

# Journal of the Royal Society of Arts.

No. 3,092.

VOL. LX.

---

---

FRIDAY, FEBRUARY 23, 1912.

---

---

All communications for the Society should be addressed to the Secretary, John Street, Adelphi, W.C.

## NOTICES.

### NEXT WEEK.

MONDAY, FEBRUARY 26th, 8 p.m. (Cantor Lecture.) LUTHER HOOPER, "The Loom and Spindle: Past, Present, and Future." (Lecture I.)

WEDNESDAY, FEBRUARY 28th, 8 p.m. (Ordinary Meeting.) H. A. ROBERTS, M.A., Secretary of the Cambridge University Appointments Board, "Education in Science as a Preparation for Industrial Work." SIR HENRY A MIERS, M.A., D.Sc., F.R.S., Principal of the University of London, will preside.

Further details of the Society's meetings will be found at the end of this number.

---

---

### CANTOR LECTURE ON "THE MEAT INDUSTRY."

On Monday evening, February 19th, MR. LOUDON M. DOUGLAS, F.R.S.E., delivered the third and final lecture of his course on "The Meat Industry."

On the motion of the Chairman, COLONEL SIR JOHN SMITH YOUNG, C.V.O., a vote of thanks was accorded to the lecturer for his interesting course.

The lectures will be published in the *Journal* during the summer recess.

---

---

### CANTOR LECTURES ON "THE CARBONISATION OF COAL."

The Cantor Lectures on "The Carbonisation of Coal," by Professor Vivian B. Lewes, have been reprinted from the *Journal*, and the pamphlets (price one shilling) can be obtained on application to the Secretary, Royal Society of Arts, John Street, Adelphi, London, W.C.

A full list of the Cantor Lectures which have been published separately, and are still on sale, can also be obtained on application to the Secretary.

## PROCEEDINGS OF THE SOCIETY.

### INDIAN SECTION.

A meeting of the Indian Section was held on Thursday, February 8th, 1912. SIR FREDERIC W. R. FRYER, K.C.S.I., formerly Lieutenant-Governor of Burma, in the chair.

THE CHAIRMAN, in introducing the reader of the paper, said it was hardly necessary for him to introduce Sir Thomas Holdich, because he was well known to everybody present either personally or by reputation, and by his writings. At the present moment the subject of the North-East Frontier of India was one of great prominence, partly in consequence of the occupation of Tibet by the Chinese, and by the pressure they had brought to bear on the tribes on the British side of the North-East Frontier, and partly in consequence of the Abor Expedition. He thought the members of the Society were very fortunate in being privileged to hear a paper from the author on the North-East Frontier of India, as he was an exceptional authority upon the question, and anything that he said was sure to be of very great interest.

The paper read was —

### THE NORTH-EASTERN FRONTIER OF INDIA.

By COLONEL SIR THOMAS H. HOLDICH, R.E., K.C.M.G., K.C.I.E., C.B., D.Sc.

So little do we hear in England of the North-Eastern Frontier of India that when the news came of the total annihilation of a mission to the Abors, few people knew who the Abors were, or what we had to do with them. And yet this remote corner of our Indian Empire possesses an interest, political and scientific, which is almost unique. Politically, it is here that the dividing line exists between the Chinese Empire and our own. Here is the hedge over which we may look, but which we may not pass; and here we may discern what the expansion of another great empire may effect in the matter of approach to our domains, and of control over

a horde of Mongoloid peoples who have direct relations with ourselves and whose goodwill as frontier neighbours we cannot ignore. The scientific interest covers so large a space that it is impossible to deal with more than a section of it in one short paper. In the first place it includes a geographical area where there are still many problems unsolved, in spite of the fact that we have a grasp of the main features of its conformation. Gradually, year by year, we have traced out the waterways of the great Asiatic rivers which enclose this butt-end of the Tibetan plateau land. We have traced them out on general lines, but we have not surveyed them. We know where they must be, but we have not always seen them, and we still have to learn their value in the great scheme of inter-communication which these valleys afford.

As a field of ethnographical study I can only compare this land of magnificent altitudes and grand natural features with the land of the Kafir in the far North-West. Here, again, is an inaccessible region which has become the last refuge of the flotsam and jetsam of aboriginal Asiatic humanity, driven further and further into the wilderness by the inexorable laws of advancing civilisation and the survival of the fittest. Call that miscellaneous agglomeration of the relics of ancient tribes on the North-East by what name you will—Indo-Chinese, Indo-Burmese, or Tibeto-Chinese—they are the modern representatives of Mongoloid races who have long ceased to have any place in the scale of human development of Asia, and who really ought to be carefully studied as original types, or at least as primitive forms of humanity, ere they pass away altogether from the world's great stage. Time after time has the attention of the Government of India been drawn to the necessity for systematic research in this fascinating field of inquiry, and more than one Orientalist has broken the ground for a comprehensive and systematic study of them hereafter (notably Colonel Waddell, of the Indian Medical Service), but so far the impossibility of free movement amongst the most obstinately hostile of these tribes has barred the way to further progress. But no thirst for scientific information would altogether justify such an expedition as that, for instance, which is now being carried through the Abor country; and without such expeditions we shall never learn the truth either geographical or ethnological. When we are actually brought into contact with these unruly and wholly irresponsible savages, it is through the absolute necessity of maintaining order on our borders

and protecting our own people in their homesteads and plantations of the plains. Experience on the North-West Frontier has taught us that the only way to secure immunity from the raids and robberies of turbulent and independent tribespeople, who have little to lose and much to gain by brigandage and murder, is to walk through their country, to hunt out their strongholds, and, if possible, to get beyond and behind them. Where their back doors, as well as their front doors, are commanded trouble ceases, but it is not much of the North-East Frontier that can be secured in this way. We must also bear in mind that it is from the extremity of our North-Eastern Frontier that there extends eastwards and southwards the line of least resistance for future land connection with China and Burma.

So far as China is concerned we need trouble ourselves no further as to the value of that frontier line which the Chinese (as I will show you) have already made their own; but as regards Burma it is impossible to look to a long future without the conviction that India and Burma will eventually be linked by a railway which will render a complete command of all contiguous tribes a political necessity.

What do we know as the North-East Frontier of India? Of what does it consist? Just as the Indus, with the rising steps of a mountain system leading up to a plateau land beyond it, marks the main feature of our North-Western Frontier, so does the Brahmaputra, from its outflow through the deep gorges of the hills north of Sadiya till it turns southward into the plains of Bengal, combined with the broken ridges of the Himalayan rampart to the north, embrace the great physical area of the North-East Frontier. These two magnificent rivers—the Indus and the Brahmaputra—start from the same cradle of the Tibetan mountains, and, sweeping outward in deep grooves to the north-west and south-east, they enclose within their mighty arms the whole of the Himalayan mountain system as now recognised geographically.

Beyond the Indus to the north-west we call the mountains trans-Himalayan. Beyond the Brahmaputra to the north-east (the country with which we shall deal presently) we have an extension of the great uplift of Tibet, scored with deep-cut waterways and seamed with magnificent ranges and ridges, which have yet to be adjusted in our maps. The valley of the Brahmaputra is, speaking broadly, the province of Assam, the province which we know as the home of many a profitable plantation, and a

population both native and European lying more apart from the social and commercial life of the rest of India than any other province in the Indian Empire.

