ANNUAL REPORT

OF

THE COUNCIL.

MAY 7TH, 1836.

In calling the attention of the Members, on this, the Thirteenth Anniversary of the Royal Asiatic Society, to a brief and cursory retrospect of its history during the past year, the Council has at once a pleasing and a painful duty to perform. On the one hand, the steadily advancing prosperity of the Society, the increased interest with which its proceedings are viewed, and the hopes which, on no unreasonable grounds, your Council is led to entertain of its future efficiency as an instrument of good, are matters of gratification which none can fail to appreciate. On the other hand, the loss which the Society has sustained by the death of some of its most distinguished Members—men whose characters and attainments shed a lustre on the Institution; and the continued ill health of our venerable Director, are subjects of melancholy but unavailing regret.

On the subject of the financial affairs of the Society, your Council refers with satisfaction to the statement of the Auditors, which will be read to the Meeting this day. It will be in the recollection of the Members, that at the close of the year 1834 there remained a balance due to the Society's Treasurer, amounting to 50*l.* 1*s.* 4*d.* This deficiency, combined with the necessity of liquidating some debts which had become due, induced your Council, however reluctantly, to sell out a portion of the Society's stock in the three per cent consols. The proceeds of this sale amounted to 224*l.* 7*s.* 6*d.* The statement of receipts and disbursements for the year 1835, however, exhibits a balance in favour of the Society of 402*l.* 6*s.* 1*d.*; so that, deducting the proceeds of the stock sold, there is still left a sum of 177*l.* 18*s.* 7*d.* in excess of receipt over expenditure for the last year. And although some heavy items are included in the disbursements for the current year, your Council confidently hopes, that the estimated balance of 326*l.* 14*s.* 11*d.*, as exhibited in the prospective statement, will be more than verified. At the same time, your Council would beg to observe, that a system of rigid economy is necessary to such a result; and, indeed, without the strictest attention to such a system, the present resources of the Society would be altogether inadequate to its ordinary demands.

Your Council has to announce, that the accession of Members since the last Anniversary has been greater than the general average for one year; while, within the same period, the casualties have been so unusually severe, as, in number, to exceed the former by one. The following is a list of those Members

of whom death has deprived the Society during the past year:—Sir Colquhoun Grant, K.C.B.; Sir John Kennaway, Bart.; Richard Blanshard, Esq. F.R.S.; Alexander Boswell, Esq.; Colonel Thomas Duer Broughton; David Carruthers, Esq.; Henry H. Goodhall, Esq.; Richard Thomas Goodwin, Esq.; Professor Hamaker; Captain Henry Kater, F.R.S.; M. Julius von Klaproth; Francis Mendez, Esq.; Colonel Gervase Pennington, C. B.; Major David Price, M.R.S.L.; Professor Reuvens; Lieut.-Colonel James Tod.

Major DAVID PRICE entered the service of the East India Company in the year 1780; and was honourably distinguished during a course of active service in India for a period of nearly twenty-four years. Sometime after the capture of Seringapatam he was appointed to the staff at Surat by the Hon. Jonathan Duncan, governor of Bombay. It was in Surat that he made the collection of Persian historical and other manuscripts, which he eventually bequeathed to this Society, and which were laid before the Members at a late meeting. At Surat, and subsequently at Bombay, where he filled the office of Judge Advocate General, Major Price pursued his researches in Muhammedan history; and after his return to England, having fixed his residence at Brecon, in South Wales, of which country he was a native, completed and published, in the years 1811, 1812, and 1821, the result of his labours, under the title of "A Chronological Retrospect; or, Memoir of the Principal Events of Muhammedan History, from the death of the Arabian Legislator to the Accession of the Emperor Akbar." Coming out under the disadvantages of a distant and rural press, and in single volumes, with intervals of several years, this work has been hitherto much less known and appreciated than the ability with which it is drawn up, and the originality of the sources which supplied its materials, entitle it to be. It was followed in 1824 by another work in quarto, entitled "An Essay towards the History of Arabia, antecedent to the Birth of Muhammed."

The Oriental Translation Committee also numbered Major Price among the distinguished scholars whose translations it has given to the public. His translation of the "Autobiography of the Emperor Jehangueir," and of the "Last Days of Krishna," were published by it; and in June 1830, its gold medal was presented to him, as a mark of the Committee's estimation of his talents and labours. Subsequently the Committee published his translation of "An Account of the Siege and Reduction of Chaitûr, from the Akbar Nameh of Abul Fazl."

To the Transactions of the Society, Major Price contributed "An Extract from the Muáliját-i Dárá Shekóhí. The MS. of the valuable work from which this extract was made, and which is supposed to be the only one in Europe, with the exception of a copy of it taken about thirty years ago for the library of the King of France, is included in Major Price's munificent bequest to the Society of his collection of Oriental manuscripts.

To the memory of the late Colonel BROUGHTON, the tribute of the Society's regret is peculiarly due, for the ability and assiduous attention with which, during a period of more than two years, he discharged the duties of Honorary Secretary; while his amusing work, entitled "Letters from a Mahratta Camp," and a small volume of translations, entitled "Specimens of the Popular

Poetry of the Hindús," have rendered him favourably known to many who had not the pleasure of his personal acquaintance.

Colonel Tod was a native of Scotland, and was born about the year 1782. At the early age of seventeen or eighteen he left England for India. In 1805, he was attached to the embassy sent, at the close of the Mahratta war, to the camp of Sindhia; and thus Rajputana became the scene of his future official labours. There he made that survey of the country, of which his map of Central and Western India is the result. In 1817, he was appointed to the important situation of Political Agent in Rajast'han, Mewar, Marwar, Jessulmer, Kolah, and Boondi, an office which he continued to hold till his shattered health compelled him to return to England.

It was fortunate for the interests of Oriental science, that a person of Colonel Tod's peculiarly ardent and indefatigable turn of mind, should have found in India a scene so well fitted to call into action, and give scope to his energies. From the moment when his official duties conducted him to Rajputana, six years after his arrival in India, in 1800, down to the year 1823, when he quitted that country, his time appears to have been divided between solicitude for the political welfare of the interesting people in some degree committed to his charge, and a zealous investigation of the history, the geography, and the learning of Western India. His great work, the "Annals of Rajast'han," exhibits abundant evidence of the latter; and the affectionate gratitude of the Rajpúts, affords the liveliest testimony of the former. The Transactions of the Society contain various papers which attest the extensive research of our lamented associate; and several others intended for it were in embryo. These are lost; but his "Travels in Western India," comprising the results of his journey across the Aravulli Mountains to Aboo, the peninsula of Saurashtra, Somnat, and Girnar, are prepared for publication.

In Colonel Tod the Society has lost one of its most distinguished benefactors. It also owes him a debt of gratitude for his services as Librarian for a considerable period, and till his impaired health compelled him to relinquish the office. That his interest in the Society's welfare, and his desire to further its objects, continued to actuate him to the last, is evinced in the valuable bequest which he has made to it; and which is, perhaps, the highest testimony that he could render to the importance of the Society in his estimation.

In M. Klaproth Oriental literature has lost one of its most indefatigable and distinguished votaries. Devoted to these pursuits from his earliest youth, and never relaxing in his ardour till the last, the number and variety of the works with which he so largely contributed to the advancement of our knowledge of Asia, its geography and its languages, might well seem the laborious fruits of a much longer life than it was his lot to enjoy.

Known through the medium of his works to all the Orientalists of Europe, and to the members of the Oriental Translation Committee in particular, as the translator of two important works, the "Annals of the Japanese Empire," and the "San kokf tsou ran to sets," he has left a void behind him which will not readily be supplied; and one which recalls, and makes still more deeply felt,

our regret for the loss of a scholar of kindred pursuits and kindred genius—the lamented RÉMUSAT.

Professor HAMAKER, of the University of Leyden, the learned author of the "Miscellanea Phœnicia," and other works on the Punic inscriptions and monuments in the Museum of Leyden, was a Foreign Member of the Society. Although chiefly known in this country by his Phœnician researches, he was a man of profound acquirements in various Oriental languages, his unwearied application to which, it is to be feared, contributed to hasten his premature end.

Another distinguished Foreign Member whom the Society has lost, is Professor REUVENS, of Leyden, well known in the learned world by his researches into the antiquities of Egypt. He was suddenly cut off by apoplexy on his return from England, which he had visited for the purpose of attending the sale of Mr. Salt's collection.

But the Council would now turn from these painful subjects of regret, and draw the attention of the Society to the numerous and valuable donations which have been made since the last Anniversary. These donations having been already particularised in the Society's Proceedings, two or three of them only will be here noticed.

To BRIAN HOUGHTON HODGSON, Esq. the Society is under especial obligations, for having enriched its library with a donation of extreme value, and one which is unique in the libraries of Europe; viz. the whole of the voluminous work, entitled the "Sata Sahasrika Prajna Paramita." These books, collected by the learned donor at great trouble and expense, form a part of a series, of vast extent, of the original Sanskrit depositaries of the Bauddha philosophy and religion—that subtle and complex system which Mr. Hodgson's zealous and indefatigable researches have so ably developed in the pages of the Society's Journal.

From Dr. OSWALD WOOD the Society has received his translation of the Chevalier von Hammer's interesting "History of the Assassins." The able translator has dedicated his work to the Royal Asiatic Society; and it is very pleasing to observe, that the fullest testimony is borne by the learned author of the original, now Baron Hammer and Purgstall, to the fidelity and elegance of this translation.

By M. GUIZOT, the French Minister of Public Instruction, the Society has been favoured, in the name of the French government, with the posthumous work of M. VICTOR JACQUEMONT, entitled "Voyage dans l'Inde." It is with peculiar pleasure that the Society notices this gratifying act of courtesy on the part of the French government.

The continued liberality of many of the Members, in the contribution of books to the Library, and of various objects of interest to the Museum, is a subject of much congratulation, and calls for the sincerest acknowledgment; while the munificent bequests of two of its distinguished associates lately deceased, to which allusion has already been made, have enriched both depart-

ments with a most valuable collection. Although by these and similar accessions, the Library has been progressively increasing, yet so varied is the field of Oriental literature, and so rare are many of the works in that department which it is most desirable to possess, that the Library is still far from being complete. The Council would, therefore, take the liberty of suggesting to Members, that much may be done to further this desirable object by individual contributions of such works on Oriental literature as the Members or friends of the Society may have duplicates of in their collections,—a practice to which the Library has been indebted for not a few valuable acquisitions.

At the last Anniversary Meeting it was unanimously resolved, "That the Chairman for the time being of the Hon. the Court of Directors of the East India Company be requested to accept the office of Vice-Patron of the Society." This resolution was made known to the Hon. Court; and your Council has the gratification to state that the request was most readily acceded to. At the same Meeting it was likewise unanimously resolved to enrol amongst its Honorary Members his Majesty Muhammad Sháh Shahen Sháh, king of Persia, and his Highness Maháráját Rungít Singh, Rájá of the Punjáb. Diplomas suitably ornamented and emblazoned have accordingly been transmitted to the Sháh and the Maháráját; the former, through the Right Hon. Robert Grant, governor of Bombay; the latter, through the Right Hon. Lord Auckland, Governor-General of India: but up to the present time no intimation has been received as to these documents having reached their destination.

The Council feels bound to advert in this place to the suggestion of its highly respected associate, Major-General Sir Henry Worsley, to hand down to posterity, by some record or memorial less perishable than that of a periodical publication, the names of distinguished members of the Society, deceased. A special Meeting of the Council was convened for the due consideration of this subject; and highly as it approved of the plan suggested by the major-general, as one in every way gratifying and desirable, still it could not, from the state of the Society's funds, recommend its adoption: nor did it consider it expedient to call on the Members of the Society to come forward with additional subscriptions on this account. At the same time, however, entirely concurring in the principle of the suggestion, the Council wished it to be understood, that the Society would be happy to receive busts, paintings, or other lasting memorials of distinguished members of the Society, and to place them, with an engraved tablet setting forth the donor's name, &c. &c. in the most eligible and conspicuous part of the Society's house.

The Members of this Society must have viewed with considerable surprise the late procedure of the supreme government in India, in withdrawing the support it had hitherto given to the printing and publishing of standard Oriental works. On this subject your Council is happy to state, that in conjunction with the Oriental Translation Committee, to which an address had been made, as well as to your Council, from Professor Wilson, on the part of the Asiatic Society of Bengal, a deputation waited upon the Chairman and Deputy-Chairman of the Hon. the East India Company, and afterwards on the President of the Board of Control, and that from the reception it had met with from the Chairs and from the President of the Board of Control, and from the attention

that was paid to its representations, your Council trusts that the best results may be anticipated by the friends of Oriental literature.

On the table are two Numbers of the Society's Journal, which have appeared since the last Anniversary. If the form and style is less costly and sumptuous than those of the Society's Transactions, it must be borne in mind, that the change has answered the object of the Council, which was to give increased circulation to the work, and, at the same time, to diminish the expenditure to the Society. By a reference to the papers which are contained in these numbers, it will be seen that the Journal still upholds its character, by the contributions of men whose opportunities of information and research entitle them to every attention.

It was notified at a General Meeting of the Society on the 5th of March last, that a deputation of the Council had waited on the Chancellor of the Exchequer to urge the claims of the Society on government for public accommodation; nor would it be necessary to advert to the circumstance here, had not some further correspondence passed between the Society and the Chancellor of the Exchequer, from which your Council hopes that our claims to public accommodation may be acceded to, whenever the rooms in Somerset House, or in any other public building that could be made available for the purposes of the Society, become vacated.

The Oriental Translation Committee has continued in active operation during the past year. The works which have been given to the public during that period are the following:—

The first volume of Hájí Khalfa's Arabic Bibliographical Dictionary, by Professor Flügel.

This is, perhaps, the most valuable work which the Committee has published since its commencement; and formed the ground-work of D'Herbelot's "Bibliothèque Orientale." It has accordingly been edited with a care correspondent with its importance. The text given is founded on a careful collation of the best MSS. in Germany, Austria, and France, and is accompanied by a faithful Latin translation.

The second volume of M. Langlois' translation of the Harivansa, a Sanskrit work, which is generally considered as supplementary to the Mahábhárata, and which throws considerable light on Hindú mythology.

The second volume of the Chronicles of Rabbi Joseph, translated from the Hebrew by the Rev. Dr. Bialloblotzky; a work which gives an interesting account of the Ottoman power, and of its wars with the French.

The Book of Rewards and Punishments, translated from the Chinese by Professor Julien; being a collection of moral maxims, each of which is accompanied by illustrative anecdotes.

Besides the works above mentioned, as being complete, there are several in a state of great forwardness, and which will soon be put into the hands of the subscribers. These are—The First Book of the Rig Veda-Sanhita; a collection of Hymns by various authors, addressed to the several deities of the Hindú mythology: edited and translated into Latin by Dr. Rosen. This work will be ready for delivery in a few months.

The first volume of the Táríkh-i Tabarí; an esteemed and authentic history,

containing accounts of the patriarchs, prophets, and philosophers of Muhammed and the Khalifs, is nearly completed.

The printing of the seventh part of the Travels of Macarius, translated by Mr. Belfour, is completed.

The second volume of Dr. Dorn's History of the Afgháns is also in the press.

