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Editor: Wm G. Sewell

Editorial Committee:
Mrs. R. O. Jolliffe
D. C. Graham
J. Kitchen

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FOREWORD

More than one reviewer has suggested that if the increased size of the journal be any indication of growth then the Society has indeed made rapid strides. The first volume, covering the years 1922-1923, contains less than seventy pages, whereas the last one contains more than three hundred. Another of the signs of advancing strength has been the decision to publish the journal annually instead of every two years as in the earlier days (though in the case of Volume III there was a gap of four years because of revolution and the consequent evacuation of foreigners from Szechwan.) The first of the "annual" volumes was No. V, but owing to delays in publishing, it became inevitable that Volume VI should cover 1933 and 1934. Annual publication is resumed with the present number.

This material expansion has come largely through the generosity of the Harvard-Yenching Committee of the West China Union University. Once more we desire to record our thanks for their assistance but for which several of the articles and most of the illustrations would have been omitted from this volume.

It is a heavy financial burden for a small society to publish a journal of this size and also to print sufficient copies to supply the increasing demands which come from all parts of the world. Experience has taught us that it is false economy to have too small an edition: Vol. II has already had to be reprinted, while Vol. I is now exhausted. Our assets thus easily become frozen, consequently the resources put at the disposal of the editor by the society have this year been less than usual: because of these financial considerations alone a certain amount of suitable material has had to be held over.

When he contemplates the imperfections in the journal the Editor is aware that the stage of pioneering is not yet passed. Despite the closest cooperation of the printers and the utmost goodwill on the part of all concerned it is impossible to avoid mishaps. Blocks, as in the case of the last journal, may arrive damaged after the long journey from Shanghai yielding, in consequence, poor reproductions. Our typesetters, who understand no English, when they open up a page to correct a fault are, to the despair of the proof-reader, more than likely to cause new errors. There are thrills and exasperations about editing a journal in West China which will inevitably vanish when the pioneering days are over.

The Editor desires to thank all those who have helped to make his work so pleasant: the members of the Editorial Committee, the United Church of Canada Mission Press, and the many individuals who have so willingly cooperated in various ways.

W.G.S.

October 1935.

PROGRAMME OF OPEN MEETINGS

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J. Huston Edgar.

While this journal is being distributed a telegram has come through from Tatsienlu to say that J. Huston Edgar has passed on.

We shall not attempt now to express the loss this means to the causes he has so eminently represented in the "Tibetan Marches". In our next volume we hope to discuss some of the observations and discoveries made by this pioneer in so many lines. Meanwhile this present journal may be considered as a self-written memorial. Many of the articles are his creative work: they reveal his inquiring mind which seemed so unfettered by the conventional. The verses at the beginning crystallise out some of his conclusions about the sources of Asian rivers in the "land of great corrosions." His maps, like his reports and recommendations, reveal his mind and heart.

Edgar has been the continued inspiration of the West China Border Research Society from its inception until the present. The members will not easily forget the personality of their Honorary President.

Chengtu, March 23rd, 1936.

YUNNAN RIVERS.

J. H. Edgar

If you wend your way to Tali
By the arid Mekong Valley
You will find much there that tries you
And much more that will surprise you
For it seems with little bother
Nature here a healthy mother
Nurses or delivers
Half of Asia's mighty rivers.

First we have the Bramaputra
Famed in treatise song and sutra;
And deep hidden in the mountains
Are the Irawaddy's fountains;
Nearer yet the Salwin forges
Through a maze of sombre gorges;
And at last the Da Ch'u[1]
Roars like constant thunder at you.

Next beyond the Li Tien passes
What is that which so outclasses
Rivers in the East of Asia
In a way that must amaze you?
It, the Dre Chu of the nomads,[2]
Here despises both its comrades
And with volume yellow
Hurries east without a fellow.

Then not far from Tali welling
Are the springs that aid in swelling
Both the Mekong and the Yangtse,
And it is no idle fancy
That two other rivers flowing
Where the jungles rank are growing
And which join their forces
Almost touch up at their sources.[3]

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1. Da Ch'u—the Mekong.
2. Dre Ch'u—the Kin Sha.
3. The Red and Black rivers.

But before we leave these topics
It is likely near the Tropics
You're befogged as much as ever,
For a new important river
Blusters thro' the Ami ridges[1]
And goes East past railroad bridges
To the Canton City,
Like an ocean dun and gritty.

Now Geographers may wonder
If from mountain, plain, or tundra
You will meet on more occasions
Rivers like these mighty Asians
On the surface of the planet?
And it seems to me you cannot
For assumed exceptions
Will in time be proved deceptions.

1. The Ta Ho—a branch of the West River.

HSIANG CH'ENG or DU HALDE'S "LAND OF THE LAMAS" *

J. H. EDGAR

Read before the West China Border Research Society, 24th November, 1934.

The district north of Hoch'ing, Likiang and Yongning was known to Du Halde's authorities as "the Land of the Lamas."[1] Hsiang Ch'eng, probably the centre of this mysterious zone, was nearly 200 years later the most discussed district in the Yunnan and Szechwan marches; and the capture of its fortified lamasery in 1907 was the climax of a remarkable frontier campaign. The writer was in the city later in the same year and travelled more than 250 miles in the contiguous regions west and north. Naturally he was able to glean much information regarding its downfall from interpreters and others who were intimately associated with both the Tibetan and Chinese authorities. China's plans for reorganising the devastated district also were openly discussed without a suspicion of the gargantuan nature of the task. That was long ago but such subjects should even now be of interest to the historian and politician. At the same time we must not ignore the geographical aspect for this was the first journey through the entire "land of the lamas;" and, if three or four travellers have visited certain sections since, nothing, as far as we know, of their experiences has appeared in English.

The following narrative, based on a diary which appeared in *The North China Herald* twenty-seven years ago, will describe the 150 miles between Batang and Hsiang Ch'eng, the lamasery-fort and contiguous districts, and the 210 miles from Hsiang Ch'eng via Taopa to the official town of Li-tang or Li Hwa Hsien. The greater part, if not all, of the regions mentioned in sections two and three had never been traversed by Europeans.

Section one. Early in September J. R. Muir and the writer left Batang for Hsiang Ch'eng, a region infamous for impudent

* The writer's reason for choosing this subject is twofold: (1) It provides an opportunity to lay before the Society historical information which apart from his diaries is not otherwise available; and (2) it will put on record geographical material concerning an imperfectly, or entirely unknown tract of Khama, 40,000 sq. miles in extent, between the Yalung and Kin-sha rivers, and south from the Tatsienlu-Batang road to the Yunnan-Szechwan borders.

isolation and fiendish cruelty. As the "Citadel of Ogres" had fallen some months previously the time in one way was propitious; but as a journey of 360 miles through a *terra incognita* lay before us unusual experiences were to be expected. On the third day from Batang, half way up the high Sanpa Range, we left the main road to rejoin the Ta So river and rested finally at lower Bomi, where a headman rules over between fifty and a hundred families. It is said the cupidity of the quondam Batang princes explains the prevailing poverty; and the wholesale migrations to the Dalai's regions the diminished population. The lamaseries are small but piety here, hand in glove with penury, specialises in magical machinery of unusual ingenuity. The region is now under a Chinese official who resides at Sanpa on the Batang road.

The next day the track for 130 li went down the Ta So river through forests of oak, birch, spruce and poplars in ravines and on mountain slopes to Ting Po, 11,000 feet, where crops of turnips follow an earlier one of cereals. There was no settled population en route, and the grass, often as high as our horses, showed no signs of nomads. Ting Po however, a settlement of 100 families under Litang, is compact and prosperous. Our next stage was Ho Chu, 120 li distant. We again continued down the left bank of the Ta So, through oak jungles alternating with houses and farms of thrifty valley Tibetans. About half way is Yüen Ken, a village of 65 families, in a hot well cultivated basin. 20 li above this concentration a road goes to Ru-ü or Tsong Tsa, two days away, where there is a population of 1,500 families. Further south between Hsiang Ch'en and Ten Tze is a region of 350 families which up to the present has failed to submit to the "Warden of the Marches."

The road leaves the Ta So river at Yüen Ken, and going east over the easy forest-clad Pei Zong La descends to the head of the Ho Chu plain where well cultivated farms are flanked by forest-clad hills. The settlements are said to aggregate 100 families and a lamasery has 400 dependents on its official roll. The B. P. was 191° F. The Chief paid us a call. He rules over 400 families with a jurisdiction extending to Yüen Ken and Ting Po. The Litang and Batang roads meet here and this was the only mart where Hsiang Ch'eng had commercial relations with Szechwan. Ho Chu, always loyal to China, was apparently also scrupulously fair to Hsiang Ch'eng; and when the crisis came her neutrality was respected by both.

In spite of rumours we found the Mapa La, 50 li distant and the main avenue to the Hsiang Ch'eng lamasery, only 14,000 ft, and the ascent easy and pleasant. On the plateau-like summit groves of larches might have been the headquarters of Oberon. But until a few months ago it was guarded by bands of very material ogres, who watched for the Chinese intruder and turned him back or flayed him alive according to the humour of the lama ruiers. As the Hsiang Ch'eng hills and valleys as well as the walls

and buildings of the great lamasery may be seen from points on the Mapa La my reactions naturally were of an unusual kind. Mine were the first European feet that had passed through the larch groves of this defiled Fairyland, and mine were the only foreign eyes that had gazed on the farms and castles which had enriched an institution, the members of which, secure in their formidable fortress under the shadow of the splendid peak, had hungered and thirsted after unrighteousness. But as it would soon be our happy fate to enter its gate we did not linger but began a descent by an excellent road, which eventually led us to suitable quarters in the very centre of what had been the Citadel of Ogres.

Section two. The Hsiang Ch'eng Lamasery, founded 150 years ago, was theoretically a protege of Litang with 2,200 registered clerics. Old maps had a mythical Chinese city in the vicinity named La Chiang T'ing[2]. The official Tibetan name however was Ch'a T'rid Gonpa, although Sam P'ei Ling was known everywhere in Khams Hsiang Ch'eng lamasery was situated on a thorn-clad terrace with a prominent range behind and the high banks of the Lama Ya river in front. An institution such as this might be expected to increase in size, wealth, power and also in holiness, but political and moral wickedness as rank and lusty weeds overshadowed everything. Indeed, Hsiang Ch'eng, a synonym for fiendish cruelty, had been a thorn in the side of China for decades.

In 1902 when the writer was 40 miles from Tatsienlu groups were discussing a mysterious matter in subdued tones. The subject was found later to be the fate of a Chinese military officer who had been flayed alive by Hsiang Ch'eng lamas with exquisite torments. Naturally the eradication of such a plague spot was an important item in the programme of the redoubtable Chao, but, well aware of the difficulties, he moved cautiously. The Tibetans, also, not strangers to heroic measures, began by destroying houses, removing stock and turning nomads. When the armies of China encircled their fort the inmates treating it as a joke drank, prayed, sported with concubines and in a general way expressed in conduct an unworthy conception of the Mahayana Paradise. They also not only made no attempt to placate their enemies but actually infuriated them by barbarities unequalled even by the ancient Assyrians.

The following well authenticated story was brought forward as a sample of their cruelty. Shortly after the investment seven benighted Chinese soldiers, mistaking the lamasery for a Chinese camp, were misinformed by a Yunnan lama, and walking in through the gates were captured. In a short time six were flayed alive and the other was driven out to relate the details. We heard also of others being impaled on stakes; of wretches suspended by hooks in the lips and cords round the thumbs; of tongues torn out; of boiling tea or butter being poured down captive throats; or of pinioned sufferers being fed daily on the grilled flesh of their own bodies.

Retributions, however, came to Hsiang Ch'eng in due time and the following account by one Wei, Chao's interpreter and an eye witness, will tell how. "For ten years or more no Chinese were allowed within the jurisdiction of the lamasery. The abbot, in theory under Litang and a desperately wicked man, had, as a result of liberal bribes, been recognised by the Dalai Lama as the ruler of the Hsiang Ch'eng region. China was openly defied; the secret of strategic roads was carefully guarded; the lamasery was fortified and stocked with provisions; and brass piping from hidden springs gave ample supplies of water. Chao after the refusal of the lamas to parley began to invest the Den of the Ogres on the 28th of the 11th moon, but for six months every plan to capture it failed so signally that the old impression that it was haunted and invulnerable gained ground.

"Mutiny was in the air. Chao, however, stabilized matters by executing a number of his Hunan bodyguard. Nevertheless Hsiang Ch'eng was being supplied with water and that fact was ruining China's chance of success. Bribery, torture and unremitting labour failed to reveal the secret of the supply. Then the unexpected happened. A very old lama, one hundred li away, allowed it to leak out that he was willing to put maps and an intimate knowledge at the disposal of the Warden, but age and infirmities made an interview at Hsiang Ch'eng impossible. Chao understood and providing a suitable horse and an escort had the renegade conveyed to his presence. The information given was to the point and the map of the water system conclusive. So Chao with the minimum of delay, in official robes and accompanied by the old lama, a substantial guard and a number of interpreters and sappers, proceeded to the spot indicated on the map. A desultory fire from the fort injured some of the staff and on one occasion grazed the garments of the Commissioner. But the work proceeded and finally, ten feet below the surface, the long looked for conduit was located and the water supplies turned from the cisterns in the fort.

"Even then the defenders did not despair. Heavy dews, seasonable rains and digging in the cement-like earth might still save the situation. So the inmates began to work and pray with a feverish ardour. For sixteen days the workmen experimented in vain and the great vault of heaven was deaf to the prayers of the wicked. But, most of them tortured with thirst, the heroic rascals refused to surrender. Taopa might yet send help! Their messenger, however, failed to pass the lines and the documents found on his tortured body revealed the desperate condition of the garrison. The call for help also gave Chao an idea which materialising gained the day for China. More than one hundred camp followers from Tatsienlu, and thirty odd interpreters from other parts bivouacked on the hillsides and hailed the garrison in the Tibetan tongue. 'Open the gates for your Taopa friends,' they

said. The heavily barred portals swung open and Chinese, ambushed under cover of darkness, poured in.

"Even then Hsiang Ch'eng was not lost. The defenders rallied and fought like tigers. That night, the next day and the night following the Chinese were still fighting for their lives; but early in the morning of the third the famished defenders lost ground and before long the Dragon of China was floating over the central temple of Hsiang Ch'eng. The abbot had committed suicide some hours before the final assault, and the bodies of thirty concubines dangled from some of the less conspicuous balustrades. The casualties were said to be many but 250 may be near the mark for of the 2,200 on the roll not more than one thousand were required to defend the citadel. It is known also that many escaped or had deserted previously, and some of the older lamas were spared. But Sam Pei Ling from that day ceased to exist as a lamasery even if, as is possible, it will yet make history as a Chinese city."

The Hsiang Ch'eng lamasery controlled the unsurveyed territory between 99.30 and 101 E. and 28 and 29.30 N. The population was probably between fifteen and twenty thousand, mostly farmers, with droves of yak and flocks of small animals. As they were free from native princes and Chinese government officials, and as the lamasery was a brotherhood with a representative from every family in the land, a measure of prosperity was assured. The state also was admirably suited for illegal traffic. Slaving caravans, for instance, pass d through its territory on their way to Mān Kong in Tsa Rung.[3] The origin of the Hsiang Ch'eng people is uncertian but much in their dress and architecture, and the presence of alien survivals around them will suggest, according to the traveller's bias or training, either a Bodpa or non-Bodpa ancestry. In any case Du Halde, unwilling to class them with Tibetans, is agreeably explicit in the following note:[4]

"Among the Tartar lamas who dwell in Tibet the richest and most considerable are those whom the Chinese call Mongfan; they are the masters of a large territory north of Likiang Toufu, between the rivers Kin Cha Kiang and Vou Leang Ho. Ou San Guei . . . . yielded them up this territory . . . . . " The Wu Liang Ho, the Limitless River, is of course the Litang or Li Ch'u.

China rarely breaks to annihilate: reconstruction and absorption has always been her policy. So Hsiang Ch'eng need be in no doubt about its future. Indeed the work has begun already and the lamasery is now an administrative centre. One cannot but applaud this decision. The altitude of the fortress is 10,000 ft; it is typically central and roads approach it from the four points of the compass. The highway from Yunnan to the Batang-Tatsienlu road also passes through it. Moreover the amount of arable land on terraces, plains and in valleys is considerable and easily irrigated. There are, also, ample grazing grounds on the mount-

ains to supplement the produce of the farms. The summers are warm and the winters mild. Two crops annually are the rule and may include maize, wheat, oats, barley, turnips, buckwheat and a variety of vegetables.

A trip to Upper Hsiang Ch'eng confirmed what had been said in the lamasery. The crops in the midst of ruined homes were ripening in all the old fields and both men and animals were so numerous that we accepted the tales of the alleged decimation with a mental reservation. In any case there is no vacant land for Chao's colonists, and those that for obscure reasons remain will, under pressure of circumstances, marry Tibetan girls and by so doing give the "absorption" programme an unexpected turn. Of course the general opinion is that lamaism is dead; but that was yesterday. Tomorrow perhaps it will rise again. Furthermore Hsiang Ch'eng is one of the sequestered parts of the earth and it may be wise to delay attempts at direct control in favour of a purely Tibetan government under a friendly prince or lama subsidised by China. This was considered necessary by the Manchus 200 years ago.

Flaying alive was formerly one of the amusements of the Hsiang Ch'eng people, and on the 18th of September 1907 it was my fate to experience the torment in a modified form. On our trip to Upper Hsiang Ch'eng the natives, for some reason resenting our visit, began obstructive measures by providing us with unbroken animals. As the brutes were changed every two and a half miles the local machinations had every prospect of a successful issue. Muir, cunningly jerked over an animal's head, was the first to come to grief. Later a frantic brute unhorsed our Chinese guide, stunning him for a minute or two. Finally, when about five li from the Chinese camp, my Bucephalus with some suppresed war frenzy stimulated by a timid alien suddenly became the best imitation of an insane horse in the Marches or anywhere else. Weak with two month's dysentry, insufficiently saddled and no specialist in equestrian exhibitions I was soon twisted out of my seat and with a foot firmly lodged in a Tibetan stirrup was being jolted over a rock strewn plain with a rollicking abandon.

As the circus proceeded the brute gave a fine display of foot work, and at times would stop to deliver his blows with more precision or would turn to trample on me with a fiendish enjoyment. Fortunately this gave me an opportunity to grasp a foreleg and holding on with a death grip considerably curtailed the freedom of the enemy. But consciousness began to leave me and the brute, free again, let out with a vigour that was appalling. The additional energy, however, and obstructions across the path caused the thongs that bound the stirrup to give way and I was free, but half unconscious, some ribs cracked, badly bruised from head to foot, and flayed to some considerable extent on the back and right side. After a few days' rest in the lamasery, still with many

aches and pains, it was necessary to begin our last stage: 210 miles north to Litang, through unexplored territory on the right bank of the Li Ch'u.

Section three. We left Hsiang Ch'eng on the 22nd of September and thirty li down river, crossing to the left bank, rode over a fertile plain before turning up a deep ravine. Lower Hsiang Ch'eng is ingeniously irrigated and the extensive areas under cultivation and the abundant returns show that the Tibetan here can hold his own with anyone on earth as a tiller of the soil. The population in this region is numerous and closely grouped. The houses are all intact but the lamaseries are in ruins. The Yunnan border is said to be 120 li distant. On the way down Muir, in a sympathetic mood, gave a great price to a Chinese angler for a very small fish. His kindness, however, was misdirected for the man was a discharged soldier who had married a widow "with a taking way" and a flour mill. He, at least, was beginning to colonise under favourable circumstances. We are enduring uncomfortable quarters in the tent of a nomad woman.

September 23rd. On the morning of the second day, about 3.30 a.m., the movements of our mule drivers alarmed the escort who, rushing out in fighting formation, were just restrained from murdering two innocent men. As we had to traverse 120 li without settled population our caravan pushed on steadily. Some distance beyond a hot spring we entered a saturnine gorge where ambushed Tibetans held up a Chinese army for three days. Later the road, by an easy ascent through forests, led to chill snow showers on the double crested Mora La (B.P. 183.6°; Temp. 51°.) On the way down, twenty li or so, after passing the permanent nomad camp of Tarong Go, about 5 p.m. we came to a river flowing south, and although miserably tried, ignoring the tents of some nomads, finally arrived at the fertile agricultural settlement of Mora, (B.P. 188°) dominated by a picturesque fort-like structure on a high hill.

Mora has four settlements with a total of 60 families. The land is remarkably fertile, but the altitude only allows one crop annually. The people of Mora, unlike those of Hsiang Ch'eng, have an excellent reputation, but they differ from their neighbours in other ways. The hair of the women, for instance, hangs over the shoulders in luxuriant disorder, while we suspect in the faces and limbs an anthropologist would find many indications of an alien race. Their architecture might be adduced as additional evidence. Unlike the clay and gravel structures of Hsiang Ch'eng the houses are built of carefully squared blocks of stone cemented together with scrupulous care, while the flat mud roofs of Tibet are replaced by gabled types superior to and differing from those in China. The slate slabs in use are of excellent quality.

From Mora a journey of 100 li took us to Taopa, a region of evil repute. About 20 li from Mora the river of the same name is joined by the Lhamo, and the volumes united enter the Dori,

which flows south to an unknown junction. After passing the pleasant settlement of Lhamo easy ascents through green valleys lead to the summit of the bleak Lha Mo La (B.P. 184°. Temp. 38°). As we rode down to Upper Taopa (4.4° lower) cold drenching rain with pain from pleurisy and fractured ribs suggested an embarrassing situation for my friend and faithful companion. A kind reception, however, in the headman's comfortable castle was like a tonic to Muir and a sedative to me.

Taopa is interesting in many ways. It is the lowest in altitude of the series of great plains which extend south between 100 and 101 E. longitude. The Taopa concentrations are according to some maps on the banks of a river which should be the Li Ch'u. But this is a map-maker's guess and rather wide of the mark. The plain is an irregular mass of land resembling a Brobdingnagian root of ginger. More broken at the upper end it narrows towards the south. About half way down is a prominent hill cut off from the mountains by a narrow passage through which both the river and the road pass. At the southern extremity a long narrow valley joins the plain and forms the permanent centre of the lower Taopa people. This feature is later merged in a gorge through which the waters of the plain proceed to some unknown destination. In the small gaps of high mountains, south and east, the nomads have built substantial homesteads, and annually prepare the land for crops of wheat, barley and turnips. Some of the buildings are gabled and roofed with slabs of slate. Taopa had about a thousand families of the Hsiang population.

September 25th. We rode down the plain and rising a few hundred feet camped in the Topo lamasery (B.P. 187.2°) where a small Chinese garrison and a subdued cleric replace the former 500 inmates. The concentration, ten li beyond the plain, is beautifully situated below a grove of wild oaks.

September 26th. The next day was the most memorable of the trip. We left our quarters early and followed the left bank of the To Ch'u to Ra Tsa, and about noon arrived at Goa[5] (B.P. 194.4°) a large settlement above a fertile plain. The population is numerous, and the cultivation extensive. From Goa the road ascends through oak jungle to the Mengko La (187.4°) and, skirting forests on the mountain side, leads to Shaemo, with one hundred farmers and a native chief.

Napo, our destination, was still thirty li away, but, ignoring advice, sinister clouds, and the pain and fever of pleurisy, with the courage of lions and the common sense of "fried fowls"—a bad combination—we pushed on north-east to the Shaemo Pass (187°). Another ten li through forest and jungle was necessary, however, before we began the descent to Napo. The view from the broken plateau east and south gave us a creep of uneasiness which later became a presentiment of evil. The sullen, silent evening, the trembling cumulus clouds, and the savage ravines of an unexplored

peneplain seemed to suggest the edge of the planet, or a vestibule to the realm of Cimmerian hordes. As a matter of fact it *was* a presentiment, and the details filled in rapidly.

The descent was steep and the light fading, but with an unjustifiable optimism we considered the situation well in hand; but almost without warning troubles began to surge in upon us. First came thunder and copious rain, then darkness so profound that the baggage animals could only be followed with difficulty. The beating rain and the pain and fever forced me to dismount, but my shoes were soon left behind in the mud and it was necessary to flounder along in Chinese socks. The road was lost more than once and mishaps were frequent. For instance Muir's horse bolted and threw him in the mire; but why expatiate? Like all misfortunes an end came at last when the storm-pounded party finally reached the house of a Tibetan official where, by ingenious adaptations, the two Europeans prepared a scanty supper and went to bed in comparatively dry blankets. The Napo (or Lhapo) official rules one hundred families.

September 27th. We left Napo early and rode for hours over rich grazing grounds. Tents, stone huts and droves of animals left us in no doubt about the present status of the country; but the ruins of dwellings, irrigation drains and abandoned fields hint at other possibilities and probably social tragedies. After passing through forests of spruce, larch and oak, at a point sixty li north of Napo, we ascended a pretty valley to the summit of a pass, but dips in a high tableland and a tedious ascent confronted us before we reached the Ch'a Ch'u La (B.P. 184.2°). From this feature, after riding through grass clad slopes and gorgeous forests and passing nomad camps and gold diggers' claims, we finally arrived at Teh-o where there are two camps under Litang.

September 28th. We went north-west up a ravine to the Dobo pass. The usual mountain trees grew in clumps and the grassy plains and ridges supported their quota of nomads. Near the summit we ran into a furious storm and my animal refused to carry me. Hence, in great pain, it was necessary to make my way on foot to the 16,000 feet summit and after an excruciating effort in the howling tempest failed to boil the hypsometer. One thousand feet lower down, however, we were more successful (186°).

Towards evening we came to the great Shompa plain, about 600 feet lower than Litang and exploited by about a hundred families, with farms and settlements on the right bank of the stream. The houses, as in Teh-o, rudely built of mud, sandstone and granite indicate a people only partly freed from their nomadic controls. Here the net coiffure of Hsiang Ch'eng and the wild disorder of Mora give way in the women to the back decorations and nose lock of Litang.

September 29th. The evening was cold and cheerless, and a night of pain in wet blankets decided Muir to "spur on the tired

horse'' and reach Litang, 150 li distant, in one day. As life to me was now mainly a dreamy insouciance the thirty li to the banks of the Lich'u passed quickly and pleasantly, but the wits of the Lotus Eater were not so dazed that he lost interest in the remains of a large lamasery and the ruins of an imposing castle. Settlements in Mo La Shi[6] too, which in conjunction with Shompa and T'so-ts'ang provide a population of 800 families, were noted with interest. Fortunately this was almost the last entry in a diary that had been stocked with the experiences and observations of three weary months. At noon Litang was still sixty li distant. A warm sun was shining, however, as we ascended gently by a good road to the Drak'a La (B.P. 187.4°); but about 3 p.m. a furious hailstorm delayed us an hour and one of the party would willingly have spent the night in the small lamasery at the base of a forest-tipped cliff of limestone.[7] Muir, however, advised pushing on; and descending gently we were soon at the southern edge of the great plain. At this point Muir hurried on to Litang to make preparations for his sick companion.

When still fifteen li from ''port'' darkness, thick and sable, rolled over us, and before long a biting snow storm joined its ally. What was in the mind of our drivers will never be known. Was it murder or robbery? Probably not;[8] but they had made a wide detour and in the vicinity of the gorge had a lively discussion with members of an unsuspected camp. Finally, however, it was decided to deliver me in Litang, and floundering about in bogs and broken ground, and lashed by the elements the belated party finally reached its destination two hours behind Muir. Dry wood, borrowed furs, brandy and letters—the first for nearly three months—were awaiting me; and before long it seemed as if the pain and lassitude of the fever, the vicious kicking and partial flaying at Hsiang Ch'eng, the storms and buffetings by the way and the drawn sword of the brutal lama early in the day were incidents of a former and less agreeable existence.

Notes.

1. Du Halde, 3rd edition, Volume I, 1741, pages 261, 262 and 263. The people of this region are also "Si Fan."
2. China Inland maps of last generation.
3. About 28.30 N. and 98.15 E.; formerly a slave market and centre of a convict settlement.
4. Volume 4, page 447. The Tonfu = 土府 i.e. native prefecture. The "Vou" is our "Wu," but in regions to the south the tendency of many natives is to make W = V
5. Famous for paper on which is printed the Litang "b'Ka s' Gyur," i.e. "The word that became (law)." Really a ponderous Tibetan "Bible." The volumes number 108.
6. Mora Shi with Ts'o Ts'ang has 800 families. The former have been famous brigands.
7. The trees are seen from Litang.
8. Muir's early arrival in Litang made foul play unlikely in spite of my guide's threatening attitude early in the day when alone.

HOKOW: THE BACK DOOR OF CHAGRA[1]

J. H. EDGAR.

Ho-kow, also known as Yachiang Hsien and Nyach'u K'a, is ninety miles west of Tatsienlu and the eastern entrance to Litang or Lihwa Hsien. The concentration is small and over named, but what remains and what has been lost are worth recording. The present essay will be concerned with (1) the trip there; (2) the town and district; and (3) an ancient colony and its survivors.

Section one. The journey from K'ang Ting, "Kham Calmed," has much both as regards geography and ethnography that should find a place in the Tibetan text-books of the future, but at present no attempt will be made to confine the material to separate compartments.

Tatsienlu, now K'ang Ting Hsien, is geographically on the edge of Szechwan, but the first two days on the westward journey give the traveller an excellent display of the rarer V-shaped type of Tibetan scenery. He also may gloat his eyes on the five peaks and an impressive dome of the Tatsienlu range: all snow clad and, as a rule, between 19,000 and 20,000 feet. In nature's alphabet U follows V as will be proved ten miles above the dismal hybrid settlement Cheto. Here richer zones of spruce, larch, oak and thickets of azaleas, rhododendrons and many other flowering shrubs of great beauty are left behind and we enter a wilderness of bogs and mountain wastes with a flora hardly sufficient to hide the rude granite boulders recklessly abandoned by the glaciers of other days. In these higher marsh lands we find an abundance of rhubarb and on the flanking slopes dwarfed juniper and glorious poppies with blue and yellow flowers.

It is in such country that the Tibetans love to graze their animals and any time the traveller meets their caravans or sees the shaggy drivers contentedly, in all weathers, enriching a fire that only a Tibetan could force to give warmth. The road is often execrable and for this and other reasons the wayfarer is always relieved when he reaches a huge pile of stones with drooping flags which marks the summit of the Chi La[2], 15,000 feet. This pass gives no exquisite views of grinding glaciers or spotless snowfields, but being the actual gate of the geographical and ethnographical Tibet the traveller may feast his eyes on grass clad troughs and billows where marmots burrow, yaks graze and cow-boys pitch their tents Then, gradually and easily, he descends in Tibet to an open valley littered with clink stone, and passing a farm one

thousand feet lower finally camps amid the ruins of what was once the courier station of Tiru.

For twenty miles this wide valley, flanked by grassy treeless slopes, joined by three tributaries and studded with fields and castles, gives the Tibetans an excellent opportunity to balance the agricultural and pastoral phases of culture. Unfortunately, owing to savage raids by robbers, most of the ancient towers and arresting castles look as if they had been lately excavated after having been buried for ages; but as stock rearing is almost as important as barley growing the injury is not so cataclysmic as suggested. However the vast numbers of abandoned terraces seem to indicate that agriculture has had its halcyon days in the past. At Ying Kwan Chiai, below the ruins of a formidable fort and profiting by a fertile junction, we are in the vicinity of stone age remains, and have a wonderful view of the towering Gang Kar.

The road after an elbow turn now continues N. W. over a fine plain with numerous castles not in ruins. Near the top there is rare opportunity to study the outline of the Ru Nga K'ar, 23,000 feet, and a worthy rival of the higher Gang Kar. Where the Li Ch'u swings in from the north we ride through cuttings, groves of cherries and avenues of gooseberries to the Tibetan settlement of Tongolo. A road here runs north through a charming valley to the large lamasery of Lha Gong, thirty miles away, and then to the rich grazing grounds of She Shu Tang on the upper reaches of the Li Ch'u. From Tongolo the main road follows up a pleasant valley to the ruins of Shanken, six miles away, where we begin to ascend the slopes of the Ka Zhi mountain.

At first the track is steep, but later it circles round the ravine with the minimum of difficulty to the stiff few hundred feet which lead to the summit. The second and higher ridge, about 15,000 feet, is three miles at the western end of the plateau. It is remarkable mainly because of the unique view it gives of the now famous Tatsienlu ranges. It may be questioned if anything finer exists on the planet. 20° is the Zhara, massive and magnificent, north-east are massive pyramids facing the Tong, east the impressive peaks south of Tatsienlu, and finally the Mo Ilsi complex culminating in the Gong Kar south-east. Between east and 20° is the Zha Me (lower Zha) not very impressive but loaded with snow and ice. A stream runs through the plateau and on its banks two miles away, about 14,500 feet, is the religious concentration of Ka Zhi.