Through this valley of agricultural wealth flows the stately river for 450 miles in a broad and usually placid sheet of water, exhibiting every variety of river action in the formation and destruction of land on a truly gigantic scale. Here the silt washed down from the Himalayas accumulates in masses of mud, extending the banks or forming into new islets on the basis of some casual obstruction; there the river breaks away from recognised channels, and wanders with uncontrollable irresponsibility into new waterways, rendering navigation uncertain and dangerous, and forming loops which almost rival the main stream in volume. As with the Indus, so with the Brahmaputra, constant accretions of silt on its bed have gradually raised its level, so that the bordering strips of swamps and morass are constantly submerged; but beyond them again the ground gradually rises into gentle grades to the foot-hills of the mountains on either side. With the rugged plateaux and broken hills of the mountain systems south of the Brahmaputra we have nothing to do just now. These are the homes of the Kasia and Garo tribes, who may rightly be classed with North-East Frontier peoples; but we shall have quite enough to do if we confine our immediate interests to the Nagas, who occupy the hills south of the river near to the Burmese frontier, and to all the troublesome folk who people the northern hills of the Assam valley to the east of Bhutan: the Akas, Daflas, Abors, Miris, and Mishmis (not to trouble you with any but the best known tribal names). It is because we know so little about these people that I desire to draw your particular attention to them, for these are the people and this is the land which constitute our North-East Frontier. The physical character of this borderland, however, varies little, and if we take Bhutan as typical we may very safely infer that the general character of the Bhutan conformation is more or less repeated throughout the south-eastern edge of the Tibetan highland to the east of it.

Approaching the hills from the south one is immediately faced with the dense forest growth of the Tarai, interspersed here and there with vast spaces of reedy flats, where the grass grows twenty feet high and the track of the buffalo or elephant affords the only possible means of exploration. Many a weary day have I spent in the endeavour to outflank these deadly grass

jungles in order to carry a connected line of surveying past them. They are impassable without the assistance of an elephant. Where grass ceases forest commences, and although these forests do not exhibit the magnificent array of creepers and the wealth of palms and flowering plants which distinguishes Central and South American forests, they glory in the same feature of gigantic trees towering hundreds of feet above one's head, well supported by a force of bamboo thickets and jungle of minor growth, which it is absolutely impossible to penetrate. Rapid movement through these lower forests is impossible except on the rare occasions when one strikes a native footpath. As the greasy, uneven, rain-sodden track winds uncomfortably up the lower spurs to higher altitudes the character of the forest changes somewhat. The trees are of more moderate dimensions; only the bamboo increases, and at intervals tree-ferns and other easily recognisable sub-tropical plants occur, crowding and drooping over the mountain streams and decorating cascades. Animated nature asserts itself in the form of innumerable leeches, and these ubiquitous pests can penetrate anything except a stoutly-twisted putti. Bamboos specially crowd the valleys, and at 6,000 feet or so you may have the luck to look down from a height into the blue depths of a gully, where a heavy fall of snow has, perchance, taken up the curving threads of the bending bamboo, and woven a pattern of white lace over the hillsides as lovely as the silvery fall of an ice-bound cascade. At 4,000 feet or so we find the first clusters of wood-built hamlets, the early signs of permanent habitation. So far we have been climbing up the first steps of the gigantic natural staircase which leads to the great Asian plateauland. If we regard the Himalayan system as forming the wrinkled and corrugated edge of the Tibetan tableland, and presenting, in their original and primitive form, a succession of parallel barriers, or steps, leading from the plains to the plateau, we should expect here and there to encounter certain landings, or flats, dividing, as it were, successive flights of stairs till we reach the top. This is practically what happens along the whole line of the Eastern Frontier, although the conformation is by no means as well marked as it is in the far North-West. The original great scheme of Nature in thus fashioning the approach to the roof of the world is recognisable from the Indus to the Brahmaputra, but in the matter of physical aspect, due to the difference of climate, no greater contrast can be conceived than that

which exists between the barren and rock-bound and glacier-split barriers of the North-West and the more or less rounded and jungle-covered slopes of the North-East. Up to the altitude of 5,000 ft. or 6,000 ft. there is no break in the strength of the forest solitudes. Above that altitude, where human habitations are met with, the forest thins and varies in character. One wanders through an atmosphere of almost everlasting mist and cloud, amidst a weird array of gaunt, moss-covered trees with long grey beard-like parasites drooping and dripping rain-showers as they are gently stirred by the wind. It is beyond this again that we encounter the first rolling uplands with wide valleys and brawling streams, sweet grass-covered slopes covered with the glory of purple and white rhododendron, and clothed with flowers as with a Persian carpet. This is, indeed, a most lovely country, the last landing, as it were, on the Himalayan staircase before reaching the stern wide solitudes of Tibet. Physically, Bhutan is as much Bhot (or Tibet) as is all the country east of it bordering the Assam valley on the north. Politically and socially it is distinct. British India, as represented by the Assam valley, is bordered on the north by Tibet throughout. We recognise no distinct borderland of independent tribes, as we do on the North-West, when once we are east of Bhutan. But where Tibetan (in other words, Chinese) authority and influence end, and where British authority begins, we do not know. What has happened is this. The primitive Mongoloid inhabitants of this part of Asia, crushed in between the two gigantic and expansive forces of advancing Tibetan and Chinese civilisation, have been forced into the narrow spaces of the roughest and most inaccessible hills which border Assam, further advance south being barred against them by Indian occupation. I have spoken of Tibetan civilisation as a coercive power distinct from the Chinese, because in the past, when these great movements of Asiatic humanity were in progress, it was so. We hardly give sufficient credit to Tibet for its once dominant position in the world of Asiatic policy. Tibet has sent conquering armies into China and into India. Tibet has dictated terms to the Chinese Emperor, and, until its vigorous nationality was destroyed by the malignant growth of a debased and almost demoniacal form of Buddhism, Tibet stood as high morally in the roll of Asiatic nations as it stood physically. A reference to one concrete form of Tibetan civilisation in contrast to that of the savage Mongoloid tribes of the Assamese

frontier will, perhaps, illustrate better than any other method the fact that, although we may write the word Tibet across these border hills north of the Brahmaputra, and to the east of Bhutan, we have little or nothing that is Tibetan to deal with when once we enter them.

From the magnificent series of photographs collected by the greatest living authority on Bhutan, Mr. Claude White, let me show you what Bhutan can rise to in the matter of architecture. For strength and utility, adaptability to site, and complete harmony with environments certain Bhutanese buildings may almost compare with the mediæval architecture of Europe, whilst in detail of decoration they are, of course, unique. It is not necessary to go to Lhasa to convince oneself that the Tibetan race belongs to the building races of the world.

We will now turn to the extreme north-eastern corner of our frontier, that point of the Assamese wedge which, in the present state of Indian affairs, is the part which matters most. The end of the Assam railway system is on the left bank of the Brahmaputra River, opposite Sadiya, which may be considered our most advanced station. There is a branch line from Makum junction to Margharita which is important. Some fifteen or twenty miles below Sadiya is the actual point where the Brahmaputra or Tsang-Po of Tibet, after issuing from the hills into the plains of Assam, takes its south-westerly bend; consequently Sadiya is on an affluent of the Brahmaputra, which affluent has formerly been recognised as the real source of the great river, and is called the Lohit Brahmaputra still. In order to have a proper understanding of the geographical problem of this extremity of the Indian Empire, it would be well first of all to take careful note of the names of the various rivers which unite there to form the volume of the great stream which slides so majestically through the valley of Assam, because these names bear a most unfortunate likeness to each other, and may easily be confused.