The History of the Temple of Jerusalem by Suíthí: translated from the Arabic by the Rev. James Reynolds, is in the course of printing.

The able and highly interesting papers read at a late General Meeting of the Society by two of its Members, the Right Hon. Holt Mackenzie and John Forbes Royle, Esq. will be in the recollection of many of the gentlemen now present. The plan suggested in these papers—that of applying the power and influence of the Society, more immediately than has hitherto been the case, to the subjects of agriculture and commerce in regard to Asia—has since engaged much of the attention of your Council. A Committee was appointed for its special consideration; and the Council, entirely approving of the report made to it by that Committee, has adopted the same, and which will now be submitted to you for your concurrence and approbation. At the same time, the Council does not consider it necessary to dwell longer on this subject at present, as it will be more amply explained by the Right Hon. the Chairman of the Committee of Correspondence, in his exposition of the proceedings of that Committee since the last Anniversary.

In the preceding brief review, your Council has given the more prominent features of the Society's history during the past year. That the objects of this Institution are important, every one, it is believed, will readily allow; nor will it be less willingly conceded, that to prosecute these objects effectually, more extended means are required than are at present at the Society's disposal. When our intercourse with India was less free than at present; when our fellow-subjects there were less accustomed to look to England for the communication of some of those many advantages which she enjoys from her superior civilisation, the efforts of such an Institution as the Royal Asiatic Society would be comparatively limited. But now that the reverse of the foregoing is the case, they will naturally be expected proportionally to increase. Your Council hopes they may be found so to do. To the Hon. the East India Company, the acknowledgments of your Council are particularly due for its continued liberal patronage of the Society. Your Council hopes that the legislature will not be unmindful of the importance of this Institution; and that every member, impressed with a similar feeling, will afford his individual aid and influence to promote the welfare and prosperity of the Royal Asiatic Society.

AUDITORS' REPORT.

The Auditors appointed by the Council of the Royal Asiatic Society to examine the accounts for the year 1835, have the honour to submit the following Report.

The statement of receipts and disbursements furnished by the Treasurer, shews that the income for the preceding year, including the sum of 224*l.* 7*s.* 6*d.*, the produce of the sale of 250*l.* of the Society's capital in the three per cent consols, was 1588*l.* 18*s.* 2*d.*, and the disbursements, including 50*l.* 1*s.* 4*d.* due to the Treasurer at the end of 1834, 1186*l.* 12*s.* 1*d.*, leaving a balance in favour of the Society of 402*l.* 6*s.* 1*d.* to be applied to the service of the current year.

The items of this statement are as follow (*vide* Statement, No. I.):—

In the estimate of the probable receipts and disbursements for 1835, submitted at the last Anniversary, it was assumed that a balance of nearly 50*l.* would remain against the Society at the end of the year. The difference between the present and former statements arises principally from several payments having been postponed, and from the sale of stock not being previously calculated upon.

The Auditors have been furnished by the Secretary with the accompanying statement of the probable receipts and expenditure for the current year, shewing a balance in favour of the Society of about 300*l.*; but it must be observed, that a large portion of the estimated receipts, nearly 200*l.*, arises from compositions, which cannot always be reckoned upon; and that, in fact, the actual income of the Society, and within which they ought, if possible, to confine their expenses, is not more than 800*l.* The Auditors, therefore, are bound to remark, that the same necessity alluded to in the Report of last year, for a continued system of strict economy, still exists.

The Auditors cannot close this Report, without recording their entire satisfaction at the order and regularity with which the books and accounts are kept, and again bringing to the notice of the Society the attention and kindness of the Treasurer, not only in arranging the accounts, but also in promoting, on all occasions, the general interests and welfare of the Society.

The thanks of the Society are also especially due to the Secretary, not only for the care he has taken in regard to the accounts, but for the strict economy with which he has administered the very limited resources of the Society.

The assets of the Society are estimated as follows:—

	£.	*s.*	*d.*
Value of the Society's Library, Museum, Furniture, Stock of Publications, and Copyrights	3500	0	0
Value of the Stock invested in Three per Cent Consols.....	1524	0	0
	£5024	0	0

(Signed) ANDREW MACKLEW { Auditor on the part of the Council.

W. H. SYKES, M. C. CHASE { Auditors on the part of the Society.

Royal Asiatic Society's House,
Grafton Street, Bond Street,
7th of May, 1836.

STATEMENT, No. I.

1835. RECEIPTS.	£.	s.	d.	£.	s.	d.
From 106 Annual Subscriptions, at £2 2s.	222	12	0			
104 ditto, ditto, at £3 3s.	327	12	0			
Arrears of Subscriptions	75	12	0			
Annual Donation from the Hon. East India Company	105	0	0			
Ditto from the Oriental Translation Fund for the year 1834	100	0	0			
Fifteen Admission Fees, at £5 5s.	78	15	0			
Four Compositions, at £31 10s.	126	0	0			
Three ditto, at £15 15s.	47	5	0			
One ditto, at £21	21	0	0			
Produce of the Sale of £250, Three per Cent Consols	224	7	6			
Subscription from the Oriental Translation Fund for Copies of Rám Ráz's Hindú Architecture	180	0	0			
Sale of Transactions, &c.	14	19	0			
Dividends on Stock in the Three per Cent Consols	65	15	8			
Total Receipts in 1835				£1588	18	2

1835. DISBURSEMENTS.	£.	s.	d.	£.	s.	d.
By House Rent	225	5	0			
Salaries and Wages	228	10	0			
Imprests to Secretary for the payment of current expenses and taxes	200	0	0			
Collector's Commission	34	14	10			
Subscription to Indian Newspapers	180	9	11			
Printing Hindú Architecture	80	0	0			
Bookbinding	57	14	0			
Stationery, Circulars, &c.	34	9	3			
Coal-merchant's Bill	18	18	0			
Carpenter's Bill	13	12	8			
Vignettes and Lithography	30	12	1			
Freight, Shipping Charges, and Sundries	32	5	0			
				£1136	10	9
Balance due to the Treasurer at the end of 1834				50	1	4
Total Expenses in 1835				£1186	12	1
Balance of Cash in the hands of the Treasurer on the 31st Dec. 1835, applicable to the Service of the year 1836				402	6	1
				£1588	18	2

STATEMENT, No. II.

1836. ESTIMATED RECEIPTS.	£.	s.	d.			
From 118 Annual Subscriptions, at Two Guineas each	247	16	0			
115 ditto, at Three Guineas each	362	5	0			
Annual Donation from the Hon. East India Company	105	0	0			
Ditto from the Oriental Translation Fund	100	0	0			
Admission-fees, Compositions, and Subscriptions of New Members	200	0	0			
Dividends on Stock, Sale of Transactions, Journal, &c.	80	0	0			
Recoverable Arrears	80	0	0			
Total probable Receipts in 1836				£1175	1	0
Balance due by the Treasurer at the end of 1835				402	6	1
				£1577	7	1

1836. ESTIMATED DISBURSEMENTS.	£.	s.	d.			
By Rent of House	225	5	0			
Current Expenses and Taxes payable through the Secretary	200	0	0			
Salaries and Wages	230	0	0			
Collector's Commission	30	0	0			
Cox and Co's Bill for Printing Part III. Vol. III. of Transactions R.A.S.	230	7	0			
Stationery, Circulars, &c.	20	0	0			
Bookbinding	25	0	0			
Bookseller's Bills	20	0	0			
Expenses on Nos. I. and II. of the Journal, and Sundry Printing	208	12	8			
Coal-merchant's and Sundry Bills	40	0	0			
Vizetelly and Co.'s Bill for Ornamental Diplomas	21	7	6			
				£1250	12	2
Estimated balance of Cash in favour of the Society on the 31st of Dec. 1836				326	14	11
				£1577	7	1

PROCEEDINGS

OF

THE GENERAL MEETINGS

OF

THE ROYAL ASIATIC SOCIETY.

SATURDAY, JUNE 4, 1836.

A GENERAL Meeting was held this day; the Right Hon. Sir ALEXANDER JOHNSTON, *Vice-President*, in the Chair.

The Minutes of the Anniversary Meeting were read and confirmed.

The following donations were laid upon the table:—

From Professor G. H. Bernstein, F.M.R.A.S.

His "Szafieddini Hellensis Carmen Arabicum." Lipsiæ, 1816. Folio.

His "Gregorii Bar-Hebræi Chronici Syriaci Specimen primum." Lipsiæ, 1822. 4to.

His "Hitopadæsi Particula." Vratislaniæ, 1823. 4to.

G. G. Kirschii Chrestomathia Syriaca, cum Lexico; demo edidit G. H. Bernstein.

From the Editors (through Professor Bernstein)

Gregorii Bar-Hebræi Scholia in Psalmum quintum et decimum octavum; ed. J. T. G. H. Rhode. Vratislaniæ, 1832. 8vo.

Tausend und eine Nacht. Arabisch. Herausgegeben von Dr. M. Habicht. Vols. IV. V. VI. Breslau, 1828, 1831, 1834. 12mo.

From Sir George Thomas Staunton, Bart., V.P.R.A.S., &c.

His "Remarks on the British Relations with China, &c." Second edition. London, 1836. 8vo.

From J. F. Davis, Esq., M.R.A.S., &c.

The Chinese; a General Description of the Empire of China and its Inhabitants. By J. F. Davis, Esq., F.R.S., &c.; late His Majesty's Chief Superintendent in China. 2 vols. 12mo. London, 1836.

From the Author.

The Royal Society in the XIXth Century; being a Statistical Summary of its Labours during the last Thirty-five Years, with many original Tables, &c. By A. B. Granville, M.D., F.R.S., &c. London, 1836. 8vo.

From F. Corbyn, Esq., Garrison Surgeon, Fort William.

The India Journal of Medical Science. Vols. I. and II. Calcutta, 1834–5. 8vo.

From G. W. Earl, Esq., M.R.A.S.

His Pamphlet on the Commercial and Agricultural Capabilities of the North Coast of New Holland. London, 1836. 8vo.

From the Royal Geographical Society.

Its "Journal." Vol. VI. Part I. London, 1836. 8vo.

From the Zoological Society of London.

Its "Transactions." Vol. I. Part IV. 4to.
Its "Proceedings." June to December, 1835. 8vo.

From the Société de Géographie of Paris.

Bulletin de la Société de Géographie. Vols. XI. to XV. Paris, 1829–1831. 12mo.

From R. Taylor, Esq., M.R.A.S.

Twelve Treatises on Indian Mythology and Christian Doctrine, &c. In Tamil. Also, Seven Tamil Tracts on Christian and Hindú Theology. By Mr. W. Roberts, of Pursewankum, near Madras.

From Major T. S. Burt, M.R.A.S.

An Arabic MS. on the Blessings attending the Reading of certain Chapters of the Korán. 12mo.

Copies of Inscriptions from the Allahabad Lat'h; with a Latin translation of one of the Inscriptions.

Copy of an Arabic Inscription found on a tomb at Kurrah.

Plan and Section of the Fort of Buddík, in Bundelkhund.

Plan and Elevation of the Lingam.

Specimen of Persian writing written with the little finger-nail.

Three Drawings, by a native artist, of the Forts of Kombhere, Waere, and Biana.

From the Editor.

Ibn Challikani Vitæ illustrium virorum edidit F. Wüstenfeld. Fas. Prim. et Sec. Gottingæ, 1835. 4to. (Lithog.)

From the Bahama Society for the Diffusion of Knowledge.

Its "Journal." Nos. 6 to 10, inclusive.

From the Author.

Analyse de l'Histoire Asiatique et de l'Histoire Grècque. Par E. G. Arbanère. 2 vols. 8vo. Paris, 1835.

From Mahárájá Kálí Krishna, C.M.R.A.S.

Sketch of the Solar System, translated by him from the English into Bengalí.

An abridged Translation by him, into English, of Kálídása's "*Sruta Bodha.*" MS.

From Messrs. Fisher and Co.

Syria, the Holy Land, Asia Minor, &c. illustrated; in a series of Views drawn from Nature; with descriptions of the plates. By J. Carne, Esq. Part I. London, 1836. 4to.

From the Author.

Parallèle des Langues de l'Europe et de l'Inde; par F. G. Eichhoff. Paris, 1836. 4to.

From Baron Hammer and Purgstall, F.M.R.A.S.

His "Geschichte der Osmanischen Dicht Kunst." Ester Band. Pest., 1836. 8vo.

From Thomas Weeding, M.R.A.S.

A Chinese box and canister, containing the flower of the tea-plant.

The "Grand Chop," or Chinese official clearance of an English ship, the Sarah, Captain Whiteside, from the Custom House of Canton; with an analytical description of the document.

From Lieut.-Colonel Francklin, M.R.A.S.

Eight drawings in pencil, upon oiled paper, of figures from sculptures in a Bauddha Temple, near Bhilsa, in the Deccan.

Thanks were ordered to be returned to the respective donors.

John Tytler, Esq., read an analysis and translation made by him of Specimens of a Persian work on Mathematics and Astronomy, by Maulaví Gholám Hossaín.

Thanks were returned to Mr. Tytler for his communication.

SATURDAY, JUNE 18, 1836.

A GENERAL Meeting was held this day; the Right Hon Sir ALEXANDER JOHNSTON, *Vice-President*, in the Chair.

The following donations were laid upon the table:—

From Cavelly Venkata Lutchmiah, C.M.R.A.S.

Small brass images of *Chatúr Bhúja-Narrain*, and his two consorts.
Four specimens of stone.

From the Royal Academy of Sciences at Berlin.

Abhandlungen der Koniglichen Akademie der Wissenschaften zu Berlin, 1832-1834.

From Major T. S. Burt, M.R.A.S.

Observations on the Curiosities of Nature. By the late W. Burt, Esq. Edited by his nephew, T. S. Burt, Esq., F.R.S., &c. London, 1836. 12mo.

His "Views chiefly illustrative of the Ancient and Modern Hindú and Musalmán Architecture." London, 1836. Folio.

From the Madras Literary Society and Auxiliary Royal Asiatic Society.

The Madras Journal of Literature and Science. Edited by J. C. Morris, F.R.S., &c. Vol. II. Madras, 1835. 12mo.

From the Medico-Botanical Society.

Address of Earl Stanhope, President, &c., 16th January 1836.

From Cavelly Venkata Ramaswámi, C.M.R.A.S.

Moolika Sankálitum; or, Mingling of Herbs; a work on Medicine, translated from Teloogoo into English. By C. V. Ramaswámi. Madras, 1835. 8vo.

From Messrs. Fisher and Co.

Syria, &c. illustrated. Part II.

From John Lee, Esq. D.C.L.

Lithographed Drawings of two Egyptian Statues.

Thanks were ordered to be returned to the respective donors.

Henry Harper Spry, Esq., M. D., John Curtis, Esq., and the Rev. John Wilson, President of the Bombay Branch Royal Asiatic Society, were elected Resident Members of the Society.

Maulaví Muhammad Ismáil Khán, Astronomer to the King of Oude, was elected a Non-resident Member of the Society.

The Secretary read a letter from B. H. Hodgson, Esq., British Resident at Nepál, addressed to the Right Hon. Sir Alexander Johnston, giving an account of the plan he had adopted in collecting materials for his forthcoming work on the Zoology of Nepál.