Five or six miles west of the summit and 2000 feet lower at O Long Shi farming operations begin and continue intermittently to Pa Ku Lou, a settlement with a few houses and a fine octagonal tower. The roadside abounds with wild cherries, pears and apples the fruit of which is definitely unfit for food. Above the tower, about a mile, and on the right bank of the stream is a squat, partly gabled building with a Chinese tower and rows of white-washed

windows. It is the palace of the most important native ruler in Ya Chiang Hsien.

Below the octagonal tower the road begins to enter the usual V valley of the lower altitudes with forests and jungle rather unequally distributed on both sides. Pine and spruce compose the former, and oak of various dimensions constitute the latter. About thirty li from Hokow the gorges begin, and the houses become scarce and as a rule of a poor type, although some more open spots have ruins of pretentious structures. About a mile above the ferry a stream comes out from a side ravine and plunges over a waterfall into the mountain river. Terraces and tracks on a sparsely wooded slope and one house on the opposite side from high barren cliffs do not necessarily suggest the vicinity of a district capital. A melancholy gorge in front, also flanked by a none too verdant ridge, was not likely to engender optimism. Later, however, a glint of brown and a settlement on a fertile terrace temporarily reassured us. It was not Hokow, however, and hope might reasonably have vanished when, after passing a famous chalybeate spring, a few more hovels and ascending parallel to the stream and in full view of the Ya Lung, anything suggesting a city was denied us. But two or three despairing steps forward and Ya Chiang, like an unpleasant apparition, was before us.

Section two. In other words Hokow is a Tibetan-built village with forty or fifty houses massed together on terraces 100 to 150 feet above a beach which separates it from the river and provides a dumping ground for baggage awaiting the pleasure of men who manipulate certain lumbering barges that ride in the peaceful waters near the junction of the mountain stream with the Yangtse's greatest tributary. The houses are time worn and dirty; the streets, narrow and badly paved, are three in number. One runs along the top terrace parallel to the river course, and a second tumbles down roughly to the beach, forming with the other a cross of the Tau kind. Finally, about half way down the latter highway, another alley branches out to the left and turns the T into an ill-constructed F. Hokow has some shops, but retail business is never brisk and usually not apparent. On the writer's last visit a pig was squealing in death agonies; and, as no meat had been procured for two months previously, his good fortune was the talk of the town. The Hsien Yamen has been burned down years ago.

As Ya Chiang is in Ch'wan Pien it will not be a subject for surprised comment if it remains in the present condition indefinitely. Ya Chiang is probably the most shut in town in Hsi K'ang. It no doubt owes its existence to what may be the most famous ferry in Tibet. Before the Manchu conquest we assume this east west route[3] was of minor importance, but since then much of the official and mercantile traffic has jostled through its gates, or for a night or so enjoyed its lukewarm hospitality. A triennial change of all China's agents in Tibet was the rule, and the never ceasing

stream of military and civil officials of all grades, with coolies, soldiers, servants, traders and travellers, Chinese and Tibetan, kept the barges and coracles busy from dawn till dark.

An unwritten law allows the *élite* of the Hokow settlement to marry within prohibited degrees.[4] Dire necessity explains the anomaly. Formerly the "three years and change" system was in vogue here also, but accidents on the river were so frequent and serious owing to inexperience that a colony of non-Chinese experts from Yachow was settled here permanently to provide adepts for a dangerous service. Hence, because the Tibetan women would not so readily fix the special qualities required, Lis married Lis, and Wang girls brought little Wangs to the distant colony; and now the *status quo* is recognised and mildly criticised in the warning: "Do not retail the gossip of Hokow."

The altitude of the settlement is about 9000 feet, but the climate is mild and, as the arable land, what there is of it, is rich, vegetables and cereals flourish. The Hsien may have from two to three thousand families composed, apart from Hokow, of valley farmers with ranchers and cow-boys on the grasslands. The former are found up and down the Ya Lung gorges and the tributary streams. One of these, the O Long Shi valley, may have 100 families with, at times, farms in the vicinity of 13,000 feet. The ranchers of course have their tents much higher, but their main centre is said to be the native yamen above the octagonal tower.

Hokow, with its colony of fifty or sixty families, the capital of Ya Chiang, is in a position to profit by the important official and commercial traffic delayed at the ferry; and although now, as it was in the days of the Chagra princes, a frontier town, it is still in a position to profit by the adjoining ethnic backwashes, like the Litang settlement just opposite.

The Ya Lung, a large turbulent feeder of the Kin Sha, is joined lower down by the mysterious Li Ch'u or the Wu Liang Ho of Du Halde. Its upper zones are unexplored, and much of the course south of the Hsien, especially the region near the great bend, is only known to a few geographical experts. The writer forded it at Kanze on horse back on one occasion, and some days later saw a party of Tibetans engaged in the same experiment. Such a performance is so wildly impossible at Hokow, that some may question the propriety of mentioning the other. Indeed, more than twenty years ago the genius of French engineers was employed to solve the traffic problem of the Ya Lung. Chao's dream finally materialised and a fine suspension bridge, approached by a tunnel on the left bank, mystified the traders from the interior; but the innovation that cost China nearly a million dollars and more than two years of unremitting expert labour was destroyed in half a day by an enterprising raider from Hsiang Ch'eng The beautiful pillars with the names of the engineers, however, still remain.

Section three. Hokow was the most western outpost of non-Chinese princes who lived and degenerated in Tatsienlu at the eastern end. As the colony was a survival of conquered ethnic groups in Yachow[6], now extinct or absorbed, and for seven or eight generations endogamous in their marriages human material here should be of interest to both social and physical anthropologists. However, it would require a more thorough training than that possessed by the writer to benefit in any special way by the opportunity; but to begin with the non-Chinese aliens, both the geopraphical environment and highly specialised duties made them a peculiar people: a veritable human oasis.

Both Litang and Tatsienlu were far away and the constant traffic both ways passed them as a stream does a backwash. First impressions would class them as mediocre mentally, but healthy and perhaps in many cases physically above the average. But they are thorough going conservatives with a lack of enterprise that amounts to a weakened initiative. All this might be explained by inbreeding, hybridism, indifference to religion, lack of cultural opportunities and hookworm. However, although all the above may have their bearing on the problem the main cause is no doubt to be found in the necessity of the colony to specialise. In other words, they were conservatives perforce. Apart from the meagre opportunities to exploit, their calling confined them to one spot and was so exacting that ancestry as well as training was necessary. To dissipate their energies was as if Solomon had divided the living child into two dead halves. They were in a backwash with the main stream in view, but only in touch with one small part of it. Nevertheless, like the scientist who had spent a long life studying the brain of a leech, it was necessary to know their work perfectly. So their minds were focussed on one thing to the almost complete exclusion of others.

No one would blame them for being indifferent traders or inexpert cow-boys, but their government demanded that they should know every current, flood or swirl of the Ya Lung from January to December. They were practically a transported colony isolated in a foreign land, and required to be boatmen and sailors where navigation had been previously confined to skin coracles. Moreover it was imperative that the walls of isolation should not be weakened but strengthened. Hence endogamy became not only agreeable but desirable and economically valuable. So, as is usual with such groups, they became suspicious of all innovations and loyal to old programmes. Hence there was no desire to change either residence or occupation. Indispensable by experience in a difficult role what could they gain by ranching, trading or yak driving? So what interests the student of ethnography in Hokow is not physical deformities or mental abnormalities but the various expressions of true conservatives in a typical backwash. On the whole the result is very harmless, of positive value to the public

and safeguards the little community from the vices and anxieties incidental to a more advanced civilisation.

It would also be of interest to compare Hokow's conservatism with that of the nomads' encampment. Although the nomad is equally wedded to the past, lamaism is at work pulling men out of the ruts. Religious influences, however, are lacking in Hokow. A fatal stagnation is in a measure obviated by an impingement on civilisation at the great ferry which is intensified by the fact that the colony is bilingual.

Notes.

1. Chag-ra or Chag-la was the official name of an important state west of Tatsienlu. Cf. Chag-ra, or Zhag-ra, the great peak north of Tatsienlu.
2. The Chinese Che To is probably a corruption of "Chi Tō".
3. Litang, for instance, was under Ch'ing Hai.
4. That is the same surname; probably the same totem.
5. A prince named Yang. The Yū T'ong people, who were sent to their new home manacled, were of the same rebel stock. On the other hand the Hokow colony was probably a carefully selected colony, and if so would be of special interest to the eugenist.

BRIGADIER GENERAL PEREIRA

A. J. Brace.

On 2nd August, 1934, in company with Robert Cunningham, F.R.G.S., we were privileged to make a pilgrimage to the grave of the late Brigadier General George E. Pereira, one of the greatest explorers who has travelled in eastern Tibet. He lies in a quiet hillside grave, in the consecrated ground of the Roman Catholic Mission about a mile outside the North Gate of Tatsienlu at an altitude of about 9000 feet above sea level. Beside the grave is a stone on which is carved a plain cross within which is the simple legend: "Here lies Brigadier General George E. Pereira, C. B., C.M.G., D.S.O. Died Oct. 20, 1923. Age 58 years." Outside the cross are engraved the words: "Soldier" "Explorer" with a translation of the English in Tibetan script and in Chinese.

General Pereira, after visiting Chengtu where he made many friends, journeyed alone and single-handed to Lhasa in 1922, where he was accorded a warm reception by the Dalai Lama and the general in command of the forces. He returned to Shanghai; thence to Calcutta by boat; then overland by way of Burma and Yunnan to Batang, in company with Dr. Thompson of Yunnan, to engage on the hazardous trip into the unexplored Kolock country. On this trip he died near Kantze from gastric ulcers. He was buried by Dr. Thompson who was later captured by brigands; he successfully secreted Pereira's maps and diaries in his great boots, and fortunately escaped with these priceless records.

Mr. J. H. Edgar journeyed secretly to Kantze and had General Pereira's initials engraved on a round stone which he buried at midnight under the grave to mark the spot for later identification. He was intercepted and an attempted assault made by a Tibetan who misunderstood his intentions. Later the R. C. Mission arranged for the transfer of the remains over the fifteen days' marches so that they might lie in peace and under proper care in the beautiful consecrated plot on the hillside in the environs of Tatsienlu.

We were glad to visit this simple but well-kept rugged tomb, simple and massive like the character of General Pereira. He was a simple man, kind and friendly but possessed of a lion heart, full of indomitable courage and determination. Although lame, he walked two thirds of the way from Peking to Lhasa, and kept excellent records and made accurate maps of his journeys. He was kind to all Chinese and Tibetan fellow travellers and servants. In fact he is a model to all explorers in the way he adapted himself to circumstances, kept persistently at his task, performing all his

duties in true scientific fashion, and was unfailingly courteous to high and low in all his travels.

THE ADJOINING MAP was drawn by Brigadier General Pereira. It is partly the result of his observations during his journey from Chengtu to Lhasa in 1922, and shows the route which he travelled. The map was left by General Pereira in the British consulate in Chengtu.

When the British consulate was closed, Mr. A. J. Brace requested that the map be given to him; and the request was granted. Mr. Brace, in 1934, presented the map to the West China Border Research Society, to be kept permanently for the Society in the West China Union University Museum of Archaeology.

D.C.G.

THE BARLEY QUEST.

Arable Land In Eastern Tibet.

J. H. EDGAR

Tibet to most readers is a land of tent-dwelling herdsmen who live on local animal products and tea from China; but, strangely enough, "tsamba," the "flour of parched barley," the staple food of the nomads is forgotten or unaccounted for. However, as this commodity is the very life of the lamas, laymen, male and female, north, south, east, west and central, the barley of which it is made must either be grown locally in large quantities or figure as a considerable item in import statistics. As the latter is not the case, and as so much of the land is above a 30 N. latitude cereal limit, specialists in agriculture might predict either an unusually hardy cereal, an unexpected extent of arable land, a farming community of exceptional ingenuity and ability, or climatic conditions unknown elsewhere on earth. Again: to the objection that the term "Tibetan farmer" harbours a contradiction it is only necessary to point to his dietetic supplies as proof that the same Tibetan is the most efficient tiller of the soil that exists anywhere. Indeed, so unusual and ingenious are his accomplishments that we look upon certain nomadic diversions as accidents arising from the pressure of later alien controls. Such impressions almost become convictions when we remember that his flat roofed house was not naturally evolved from a gabled tent.

The extent and nature of arable lands on this great plateau of Asia is such an engrossing study that we frankly digress in order that a bird's eye view may be given of the immense expanse that in a cultural sense is included in the term Tibet. For this region, tentatively and perhaps literally, we suggest an area of one million square miles and a population of four million souls, which is united, if not racially at least by religion, tea and tsamba, into a highly civilised entity. As the area so inhabited lies between eight and twenty thousand feet, the lands below and above these figures being about equal, it is supposed by many that Tibet might be claimed as the most prolific river feeding zone on earth. Whether this is so or not matters little for it is an undeniable fact that the Indus, Sutlej, Brahmaputra, Irrawadi, Salwin, Mekong, Kin Sha, Ya Lung, T'ong, Min and Hwang rivers are born in the ice caverns of this mysterious zone.

However, the water drained section does not represent half of the Tibetan land. Physiographically Tibet resembles a Gargantuan crater with broken peneplains and a maze of high ranges

surrounded by a rim of the most gigantic mountains on the planet. This "crater" might have been an inland sea dried ages ago by the rivers mentioned above. But what about the northern and somewhat less extensive area? It consists of two basins 240,000 and 125,000 square miles respectively, studded with lakes and swamps fed by rivers entirely cut off from the drainage systems of other parts. In both these sections the higher latitudes and altitudes above 14,000 feet preclude farming operations to any great extent. Towards the east it is true the altitudes are much lower, but that only means that lakes, bogs and marshes make the land equally unproductive. So, perforce, we return to the river drained southern half and, where there is a topography very different, seek the lands which furnish nomadic centres, religious concentrations and cottages in the valleys with adequate supplies of the indispensable grain.

Both the topography and altitudes of the arable lands vary considerably. As regards the latter, 13,000, and in rare cases 13,500, may be safely stated as the upward margin; but the much lower altitude must also come under review. The agricultural zones are divided roughly into gorges and uplands. In the former the augmented volumes of water pounding their channels through obstructions have left defiles and deep canyons of many kinds. This applies alike to the main and tributary valleys where, in both cases, we find plains, junctions, alluvial fans, terraces and slopes which provide not only rich soil but offer opportunities for being irrigated. A visit to the arid valleys of the Salwin, Mekong, Kin Sha, Ya Lung, T'ong and Min will show how settlements of non-Chinese successfully cope with climatic and topographical difficulties. Above ten thousand feet, however, the corrosive forces diminish and the contracted arid V valley becomes a wide U with flats, plains and terraces, flanked by gentle slopes above meadows and forests, moderately free from cliffs and rocks. The rainfall here is adequate but the altitude ordains a solitary crop annually. The cereal limit, as mentioned earlier, is 13,000 to 13,5000 feet in Kham, 30 N. latitude, but for more than two thousand feet higher rich pasture lands are exploited by hardy tent dwellers.

In these wide high valleys, in both of which are plains, bights, deltas, terraces and flanking slopes, we have the typical upper agricultural zones. The soil in the valleys is usually rich, and the Tibetans trained by necessity and generations of experience to exploit it have built their fortified castles, and yearly till the permanently productive sites around them. The fields here, often enclosed by stone dykes and seldom left fallow, must be carefully manured and systematically prepared to insure what seems to be a never ending rotation of crops. This perennial productivity is remarkable when, judging by the time-stained dwellings and the ruins all around them, we are forced to conclude that the present day process has been in operation for hundreds, if not thousands, of years.

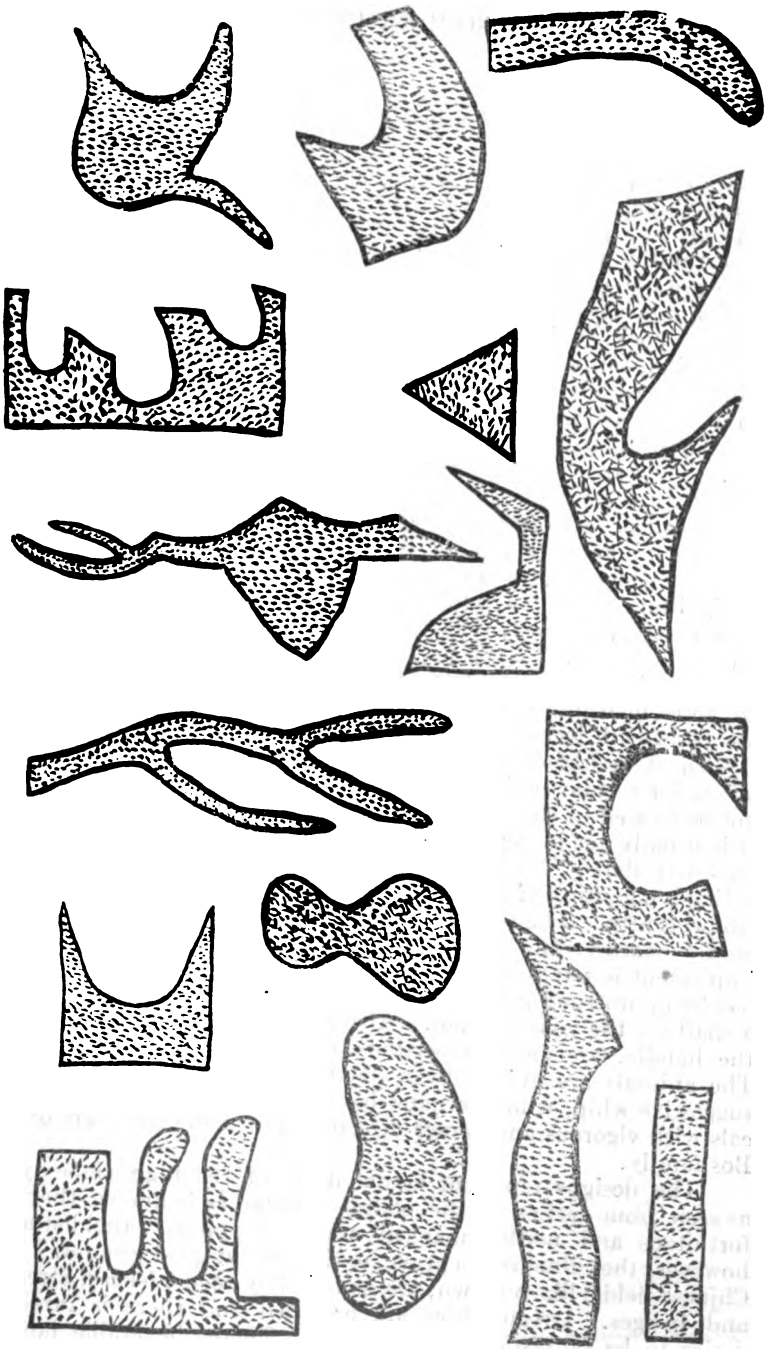

Fig. 1. **Field contours about 13,000 feet.**

The demand for barley has sent the farmer above the ancient settlements in the valleys to the higher slopes on the mountain. This development is a definite attack on nature and the sketches of individual fields *(see fig 1)*, correct as to contour, may suggest not only how great the need is, but also how heroically the limited opportunities are exploited. Literally even ribbons hardly a yard wide are not despised. As a rule fogs and dews make irrigation drains unnecessary; but as the weeks between the frosts are few in number positions in the sun are eagerly sought, and one is soon aware that sunlight deficiency disqualifies large areas where the ground is otherwise suitable; while soil of poorer quality higher up if more favourably exposed may be utilised.

There are many signs that the hillside patches are soon worked out. They are then abandoned and, being unfenced, become again corners in the pasture lands. In Minyag the remains of former fields high above the present farming zones are obtrusively common. Has the climate changed, or have the original owners migrated? Both questions may be answered in the affirmative, but it is more likely that such ruins represent the experiments of another age. It is possible, however, that the need of "tsamba" may again force the valley farmer to creep up towards the absolute limit. In such regions climate, superstition, affluence or affliction may, one or all, force men into new and more congenial regions or occupations less beset with irritations and difficulties.

In these higher slopes the ground is well worked and kept fallow for regular periods. The seed is sown so that the crop will not be frosted in the flower or injured by the approach of winter. It is usually cut in September with sickles and threshed on house-tops with flails. The plough used is very simple. The main piece is like a gigantic leaf concavely conditioned with a highly bevelled rib or centre. The top end forms the handle and the sides are mould boards controlled by the driver. At the ground end the implement is pared to receive an iron sock. A beam nine to ten feet long, protruding from the centre of the mould boards, provides a shaft for the yoke of oxen. At the end of the latter, and top of the handle, are simple insertions to aid in holding and yoking. The animals are guided by a determined looking yokel with a suggestive whip, who alternates his renderings of Tibetan theatricals with vigorous anathemas directed against the members of the Bos family.

The designs represent actual fields of the high slope types as seen from castles on the plains. As far as is known they are fortuitous and neither magical nor ornamental. Incidentally, however, they illustrate a grave anxiety about good ground. The Chinese fields, like our own, are bounded by roads, fences, streams and hedges. Irregularities are modified and there is rarely a desire to be fantastic or ornamental. There the arable land is plentiful, but in Tibet every foot is valuable because every handful of grain is precious. Here, also, the slopes are admirably suited

for displaying the bizarre veins, the good "ground" of which nourish the maze of unfenced crops. The smallness of the areas is often pathetic. Some for instance, less than a chain long and hardly a yard wide, will not account for more than a few bushels, although larger fields in better positions may yield ten or twenty times as much. The terrace effect often seen is not so much the result of intelligent purpose as long continued cultivation. At least, we cannot imagine any great need for such a development: the grain does not grow less readily on sloping ground, it offers no obstruction to the ploughman or the reapers, and provision for irrigation is unnecessary. Still the unworked slopes show few distinct signs of natural terraces.

There is many a fascination about these agricultural vagaries in high altitudes. Near at hand are the grim castles of another age, and higher up the black spider-like tents of the nomads. Cow-boys appear and disappear on the landscape, droves of yak and flocks of sheep roam over the pastures. Below, autumn tints, while exaggerating the contours of the fields, speak of a nature near the verge of its winter Nirvana. The alien may suspect the combinations are too magical to be real and, as he lazily ponders the matter over, night, soft and caressing, draws her sable curtains over a scene that has made the reverie possible.

THE GREAT BUDDHA OF KIATING

T. Cook

This image dates back to the Tang Dynasty. History claims that it was carved out of the rock during the early part of the reign of Kai Yüen (Tang Ming Wang) 713-741 A. D. The history is recorded by Wei Kao, who was the governor of Western Suh during the reign of Chen Yüin (Tang Teh Chong) 785-804 A. D. The history was written on a stone slab. Originally a thirteen storied pagoda was erected on the head of the image; and a great deal of gold was used for gilding certain parts of it. This was destroyed by fire. A nine storied edifice was later erected on the same place and this was destroyed by Li of the Short Queue at the time of the Tai Ping Rebellion (during the reign of Han Feng) 1851-1861. An engraved stone, set up near the image records and the priests at the Temple claim that the image measures 360 Chinese feet from its base to the top of the head. Measured according to English measurements it is only just over 200 feet between these same points.*

History reads:

"The Record of the Big Buddha at Ling Yuin Tempel at Kia Chow"

"The sage alone can establish doctrine and only the virtuous one can attain to be a sage. His aspiration and accomplishments were great and of great benefit to society. When his work was accomplished he was transformed into a god. Having attained to this, he then, from above, determined to dissipate the world's moral darkness. He vouchsafed a revelation of his image that he might save the people from their great danger. The realization of this objective is to be seen in the great stone image of the Buddha at Ling Yüin Temple at Kia Chow.

"The god exercised his powers to dissipate the winds and waves and dispel the noxious vapours that prevailed. What were the reasons for this act? It was because in days of yore the river Ming was so enveloped in vapour and fog that the sun was invisible and the mountains were as if they floated in mist. The river flowed eastward

*See this journal Vol. V. page 102.

toward Chien Wei and there came in conflict with the Liang Mountain. In anger it roared and thundered along for one hundred li. It whirled and smashed against the cliffs and reared up in tremendous waves. The boats came down at the mercy of the waves and the boatmen found it impossible to control them.

"This great city of the Kingdom of Suh, excelling as it did the cities of Kiangsu and Hunan, was hidden from the sun and moon by miasma and fog until the beginning of the reign of Kai Yuen. At this time a priest called Hai Tung sorely deplored the dangerous situation and looked upon it as a calamity from heaven which only by the strict application of ability and virtue could be overruled and transformed.

"The structure of the mountain is such that it causes the torrent to dash along at a furious rate. The cliff rears up a wall for thousands of feet. The priest said 'This rock must be reduced and the river bed levelled and the waters brought under control. If we carve out the benign countenance and create a great image we shall establish that which will work out for the benefit of all. All the people will unite in the effort and the consequences of it will be blessing forever. By making an image of the ancient Buddha past calamities will be remedied, future catastrophies will be prevented and peace will be preserved.'

"The dimensions were now determined and stability and permanence was the objective aimed at. The circumference of the head was to be one hundred feet and the distance across the eyes was twenty feet. Other measurements were to be in proportion and everything was arranged accordingly. As soon as the priest took up the work, gifts were donated, from all over the land came valuable donations and wealthy masters and artisans came in great numbers to do the work. The men worked with a will. A thousand chisels plied in unison. The rocks fell with the noise of thunder and the dragon hidden in the waters was moved to fear. The lagoon below was almost filled with rock, and the noxious creatures in the depths of the water were put to flight.

"Time passed on, days came and went, months became years. The sacred face was revealed in life-like majesty. It stood alone in lofty beauty. It was as if the figure filled the whole heavens. The racing torrent and the angry waves were at peace. Solitude reigned in the mountains and they were bathed in mists and in moonlight.

"All matters work out from the inner heart to the exterior. The heart should be in accord with its environ-

ment; then winds would be quelled and rivers would be at peace. I, Wei Kao, have meditated on the lives of men. I see that they act contrary to truth and delight in following the bypaths of life: therefore, the sage because he, himself, yearns after Truth endeavors to teach men how to cultivate lives of Virtue and Truth. If men perfect their conduct now, happiness will accrue to their posterity. This truth is a vital one. How was it that by the application of skill and wisdom this heaven-imposed danger was removed and the angry waves caused to flow peacefully along? We must minutely consider the whole matter. All matters have their origin in disorder. We know that disorder did not exist originally. All things are vanity. Though things appear to be real, in reality they do not exist. Thus neither danger nor peace have any existence. The Holy One is omniscient. He is without form or likeness, yet he responds to all who beseech him. Whatever the depth or importance of the question brought to him it will be completely annulled. Where is there anything which cannot be changed? If he were not the absolute god of the Universe how could he annul such a danger as this one?

"The good Hai Tang manifested the utmost sincerity in pursuing the work of redeeming nature. While thus occupied the district official demanded a bribe from him. The priest replied 'You may gouge out my eyes but the money belonging to Buddha shall never be yours.' The official became wrathful and said 'You shall be taught the extent of my power.' On this, the priest gouged out his own eyes and brought them on a platter to the official. The official was greatly upset by this and ran hurriedly to meet the priest seeking his forgiveness. The priest thus displayed his single-mindedness and sincerity up to the point of injuring his own body. Even the great work of removing mountains and changing the course of the sun was possible to him. Furthermore, he gave credence and power to the holy doctrine and encouraged the hearts of men. He caused peace to reign over the roaring flood and it is fitting that his reward was speedily realized. His merit was great and the consequences are vast. The expenses ran into many millions of cash. Before the figure was completed the priest died. What a catastrophe! His efforts for good were prompted by love and benevolence and should be carried on by the generations yet to be.

"Subsequently a general called Chang Ch'eo Chien Chüin contributed 200,000 cash from his salary to help toward the expenses of the scheme. In the middle of Kai Yuen's reign the Emperor issued a mandate to effect

the allocation of the hemp and salt taxes toward the expense of the building of the image. This great work moved heaven and men to reverence, and all sought to carry out the scheme. What great foresight and power was shown by the priest in the inauguration and execution of the scheme! It was his ambition to overcome all the difficuties and bring blessing to future generations of men.

"In the beginning of the reign of Chen Yuen 785 A.D., the Emperor commissioned me, Wei Kao, to take up office in this corner of the empire. I discussed with the workmen all matters pertaining to the building of the image. From the lotus flower base upwards to the knees was still untouched. This was about one hundred feet. In the fifth year of Chen Yuen, 789 A.D., the emperor commanded a local priest to undertake the repairing and completing of the figure. I immediately called the workmen and contributed 500,000 cash of my salary towards the expenses. Red coloring was used for the body of the image and gold was used to accentuate the features. Now in the 19th year of Chen Yuen the feet and legs are finished and the lotus flower stands out clear from the water. It was as if the god had descended from heaven or as if he had burst out from the bowels of the earth. The whole environment was arranged suitably and the image was complete. I here record the matter from start to finish as an evidence of the work done."

BAMBOO RAFTS ON THE YA RIVER

J. H. EDGAR

On the waterway between Yachow and Kiating there exists a primitive but very efficient mode of transport. The Ya River is, as a rule, shallow and full of snags in the winter, and so wild and turbulent in the summer that boat traffic has to a great extent been ruled out; but the extent of the Ch'ien Chang and Tibetan traffic has been, and is, of such importance that a form of transport other than coolies and horses seemed necessary. Such a need would set men thinking and in the end the raft now in use was either invented or modified from patterns used in other provinces, or from models originating in the ages before China was a power in Szechwan. This latter explanation is suggested by the name "Pa tsi" (筏子) which is read "fa tsi" in other provinces. The argument is that in ancient times many of the words now beginning with "F" had originally a "B" sound like Fu (佛) (Buddha). In the case of the Yachow rafts we assume they were in use in very early times and have retained the old sound.

The Yachow rafts are from 100 to 120 feet long, 10 to 12 feet broad, and draw anything from 3 to 6 inches of water. Long sections of bamboos, from 4 to 6 inches in diameter, after the joint rings and outside covering have been planed off, are tied together with ribbons of the same material but of different species. Cross stays of wood at regular intervals firmly lashed by withes and bamboo bands adequately reinforce and complete the structure. In front the whole breadth of the raft turns up like the prow of a Chinese boat and at both sides heavy bamboo "logs" form miniature gunwales. A staging is generally put up for the pilot and a powerful stern sweep is attached to the root of a tree which is firmly bound to the floor of the raft. An equally powerful bow sweep is also in position for quick and decisive action in the event of emergencies. Immense cudgels of wood, rudely fashioned, also do duty effectively as oars. Heavy iron shod poles are laid out at convenient places and do valiant service when a shivering wreck seems to be the next incident to record.

A flimsy platform two feet high and five to six feet across runs down the greater length of the raft, and on it are packed the three to seven tons of cargo. This is the only dry place and here the passengers take up their quarters or hide themselves in booths not more commodious than a sedan chair. This also explains why every evening there is a rush to the adjacent inns. The upward journey, occupying from 12 to 30 days, might have fitted in agreeably with the programmes of Jared or Methuselah, but 20th

century wayfarers, it is assumed, find it irksome. Groups of men, harnessed to lines of bamboo ribbons and assisted by comrades aboard with poles, only cover on an average from five to ten miles a day; but the downward journey is the limit of contrasts for in good water the distance of 100 miles may be accomplished in 20 hours! On arrival at Kiating a fair percentage of rafts proceed up river to Chengtu, and some eventually anchor in Chungking.

The downward trip on the Ya is famous for a variety of thrills of many kinds. At first it promises to be dull enough; but the distant roar of rapids, anxiety lines on the faces of passengers, the crew silently slipping into positions of responsibility, the furtive glances of steersman and pilot at something down river, and the rapidity with which river bed pebbles seem to be gliding up stream give the impression that a crisis must soon be faced. Then like a bolt from a catapult you and your craft are shot into a nightmare. You seem to be in the grip of a merciless monster whose object is to "shiver your timbers," but with an obligato of frenzied shoutings above a quartet of crunching beams, crackling from snapping binders, the swishings of pugnacious waves and the hoarse roar of opposing currents, the flimsy structure buckling, swaying, contorting and "shipping green seas" romps down the cataract or flounders through maelstroms into the calm of a backwash or artifical weir. Any damage is soon repaired and the journey is continued at a pace so uniform that the next rapid is anticipated with pleasure.

There is more in the trip than a conflict with rapids, maelstroms and primitive transport contrivances. The scenery is of a kind that China produces most exquisitely. The region is associated with the great Yü who after draining the fen lands "sacrificed to Meng and Ts'ai." We doubt the latter part unlese it is allowable to read "on Meng and Ts'ai." Then we may assume he saw the towering Gang Kar, a sight of sufficient rarity to call for an expression of worship. Even now on a plain about three miles from Yachow there is an arch which dates back to the Han Dynasty. Below this plain we race along the side of sandstone cliffs and, at a picturesque settlement with an unpleasant aura, pass a haunted temple on a romantic island and dash into the placid water of a gorge flanked by sheer cliffs streaked at times with waterfalls and robed with vegetation wherever gravitation allows. As robbers often operate in such canyons a delicious uncertainty courses through our veins like a current.