We know now that the main stream of the Brahmaputra comes from Tibet, breaking its way through Himalayan barriers, but until it has actually passed these barriers and reached the centre of the valley it is known as the Dihang. It is on the borders of the Dihang that the Abors live of whom we shall have something to say presently. Eastward of the Dihang is the Dibong, which drains from north to south through an unexplored corner of Tibet, although its lower reaches have been mapped by

Woodthorpe and Ward. Its chief affluent is the Ikthan or Ithan. Next comes the lineal extension of the Brahmaputra, the Lohit Brahmaputra, on which stands Sadiya, leading directly to China. Not a hundred miles from Sadiya, on the Lohit, is the village of Rima, and at Rima the Chinese have recently established a frontier post. From Rima the road to China strikes off north-east over a series of high passes to Batang, which now must be reckoned as a Chinese town rather than Tibetan, and where, I believe, we may find the most advanced of the inland mission stations in western China. The river itself leads northward from Rima to the Tibetan plateau and Lhasa. From Batang to Rima and from Rima to Lhasa, the route has been traversed by that well-known native explorer who now lives in retirement as Krishna. From Sadiya to Rima various attempts to map the river have been made, and it is in this connection that the name of Needham is most prominent. It is impossible within the narrow limits of a paper like this to do justice to the names and memories of all the gallant officers and gentlemen who have distinguished themselves on the North-Eastern Frontier, but in the political field the name of Needham, political officer at Sadiya, stands out as does that of Woodthorpe in the field of exploration and survey. What Needham does not know about the North-Eastern Frontier certainly no one else knows. His connection with the wild, but not totally irreclaimable, savages of that remote corner of our Empire is one of the romances of the North-East. He nearly reached Rima, quite near enough to fix its position relatively to Sadiya. Turning south from the Lohit, we arrive at the Dihing which points south-eastwards to the foothills of the Patkoi range and the gateways of northern Burma. Thus we have the Dihang, the Dibong, and the Dihing in close juxtaposition, and uncomfortably similar in sound, all their names probably being derived from one and the same primitive native equivalent for the word "river."

It is with these waterways of the Brahmaputra, radiating as it were from the apex of the Assam valley, that we have chiefly to concern ourselves.

The Dihang, which is really the main stream of the river, connecting in one continuous channel the Tzanpo, of the Lhasa system, with the Brahmaputra of the Assam basin, concerns us chiefly, for it is the valley of the Dihang that affords the most obvious geographical opportunity for a direct connection with the most

highly-developed provinces of Tibet, and it is in the wilderness of forest-clad mountains which enclose the Dihang that the Abors dwell, the people who have so persistently resisted all efforts to effect a passage through their narrow territory, and who have lately signalled their determined opposition to the interchange of friendly communication by the disgraceful treachery which marked the murder of Mr. Williamson and of his whole party. The opposition is easily explained and is perhaps natural, but the treachery which withdrew that opposition for a time for the purpose of entangling their friendly visitors in a position from which there could be no escape will, we trust, be properly punished. Westward of the Abors the hill country is occupied by the Miris, who extend into the forest-covered flats of the plains below the hills. The flat forest (or Tarai, as it is locally called) between the Dihang and Dibong, is practically uninhabited. Immediately west of the Dihang the hills are the home of the Passi-Meyong Abors; the Pangi Abors come between the Dihang and the Yamne; and the Bor Abors (Bor means "great") hold the hills from the Yamne to the Dibong. These three sections or clans of the Abor tribe are thus all of them people of the hills; the Miris, to the westward of them, are found both in the hills and the plains; and the Mishmis, a most important tribe that cannot be overlooked, occupy the basin of the Lohit Brahmaputra, to the east. We need not trouble ourselves about any other of these Mongoloid tribes at present. In general physique they are all alike, the Abors, perhaps, being the finest race. In tribal customs they differ considerably in detail, but in the outer barbarism of their methods, their savage lust for bloodshed, and their general indifference to the ordinary and natural laws of chivalry, even amongst savages, when dealing with women and children, there is little to differentiate them from the naked head-hunting Nagas of the southern Assam hills. Just to refer shortly to the details of the expedition which is now being undertaken against the Abors, you will observe that the base of it is at Kobo, near the junction of the Dihang and Brahmaputra. From Kobo one column has followed the line of the Dihang to Pasi Ghat, at which point the river debouches from the hills. A second column made its way westward to deal with the Pasi Meyong Abors, entering the hills somewhere near peak 2835 on the map, ultimately joining number one column at Kebang. It is with number one column that the interest of the expedition chiefly lies, for it

is in connection with the operations of this column that we shall finally learn whatever geographical secrets there may yet be to be learned about that section of the Brahmaputra River between Tibet and Assam which has never yet been surveyed, but which has been explored both from Tibet and from Assam, so that there is not much of it about which we can say we know absolutely nothing. The story of its exploration from Tibet is one of the romances of the Indian Survey Department.

Kinthup (or "K.-P.," as he is known in the confidential archives of the India Office) was a native of Sikkim, and one of the native explorers of the Indian Survey. In the year 1880 he went forth armed with certain instruments and some careful instructions to trace the Brahmaputra from Tibet to Assam. He travelled with a Chinese lama, also an agent of the Survey Department, a doubtful sort of companion, who was the originator of all his troubles. Making their way by routes previously explored, they arrived in due time at Gyala Sindong, near the point on the river where it bends sharply from a north-easterly to a south-easterly channel. So far there was no great difficulty, the route lying on the right or southern bank of the river. With the bend there occurs an abrupt narrowing of the valley caused by the enclosing mountains which closely grip the river for some five and twenty miles, producing a series of rapids and falls. It is possible, however, to follow the left bank of the river fairly closely to a point about five miles above the principal falls (Sindi Chogyal), whilst from a point two miles below these falls there is a well-trodden route passing from village to village till it reaches the market-town of Miri Padam. On the right bank of the river there are also tracks, and it is to be noted that the capital of the district, Pema Koichung, is not far above the falls connecting the routes on either side; but it is clear that there is no route on either side which follows the stream closely past these falls. Below them there are routes or tracks on both banks passing through villages and cultivation, and presenting, apparently, no great difficulties to travellers. Kinthup's description of the valley, its cultivation (which includes rice, cotton, and fruit), its monasteries and sacred places, and the wild and savage Abors of the lower reaches is deeply interesting. The roads are mere tracks, rising over successive spurs and dropping again into the flats on the river border. Clearly we must look to two sections of the valley to account for the fall of the river from the Tibetan highlands