The Secretary also read a letter from Percival B. Lord, Esq., of the Bombay Medical Establishment, containing remarks on the port and town of Cambay, in Guzerat; and giving a description of the method pursued by the natives of that place in the cutting and polishing of cornelians.

Thanks were ordered to be returned to those gentlemen for their communications.

SATURDAY, JULY 2, 1836.

A GENERAL Meeting was held this day; the Right Hon. Sir ALEXANDER JOHNSTON, Vice-President, in the Chair.

The Right Hon. the Chairman announced, that the meeting had been made special for the purpose of submitting to the members a recommendation from the Council to alter Article XLIX. of the Regulations of the Society; and, in room of the words "the sum of Twenty Guineas" in that article, to substitute the following:—"an Annual Subscription of Two Guineas, or, in lieu thereof, as a composition, the sum of Twenty Guineas."

The question whether the above alteration should be made was then put, and carried unanimously.

The following donations were laid upon the table:—

From B. H. Hodgson, Esq., M.R.A.S.

A second series of Sanskrit MSS., comprising seventy-six works, of the religion and philosophy of the Buddhists, collected by him in Nepál.

From J. C. Whish, Esq.

A large quantity of MSS. on palm-leaves, principally in Sanskrit, written in the Malayalma character, and comprising the *Vedas*, and other religious, philosophical, historical, and miscellaneous works of the Hindús; also a quantity of similar MSS. on paper. The whole being the collection of his brother, Mr. C. M. Whish, of the Madras Civil Service, deceased.

From Sir Charles Forbes, Bart., M.R.A.S.

Portraits in oil, in a richly gilt frame, of two natives of Bombay, Jamsetjee Bomanjee, Esq., and Nowrojee Jamsetjee, Esq., shipbuilders.

From the Right Hon. Lord Prudhoe.

Four African Spears.

From the Asiatic Society of Bengal.

The following works, printed under its auspices: —
Fatawa Alemgirí. Arabic. Vols. IV., V., VI. Calcutta, 1835. 4to.
The Mahábhárata. Sanskrit. Vol. I. Calcutta, 1834, 4to.
The Rája Taranginí. Sanskrit. Calcutta, 1835. 4to.
The Súsruta. Sanskrit. Vol. I. Calcutta, 1835. 8vo.

From the Lords Commissioners of the Admiralty.

Richardson's Catalogue of 7,385 Stars, chiefly in the Southern Hemisphere. Printed by order of the Lords Commissioners of the Admiralty. London, 1835. 4to.

From the Author.

A Journey from Sydney to the Australian Alps. By Dr. Lhotzky. Sydney, 1835. 8vo.

From the American Philosophical Society.

Its "Transactions." Vol. V. Part 2. Philadelphia, 1835. 4to.

From Messrs. Fisher and Co.

Syria, &c. illustrated. Part III.

From J. C. Loudon, Esq.

His "Arboretum Britannicum," &c. Nos. 20, 21, 22. 8vo.

From the Rev. C. Gutzlaff.

Two Ancient Japanese Coins.

Thanks were ordered to be returned to the respective donors; and, in the cases of Sir Charles Forbes, Mr. Hodgson, and Mr. Whish, they were made special.

Colonel Sir J. O'Halloran, C. B.; W. R. Baker, Esq.; John Miller, Esq.; Lieut.-Colonel Galloway; and John D. Campbell, Esq., were elected Resident Members.

David L. Burns, Esq., and Captain Robert Cogan, were elected Non-resident Members.

The Chevalier E. G. Arbanère was elected a Corresponding Member.

The following papers were read to the Meeting: —

1. The personal narrative of the Taleb Sidi Ibrahim ben Muhammed el-Iessi, of the Province of Sús, including some statistical and political Notices

of that extreme south-west country of Morocco. Translated from the original Berber MS. into Arabic; and afterwards translated into English by W. B. Hodgson, Esq.

2. Translation of an Inscription on an Ancient Hindú Seal, by the late Si Charles Wilkins; with Observations by Professor Wilson.

SATURDAY, JULY 16, 1835.

A GENERAL Meeting was held this day; the Right Hon. C. W. WILLIAM WYNN, M.P. *President*, in the Chair.

The following donations were presented:—

From Walter Elliot, Esq. M.R.A.S.

Two MS. volumes containing copies of five hundred and ninety-five Inscriptions on stone and copper, principally in the Sanskrit language, in the Canarese character, collected by him, during a period of eight years, in the Southern Mahratta country, in the Northern District of Mysore, and in the Province of Sunda; with an analytical Account of the Inscriptions, and of the dynasties to which they refer.

An Alphabet of the Ancient Canarese Character; compiled by Mr. Elliot. Lithog. Folio. (Three copies.)

An original Grant or Deed, engraved on two copper-plates, in the Ancient Canarese Character. The plates are connected by a copper ring, on which is represented a boar, surmounted by figures of the sun and moon.

From Colonel James Kelley.

The Horns of the Bison.

From the Author.

Die Regenwurmer auf den Feldern der Orientalischen Numismatik untersucht von Dr. E. Adernson. Leipzig, 1836. 8vo.

From Dr. G. F. Grotefend, F.M.R.A.S.

Sanchuniathon's Urgeschichte der Phonizier, &c. Mit einem Vorworte vom Dr. Grotefend. Hanover, 1836. 8vo.

Thanks were ordered to be returned to the respective donors.

The Right Hon. Sir Alexander Johnston submitted to the Meeting a Table of Plants cultivated for useful purposes in Bengal, compiled from documents in the East India House, and with which he had been favoured by the Deputy-Chairman of the Court of Directors; and intimated that that gentleman had expressed his willingness to furnish copies of any similar papers at the India House that might be of use to the Society:

Ordered,

That the special thanks of the Meeting be returned to the Deputy-Chairman of the Court of Directors.

John Macvicar, Esq., and Thomas Teed, Esq., were elected Resident Members.

His Highness, the Imám of Muscat, was unanimously elected an Honorary Member.

The following gentlemen, natives of Bombay, were elected non-Resident Members of the Society:—Jamsetjee Jeejeebhoy, Bomanjee Hormarjee, Dadabhoy Pestonjee, Framjee Cowasjee, Hormarjee Bhiccajee, Jugonathjee Sunkersett, Dhackjee Dadajee, Cursetjee Cowasjee, Nowrojee Jamsetjee, Cursetjee Rustomjee, Mahomed Ally Rogay, Mahomed Ibrahim Muckba, Cursetjee Ardaseer, Esquires, His Majesty's justices of the peace, &c.

The President announced that the Meetings of the Society were adjourned till December.

[The three Letters, of which the following are copies, have been received by Sir Alexander Johnston, the Chairman of the Committee of Correspondence of the Royal Asiatic Society, from three very distinguished individuals, two of whom are Members of the Society, upon subjects to which, as appears by the different reports made at their Anniversary Meetings by Sir Alexander, the Committee of Correspondence had called the attention of the Members. The first is written by Mr. Lord, the author of a very popular work on physiology, and a surgeon on the Bombay establishment. The second, by Mr. Hodgson, who has enriched the Library of the Society with some of the most valuable works upon the Buddhist religion; and, who has undertaken to prepare, in the most liberal manner, a work by which the public may be made acquainted with the zoology of Nepál, and of other countries in its neighbourhood. The third, by Captain Mackenzie, of the Bengal Cavalry, who has long distinguished himself by his activity in acquiring a topographical knowledge of many of the most interesting parts of India; as may be seen by the pamphlet which he sent to the Society, some time ago, upon the Course of the Suttledge; and who, availing himself of the leave which he has obtained to come on furlough to England, has taken the route of the Red Sea and Egypt, in order that he may be enabled to afford the public the most recent account of that route, and of many of the places and people who are situated along the shores of that sea. As these letters contain recent and curious information relative to the manufactures, geology, and zoology of the western and north-eastern parts of India, and to the route which is followed in the communication between India and England, through Egypt, it is thought advisable to publish them, as well by way of shewing the high sense which the Society entertains of the zeal, talents, and activity of those gentlemen, as by way of evincing the anxiety which it feels to afford the public such information as may be of immediate interest to them.]

Copy of a Letter addressed to the Right Hon. Sir Alexander Johnston, Vice-President of the Royal Asiatic Society, by Percival B. Lord, Esq. of the Hon. East India Company's Medical Establishment, Bombay.

Domus, near Surat, December 10, 1835,
Bombay Presidency.

Sir,

Having been lately detained some days at Cambay, while waiting for the return of the spring-tides, I employed my time in making a few observations on the town, and some of its branches of industry, particularly the cutting and polishing of cornelians. These, though few, and not very important, yet, as being the result of actual inspection, and of information obtained on the spot, I have ventured to hope may appear not entirely devoid of interest to you

and the Society, of which you so zealously and efficiently fill the Vice-President's chair.

You are aware, that for some years past the upper part of the Gulf of Cambay (that on which the town is situated) has been decreasing in depth; but that process is now going on with such rapidity as almost to allow the observer to witness, in the formation of dry land before his eyes, a tangible illustration of Mr. Lyall's beautiful and much-talked of theory. "Fifteen years ago," said an intelligent Parsee, with whom I was conversing on the subject, "I remember, in high tides, vessels discharging their cargoes under the very walls." At the moment when he was speaking, the nearest vessel in harbour was at least four miles distant, and was there lying sunk in the mud, without any chance of floating until the return of the springs. The cause of this is the immense quantity of slime and mud brought down by the river Mhye, which, after a course of nearly one hundred miles through an entirely alluvial country,* comes to discharge its turbid contents a short distance to the east of Cambay. The mud thus accumulated and thrown up by each successive tide, has now formed a wide beach, very partially overflowed even in spring-tides, and perfectly dry at other times; covered in most parts with a white saline efflorescence, which so powerfully reflects the rays of the sun, that on the afternoon of a very warm day, I witnessed there a mirage so perfect, as to induce me for a moment to believe that an unusually powerful spring-tide had suddenly set in and laid the whole under water.

The effect of this diminution in the depth of the harbour on the already declining trade of Cambay, may easily be conceived. Heavy goods have almost entirely ceased to be shipped from this port; and the greater part of the Guzerat cotton now finds its way to Gogo. Tobacco of very good quality grows with great luxuriance round Cambay; but they never (as I was informed) attempt to work it up themselves. For this purpose it is exported to Bombay, where it is manufactured into an imitation of Manilla cheroots, in which form no inconsiderable part of it finds its way back again. Some grain is exported, as is also indigo; but almost the characteristic feature of Cambay industry is the manufacture of different ornaments from cornelian, agate, blood-stone, &c., of which I proceed to give a slight sketch.

The stones are brought in great quantities from the Rajpeeply Hills, a short distance to the east of Baroach; and a good description of the mines, by Mr. Copland, of our service, may be found in the first volume of the "Bombay Literary Transactions." Previous to being exported, they have always undergone the change of colour which is produced by exposing them to the heat of the sun, or of fire; so that, from their original black flintlike appearance, the cornelians, when brought to Cambay, have assumed some a red, some a white, or any intermediate shade of greater or less intensity.

On entering the workshop, you perceive one corner of it occupied by a large heap of dirty-looking rolled pebbles of a dull red colour, and, perhaps, mixed with them, some larger masses of a blackish green. The former of these are cornelian; the latter, blood-stone. We shall say, first, that the workman

* Which it enters not far from Lunawarra.

desires to make a set of beads from the former; and follow his process, which is extremely simple. Before him, and somewhat inclined towards his right hand, is fixed a long thin iron stake, sharpened and steeled on the end. Against the point of this he places one of the pebbles with his left hand, and striking it with a small mallet of hard wood with a flexible cane handle, which he holds in his right, he chips off the rough exterior, and soon reduces it to an irregularly globular figure, with numerous faces or sides. To get rid of these, and form it into a perfect sphere, is now all that remains to be done; and for this purpose a long leathern bag is filled about two-thirds with these chipped pebbles. It is then closed at each end, and placed on a long board between two men, who taking hold each of the end of a strap passed round the bag, proceed to roll it backwards and forwards from one to the other; and when this process has been continued for fifteen days,* the bag is opened, and all the pebbles are found reduced to perfect spheres, the corners having been completely removed by the long-continued friction.

But suppose the object is to produce some article with a flat surface, such as an amulet, a brooch, a clasp for a bracelet, tablet for snuff-box, &c., the means employed are then different, consisting entirely, both for cutting and polishing, of circular plates, fixed on revolving axles. These plates appeared to me at first, both in colour and thickness, to resemble a rounded dark slate; but on looking more closely, their compound nature became evident. They are of three kinds, are made by the workmen who use them; and I was not a little astonished when informed of the nature of their composition. However, I did what I could to assure myself that I understood what was told me respecting it, by causing the workmen to produce specimens of the component parts.

The first and coarsest kind consisted of gum-lac and a rough quartzose sand. The lac is brought to a state of fusion, and the sand, previously reduced to powder, is then added. The paste that results from this mixture is poured out on a flat stone; it rapidly hardens; and while this is taking place it is rolled thin, cut round, and, when it has acquired a sufficient degree of consistence, is sharpened on the edge by being made to revolve rapidly in a V-shaped groove, cut out of very hard wood. This is the coarsest kind of plate, and is used for cutting the stones into thin slabs, as well as for carving common amulets, and giving them an imperfect polish. The cutting and carving are performed with the edge, the polishing with the side. The plate is fixed on a horizontal axle, round which is placed a bow-string, by means of which the workman with his left hand gives the plate its rotatory motion, while with his right he applies the stone. The other plates are used for finer work and superior degrees of polish; the one being composed of gum-lac and *coringe*;† the other, of gum-lac and the

* A gentleman to whom I mentioned this, told me his informant mentioned six weeks as the time required.

† Pronounced like im*pinge*. This is the nearest attempt I can make at representing the name of this material, of which they had unfortunately no specimen. Is it possible they could have meant كرند the *corund*um stone, which, by the way, is to be found in the Rajpeepley Hills, and which, consisting in a great

almost impalpable dust got in boring the beads above mentioned by means of a drill. Water is used with all these plates. Any one who has ever seen glass cut or engraved, will readily understand the mode of their application, if my description should have failed in conveying an adequate idea.

In addition to cornelians and blood-stones, agates, chocolate-stones, chalcedonies, moon-stones, and that kind which we term Mocha-stones, but which, from their appearance, the natives with more propriety denominate moss-stones, are here wrought. Of the quantity exported yearly, though it must be considerable, I could get not even an approximative estimate. The duty paid is an *ad valorem* of 5½ per cent, of which 3 per cent go to the Nawab of Cambay, and 2½ per cent to the East India Company. Cambay is now given up as a station by the Company, there being merely a Parsee agent, with a few purvoes and peons, to look after the customs. The fortifications and, indeed, several parts of the town, are in a ruinous state. The old British factory is still kept up for the accommodation of officers coming down from the north to embark for Bombay; but the Portuguese factory, once such a formidable rival, is quite deserted and falling rapidly to decay.