Once out of the gorge we enter a real China unspoiled by the neurotic West. Walled cities are seen only on two occasions, but ever and anon there are riverside markets with hamlets and farm houses on plains and hillsides with bamboo groves and clumps of lanmu, conifers and cedars as associated traits. On the banks and tops of ridges, often embracing ruins with their octopus-like roots, are the gigantic "banyans" with rough boles and umbrageous crests. Not the least of the attractions incidental to this journey

is the gradual sweep upwards of the unbroken country on our flanks with groves planted by man and the woodlands of Nature, until it climaxes in low ranges which, with the intervening tracts, although softly blurred, are never hidden by a haunting diaphanous haze. At a gorge two thirds of the way hundreds of Buddhas are cut out of sandstone. These are a great testimony to China's ability to reverence alien teachers, but a warning also of the withering effect of formalism unless disturbed by periodic stimuli from without.

About ten miles from Kiating a wide swing of the river has cut into an older topography and left cliffs of peculiar shapes. Here a soft hypnotic atmosphere and the apparent fact of "banyans," bamboos, bananas, cycads and other floral anomalies robing the cliffs suggest the approach to settlements in Borneo or Timor-laut, and a feeling that our raft is a catamaran with Malays or Papuans, friendly or otherwise, in the offing. However we are soon caught in the current of the T'ong which loops up to meet us, aud racing into a rapid glide past a nunnery on the cliffs and a military camp at their base to the crumbling walls of a large city which is Kiating, the Pearl of the West.

FUNDAMENTAL PRINCIPLES IN CHINESE BOXING (中國拳術)

CLARENCE G. VICHERT

The basis of a paper read before the West China Border Research Society, 12th January, 1935.

The fundamental principles of Chinese boxing had their origin in the early Chinese cosmogony. Ch'i (氣), with its essential principles, Yang (陽) and Yin (陰) are the foundation stones upon which, with the help of Taoism and Buddhism, have been erected the inner and outer work of modern Chinese boxing. Boxing, as a systemized form of physical training, made a comparatively late appearance in Chinese life (probably early Ming dynasty) and therefore it has borrowed liberally from those movements of thought that preceded it. The philosophical ideas underlying Chinese medicine and Chinese alchemy have been taken over by boxing and consequently, while these ideas go back to primitive Chinese thought, they arrive second hand in boxing. In this paper the attempt is made to outline a few of the fundamental principles of Chinese boxing as they are stated in I Chin Ching (易筋經), Hsi Sui Ching (洗髓經)[1], and other sources.

ORIGIN OF LIFE.

"The universe is full of life principle, Li, (理). This life principle cannot be known through the senses. It is made manifest through the cosmic breath, Ch'i, (氣), but the cosmic breath depends for its movement upon the life principle. They (理和氣) must be considered as one, they cannot be separated. All living things have come from the cosmic breath. Originally the cosmic breath rose like steam and changed into water, fire and earth. Water appeared first on K'uen Len Tien, (Koulkun mountain), (崑崙巔), and from there it flowed in four directions into a pit. This water brought forth hot air. Water vapor and hot air ascended and formed clouds and rain. These gave birth to man, animals, and all useful things. Water, after standing a long time, changed into earth and hot air into fire. Man is a miniature heaven and earth. He is the highest creation." (1)

MAN'S POWER.

Man has the power to change his body because, having been created by the cosmic breath, he can return to the cosmic breath.

1. Hsi Sui Ching 洗髓經

"There is no life or death. After heaven and earth pass away man will still be in existence." (1) Man has the ability to change his false body into reality. He can then rise superior to this earth.

PRINCIPLES OF IMMORTALITY.

"Man is body and spirit. To gain immortality that which has form and that which has not form must be trained. The training of the body has as its goal the strength and hardness of gold and stone. The training of the spirit has as its goal the elimination of all thought. After these two goals have been gained that which has body can be cast aside, that which is without body can enter Nirvana. If a man desires to remain in the body then he becomes a master of boxing. To stay in the body or to leave the body is a matter of personal choice." (2)

TRAINING THE BODY.

"The starting point in training the body is the cultivation of cosmic breath." (3) The original constitution of man contains cosmic breath and therefore the road to immortality is open to all men. Failure to become an immortal is due to neglect of and opposition to cosmic breath. The cosmic breath may be added to, diminished or maintained at a given level. To increase the amount of cosmic breath in man there are two methods. One is the production of cosmic breath in the body and the other is the introduction of cosmic breath into the body from outside sources.

PRODUCTION OF COSMIC BREATH.

The production of cosmic breath in the body follows a process similar to that used in transmutation of metals. Heat is required and the basic element is refined into a new form. In the case of the human body the transmuting furnace is the region between the umbilicus and the pubic bone (丹田). "Heat in this region changes the seminal fluid (精) into essence (氣), this essence rises in the body and nourishes and develops the cosmic breath. In this way the cosmic breath in man is increased." (4) Heat is produced, in the beginning, by conscious thought but later, thought is not necessary as heat will generate naturally. It is very important that the seminal fluid be preserved, for any loss of this fluid entails, indirectly, a loss of cosmic breath.

INTRODUCTION OF COSMIC BREATH INTO THE BODY FROM OUTSIDE.

There are two methods of gaining cosmic breath from outside sources. One is through taking medicine. This method is not advised as it represents a degraded form of body training. The taking of medicine is only practised by ignorant people. The second method is through breathing. The air at certain times and

1. I Chin Ching, 易筋經
2. Ibid.
3. Ibid.
4. Nui Kung Lien Tan Mi Chüeh (內功鍊丹秘訣) Vol. I page 35.

seasons is rich in the cosmic breath. The cosmic breath is most abundant where new life is; therefore to walk in the woods in the spring of the year is an excellent practise. During the day dawn and dusk are the best times to practise breathing. During the month the first and the fifteenth are the most suitable periods. The breath of young children is highly valuable and should be breathed in by adults as opportunity provides.

CIRCULATION OF COSMIC BREATH.

Next in importance to the gaining of cosmic breath is its circulation in the body. There are various methods used to insure a free circulation such as massage, bathing, exercise and concentration of mind. Free circulation is obtained when the fetal circulation is restored. At birth the fetal circulation is broken and therefore the cosmic breath has only a partial circulation in the newborn baby Roughly speaking the cosmic breath should circulate in an oval from pubic region to head and back to pubic region again.

YIN AND YANG.

The free circulation of the cosmic breath is not sufficient to ensure success because the Yin and Yang must be in the right proportions. Any disturbance in the proper proportions results in sickness and possible death. Man must make sure that his Yin and Yang are in harmony. If the Yin and Yang are not in harmony man must find a method of adding or diminishing one or the other of these principles. "Girls are Yin on the outside and Yang on the inside. Boys are Yang on the outside and Yin on the inside. By breathing the breath of girls or boys man can strengthen his Yin or Yang." (1) (The author has been informed that Taoist priests of today who seek eternal youth through inhaling the breath of young girls gain what they seek but the girls die.)

OUTER STRENGTH.

After inner strength has been gained through the development and circulation of the cosmic breath (wherever the cosmic breath goes the sinews, membranes and bones become strong) then outer strength should be sought. "Outer strength comes through exercise, kicking, lifting, pushing, pulling, grasping, pressing, ringing and twisting." (2) Boxing represents the most effective way of gaining outer strength.

TRAINING THE SPIRIT.

The cosmic breath is retarded in development by desires and wandering thoughts. The ultimate goal of the spirit is the elimination of all thought. The first step toward this goal is a feeling of repentance. "I have not repaid my debt to the Four Mercies (四恩) (King, Parents, Teachers and Buddha). I have not

1. I Chin Ching 易筋經
2. Ibid.

been able to leave the sins of the flesh. I have not followed the path of the sages. I have not brought my spiritual nature and my divine nature into harmony. The human attributes form, perception, consciousness, action and knowledge tie me down." (1) After repentance the next step is to distinguish true and false. "You must know yourself." (2) "That which is seen is not reality. That which seems permanent is not permanent. That which is ugly and dark is true beauty and light. If you cannot understand this how can you gain heaven? Through meditation comes the power to see what the common man cannot see." (3) "In the glimpses of truth that come to you through meditation find pleasure. In a peaceful and settled heart find happiness. Dwell in a quiet place. These are the first steps in meditation." (4)

THE GOAL.

"At first the body is necessary just as a raft is necessary in crossing a river, but after the crossing has been completed the vehicle can be discarded." (5) When man is full of cosmic breath and his outer strength complete then he becomes independent of his body. He is oblivious to heat and cold, water and fire. Heaven and Earth cannot harm him. "In following the Tao (道) there is no death. There are three religions but their source is the same and there is but one method of gaining immortality. That which is used on the inside is the Tao (道), that which is used on the outside is strength (力). The man who has Tao and strength will be able to move mountains and empty the sea. He will be able to control the wind and rain. He will be able to make all things new." (6)

Suifu, Sze.
May 9, 1935.

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1. Hsi Sui Ching 洗髓經
2. Nui Kung Lien Tan Mi Chüeh (內功練丹秘訣) Vol. I page 21
3. Hsi Sui Ching 洗髓經
4. Nui Kung Lien Tan Mi Chüeh (內功練丹秘訣) Vol. I page 21
5. Hsi Sui Ching 洗髓經
6. I Chin Ching 易筋經

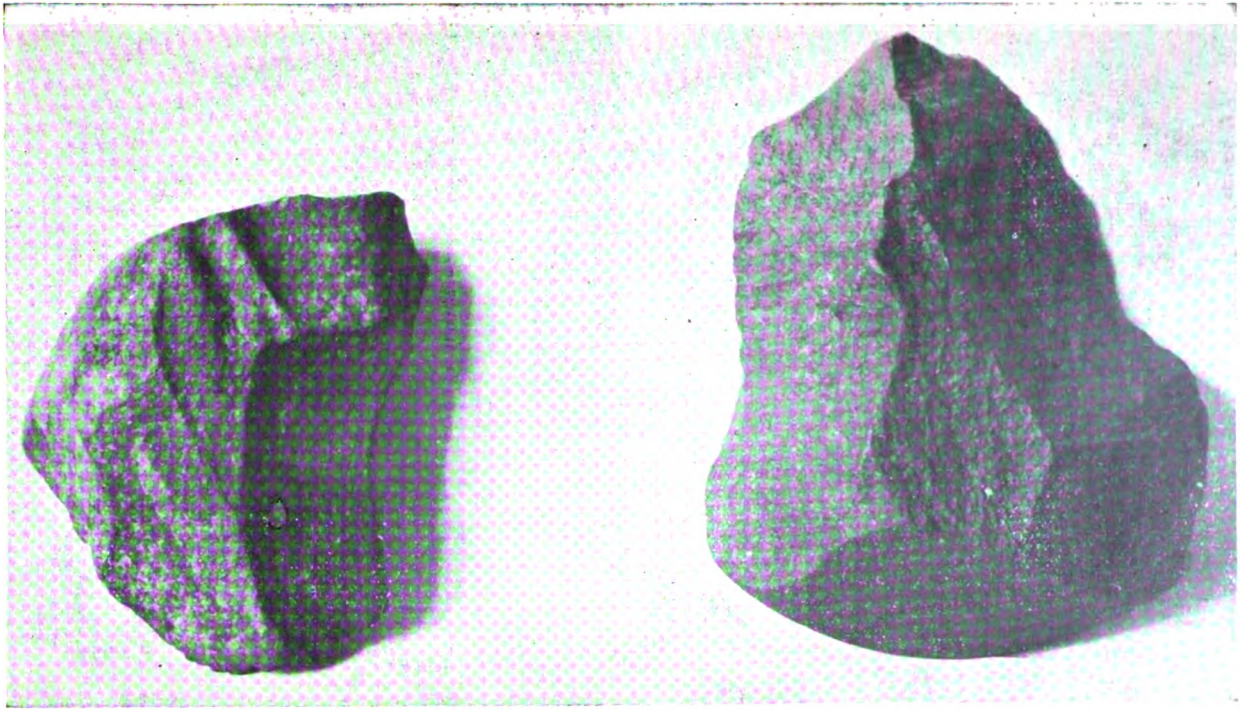

Plate I. Implement found *in situ* under loess at Sharatang. The small one was found in 1930 by J. H. Edgar in the presence of Dr. Heim.

IMPLEMENTS OF PREHISTORIC MAN IN THE WEST CHINA UNION UNIVERSITY MUSEUM OF ARCHAEOLOGY*

DAVID CROCKETT GRAHAM

In the West China Union University Museum of Archaeology there is a collection of paleolithic and neolithic stone implements from Szechwan Province and the China-Tibetan border. They include some of the types that have been found in Europe, and seem to bridge, at least partly, the gap that apparently exists in east China between the cultural implements of Peking Man and the upper Paleolithic. Some of the types have not been found in Europe, and may be peculiar to this part of the world. A few of the specimens may be older than Peking Man.

The discoveror of stone implements in West China is Rev. J. Huston Edgar. He formerly lived in Tasmania, in Australia, and in New Zealand, where he gathered and examined stone implements; he also visited New Guinea and the Chatham Islands. He came to West China with a mind that was interested in stone implements, and with an experience that enabled him to recognize them when he saw them.

Mr. Edgar began gathering stone implements in 1913. He first sent a few to the museum of the North-China Branch of the Royal Asiatic Society, which have seemingly been lost. All the rest are in the West China Union University Museum of Archaeology. He has found them all the way from Ichang to Li Tang. Many of them have been found *in situ*, and others have been found in places where they have been exposed by erosio, on or near the original sites. All have been carefully numbered and catalogued, and such data as the place, whether or not found *in situ*, the date when found and under what circumstances, have been carefully recorded in the museum records. An article by Mr. Edgar in Volume VI of this Journal (page 56) describes and gives a map of the important sites on the China-Tibetan border.

In Volume II of this Journal there are drawings of some of the stone implements collected by Mr. Edgar. In 1930 Dr. Arnold Heim visited Sharatang with Mr. Edgar, and saw the latter find two stone artifacts (*see plate I*) *in situ* deep down in a loess bed. He later reported this find in European scientific journals and in his own book, *Minya Gonkar*. In the summer of 1931 Mr. Edgar escorted Dr. Gordon Bowles to this region, and together they made a large collection which was given to the museum of the West

*Publication of the West China Union University Harvard-Yenching Institute.

China Union University. Dr. Bowles wrote an account of the journey and a description of the collection in the *Bulletin of the Geological Society of China*. The significance of this collection and of this report is due to the fact that Dr. Bowles is a university-trained archaeologist, and that he verified the genuineness of Mr. Edgar's work and of his stone implements.

The writer has read with a great deal of interest two articles written by Amadeus Grabau, Dean of the Peking Laboratory of Natural History. One is *Did Man Originate in Asia*, in the January issue of *Asia*, 1935, and the other is in the 1934 *Journal of the North-China Branch of the Royal Asiatic Society*. The essence of the theory advanced by Dr. Grabau is that the rising of the Himalaya Mountains, in the later part of the Tertiary age, and the consequent deforestation of the Tibetan-Mongolian area, compelled man's anthropoid ancestor, Protanthropus, to live on the ground instead of in the trees, and started the developments that have finally resulted in present-day man.

An interesting fact is that before the writer had read Dr. Grabau's articles he had heard Mr. Edgar express the belief that man's origin may have been in Tibet. When, later, the writer showed Dr. Grabau's articles to Mr. Edgar, they were to him a confirmation of a belief that he had already held.

A part of Dr. Grabau's theory is that during the pleistocene age, when the great glaciers and ice-fields covered much of Europe, man did not and could not live in China. When he did return he brought with him an Upper Paleolithic culture. Man fully established himself in China after he had attained the late Neolithic culture.

Five paleoliths have been found by Mr Edgar between Ichang and Chungking. Two were in conglomerate rock where they were exposed by erosion. This rock consists of pebbles that have been deposited by the river. They have been solidly cemented together by lime and other mineral substances that abound in the water of West China. This fact, the crude chipping and the patination indicate that the implements are of great age. Another implement has the typical flat top and curved edges which are found frequently in the museum collection. Still another implement is a fine, well-patinated fist-axe that in Europe would be classed as Acheulean. *(see Plate II.)*

A well-made neolithic axe was found at Chungking, and a large number of neoliths and paleoliths were found between Chungking and Kiating. Mr. Edgar said that practically all were above the high-water mark along the Yangtse and the Min rivers. There is a fine neolithic axe from Suifu, C/5012, that shows both rubbing and chipping. Several of the implements are large, Mousterian-like knives or scrapers. That is, a chip was broken off a big stone, and not always rechipped along the cutting edges. Two large chips have been made into hafted hoes or axes, and Mr. Edgar said that he saw a similar stone implement in a Korean museum.

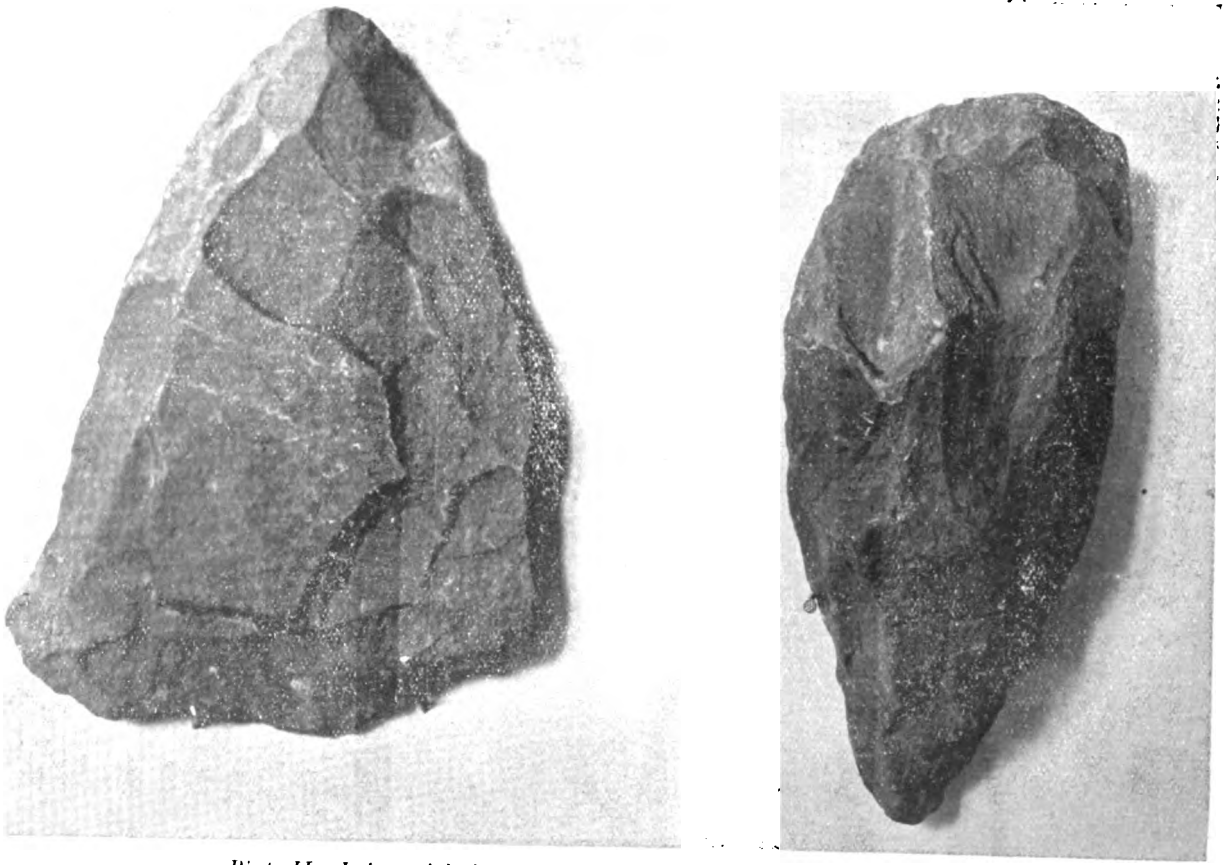

Plate II. Left: a pick, hoe or fist-axe from Yin Kuan Tsai.
Right: an implement [illegible]

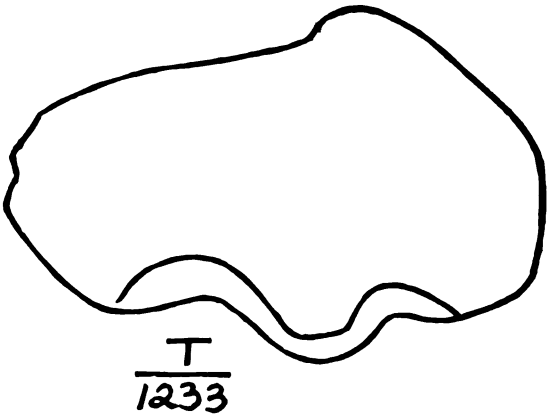

Fig. 1. "Saw-toothed" stone implement from the Zhu-Ri-Ha-Ka site. Shows very old patination. Length 67 mm, width 41 mm, thickness 13 mm.

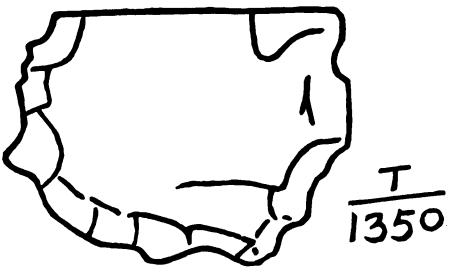

Fig. 2. A small stone implement from the same site, showing a flat top and a rounded, chipped cutting edge. Length 41 mm, width 32 mm, thickness 10 mm. This type of implement occurs frequently in the collection.

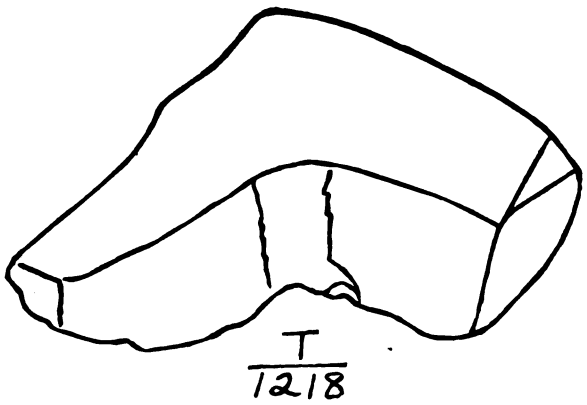

Fig. 3. A stone implement from the Zhu-Ri-Ha-Ka site. Length 75 mm, width 38 mm, thickness 11 mm.

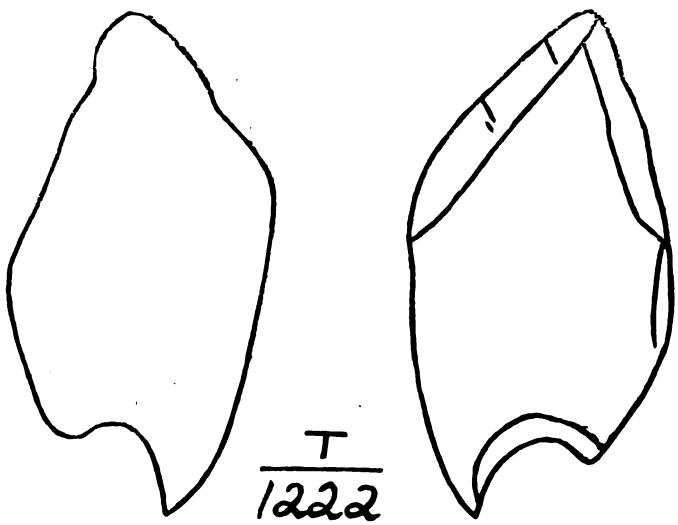

Fig. 4. A gouge or punch from the same site. Length 16 mm, width 31 mm, thickness 12 mm.

In 1916, just after a flood, Mr. Edgar came upon an ancient camp site near Suifu that had been exposed by the freshet. There are seven stone implements from this camp site. One is a well made thumb scraper. Another is a hammer or sledge hammer with a groove chipped around the middle for hafting. Five might be called Mousterian: they are large chips knocked off river boulders. Two have been sharpened by rubbing, so we must class the implements as neolithic.

C/4732 is a crude fist-axe with secondary chipping from the region between Kiating and Yachow. The patination is very old. Mr. Edgar has seen other implements in this region, but he did not pick them up.

A few implements have been found near Chengtu, among which is a neolithic sandstone axe that Mr. Edgar picked up while taking a walk with the writer.

Kwanshien, Wen Chuan, Wei Cheo, and Li Fan are on the banks of the Min river and one of its branches. The altitude is between 2500 and 4000 feet above the sea level. The collection from this region includes some fine paleoliths and neoliths. There is a hard, well-shaped neolithic axe, and a stone chisel. There is one white quartz fist-axe. T/749 is an implement made by knocking two long chips off one side of a river pebble. It was a skilful hand that knocked off these chips. There are several picks, hafted hammers, first-axes, and scrapers, and one small thumb scraper. There are fewer neoliths than paleoliths.

The Mongkong region has yielded over sixty paleoliths. One seems at first sight to be a paleolith, but it is a soft slate that might have been worn into shape by water action. The largest specimen is either a core or a coarse heavy pick. One is a pestle or hammer made from a large pebble. At least two show adaptation for hafting. There are fist axes, picks, and coarsely-chipped scrapers. Seven are made of mica shist. The material is so soft that they would not have persisted until today if they had not been in dry places. Mr. Edgar affirms that he found them in dry and protected spots. There are nine white quartz implements, all of which seem to be fist-axes. T/1258 is a finely shaped fist-axe, and T/1186 shows remarkably fine chipping on both sides of the cutting edge.

From Li Tang there is only one specimen, T/1398. It is a coarsely-chipped scraper, made of igneous rock.

From Jedo, near Tatsienlu, there are four stone implements and one bone punch or awl. The two larger paleoliths, T/1329 and T/1338, are flat on top, and pointed. T/1329 is a well-made implement of a type that often occurs in the collection. It is flat or straight on top, and is chipped around the curved edges. T/1356 is a small thumb scraper on which the chipping is remarkably good. T/779 is a bone punch. It was found *in situ* in a glacial deposit, and is well fossilized.

There are two stone implements from Fu Bien, both of which were found *in situ* in a loess deposit. One is the typically flat-

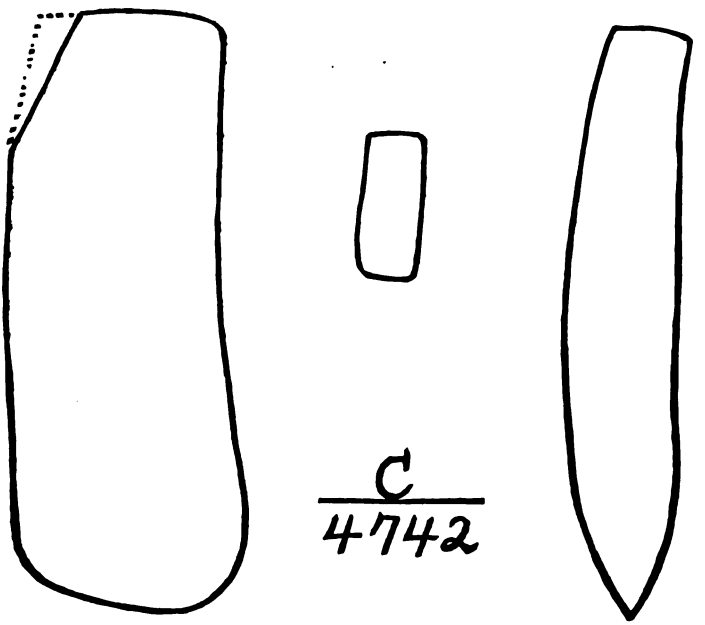

Fig 5. (Half size) An axe or hoe of a typical megalithic type, found at Wei Chow. Length 156 mm, width 61 mm, thickness 33 mm.

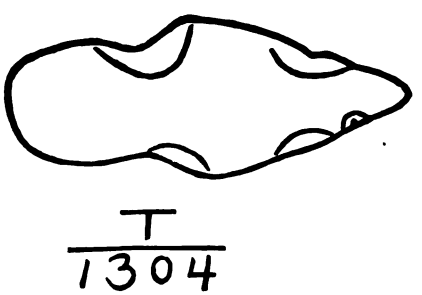

Fig 6. Stone arrow point from the Zhu-Ri-Ha-Ka site.

topped axe or scraper, of igneous rock, and has a very old patination. The other is sandstone, and has finger-hold depressions.

There is a meteorite from Taining that has been made into a fist-axe, and also a finely shaped and well chipped white quartz *coup de poing*. The meteorite was unearthed by gold diggers. It is patinated, and contains a high percentage of iron.

The collection from Ate includes only black igneous rocks, with the exception of a small scraper made of quartz crystal, and another of flint. There are four implements with circular edges, one about a foot long and resembling a sickle. There are several of the typical knives or scrapers with flat tops and rounded and chipped edges.

The collection from Zhu-Ri-Ha-Ka is very interesting and thought-provoking. There are about sixty small and ten large paleoliths. Some of them are so crude that they seem to be neolithic. Three are of white quartz, one of flint, and one of a black stone that may be porphyry. There are several specimens that show fine workmanship. Two, T/1233 and T/1327, have what might be called saw teeth, a style that appeared rather late in Europe. T/1187 is the typical flat-topped, round-edged knife or scraper. T/1350 (*Fig 2*) is a very small sample of the same type-being only 1.5 inches long and 1.25 inches wide. T/1222 (*Fig 4*) has a rather sharp point, and is apparently a gouge. There are three that seem to be arrow heads or spear points. T/1218 (*Fig 3*) is a small, sickle-shape, well made tool.

There are several stone implements that closely or remotely resemble megalithic tools from Europe. C/4742, (*Fig 5*) found at Wei Chow, shows the typical curves of European megalithic axes both along the sides and along the edges.

C/4764 (*Fig 7*) resembles the Asturian pick. It was collected between Kiating and Chungking.

One of the first questions asked by an archaeologist is: were the artifacts found *in situ*? Mr. Edgar has pointed out a large number of stone implements that he found *in situ*. There are the two stone artifacts found *in situ* at Sharatang in the presence of Dr. Heim. Some of the Edgar-Bowles collection were found *in situ* either by Mr. Edgar or by Dr. Bowles. Most of the objects found at Dan Ba were found in the loess, undisturbed and *in situ*. Others were found embedded in loess at Sharatang, and still others at the Zhu-Ri-Ha-Ka site. The fine Acheulean fist-axe T/727, was found deep down in a water-worn hollow, in undisturbed material where it had been exposed by water. A large number of the stone implements were found *in situ*, and a large number were in the vicinities of those *in situ*, and are of similar cultural types.

No neolithic or smooth-stone implements have yet been found above 7000 feet in the China-Tibetan border—at least, none that Mr. Edgar or the writer knows about. But pottery has been found, and this constituties one of the puzzling problems. Cultures with pottery are generally neolithic.

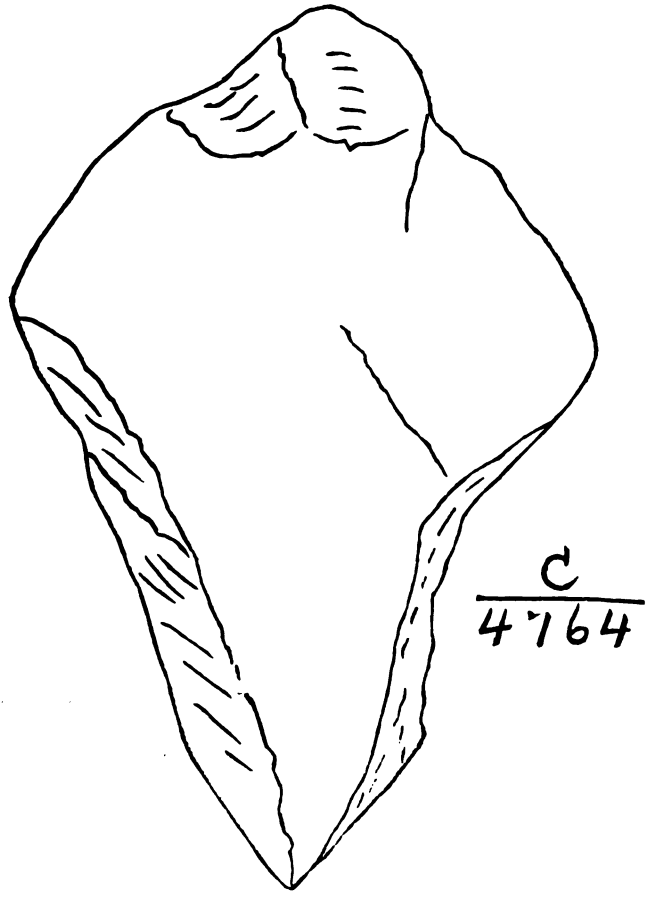

Fig 7. Asturian-like pick or fist-axe from between Chungking and Kiating.