(say 11,000 ft.) to the flats of Assam (say, 500 ft.), and these two sections are the rapids and waterfalls of the Gyala Sindong gorge and the final grip of the mountains below Kebang, that gateway of the hills which makes the advance of our force under General Bower a work of such supreme difficulty. Kinthup got no further towards Assam than Onlet, above Miri Padam, but his account of the generally open and easy nature of the valley between the falls of Sindong and Kebang is fully supported by the two Gurkha surveyors who made their way under Mr. Needham's direction in the spring of 1901 to Kebang by the right bank of the Dihang, and were there met by the determined opposition of the Pasi Minyongs, who blocked any further exploration most effectually. They maintain that the route from Kebang to Gyala Sindong (which they said they could see in the distance on a clear day) was absurdly easy compared to that which they had surmounted. They speak, indeed, of country "open and undulating," and the distance only ten stages. The falls are very sacred and the bourne of many a devout pilgrimage. Clouds of misty spray rise into the clear atmosphere above them, and a rainbow ever spans the valley. The scenery is magnificent. A dense sub-tropical jungle, rich with every variety of tree-fern and bamboo, reaches up the hill-sides to the limits of more open spacing, and a more stunted growth of rhododendron and oak. Above them are protruding glaciers and granite peaks, and towering above all the eternal snows and the everlasting silence of the ice-fields. I should like to tell you more fully about Kinthup, but time fails me—how he was sold into slavery and served his time under a Tibetan taskmaster; then, escaping, he was hunted through the valleys, claimed the protection of a monastery, and was again bought as a slave, and, escaping again, dug out his hidden instruments, and with no thought of turning back, set his face steadily to carry out the instructions of his master, Captain Harman. Finally he found a cave, and therein he completed the cutting and marking of certain logs, which were to float down the river to tell Captain Harman, who was on the watch in Assam, that the river where the logs started was one and the same with the Brahmaputra. Many a long day did the gallant Harman watch from his station for these wooden messengers bobbing along on the swirling tide of the great river—and at last he died there before they reached him. Kinthup knew nothing of this. He adopted the rôle of a pilgrim and made a fresh start. He

explored a new route from his monastery on the Brahmaputra to Lhasa; again returned by other ways on his original quest, reaching south as far as Onlet, where he was stopped by the pig-headed obstinacy of the Abors within sight of Miri Padam. Eventually he returned by Lhasa, and turned up at the headquarters of the Survey Department in India after four years of patient research and most extraordinary adventure. His reports have been verified once and again, but his mapping, under the uncertain conditions of his work, certainly left something to be desired. That something we shall learn from my old friend, General Bower, when he comes back from dealing with Williamson's murderers. The man who pioneered the first European track across Tibet from west to east is not the man to come back from this unmapped corner of our North-Eastern Frontier with his work half-finished. General Bower is a good soldier and sportsman, but before all things he is a sound geographer.

A notable expedition into the Abor country as far as Kebang was made by Colonel D. M. Lumsden in January, 1909. He was accompanied by the ill-fated Political Officer, Mr. Williamson, and by Mr. Jackman, of the American mission, who can talk the Abor language "like a native." On that occasion they were guided by the *gam*, or head man, of Kebang from Pasi Ghat, where they entered the Abor country, and their welcome at Kebang, if rough and rather embarrassing, was, at any rate, sound. Beyond Kebang, however, they could not proceed. The excuse made was the existence of tribal war between certain sections of the Abors, which would make travelling unsafe, and they were in a position to verify the statement as correct. A notable personage in the Gam of Ren met them at Kebang, and addressed the Abors publicly. It is probable that the negotiations which then passed between Williamson and this chief led to the subsequent fatal expedition, for it was apparently through the treachery of this chief that the party were massacred almost to a man. It is to Colonel Lumsden that I am indebted for the few photographs of the Abor community which we possess.

The Dibong River drains an important section of the Mishmi country lying east of the Abors. It has been traced and mapped for some twenty or thirty miles above its debouchment from the hills from Nizamghat by Woodthorpe and Ward, and the general conformation of the hill country overlooked corresponds with that already

described as the lower basin of Dihang. It is essentially upland deeply rifted by narrow waterways. The hills range up to an altitude of 15,000 ft., and are all covered by dense tree jungle. This invariable feature of the North-East Frontier is due doubtless to the excessive moisture in the atmosphere of the wettest corner of India. The monotonous persistency of rainfall during nine or ten months of the year is an unpleasant feature of the climate, which accounts for much of the difficulty of movement about the country. Our friends on the Abor expedition are suffering much from this infliction. It may be noted that on the southern edge of the hills south of the Brahmaputra, where the inrush of cloud-bearing currents sweeping inwards from the Bay of Bengal first strikes the mountains, the rainfall is such as to constitute a world's record. It averages about 60ft. a year—enough to float a Dreadnought!

The Mishmi paths are steep and difficult, and there is nothing within the areas surveyed to indicate anything like the open and undulating valleys that we have been told to expect beyond Kebang on the Dihang (or Brahmaputra). What may be beyond the limits of Woodthorpe's exploration we have yet to learn. We shall find eventually, I have no doubt, that the belt of wild jungle-covered, and almost inaccessible, hills is backed by more open uplands, and that it is the fringe of the mountains and the gorges of the great rivers bursting through it that presents the chief difficulty to exploration. The Dibong, however, so far as we know, leads to no ultimate line of international communication, and is so far comparatively unimportant.

It is otherwise with the Lohit Brahmaputra (or Zayal Chu), which drains the Tibetan province of Zayal ere it reaches the Chinese frontier at Rima. Rima is less than a hundred miles from Sadiya, and the way thereto is beset with the usual amount of weary struggle with slippery rocky paths and jungle-covered hill. I have already said that Needham very nearly reached Rima from Sadiya, and that the explorer Krishna did actually reach Rima from the other side. From Rima he effected an important discovery by following up the Lohit northward to its source, reaching the Tibetan province of Kham, and ultimately Lhasa, by that route. The significance of Rima lies in the military post which China has recently planted here. We are politically on the edge of China wherever we touch Tibet or the wild tribes that border Tibet, but nowhere is the practical advance of that irrepressible nation so distinctly marked as at

Rima. What does it mean to us? What is the real significance of this apparition of a yellow face looking over the border hedge into a corner of Assam? I will not bore you by pointing out the reasons why, as a matter of military significance, it has no meaning at all; I will merely indicate one at least of the conditions implied by that occupation. The Chinese do not dump down their military posts along their frontier without securing good and safe means of communication behind them; so that we may well believe that the route followed by Krishna from Batang to Rima, crossing though it must a series of high passes, is a fairly useful road; indeed, Krishna says it is. Batang, on the high road between Lhasa and China, is not more than 150 miles as the crow flies from Rima. At Batang, I believe, there is already a European mission station. I believe it because I know it was contemplated some time ago, and the missionaries are usually first on the field of practical geographical advance. The road thereto from Rima is very much longer than 150 miles—say 200—but it is evidently a sound route for purposes of military and commercial communication, and it is the straightest road to western China. The point of the position is this. If a Chinaman from Rima wished to explore Assam, we should not interfere with him. He might find a little difficulty with the Mishmis, but he would find none from us. We then have a right to demand reciprocity. If we, too, are prepared to take our chance with the Mishmis, who will not give trouble for long now that they are dominated from both sides, why should not we traverse the direct road to Batang and western China? It has happened to me on another part of the Chinese frontier that the crossing of that frontier was immediately met by a hostile demonstration. I was politely, but unmistakably, made prisoner and marched back again. This, too, when I was actually assisting to determine a frontier in Chinese interests, so we may assume that there is not a prospect of our finding an open road beyond the Chinese door unless we insist on it as one of the conditions of Chinese occupation.