Close to the nawab's residence is a mosque, still beautiful, though much injured by time and other causes. It is, I think, described by Forbes, who says it was originally a Hindú temple, transformed, after the Muhammadan conquest, into a mosque; but this transmigration is indignantly denied by an old Persian guardian of the temple whom we found there, and who referred us for proof to the tomb of the original founder. This tomb was contained in a small but highly ornamental octagonal apartment off the main building. It was of white marble, beautifully carved with Arabesque devices, and bearing on its side the name and occupation of the founder (who appears to have been a rich merchant), accompanied by some verses from the Korán.

The temple in its main quadrangle, or court, contains about three hundred and sixty pillars, and is all built of a handsome red sand-stone, which must have been brought from some distance, as there is not a quarry, nor even a pebble to be had, near Cambay. Tradition says, they came from Cutch; and as a specimen of the stories with which we were entertained respecting the expense of erecting the edifice, our old Persian friend told us, with a grave face, that nine crores of rupees had been expended in oil for the purpose of greasing the wheels of the carts that brought the stones? I think this rivals the celebrated story of the Dutch commercial house, who saved five hundred dollars a month by directing their clerks to cease dotting the *i*'s, and crossing the *t*'s, in keeping their books.

I visited also the Jain temple, of which Forbes speaks, and was miserably disappointed; as, in place of a magnificent excavation, I found nothing but a

measure of alumen, might be supposed to yield a porcelainous sort of composition, as the quartzose sand, from the silica of which it is composed, would incline towards a vitreous? Perhaps I may strengthen this conjecture by adding, that they explained the *coringe* to be a kind of gravel capable of being reduced to a very fine powder; and which, they said, was always brought in *vessels coming from Baroach.*

damp, underground apartment, which did not look to me more than twenty feet square. On three sides of it were empty niches; on the fourth, a partition took off a space of about six feet in width, within which were ranged, in a double row, a great number of idols, generally of white marble, and all representing the figure of a man, with a remarkably placid countenance, sitting cross-legged, with his hands also crossed, and on the open palm of one a sort of trefoil, which, I believe, it is proper to term a lotus.* The centre figure was of large dimensions; I should say seven or eight feet high. The rest were in general from eighteen to twenty-four inches. A similar collection of idols was placed in a similar manner in the room above this; and these two rooms, which in England would be termed a ground-floor and cellar, constituted the Jain temple. Whether the number of idols was exactly twenty-four, representing the twenty-four saints of the Jain calendar, I did not particularly observe; but I should rather think they were of a greater number, and most certainly they all, or almost all, represented exactly the same individual, if I may be permitted to draw that conclusion from likeness of features and attitude. At one end of the row in the upper room was a large idol of black marble, equal in size to the idol of white marble which stood in the centre. The rest of the row consisted of idols not exceeding two feet in height.

The population of Cambay is estimated at ten thousand. Of these, there are about thirty or forty Parsee families, who transact most of the English business of the station. The rest of the population is pretty equally divided between Musalmáns and Hindús.

Such are the observations I have been able to throw together, during a short stay at Cambay, at a time when I was just convalescing after a severe attack of Guzerat fever, which has sent me to the coast to recruit. This I mention as some slight apology for their imperfections, of which no one can be more sensible than myself. For these, I must venture to solicit your kind indulgence, and that of the Society; and have the honour to remain,

Your faithful, humble servant,

PERCIVAL B. LORD, M.B.

Assistant-Surgeon 1st Light Cavalry,
Bombay Establishment.

* I know little or nothing of Hindú mythology; so I have merely described what I saw, without attempting to affix names. But it strikes me, that a person accidentally lighting on this temple, and applying to it the principles laid down by Erskine in his paper on cave temples, would undoubtedly pronounce it to be Buddhistic. It was shewn to me as Jain.

Copy of a Letter addressed to the Right Hon. Sir ALEXANDER JOHNSTON, *Vice-President of the Royal Asiatic Society, by* BRIAN HOUGHTON HODGSON, *Esq., the Hon. East India Company's Political Resident in Nepál.*

MY DEAR SIR, *Nepál Residency, June* 20, 1835.

During the many years of my residence in Nepál, I have been gradually accumulating materials to illustrate its "animal kingdom," especially its quadrupeds and birds. My fixed residence in the midst of these mountains, and my representative character, have, together, afforded me great facilities for the collection and continuous observation of subjects; and, I trust, I have not altogether failed to avail myself of my unique opportunities. The existing results of my research consist of a series of drawings (the birds all of the natural size), executed by two native artists, carefully trained to the strict observance and delineation of the significant parts; and of a large quantity of notes relative to the internal structure, the habits, and economy of the beings portrayed by the draughtsmen. It is my wish to publish both drawings and notes, with the patronage of some public body, and the aid of some man of science, selected by such body, and with whom I might co-operate in some such manner as Richardson did with Swainston. It is probable that I may remain here three or four years longer; and, were I speedily put into effectual communication with one of the real "ministers and interpreters of nature," it strikes me that the combined result of my local inquiries (past and to come), and of his scientific knowledge, could scarcely fail to be highly important to zoology.

There has heretofore existed a disconnexion between local facilities, and the knowledge to turn them to the best account, of which (if I mistake not) our first-rate works on natural history exhibit lamentable traces. Our collectors have either been wholly inexpert in science, or else, rapid passengers through the field in which they had to reap; and whether, in the latter case, they have subsequently worked up their own materials in Europe, or, in the former, have transmitted them to scientific individuals or bodies at home, it is obvious that such modes of investigating *animate* nature, are necessarily subject to the most serious drawbacks. The competent local inquirer has wanted time and opportunity to observe manners, to trace internal structure, or even to delineate his subject, whilst it was fresh, and exhibiting its characteristic figure and external attributes. The mere collector has continued to forward dried skins only to Europe, whence chiefly our naturalists have been compelled to draw all the information accessible to them respecting the magnificent riches of the animal kingdom of the East! Our Jacquemonts have been few and far between; and even *they* have been too much hurried to study with effect, or to collect materials for the study of the perishable, varying, and complex peculiarities of living beings; which peculiarities (limiting our view even to the mere externals) change with age, with sex, and with season; and, consequently, require continuous attention and repeated opportunities of observation, such as time only, and local residence, can supply the means of.

Even Cuvier's "Regne Animal" is more like a hortus siccus than an actual garden: — more like a research of *inanimate* than of *animate* nature! Now, without presuming to say I could furnish the ripe and good naturalist of England with a tithe of the information he might desire and need, I *do* venture to say, that I could and would supply him with a store of facts of the highest value, which he might look for in vain from any other quarter, and which I have accumulated, and will, by virtue sheerly of the peculiar circumstances that have made me a fixed resident *for years* at this place, and have afforded me leisure at it. My drawings amount to several hundreds; and almost every subject has been again and again corrected, from fresh specimens, with a view to the mature aspect of the species, in respect both to colour and to figure. Sexual differences, as well as those caused by nonage, have been fixed and portrayed when it seemed advisable; and various characteristic parts, external and internal, have been separately delineated. In regard to the latter, whether given separately, or combined with the general form, the use of the camera has been resorted to, to insure rigid accuracy; and, when it has not been employed, the draughtsmen have been perpetually recalled to the careful exhibition of *characters* by my supervision. Whilst *abundance* of *fresh* specimens have been thus employed by my painters, I have myself continued to draw from the same source notes of the structure of stomachs and intestines; of habits in regard to food, as indicated by the contents of stomachs; and of other habits, of manners, location, and economy, derived either from observation or report. In occasionally making more extensive dissections, I have had, and shall continue to enjoy the assistance of my domestic surgeon, Dr. Campbell, whose professional education renders him sufficiently able to notice and set down the general features of anatomical peculiarity. My drawings are nearly completed, so far as they go: my notes are in daily progression; but they, too, already embrace many particulars relative to almost every quadruped or bird delineated. What has occurred to myself as the best mode of proceeding, with a view to the proper use of my materials, is, to send home the drawings and notes, duly numbered, so as to admit of easy reference between me and any person in England; and, having procured the aid of a co-operator of real knowledge and ability, to cause the drawings and notes to be submitted to him. These to be the *base* of his operations, and he to call on me for such corrections or additions to the materials as *his* science may suggest for their completion, and *my* means and opportunities seem to warrant the expectation of realising within a definite period. The whole to be published under his superintendence, and with such aid from me in working up descriptions as he may desire or need.

In the field of illustration, I have been anticipated by Hardwicke and by Gould; but, if there be any truth in the foregone remarks, my drawings will still possess a value independent of novelty. The other field is still almost all my own; and, as the illustrations, even when not new, would be required to complete the text, so the novelty of the text might well be allowed to warrant the publication of the whole of the illustrations, due reference being had to the superior correctness of the latter. I am willing to be the drudge of science, through the medium of one of her true ministers and interpreters; nor do I seek any honour that shall not properly belong to me — any share in the work which *such* a co-operator shall not *seek* and *desire* at my hands. But with any *common* editor

I would not choose to co-operate, it would not serve the purpose I have in view; and I dread a vulgar reputation in such matters! Pardon me, sir, but the pride, I hope, is a just one, and, at all events, is an invincible one. With such views and aims, I naturally turn to Sir Alexander Johnston, whose patronage of all sorts of Oriental science does him so much honour, and the Society over which he presides. My notes and drawings have cost me much, in every sense; and, I am ready to be at the further expense of sending them home, together with any number of specimens that may be required. I am ready, too, to aid the publication with a donation of two or three thousand rupees. But I am told by the expert in such matters, that the publication of coloured drawings is most expensive—the sale very limited—and that, in a word, the thing is impossible, without the efficient patronage of some public body. The drawings, as the work of a native artist; the notes, as germain to Indian science, may, perchance, seem worthy of your powerful protection, which, whether it were afforded through the Royal Asiatic Society, through intercession with the Honourable Company, or through other channels, might still be very efficiently given; and, should Sir Alexander Johnston honour the work with his aid, I would beg to refer him to my relative, the Dean of Carlisle, who, as a member of the Zoological Society, I have sought to interest in the matter. Sir Alexander will, I am sure, pardon the seeming liberty of this reference, arising, as it does, out of the obvious necessity of the case. I am a distant stranger, and cannot presume to trouble him with the direct tender of a huge portfolio of drawings.

Some of the drawings have already been sent home; the rest will follow in December next; and the notes and specimens but await the promise or prospect of such co-operation as I seek. To any public body capable and willing to furnish me with such a co-operator as I require, and to usher the work into the world, I would offer the inducement of making their museum the ultimate depository of all my collections, actual and future, till I return home myself; and, whether I advert to the munificence of my honourable masters, or to the abilities of the Curator of their Museum (Dr. Horsfield), I cannot help thinking, that were my purpose* properly stated to the East India Company, I might procure from them both the scientific aid, and the patronage of the work, which I so much need; and which, I fear, it is out of the way of the Royal Asiatic Society to afford me, even though my purpose seemed worthy of its countenance.

But Sir Alexander Johnston, personally, is able to prop my undertaking by his influence and recommendations; and, perhaps, it may not seem unworthy of him to interest himself in the matter, in such way as shall appear most fitting to himself, and most likely to effectuate the end in view.—I remain,

My dear Sir,

Your faithful servant,

B. H. Hodgson.

* That purpose is, in a word, to marry opportunity to skill—to effect such a union of local facilities with the ability to turn them to account, as is at once in the highest degree *needful and difficult* in regard to researches into the phenomena of *animate* beings.

Extract of a Letter from Lieutenant JAMES MACKENZIE, *of the Bengal Cavalry, to the Right Hon. Sir* ALEXANDER JOHNSTON, *dated Judda, the 22d of February*, 1836.

'* * * WE left the Calcutta Pilot on the 16th December, and sighted Ceylon on the 26th of the same month: coasting Ceylon, as far as Cultara, on the western side of the island, we sighted Cape Comorin on the 31st, and arrived at Cochin, on the Malabar coast, on the 5th January, where we took in wood and water. Sailing again, on the 8th, we worked up to latitude 15° 10′ north, and then hauled off to the westward; and, after a rough passage of seven days, the wind blowing strong from the north and north-north-east, sighted Cape Fartash, on the coast of Arabia Felix, on the evening of 21st ultimo: here we found ourselves about ninety miles out in our longitude, the captain having no chronometer, and being unable to take lunar observations. From Fartash, we steered to the south of west, and, after losing our way (caused again by errors in the longitude) for two days, sighted the high, black, and arid mountains of Aden (the most southerly point of Arabia) on the 27th; passed the narrow strait of Babelmandeb on the 28th, and anchored inside for the night, as we were afraid of not being able to reach Mocha before dark. On the morning of the 29th, weighed at daylight, the wind blowing violently from the south-east, and passing the shoals to the south and west of the town, anchored in Mocha Roads at twelve at noon, alongside an American barque, which had been waiting five months for a cargo of coffee. The Hon. Company's schooner of war, Shannon, of four guns, was lying inside, and about fifteen or sixteen buggalos (or Arab vessels, with one mast and one large lateen sail.) On the 30th, I and my family landed, and were received at the Bab Sahil, or water-gate, by Sheikh Taib, the Hon. Company's agent, who conducted us to his house, seated us on a divan, and gave us a capital breakfast. After breakfast, I strolled into the town, the streets of which, though narrow, are clean, being watered every day, each inhabitant being obliged to sprinkle the space before his own door. The town is falling to decay, having been the scene of plunder and devastation for many years: Mahummad Ali's government may restore it. The place belonged to the Pasha of Egypt, when, in 1833, it was taken by a rebel officer in His Highness's army, who ruled for some time in the name of the Sublime Ottoman Porte. Muhammed Ali bribed the Bedouins to attack the traitor Toorkee Bilmus, and the garrison of Mocha, composed chiefly, if not entirely, of Turkish troops, amounting only to 600 men. Accordingly, several thousands of these barbarians came down from their fastnesses, and sacked the place, driving the Turks into the sea, and killing, plundering, and maltreating the inhabitants. About a year ago, Muhammed Ali retook it from the Bedouins, and it is now garrisoned by 1500 infantry of the line, commanded by Mustapha Bey, a colonel in His Highness' service. The Mohafus, or governor of the town, is Sooliman Agha, a respectable gray-bearded Turk, upon whom I waited, and who received me very politely, giving me coffee and a pipe. I told him, that, on approaching Mocha, we were delighted to see,

from the deck of the Khassovie, the Pasha's flag flying on the ramparts, 'because Muhammed Ali is a just prince, and protects travellers and merchants.' He replied, 'Muhammed Ali wishes to act justly, but his authority is frequently abused by his representatives in distant parts. If any oppression is committed by them, depend upon it it is without the pasha's sanction or knowledge.' The following morning I rode into the country to see the date plantations to the south of the town. The soil is sandy, and the dates not so large or well-flavoured as those of Persia. No grass grows on the arid plains around Mocha: a few weeds, of stunted growth, here and there relieve the universal barrenness. All vegetables for the consumption of the inhabitants come from Gibal, the mountainous country to the east of Mocha; and fruits, from Senna. The coffee hills are to the north and north-east, distant several days' journey. At present it is difficult to bring down the berry, owing to the road being infested by the Cisseers, a fierce and powerful tribe at war with Muhammed Ali. The pasha's troops are tolerably well drilled by the French and Italian *instructeurs*; but they do not appear to have much respect for their officers, who are in the habit of sitting, smoking, and even gambling with them. The dress of the men is white cotton cloth, with white belts, good cartouch-boxes covered with deer skin, and excellent muskets and bayonets after the French fashion, which are made at Cairo, and kept very clean. The soldiers do not shew any mark of respect to British officers in uniform, although lately desired to do so by their commandant. The guard at one of the gates lately beat a British subject who had come by land from Hodeida. A representation was made to the authorities, who not giving a satisfactory answer, a statement of the affair has been forwarded to Colonel Campbell, the Consul-General, for his Highness' consideration. On the 31st, as Napier and myself were passing through the water-gate to reimbark, the commander of the troops, Mustapha Bey, sent us a polite message to walk into his apartment under the arch. He gave us coffee, of course, and me an Albanian pipe. I found all the officers exceedingly civil and urbane. I cannot say the same of the troops. On the evening of the 31st ult. we weighed, and with a strong south-east wind made quick progress as far as Jibal Teir, a volcanic island: afterwards had calms and northerly winds, which compelled us to sight the Abyssinian islands, and took to the north-east. A southerly wind springing up on the 8th, carried us into Judda harbour on the 10th instant. Here we found the Hon. Company's sloop of war, Clive, eighteen guns, commanded by Captain Hawkins, in whose house on shore we are now living. He has been very kind to us, as have all his officers.