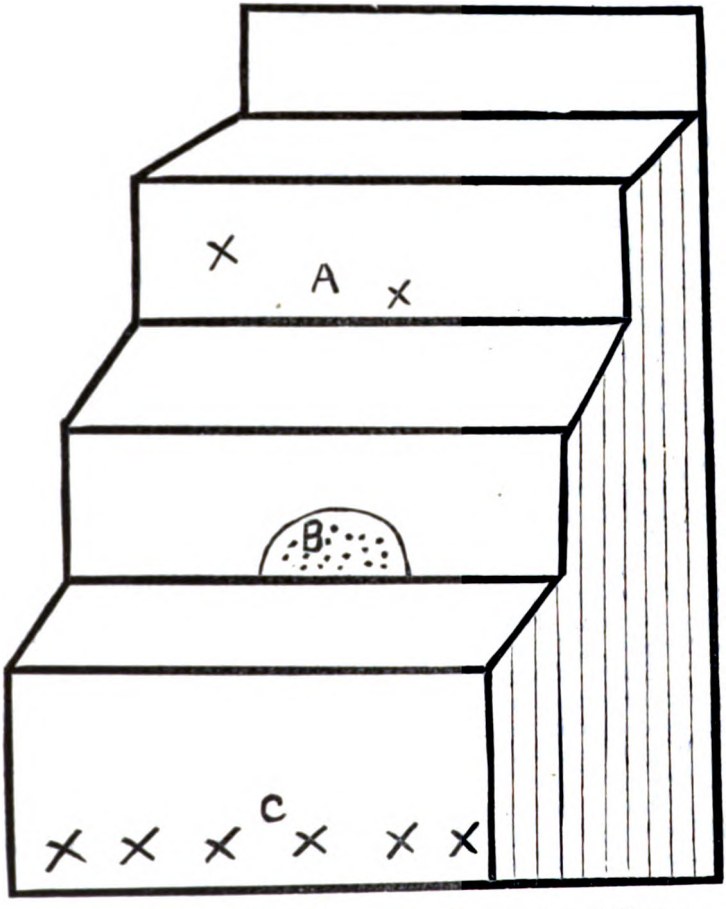

Fig 8. Diagram of loess terraces at Sharatang by J. Huston Edgar.

Total altitude more than 100 feet. A: Fine Aurignacian stone implements with chipping on both sides. B: Human and animal bones with charcoal. C: Cores and very rough stone implements.

In the article mentioned above, Dr. Bowles tells of finding pottery in the loess deposits, but he states that it was always found near the surface. The lowest depth he mentions is six feet. Laying aside the possibility of the pottery being the result of later intrusions, which Dr. Bowles would probably have noticed, it seems safe to assume that the pottery is later than the stone implements found imbedded deep down in the loess (probably a very late paleolithic or mesolithic culture) or possibly in the early neolithic age before smooth-stone implements came into use.

Let us now turn our attention to the diagram of the loess terraces at Sharatang (*See Fig 5*). This is not the result of careful measurements, but was drawn from memory by Mr. Edgar while he was in Chengtu. Mr. Edgar has visited the scene many times. Cores and very rough stone implements were found in the lowest terrace, marked C. Near the centre, at B, there was a human skeleton, charcoal, and bones of animals. This has recently disappeared, probably the result of farming. At A there were found fine stone implements with chipping on both sides, which Mr. Edgar calls Aurignacian.

Hasty deductions would not be scientific, but it seems safe to draw the following tentative conclusions:—

1. Because of the different climatic conditions on the China-Tibetan highlands, it is very likely that ancient man lived and hunted there during long periods when he was not to be found in eastern China. He may sometimes have made excursions down the Yangtse and the Min rivers.

2. Traces of man during late neolithic times are lacking in the highest altitudes, but become very plain below the altitude of 7000 feet, especially in the rich lowlands of Szechwan.

West China is a rich field for archaeological work. It should only be investigated by trained archaeologists, with the approval of the Chinese government. But when it is done, it will reveal unknown chapters in the history of man, and both skeletons and implements of prehistoric man will be found.

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SOME SUPERMEN OF THE BAMBOO BOOKS

J. H. Edgar

The "Bamboo Annals" of the Chinese during the period between 2500 (about) and 293 B C.* give an account of eighty-seven rulers. The greater number have been conceived and born like ordinary mortals, and reacted to local influences similarly to rulers of any country or period. But this is not the case with some of those between 2500 and 1050 B.C. whom we are about to discuss in the present article. During the proto-historic period the national welfare of the Kingdom seemed to require rulers of more than human insight and governing ability, and such were never wanting when circumstances demanded them.

(*Section one*) The "Bamboo Books" which supply the material for our investigation are patently unreliable as history; but all the same they suggest an attitude towads life which may yet be of value to students of early civilizations. The first king mentioned is Hwang Ti B. C. 2500 approximately. He was born of a human mother without the aid of a male parent, man or spirit. His mother, Fu Pao, whether wife or maiden we are not told, beheld an unusually bright flash of lightening and becoming pregnant, after a gestation of 25 months, was delivered of an infant with a dragon's visage and an ability to converse immediately at birth. His life history proclaimed him a quasi-divine being. Spirits came to his court for instructions, and tigers, panthers, bears and pandas assisted him in operations against enemies, while a miraculous grass kept sychophants and importunate visitors from the royal palace. Ambrosia eating phoenixes roamed in his gardens or made nests in the court galleries; and when the males sang the females gambolled. The royal parks, also, abounded with "ch'i lins", and besides other animals and birds from the spirit world, worms coloured like rainbows were in evidence. In his 59th year the chiefs of "Perforated Breasts" and "Long Legs" submitted to him.

Hwang Ti's successor, Chï (Shao Hao) had neither a human nor a spirit father. His mother saw a rainbow-coloured star floating down a stream and gaining possession of it in a dream, by a purely mental process, bore a son who became ruler of the empire. The mother of Chuan Hsü, the next to ascend the throne, saw a rainbow star go through the moon and the sight so stimulated her

*This calculation based on the Cycle names in the Bamboo Books (Legge) really begins with the Emperor Yao. Chinese feet are used in measuring the rulers mentioned.

emotions that she conceived and in time gave birth to the king in Szechwan.

K'u of Kao Hsin was the grand-son of the demi-God Hwang-Ti. He had a double row of teeth, and although born in the natural way possessed the virtues of a sage. He caused blind men to entertain flocks of phoenixes with drums, bells and musical stones with the result that the happy creatures flapped their wings and gambolled.

Ch'ing Tu, mother of the superman Yao, was born in the wastes of Tou Wei. A yellow cloud constantly overshadowed her and she knew by reflections in water that dragons were in attendance. One morning a creature of this species brought a picture to her for inspection. By his influence, probably asexually, she became pregnant, and gave birth to a son fourteen months later. He was like the picture his mother had seen previously, and was endowed with the virtue of a sage. He was ten feet high and dreamed he had climbed up to heaven. In his reign the Chiao Yao pygmies submitted.

The mother of the demi-god Shuen saw an enormous rainbow and the sight so affected her that she conceived. The child had a black body, a dragon's countenance double, pupils, a large mouth, and was above the average as regards stature. The far distant state of Hsi Wang Mu paid him homage and phoenixes nested in his courts. He died in Hai Chow.

Yü's mother saw a star falling thro' one of the constellations, and in a dream connected with it, she became pregnant. Later, she swallowed a magic pearl and in due time Yü entered the world by an opening in the mother's back. He had a tiger's nose, a large mouth, ears with three openings and a body 9 feet 6 inches high.

Ch'eng T'ang of Shang 1766 B. C. has a remarkable pedigree. Chien Tih the wife of Kao Sin the grandson of Hwang Ti, swallowing a brightly coloured egg became pregnant and later gave birth to a son through an opening in her chest. After thirteen generations the wife of his descendant Chu Kwei conceived after viewing a white vapour passing through the moon. A son born later was T'ang of Shang. His face, broad below and tapering above, was white and whiskered. His body was one sided, his voice was loud, his arms four jointed, and his stature nine feet.

King Wu of Chow. Chiang Yüan another of Kao Hsin's queens, when desirous of a son, trod in the footsteps of a giant and conceived. Later the son which she bore was Chi, Yao's minister of Agriculture. His grandson was Kong Liu, and thirteen generations later one Chi Li of this line was born. His wife in a dream, stimulated by a vision of a man of gigantic proportions, conceived and gave birth to her son in a pigpen. He had a dragon's face, tiger's shoulders, four nipples on his breast, and was ten feet high. This demi-God was King Wen the father of Wu the first ruler of the Chow Dynasty.

(*Section two.*) From the above summary we conclude that mental rather than physical processes were responsible for the embryonic life of China's earliest supermen, who, in some cases, were not even born in the ordinary way. To most readers this will be sheer nonsense, and the exceptions will, of course, interpret it differently. Now and again however some may see in such cases of asexual reproduction evidences of a mentality not hinted at, for instance, in early Hebrew literature. Indeed, to unearth anything analagous, a study of the Australian natives or the inhabitants of the Trobriand Islands would be necessary. Unlike, also, the majority of cases in the mythology of the Greeks, we do not find male gods in love with human females, but rather unintelligent phenomena or vivid dreams stimulating the minds of wives and maidens. Indeed although certain functions of the human male are taken for granted, nevertheless he, as an essential factor in fertilizing the female ovum, may be dispensed with. But it may be argued that the above myths are so much protective mechanism safeguarding society against a tendency among rulers to assert the right of primogeniture. It is quite true hereditary succession was not in favour with either Yao or Shuen, and, later, asexual conceptions recorded have to do with men who rendered unusual services to the nation or saved the people from the withering injustice of tyrants. In such cases, a quasiapotheosis would impress on later generations the magnitude of the their achievements and save them, when necessary, from the stigma of regicide.

This tendency to deify mortals in order to safeguard their importance and position in society, exists in China today. Indeed, until 1911 the Emperor of China was the Son of God; but it is the origin of the belief rather than its survival from respectable antiquity to the present time that interests us. Hence we suggest that students may yet find in these persistent cases of asexual reproduction hints of a mentality supposed to connote the Arunta and Trobriand Islanders where the relation between an ordinary act and an infant nine months later is only dimly at all if understood. The prolonged periods of gestation mentioned in the cases of Hwang Ti and Yao, 25 and 14 months respectively, may be a further indication of ignorance or confusion of a law understood in essentials by everyone with the exception of the backward groups mentioned above.

(*Section three.*) The following list of agents directly or indirectly responsible for the earthly life of the early Chinese rulers as a condensed repetition may be of value to students of symbolism. The order is the same: (1.) Lightning surrounding a star and great brightness in the vicinity of a woman. (2.) A star like a rainbow floating down a stream to an island. Possession of the star in a dream and mental agitation as an immediate cause of pregnancy. (3.) A star in the "Dipper" goes through the moon like a rainbow. This produces certain symptoms which may be intended to indicate quickening. (4.) We have a yellow cloud,

dragons on guard, and a picture presented by a dragon which contained (a) characters meaning, "The red one has obtained the favour of heaven;" (b) a figure with coloured eyebrows like:  * A face sharp above and broad below with long whiskers; and a giant's body 7 ft. 2 inches. Its feet were set on a constellation. Finally: we have winds and darkness, with pregnancy owing to the influence of the dragon. (5.) In this case there is a large rainbow and mental agitation. (6.) Yü's mother saw a star passing through a constellation and was powerfully influenced by it in a dream. A magic pearl is swallowed later. (7.) The ancestry of Ch'eng T'ang: (a) a beautifully coloured egg brought by a dark bird and swallowed; (b) a white vapour passing thro' the moon. (8.) The ancestry of King Wu: (a) footprints of a giant in which the woman trod; and, (b) a dream of the ordinary erotic type connected with it.

*The ancient form of the figure eight.

THE CHEN T'AN

from

"THE LOCAL CUSTOMS OF THE CAMBODIANS"[1]

(A tentative translation)

J. H. EDGAR

This book was written by one Chow Ta Kwan[2] who accompanied a Chinese envoy to the court of Cambodia between 1295 and 1297 A. D. Cambodia at that time could boast of an advanced and picturesque civilization, but unblushingly condoned customs worthy of groups of native Australians in the vicinity of 26 S and 129 E. A glance at the contents shows that the author was a keen observer who discriminates between what he himself has seen and what has been purveyed to him by others. Indeed it is clear that he has refused to romance when there must have been a great temptation to do so. Hence, we accept his facts without hesitation and, even when retailing rumour, his alternatives are so many that we have valuable indications of the trend of the Cambodian mind. Historically, also, we have no reason to accuse him of imagining vain things.

Cambodia at the beginning of the Mongol Dynasty had a powerful social organization. The king was an autocrat with "five wives and from three to five thousand concubines." His palace was a grand mass of buildings and so strangely and richly upholstered that we cannot forget that Angkor Vat, probably not then in ruins, was a product of the same land. "Women", we are told, "were very numerous," and the priesthood, highly organized, had peculiar duties assigned to them. The religion, also, expressed itself in gorgeous temples and an art partly indigenous and partly borrowed from other lands. Still, in the midst of all the "barbaric splendour" of the court we are told quite naturally of a brass Buddha "with a stream of water issuing from his navel." In such a land superstition was rife but one mentioned is not only significant but shows how exacting the duties of the autocrat were and how a freak of the imagination might have cost him his crown. In one of the buildings sacred to the ruler we are told there was "according to the natives the spirit of a nine-headed snake which was the guardian of the land. This spirit materialized every night as a female, and the king must cohabit with her. His wives are not allowed to enter the building, and only after the second watch is he free to depart and retire to his harem. If the spirit does not assume human form the time of the king's decease is imminent;

and if he fails to pay his nightly visit calamities of many kinds will follow."

Our object, however is to render Chow's account of the famous Chen T'an[3] into English. As the book is rarely seen and our opportunity to study it did not exceed a few hours, a word for word translation of the 14th century text is likely to have some errors. But it is hoped that these, except in rare cases, will not be contrary to the sense of the traveller's interesting narrative which, with the exception of a few lines towards the end is as follows:—

"People, who have female children, in blessing them say: 'may you have myriads of husbands!' The heads of all famlies, the wealthy and the poor alike, when their girls reach a given age—those of the former between seven and nine, and of the latter not later than eleven—must order a priest to deprive them of their virginity[4]. This ceremony known as Chen T'an is (as follows):- Every year at a date corresponding to the Chinese 4th month the families with girls who (by law) are ready for the ceremony must report to the officials. A large candle is (then) given to them on which the (family) name as well as an appointed designation is written. On the date determined, when dark, with the candle alight (the family) proceeds to the locality indicated.

"The Chen T'an has now begun. A month, half a month, or ten days previously the parents have made arrangements with a Buddhist or Taoist priest. No matter where their temples or retreats are their services are constantly in demand. The better class clerics are monopolized by the official and wealthy classes while the masses have not much to choose from. The former bring as presents wine, rice, cloth, silk, betel nuts and vessels of silver to the amount of 100 piculs and worth from two to three hundred ounces of silver. Some less lavish, according to their means, give only 40 to 50 or 10 to 20 piculs weight. (As regards the poorer class) on the 11th year—the time to observe the custom—it may be difficult to find the materials required; so to come to the assistance of such and enable them to observe the ceremony by gifts of money is considered a praiseworthy action. The priest may only attend to one girl during the year and once his services have been agreed to he may not have relations with another.

"On the night (of the Chen T'an) there is feasting, music, and the meeting of friends and neighbours. A shed is built and from three to four or (even) ten odd figures of men and beasts, moulded in clay, are put on top. The poor have none . . . . . Generally, on the seventh day, dismantling begins and when dark (those concerned) go out with chair and umbrellas accompanied with music, to bring the priest. They then erect two booths with ornamented silk, one of which is for the girl and the other for the cleric. The noise of the instruments makes it impossible to catch the meaning of his words (incantations). At this time all restrictions are waived and the priest (finally) enters a house and deflowers the maiden

with his own hand' (after which) the (effusion) is received in wine. Some say friends and neighbours dot their foreheads with it or taste it with the mouth. Others declare the priest cohabits with the girl. But some disagree, and as Chinese are not allowed to witness the ceremony nothing can be said with certainty. Just before daybreak the priest is sent home in a chair preceded by umbrellas and accompanied by musicians. Later, clothes and silk are sent to him for redemption money. Otherwise, the priest has a claim on the girl and she is not free to marry another.'' . . . . . "The custom of debauching a maiden and giving her in marriage afterwards is considered neither shameful nor unusual.'' . . . . . "When the priests are being met at the Chen T'an season the whole population of smaller streets, or families from the city in groups of ten odd, may be seen crossing and recrossing[5] and there is no place where the sound of music is not heard.''

Notes

1. 眞臘風土記 : *Chen La Feng T'u Chi.*
2. 周達觀 : *Chow Ta Kwan.*
3. 陣毯 : *Chen T'an*—chen : to arrange, fight; t'an : rug.
4. 去其童身 : deprive of physical virginity.
5. 交錯 : really interchange, interlook. The above rendering seems to suit the sense.

THE STORY OF THE FLOOD IN THE LITERATURE OF THE MO-SO (NA-KHI) TRIBE

J. F. Rock

The Mo-so 麼些 or Na-khi Tribe which now inhabits the northwestern part of the province of Yunnan, especially the region of the great Yangtze loop which adds several hundred miles to the course of that river, are immigrants and not aborigines of that region. The Na-khi (the Kh to be pronounced like the German *ch* in ich) are a branch or clan of the great Ch'iang 羌 race and belonged to the Mao-niu-yüeh-sui-ch'iang 旄牛越嶲羌 in particular. Prior to the occupation of the territory which became their home, with the city of Li-chiang 麗江 as the capital of their ancient Kingdom, the P'u-hsieh tribe 濮獬 were in possession of it. We know when the Mo-so first settled in Yung-ning 永寧 to the northeast of Li-chiang and outside the Yangtze loop, and when they gradually came, about 24 A.D. within the Yangtze loop and settled in the present district of La-pao 剌寶 to the north of Li-chiang. The history of these people is a most interesting one and will be fully treated in my forthcoming book *The History and Geography of the ancient Na-khi Kingdom*.

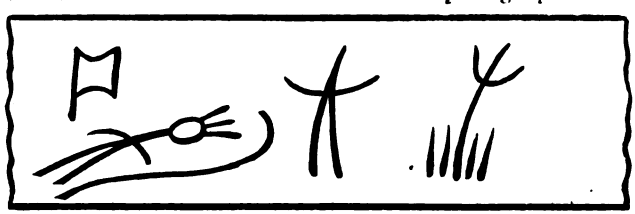
It was known that the Na-khi possessed a written language, and that they possessed two types of writing, a pictographic and a syllabic type, the latter resembling somewhat the No-su or Lo-lo characters; it was however not known that they possessed an extensive literature in manuscript form, the translation of which has occupied me now for the last five years. This is not the place to go into detail as to the type of their literature, which is mainly a religious one, but simply to give the translation of one of their manuscripts dealing with the Flood, a story possessed by many aboriginal tribes of west China. The book which contains the story of the Flood bears the title: "Ts'o mbĕr t'u"* which may be translated as "The Decent of Man" Ts'o is part of the name of

Notes as to the pronounciation of Na-khi words: "dt" is neither a "t" nor a "d" but is pronounced harder than a "d" and softer than a "t." The same holds good for "gk." "Gh" is pronounced like the Arabic *ghain*, a soft guttural "r." A final underlined "n" indicates that the foregoing vowel is a nasal one. The dipthongs "ö, ä, ü" are pronounced like in German. A double consonant like "ll" in "llü" is an intensified "l" as in the English word *lull*. "a" is always pronounced broad, as in the word *after*. A vowel with the mark above it, as " ," indicated that the vowel is short; with a broad line above it that it is long, "o."

Plate I. Dto mbas performing the Garuda dance at the ceremony called To-na-k'ö, in the court of the author's house in the snow-village of Nv-lv-k'ö, north of Li-chiang.

the ancestor of the Na-khi race who is known as Ts'o dze llü ghügh, mlĕr = descent, and t'u = arrival. There are many books bearing that title and varying somewhat, depending at which ceremony they are chanted. Suffice it to say, that none of the Na-khi manuscripts are chanted just for the pleasure of it, or are recited like a bard would chant old legends and traditions, but at ceremonies only.

Of the latter the Na-khi have a great many, and a work on the funeral ceremonies of this tribe, including the translation of the literature pertaining to it, would fill two large volumes. There are only few ceremonies during which Ts'o mlĕr t'u is not chanted, but as already remarked each ceremony has its own particular Ts'o mlĕr t'u, the main facts of the story however remain unchanged. Like a number of other semi-historical books it is chanted at the beginning of a ceremony. The particular Ts'o mbĕr t'u here translated belongs to the Shi ku dtĕr bpö ceremony the meaning of which is Shi = dead, ku = gate, dtĕr = close, and bpö chant = that is the chanting, or performing of the ceremony of closing the gates of the dead. The title is written in Na-khi pictographs thus:



The first upper character represents the gate, below it a dead person, the three lines on the head indicate that the person has become a demon; the third character dter

is employed as a phonetic only, as it represents a headless demod which, it is believed, people who die of a violent death become, the character is read dtĕr, and is employed for dtĕr "to close," an abstract idea impossible to write with a pictograph. The last character bpö represents a tree and paraphernalia used around a tree in a ceremony, hence the character is employed for the word bpö meaning to chant, or perform a ceremony.

The Na-khi have, as has been remarked, two types of writing, a phonetic resembling somewhat Chinese and No-su or Lo-lo characters, and the pictographic type. The former strange as it may seem is the older, and the least known, very few dto-mba or sorcerers of to-day being able to read it, while all can read the pictographs. The latter was developed in the present home of the tribe, for the

animals and plants etc. used as characters, are such as appear in the mountains of Li-chiang. The phonetic script was undoubtedly brought with them from their ancient home, the grasslands of northeastern Tibet, whence they started on their great migrations south. Thus their written language has degenerated rather than developed. The pictographic script is stated in the Genealogy of the Mu 木 Family to have been invented by Nien-pao-a-tsung 年保阿琮 who lived at the close of the Sung Dynasty. The Mu Family ruled the tribe, its members were the ancient Kings of the Yüeh-hsi-chao 越析詔 or Yüeh-hsi Kingdom, also called the Mo-so-chao 麽些詔 or the Mo-so Kingdom, which for a time was part of the Nan-chao 南詔 or the Southern Kingdom in Yunnan, during the T'ang and Sung Dynasties.

The Na-khi religious literature is of the greatest interest as it gives an idea of what the genuine pre-Buddhistic religion of Tibet the Bon chos or Bon religion consisted of, for it has survived in its purity among this tribe. The latter having come in contact with the later lamaism only in its new home, in the district of Li-chiang, and as late as the Ch'ien-lung period of the Ch'ing Dynasty.

The monograph on the Mo so or Na-khi which I am working on, and of which the first volume will appear during the spring of next year (1936) will consist of four or five volumes and will include a dictionary and phrase book of the two written languages, the pictographic and syllabic. The book here discussed and translated does not only tell of the flood, but may also be looked upon as their genesis, for it tells of the creation of the world, the cause of the flood which was incest, and the marriage of the lone survivor after the flood with a celestial female, who became the parents of the human race.

Translation of Ts'o Mber T'u.

"In the dim past, in the very beginning of things, before heaven was, when Ndu and Sse were about to appear, and the trees were on their way, the rocks contemplated to come upon the scene, and the earth was about to be born, there were three shadows which were to become heaven, and three shadows to become the earth. The sun and moon were not yet, but the three shadows of each existed. The stars and the planets (Zaw) were as yet not, but the three shadows of each were. The mountains and valleys, the trees and rocks, the water and the creeks were as yet not, yet the three shadows of each existed. From three things there appeared nine things, and from the latter there came forth a woman (mother). If it was so or not is not certain. There came forth something brilliant and from that something came forth something brilliantly white. From the latter came forth a being able to call.

From this came forth O̲ gko aw gko[1] after that there came forth something blue and black and from the latter came forth a being with a bad voice. From this being came forth Yi gko di nà.[2]

"From O̲ gko aw gko in the beginning came forth a white egg, from the latter a white chicken (another version says from O̲ gko aw gko came forth a white dew drop and from the latter a white egg etc.). There was no one to give it a name. (Therefore) Du (Muan llü du ndzi)[3] gave it the name ghügh yu ghügh ma.

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1. The name of this deity is written with Tibetan letter ཨ "a" pronounced in Na-khi, O̲. Apparently it is the first great cause or the supreme god of the Na-khi. He is never figured. In all the Na-khi manuscripts there is no figure of him, only the Tibetan letter a. Neither are there descriptions of him.

   It is related that the Na-khi deity Ssaw yi wua de which corresponds in all probability to the Tibetan Shen rezigs sPyan ras gzigs meditated on the existence of O̲ that is O̲ gko aw gko and the latter became a reality. Jäschke in his Tibetan Dictionary states: "This letter is a symbol of the deity of the cho's-sku that was before everything else."

2. Yi gko di nà similar to O̲ gko aw gko is written with the Tibetan letter ན na=black. As O̲ gko aw gko is the supreme being that was before everything else, so Yi gko di nà is the original evil and enemy of O̲ gko aw gko, and as from the former originated all good spirits, so originated from the latter all demons. In the Na-khi religion every good being, deity, or spirit has its evil counterpart or enemy. Black is to the Na-khi equivalent to evil, white to good.

3. Muan̲ llü du ndzi often called only Du, is perhaps equivalent to the Chinese god of longevity the Shou-shen 壽神. The Chinese always depict him with a very high forehead, and so do the Na-khi in their religious manuscripts. Muan̲ is heaven and indicates that he is a celestial being; there are many books telling of his origin and his fights with his enemy—Muan llü ssu ndzi. His wife was called Tsu dzhwua gyi mun̲ she originated from the spittel of Muan̲ llü du ndzi which he threw into the lake Muan̲ llü nda gyi khü=lake Manasarowar. He is always accompanied by a stag which guided his soul from the netherworld where it was lost, to his own realm. The numerous Na-khi books existing about Muan̲ llü du ndzi show that he is not an adopted deity. His origin and that of the lake Muan̲ llü nda gyi khü, and the tree Ha yi bua nda

"The chicken tried to fly towards heaven but could not reach it. It tried to crow but could not. It then arrived at the land Tsü hö dü mba and thence could neither fly nor hop. At that time the horses could not gallop, nor the oxen plough a field. There was neither lance nor armour. The chicken used the clouds as its bedding and the grass of the land for its nest. It laid nine pair of eggs. From one pair were born the P'er nä ssa[1], from another pair the Ngaw nä wu[2], from another pair the O nä hä[3]

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ndzer (the Tibetan dPag-bsam-ljon cing which is equivalent to another Na-khi name for it viz: Bpa sso'dzu shi) which grows on Mountain Sumeru are described in several manuscripts.

1. The P'er and the Ssa or P'er nä Ssa, the P'er, (the character stands for white) represents the nine P'er zo the makers of the heavens, and Ssa the seven female Ssa or Ssa mi sh r gku the makers of the earth or soil. The figure nine is always associated with the male sex, and seven with the female sex.

2. The Ngaw and Wu, the Ngaw are house spirits and also spirits of victory hence they are represented by a flag, for a flag is carried in front. Every family has its own Ngaw; a protective spirit which helps the family to overcome their enemies. They are propitiated in a ceremony called Ngaw bä. There are several Wu, Wu really means a slave, Wu yi transcribed in Chinese 猧弋 is a derogatory term for slave among the Na-khi; the ancestor and chief of the Ch'iang was called Wu yi because he had been a slave, having been caught by the Chinese. The Wu are supposed to be the caretakers perhaps slaves of the Ngaw. The enemies of the Ngaw are called Nyi, and the enemies of the Wu, khi tsu. There are also mountain spirits which are called the To nä wu, the To and probably their caretakers. The god or spirit of riches of the Na-khi is called Wu gku.

3. The O and the Hä, O nä hä with this expression all the spirits are meant, that is the good spirits. The O are said to be male, and the Hä female, however when a female deity is meant Hä mi is written, mi = female. The word Hä and its pictograph employed alone stands for deity, as a temple is spoken of as a Hä gyi = house of god. When the name of a deity is mentioned the word Hä is either prefixed or postfixed. When a greater deity is spoken of the word ddü = great is added, as Hä ddü O p'er = the great spirit with the white bones.

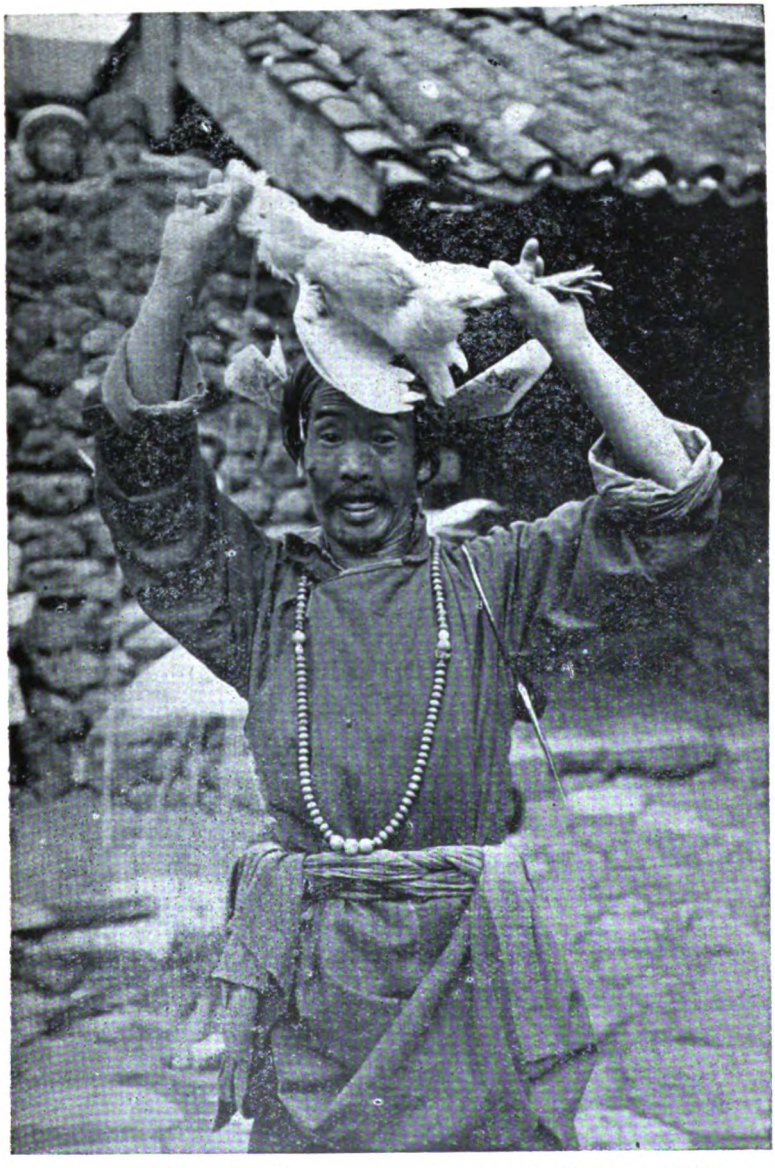

Plate II. A Llu-bbu or Shaman in a trance, offering a chicken to the Protector Spirit of the Llu-bbu, called Sa-dto.

came forth; from another pair Ndu and Sse[1] from another pair one who had knowledge and one who had ability; from another Ler nä ch'ou[2]. From another came forth two chiefs a superior and a subordinate, and from another pair the Dto-mba and Llu bbu[3]."

1. There is a book called Ndu Sse Ch'ou shu which is chanted at every ceremony. It contains the origin of Ndu and Sse. They are considered the creators of the Heavens and the Earth. It speaks in the above mentioned book that P'er zo ngv gku=the nine male P'er made the heavens, and Ndu the highest heaven lit full of stars; the land Ssa mi sher gku the seven female Ssa made, while Ndu made the vast lands and made the grass to grow, and the plans for the houses Ndu made. Sse takes care of the trees and causes the hills and mountains to be covered with pines. The upright rocks and cliffs Ndu made. Ndu taught the people to speak and Sse taught them to drink. Two white stones called Ndu lv (lv= stone) the stones of Ndu are always placed at the entrance to a house; they represent Ndu and Sse. They remain there until the 30th of the last moon when they are carefully washed and pine needles placed under them, while flour, wine and tea are put on top of them as offerings. The family then prostrates before them. The Na-khi Ndu and Sse are equivalent to the Chinese Yin and Yang the female and male principle. In the syllabic script of the Na-khi they are represented by a broken and unbroken line thus — — Sse,————Ndu. They are represented at the Muan bpö ceremony when heaven and earth are propitiated, by two white stones, also called Ndu lv; a white stone is simply called lv p'er. Mr. Torrance in his paper "The History, Customs and Religion of the Ch'iang" figures on page 31 a Ch'iang white (sacred) stone or Lopee. The latter word like the Na-khi Lop'er means white stone, the word Lv is often pronounced Lu and p'er is white.