Yet another part of the North-Eastern Frontier must be touched upon. There are other ways of linking up India with China, which is one of the inevitable developments in the world's progress, than by taking the straight and narrow, but neck-breaking, path. We turn now to the Dihing. Not that the Dihing is in itself of any vast importance, but it points the way to Burma. We are now in the land of

another primitive Mongoloid race, but a race possessing far more affinity with the Chinese. The Singphos are a section of the Indo-Burmese group who have in times past shown considerable activity and enterprise in enlarging their borders. They pushed across the intervening hills from Upper Burma into Assam, where they left their mark in the shape of the district name (Ahom or Asom), and where they are to be found still. Meanwhile a section of the irrepressible Nagas have thrust their way across the line of advance, and divide the Assamese Singphos from the Singphos of Burma. The Nagas, by the way, are not so irreclaimable as to be unaware of the value of the British rupee. They are the people from whom the leaders of the Abor expedition have recruited a most useful corps of carriers and jungle-cutters. They are a most interesting and bloodthirsty race, but time fails me to talk about them further.

The connecting routes between Upper Assam and Upper Burma have been thoroughly reconnoitred. There are three which offer possibilities for railway construction.

The story of the North-Eastern Frontier of India would be incomplete without a reference to that most important feature of it—the approaches and gateways to Burma. It is important for the reason that we might hereafter be sorely in need of a land route to Burma from India. Here we get back again to the old, old story of the command of the sea. We are never far from it in India; and inasmuch as our hold on India is dependent thereon, you may probably object that if we lose that command we need trouble ourselves no further about a highway between India and Burma. But Britain still rules the waves, and there are other considerations, both political and commercial, which almost compel us to secure all the dominant power which such a right of way would give us. And it was with some such prompting as this, no doubt, that the Government of India wisely organised a series of surveying expeditions across the intervening hills, which should decide—and which have decided—where the iron way could best be carried. Of the three ways of getting to Burma from India, one is not an Assam route at all. This may be called the Aeng pass route. It follows the coast-line more or less from Chittagong southwards till it faces the easiest gap in the long extended mountain system of Arakan, which would allow of its divergence into the valley of the Irawadi, somewhere half-way between Rangoon and Mandalay. An expensive and difficult line. Then there is



the Manipur route, which leaves the Assam valley to the east of Gauhati and Shillong, and, after winding through the hills and visiting the small and independent state of Manipur, would land the traveller on the Irawadi, about half-way between Mandalay and Bhamo. This has certain military advantages, especially in matters touching Manipur, but, once again, it is expensive and difficult. Thirdly, there is the Hukong valley route, which, starting from near the head of the Assam valley, twists its way to the foot-hills of the dividing range of Patkoi, and then, negotiating that range by means of a prospective tunnel, drops into the small beginnings of the Hukong River, terminating on the Irawadi at Mogaung, to the north of Bhamo. This is the true North-East Frontier route, inasmuch as it would cost about half that which the Manipur route would cost, and is in every way the easiest to construct and to maintain. It is, therefore, the route which we may confidently expect will be ultimately adopted in that good time when India is free to spend money on frontier developments. The total distance from the railway head in Assam of this route is a little short of 300 miles, of which about half runs through the rough dividing hills between the Assam valley and the head of the Irawadi affluents, and the other half may be reckoned as a surface line. There is only one formidable dividing range parting the two great river systems at this point—the Patkoi—which runs to about 4,000 ft. in altitude. A tunnel at about 2,700 ft. would not be a difficult or very expensive construction, and the drop into the Hukong is simple. On the Assamese side of these dividing hills the jungle is very dense. It has been explored by several good geographers, amongst others by Needham and Woodthorpe. The latter followed the line of the Dihing. The universal feature of eastern frontier exploration is the terrific labour involved in cutting a way through the close-packed vegetation that is massed in the valleys and stiffens the hillsides of all hill slopes below 6,000 ft. in altitude. There is no getting away from it. A footway cut out of the solid jungle one year will be as if it had never existed by the end of the following rains; and it is only because Nature has so fitted man to his environment, that the untutored savages of this corner of the Empire are most skilful artists when it comes to jungle-clearing and load-carrying, that the European is able to grope his way through the rocky tracks at all. A notable journey was made by Mr. C. E. Young a few years ago from Yunnan, in China, to Sadiya, on the Brahmaputra, passing more or

less closely along the Hukong valley route; but we have in the records of the Government Railway Survey in 1895 and 1896 so full an account of the route and its environment as to leave little to be added by subsequent explorers. The Intelligence Officer responsible for the Surveys on that special mission was Captain (now Sir Eric) Swayne, who has since proved his capacity for geographical exploration in Somaliland and elsewhere. Passing the Patkoi range we are in a district of somewhat different race affinities to those of the Assam valley. The Singphos and the Khamtis of the Assam valley are cognate peoples of the same Indo-Chinese stock. It is a matter of history that some hundred years ago the Khamtis crossed into Assam from Upper Burma, and have remained there ever since. The Singphos of the Hukong valley own many Assamese slaves, whom they treat well, on the whole, and who complain of nothing except the inevitable break-up of families under the conditions of slave commerce. The Singphos are hardly to be reckoned with as a martial race, and the little opposition that they might offer to a permanent European institution amongst them (such as a railway) would be prompted far more by their fear of a movement against slavery, entailing consequent loss to themselves, than by any active feeling of hostility to the European. Such at least was the opinion formed by the railway route explorers of fifteen years ago, and such seems to be the opinion of, perhaps, the greatest authority on Burmese affairs, Sir George Scott, to-day. He pointed out in an able paper, read before the Colonial Institute in December last, that what the fertile valleys of Upper Burma want is population, and that population with commercial development can only be introduced by communication with India.

Isolated railways and railway systems in the East lose half their value and significance if they are not projected with the ultimate idea of creating and developing commerce over large and favourable areas, however much they may be built to satisfy the claims of strategy and administration in the immediate future. "Shreds and patches" of railways, as Sir George Scott calls them, are only locally useful. They will soon disappear in China in favour of a national system, and then we shall be face to face with this curious anomaly. There will be one huge isolated system in India; another system not so huge, but equally isolated in Burma; and a third in China. Between these systems there will be no connecting link to bind

them to each other, or to bind India to Europe. Such a disjointment of the world's commercial interest cannot possibly last. There must be many here to-day who will live to see the linking up of Europe with India, and India with the remoter East, when it will be no longer necessary to take advantage of the enterprise of Russia in order to reach the shores of the Pacific from Western Europe; and the first link forged in the chain will probably be this of the Hukong valley.

One turns from the fascinating theme of the North-Eastern Frontier with something of regret. Doubtless there is more in the stirring atmosphere of the North-West to attract public attention, because it is there that we find the great bulwarks of India's defence, and it is there that we watch for the first shadow of those coming events which may affect the ultimate destinies of the whole British Empire; but, as a matter of sentiment, the call of the unknown and of the beautiful appeals more strongly from the North-East. It is not the large flat solitudes nor the cold craggy magnificence of icefields and snow-capped peaks of the North-West that first touch the chords of memory during the waking dreams of the shelved and antiquated Anglo-Indian official. Rather it is the butterflies and the birds, the wild beauty of Bhutan, or the deep, silent, tiger-haunted forests and savannahs of the mystical valley of the Brahmaputra.