'The governor of this town is a Turk, named Sooliman Effendi, upon whom I called, and who promised us every aid I required. He said, 'Muhammed Ali is the brother of the English; and if I were not to befriend you, I should incur his displeasure.' He talked about European politics; and, on my saying that I thought it very likely there would be a collision between Russia on one side, and England and France on the other, he replied, that it was much to be wished that the Russians should be driven back to their Siberian deserts; and that the pasha would lend his aid to effect so desirable an object. For the safety of India, it is much to be desired that British councils should supersede Russian ones in Persia and Turkey. The commander of the Egyptian troops encamped

outside the town, is Osman Bey, who speaks French fluently. I went the other morning to see the men exercising, and called on the general, who told me he was practising light infantry (voltigeur) movements, to enable him to contend against the Asseers. The men worked slowly, and by word of command instead of the bugle. The encampment is regular, and the tents good. About three thousand men are fit for duty; but many, particularly Nubians, pressed into the service, are in hospital, under the charge of French, German, and Italian surgeons. Besides the troops at Mocha and Judda, there are two or three thousand men under Ibrahim Pasha (Muhammed Ali's nephew) at Hodeida, and several thousand, with some cavalry and artillery, at Mecca, where at present resides the commander-in-chief, and governor-general of Arabia, Koorshid Pasha. More troops are coming down from Egypt; and when the *haj*, or pilgrimage is over (forty days hence), nearly 20,000 men will take the field against the Asseer tribe, who inhabit the mountains to the east and south-east. Last year these formidable Arabs defeated Muhammed Ali's troops, cutting up five regiments. The defeat was attributed to treachery on the part of the Shereef of Mecca, and Hamed Pasha, the viceroy's nephew. Both have been summoned to Cairo to answer for their alleged misconduct. It is supposed Hamed Pasha wished to conciliate the Arabs, that, on the event of a break up at his uncle's demise, he might secure their services in usurping this country. As his Highness' post starts to-day for Cairo, *vid* Mecca, I must say adieu. We hope to leave this in two or three days on the Khassovie for Kosseir, which we may reach on the 6th or 8th proximo. The desert of the Thaboid will occupy five days; the voyage down the Nile, twelve. God willing, we may be in time for the April steam-packet from Alexandria to Malta.

* * * * * *

'Believe me, my dear Sir,

'Yours very sincerely,

'JAMES MACKENZIE.'

PROCEEDINGS

OF THE

Bombay Branch

OF THE

ROYAL ASIATIC SOCIETY.

EXTRACT from the Proceedings of a Meeting of the Bombay Branch of the Royal Asiatic Society, held at Bombay in the Society's Rooms, on Wednesday the 27th January, 1836.

"The President, agreeably to a notice given by him on taking the Chair at the last Meeting, proceeded to take a review of the past proceedings of the Society, and of some of the various subjects of inquiry, especially connected with the West of India, which still invite consideraion.

"Proposed by W. C. Bruce, Esq., seconded by James Farish, Esq., and resolved unanimously,

"That the thanks of the Meeting be offered to the President for his learned paper, and that he be requested to allow it to be printed, that a copy may be circulated to each Member of the Society.

(A true extract) "T. M. DICKENSON,

"*Secretary B. B. Royal Asiatic Society.*"

Address read before the Monthly Meeting, by the Rev. JOHN WILSON, President of the Society, and Missionary of the General Assembly of the Church of Scotland.

GENTLEMEN,

This Society has now been in existence for upwards of thirty years; and it may not be improper for us, in our present circumstances, briefly to advert to its past proceedings, and to some of the various subjects of inquiry, and especially those connected with our situation in Western India, which still invite our attention.

In the discourse delivered at the formation of the Institution by its first President, Sir James Mackintosh, that great man declared himself "ambitious of no higher office than that of conveying to India the desires and wants of the

learned at home." A more worthy "representative of the curiosity of Europe" could not have presented himself in this country. It must be admitted, however, that, powerful as was his influence, and remarkable as has been the zeal and success of the members in prosecuting some of the objects proper for investigation by an Asiatic Society, their contributions on the topics to which he more particularly directed attention, have not been so numerous and extensive as might have been reasonably expected.

On *Natural History*, on which he dwells at greatest length, there are in our Transactions only a few distinct contributions, while the subject is only partially adverted to in the papers descriptive of particular districts of the country. This is undoubtedly a matter of regret; for the study, directly conversant as it is with the works of God, and with the intimations which they give of his wisdom, power, and goodness, is, in all circumstances, possessed of the highest interest, and conduces both to intellectual gratification and to moral improvement: and in such a country as India, so vast in its extent, and so grand and multifarious in its productions, it is possessed of peculiar charms. It is a study, in many of its branches, so intimately connected with national resources, and the useful arts, and the means of human amelioration, that it is powerfully recommended to every economist and philanthropist. It is a study in which most who have received a liberal education may engage, and to advance which, all who give it an ordinary share of attention, may considerably contribute. The sojourners in Bombay have, in the mountains, and forests, and islands, in the neighbourhood, innumerable objects, connected especially with geology, botany, and zoology, which, both from their comparative novelty and intrinsic interest, invite attention. The Society cannot do better than encourage their investigation, and imitate, in reference to them, the laudable procedure of the sister institution in Bengal, with regard to those of a similar nature more particularly connected with that province, and among whose highest honours must ever be its having numbered among its members such men as Roxburgh and Wallich, and fostered their earliest attempts to unfold the beauties and mysteries of creation. The report of observation and discovery connected with them, if given in this place, would form an agreeable entertainment even to those who may be most ardent and persevering in their researches into the other important objects of the Society's investigation. That a studious attention to both of them by individuals is not impracticable, is well evinced in the cases of Jones, and Colebrooke, and Carey, and others, who have been distinguished in India both for their science and literature; and who have been not less remarkable for their knowledge and expositions of the thought and feeling of man, as connected with the objects of his devout regard, or superstitious reverence, and the language by which he holds communion with his fellows, than for their lively cognisance, and philosophic interpretation, of the varied phenomena of nature.

The *Statistics* of any country are intimately connected with its political economy, and are consequently highly worthy of attention. Their importance was not so generally admitted, as at present, on the formation of our Society; but it is strikingly set forth by Sir James Mackintosh. The tables which he himself presented, connected with the population of Bombay, and the remarks with which he accompanied them, are valuable. Similar ones, of a later date,

are *desiderata*, and when compared with those given by him, would furnish curious information. The notices of Jambusar and Loní, given in our Transactions, by Drs. Marshall and Coats, and of certain districts of the Southern Maráthá Country, and of the Jhárejas of Kach, in the Journal of the Home Society, by Dr. Bird, and Lieut. Burnes, are good specimens of what is required of other localities and tribes. Without the assistance of our liberal government, little can be done with satisfaction in this department. Such assistance, by instituting special inquiries, and by delivering up documents already in its possession, or which could be procured by application to its judges, and magistrates, and revenue officers, it could easily, and with great advantage to itself, render.*

† Only one paper on the subject of *Political Economy* as connected with India, has been laid before our Society. It is by Mr. Bruce, and has been transmitted to England, where it will not fail to be appreciated.

Of all the topics of inquiry, that of the *History and Present Condition of the People*, in the different provinces, in regard to language, religion, literature, science and rt, means of support, and manners and customs, is paramount. It is very extensive, and has met, from the Members of the Society, with considerable attention.

The Párśís, the great body of whom dwell amongst us, present themselves as special objects of inquiry. The history of their original country has been ably unfolded by Sir John Malcolm; and on its ancient chronology previous to the conquest by Alexander, and its state from the battle of Arbela in A.C. 331 to the rise of Ardeshir Bábegán, much light has been cast by our late learned President, Colonel Vans Kennedy. Mr. Erskine's papers respecting them are remarkably interesting, as containing an able review and analysis of the works of Anquetil du Perron, who followed Dr. Hyde as the expositor of their tenets, the results of his own observation, and valuable disquisitions on their sacred books and ancient languages. The researches of Professor Rask, in his paper given to this Society, whatever may be the opinions formed of the particular conclusions at which he has arrived—and it must be admitted he has reasoned ingeniously in their support—are also interesting. For the original tracts, with remarks, in the course of being published in France by M. Mohl, we owe our gratitude. The "History of the Early Kings of Persia," by Mirkhond, translated by Mr. Shea; and the "History of Vartan and the Armenians," by Mr. Neumann; and of the "Sháh Námah," by Mr. Atkinson, for which we are indebted to the Oriental Translation Fund, contain much historical information on the religion of Zoroaster. Still more may be expected from the translation of that singularly curious work, the Dábistan, which is about to appear. The curiosity of the public respecting the Parsís, however, is far from being satisfied, as is evident from the inquiries which frequently reach this place, both from London and Paris. We need a more exact translation of the books which

* A proposition has, I understand, been made by an able and zealous officer of this presidency (Capt. T. B. Jervis) to the different governments of India, relative to the periodical publication of the returns of population, revenue, and cultivated and waste lands.

they esteem sacred, than that which is furnished by Anquetil du Perron. Such a translation has been promised by Professor Burnouf, whose attainments in Oriental literature, and ardour in Oriental study, afford good ground for hope that our wishes respecting it will be realised. Should he fail, the attempt may be made in Bombay, where there are still a very few Zand scholars among the Zoroastrians to be found, and whose assistance, as well as that to be furnished by the translations into Gujurathi, may be procured.* We require information, particularly on their popular superstitions, and domestic manners and customs, and general habits, as exhibited to the native community, and which, there is reason to believe, differ not a little from those generally observed by their European acquaintances; and for which they have received, in the opinion of the most intelligent of their own number, a more than *quantum sufficit* of credit. It was with the view of adding my mite to the information possessed on these topics, and not because I conceived it possessed of any intrinsic merit, that I lately presented the Society with a translation of their "General Siroze." There are extant narratives of their settlement and history in India, versions of which should be presented to the Oriental Translation Fund. At a late meeting of the Committee of Correspondence of the Royal Asiatic Society, some of the more liberal natives in Bombay were invited to form themselves into an Association, with the view of aiding in collecting information on some of the topics to which I have now adverted. Little, I fear, can be expected from them, without the co-operation of European scholars, or without the proposal to them of special queries calculated to direct them in their communications. I am decidedly of opinion, that it would be of advantage to both parties, were some of them associated with ourselves; and I would fondly hope, that should any of them, possessed of competent attainments and zeal, and a respectable character and influence, ask membership of our body, it should be readily accorded.

There is no institution which has furnished more able and interesting illustrations connected with the Mussulmáns than our Society. The question, so interesting in the history of the errors of the human mind, was Muhammad an impostor or an enthusiast, has been discussed by our late President, Colonel Vans Kennedy; and though many may dissent, as I myself do, from the conclusion at which he arrives, the ingenuity with which he conducts his argument, and the varied learning which he displays, must be readily acknowledged. The same distinguished orientalist has furnished us with the most correct estimate of the literature of the Mussulmáns in Persia which is extant; and has given us a minute and precise abstract of the Muhammadan municipal law, with a constant reference to acknowledged authorities, and with an arrangement particularly luminous, being suggested by that of Blackstone in his Commentaries on the Laws of England. His paper furnishes an important aid to the understanding of the state of government, and society in general, in Muhammadan countries.† The points at issue between the Shiás and Sunnís, and which have been, and still are, the cause of the greatest distractions and animosities among the Moslems, are well illustrated by the translations and remarks of Sir John Malcolm; and

* Six Fargards of the Vendidád can also be procured in Sanskrita.

† See Journal R. A. S. vol. ii. p. 81.

the sentiments of the Sufis, and Mehdivis, by those of the late Lieutenant Graham and Colonel Miles. The account of the Akhlák-i-Nássiri, by Lieutenant Frissell, and the translation of one of the discourses of Sádí by Mr. Ross, throw much light on the Mussalmán economics and ethics, both theoretical and practical. What we chiefly want in reference to the Muhammadan religion, is a fuller account, drawn from a comparison of all the existing authorities, of the state of Arabia at the time of its origin, and from which we could form a more enlightened judgment than we do, of those great revolutions brought about by its author; of the history of its religious influence, distinguished as much as possible from that of the military exploits and civil arrangements of its followers, which have hitherto almost altogether engrossed attention; of the general arguments by which its doctors have urged its pretensions in opposition to Christianity;* of the Bohorás† and other curious sectaries; and of the peculiar practices, superinduced, probably, by intercourse with the Hindús, of those who profess it in India, and particularly in the provinces with which we are most intimately connected. That the latter subject is not unworthy of interest, will appear to any reader of the work lately published by Dr. Herklots, and to the notices given of certain festivals, by M. Garcen de Tassy. From these documents, as well as from Colonel Kennedy's paper on the religion introduced into India by the Emperor Akbár, it appears that the followers of Muhammad cannot only, when circumstances tempt them, lay aside their intolerance, but accommodate themselves to existing prejudices, and indulge in the boldest speculations. In the

* Some interesting information on this subject is to be found in the Controversial Tracts by the Rev. Henry Martyn, and his opponents in Persia, and the preface prefixed to them by Professor Lee, and in the last of the letters addressed to me by Hàjí Muhammad Hàshim, and published in Bombay. As the discussion of the points at issue, however, is an ancient one, it seems desirable that a collection should be made of the hints respecting it which are to be found in the Mussalmán works of theology.

† To any person, whose leisure may permit inquiry into this body of Mussalmáns, the following memorandum, written by me on a visit to Surat in the beginning of last year, may not be unacceptable. "The Bohorás of Surat are divided into three sects, respectively denominated Ali, Sulimán, and Dàud. In the first of these, there are only five or six families; in the second, about fifty; and in the third, about five thousand, with a population of about twelve thousand. They have accounts of their tribe, one of which I have seen in Arabic, which carry back their history about six or seven hundred years. They generally support themselves by the vending and manufacture of cloths, hardware, household furniture, &c. They profess to be quite distinct from the agricultural Bohorás, who are to be found in the Baroch districts, and of whom a considerable number of families have now also settled in Surat.