   See the Yin principle or Earth, is different from the Ssa the seven female spirits of the soil, perhaps the Chinese 社 She, god of the earth or soil is identical with them.

2. The Ler nä ch'ou are two beings Ler and Ch'ou, one represents a measure as a measuring rod, and the other a pace or step, both of which were employed in measuring, the former the vault of heaven and the latter the earth, they were also employed in the construction (measuring) of Ngyu na shü lo = Mount Sumeru.

3. The Dto-mba and Llu-bbu. The Dto-mba is the Tibetan equivalent of sTon pa ཟོན་པ། teacher, promulgator of a doctrine. Transcribed in Chinese 多巴 the founder of the Bon sect is thus called sTon-pa gCen-rab = Dto-mba

"From Yi gko di na the enemy of Ō gko aw gko came forth a black egg and from that egg came forth a black chicken. It had no name and so Muan llü ssu ndzi called it Fv gyi a na.[1] This chicken laid nine black eggs, from one came forth the Tsu nnü nyu[2], from another pair the Dtu nä Ds'ä[3], from another the Mun

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Shi-lo of the Na-khi. The Dto-mba perform ceremonies and chant the many religious books and make blood sacrifices to demons. The Llü-bbu or Llu-bbu is a type of sorcerer employed to get into communication with souls of departed spirits. In ancient days they were females and as such are depicted in the manuscripts. They wore their hair long and disarranged; the Llu bbu are supposed to be the followers of the sister of Chiang-tzu-yu 姜子牙 of the 11th-12th century B. C. whose real name was Lü-shang 呂尙. He was supposed to exercise authority over the spirits of the unseen universe. It was he who sent his sister away saying: Wherever you go and you will pronounce ten words, nine will be correct and people will invite you. There upon she became a Tuan-kung 端公 or Shaman and Shih-niang 師娘 or sorceress with flowing hair, and the Llü bbu are her followers. The Llü bbu are also called P'a meaning to turn over, having reference to their gyrations, dancing and shaking of heads. They have their equivalent in the Tibetan oracles known as Sung ma (bSrung-ma ཟུངས་མ།). (See plate II)

1. Muan llü ssu ndzi is the enemy of Muan llü du ndzi, to the latter a white rooster is sacred and to the former a black one called Fu gyi a na, Fu gyi = charcoal, a = chicken, na = black. Many manuscripts are devoted to Muan llü ssu ndzi and his son Ssu zo mi sse ngo wu and his warriors. In a special ceremony called Zs chung bpö performed for the prolongation of life (nowadays a very rare ceremony and the equivalent of the Tibetan Tshe gzungs ཚེ་བཟུངས་ = longevity, or literal Tshe = life, gzungs = that which holds, that is prayers for long life, which are chanted after a funeral for the living) the realm of Muan llü ssu ndzi is destroyed. (see plate III)
2. The Tsu and Nyu, that is the male and female demons. The Nyu demons are depicted with a black face.
3. The Dtu and Ds'ä Two types of demons, the Dtu with a conical head and the Ds'ä with a split head. The Dtu has its Tibetan equivalent in bDud = བདུད། pronounced Du, the chief evil or the personified evil principle. Several manuscripts relate of their origin.

Plate III. The deity Muan llü du ndzi equivalent to the Chinese Shou Shen 壽神, attended by one of his warriors dressed in armor. This scene is from the Zs-chung ceremony.

nä ghügh[1], from another the Dter and La[2] demons, from another pair the Ch'ou nä ndshi[3]."

From another pair of eggs came forth the Dzi nä Ts'o and the Boa nä O. [4]

We have here the creation of good and its counterpart evil. White being the color of the former, and black of the latter. The story then relates of the nine males P'ĕr or P'ĕr so ngv gku the

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1. The Mun and Ghügh demons. They are water demons male and female, the male steal the soul of people and the female ghügh drink the blood, they are vampires. A ceremony Mun ghügh bpö exists in which these demons are propitiated. They are believed to cause people to commit suicide by drowning.
2. The Dtĕr and La demons. The Dtĕr are headless demons and all persons who die a violent death as falling over cliffs, or from trees, or are killed by lightning, or by the sword, become dtĕr demons. The la=tiger, are dtĕr demons riding a tiger, those killed by tigers become dtĕr la.
3. The Ch'ou and Ndshi demons. The first are the demons of immorality and impurity, the word Ch'ou is represented by a human embryo. The second is the demon of pride and haughtiness. There is a large ceremony called Ch'ou na gv, also a smaller one called Ch'ou gv in which the origion of these demons is told.
4. The Dzi, the word is written with the figure or head of a Jackal, represents the wild Lo-lo tribe, while the Ts'o stands for the ancestor of the Mo-so or Na-khi Ts'o dze llü ghügh and represents the Na-khi race; the character for Boa is the sole of the foot called Boa, and is here used as a phonetic representing the Hsi-fan 西番 tribe whom the Na-khi call Boa. The character O represents grain and is here also used phonetically, it stands for the tribe O, but which tribe is meant is now not known; the Boa and O are always associated in the Na-khi literature. It is surmised however that the O represent a Na-khi clan living at O-yü on the Shou chu river Chinese Wu-liang-ho 無量河 a tributary of the Yangtze in southwest Szechwan. O yü being in Mu-li 木裏, Hsi Fan territory, yet the Mu li natives who have a language of their own, not understood either by the Lo-lo or Na-khi, nor by the Tibetans, call themselves Chra-me and Pr'on-mö which the Chinese have transcribed Chia mi 喀迷.

makers of heaven, and the seven females Ssa, or Ssa mi shĕr gku the makers of the earth.

We have here a Tibetan word "Sa ས" = the earth, "mi" in Na-khi is a female and "zo" a male.

These nine males and seven females not having discussed together the making of heaven and earth did not succeed. Yet the existence of Ngyu na shü lo Mount Sumeru the great Cosmic Mountain of the Universe is taken for granted. Ngyu = mountain, na in this case meaning huge, immense, Shü lo (the Tibetan gçen rab pronounced Shen-rab) is the founder of the Bon religion and also looked upon as the founder of the Dto-bma Mo-so religion, identical with the Bon, is believed to reside on Ngyu na hence his mountain.

It relates how the nine P'ĕr and seven Ssa, propped heaven on the east side of the mountain with a conchshell, on the south with jade, on the west with coral on the north with gold and in the center with iron.

The P'ĕr zo ngv gku could not finish the heavens, there seemed not enough to go round, so they filled the rest with blue mist. There was not enough to make the earth so the Ssa mi shĕr gku filled the gap with Ha lv mă (the Dză dză ha lv mă)[1] a mythical rock of gold = Ha, with which they filled the huge void. So much for the creation of the heavens and the earth. The building of Mountain Sumeru[2] is described in the same manuscript.

"The being possessing knowledge, and the being possessing ability took rocks, earth, silver, gold, jade, coral and conchshell and made Ngyu na shü lo, they built it like a quadrangle. The people of Dzi gyu la lĕr dü[3] placed nine rocks before them and worshipped. They called the tiger and the leopard to guard the mountain, they called the Dtu p'ér senge = the white bellied lion, and the Ha shi ts'o ndsi = the golden elephant, also Gyu gkaw na

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1. Ha lv mă the golden mother rock, Dză dză means to connect, that is the two ends or sides in the great void which the Ssa filled with the huge rock of gold. This Ha lv mă is probably equivalent to the foundation of gold on which the Tibetans believe the earth is set.
2. Mount Sumeru's terrestrial prototype is the most sacred of all Tibetan mountains, Mountain Kailas—called Te se ཏེ་སེ། in Tibetan, while Sumeru the Ngyu na shu lo of the Na-khi is called Ri-rab-lhun-po རི་རབ་ལྷུན་པོ། meaning ri = mountain rab = the superior, excellent, and lhun = bulk, or very large, which is the same as Ngyu na the vast huge mountain.
3. Dzi gyu la lĕr dü = the inhabited land, the land where all the people run about is the literal translation of the phrase.

bbu[1] a giant (who had hauled the rocks and the earth and piled up Ngyu na shü lo) to guard the mountain. The five precious objects had been placed into the mountain, yet it swayed. It was steadied by a Dtu or prop whereupon it held up the heavens, and its foot steadied the earth."

We come now to the creation of man, the ancestor of the Na-khi race, and the actual story of the flood and cause of it.

"From the breath of the heavens and from the steam of the earth came forth three white dew drops and from these a lake came into being and at the same time thunder was born. From the lake came forth Tsu tsu (the ancestor of Ts'o dze llü ghügh the survivor of the flood). From him descended Tsu yu, from him Tsu gkyu, from him the family Dzi dzä and from the latter Ts'o dzä. This family had five sons and six daughters. The daughters of Ts'o dzä no one wanted in marriage. Neither were there any wives available for his sons. Thereupon one son took for his wife one of his sisters. After that heaven, earth, sun, and moon, became Ch'ou=unclean. After three days the trees fell down, so that the tigers could not roam (jump). The waters became Ch'ou so that the fish and otter could not swim in it. The mountains and valleys rumbled for they had become Ch'ou=unclean." (It is interesting to note that the Na-khi character for Ch'ou, unclean, impurity etc. represents a human embryo written

"  "

Any woman with child is considered Ch'ou, and if she dies with child her body is considered Ch'ou and so is every corpse of a child under 100 days old).

"Ts'o dze llü ghüh, one of the five sons acted like a moth or ant, running hither and yon on account of everything having become Ch'ou.

"Llü ghügh kwua the son who had intercourse with his sister went to plough the land of Ndu and Sse with an ox called Mun shwua miu na=a castrated bull with black eyes. Ndu thereupon became ill at ease, and he called a boar whose name was Bbu nyi shi dtu=the boar with the yellow snout, to again level the ground ploughed by Llü ghügh kwua. The latter tried to catch it with a gold and silver trap; he caught it in the trap at night, having failed to do so in the day time He went to see his trap in which the boar had been caught, and Ndu also went to see about the boar. Llü ghügh kwua perceiving Ndu knocked him down with the

1. Gyu gkaw na bbu one of the giants or Titans called Ha ma yi in Na-khi. They are the equivalent of the Tibetan Lha-ma-yin ལྷ་མ་ཡིན or the Indian Asura who are situated at the base of Mount Sumeru, =between heaven and earth.

plough so that his head was injured. Ndu called to heaven and heaven heard him. Sse also came and he knocked her down and smashed her golden walking stick. She called and the earth heard her. Ts'o dze llü gügh then appeared on the scene and said A p'u (a term of veneration) are you injured, are you black (from the beating)? I will wash you to ease your injury. The five brothers then quarrelled.

"Llü ghügh kwua committed incest with another sister whereupon heaven, earth, etc. became Ch'ou. Ts'o dze llü ghügh was a good man, and had acted kindly towards Ndu. So Ndu spoke to Ts'o dze llü ghügh and said: 'Go and kill nine yak (or yaks) and from their skin make a large drum, use a small needle and a large thread!' He was told to tie the drum by three ropes to a juniper tree on one side, to a fir tree on the other, to heaven above, and to the earth below. He was told to put into the drum 9-10 kinds of grains, goats, dogs, and chickens and other useful things. Ndu had not forgotten the ill treatment by Llü ghügh kwua and he told him to go and kill a pig and make a drum out of its skin, use a large needle and a fine thread, and tie the drum on one side to an oak, and on the other to a pine tree, and to heaven above, and to the earth below. He also told him to put certain objects into the drum which were useless. Ts'o dze llü ghügh killed the yaks and did as he was told by Ndu, and put into the drum besides those things mentioned, a flint and steel to strike fire, and also a sword. After that Ts'o dze llü ghügh sat down in the center of the drum. Llü ghügh kwua did also as he was told, and sat down in the center of his drum. After three days the mountains, valleys, rocks and trees screamed like the howling of the wind, rain descended accompanied by thunder, and the ground opened with the sound of an explosion, and caused the waters to gush forth, and flood the land. The tigers and leopards had no place to go. The pine to which Llü ghügh kwua's drum was tied was struck by lightning (thunder is the word used here) and his body was cut into nine pieces, which disappeared in the clouds. At the same time as the pine was struck, an explosion occurred in the ground uprooting the oak, and his body was again torn into seven pieces disappearing in the ground."

"Ts'o dze llü ghügh believed he had arrived on a new mountain spur, and he counted the time and found that seven months had passed. He took his sword and made a hole in the drum and looked out. He looked to the left and saw no grass that any horse might eat, he looked to the right and saw no place where one could plough fields. He looked up the mountain and found it very high, and looked down into the valley and saw that it was very deep. The goat then called and Ts'o dze llü ghügh asked her why she had called and the goat said: 'When I was small I drank milk and later I ate grass, but now there is neither grass nor milk and it is for these that I called.' The dog barked under the fir tree and asked for milk, the chicken crowed and asked for white rice for

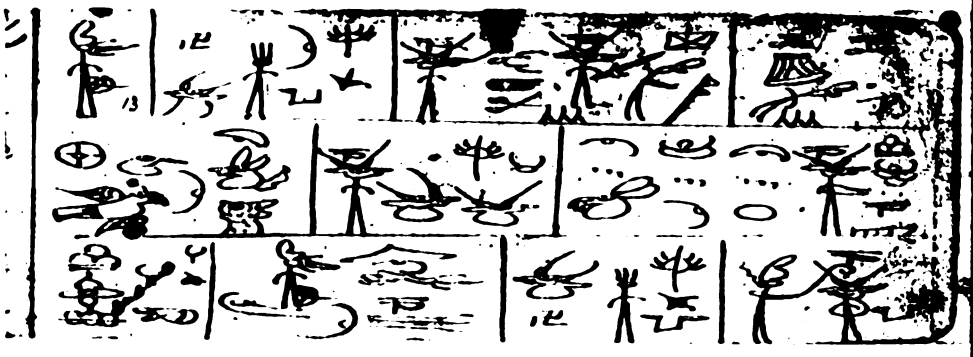

Plate IV. Showing a specimen of the Na-khi pictographic writing from a book called Lv-mber-lv-zaw-ssaw. In this type of text the characters act only as milestones in the sentence, much must be read into it which is not written.

Plate V. Illustrations of Spirits which often decorate the back-pages of a manuscript which relates of their history. The first represents Kaw-zher, a four-headed spirit who controls the demon-spirits of suicides whom he suppresses. The other two figures are Bā-da or warriors who assist him.

there was none. On the land there was no human being only flies flew about everywhere. (The idea of flies surviving the flood is interesting for the greatest pests the Na-khis have are flies; in the summer their homes are black from myriads of flies). There were no cows but green grass was everywhere. Ts'o dze llü ghügh made shoes from grass (called Zsu) and clothing to dress with. He took a bow three steps long, and arrows three hands-spread long. As he had nothing to do he shot off his arrows in various directions, he climbed up the mountain, and down into the valley, he made fire with fir wood, in the day time the smoke rose to heaven, and in the night it illuminated the land. He then said: 'The smoke from the fire is no companion'. Ndu then made nine human beings from Rhododendron wood; he remarked: 'they have tongues yet cannot speak, they have eyes but cannot see, they have arms yet cannot move them.' Ts'o dze llü ghügh then said: Out of wood man cannot be made. Ndu then took one of the human beings he had made and hurled him against a cliff and he turned into the echo. One he threw into the water and he turned into a Lv mun ghügh[1] one he threw into the forest and he turned into Bi lo ts'o p'u.[2]

"Thereupon Ts'o dze llü ghügh asked Dzi lä a p'u[3] have you not a daughter? The latter answered and said: 'Search one for yourself.' He also told him that high up in the heavens on the cliffs under the stars there are two women, one of them has vertical eyes, one above the other, she is the more beautiful, and her name is Muan mi miu tsu, muan = celestial, mi = female, miu tsu = eyes one above the other. The other one has the eyes horizontally placed, she is not beautiful, but she is the better, her name is Ö mä miu nder.

"Thereupon Ts'o dze llü ghügh took the one with vertical eyes to be his wife and they started a family. To them were born every year one pair. The first pair was a pine and an oak, the second a wild pig and a bear, the third a monkey and a chicken, the fourth a snake and a frog. Thereupon Ts'o dze llü ghügh said to Ndu: 'I did not listen to you and such things were born unto us instead

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1. Lv mun ghügh also called Lv mä mun ghügh is the mother of the water demons.
2. Bi lo ts'o p'u is the husband of Lv mun ghügh and the father of the water demons Mun ghügh. They had seven sons and six daughters. Their origin is told in several of the Na-khi manuscripts and varies considerably. He is the demon of the forest.
3. Dzi lä a p'u was a celestial being. His wife was called Dü mi ts'ä tsu mi. Ts'a khü bu bu mi was their daughter who was given in marriage to Ts'o dze llü ghügh.

of children.' Then Ndu replied: 'Chase the monkey and chicken on to the cliff, the pine and oak on to the spur, the wild pig and bear into the forest and the snake and the frog into the water. The woman you took to be your wife is not your wife but your enemy and when you see her kill her.' When he had killed her with an arrow she was turned into a snake by Ts'ä khü bu bu mi: In the whole world Ts'o dze llü ghügh had no wife, and so he intended to go to heaven. In heaven there was a woman called Ts'a khü bu bu mi who had no husband and she intended to descend to earth to search for one. There existed two lands collectively called P'ér na ndü gkan chung[1] a white and a black region and between them grew a large tree with white flowers. There Ts'o dze llü ghügh and Ts'a khü bu bu mi met at the tree. The woman said to him: 'Come up with me into heaven!' He replied: 'How can I go there, I cannot fly.' Thereupon she changed herself into a white crane, took him under her wings and they flew to heaven. (The Na-khi believe that the crane was their "Mi la mbo" or go-between in marriage, and therefore before any marriage can take place there must first be a go-between.) Ts'o dze llü ghügh thus had arrived at the house of Dzi lä a p'u the father of Ts'ä khü bu bu mi."

The story is a long one and would cover many pages. Ts'o dze llü ghügh is given water from nine streams to wash his body, and then to rub his body with nine loaves of butter. To enter the house of Dzi lü a p'u she made a bridge of nine swords and he entered her father's house. It is said that the lines of the palm of the hand in man are due to the crossing of the sword bridge. Tso dze llü ghügh was given many impossible tasks to perform which she helped him to solve ere Dzi lä a p'u would consent to give him his daughter in marriage. One of the tasks was for him to secure three drops of tiger's milk. He thought he would cheat Dzi lü a p'u and saying nothing he secured the milk of a fox and a wild cat. Dzi lü a p'u on arrival of Ts'o dze llü ghügh placed the milk among horses and cows but they were not afraid. He then placed the milk where the chickens roosted, whereupon they flew away frightened. In the end Ts'o dze llü ghügh boasts of all his accomplishments telling her father that he was descended from one who could take a mountain under his arm, and that when he drank he could drink a lake dry and still be thirsty, that he could eat three measures of Tsamba (roasted barley flour) at one time without choking.

"He killed a tiger and from its skin he made a quiver for his arrows, also a suit for himself, a hat, a girdle and trousers. He said: 'The man's clothes are now ready but not the wife's'. In the

1. P'ér na ndü gkan chung, the realm between the white land of the gods and the black realm of the demons, there grew a plum tree with white flowers.

Plate VI. Specimen of pictographic script employed in writing Hua-llū = Dharani, that is magic formulae, where each phrase is fully written out. Compare with Plate IV.

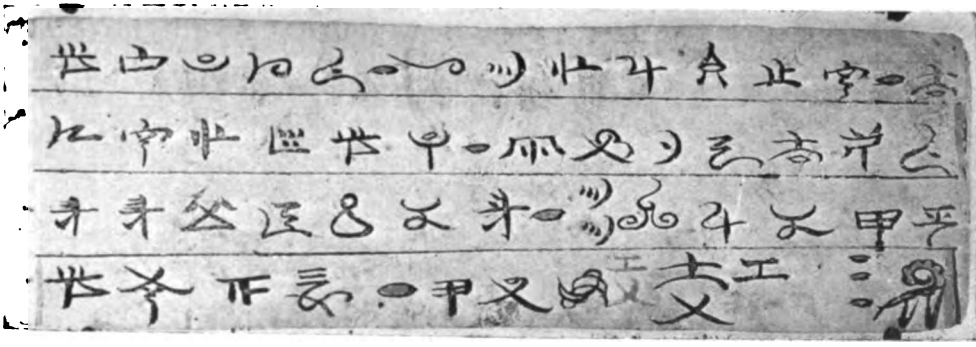

Plate VII. Specimen of the syllabic or Ggo-ba script, said to have been invented by the disciples of Dto-mba Shū-lo the founder of the Bon Religion. His disciples were known as Di-tz Ggo-ba, hence the name of the script. The first two syllables are of Chinese origin viz: 弟子. Ggo-ba has reference to the rising to the dance, which meaning these two syllables convey.

eighth and ninth moon the sheep are brought in from the alpine meadows to be sheared. From the white wool felts and bedding are made, also skirts, hats, and girdles, for the wife. It is also the custom to give nine silver cups and seven golden ones, nine jade cups, and seven coral ones." Dzi lü a p'u gave them nine riding and seven packhorses, nine pairs of oxen for ploughing, and seven pairs for raking the fields. He also gave them nine Dto mbas who were called Ngv nun bö gkv and seven Llu bbu, Shĕr nun p'a gkv. Of the many grains he gave them, he withheld the seeds of one, those of the Na-khi Ngyu=the rape turnip (the Chinese Man-tsing 蔓菁 *Brassica rapa-depressa*). Ts'o dze llü ghügh hid some of the seeds under his finger nails. When Dzi lä a p'u saw them later growing on the land, he ordained that this turnip should become terribly heavy, so as to make harvesting a hardship to the farmer, and when boiled it should turn to water. And this is actually the case.

To Ts'ä khü bu bu mi he gave nine domestic animals but no cats. Surreptitiously she took a cat with her. Her father being displeased ordained that, although formerly a cat could chase a tiger, now it should purr even the rats away. They also took buckwheat which is the first to flower and fruit of the hundred grains. On their road to earth they dropped the buckwheat seed to lead the other grains, while a white goat led the domestic animals. When they had started from heaven an evil star appeared. They lost their way, the heavens were high and filled with clouds and rain, and the land was flooded; they could see nothing, and could not find the bridge to earth. They then returned to Dzi lä a p'u who cast a horoscope to find out the most propitious day for them to return to earth.

Ts'o dze llü ghügh took butter from a red cow, and Ts'ä khü bu bu mi three measures of flour and they propitiated the Ssu nä lv[1], and the Llü mun of the mountains and valleys. When they had all been propitiated the sky cleared and the land could be seen. Three lucky stars appeared and they arrived at the summit of Ngyu na shü lo (Mount Sumeru). Then they arrived at Ndaw gyi man, then at Na ssaw wua gv mbo, and Nv p'ĕr k'o dzu wua, where they found the silver white ladder on which they descended to Ha shi nyu dzu wua, and from there they descended on a golden

1. The Ssu and Lv that is the snake spirits which the Na-khi commonly call Llü mun. The Tibetan serpent spirits are called kLu 𑖀𑖨𑖽. They are water spirits who are responsible for the presence of water, they also cause hail and illness if displeased. There is a large ceremony called Ssu gv during which about one hundred books are chanted for the propitiation of these spirits. These manuscripts have all been translated.

chain. They arrived on the land where he made a house, and she burnt incense and placed the 16 stones of the Ngaw[1] and burnt incense to them.

The book ends with the plea, "give us plenty of sons and daughters, give us riches, keep us from illness, let us hear only good tidings and let us be as rich as a pond can be full".

A few pages from the original manuscript are here introduced and explained to illustrate the story.

Fig. 1. The first line shows Ts'o dzā llü ghügh killing nine Yak, following this is the drum tied to a juniper and a fir tree, beneath the drum is a needle and a thread, the three animals are the goat, dog and chicken which he is to take into the drum. The next rubric, end of first line, shows Ndu telling Llü ghügh k'wua to make a drum out of a pig skin. The second line shows his drum tied to a pine and an oak. The first two lines are illustrations of the orders given to the two brothers by Ndu. The remainder is a repetition of the former showing that they had carried out the order. The last rubric of the third line depicts how after three nights (the inverted moon) the waters came forth from the mountains and of the valleys, and how the fir shrieked, this is indicated by a mouth attached to the trunk of the fir, with the tongue protruding.

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1. At the Ngaw bä ceremony, performed once a year, 16 black stones are used representing the 16 Ngaw, they are placed in a bag with the Ngaw k'o a wooden wedge to which the Ngaw are fastened to keep them from leaving the hearth: the bag is tied with a rope and placed in the kitchen with the Ssu dtu = the spirit basket similar to the one the Lo-los use. It serves instead of the soul or ancestral tablet. There are many ceremonies in which books pertaining to the Ngaw are chanted.

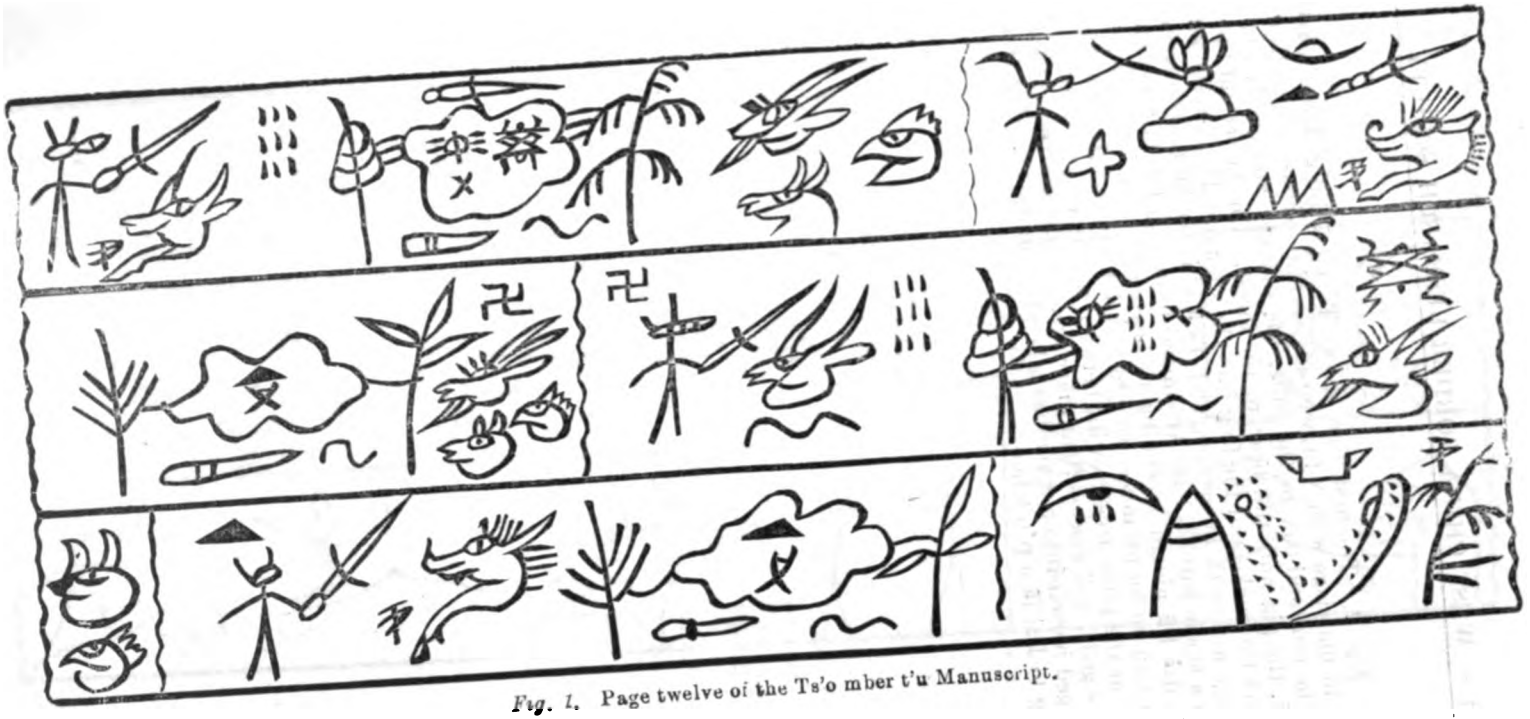


Fig. 1. Page twelve of the Ts'o mber t'u Manuscript.

Fig. 2. The first line shows Ts'o dzǎ llü ghügh discussing his ill marriage with Ndu, who advises him to chase his ill offspring as the pine and oak to the hills, the monkey and chicken to the cliff, the pig and the bear to the forest. On the second line he drives the snake and the frog into the stream. He then shoots his enemy wife with an arrow, and Ts'ǎ khü bu bu mi changes her into a snake with a bbue (Artemisia) branch. The last line shows Ts'o dzǎ llü ghügh ascending to heaven to look for a wife, and Ts'ǎ khü bu bu mi descending to look for a husband. They both meet at the plum tree growing between the land of the demons and of the gods, and discuss their marriage. In the last rubric she has changed herself into a crane has taken him under her wing and is flying to Dzi lǎ a p'u's house.

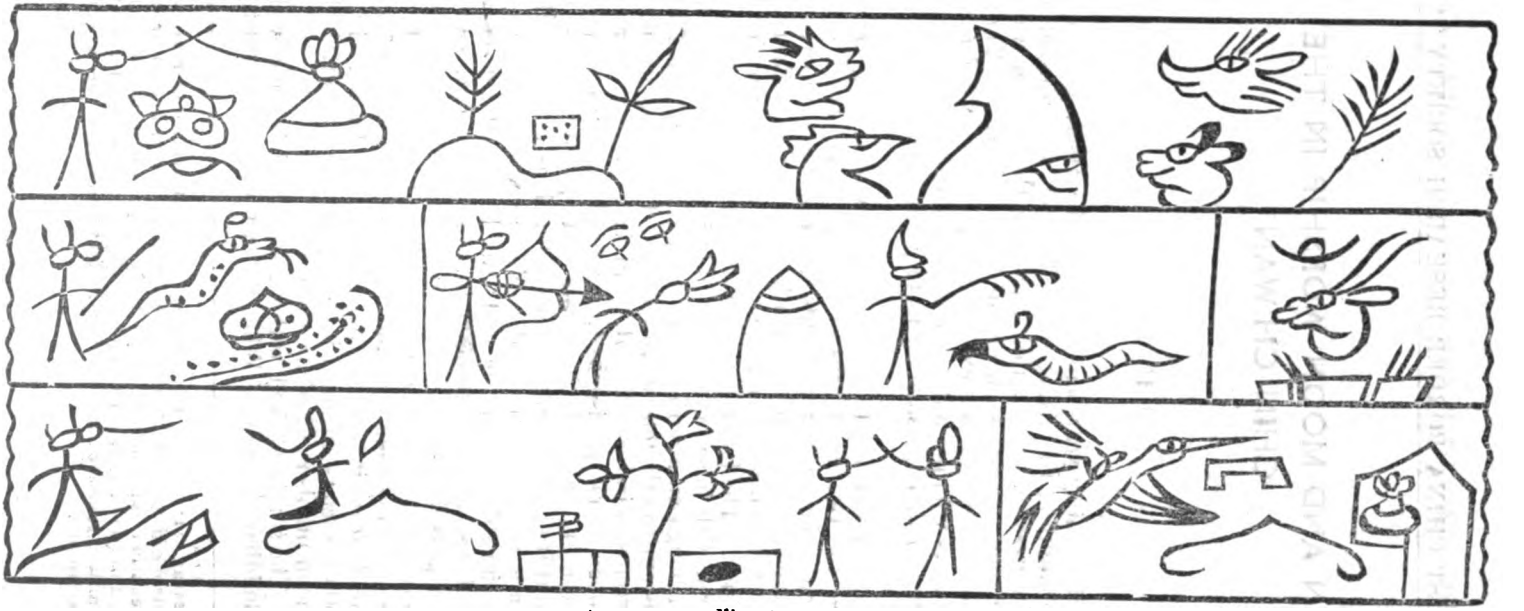


Fig. 2.

SUN AND MOON WORSHIP IN THE CHIN CH'WAN*

J. H. EDGAR

More than thirty years ago natives of the Hsiao Chin might be seen worshipping the rising sun. The act was unusual and, although impressive, information regarding the custom was not then obtainable. Towards the end of 1933, however, at Tanpa it was our good fortune to be next door neighbours to a family of sun worshippers who not only gave some inside information about their cult but made it possible for us to peruse their sutra of *The Sun and Moon*.