#### DISCUSSION.

THE CHAIRMAN (Sir Frederic Fryer), in opening the discussion, said that all present had listened with much interest to the graphic account of the North-Eastern Frontier given by the author, and they could now realise the nature of the country with which he had been dealing. The country was naturally one of great difficulty for surveyors. It was not only the physical features of the country that made it so difficult, but also the hostility of the inhabitants and the difficulties of transport. Those explorers who opened out such a country for the British people did so at very great risks, and incurred very considerable hardships. His own acquaintance with the North-East Frontier of India was principally confined to Burma. In Burma there had been several Boundary Commissions. In 1893 the boundary with Siam was delimited, and in 1895 the boundary of that country was delimited with France, which now was the Mekong River. There had been three years of boundary work by Commissions on the Chinese frontier; a considerable part of the Chinese boundary had been delimited, and the boundary had been marked out by cairns upon the spot. One gap was left in what was known

as the Wa country, which was inhabited by a head-hunting and bloodthirsty tribe. When Sir George Scott, who was in charge of the British side of the Boundary Commission with China in 1900, was in the Wa country, three officers of the Commission went down to visit a market that was being held in a Wa village, and the natives fell upon them and killed two of the officers, Major Kiddle, of the Indian Medical Service, and Mr. Sutherland, of the Burma Commission. Mr. Lytton, who was the political officer of the Boundary Commission, very narrowly escaped with his life through the help of a Chinese sergeant. The Wa country had not yet been delimited, and though it was considered to fall within the British sphere of influence its administration had not yet been taken over. To take over the administration of a country inhabited by people like the Was was a very expensive thing. The country would have to be held by police posts; no revenue would be obtained, and for another thing it would be necessary to keep the Was in order. Beyond Bhamo the boundary was considered to be the watershed of the Salwin and the N'maikhah Rivers, and the Chinese had agreed that that should be considered the boundary. But it had never been actually delimited on the spot, and the Chinese were constantly trespassing across the border. In 1900, when the British Civil Officer was in that region on his winter tour of inspection, he was attacked by a large party of armed Chinamen. Fortunately he had an escort of seventy Ghurka police with him, and the Chinese had cause deeply to regret their boldness. Those sections of the frontier ought, no doubt, to be delimited. Although it was natural to suppose that the Chinese were already sufficiently occupied by their own internal troubles, as a matter of fact they were steadily encroaching on the British frontier; and unless the frontier was actually delimited, and this country was prepared to hold it in some force, the Chinese would always trespass across it. So far as the frontier actually delimited went, they observed it very well, and the Chinese officials met the British officials every year in the cold weather to settle any outstanding disputes. The great difficulty was to keep the tribesmen on the British side from attacking the tribesmen on the Chinese side, and *vice versa*; but any such cases were now dealt with by a joint commission of officers from both sides of the border, and so far things had worked very smoothly. With regard to the question of communication with India by railway, he believed that a line through the Hukong Valley would, as the author stated, be very easily made. The country was quite simple, and there were no very great natural obstacles. A proposal had been made to construct a line to T'êng-yüeh. A line could easily be made to T'êng-yüeh, but he had always understood the difficulty was to carry the line beyond that place. Engineers, however, could overcome all kinds of obstacles, and no doubt it would be possible for them to carry the line even beyond T'êng-yüeh; and there were, no

doubt, other directions in which a railway might be still more easily made.

COLONEL SIR ERIC SWAYNE, K.C.M.G., C.B. (Governor of British Honduras), said that whilst listening to the paper his memory had gone back to sixteen years ago, when he travelled through the country to which the author had referred. The question of the railway was one which had a very tangible interest to a large number of those present. Personally, he believed a railway would have to be made some day. Speaking only of the railway going eastward from Assam into Burma, there were, in the Hukong Valley, some 1,200 to 1,500 square miles of very fertile land covered with forests, but there was hardly any population there. A railway was required to bring a population and develop the country. It was a rubber-producing country, the rubber being obtained from the big rubber trees, and great quantities of rubber had been exported during the last thirty or forty years, both into Assam on the one side and Burma on the other. Chinese traders came with Burmans from the side of Burma and penetrated right up to the Patkoi range, made their advances to the local people, who gathered the rubber and floated it down on rafts into Burma, or else they carried it across the Patkoi range and sold it in the Dibrugarh market. When he went up to the Patkoi range, canoes had to be employed to carry the party up the streams, while subsequently rations were carried on the backs of elephants through tunnels in the forest up to the foot of the Patkoi range, where Naga coolies were obtained. From the Patkoi range a splendid view was obtained over the Assam valley, right up the headwaters of the Brahmaputra, the whole range of the Himalayas being seen in the distance. In looking down upon the country in that way the whole of Assam was spread out before the traveller like a map. The plains were covered with dark forests, and the line of each river was very clearly marked, winding in a white band across the plains. The rivers were full of fish, and the place was a true fisherman's paradise. In one hour he caught 80 pounds of mahseer, consisting of 30, 20 and 10 pounders. The fish was of a good fighting kind, and he could strongly recommend the sport to anyone who was a true fisherman. Unfortunately, while he was travelling in the country, the coolies accompanying the party contracted cholera to start with, and later on scurvy and dysentery. A great many of the men were lost in that way, and the camps were marked by the graves of the men who were left behind. The jungles were very thick, it being necessary to cut their way through them, and it was also necessary sometimes to make bridges over the rivers. The coolies were excellent men for that kind of work. In many cases the party preferred to march down the river up to their waists in water, rather than go over the thick jungle-covered hills, on which it was only possible to march two or three miles a day. When the Hukong valley proper was reached everything was plain sailing. If a railway was built

it would be absolutely necessary for the British to control the tribes in the Hukong valley. As far as he saw, there would be no difficulty in doing that, the tribes being well disposed towards us. The only difficulty that would arise would be occasioned by the slave question. Domestic slavery existed in the country. The slaves were well treated, but hardship existed in that they were liable to be sold to other masters, so that mothers were separated from their children. The slaves were well fed, but any excess of zeal on their part did not make for their own good, but the benefit of it went to the masters. If a railway was made, that matter would have to be taken in hand, but he hoped that it would be done very gradually, and that nothing drastic would take place. Probably it would be wiser to adopt a system similar to that adopted in Zanzibar, by means of which domestic slavery would automatically cease as time went on. If the slavery question was properly dealt with, no trouble would be experienced in administering the Hukong valley. The valley itself was very rich. It possessed amber mines, the amber being dug out of pits; while on the borders of the valley, towards Burma, there were jade and ruby mines. His party came across huts in the Hukong valley, on the banks of rivers, which contained wooden dishes with which the natives collected gold. A regular practice was not made of working the gold, but when there was nothing to be done in the fields the natives went to the rivers and washed up whatever gold had been brought down by the floods. Sometimes the more energetic went up to the headwaters of the river, where the sands had collected, and returned with quills full of gold. The country might, he thought, develop into a splendid rubber-producing property, and, taking it all round, it was a country which England could not afford to neglect.