"The Bohorás are under the religious, and, to a great extent, the civil government of a Mullá, whose head-quarters were originally in Arabia. The Mullá in Surat sits upon a throne, and is highly respected. He is thrice saluted by every person when he is *in cathedrâ*; and his attendants give him all the attentions which the princes of the land receive when they are in Darbár. He has deputies in all the towns in India where Bohorás are to be found, and even in Maskat, Basora, Jadda, and Mokha. He has a very large income, arising principally from donations

almost universal neglect of historical records by the subjugated Hindús, we must principally look to the Mussalmáns for any historical information connected with this country, which refers to the times which intervene between the commencement of their conquest, and that of the European powers. The history by Ferishta, translated by Colonel Briggs, though neither, as was to be expected, very philosophical, nor rigid, is valuable. Captain Rowlandson and Dr. Bird have done well to translate two works, which treat of the history of Malabár and Gujarát. They contain much interesting information. Another history of the latter province, by a very intelligent Bráhman, but principally from Muhammadan authorities, and which may prove worthy of translation, was lately presented to our Society by our zealous Secretary. There are materials to be found, in different places, sufficient to throw light upon the principal occurrences in almost every province of India.

Of various tribes of the Hindús, as the Kátis, the Bhíls, the Banjáris, the Pándu Kolís, the Dakhan Kunbís, and the Kárádí Bráhmans, and the inhabitants of Sindh, very curious notices are to be found in our Transactions. Of many other tribes, accounts have appeared in separate publications.* Many more, however, with marked natural peculiarities, and in a strange social state, still remain to be described. Those who are found resident in the jungles, and in mountainous districts, and who are probably the remains of the aborigines of the country, are particularly worthy of investigation. Attention to them is called for, by all who desire to advance their civilisation, and to elevate them from their

at births, marriages, and deaths; but from his funds, the poor of the sect, whether resident in Surat, or occasional visitors, are supplied. He nominates his successor, having a principal regard to his talents, information, and capacity to govern.

"The Mullá, or Mullájí, as he is called, by way of distinction, reads the Kúrán, and addresses the people during five or six days of the Muharram, and one day during the month of Ramazán, when his auditors are numerous. In the part of Surat principally inhabited by Bohorás, there are many courts, in each of which there is a Mullá to conduct worship early in the morning. The people, however, seem most to relish praying at the tombs, or great mausoleums, which contain the sepulchres of some of the ancient Mullás, and their relatives. They actually, as we observed, kiss the chunam covering of the graves!

"In regard to marriage, it may be observed, that the number of wives permitted by the Kúran is allowed, as in the case of other sects of Mussalmáns. The follies of the Hindús have found a place among them, in the manner in which marriages are contracted and celebrated. Girls are espoused at the early age of five years, and without much regard, on the part of their parents, to the age of those with whom they are united. The processions and feastings are conducted much as among the other classes of the natives.

"The shaving off the hair, which is viewed as a kind of sacrament, is performed on the seventh or twenty-first day after the birth either of a son or daughter.

"Expulsion from caste follows the practice of gross immoralities, and particularly the drinking of ardent spirits.

"Funerals are conducted with considerable solemnity. Those of the higher classes are attended by the Mullá."

* Among the fullest and most interesting of these, is the *History of the Rámoshis*, lately published by Captain Mackintosh.

present degradation. Description must precede any considerable efforts made for their improvement. Perhaps some similarities may be discovered in their language, religion, and customs, which may lead to important conjectures as to the ancient history of India. Of many of them it has been already ascertained, that they have had no connexion with Bráhmanism, except in so far as they may have felt its unhallowed influence in excluding them from the common privileges of humanity, and banishing them to the wilds, or dooming them to ignorance, and unwilling and unrewarded servitude.*

Though, on the *Hindú Religion and Literature* in general, our publications contain rather scanty observations, some of our members have added greatly to the information communicated by the distinguished literati of the other side of India, and of Europe. Our Society was the first body to submit to the public a proposal for a union for the promotion of translations from the Sanskrita. Its claim to this honour, it is right again to reassert. It will be established by a reference to a letter addressed to the Asiatic Society of Bengal, in 1806, by Sir James Mackintosh, and published as an appendix to the first volume of our Transactions.† Such translations were practically encouraged by the Society itself, in the case of the *Liláwatí*, a treatise on arithmetic and geometry, by Bhaskara Acharya, and the *Prabodh Chandrodaya*, a curious allegorical play, illustrative of the opinions of the Vedántikas, and both published by the late Dr. John Taylor. The first general account of any considerable size, of the Hindú Pantheon, is by one of our members, Major Edward Moor. In Colonel Kennedy's *Ancient and Hindú Mythology*, we have a work, than which none more important, if we refer either to original quotations from the Shástras, or learned disquisitions, has yet appeared. I make this remark with the more freedom, that circumstances called me, on the publication of the work, to animadvert on the estimate which it forms of the moral character of Brahmanism in a manner which gave the learned author offence. In the *Essay on the Vedánta* by the same gentleman, we have the best account of that very curious system of speculation, considered in a philosophical point of view, which has yet appeared,—an account which proves it to be a system of spiritual pantheism, and as such entirely different, except in occasional expressions, from that of the *Mystics of Europe*, to which it had been maintained to be similar by Sir William Jones, and other writers.‡ It was in this place that the first defence, by a native, of both

* See particularly Mr. Baber's answers to the queries of a Committee of the House of Lords on the state of slavery in the south-west of India.

† Page 310.

‡ In the works of the Mystics, and of the pious writers, to whom Sir William Jones alludes in the course of his reasonings, there are figures of speech, and other expressions, very similar to those used by the Vedántists. Others, still more strikingly similar, could easily be produced. I give one from the poems of Richard Baxter.

"But Oh! how wisely hast thou made the twist!
To love thee and myself do well consist.
Love is the closure of connaturals;
The souls return to its originals:
As every brook is toward the ocean bent,
And all things to their proper element;

the exoteric and esoteric systems of Hindúism, in reply to those who seek to propagate the principles of our holy faith, appeared; and it was here that a rejoinder, embracing briefly the consideration of both these subjects, was published. About two years ago, a portion of the *Rigveda*, the most considerable which has yet been printed, was published in Sanskrita, Maráthí, and English, by one of our members. A translation of the whole of this work, to which I believe Professor H. H. Wilson has turned his attention, and of the *Bhágawata Purána*, which, though it cannot claim an antiquity much exceeding that of six hundred years, is certainly the greatest practical authority at present, at least in the West of India, are greatly to be desired. On the different sects of the Hindús, and on their provincial superstitions, much light has yet to be cast. On the north of this presidency, we have the Vaishnavas; in our immediate neighbourhood, the Smártas; and in the south, the Shaivas, or Lingávants, in the practice of all their peculiarities. In the Dakshan, we have a general worship of deified heroes, as yet unnoticed, except in the most incidental manner. Many curious classes of mendicants, of whom little or nothing is known,* are to be found within the sphere of our peculiar observation. The religion of the Jainas, on which most valuable manuscripts, procured by Mr. Wathen, are deposited in our library, is still, in many respects, to be unfolded. Our Transactions have only one paper, by Captain M'Murdo, which refers to it. In the possession of the Jainas, there are many works calculated to throw much light on the religious history of India in general, with the use of which some of them would not be unwilling to favour a European student. I fondly trust and believe, that there

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And as the inclination of the sight,
How small soever is unto the light:
As the touch'd needle pointeth toward the pole;
Thus unto thee inclines the holy soul:
It trembleth, and is restless till it come
Unto thy bosom, where it is at home."

No person who is familiar with the Upanishads, can fail to mark the coincidence of the language of Baxter in the preceding passage, with that of the Transcendentalists of India. This coincidence of language, however, does not warrant the inference that there is the least agreement of sentiment. In proof of this position, we have merely to quote the lines which follow those now given.

" Yet no such union dare the soul desire—
As parts have with the whole, and sparks to fire;
But as dependent, low, subordinate,
Such as thy will of nothing did create.
As tendeth to the sun the smallest eye
Of silly vermin, or the poorest fly.
My own salvation, when I make my end,
Full mutual love is all that I intend;
And in this closure, though I happy be,
It's by intending, and admiring thee."

* Of one of these, the Mánbhavís, whom I had particularly in view in making this remark, I have just received an interesting account from Captain A. Mackintosh, the author of the " History of the Rámoshís."

are among our Members those who will continue to contribute, as circumstances may call them, to the exposition of the systems of faith which have so long exercised their sway in this country, and the various literary works, which, though unlike those of Greece and Rome, are of little or no use in the cultivation of taste, are valuable, as they illustrate the tendency of these systems in their connexion with social and public life; and as they explain a language, the most copious in its vocables, and powerful in its grammatical forms, in which any records exist. Destitute of a knowledge of these systems, and the works in which they are embodied, the native character, and the state of native society, will never be sufficiently understood, a right key obtained to open the native mind, and all desirable facilities enjoyed for the introduction among the people of a body of rational and equitable law, and the propagation of the Gospel, and the promotion of general education. There are some respectable patrons of the latter supremely important work who overlook its importance; but their number is on the decrease. They ought to consider, that the situation of those to be instructed is to be attended to, as well as the instructions to be delivered. While divine truth must be propagated with unwavering fidelity, and all hope of ultimate success rest on its own potency, its suitableness to the general character of man, and the assistance of divine grace, judgment ought to be employed in the mode of its application to those who vary much in their creeds, and differ much in their moral practice. We have the highest authority for an accommodation such as that for which I plead. Though the great truths proclaimed by the apostle Paul were the same in all circumstances, they were introduced in very different ways to the Jewish Rabbis and people, and to the members of the Athenian Areopagus. I must hold, that there is no little unsuitableness in India in addressing a Pantheist as a Polytheist, and *vice versâ;* in speaking to a Jaina as to a Brâhman; in condemning that at random which the natives may suppose to be unknown; and in using theological terms and general phrases, without any very definite sense of their application by the natives themselves. The more a knowledge of Hindúism and of Hindú literature is possessed by any teacher, the more patiently and uninterruptedly will he be listened to by the people, and the more forcibly will he be enabled—and principally by contrast and concession—to set forth the authority and the excellence of the doctrines of Christianity.

In connexion with the subject to which I have now adverted, I may allude to the peculiar duty which devolves on us of collecting Sanskrita manuscripts. They are to be found in a purer state in the Dakshan than in any other part of India; and the poverty of the Bráhmans leads them readily to part with them. Those which were lately purchased by us are very valuable.

The contributions of the Members of our Society to the elucidation of *Hindú Antiquities* have done much to extend and support its credit. The proximity of the ancient excavations, which may be classed among the wonders of the world, could not fail to excite curiosity and inquiry. The descriptions and illustrations of those of Ghâripur (Elephanta), Sáshtí (Salsette), Kárali (Carlee), Verula (Ellora), Bág, and Ajantá,* though a few errors and oversights may be detected in them, are highly interesting. Mr. Erskine has satisfactorily shewn the dis-

* Written by Messrs. Salt, Erskine, Colonel Sykes, &c.

tinguishing characteristics of those of them which are respectively to be attributed to the Bauddhas, and Jainas, and the Bráhmans. It is to be hoped that the inscriptions which are to be found on some of them, and which are in the Sanskrita language, and in ancient characters very similar to those which have lately been published in the ably conducted Journal of the Asiatic Society of Bengal, will be soon understood. The Rev. Mr. Stevenson has already been successful, to a great extent, in deciphering and translating those of the temples of Karali, and thus leading to inferences by no means unimportant. Some of those of Kanádí on Salsette, I should think, from a partial trial, present no greater difficulties than those which have been already overcome. The stone bearing the inscription of the temples at Elephanta, we learn, from Diogo de Couto, the Portuguese Annalist, was sent to John the Third, of Portugal, about the year 1534, and is probably now either in the Royal Museum of Lisbon, or in the University of Coimbra. The Royal Asiatic Society may, without difficulty, procure a transcript. There are excavated temples in the country, such as those of Nasik and Junar; and others, which have been erected, such as those of Abu, Pálitáná, and Girnár, which have not yet been particularly described. What we principally require in reference to them all is, information as to the time at which, and the views with which they were constructed; an estimate of them as works of art, or as indicative of the resources of those to whom they are to be ascribed, and an inquiry into the religious rites and services for which they have been appropriated, and the moral impressions which they seem fitted to make on those resorting to them. They are worthy of attention only, as they may illustrate the civil and religious history or practices of the country. The grants of land, engraven on copper-plates, many of which are still to be found in different parts of the country, are next to them in importance in the advancement of antiquarian research. One of these was translated by Dr. Taylor. Mr. Wathen has been successful in deciphering the most ancient of those in our museum; and the results, as stated by him in his communication in the Journal of the Asiatic Society of Bengal for August last, are both curious and useful. Ancient coins are occasionally found in different parts of the Presidency, and the Native States to the northward, which may aid in the correction or enlargement of such genealogical tables as have been lately published by Mr. Prinsep of Calcutta.*

There is a small body of Armenians in Bombay, from which something interesting might be learned. A dissertation by one of them on the antiquity of their native language, with notes by Mr. Dickinson, has lately been transmitted by us to the Royal Asiatic Society, and cannot fail to be acceptable. There cannot be a doubt that the Armenians can fill up important blanks in our church history, which, to the undue neglect of the Orientals, is principally formed on the authority of the Roman and Byzantine Fathers.

The Beni-Israel of Bombay, and the adjoining territories, amount to about eight thousand. It is to be regretted, that no considerable account of them has yet appeared, particularly as they have been long settled in the country, refuse the appellation of Jew, and are probably a portion of the Ten Tribes, never

* Such coins are occasionally worn as personal ornaments by natives, who have no idea of their value.

amalgamated, as the body of them probably was, with those of Judah and Benjamin.

The researches of our members on antiquities, and other subjects of observation and rational inquiry, have not been confined to India; but I cannot longer detain you by alluding either to their results, or by attempting to form what is unnecessary, and what in me would be presumptuous, an estimate of the enterprise and intelligent observation and research of our Malcolms, Elphinstones, Pottingers, Riches, and Burneses. The contiguity of our Presidency to Persia, Arabia, and Egypt, and the prospect of increased intercourse with these countries by steam navigation, afford ground to hope that our geographical and historical knowledge of them will, ere long, be greatly enlarged. There is scarcely a country of Asia which, even in our present circumstances, does not furnish visitors to Bombay, who prove themselves ready to communicate to intelligent inquirers information on places never as yet surveyed by any modern European traveller. Mr. Wathen has been able, from conversing with Muhammadan pilgrims, to prepare a brief but interesting memoir of Chinese Tartary.*

I owe to the meeting an apology for the many imperfections of the sketch which I have rapidly taken. I have rather endeavoured to mark our progress, than to point out what would perhaps have contributed more to our encouragement, the advantages and means of further advancement. Our Society, I may be permitted to hope, will soon again be inspired with its pristine zeal, at the same time that it is directed by its accumulated experience, maintain the character which it has earned for itself, and prove not unworthy of its incorporation with the Royal Asiatic Society of Great Britain and Ireland, an incorporation which must be admitted, notwithstanding some disadvantages, to be beneficial, as it secures that literary sympathy and communication which is greatly to be valued, and the circulation of our papers, with no expense to ourselves, and now in a convenient form, throughout the world.