The most ardent devotee was a woman, who for a generation had adored the two great orbs of heaven. She was a hybrid of the Tanpa regions and her parents had also been adherents of the same system. Her son is now a lama in Lhasa. Every day this ancient lady adores the rising sun with incense, genuflections and kotowings. The latter are thirty-two in number. The moon is also adored with incense, bowings and nine prostrations. This worship, although an alien element in the Chinese and Tibetan religions, is apparently tolerated by both. The most simple explanation seems to indicate that the cult is a survival of an old sun and moon worship disguised, for prudential reasons, by a Buddhist veneer. Several times the Liturgy complains that although multitudes reverence countless Buddhas and gods these great orbs are practically ignored. We are also informed that when "the sun shines from the east, the hells and the heavens open their doors, and the 108,000 Buddhas come out, and the multitude of gods line up to honour him as he begins his journey."

We were able to scan the Liturgy for a few hours. It was very scarce and copied out by hand. Known as *The revered classic of the Sun and Moon*, it is in two parts. The one dealing with the sun has 280 characters arranged in 40 lines, while the part dealing with the moon numbers 62 of the same size.

(A). The sun is praised without stint and is conceived as excelling Buddhas and gods. "When the two powers were instituted

*This essay may be a stepping stone to discoveries of real value. Zoroasterianism *did* come to China in the T'ang Dynasty, and in order to escape persecution might have very likely (a) retired to the ethnic backwashes, and (b) disguised itself under the garb of a popular system, while safeguarding the essential teachings. This seems to be the case in the following description.

the sun and moon appeared, the former to control the upper, and the latter the lower realms." (Yang and Yin). A complaint is made that although Buddhas and local gods receive ample homage the great Sun God is ignored. Earlier in our essay we find how in spiritual places innumerable beings recognise his authority; but more explicitly we are told that the sun is the Light God without whom the creative forces would cease, harvests would not ripen, the people would starve and all life would be implicated in widespread suffering. His birthday is on the 19th of the 11th month. On such occasions he must be adored with a pure fire (lamp) and the ritual is to be performed with an intense heart. The repetition of the Liturgy is considered to be "ten times more efficacious than the reciting of the Diamond Classic." After an examination of the sun's exalted position in this system it seems like defending a truism to descant on spiritual blessings which come as a reward to the faithful, but among them we find the counteraction of influences from evil stars; and, as calamities here and suffering hereafter are mitigated, happiness is a natural consequence.

(B). Theoretically the moon is less important than the sun, but seeing the former has nearly double the space alloted to it we must assume a superior importance for some reason not overtly claimed. This orb, the Moon Light God of Heaven, is also known by the foreign name of Mo Kasa (?). We read: "I, the Moon God in heaven flood the hills and the valleys with light, flit over lakes and seas, pass every door and, in the scorching heat of summer, form the dew to refresh nature." The repetition of the Liturgy wards off calamity, invites happiness and insures longevity. A special day of moon worship is fixed for the sixth of the first month and, with the exercises stipulated for daily performance, is of great benefit to the faithful of all classes. We produce the following as samples: orthodox men are free from disease and prosper in the mundane sense, women become men in a future life, power, emolument and fame come to officials and rulers will find nature flooding the land with peace and prosperity. But by direct warnings and many insinuations those who, persistently ignore these two great light orbs, although assiduous in the attentions to other deities, will certainly suffer in the long run for their indifference.

In conclusion, while we assume that this cult is a survival of sun worship, disguised by Chinese Buddhism, so far there is no evidence that would link it with Bonism, a system that may have been a form of Persian Magianism. Will the existence of this cult, however, help to explain the suspected moon worship content in the frontier architecture?

THE "WHITE MEN'S GRAVES" OF SOUTHERN SZECHWAN [1]

DAVID CROCKETT GRAHAM

In a previous issue of the Journal the writer has a note *Ancient White Men's Graves in Szechwan Province.*[2] The information in that short article was secured from Chinese and aborigines who had actually seen the "White men's graves." Since then the writer has visited the graves himself, and has gathered additional information that will be of interest to others.

In the previous note it was stated that there are numerous wooden coffins on the sides of perpendicular or overhanging cliffs, each coffin held in place by iron bars stuck horizontally into the sides of the cliff, and that the tradition is that they are coffins of an extinct race called beh ren or white men.

Subsequent investigation has revealed the fact that the term beh ren (僰人) does not mean white people (白人), but is the name of aborigines who lived in Szechwan in the Cheo and the Han dynasties, during the time of the Three Kingdoms, and possibly a few centuries later. The Kiating histories state that these people were in the Kiating district with the Liao people near the end of the Cheo dynasty, B C. 255. Apparently they and the Liao disappeared from the Kiating area during the Ch'in and the Han dynasties. The Suifu history states that the Beh Ren inhabited the Suifu Prefecture during the Han dynasty and the Three Kingdoms, and possibly later, and that the Suifu Prefecture was called the Beh Dao (僰道) or the Beh region. Afterwards, and possibly at some earlier period, they probably inhabited the region of Lo Biao and Kong Shien, south of Suifu on the Szechwan-Yunnan border. Near Lo Biao there is a locality that still bears the name Beh Ch'uan Keo (僰川溝) or Beh Creek Gulch, and near Lo Shin Tu there is a place called Beh Ren Chai (僰人寨), or Beh People Fortress. The Suifu history contains two remarkable quotations about these Beh Ren, namely: "The Beh Ren are the most benevolent among the aborigines. They have human principles" (僰) 夷中最仁, 有人道), and "None of the aboriginal officials are equal to the Beh nobles." (諸夷君長, 不及僰侯). It is these Beh Ren to whom tradition traces the wooden coffins on the cliffs near Kongshien and Lo Biao.

1. Research article and publication of the West China Union University Harvard-Yenching Institute.

2. This Journal, Vol. V. Page 78.

Plate I. Wooden coffins on the side of a perpendicular cliff near Lo Biao. They are held up by wooden stakes. Holes show where formerly there were coffins.

Fig. 1. Drawing of a typical wooden coffin, without the cover, carved out of a solid tree or log. There are many of these on the sides of cliffs near Lo Biao.

Fig. 2. The end of a typical wooden coffin. The lid and the box are each carved out of a single tree. The ends are sawn off smooth.

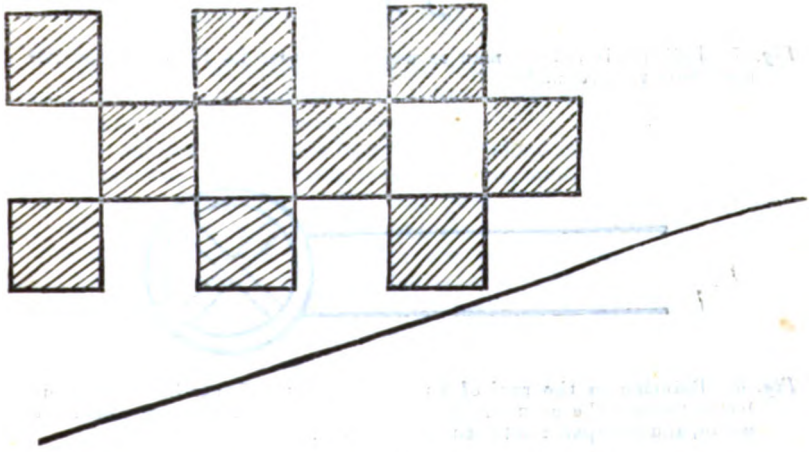


Fig. 3. Checkered pattern painted in red on a cliff near Lo Biao, about 100 feet above the ground.

Fig. 4. Painting of a man. (Near Lo Biao. 100 feet above the ground.)

Fig. 5. Painting in red of a man or woman. (Near Lo Biao. About 120 feet above the ground.)

Fig. 6. Painting on the roof of an overhanging cliff near Lo Biao, about 100 feet above the ground. The rim and the spokes of the wheel are white, and the spaces between them are red.

The writer visited the region of the Beh Ren graves in the summer of 1934, used a telescope, and made extensive enquiries. He found that the wooden coffins on perpendicular cliffs extend over a wide range of territory. They are found in considerable numbers near Shin Wen Shien (興文縣). There are some near Cheo Kia Keo (周家溝), and they are to be seen in large numbers and on many cliffs near Shang Lo (上羅), Lo Shin Tu (羅星渡), and Lo Piao (洛表), the last-mentioned place being the center where the largest numbers are found. (*See Plate 1*) They extend southward into Yunnan Province as far as 豆沙關, where similar wooden coffins can be seen in a sheltered place on a cliff.

Many of these coffins are still in position where they were placed centuries ago, but others have fallen to the ground and disappeared. There are many cliffs where not a coffin is left, but on which the square holes into which the posts or stakes were driven are plainly visible.

It is the common belief that the coffins are held in place by iron pegs or stakes driven horizontally into the sides of the cliffs. By use of field glasses, by persistent enquiry, and by actually getting hold of some of the pegs that had fallen, the writer was able to prove that the stakes or pegs are made of wood instead of iron. They were generally made of a very hard wood that would last centuries in a sheltered place.

The coffins, unlike Chinese coffins today, are not made by nailing several boards together. Each coffin and each lid has been carved out of a solid tree trunk. The ends are smooth and flat, and evidently have been sawn off with a metal saw. (*See figs 1 and 2*).

The stakes on which the coffins rested were driven into square holes that were chiseled into the sides of the cliffs. These holes are generally four or five inches square.

Not all the coffins were hung up on wooden pegs. Occasionally advantage was taken of natural depressions, such as caves or ledges, but always where the coffin was protected from rain by an overhanging rock, and in places which are very difficult to reach. On one large sheltered ledge there are nearly twenty coffins laid side by side. Near Cheo Jia Geo several coffins were placed in cavities that were neatly chiseled out of the rock. The wooden coffins in the Yangtse Gorges may belong to the same culture as that near Lo Biao, which we may call tentatively the Beh Ren culture, for they have been deposited in natural depressions on perpendicular cliffs.

The bottoms of a few of the coffins have rotted away so that bones can be seen through the holes. From one coffin a femur or a humerus was seen hanging down.

There is dependable information that silver and jade rings, bracelets, and other ornaments have fallen down from some of these coffins. (It is believed that great harm may come to any person

who picks up and uses one of these objects). This, and the fact that it requires a great deal of skill to put up graves on such high, inaccessible cliffs, indicates that the Beh Ren fen are probably graves of a people of a comparatively high culture.

One of the great surprises to the writer was to find cliff paintings in very close proximity to the Beh Ren graves. (*See Figs 8-9*). They do not seem to be works of art, and may have been done by the workmen who put the coffins in place. One painting seems to be a wheel with six spokes. The checkered pattern may possibly have been copied from checkered bamboo mats. One picture is that of a rider on a horse, and another seems to be a horse in a shed.

Who, then, were the people who buried their dead in wooden coffins on these perpendicular or overhanging cliffs? All that we can affirm so far is that tradition says that they were placed there by relatives of the Beh Ren who were in Kiating at the end of the Cheo dynasty, and at Suifu during the Han and dynasty the Three Kingdoms and that another tradition states that they were in the Kongshien or Lo Biao region at the end of the Han dynasty, when Chu Ko Liang came into contact with them, and advised them to bury their dead in this way, saying that if they did their descendants would prosper. That they were a group of Caucasians is possible but improbable. It may be that they were Chinese who used this method to protect their dead from the surrounding aborigines. It is even possible that they were the Liao. Probably they were a non-Chinese people of a metal age, and probably they were the Beh Ren. The solution of the problem awaits the work of the scientifically trained archaeologist.

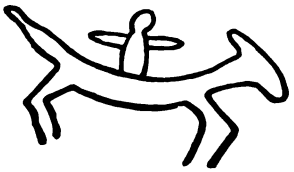


Fig. 7. Painting in red of a horse and its rider. These cliff paintings at Lo Biao are near wooden coffins.

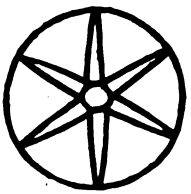


Fig. 8. Cliff painting, Lo Biao, on the rock at the top of an overhanging cliff. The small central circle, the spokes and the outer circle are red.

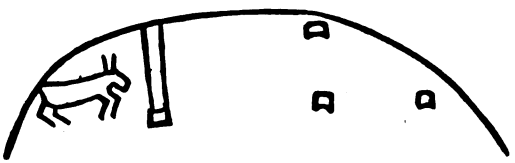


Fig. 9. Cliff painting, Lo Biao. There are four sockets for wooden posts. The animal and the curved and straight lines are red.

A LATE NEOLITHIC CULTURE IN SZECHWAN PROVINCE*

DAVID CROCKETT GRAHAM

In 1933 a Chuan Miao friend brought to me a neolithic stone axe that had been found in the southern part of Szechwan Province. It was a well-shaped implement, ground out of hard igneous rock. Unfortunately the cutting edge had been rubbed off for use as medicine, for unsophisticated people in Szechwan believe that such stone implements have been deposited by thunder and lightning, and that when they are ground to powder they make excellent medicine. Doubtless many fine neoliths have been destroyed in this way.

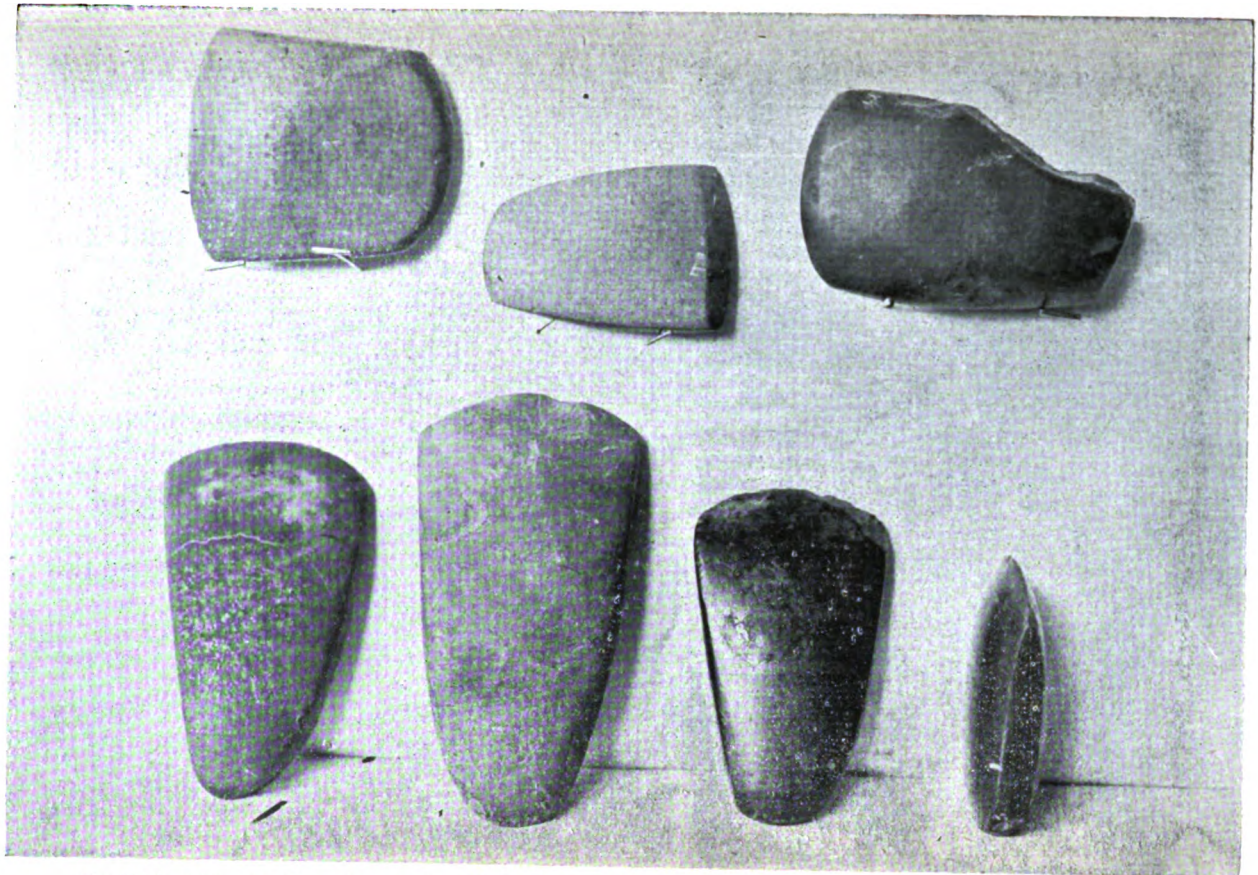
In the summer of 1934 I went into the Kongshien district to collect curios or artifacts of the Chuan Miao aborigines for the West China Union University Museum. I did not expect to find stone implements. On the day that I reached Kongshien, on the top of a ridge, I was examining the limestone rocks near the road for fossils, when I saw a stone that looked like a sickle such as a farmer might use to cut grass. It looked too good to be true, and I thought that stone implements could not have been made of such soft material as limestone, so I was inclined to throw the "tool" away. However, I kept it to show how nearly like a tool a natural stone might be.

A few days later I asked a Chuan Miao friend if he had seen any of the stone objects called "thunder-stones." He replied that they were frequently found in that vicinity. I told him to send word around that I would like to buy them.

The stone implements soon began to come in. They were made of hard igneous rock, and were wider near the blade than near the butt. They varied in color from a light yellow or brown to a dark brown or black. Some of them were of fine workmanship. In all there were forty-nine implements, of which one is a chisel, several are hand hammers or rubbing stones, and the rest axes.

Meanwhile I had found several limestones that looked like neolithic knives or scrapers. I still did not believe that pieces of limestone could have been used as implements, but before long I found several that were probable stone implements, and finally picked up C/9971, (*see fig 3*) which was certainly a limestone knife or scraper that had been carefully ground in several places. After this I ceased to doubt the existence of limestone neoliths.

*Research article and publication of the West China Union University Harvard-Yenching Institute.



Neolithic stone axes from the borders of Szechwan, Kweichow and Yunnan provinces. There are now over two hundred neolithic axes, knives and scrapers from this region in the West China Union University Museum of Archaeology.

Most of the limestone implements have been found between Lo Biao and Kongshien, but about twenty-five are from near Shin K'ai Shi on Mt. Omei. So far all of them have been less than five thousand feet above sea level, and in places that are under cultivation. Some spots were richer than others. For instance, two were found at one place near Shiao Tien Tsi, at the foot of Mt. Omei. Near Kongshien, in a radius of about twenty square feet, I found three fine but irregularly shaped axes, C/9935, C/9936, and C/9937.

Some of the limestone implements are large and heavy, but most of them are small knives and scrapers. There is a far greater variety of shapes and sizes among the limestone implements than among those made of igneous rock.

While many of the limestones are certainly neoliths, there are others that are more or less doubtful. It must be remembered that erosion occurs much more rapidly in limestone than in hard igneous rock. A few centuries would make it impossible to recognize many of the limestone impements. The fact that the people in this region have no conception of using such stones as tools, the finding of some that are certainly stone implements, and the finding of the limestone tools in the region where fine axes made of igneous rock are constantly being dug up, constitute strong evidence that neolithic man in West China used not only the fine hard tools made of igneous rocks, but also a large number and a great variety of implements made of limestone, which were easy to make, easy to break, and, when broken, also lightly to be discarded.

In September, 1934, Mr. Chu Huan Chang brought from Kweichow province a hard neolithic axe similar to those I found near Kongshien, Rev. J. Huston Edgar has found a few similar neolithic axes on the Yangtse and the Min Rivers, and near Kwanshien, Wen Chuan, and Wei Chow. It is evident that in these limestone and igneous stone implements we have found traces of a late neolithic culture that extended over most of Szechwan, and probably over most of central Asia.

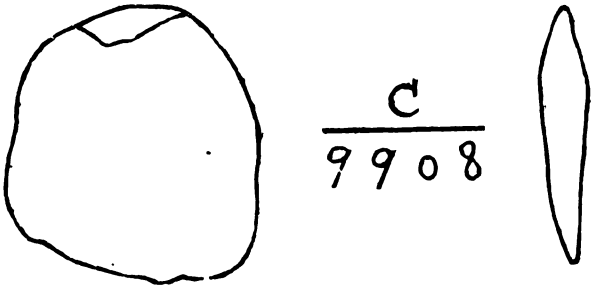


Fig. 1. Small limestone knife or scraper; neolithic. Length 36 mm, width 32 mm, thickness 7 mm.

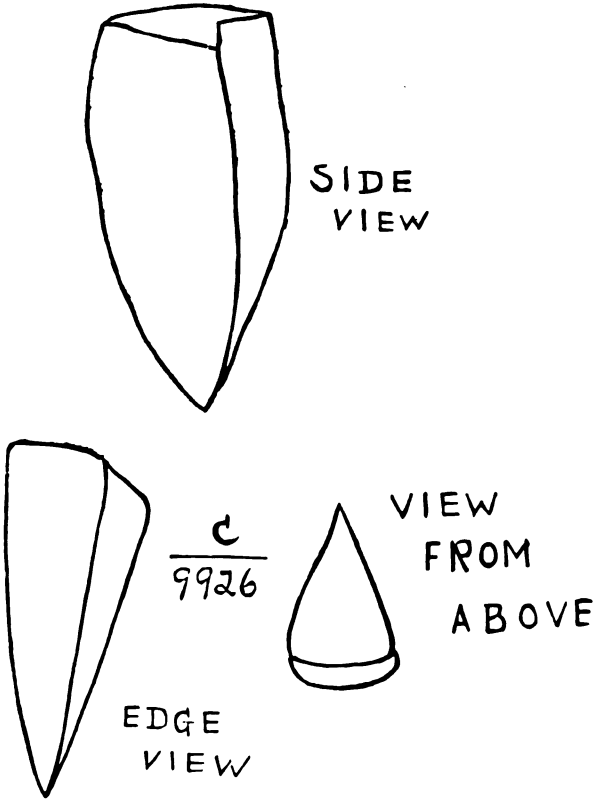


Fig. 2. A small neolithic limestone knife or scraper. Length 53 mm, width 24 mm, thickness 17 mm.

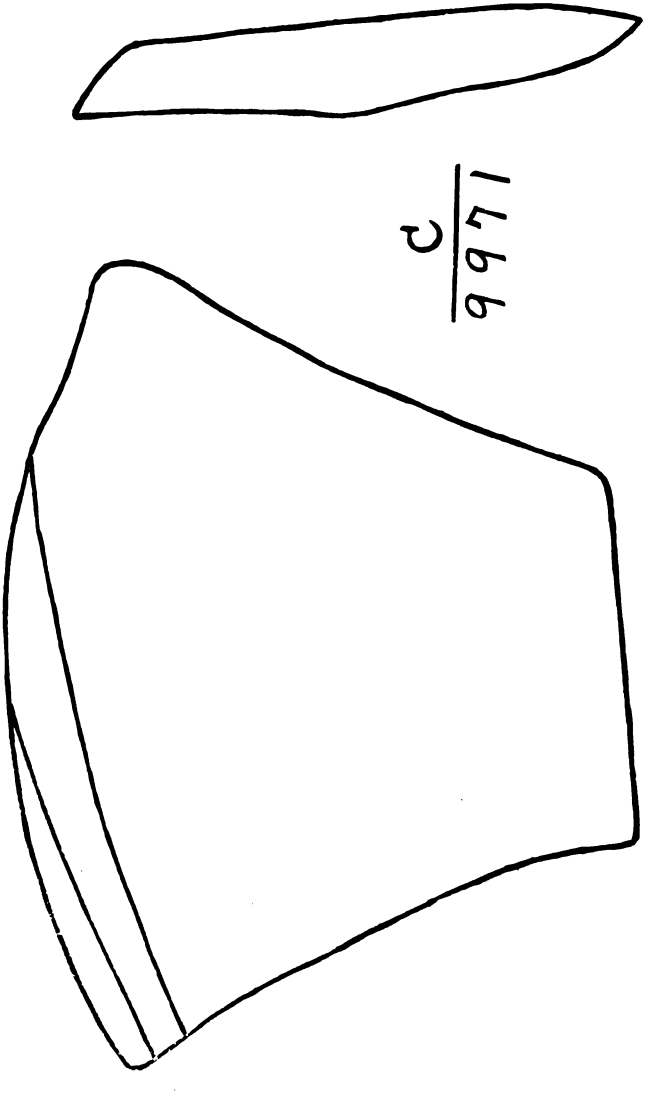


Fig. 3. Diagram of side and edge of a neolithic limestone knife or scraper: the first unmistakable limestone neolith found by D. C. Graham. Length 106 mm, width 80 mm, thickess 12 mm.

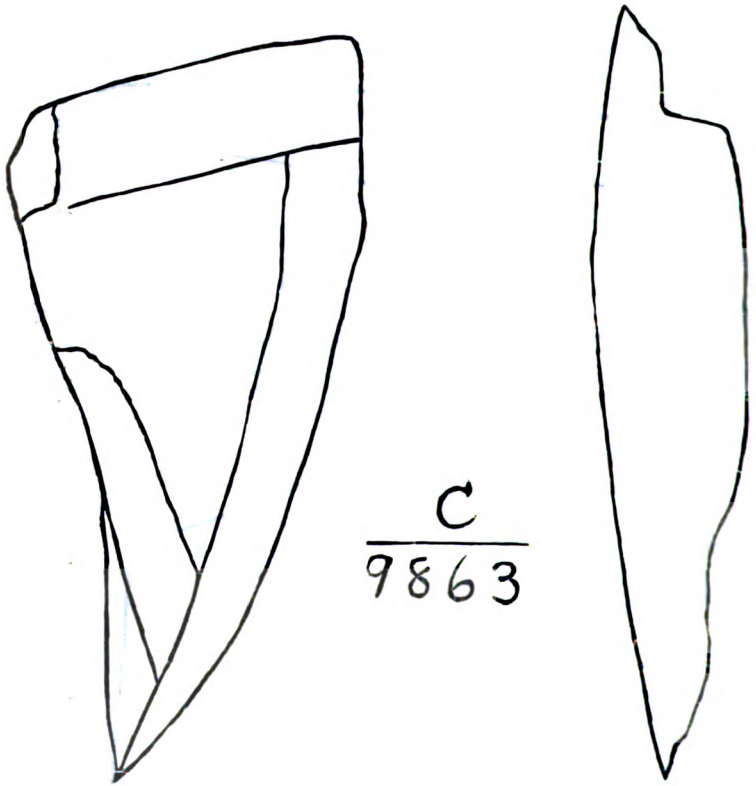


Fig. 4. Side and edge of a neolithic punch made of limestone. The top has been shaped for hafting. Length 98 mm, width 44 mm, thickness 18 mm.

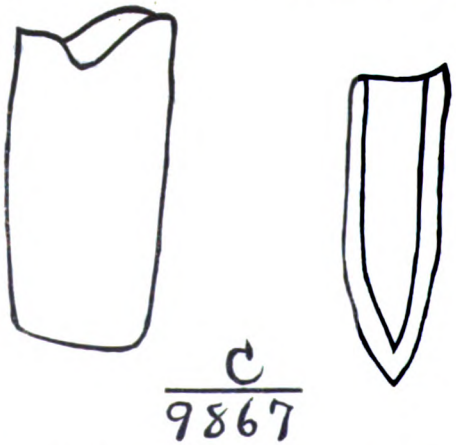


Fig. 5. A chisel made of igneous rock, the top broken off. Length 42 mm, width 20 mm, thickness 12 mm.

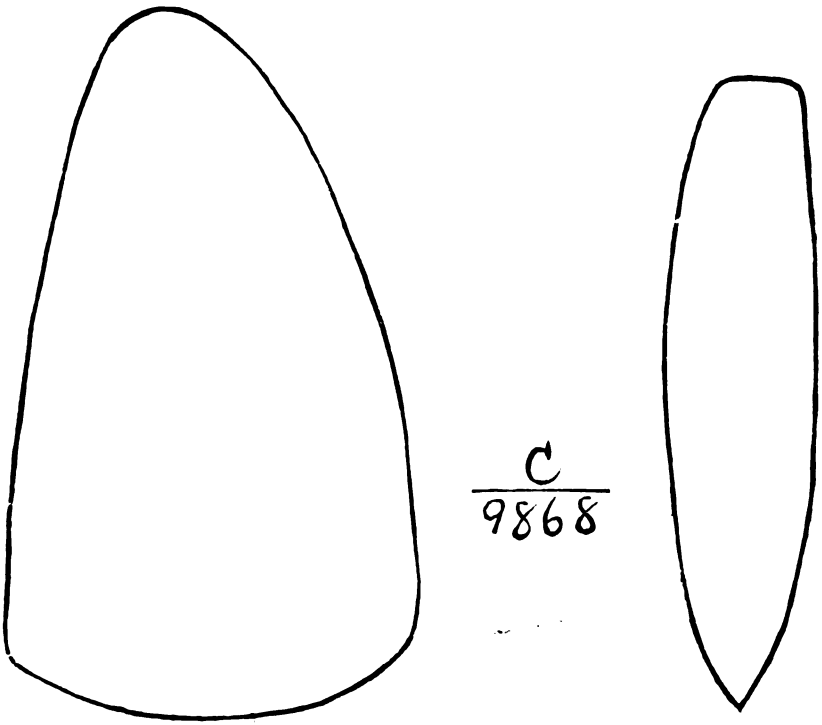


Fig. 6. A late neolithic stone axe made of hard igneous rock. Colour: a dull, dark brown. Length 88 mm, width 50 mm, thickness 17 mm.

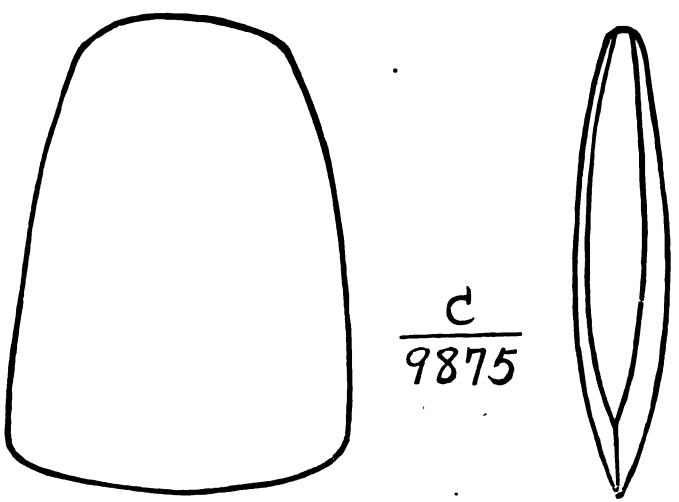


Fig. 7. Side and edge view of a small neolithic axe; finely carved; colour: a light yellowish brown. Length 61 mm, width 42 mm, thickness 12 mm.

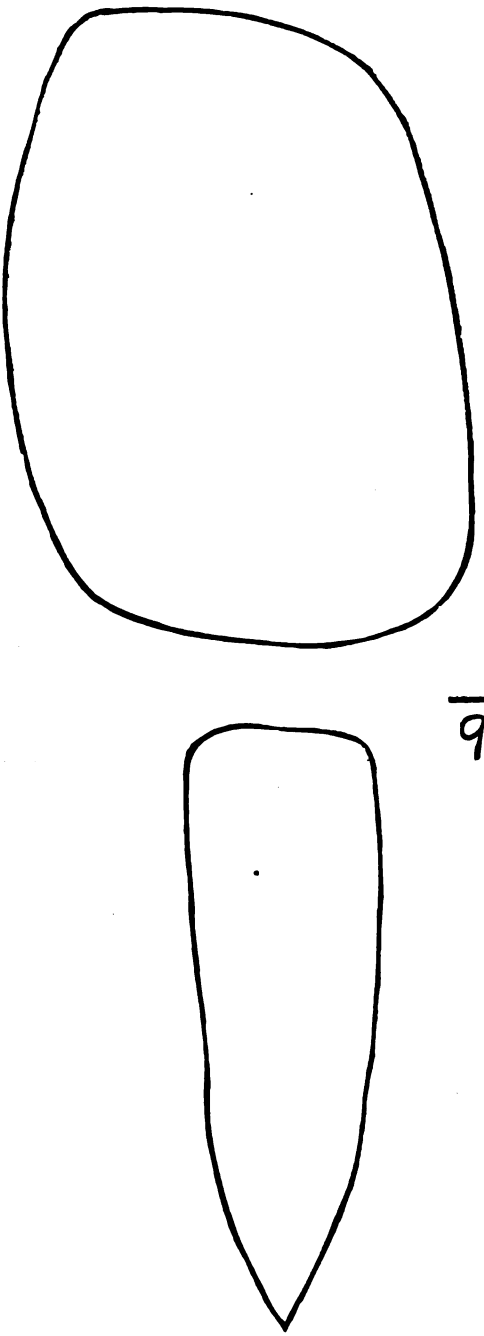


Fig. 8. A limestone stone axe, found near Kongshien. Length 83 mm, width 58 mm, thickness 26 mm.