SIR JAMES GEORGE SCOTT, K.C.I.E. (late Superintendent, Southern Shan States), said the author was a great authority on the North-West Frontier of India, and his book, "The Gates of India," was most charming reading. He hoped now Sir Thomas Holdich had gone a little towards the north-east, he would go farther still and write a book on the whole North-East Frontier. In order to tempt the author to examine the North-East Frontier, he wished to say that there were some gates there already, although they were not such gates as tempted Alexander to come in from the West with the Greeks. Although they were called gates, possibly the average person would call them trap-doors, or manhole doors, or attic windows. When the question arose of delimiting the Burma frontier, the Chinese adviser to the Burmese Government discovered in the T'eng-yüeh annals that there were seven gates all named, and they naturally seemed to concern the frontier very seriously. A British party, therefore, went out to find those gates, but they discovered they were just as difficult to identify as the writer of the letters of Junius. They travelled in a country quite as nasty as some of that shown in the

photographs; they did a lot of Alpine climbing in a sort of palm-house temperature; they cut down a very great deal of jungle, and they took down the sworn depositions of a number of imaginative headmen. At first they thought that the leeches were the most disagreeable feature of the country, but before they had gone far they came to the conclusion that the blood-blister flies were still worse. The whole winter season was spent in the hills, and when they got back to headquarters the only thing they were quite certain about was that all men were liars. The Chinese also knew that there were the seven frontier gates to which he referred. The Tsung-li Yamen sent a telegram to T'êng-yüeh to say: "The frontier with Burma is about to be delimited; there are seven frontier gates; see that those gates are found." The Chinese at T'êng-yüeh knew nothing about them, but they sent out orders to all the headmen and said, "There are seven gates; you must put them in order; the Board of Punishments will see about it if you don't." Therefore, in the businesslike way of all Chinamen, and people under Chinese orders, they proceeded to go to the farthest point to the south and the south-west where they could go without getting into trouble with the hill tribesmen, and proceeded to build seven gates, which were afterwards pointed out to the Chinese Commissioners when they visited the place. Their position was duly noted, but the frontier which was eventually laid down went near none of those gates at all. Their only use was that they pointed out the limit to which the Chinese could extend their authority. The people along the frontier were mostly Kachins, who were really the same people as the Singphos. Their own name for themselves in fact was Ching-paw. The author had stated that the Singpho were not a martial people. They must have deteriorated from the main body of the race, because although a Kachin might not be called a warlike man, he could not at any rate be called an effeminate or a degenerate. Their chief occupation for many years was stealing other people's cattle, which they did with quite as much enthusiasm as the Johnsons and the Jardines did on the North British frontier. The Singpho were mixed up with a number of other people. Photographs had been shown of the Lissu, who, the author had led them to believe, were the only people who possessed crossbows, but that was by no means the case. There were quite a number of tribes a long way inside British territory who had crossbows. He remembered on one occasion he got a number of Muhsö to beat the jungle for a shooting party, but unfortunately very little game was obtained. In order to reward the beaters, and to amuse themselves, an archery meeting was got up with coins as prizes. The party, however, found that it was a great deal too expensive to put up rupees or eight-anna pieces to be shot at. Eventually two-anna pieces were put up, and quite often men at twenty-two paces were able to hit a two-anna piece every time. So that the Lissu,

who were not British subjects, were not the only people who had crossbows on the borderland, and he hoped that would be a further inducement to the author to write a book about the North-East Frontier. The Kachins overlapped what might be called the North-East and by East Frontier, and especially they ran up beyond the point where the Burma frontier ended for the present. That frontier was determined at home. The signatories in the Foreign Office agreed that the frontier went up to a high conical peak. That sounded very satisfactory, but when the party got to the ground they found that the "high conical peak" was a noun of multitude. However, eventually they determined on a particular high conical peak, from which straight to the north there was a very satisfactory boundary from the map point of view and from the point of view of actual physical geography, namely, the watershed between the N'maikhah, which was the eastern branch of the Irawadi, and the Salwin. Unfortunately, the hills in that country constitute the worst kind of frontier, because the people who lived in the hills usually lived very near the top. The race which lived highest in the hills were called the Lihsaw, who might be connected with the Lissu, although Dr. Grierson said they were not. Their chief form of occupation was cutting down and burning jungle, which, from the point of view of science, was the very best form of agriculture. The Forest Officers, however, did not like it; the climatologists said it spoilt the rainfall, and in any case it did not suit a hill-top frontier. The sooner that frontier was marked down the better. Beyond the North-East and by East Frontier there was another frontier which might be called the North-East and by East, a point to the East, namely the Wa frontier. The Was were a little more troublesome even than the Kachins, for they made a habit of head-hunting. The trouble all along that frontier, not only with the Was, but with the Kachins, was due to the latest Opium Agreement. According to that Agreement, no opium could be sent from any part of British India into any province of China where opium was not grown. It was said that no poppy was now grown in Yün-nan, but the Wa had never grown anything else but poppies for centuries. For many hundred years before the Anti-Opium Society ever existed they sent tons of it into China, and would go on doing so now despite all conventions between this country and China, because they wanted salt. They did not want money; all they wanted was salt and rice with which to make spirits, and serious trouble might be experienced there. He must conclude abruptly. The Chinese frontier was very much like a lady's hat which was kept firm with a steel hatpin. The frontier would be fixed by driving railways through the frontier like a lady's hatpin through a hat.

Mr. ANGUS HAMILTON said in the very interesting paper to which they had just listened with so much pleasure, Sir Thomas Holdich had referred

to the Mishmi Mission. As the special correspondent of the London Central News Agency with the Abor Expedition, it was his privilege to witness the preparations for the departure of the Mission from Sadiya. Sir Thomas Holdich stated that the distance between Sadiya and Rima was, as the crow flew, about 100 miles. By road, of course, the distance was much more; in fact, from Sadiya, whence the expedition set out, to Rima, which was the real limit of Chinese authority on the Tibeto-Mishmi border, the road was at least 198 miles. It was very doubtful whether the Mission would proceed to Rima. Unfortunately, the Government ordered Mr. W. C. M. Dundas, the Political Chief of the Mission—and a man of unrivalled reputation as an authority upon the languages and tribes of the Assam border—not to advance beyond the places in the Lohit valley to which the Chinese had penetrated. These places—and they represented the limits of Chinese encroachment in the Lohit valley—were Menilkrai and Walong, and hitherto they had been regarded by the Mishmis as within the tribal line. The distance from Sadiya to Walong, the more easterly of the two places, was 165 miles, and it was somewhere between Menilkrai and Walong that the British Government had ordered Mr. Dundas to place a cairn, which should serve to indicate where the frontier between India and China begins. The exact spot to be honoured by this distinction, if the real limits of tribal territory were recognised, would be between Sama and Rima, and opposite the position where the Chinese had set up their standard. There were but very few villages in the course of the Lohit valley between Sadiya and Walong, and it was interesting to know that Mr. Dundas was proposing to establish a chain of posts, which would be placed at intervals of fifty miles along the valley, and could serve as the supply depots of the Mission. The first of these fifty-mile posts out of Sadiya was Temiemukh, where three months' provisions for the entire force were to be held in reserve. Kupa, where only two months' reserve stores were to be stocked, was the second post of this character, while the third was Mingszan, where six weeks' reserves were to be kept. Beyond Mingszan, ten miles away, stood Menilkrai—nothing but an oasis of sand and river-bed—over which, with calm and celestial impudence, flew the Dragon Flag, unguarded and alone. Five miles further came Walong, where a family of half-caste Tibetan traders occupied three dilapidated houses. Thirty-three miles further on was Rima, the road to it passing through a country that was bleak, deserted and uninviting, though not sufficiently uninviting to have repressed the curiosity of the Chinese, who, as had just been stated, had set up their flag at Menilkrai. From Sadiya to Temiemukh it was possible to go either by land or by water. The waterway met the land route at a place called Diphu, while a few miles further along at Sanpara the limit of navigation by boat was reached. The journey by river as far as Sanpara was one of