* See Asiatic Society Journal for December 1835.

REGULATIONS

FOR

THE ROYAL ASIATIC SOCIETY.

OF THE OBJECTS OF THE SOCIETY GENERALLY, AND OF ITS MEMBERS.

ARTICLE I.—The ROYAL ASIATIC SOCIETY OF GREAT BRITAIN AND IRELAND is instituted for the investigation and encouragement of Arts, Sciences, and Literature, in relation to Asia.

ARTICLE II.—The Society consists of *Resident*, *Non-resident*, *Honorary*, *Foreign*, and *Corresponding* Members.

ARTICLE III.—Members, whose usual place of abode is in Great Britain or Ireland, are considered to be *Resident*.

ARTICLE IV.—Those whose usual abode is not in Great Britain or Ireland, being, however, British subjects, are denominated *Non-resident*.

ARTICLE V.—Foreigners of eminent rank or station, or persons who have contributed to the attainment of the objects of the Society in a distinguished manner, are eligible as *Honorary* Members.

ARTICLE VI.—The Class of *Foreign* Members shall consist of not more than *Fifty* Members; and no person shall be eligible as a *Foreign* Member who is a British subject, or whose usual place of residence is in any part of the British dominions in Europe.

ARTICLE VII.—Any person not residing within the British Islands, who may be considered likely to communicate valuable information to the Society, is eligible for election as a *Corresponding* Member.

ARTICLE VIII.—All the Members of the Society, of whatever denomination, *Resident*, *Non-resident*, *Honorary*, *Foreign*, or *Corresponding*, must be elected at the General Meetings of the Society, in the manner hereinafter described.

ARTICLE IX.—*Honorary*, *Foreign*, and *Corresponding* Members, when residing in England, have a right of admission to the Meetings, Library, and Museum of the Society; but are not eligible to its offices, or entitled to copies of the Transactions.

ARTICLE X.—The Literary Society of Bombay is from henceforward to be considered an integral part of the Royal Asiatic Society, under the appellation of the BOMBAY BRANCH of the ROYAL ASIATIC SOCIETY.

ARTICLE XI.—The BOMBAY BRANCH SOCIETY shall be considered quite independent of the ROYAL ASIATIC SOCIETY, as far as regards its local administration and the control of its funds.

ARTICLE XII.—The Members of the BOMBAY BRANCH SOCIETY, while residing in Asia, shall be *Non-resident* Members of the ROYAL ASIATIC SOCIETY; and when in Europe shall be eligible for election as *Resident* Members, in the same manner as *Honorary* Members are elected.

ARTICLE XIII.—In like manner the Members of the ROYAL ASIATIC SOCIETY, while residing in Europe, are *Non-resident* Members of the BOMBAY BRANCH SOCIETY; but when within the presidency of Bombay shall be eligible as *Resident* Members, in the manner prescribed by the Regulations of that Society.

ARTICLE XIV.—The United Literary Societies of Madras are from henceforward to be considered an integral part of the ROYAL ASIATIC SOCIETY, under the appellation of the MADRAS LITERARY SOCIETY and AUXILIARY of the ROYAL ASIATIC SOCIETY.

ARTICLE XV.—The MADRAS LITERARY SOCIETY and AUXILIARY of the ROYAL ASIATIC SOCIETY shall be considered quite independent of the Royal ASIATIC SOCIETY as far as regards its local administration and the control of its funds.

ARTICLE XVI.—The Members of the MADRAS LITERARY SOCIETY and AUXILIARY of the ROYAL ASIATIC SOCIETY, while residing in Asia, shall be *Non-resident* Members of the ROYAL ASIATIC SOCIETY; and when, in Europe, shall be eligible for election as *Resident* Members, in the same manner as *Honorary* Members are elected.

ARTICLE XVII.—In like manner, the Members of the ROYAL ASIATIC SOCIETY, while residing in Europe, are *Non-resident* Members of the MADRAS LITERARY SOCIETY and AUXILIARY of the ROYAL ASIATIC SOCIETY; but when within the presidency of Madras, shall be eligible as *Resident* Members, in the manner prescribed by the Regulations of that Society.

MODE OF ELECTING THE MEMBERS.

ARTICLE XVIII.—Any person desirous of becoming a *Resident* or *Non-resident* Member of the ROYAL ASIATIC SOCIETY, must be proposed by Three or more subscribing Members, one, at least, of whom must have personal acquaintance with him, on a certificate of recommendation, declaring his name and usual place of abode; specifying also such titles and additions as it may be wished should accompany the name in the list of Members of the Society.

ARTICLE XIX.—A candidate proposed as a *Foreign* Member must be recommended to the Society by five Members, or more.

ARTICLE XX.—The Council may, upon special grounds, propose to a General Meeting the election of any Foreigner of eminent rank and station, or any person who shall have contributed to the attainment of the objects of the Society in a distinguished manner, either by donation or otherwise, to be elected an *Honorary* Member of the Society; and, upon such proposition, the Society shall proceed to an immediate ballot.

ARTICLE XXI.—The Council may propose for election as a *Corresponding* Member, any person not residing in the British dominions in Europe who may be considered likely to communicate valuable information to the Society.

ARTICLE XXII.—Every recommendation of a Candidate proposed for election, whether a *Resident*, *Non-resident*, *Foreign*, or *Corresponding* Member, shall be read at three successive General Meetings of the Society. After the first reading, the certificate shall remain suspended in the Meeting-room of the Society till the ballot for the election takes place, which will be immediately after the third reading of the certificate; except in the cases of the Members of the BRANCH SOCIETY of BOMBAY, and the LITERARY and AUXILIARY SOCIETY of MADRAS, who are eligible for immediate ballot.

ARTICLE XXIII.—No candidate shall be considered as elected, unless he has in his favour the votes of three-fourths of the Members present who vote.

ARTICLE XXIV.—The election of every candidate shall be entered on the minutes of the proceedings of the Meeting at which he is elected: but should it appear, upon inspecting the ballot, that the person proposed is not elected, no mention thereof shall be inserted in the minutes.

ARTICLE XXV.—When a candidate is elected a *Resident* or *Non-resident* Member of the Society, the Secretary shall inform him of his election by letter.

ARTICLE XXVI.—To an *Honorary*, *Foreign*, or *Corresponding* Member, there shall be transmitted, as soon as may be after his election, a Diploma, under the seal of the Society, signed by the President, Director, and Secretary.

OF THE COUNCIL AND OFFICERS, AND OF COMMITTEES.

ARTICLE XXVII.—There shall be a Council of Twenty-five *Resident* Members, constituted for the management and direction of the affairs of the Society.

ARTICLE XXVIII.—The Officers of the Society shall form a part of the Council, and shall consist of a President, a Director, four Vice-Presidents, a Treasurer, a Secretary, and a Librarian. The Council will, therefore, be composed of sixteen Members, besides the Officers.

ARTICLE XXIX.—The Council and Officers shall be elected annually by ballot, at the Anniversary Meeting of the Society, on the Second *Saturday* in *May*.

ARTICLE XXX.—Eight Members of the Council shall every year be withdrawn, and eight new Members shall be elected in their places, from the body of the Society.

ARTICLE XXXI.—The Council shall meet once in every month, or oftener, during the Session.

ARTICLE XXXII.—At any meeting of the Council, *Five Members* of it being present shall constitute a *quorum*.

ARTICLE XXXIII.—The Council shall be summoned, under the sanction and authority of the President or Director, or, in their absence, of one of the Vice-Presidents, by a circular letter from the Secretary.

ARTICLE XXXIV.—The Council shall have the power of provisionally filling up vacancies in its own body, occasioned by resignation or death.

ARTICLE XXXV.—Committees, for the attainment of specific purposes

within the scope of the Society's views, may, from time to time, be appointed by the Council, to whom their reports shall be submitted, previously to their being presented at a special, or at an Anniversary Meeting, of the Society.

COMMITTEE OF CORRESPONDENCE.

ARTICLE XXXVI.—The Council shall appoint a *Committee of Correspondence*, to consist of a Chairman, two Deputy-Chairmen, twelve Members, and a Secretary; with power to add to its number, and fill up vacancies occasioned by resignation, removal, or death: four of such twelve Members to go out annually, and be replaced by a similar number from the general body of the Members.

ARTICLE XXXVII.—The special objects of the *Committee of Correspondence* are, to receive intelligence and inquiries relating to the Arts, Sciences, and Literature of Asia, and to endeavour to obtain for applicants such information on those subjects as they may require.

COMMITTEE OF PAPERS.

ARTICLE XXXVIII.—The Council shall appoint a *Committee of Papers*, to which all papers communicated to the Society shall be referred for examination; and it shall report to the Council from time to time such as it may deem eligible for publication, or to be read at the General Meetings.

FUNCTIONS OF THE OFFICERS.

ARTICLE XXXIX.—The functions of the PRESIDENT are, to preside at meetings of the Society, and of the Council; to conduct the proceedings, and preserve order; to state and put questions, according to the sense and intention of the Members assembled; to give effect to the resolutions of the Meeting; and to cause the Regulations of the Society to be put in force.

ARTICLE XL.—The functions of the DIRECTOR are twofold, *general* and *special*. His general functions are those of a *Presiding Officer*, being next in rank to the President; by virtue of which he will preside at Meetings when the President is absent, and discharge his duties. His special functions relate to the department of Oriental Literature, which is placed under his particular care and superintendence.

ARTICLE XLI.—The duties of the VICE-PRESIDENTS are, to preside at the Meetings of the Society and of the Council, when the chair is not filled by the President or Director; and to act for the President, on all occasions, when he is absent, and when his functions are not undertaken by the Director.

ARTICLE XLII.—The TREASURER will receive, on account of and for the use of the Society, all monies due to it, and make payments out of the funds of the Society, according to directions from the Council.

ARTICLE XLIII.—The Treasurer's accounts shall be audited annually, previously to the Anniversary Meeting of the Society. The Council shall, for that purpose, name three auditors, of whom two shall be taken from the Society at large, and the third shall be a Member of the Council. The Auditors shall report to the Society, at its Anniversary Meeting, on the state in which they have found the Society's funds.

ARTICLE XLIV.—The functions of the SECRETARY are the following:—

He shall attend the meetings of the Society, and of the Council, and record their proceedings. At the General Meetings he will read the papers that have been communicated; unless any Member obtain permission from the Council to read a paper that he has communicated to the Society.

He shall conduct the correspondence of the Society, and of the Council.

He shall superintend the persons employed by the Society, subject, however, to the control and superintendence of the Council.

He shall, under the direction and control of the Council, superintend the expenditure of the Society. He shall be competent, on his own responsibility, to discharge small bills; but any account exceeding the sum of Five Pounds shall previously be submitted to the Council, and, if approved, be paid by an order of the Council, entered on the minutes.

He shall have the charge, under the direction of the Council, of printing and publishing the Transactions of the Society.

ARTICLE XLV.—If the Secretary shall, at any time, by illness, or any other cause, be prevented from attending to the duties of his office, the Council shall authorise the Assistant-Secretary, or request one of its Members to discharge his functions, till he shall himself be able to resume them.

ARTICLE XLVI.—The LIBRARIAN shall have the charge and custody of all books, manuscripts, and other objects of learning or curiosity, of which the Society may become possessed, whether by donation, bequest, or purchase; and apartments shall be appropriated, in which those objects may be safely deposited and preserved.

ON THE CONTRIBUTIONS AND PAYMENTS WHICH ARE TO BE MADE TO THE SOCIETY BY THE MEMBERS.

ARTICLE XLVII.—Every *Resident* Member is required to pay the following sums upon his election, viz.:—

Admission Fee	Five Guineas.
Annual Subscription	Three Guineas.
(Unless his election shall take place in December, in which case the first Annual Subscription shall not be due till the succeeding January.) The following compositions are allowed, viz.	
Upon election, by the payment of	Thirty Guineas.
After two Annual Payments	Twenty Guineas.
After four or more Annual Payments	Fifteen Guineas.

ARTICLE XLVIII.—Any person elected as a *Resident* Member of the Society who shall proceed to the Cape of Good Hope, or to any place eastward thereof, shall not be called on to continue the payment of his Annual Subscription; but his rights and privileges as a Member shall remain in abeyance, with liberty to resume them on recommencing the payment of the Annual Subscription, or paying the regulated composition in lieu thereof.

ARTICLE XLIX.—Any person who shall henceforward desire to become a *Non-resident* Member of the Society, shall, on his being elected, pay an Annual

Subscription of Two Guineas, or in lieu thereof, as a composition, the sum of *Twenty Guineas.*

If he subsequently become a *Resident* Member, he shall, from the time that he has fixed his residence in the British Islands, pay the usual contribution of *Three Guineas per annum;* or, in lieu thereof, the sum of *Ten Guineas* as an equivalent for the composition.

ARTICLE L.—Any *Resident* Member, whose permanent residence may be abroad, shall be at liberty to become a *Non-resident* Member, should the payments he may have already made to the Society amount to Twenty Guineas, or, on making up that amount, inclusive of all his previous payments; and he shall be free to resume his Resident Membership on recommencing to pay his Annual Subscriptions.

ARTICLE LI.—*Honorary, Foreign,* and *Corresponding* Members, shall not be liable to any contributions, either on their admission, or as annual payments.

ARTICLE LII.—Every person elected a *Resident* Member of the Society shall make the payment due from him within two calendar months after the date of his election; or, if elected a *Non-resident* Member, within eighteen calendar months after his election; otherwise his election shall be void: unless the Council, in any particular case, shall decide on extending the period within which such payments are to be made.

ARTICLE LIII.—All annual subscriptions shall be paid to the Treasurer on the first day of January in each year; and in case the same should not be paid by the end of that month, the Treasurer is authorised to demand the same. If any subscriptions remain unpaid at the Anniversary Meeting of the Society, the Secretary shall apply, by letter, to those members who are in arrears.

ARTICLE LIV.—The publications of the Society shall not be forwarded to any Member, whose subscription for the current year remains unpaid.

ARTICLE LV.—The Resignation of no Member shall be received until he has sent in a written declaration, and has paid up all his arrears of Subscription.

OF THE MEETINGS OF THE SOCIETY.

ARTICLE LVI.—The Meetings of the Society, to which all the members have admission, and at which the general business of the Society is transacted, are termed General Meetings.

ARTICLE LVII.—At these meetings, the chair shall be taken by the President, or, in his absence, either by the Director or one of the Vice-Presidents; or, should these Officers also be absent, by a Member of the Council.

ARTICLE LVIII.—*Ten Members* being present, the meeting shall be considered as constituted, and capable of entering upon business.

ARTICLE LIX.—The General Meetings of the Society shall be held on the *first* and *third Saturday* in every month, from December to July, both inclusive; excepting on the *first Saturday* in May, and the Saturdays preceding Easter and Whit Sundays and Christmas-day.

ARTICLE LX.—The business of the General Meetings shall be, the proposing of candidates, the election and admission of Members, the acceptance and acknowledgment of donations, and the reading of papers communicated to the Society on subjects of science, literature, and the arts, in connexion with Asia.