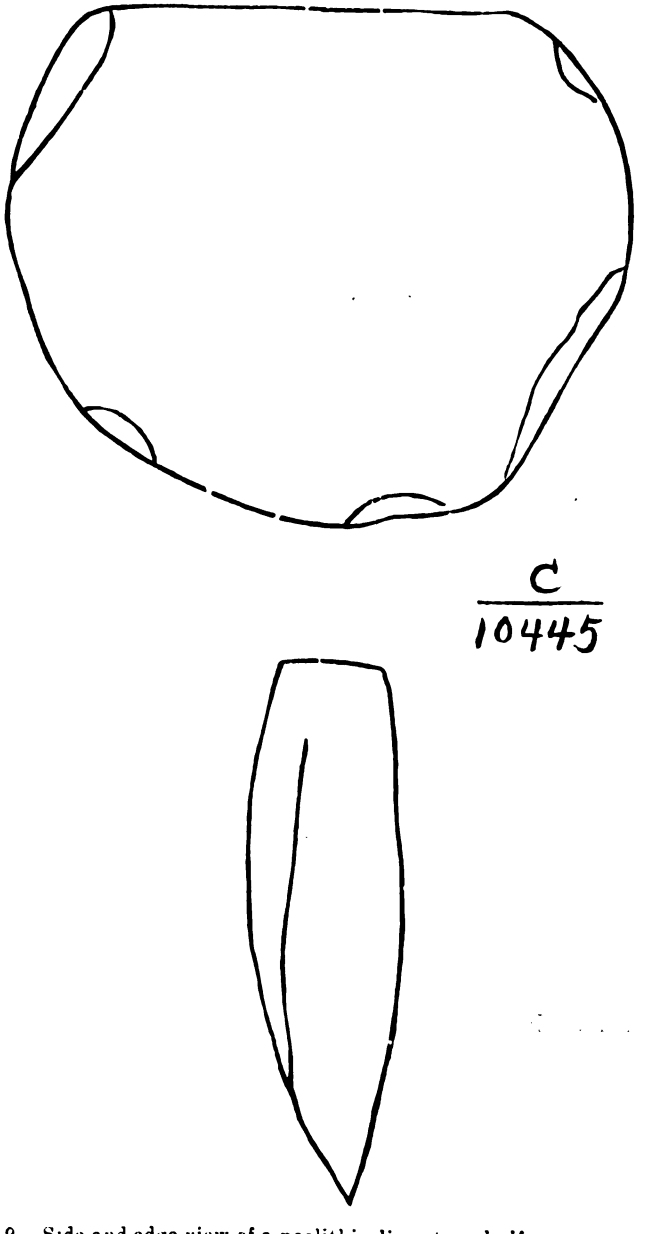


Fig. 9. Side and edge view of a neolithic limestone knife or scraper. This type occurs frequently among the paleoliths of West China, and resembles iron knives still in use. Length 80 mm, width 68 mm, thickess 19 mm.

THE NINE YI, PAH TIH, SEVEN YONG and SIX MAN[1]

From the "Bamboo Books" and the "Canon of History"

J. H. EDGAR

This review does not claim to be exhaustive, nor does it discuss the authority of the *Annals* or the *Canon*. It is also only fair to remind readers that the writer, when dealing with the texts, found it convenient to use Dr. Legge's translation and notes freely.

In ancient times China was an empire surrounded by four great hordes, mentioned in the title, which were again subdivided into the secondary groups. For convenience we shall accept this classification and speak of the Yi, Tih, Yong and Man. The Miao also will be referred to. The ethnographical value of the names given are not even now easy to determine. To what extent are they influenced by geography, culture or race? Even Legge, at times, seems in doubt, but on the whole we conclude that the Hwa and the Hsia were racially different from the Yi and Yung.

At the same time the Chinese of those days were very likely a mixed race composed of aboriginal elements absorbed by an important migration of unknown affinities from more western regions. In any case, after years of contact with Chinese and non-Chinese in the Empire, it is impossible to explain the marked mental, physical and psychological differences only by centuries of isolation, geographical influences and a varying series of capricious unions and forced dispersions of cognate peoples. This does not mean, however, that the "five Tih and the hundred Man" were in every case in the "four seas" beyond the "nine departments."[2] Indeed, history will show us non-Chinese, including Miao, within the Empire of Yao, Shuen and Yü. For instance, in the 76th year of the former we hear of operations against the Yong of Ts'ao and Wei. There were Peh Yi in Shanhsi, Yong in Hsü, the Yi of Hwai, the Lai Yi in Ch'i and Yong in Lu Hwen. Legge also points out that powerful states like Wu and Ch'u expelled Yi and Tih from their borders. This probably means that the foreign elements for any reason living within a "civilised state" would have an opportunity of conforming to the laws of the Middle Kingdom and eventually losing its identity in its ethnic amalgam. Apparently also any too obvious suggestion of non-conformity meant expulsion or extermination. But the "wild peoples" outside the Holy Domain (神州) would have a wider range, and conformity would not be the only alternative.

(a) 三苗 The Miao are of great interest. They were among the earliest of the non-conforming peoples mentioned, and are the only ones within the Empire who have refused to be absorbed in the great magnetic human "ocean." Today we would infer that their unconciliatory attitude had had results of an unfavourable kind, but for centuries they carried on a struggle that was dynastic in its proportions. They dwelt in a region now represented by Yochow, Wuch'iang and Chiuchiang (九江). They were very wicked. It is said: "God surveyed the peoples and found no fragrance of virtue arising from them but the rank odour of their cruel punishments." Then we learn that their prince Yu Miao (有苗), was one of the four great criminals of antiquity. Shuen finding them obdurate banished them (in part) to the San Wei.[3]

We are also told that their rulers depended on the fear of punishment, not on the exaltation of virtue (like the Chinese) as the secret of good government. They were finally "discriminated and separated. . .because they refused to acknowledge their duty." Without concerning ourselves with questions of sequence we learn that Yü was ordered to attack them and, his warlike operations failing, three decades later they were won over by a peaceful policy. In the distant San Wei, also owing to the exertions of Yü, the oases were made habitable and the affairs of the convicts were arranged satisfactorily. But we also read that these inconvenient enemies were finally wiped out (in part), probably by Shuen, with a sanction from God.

(b) 九夷 The Yi, summed up occasionally as the Nine Yi and also as the Hsi Yi (西夷), are frequently mentioned in the *Bamboo Books* and *Canon of History*. They most frequently seem to be an eastern people, who brought tribute of pearl oysters, fish and silk to Yü from the Hwai region and the Islands. About 1942 B. C. we have expeditions against the Yi of the same region as well as those of Feng and Hwang. About 1708 King Hsie conferred titles on the Western (畎夷), White, Black, Wind (風), Red and Yellow Yi. In 1595 various hordes of Yi welcome the new king Fah; and about 1413 (T'ai Mow) the Nine Yi from the east came to court. Among the primitive armies of the Duke of Chow, 1049, were soldiers from the eight kingdoms of the southern and western Yi: Yung, Shuh, Ch'iang, Mao, Wei, Lu, P'eng and P'uh. During the reign of King Hsüen the Hwai Yi, still capable of unconstitutional conduct, were paying the penalty of non-conformists. Apart from the above references the *Canon of History* informs us (*Hounds of Li*) that after the conquests of Shang the way was open for friendly intercourse with the Nine Yi and Pa Man. Moreover the (Western) Lü sent a tribute of hounds.

(c) 羌 and 氐羌. (The Ch'iang). It is possible that the Ch'üen Yi (畎夷) may be another name for the Ch'iang (羌) groups of West China. However we are informed that about 1557 B. C. the Ti Ch'iang made submission and later, in 1273, the

western frontier did not extend beyond the regions inhabited by these people. In 1049 they are included in the armies of the Southern and Western Yi under the Duke of Chow.

(d) 狄 (The Tih). This group, the "aliens of the north," although sparingly mentioned. were often a thorn in the side of the empire. In some records we learn they were divided into eight tribes. In the reign of King Hwei, 17th year (658 B. C.), operations were in progress against the Red Tih, and eight years later we find the northern hordes attacking Chin (晋). About 599 King Ting, 6th year, they were the allies of Duke Ch'eng when he took up arms against Ch'in (秦). The Hsiung Nu, as Hsien Yün mentioned as overrunning Tsong Chow in the 14th year of King Li (838) and who were smitten seventeen years later, may have been a division of the same people.

(e) 戎 and 西戎 The Yong strictly speaking are a western people represented by seven divisions. They, with the San Miao, are the earliest groups mentioned in the *Bamboo Books* and the *Canon of History*. Numerous and elusive, they were capable of inflicting great injury on the heirs of the Middle Kingdom. In Yü's time the chiefs of the K'wen Luen, Hsi Chi and Ch'ü Sou,* the most powerful chiefs of these people, brought tribute and no doubt influenced other groups to fall in line. In the reign of T'ai Mow, 6th Year (1448), the Hsi Yong submitted and presents were sent to them. About 1191-1192 (Ts'u Chia 12th and 13th years) they were again in rebellion and forced to submit. We also hear of them in 887 as invading Hao; but punished in 869 they bring tribute in horses. In the reign of King P'ing, 764, the Duke of Hsiang died on an expedition against them. The Hsi Yong are also mentioned in the reign of King Hwan about 705 B. C.

Another type of Yong, who may differ ethnically as well as geographically from the former, lived under bridled conditions with other aliens in many parts of the Middle Kingdom. In the 76th year of Yao, for instance, we learn that the Yong and Tsao and Wei were smitten. In the time of Kwei, B. C. 1582, the Yong of Ch'i Chong (岐踵) came to court. Yang Chia punished the Yong of Mount Tan (丹山戎) about 1315; and in the reign of Wu Yi, 1133, the Demon Yong, a western horde, were smitten the same year that the "Son of Heaven" was killed in a thunderstorm. About 1123, when Wen Ting was king, the Yen Ching Yong and those of Yü Wu, Shih Hu and I T'u were all dealt with. Again in 1030 Yong were smitten and those in Li came to court seventeen years later. When Mu was king, 943, Yong hordes were removed to T'ai Yüen.

About 823 B. C., the 3rd year of King Hsüen, the Hsi Yong were attacked, and three years later the Yong of Hsü. at the other end of the empire, required attention. About the same time Chong of Ch'in was killed by invaders of the less restrained hordes. In the 33rd year of this ruler the royal forces failed in an attack

on the Yong of T'ai Yüen; but five years later the Yong of T'iao and Pen were put to flight. The next year the Chiang hordes (羌戎) were defeated; but in the 40th year the unrelenting Yong destroyed the city of Chiang. In the same year, however, some northern Yong were defeated by the people of Chin (晉). Finally, about 769 (King Yu, 11th year), the Dog Yong with their allies not only murdered the king and his son but took the infamous Pao Sze captive. In the *Canon of History*, the Speech at Pi (費), perhaps between 1060 and 1100 B. C. the Hsü Yong are mentioned as about to be punished with the hordes of the Hwai.

(f) 蠻 The Man or the southern "rude hordes" are mentioned more than once in the authorities quoted above. To what extent they differed racially and culturally from the other groups we cannot say, but, until about 1300 A.D., most of the Chinese south of the Yangtse were Man. The name today is applied to the Tibetan people of Tatsienlu, but in this case it may be a corruption of Mi Nya, a native region in the vicinity. The caves in the Kiating district are also known as Man Tong (蠻洞) i.e. caves of the Southern Hordes. It is interesting to note also that regions in the same prefecture are described in the "Tu K'ao" as being the home of the Tong Man (峒蠻), which, if we assume a mistake as unlikely, might eventually prove to be "cave dwellers" or "troglodytes."

(g) We are quite prepared to assume that, apart from geographical distribution, the Yi, Tih, Yong and Man differed to an extent that would be appreciated by modern anthropologists, but in what measure this would be true of the subdivisions mentioned we would rather not hazard an opinion. For instance did the names 戎 and 戝 mean anything more than a geographical accident; or could the term Hsi Yong (西戎) include different races? We cannot answer categorically. One thing, however, is certain: they were not myths. But students are just as convinced in the other direction about some groups. We have, for instance, the Kwan Hsiung 貫胸 and the Ch'ang Ku 長股 [5] who came to court during the reign of Hwang Ti. Are we to class them with the Feng Hwang, Ch'i Lin and the Yin worms? Or may they not be native names rendered into Chinese and an entirely wrong meaning perpetuated? For instance, we would not too readily assume that the Chiao Yao pygmies[6] were mythical or that they are extinct today. Then what about Hsi Wang Mu[7]? He was one of the rulers who came to the court of Shuen and became, with his people, part of the empire. He brought white stone rings and thimbles of gems as tribute. As late as 944 King Mu received a prince from this state and lodged him in the Chao 昭 Palace. Again, the words may be the transliteration of a native name which in the course of time has lost its true meaning and significance. It may possibly have been a matriarchal state. Sze Ma Ch'ien places it in the unknown west.

NOTES

1. 九夷 八狄,七戎,六蠻. We have, of course, many other classifications such as the 九夷 and 八蠻; the 蠻夷 and 蠻貊 We also find besides the 三苗,九夷 八蠻 六戎 and 五狄; with a slight rearrangement we have the 九貉 八蠻,七閩 六狄,五戎,四夷, and 三苗 as well as 五夷 and 百蠻.

2. "The four seas" are thought by some to be the four unbridled hordes that surrounded the nine "continents" (州). *See Fig. 1.*

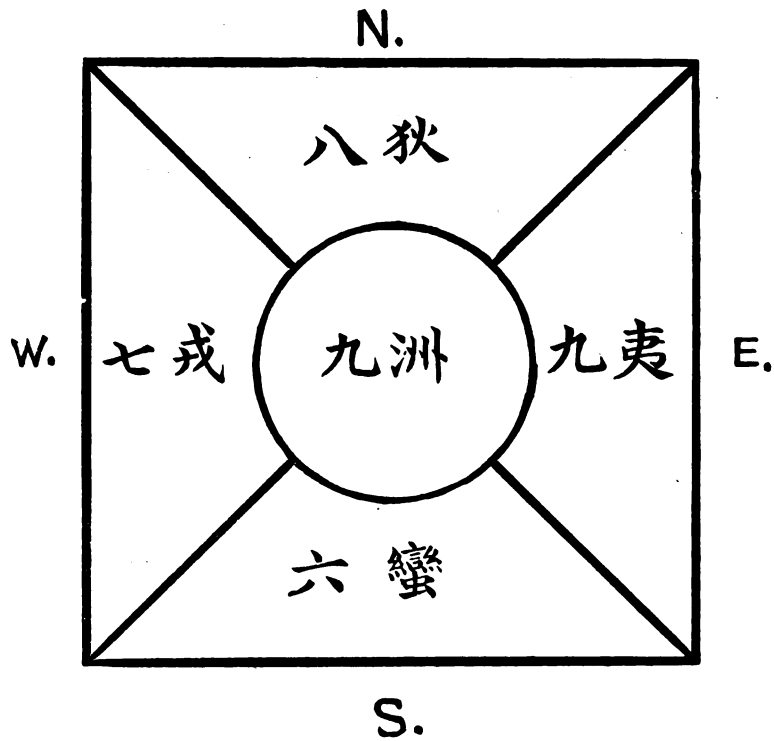


Fig. 1. According to Legge: "all within the four seas (the Nine Yi, the Pa Tih, the Ch'ih Yong and the Luh Man) was divided into the nine Provinces." I have tried to make this clearer by the above diagram which accords with the view of Chinese authorities.

3. 竄三苗于三危 Legge. (Shuen) "drove (the chief) of the San Miao (and his people) into San Wei, and kept them there." This makes San Wei not the zone of diffusion but the place of banishment. The quotation is from the *Canon of Shuen.* This region of the San Wei

has been the cause of endless discussion, and has raised issues of great interest. Although the "Hsi Tsang Tu K'ao" makes it the "three divisions of Tibet" the majority of commentators assume it is a region in the N. W. of Kansu near the present Tuen Hwang. This, however, brings up the question of the identification of the classical "Black Water" (He Shui 黑水). The orthodox commentators make it the Su Lei Ho near Tuen Hwang, but when we are told it eventually enters the "southern ocean" we sympathise with the authors of the "Tu K'ao", and think of either the Mekong or the Salwin. It cannot be both to us: no! But to the Chinese exploiting "an underground river" theory (as in Sze Ma Ch'ien) there is no reason why a large river, disappearing in the desert sands, should not reappear as the upper waters of the Mekong or the Salwin. This is thought to be the case with the Tarim and Hwang Ho.

The problem of the Ro Shui 弱水 also comes up. The water of this somewhat theoretical stream, in which a straw would not float, was forced on the attention of Yü, and is probably the Hwei Ho branch of the Edsin Gol in the vicinity of Su Chow, N. W. Kansu.

4. 嶓冢 析支 渠搜, probably the names of mountains, and representing the three most important groups of the 四夷.

5. 貫胸 "Perforated Breasts," and 長股 "Long Legs." (Legge).

6. 焦僥 (Chiao Yao.) They brought feathers that sank in the water. (來朝貫没羽) According to Giles they were three feet in height.

7. 四王母 King Muh, the owner of "Spurn the Earth," "Mount the Clouds" and other famous horses, was a great traveller. He was in Lob Nor district 950 B. C. Again in 933 he went on a punitive expedition to Kwen Lwen. It was then he saw the Hsi Wang Muh who came to court next year. The Greek influence on the name, if proved, would be much later.

THE HWA MIAO LANGUAGE

W. H. HUDSPETH

Here are fifteen simple lessons in Hwa Miao 花苗 as spoken in N.W. Kweichow. With few exceptions I have written them in the international phonetic script so that people of any nationality will be able to follow them. There are 178 words woven into 120 sentences. The tones of all words are indicated in the vocabularies by using the signs ¯ _ / \

upper even tone (shan p'ing sheng)	ā
lower even tone (hsia p'ing sheng)	a̲
ascending tone (shang sheng)	á
departing tone (ch'ü sheng)	à

In the sentences wherever there is uncertainty about the tones they are duly indicated.

I venture to suggest that students of other tribal languages prepare similar lessons, using, in so far as possible, the same vocabulary so that the languages of West China might be classified.

For the idea of the lessons I am indebted to the late Mr. F. W. Baller's *An Idiom a Lesson.*

A list of the phonetic symbols used precedes the lessons.

CONSONANTS.

Phonetic Symbol.	Key Word.	Phonetic Spelling.
p	pip	pip
b	bib	bib
t	tit	tit
d	did	did
k	kin	kin
g	gig	gig
m	mid	mid
hm	an aspirated m	
n	nip	nip
hn	an aspirated n	
ŋ	king	kiŋ
l	lip	lip
v	vivid	vivid
s	sit	sit
Z	zest	Zest
ʃ	ship	ʃip
j	yet	jet
h	hit	hit

G	Hebrew Qoph. A very guttural g.
Gh	an aspirated G
l̇	the Welsh ll; Llan phonetically transcribed is l̇an
gl	combination of g and l, pronounced as above
nd	combination of n and d, pronounced as above
nb	combination of n and b, pronounced as above
ng	combination of n and g, pronounced as above
ndz	combination of n and dz, see below
ndZ	combination of n and dZ, see below
kl	combination of k and l
hh	a very guttural h
d^{dz}	the d followed by a slight dz sound
t^{dz}	the t followed by a slight dz sound
nd^{dz}	the nd followed by a slight dz sound
nt^{dz}	the nt followed by a slight dz sound

VOWELS

Phonetic Symbol.	Key Word.	Phonetic Spelling.
i:	east	i:st
i	imp	imp
e	end	end
æ	hat	hæt
a:	shah	ʃa:
u:	pool	pu:l
ə	villa	vilə
ə:	bird	bə:d

CONSONANT LIGATIVES

tʃ	witch	witʃ
dz	ridge	ridz
ts	pits	pits
dZ	bids	bidZ

DIPHTHONGS

ei	day	dei
ai	aisle	ail
au	bough	bau
ou	low	lou
oe:	French oeil	oe:l
y:	French du but lips more rounded	dy:
ie	the "i" of imp and the "e" of end	
iou	the "i" of imp and the "ow" of low	

LESSON 1.

VOCABULARY

money	dú:-tsə:	dog	glī:
Classifier	f:-glí:	C.	f:-du:
book	ndoe:	pig	nbá:
C.	f:-nae ə	C.	f:-du:
have, possess	mà:	la: an interrogative	
I	gu:	hí: a negative	
you (sing)	dzy:	die an interrogative	
he, him	ny:	dziou an ending	

SENTENCES.

1. I have money. He has money. Have you money?
gu: ma: du:-tsə: ny: ma: du:-tsə: dzy: ma: du:-tsə: la: hi: ma:

2. I haven't any money. You haven't any money. Has he any money?
gu: hi: ma: du:-tsə: dzy: hi: ma: du:-tsə: ny: ma: du:-tsə: la: hi: ma:

3. He has dogs. I have pigs. You have money.
ny: ma: gli: gu: ma: nba: dzy: ma: du:-tsə:

4. I haven't any dogs. You haven't any pigs. He hasn't any money.
gu: hi: ma: gli: dzy: hi: ma: nba: ny: hi: ma: du:-tsə:

5. He has pigs, money and dogs.
ny: ma: nba: du:-tsə: gli:

6. You have money but not dogs. He has books but not money.
dzy: ma: du:-tsə: hi: ma: gli: ny: ma: ndoe: hi: ma: du:-tsə:

7. Has he any books? He has.
die ny: ma: ndoe: la: hi: ma: ny: ma: ndoe:

8. Has he any money? Yes. I have dogs but not money.
ny: ma: du:-tsə: la: hi: ma: ma: dziou gu: ma: gli: hi: ma: du:-tsə:

LESSON 2.

VOCABULARY

want	ja:	word, words	hú:
possessive particle	bié	C.	f: lou
plural of persons	dZàu	an ending, sign of comple-	
sign of future	la:	tion and past tense	dae ʔ
to eat	nàu	verb "to be" and a connec-	
		tive; it also indicates	
food (cooked)	vá:	sequence	gu:
to speak, to say	hi:	we	bí: or bí:-dZuàu
you (plural) mi: or mi:-dZàu		they	ny:-dZàu

SENTENCES

1. Do you want money or not? No, I have money.
   die dzy: ja: du:-tsə: la: hi: ja: hi: ja: gu: ma: du:-tsə: daeʔ
2. Does he want to eat? No, he wants to talk.
   die ny: la: nau va: la: hi: nau ny: hi: nau va: ny: ja: hi: lu:
3. Do you want our pigs? No.
   bi: nba: die mi: ja: la: hi: ja: hi: ja:
4. Dont eat my food.
   hi: ja: gu: nau gu: va:
5. They want to speak. Do you?
   ny:-dZau ja: hi: lu: die dzy: ja: hi: la: hí: hi:
6. Have they food to eat? No, they want to eat yours.
   die ny:-dZau ma: va: nau la: hi: ma: bi: ma: ny:-dZau ja: nau dzy-bie
7. Do you want your books or not?
   dzy: ndoe: die dzy: ja: la: hi: ja:
8. Have you (plural) food? Yes, we don't wish to eat yours (plural).
   die mi:-dZau ma: va: la: hi: ma: ma: dziou bi: hi: ja: nau mi: bie

LESSON 3.

VOCABULARY

this	di: ni:	water	aú
that	dí: vei	cup, basin	koú-vɜ́
or	dźə: vei	C.	f: lú:
is	jou	what	Gá:-ʧə:
a man, a person	dé-né	or	á:-ʧə:
C.	f: lé	tea	tʧa: (same as Chinees)
to drink	hau	whose	Gá:-dy:-bíe
yes	jou or jou-dziou		

SENTENCES

1. What water is this? It is my water.
   di: ni: gu: au Ga:-ʧə: di: ni: gu: gu: au

2. What basin is that? That is a tea-cup; this is a rice-basin.
   di: vei gu: kou-və Ga:-ʧə: di: vei gu: kou-və gu: hau tʧa:
   di: ni: gu kou-və gu: nau va:

3. Whose tea-cup is this? It is his.
   di: kou-və gu: hau tʧa: ni: gu Ga:-dy: bie gu: ny: bie

4. Whose food is this? It is mine.
   di: va: ni: gu: Ga:-dy: bie gu: gu: bie

5. Does that person want this dog?
   dZə: de-ne vei ja: dû: gli: ni: la: hi: ja:

6. What money is this? He says it is his.
   di: ni: gu: du:-tsə: Ga:-ʧə: ny: hi: gu: ny: bie

7. What does he say?
   ny: hi: lu: a:-ʧə:

8. Is this pig his? No, it is mine.
   dú: nba: ni: die jou ny:-bie dziou hi: joú gu: gu bie

LESSON 4.

VOCABULARY

to listen, to hear	nau	now	na: ni
to hear	hnou	to see, perceive	bou
to look	na:	to look (and) see	na: bou
to come (of a stranger as guest)	dà:	fat, stout	glou
to obtain	dáu	to read	na: ndoe:
good	Záu	at, in, on	niou

SENTENCES

1. Can you hear or not? No.
   die hnou la: hi: hnou hi: hnou
2. Can you see? Yes.
   die bou dau la: bou hi: dau bou dziou
3. Can you hear him speak? Yes.
   ny: hi: lu: die hnou la: hi: hnou hnou dziou
4. Will he come now? He will not come at present.
   na: ni: die ny: da: la: hi: da: na: ni: ny: hi: da:
5. Come and see this fat pig. Look, what is this?
   dzy: da: na: du: nba: gu: glou ni: dzy: na: di: ni: gu: Ga:-ʃə:
6. Can you hear what he says? Yes.
   ny: hi: lu: a:-ʃə: die dzy: hnou la: hi: hnou hnou dziou
7. Don't speak just now. I want to hear him speak.
   na: ni: hi: ja: gu: hi: lu: gu: ja: gu: nau ny: hi: lu:
8. We must read now. What book shall we read? Read mine.
   bi: na: ni: ja; na: ndoe: ja: na: ndoe: Ga:-ʃə: ja: na: gu: ndoe:

LESSON 5.

VOCABULARY

to go, to walk,	mau	to take away	tʃioe: (or tʃə)... .....loe:
to take up (of books, money etc)	tʃioe:	to bring	tʃioe: (or tʃə)... .....dà:
to take up (of pots, jugs, cups etc)	tʃə	to contain, hold (of liquids)	ndi:
jug, pot	lí:-py:	cold (of weather)	noú noú
C.	í: lú:	cold (of food, water)	dZie
one	í:	two	á:

SENTENCES

1. Take away this jug of water and bring a cup of tea.
   tʃə lu: li:-py: au ni: loe: tʃə i: kou-və tʃa: da:
2. Take away this money and bring my book.
   tʃioe: gli: du:-tsə: ni: loe: tʃioe: gu: ndoe: da:
3. What is this? This is a water-jug.
   di: ni: gu: Ga:-ʃə: di: ni: gu: i: lu: li:-py: gu: ndi: au
4. Take away these two cups.
   tʃə a: lu: kou-və ni: loe
5. Take away this basin of cold rice. I don't want to eat it.
   tʃə lu: kou-və va: dZie ni: loe: gu: hi: nau
6. Bring two cups of cold water and take away this rice-basin.
   tʃə a: kou-və au dZie da: tʃə lu: kou-və gu: nau va: ni: loe:
7. Bring a jug of water.
   tʃə i: li:-py: au da:
8. Take this away and bring two basins of food.
   tʃə lu: ni: loe: tʃə a: kou-və va: da:

LESSON 6.

VOCABULARY

to do, to make	á:	for, on behalf of, to, and with	$nd^{dz}ou$
to write	sáu	to give to	má:....$t^{dz}aú$
an ending	sáeʔ	to buy	ma:
to	$t^{dz}aú$	to sell	dei
cupboard	lú:-Zu:		
then	dziù: (taken from the Chinese)		

SENTENCES

1. I will come when I have finished drinking tea.
   gu: hau tʃa: sae ʔ da: dae ʔ
2. I now sell you this basin.
   gu: na: ni: dei lu kou-və ni: t^{dz}au dzy:
3. He will go when he has finished making this cupboard.
   ny: a: lu:-Zu: ni: saeʔ dziu: ja: mau
4. When he has finished talking he will come to see you.
   ny: hi: lu: saeʔ dziu: da: bou dzy:
5. I bought two cups of tea for them.
   gu: nd^{dz}ou ny:-dZau ma: a: lu: kou-və gu: hau tʃa:
6. What is he doing? He is eating his food.
   ny: a:-Ga:-ʃə: ny: nau va:
7. When he had finished his meal he gave them two cash.
   ny: nau va: daeʔ dziu: ma: a: gli: du:-tsə: t^{dz}au ny:-dZau
8. He said: "give me my book"; he thereupon gave it to him.
   ny: hi: dzy: ma: gu: ndoe: t^{dz}au gu: ny: dziu: ma: t^{dz}au ny:

LESSON 7.

VOCABULARY

how many	bí:-dzáu	five	bé
much, more, many	dziáu	ten	gau
few, less	dzoe:	twenty	ni:-ngau
three	dZé:	thirty	dZé:-dziau
four	gláu	to buy and obtain	ma:-tʃe

SENTENCES

1. How many books has he? He has five.
   ny: ma: bi:-dzau naeŋ ndoe: ny: ma: be naeŋ
2. How much did this cost? This cost fifteen cash.
   du: ni: ma: tʃe bi: dzau gli: du:tsə: du: ni: ma: tʃe gau be gli: du:-tsə:
3. How many men are there? There are a few tens (something between 20 and 100).
   ma: bi:-dzau de-ne ma: bi:-dzau dziau le
4. How many cups did he buy? He bought between ten and twenty.
   ny: ma: bi:-dzau lu: kou-və ny: ma: gau dziau lu:
5. How much did this book cost? Forty cash.
   naeŋ ndoe: ni: ma: tʃe bi:-dzau gli: du:-tsə: glau dziau gli: du:-tsə:
6. How many cash did he give you? He gave me twenty cash.
   ni: ma: bi: dzau gli: du:-tsə: t^{dz}au dzy: ny: ma: ni:-ngau gli: du:-tsə: t^{dz}au gu:
7. How many basins have they? More than fifty.
   ny:-dZau ma: bi:-dzau lu: kou-və ma: be dziau dziáu lu:
8. Give him these ten odd cash.
   dzy: ma: gau dziau gli: du:-tsə: ni: t^{dz}au ny:

LESSON 8.

VOCABULARY

discuss, talk	ha:-la:	cow	dú:-niù:
inside	niou-vei-nglóu	horse	dú:-né
east	saé ɔ -gu:-hńu:-dà:	very	ef
	or saé ɔ -hnú:-dà:	things	glaé -né
west	saé ɔ -gu:-hnú: ndźe	C.	f:-du:
	or saé ɔ -hu:-ndźé	here	niou-vei-ni:
side	saé ɔ	there	niou-bi:-dì:
the sun	hnú: or lú:-hnú:	there	niou-vei-i:
to set (of		to come	lou
the sun)	ndźe	where	Ghoú-dý:
that	f:		

SENTENCES

1. Where are my things? Here.
   gu: glae ɔ -ne niou Ghou-dy: niou-vei-ni:
2. There are four men here and five there.
   ma: glau le de-ne niou-vei-ni: ma: be le de-ne niou-vei-i:
3. Their books are inside, not here.
   ny: dZau ndoe: niou-vei-nglou hi: niou-vei-ni:
4. There are ten cows over here, two horses over there.
   niou sae ɔ ni: ma: gau dú:-niu: niou sae ɔ i: ma: a: du: ne
5. There is nobody here.
   hi: ma: de-ne niou-vei-ni:
6. Is he here? He is not here, he is to the east (of us).
   die ny: niou-vei-ni: la: hi: niou hi: niou-vei-ni: gu: niou sae ɔ hnu da:
7. This is a good article. Where was it bought?
   dú ni: gu: i: du: glae ɔ -ne gu: ei Zau ma: lou Ghou-dy:
8. I don't hear them talking over there.
   ny:-dZau niou bi: di: ha:-la: gu: hi: hnou

LESSON 9.