considerable danger, for the stream was beset with rapids, over which canoes had to be dragged, while, in addition, there were rather bad whirlpools and many patches of quicksand. He (the speaker) was afraid he was unable to discuss the political aspects of this region, as one of the unwritten laws of the Society debarred all reference to politics. At the same time he was sure that all would understand how much importance attached to the outcome of the Mishmi Mission, and, personally, he hoped that they would not understand a process of reasoning which cut the cake in half when the whole cake could be taken away. By this he meant that the cairn to be put up by the Mishmi Mission at the orders of the British Government cut the tribal lands in half when all the chiefs of these lands were only too anxious to place the whole of them under British protection. It was difficult, perhaps, to state definitely the precise limits of the Mishmi country. The tribes themselves, however, had always considered that their lands ran as far as Sama, some little distance up the Rima valley, and they should be the best judges, particularly as the Chinese had never before been seen at Menilkrai, and had only appeared there because a patrol from Rima, when that ramshackle village was garrisoned the other day by Chinese troops, casually wandered into and along the Lohit valley. In the present unsurveyed state of the tribal lands it might be of value to count the divisions accepted by the people themselves. There were in the first place four tribal groups—the Midus or Chulikattas, the Bebejiyas or Mithuns, the Taius or Digarus, and the Mejus. As an indication of the Mishmi boundaries, perhaps he might say that the Chulikattas occupied both banks of the Dihang river, many of the larger and more affluent villages lying close to the Tibetan border, and were found also in the ranges north of Sadiya from the Sesseri River on the west to the Digaru River on the east; the Bebejiyas frequented the valleys of the Ithun and Ithi Rivers, holding the country to the north of the Sihi range and Saruba Peak and east of the Chulikattas, and bordered on the north by the ranges of southern Tibet, and on the east by the possessions of the Digarus. The Digarus lay to the east beyond the Digaru River, and the Mejus were further east again, towards the Lama valley, a sub-prefecture of Lhasa. In general, the Mishmi country was mountainous, greatly cut up by watercourses, and difficult of access. The mountain valleys were covered with dense jungle, and the crests of the ranges were hidden in snow. Trade was poor, and cultivation scanty. The tribesmen were of uncertain temperament and small in stature, though wiry, with strongly-marked Mongolian features, while, finally, the four great tribal divisions were split into numerous clans, in which the language, manners and customs, while varying slightly between the several groups, were altogether different from those prevailing among the Abor peoples,

LORD SANDERSON, G.C.B., K.C.M.G., in proposing a hearty vote of thanks to the author for his very interesting paper, said he had the greatest pleasure in doing so, because Sir Thomas Holdich was an old friend of his, and an officer to whom, when he (Lord Sanderson) was at the Foreign Office, they were greatly indebted on many occasions. Sir George Scott had referred to the Seven Gates on the Chinese frontier of Burma. He was one of those who had to carry on the negotiations at the Foreign Office in connection with the delimitation of that frontier. He did not think he was personally responsible for the choice of the conical peak to which reference had been made, but he recollected perfectly well the seven gates, and that the Chinese Minister said he must have them, although he could not say where they were. The sufferings of the British negotiators were very great in consequence.

MR. H. LUTTMAN-JOHNSON, in seconding the motion, said that he lived on the North-East Frontier for a great part of his life, and he was, therefore, able to confirm from his own personal experience the accuracy of all the statements contained in the author's excellent paper. He thought an extraordinary vote of thanks was due for a paper so good in matter and style. The author had done a great service in pointing out how very much Assam was connected with China and Tibet. When he used to go fishing up the Subansiri he heard stories of bodies of people being washed down in times of flood, and those people had been identified as Chinese and Tibetans. In his bungalow at Gauhati, swarms of Tibetans used to visit him, and he had known Chinese gentlemen pass through Dewangiri on their way to pilgrimage at the reputed scene of the death of Buddha. He used to pay the Tibetans their annual *posa* (tribute) at Udalguri Fair. He remembered a trader from Lhasa who came to visit him comparing his bungalow with those he had seen at Darjeeling. The *Dafas* had often described to him the cities of the Upper Subansiri. His wife's wedding ring was made of Tibetan gold.

The resolution of thanks was carried, and Sir Thomas Holdich having briefly acknowledged the compliment, the meeting terminated.

MR. ARCHIBALD ROSE, C.I.E., late British Consul on the Burma-China frontier, writes:— "It was with great regret that I left to-day before the discussion on Sir Thomas Holdich's most interesting paper, for I felt that our imagination had been thoroughly stimulated in regard to the frontier and the neighbour beyond those jungle-covered hills. In every frontier question the neighbour counts for so much, and on this north-east borderland the interest and influence of China is accentuated by the fact of the intervening tribal belt. I have brought back from the far side of the border a realisation of the Chinese genius in the rôle of frontiersmen. They have shown an

unmistakable imperial gift in Central Asia for the last 2,000 years, whilst their recent activity in Tibet, and their peaceful penetration into the tribal country, seems to show no decrease in vitality. For many years the unadministered tribes have formed a definite buffer between the two great empires. The whole history of Central Asia, however, leads one to the conviction that political and imperial frontiers are inevitable developments, and that the prosperity and well-being of settled communities can only be assured when the scattered tribes have been brought to a realisation of their responsibility both to their tribal neighbours and to the great Powers within whose zone they have their homes. This fact has been realised by China; she has set herself, with a striking tenacity of purpose, to the administration and often to the absorption of her tribes, devoting one of her most brilliant statesmen to the task. It has not been difficult, for Chinese prestige stands high in the border country. It is a prestige gained by long centuries of quiet work and of little expeditions, till the tribesmen on the Chinese side look to the 'father and mother official' as the embodiment of all wealth and learning and power. As a result the sedan-chair of a mandarin and a handful of soldiers are generally sufficient to quell any tribal disturbance, though China does not hesitate to undertake new and difficult campaigns when they become necessary, as in the more lawless Shan States on the south of the Burma-China border. Such a frontier prestige is an enormous asset to China as an empire, and it is not without significance that, even in the midst of the present chaos in China, an early manifesto of the revolutionary leaders pointed out the vital importance of strengthening the frontier administration in this region. It is a factor, too, that can well be appreciated by us, for like the Chinese we have an empire with long land frontiers, and we actually march together for some 3,000 miles on the Chinese-Indian border. My experience in the Chinese border country convinces me that Great Britain and China will find mutual difficulties and common interests in dealing with the problem of the North-East Frontier; and that the best interests of both empires will be served by a policy of friendly co-operation, with a definite political frontier and a belt of tribesmen who have been brought to a realisation of their neighbourly responsibilities.

#### ELEVENTH ORDINARY MEETING.

Wednesday, February 21st, 1912; SIR GEORGE BIRDWOOD, K.C.I.E., C.S.I., M.D., LL.D., Vice-President of the Society, in the chair.

The following candidates were proposed for election as members of the Society:—

Bevington, Alexander, Silverwood, Pyrford, near Woking, Surrey.