ARTICLE LXI.—Nothing relative to the regulations, management, or pecuniary affairs of the Society shall be introduced and discussed at General Meetings, unless the meeting shall have been declared *special*, in the manner hereinafter provided.

ARTICLE LXII.—Every member of the Society has the privilege of introducing, either personally or by a card, one or two visitors at any General Meeting; but no stranger shall be permitted to be present, unless so introduced, and approved of by the Meeting.

ARTICLE LXIII.—The admission of a new Member may take place at any General Meeting. When he has paid his admission-fee, and subscribed the Obligation-Book, the President, or whoever fills the chair, standing up, shall take him by the hand, and say: "*In the name and by the authority of the Royal Asiatic Society of Great Britain and Ireland, I admit you a member thereof.*"

ARTICLE LXIV.—The Obligation-Book is intended to form a record, on the part of the members (by means of the signature of their names in their own handwriting), of their having entered into the Society, with an engagement (distinctly expressed at the head of the page on which their names are signed), that they will promote the interests and welfare of the Society, and submit to its Regulations and Statutes.

ARTICLE LXV.—The Council may at any time call a *Special Meeting* of the Society, to consider and determine any matter of interest that may arise; to pass, abrogate, or amend regulations, and to fill up the vacancy of any office occasioned by death or resignation.

ARTICLE LXVI.—Such Special Meetings shall also be convened by the Council, on the written requisition of *Five Members* of the Society, setting forth the proposal to be made, or the subject to be discussed.

ARTICLE LXVII.—Notice of Special Meetings shall be given to every member residing within the limits of the Three-penny post; apprising him of the time of the meeting, and of the business which is to be submitted to its consideration. No other business shall be brought forward besides that which has been so notified.

ARTICLE LXVIII.—The course of business, at *General Meetings*, shall be as follows:

1. Any specific and particular business which the Council may have appointed for the consideration of the meeting, and of which notice has been given, according to Article LXVII., shall be discussed.
2. The names of strangers proposed to be introduced shall be read from the chair; and if approved, they shall be admitted.
3. The minutes of the preceding Meeting shall be read by the Secretary, and signed by the Chairman.
4. Donations presented to the Society shall be announced, or laid before the Meeting.
5. Certificates of recommendation of Candidates shall be read.
6. New Members shall be admitted.
7. Ballots for new Members shall take place.
8. Papers and Communications shall be read.

ARTICLE LXIX.—The Anniversary Meeting of the Society shall be held on the second *Saturday* in *May*, to elect the Council and Officers for the ensuing year; to receive and consider a Report of the Council on the state of the Society; to receive the Report of the Auditors on the Treasurer's Accounts; to receive the Report of the Committee of Correspondence; to enact or repeal regulations; and to deliberate on such other questions as may be proposed relative to the affairs of the Society.

OF THE PUBLICATIONS OF THE SOCIETY.

ARTICLE LXX.—Communications and Papers, read to the Society, shall, from time to time, be published, under the title of *Transactions*, or *Journal of the Royal Asiatic Society of Great Britain and Ireland.*

ARTICLE LXXI.—All *Resident* and *Non-resident* Members of the Society are entitled to receive, *gratis*, those parts or volumes of the *Transactions* or *Journal* published subsequently to their election; and to purchase, at an established reduced price, such Volumes or Parts as may have been previously published.

ARTICLE LXXII.—The Council are authorised to present copies of the *Transactions* or *Journal* to learned Societies and distinguished individuals.

ARTICLE LXXIII.—Every original communication presented to the Society becomes its property: but the author, or contributor, may republish it twelve months after its publication by the Society. The Council may publish any original communication presented to the Society, in any way and at any time judged proper; but, if printed in the Society's *Transactions* or *Journal*, twenty-five copies of it shall be presented to the author or contributor, when the Volume or Part in which it is inserted is published. Any paper which the Council may not see fit to publish may, with its permission, be returned to the author, upon the condition that, if it be published by him, a printed copy of it shall be presented to the Society.

MISCELLANEOUS ARTICLES.

ARTICLE LXXIV.—Every person who shall contribute to the Library, or Museum, or to the General Fund of the Society, shall be recorded as a Benefactor; and his gift shall be acknowledged in the next publication of the Society's *Transactions* or *Journal.*

ARTICLE LXXV.—No books, papers, models, or other property belonging to the Society, shall be lent out of the Society's House, without leave of the Council. Every Member of the Society has a right, between the hours of ten and four, to inspect the books or manuscripts of the Society, and to transcribe extracts therefrom, or take copies; but no stranger shall be allowed the use of the Library without the permission of the Council.

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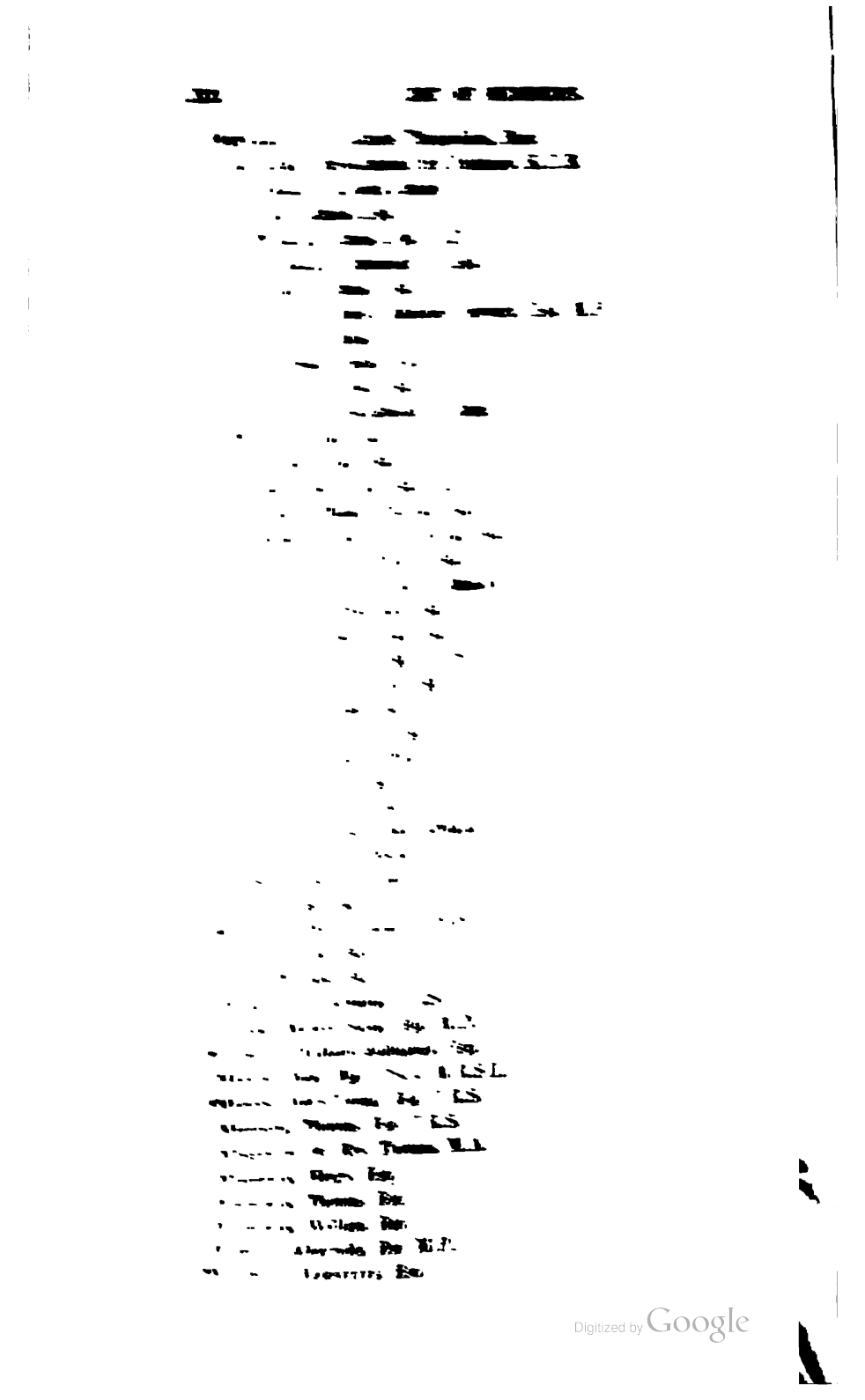

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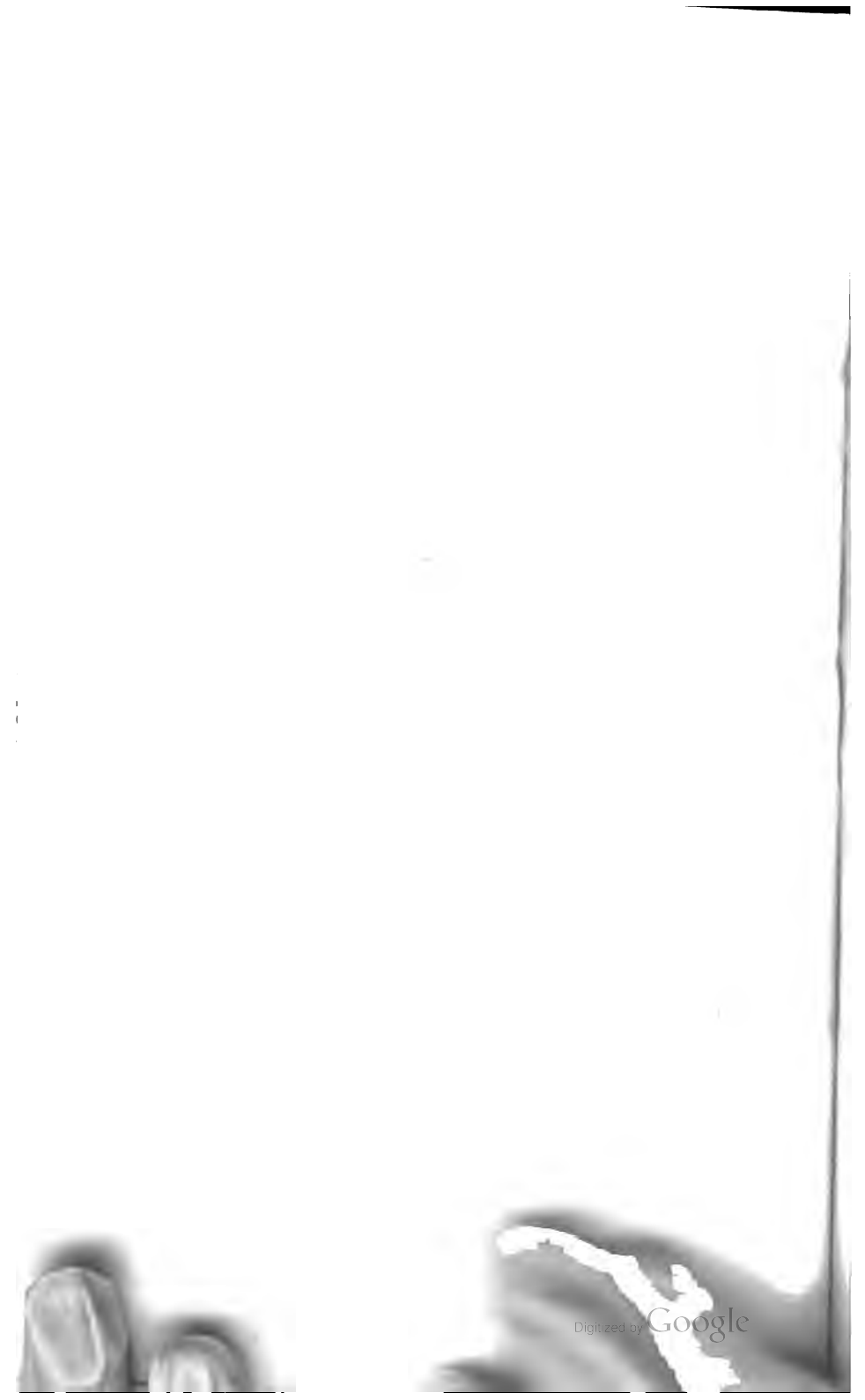

INDEX.

ERRATA TO VOLUME III.

Page 3, bottom line, *for* salt-boilers' nuts, *read* salt-boilers' huts.
.. 4, line 25, *for* lost, *read* joss.
.. 25, .. 3, *insert after* from, Vol. II.
.. 39, .. 21, *for* sassafra, *read* sassafras.
.. 40, .. 12, *for* innocuous, *read* innoxious.
.. 111, .. penult, *for* JEZRAEL, *read* JESREEL.
.. 118, .. 5, *for* POKEN, *read* SPOKEN.
.. 131, .. 2, *for* GRÄBERG, *read* GRÅBERG; and elsewhere.
.. —, .. 5, *for* Marocco, *read* Morocco; and elsewhere.
.. 132, .. 13, *for* Alsákiyah, *read* Al-sákiyah.
.. —, .. 19, *after* qualifications, *insert* a comma.
.. —, .. 30, *for* Mághfibins, *read* Maghribín.
.. —, .. 37, *after* them, *insert* a comma.
.. 133, .. 1, *for* EL NUVBIAÍ, *read* EL NUWAÏRÍ.
.. —, .. 29, *for* might, *read* may.
.. —, .. 38, *for* distinctive, *read* generic.
.. 134, .. 6, *for* tetáwin, *read* tetuan.
.. —, .. 15, *for* Hast, *read* Host.
.. —, .. 21, *after* forms, *dele* comma.
.. —, .. 36, *for* sprung, *read* sprang.
.. —, .. —, *for* come, *read* came.
.. 135, .. 4, *for* Maghrib-ul-akså, *read* Maghrib-ul-akså.
.. —, .. 5, *for* Sahrá, *read* Sahrá.
.. —, .. 27, *for* l'd Wakál, *read* l'd Wakál.
.. —, .. 29, *dele* in, *before* all the plains.
.. —, .. 32, *for* Sus, *read* Súa.
.. —, .. 37, *dele* and.
.. 138, .. 16, *for* Hawásahs, *read* Hawáraha.
.. —, .. 31, *for* Khúst, *read* Kúst.
.. 140, The English should have been placed in the last column, next to the Arabic.
.. —, col. 3, line 4, corresponds with col. 1, line 5.
.. 141, last line, cols. 4, 5, should be in line 1, page 142.
.. 142, line 1, cols. 2, 3, 4, should be placed above that line.
.. 143, .. – cols. 4, 5, belong to the same columns in line 2.
.. —, .. 7, .. 2, ايرتد should be placed below يرول
.. 144, .. 9, .. 5, *for* بزف *read* بزف
.. 147, .. 1, *for* عدا *read* عدا
.. —, .. 10, *for* عقلا *read* عقلا
.. —, .. 12, *for* from him, *read* from kin, &c.
.. 148, .. 3, *for* Súbdú, *read* Dúbdú.
.. —, .. 18, *for* Ammu ocgattag, *read* Ommu agattag.
.. —, .. 35, *for* d'itch, *read* d'itsh.
.. 149, .. 2, *for* thoulad, *read* thrúlad.
.. —, .. 36, *for* Ghadémis, *read* Ghadamis.