VOCABULARY

to ask for, to ask	nu:	why	á:-diaé ɔ̃ ŋa:
to go up, to go up to	ndzí: ..mau	why	ne-Gá-ʃə:
to give, to escort	saé ɔ̃	to go to	glá:
big, large	loú	very small	ɔ̃á:-ɔ̃a:
small, little	ʃaú	to bring...come	dzioù...dà:
Mr., teacher, sir	Ghá:-ndóe:	six	glau
Mr. Wang	Ghá:-ndóe: hmaú-dae ɔ̃	an interrogative ending	leí

SENTENCES

1. Why doesn't he come?
   ny: á:-dziae ɔ̃-na: hi: da: or ny: ne Ga:-ʃə: hi: da:
2. Why not ask the teacher?
   dzy: a:-dziae ɔ̃-na: hi: nu: Gha:-ndoe:
3. Why did Mr. Wang give him that cow?
   Gha:-ndoe: hmau-dae ɔ̃ a:-dziae ɔ̃-na: ma: du: niu: vèi t^{dz}au ny
4. He said to me: I make you a present of this book.
   ny: nd^{dz}au gu: hi: gu: sae ɔ̃ nae ɔ̃ ndoe: ni: t^{dz}au dzy:
5. Where are you going? To the west.
   mau gla: Ghou-dy: mau gla: sae ɔ̃ hnu: ndZe
6. Is he here? Yes.
   ny: die niou vei ni: la: hi: niou ny: niou dziou
7. Why did he buy a small basin and give it to him? There were no large ones.
   ny: a:-dziae ɔ̃-na: ma: di: ɔ̃a: ɔ̃a: kou-və ni: sae ɔ̃ ny: hi: ma: kou-və gu: lou dae ɔ̃
8. Why doesn't he bring those six books?
   ny: a:-dziae ɔ̃-na: hi: dziou glau nae ɔ̃ ndoe: í: da: lei

LESSON 10.

VOCABULARY

to understand, to know	báu	can, able	dZòe:
a street	dźi:	to go out	loe:
C.	í: dzia:		
affair, affairs	nú:		
C.	í: Záeɲ		

SENTENCES

1. What are you going to ask him for? I am going to ask him for money,
   dzy: mau nu: ny: ja: Ga:-ʄɵ: gu: mau nu: ny: ja: du:-tsə:
2. Can he manage this affair? I don't know.
   Zaeɲ nu: ni: die ny: dZoe a: la: hi: dZoe: gu: hi: bau
3. Go and ask them for those three books.
   dZɵ: naeɲ ndoe: i: mau nu: ny:-dZau ja:
4. This is the main street.
   dzia: ni: gu: i: dzia: dzi: gu: ei lou
5. Where has he gone? He has gone to the street to buy things.
   ny: gla: Ghou-dy: loe: ny: mau ma: glaeɲ-ne gla: dzi: loe:
6. When I speak do you understand? Yes.
   gu: hi: lu: die dzy: bau la: hi: bau bau dziou
7. This is an unimportant matter; that is important.
   Zaeɲ ni: gu: ɲa: ɲa: nu: Zaeɲ vei gu: nu: gu: lou
8. Can you go now? I cannot go at present.
   na: ni: die dzy: dZoe: mau la: hi: dZoe: na: ni: hi: dZoe: mau

LESSON 11.

VOCABULARY

long	ndi:	to wash (of one's	
short	lú:	hands or face)	ndZa:
to go down, descend	lau or lau-lou	face	klú:
clothes	tʃoú	which	lí:-dziaeɔ
C.	í: lú:	also	d^{dz}ei
to wear	hnaéɔ	something like "all	
towel	ndZa:-klú:	right"	Gau
C.	í: gla:	when	taú gu:

SENTENCES

1. There are two garments here, which one do you want? I want the long one.
   niou vei ni: ma: a: lu- tʃou dzy: ja: i: lu: li: dziaeɔ gu: ja: lu: gu: ndi:
2. I want to buy a few towels - good ones. I will buy four.
   gu: ja: ma: bi:-dzau gla: ndZa:-klu: ja: ma: di: gu: Zau gu: ja: ma: glau gla:
3. He has long ones and also short ones. How will it do to buy long ones? Quite all right.
   ny: ma: di: gu: ndi: d^{dz}ei ma: di: gu: lu: ma: di: gu: ndi: die Gau la: hi: Gau Gau dziou
4. In wearing clothes, one should wear good ones.
   hnaeɔ tʃou ja: hnaeɔ di: gu: Zau
5. How many garments do you want to buy? Three.
   ja: ma: bi: dzau lu: tʃou ja: ma: dZə: lu:
6. They made a present of two dogs, a large one and a small one.
   ny: dZau saeɔ gu: a: du: gli: i: du: gu: lou i: du: gu: ʃau
7. There are books here; how many do you want? I want five.
   niou vei ni: ma: ndoe: dzy: ja: bi: dzau naeɔ ja: be naeɔ
8. I was here when he went up, not when he came down.
   tau gu: ny: ndzi: mau gu: niou vei ni: tau gu: ny: lau lou gu: hi: niou vei ni:

LESSON 12.

VOCABULARY

to recompense	baù	seven	ʃíaeɔ
to call, to sing	hhú:	in addition, and	tié
vegetables	Zaú	still, yet	si:
fish	nbó	more, still	Ghá:
C.	f: du		

SENTENCES

1. Do you want any more fish? I want six more large ones.
   die Gha: ja: nbə la: hi: ja: la: ja: glau du: gu: lou tie si:

2. Have you any more money? I still have seventy cash.
   die dzy: Gha: ma: du:-tsə: ma: ʃiaeɔ dziau gli: si:

3. I want one more basin of rice and two more basins of vegetables.
   gu: la: ja: i: kou-və va: tie a: kou-və Zau si:

4. He still wants to go to the street and buy a few things.
   ny: la: mau ma: bi:-dzau Zaeɔ glaeɔ-ne gla: dzi: si:

5. Do you want any more? Yes.
   die Gha: ja: la: hi: ja: tie la: ja: tie si:

6. Go and call him; I want to say something else to him.
   dzy: mau hhu: ny: da: gu: ja: nd^{dz}ou ny: ha:-la: si:

7. How many more towels are there here? There are still twenty-six.
   niou-vei-ni: Gha: ma: bi:-dzau gla: ndZa:-klu: ma: ni: ngau-glau gla: si:

8. Tell him to bring those two large books here.
   hhu: ny: tʃioe: a: naeɔ ndoe: gu: lou i: da:

LESSON 13.

VOCABULARY

heaven	ndù:	first month (of the year) (i.e. snake month)	naéʒ-li:
a month, a moon	lú: li:		
a year	í: ʃiaú	tomorrow	bi:-dzi:
this year	ʃiaú-na:	each, every	tsá:
next year	hí: niau na:	day	hnú:
	or bá: ʃiáu	Note the use of dú: all	

SENTENCES

1. It is cold this year. No one knows whether it will be cold next year or not.
ʃiau-na: ei nou nou hi: bau hi:-niou-na: ja: nou hi: nou

2. He says he will come next year in the first month.
ny: hi: hí:-niau-na: naeʒ li: lou

3. I cannot go to-day: I can go tomorrow.
hmou-na: gu: hi: dZoe: mau bi:-dzi: gu: dZoe: mau

4. He writes every day; he will be writing to-day.
ny: tsa: hnu: du: sau ndoe: hmou-na: la: ja: sau si:

5. This was bought in the 3rd month of this year.
du: ni: gu: ʃiau-na: lu: dZə: li: ma:

6. They come every year (and) they will come next year.
ny: dZau tsa: ʃiau du: da: bə:-ʃiau du: ja: da: si:

7. It will take two months to make that article.
a: du: glaeʒ-ne i: ja: a: li:

8. In what year was this bought? It was bought this year.
du: ni: gu: i: ʃiau li:ᵕ ziaeʒ ma: gu: ʃiau-na: ma:

LESSON 14.

VOCABULARY

to go out, to produce	doe:	a degree of comparison	dá:-die
to open	Ghé	outside	Zau
to shut	Gou	an ending	dzie
a door, a gate	á:-glaù	when	táu-dy:
eight	i:	Mr. Wu	Ghá:-ndoe: hmáu-glú:
nine	dzià	Mr. Chu	Ghá:-ndoe: hmau gla:
to read	dzioe:		
time, season	dziài-niau		

SENTENCES

1. When he was there reading, I was there eating.
   tau gu: ny: dzioe: ndoe: ſ: gu: niou-vei-i: nau va:
2. When Mr. Wang went on his travels, he saw many people in the street.
   tau gu: Gha:-ndoe: hmau-daeꝫ doe: Zau bou de ne dziau da:-die niou vei dzi:
3. When they take their food, they eat more rice than vegetables.
   tau gu: ny:-dZau nau va: dziau nau va: dzoe: nau Zau
4. When he went out he didn't shut the door.
   tau gu: ny: doe: loe: ny: hi: Gou a:-glau dzie
5. While I was speaking Mr. Wu came to see me.
   tau gu: gu: hi: lu: Gha:-ndoe: hmau glu: da: bau gu:
6. He cannot come at this time; I cannot go at that time.
   du: dziai-niau ni: ny: hi: dZoe: da: du: dziai-niau i: gu: hi: dZoe: mau
7. When did Mr. Chu go? In the 3rd month of this year.
   Gha:-ndoe: hmau-gla: tau dy: mau ʃiau-na: lu: dZə: li: mau
8. Tell him to go to the street and buy a few things for me.
   hhu: ny: mau gla: dzi: nd^{dz}ou gu: ma: bi:-dzau Zaeꝫ glaeꝫ-ne

LESSON 15.

VOCABULARY

to arrive at	ndziau	to cause	gou
then, afterwards	nd^{dz}ù:-Gé or á:-Gé	sie prefixed to the days of the month up to the 10th inclusive.	
hand	dí:		
C.	í:-tsai		

SENTENCES

1. Some washed their hands, others washed their faces.
   ma: di: gu: ndZa: dí: ma: di: gu: ndZa: klu:
2. Sometimes (he) comes, sometimes he doesn't come.
   ma: dziai-niau gu: da: ma: dziai-niau gu: hi: da:
3. In the street some are selling fish, some are selling vegetables.
   niou dzi: ma: di: gu: dei nbə ma: di: gu: dei Zau
4. Mr. Wu came afterwards.
   Gha:-ndoe hmau-glu: ndziau daú a:-Ge
5. How many cash did he bring? I have not asked him.
   ny: dziou bi:-dzau gli: du: tsə: da: gu: hi: la: nu: ny: dziou bi:-dzau
6. When did you arrive here? To-day.
   mi: dZau tau-dy: ndziau vei ni: bi: hmou-na: ndziau
7. Tell him to go outside.
   hhu: ni: gou gla: Zau loe:
8. To-day is the 6th of the 4th month.
   hmou-na: gu: gláu li: sie glau

THE BEGINNING OF THE IRON AGE IN CHINA: "THE BAMBOO BOOKS" AND THE "CANON OF HISTORY"

J. H. EDGAR

A study of the *Bamboo Books* and the *Canon of History* in conjunction with Dr. Ball's *Chinese and Sumerian* suggests that the dominating element in the Chinese civilization arrived as a cultured imigration which had been in contact for ages with Sumerian groups far to the north or north west of Babylon. Some such theory would help to explain the civilization of Yao and Shuen, and make the inferences and references regarding iron and even steel of historical importance. As regards inferences, only two will be presented. In the *Annals* we are told that Yao travelled in a "plain carriage." This was about 2,307 B. C. Then more than 200 years later the Emperor Hsiang "prepared chariots and horses." With a culture such as these two quotations imply it is surely reasonable to associate with it a knowledge of iron. Again, in the *Canon of History* we read that the founder of the Hsia Dynasty[1] "following the course of the hills hewed down the woods."[2] Here again we may fairly assume that the phrase quoted implies a general use of iron before 2,200 B. C.

We are not, however, confined to inferences only for in the *Tribute* Book I, Chapter IX, we are told that Liang Chow[3] sent among other things "iron, silver, steel and stones for arrow heads."[4] Legge, commenting on the first and third characters, never questions the text and defines "t'ieh" as "soft iron," and "lou" as "steel," or iron so hard that it was used as an engraving tool. In the same note this peerless translator informs us that in the Han Dynasty "Iron Masters"[5] were sent to Liang Chow (Sze-chwan) to superintend smelting works there. Some, we are told, who were engaged in this industry became enormously rich.

These notes may not prove the use of iron and steel in the Hsia Dynasty, 2204—1766 B. C., but they certainly do indicate that iron was well known centuries before our era in the region referred to by the Books of Hsia.

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1. 禹貢　2. (隨山) 刊木　3. 梁州
4. 鐵銀鏤砮磬　5. 鐵官

In the Fourth Book of Yü, "Yi and Chi", (益稷) we read: "I mounted my four conveyances." (予乘四載). From Legge's note based on the *Historical Records* we learn these are carriages, boats, sledges and spikes for shoes. The carriages are for the roads, boats for the rivers and canals, sledges for the miry places and the spikes for mountain sides. The characters are: 車,舟,橇 and 檋. The spike was "like an awl," and it is not doing violence to the text to assume that iron was used.

'Regarding the character 檋 K'ang Hsi states 肯曰, 廣曰, 直轅車也. "A general name for a cart with straight shafts." This seems rather much to the point; in any case such a carriage would have advantages in hilly country.

THE CHEMICAL ANALYSIS OF SOME OLD CHINESE COINS

Y. L. KAO

Owing to the complexity of the coinage systems, profit is often made by melting the old coins into copper lumps, and selling these to the mints where the new copper coins are made. Because of this the old coins have become so rare during the last few years that it is not possible to obtain any except through the curio stores.

It has long been in my mind to make a chemical analysis of these coins before they were all gone. It took some time to obtain genuine ones, but reliable specimens were presented by Rev. T. Torrance who has been collecting for many years and who is well known as an authority.

To our regret only a few dynasties are represented, and in most cases only by one very rusty coin. These coins have with difficulty been cleaned, using both chemical and mechanical means.

The analyses were carried out in May 1934 with the assistance of my fellow students, to whom due acknowledgement is made.

The following table gives the composition of the coins:

COMPOSITION OF THE COINS ANALYSED

Dynasty	*Han*	*—Tang—*		*—Sung—*		*—Ming—*		*Tsing*
	五銖	嘉猶	開元	元通A	元通B	萬曆	洪武	——
Copper	86.38	73.69	71.93	65.10	63.10	71.01	75.00	80.60
Lead	0.52	16.61	12.91	26.05	25.40	5.17	15.35	4.63
Iron	6.16	0.38	1.43	3.36	0.42	0.95	0.33	0.79
Zinc	5.29	1.38	1 40	4.71	1.03	20.91	1.38	1.25
Tin	——	7.93	11.84	0.60	9.30	2.58	10.06	12.94
Antimony	——	——	——	——	——	——	Trace	Trace
Total	98.35	99.99	99.51	99.82	99.25	100.62	102.12	100.21

By studying the above data we can draw conclusions as follows:

1. Copper is the main constituent, the other metals being diluents.

2. Since the Tang Dynasty lead and tin have become more or less important constituents.

3. After the Han Dynasty there is only a small percentage of iron in the coins. This may be due to dirt which we could not remove. The reason why the Han coins contain so much iron may possibly be because the other diluents, such as lead and tin, were neither so common or plentiful as iron at that time.

4. Zinc occurs only in small percentages except in an extraordinary case in a Ming Dynasty coin. As zinc alloys are brittle and have no remarkable practical application the percentage should be as low as possible so that the coins may not easily be broken.

5. A trace of antimony also occurs in the last two coins. This metal plays a very important role in the making of type alloys, as it causes the characters to be clear and sharp if the alloy is properly made. Here, since there are characters on the coin, we might conclude that its use was the same. But as a matter of fact the amount of metal is too small to produce any effect, and we are rather inclined to consider that antimony occurs as an impurity in the other metals, such as lead and tin, which have been used in making the coins. *Reference: Dictionary of Applied Chemistry*, Thorpe.

Chemistry Department,
West China Union University.

SHORTER ARTICLES AND NOTES

THE COUVADE IN KWEICHOW PROVINCE.

The couvade is a custom of much interest to anthropologists. Its occurrence has been so rare and in such widely separated places that it seems impossible to believe that it has spread through cultural borrowing.

The common custom in West China is that when a child is born the mother remains in her bedroom for one month. She is regarded as unclean, and it is thought that if she goes out of her bedroom or her house it will do harm to other people. In the case of the couvade the husband remains in bed for one month, while the wife goes about as she pleases. It is believed that violation of this custom will bring injury to the child, such as sickness or ill luck.

In Europe the couvade was observed, up to a century or two ago, by the Basques, a peasant people in the Pyrenees. In South America the custom has been found among cannibalistic Indians in Brazil.

There is evidence that the couvade was formerly observed by a "tribe" or ethnic group in Kweichow Province. In the *Journal of the North-China Branch of the Royal Asiatic Society*, published in 1859, there is a translation of a Chinese book about the aboriginal tribes in Southwest China, which describes eighty-two ethnic groups in Kweichow Province. The paragraph we are specially interested in is as follows:—

> 51. Lang-szi, a small tribe of aborigines found in the department of Wei-ming.
>
> Their manners and customs are very extraordinary. For example: when the wife has given birth to a child, the husband remains in the house and holds it in his arms for a whole month, not once going out of doors. The wife, in the meantime, does all the work indoors and out, provides and serves up both the food and drink for the husband, she only giving suck to the child. When any one dies, the kindred of the deceased, at the moment the breath leaves the body, take hold of the head and turn the face backward, saying, "It is good to look to posterity."[1]

1. Journal North-China Branch of Royal Asiatic Society, No III, Dec. 1859, page 18.

The following quotation from a letter received from Rev. W. H. Hudspeth, dated at Chao Tung, Yunnan, May 2, 1935, is of interest:

"The couvade was once observed amongst the Miao, and evidence of this I shall publish some day. There is a picture in the British Museum (as no doubt you will know) of a Miao man lying in. It is reproduced in Bushnell's 'Chinese Art.' Marco Polo mentions meeting with the couvade system in Yunnan."

D. C. GRAHAM.

NOTES ON THE BLACK LAMA RELIGION OF TIBET.

The Bons or Black Lamas differ from the orthodox or pseudo-orthodox in theology, charms, and conduct.

1. Their gods, worship, and eschatology, while superficially similar, are fundamentally different in most cases.

2. It is so, also, with their charms and symbolism. They have sacred birds, swastikas with prongs different from other sects and prayer drums turned in the opposite way. The same is true of their circumambulations, and Om ma tri mu ye sa le ^{n}du (*See Fig 1*) replaces Om ma ni pad me hum. Black ostentatiously distinguishes them, and much of their magic is anathema to the orthodox.

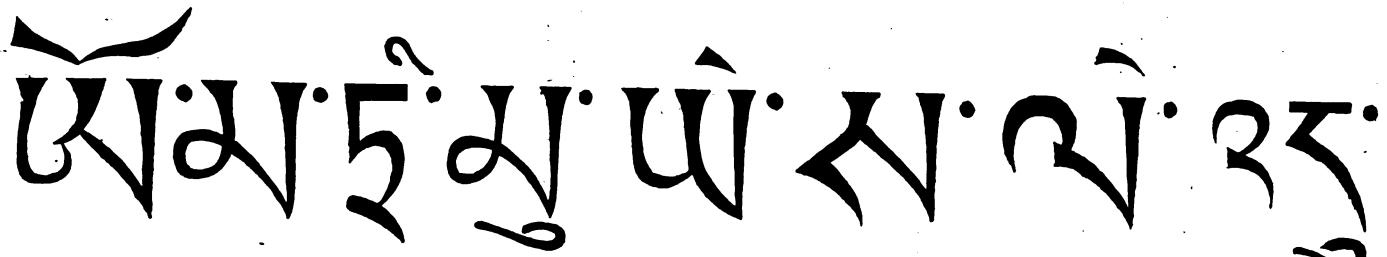
3. Their gods are essentially different, and they have their own holy places, church organization, worship and standards of conduct.

J. H. EDGAR.

MONI (MANI.)

In Dr. Faber's *History of China* we are told that about 764 A. D. the Tibetans and the Yuigurs were under one leader (on the western frontier of China.) The latter, however, joined with the Chinese, and their former allies, the Tufan, retired. "In 806 A. D. the Yuigurs (Hwei Ho) brought tribute, and with them came the monks of Moni who built monasteries." These were Manichees; but in a note it is assumed that Moni is the Sanscrit "Mani" as found in the Tibetan charm "Om mani pad me hum." If this note were beyond dispute we might venture to quote it as proof that Om mani pad me hum was at one time an invocation to Mani

Du Halde's version of the Yuigur defection, summarised, is as follows: About 700 A. D. Tibet made an alliance with the Hwei Ho and both sides, later, assisted China in her wars and in-



OM·MA·TRI·MU·YE·SA·LE·ᴺDU·

Fig. 1. The above Tibetan inscription from a sacred mani stone (commonly called "prayer stone") was copied by J. H. Edgar. He found and presented the stone to the West China Union University Museum of Archaeology. There are few, if any, such black lama mani stones in other museums. The transliteration is also the work of Mr. Edgar.

cidentally enriched themselves with plunder. In time, however, China by means of racial jealousies cajoled the Yuigurs to her side and unitedly they defeated the Tufan. Friendly relations, however, were not permanent and the alliance ended by the Yuigurs retiring in disgust.

J. H. EDGAR.

COCHIN CHINA.

The first word of this combination is probably derived from some southern rendering of "Chiao Chï" (交趾 i.e. web-footed) a name applied to Annam as far back (some think) as the days of Sze Ma Ch'ien. Certainly Cochin as a derivative of Chiao Chï presents no difficulties, especially when we remember that seafaring men from the Indian port of Cochin had frequent connections with Indo-China. The age long claims of China as a suzerain and the uninterrupted cultural influences will readily enough explain the second term.

J. H. EDGAR.

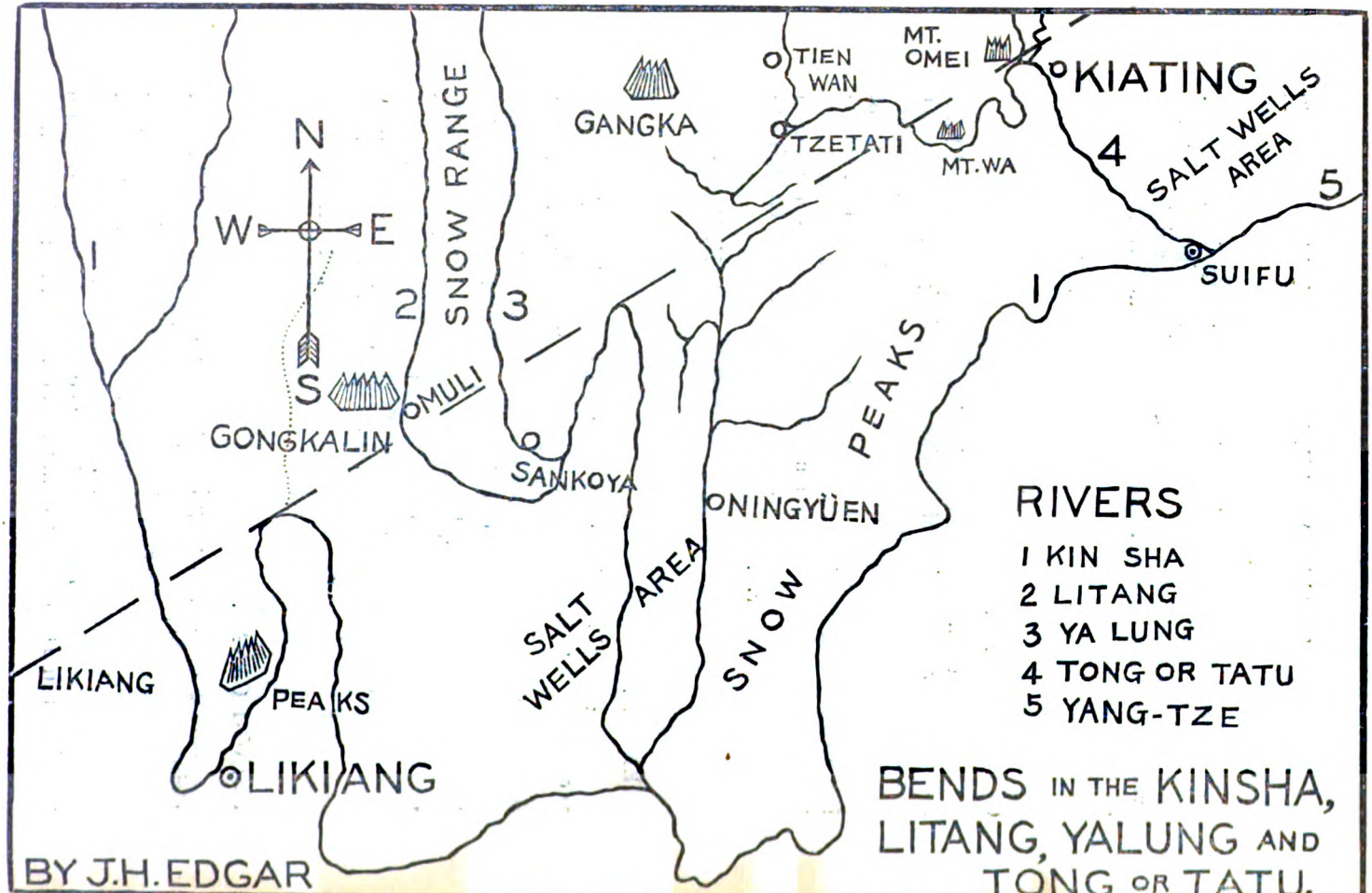
TIEN MA.

The animal called the T'ien Ma (天馬) has been given some prominence lately. The specimen seen by us may, or may not, eventually find a place in "the zoo that never was," but in the Shih Chi 史記 the name indicates a breed of horses from Turkestan which were popularly supposed to be conceived without the intervention of a male parent. The anomaly is explained by the assumption that during the night wild stallions from the mountains visited the herds of isolated females on the adjacent plains. The true facts were carefully suppressed and the supernatural parentage emphasised to enhance the value of a much envied monopoly.

J. H. EDGAR.

HSING-I CANAL.

It may not be generally known that a canal in the vicinity of Hsing-i (Kwanghsi) connects the Yangtse and West River waterways. The writer has in his possession a photograph kindly presented by Bishop John Holden which evidently gives a good idea of this interesting feature. The canal in question was discussed in the Journal of the R.G.S. about 67 years ago. It is also mentioned in Du Halde's *China* about 1735, thus: "One may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W
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GANGKA
TIEN WAN
MT. OMEI
KIATING
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MT. WA
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SUIFU
OMULI
GONGKALIN
SANKOYA
ONINGYÜEN
SNOW PEAKS
SALT WELLS AREA
LIKIANG PEAKS
LIKIANG
1
2
3
4
5
RIVERS
1 KIN SHA
2 LITANG
3 YA LUNG
4 TONG OR TATU
5 YANG-TZE
BENDS IN THE KINSHA, LITANG, YALUNG AND TONG OR TATU.
BY J.H. EDGAR

pass from Canton the most southern city to Peking the most northern without travelling above one day by land, and even not that if one goes a little about by the Province of Quang Si and Hou Quang."

J. H. EDGAR.

BENDS IN THE KIN SHA, LITANG, YA LUNG AND T'ONG OR TA-TU RIVERS.

As geographical curiosities the rather striking bends in the rivers mentioned above may be worth emphasising. As far as we know, even if they have been referred to by writers, no explanation of their peculiar topography has been essayed. Without attempting to remedy the deficiency we shall proceed to supply a few facts that may in time assist others.

(1). It will be seen from the chart, based on Broomhall's map of China, that a line touching the apexes of the east and west features will also impinge on the centre one.

(2). The fact also must not be overlooked that three of the bends are in the vicinity of snow clad complexes, and the fourth is apparently affected by the Mount Omei intrusion.

(3). Judging by the north and south trend of the ranges and the topography in the region of southern portions of the Kin Sha, Litang-Yalung and western T'ong bends one is tempted to suspect in former ages an interrupted southern course for the Kin Sha, a south western one for the Litang and Yallung, and a more or less direct channel south for the T'ong.

(4). Salt wells exist to the south-east in two cases at least.

(5). It will be noticed that the broken line impinging on the apexes of the bends is roughly paralleled by the depression through which the Kin Sha now flows. This may suggest a crack along the top line owing to lack of support in the trough to the south. The opinion of some orthodox geographers of note assumes that the original course of the Kin Sha was to the south.

J. H. EDGAR.

SILVER RUPEES IN TATSIENLU.

The use of silver rupees in Tatsienlu and environs moved us to make enquiries about the genesis of the use of this Indian coin.

Mr. J. H. Edgar told us that when he went first to Tatsienlu in 1902 an East India Company rupee was then in use which was larger than the coins now used. It seems that at one time Nepal had the right to provide currency for Tibet and introduced the Indian Rupee with the head of the British King plainly marked

on one side, while the reverse carried the date and usual inscription. The suggestion that Tibet belonged to England was, even before the Chinese Revolution of 1911 and the coining of words for "patriotism" or "President", enough to cause a revolutionary change in the Tibetan currency. They built their own mint, made their own "rupees" and engraved the head of the Emperor Kwang Su on them. This has continued ever since, and now in the twenty-third year of the Republic we find the rupees still carrying the effigy and inscription of the Manchu Emperor Kwang Su.

The exchange varies from two to three rupees for a silver Mexican dollar. Through the generosity of Mr. Edgar we are the proud possessors of a silver rupee minted in Lhasa entirely in Tibetan script on both sides of the coin; also a brass coin made in Batang; and several half rupees made by the simple expedient of cutting a rupee in two. Through the kindness of Mr. Robert Cunningham we came into possession of a most valuable set of silver rupees, dating from King William IV. In the set are one William IV, two of Queen Victoria, one of King Edward VII, one of King George V, and one of Kwang Su. With modernity coming fast to the Tibetan Marches it will probably not be long before the day of the rupee is over. Mr. Cunningham is still able to make good collections of rupees of various reigns through Tibetan merchants, but there is no guarantee that the supply will hold out indefinitely.

A. J. Brace.

EXTRACT FROM A LETTER REGARDING THE HANCHOW EXCAVATION.

The following paragraphs are taken from a letter dated 20th July 1935, from Dr. C. W. Bishop of the Smithsonian Institution to Dr. D. C. Graham regarding the Hanchow Excavation (see this Journal, Vol VI, page 114).

"I want to congratulate you and your colleagues at the University and elsewhere upon the splendid way in which the excavation was carried out in the face of difficulties of a sort of which I myself have had abundant experience. The results you secured are in my estimation very important to a right understanding of the early cultural development of the upper Yangtse valley.

"I wonder if you have received a reprint of a paper of mine on *The Beginnings of North and South in China* which appeared in *Pacific Affairs* for September, 1934? In it I pointed out that there was traditional evidence that the Chous had contacts with the Szechuan region even prior to their overthrow of the Shangs (or, as the Chous seem to have called them, the Yins). Consequently it

occurs to me that your dating of the Hanchow deposit as about the beginning of the Chou Dynasty might well be pushed back anyway a century or two earlier. We know that the Chous occupied eastern Kansu and western Shensi, on the headwaters of the Ching Ho, before they made their final successful attack on the Shangs, and it is inherently likely that they pushed down into Szechuan as well as eastward toward Honan.

"The fact that you found in association jades with marks of a wire saw and pottery and stone implements of a Neolithic character need not, I think, cause any difficulty; for I think it is quite clear that the masses of the Chinese people, including the inhabitants of the Yangtse valley, remained in the Neolithic stage of culture until iron became both plentiful and cheap enough to be used in the place of stone tools. Bronze must always have been expensive and hard to obtain, and quite out of the reach of the ordinary peasant and poor city-dweller. That explains, I think, why it is that we find so many characters denoting the operations of cutting, hacking, or piercing, written with the 'stone' radical or signific.

"I think you are quite right in thinking that the jades you found indicate an earlier rather than a late Chou dating; but of course the possibility of local differences or provincialisms is to be considered. The mere fact of the presence of Neolithic or Chalcolithic objects in the association is no indication of early age in itself, for archaeological deposits have of course to be dated by the latest objects which they obtain.

"That the culture you have found had nothing to do with the Shang material at An-yang is, I think, pretty clear. The jade disks are, as you suggest, symbols of T'ien, the Sky God, and it has lately been demonstrated that he was not a divinity of the Shangs, who worshipped Shang Ti as their supreme deity, but was a deity imported by the Chous, and only later became amalgamated with the chief god of the Shangs, much as the Romans came to identify their own Jupiter with the Greek Zeus. Hence the presence of what are almost certainly symbols of T'ien is, I think, good reason to believe that your new culture was the work of the early Chous in their conquest of the Shangs. In fact I should not be at all surprised to find that the Chous themselves were of Tibeto-Burman speech originally, but that they lost their mother tongue after the conquest, just as the Normans, after they had conquered England, exchanged Norman French for English, or as the Manchus exchanged Manchu for Chinese."

J. H. EDGAR'S MAP FROM DAMBA TO CHAN TUI.

The map at the end of this volume is generously made available by Mr. Edgar to be a challenge of the difficult and the unknown to be conquered and known. Here are undoubtedly "border conditions", and it is at limiting conditions or thereabouts that truth is often most self-evident.

As one "reads" this map of 30-32 N. and 101-102 E. he comes across altitude and topography that spell out swampy pasturage for yak; passes of frost-riven rock; glacier with moraine; earthquake and hot springs; turbulent river with coracle or slip-rope bridge; sheer cliff with occasional falling rock; steep talus slope of unstable repose; religions and nomads and tribes; peoples ancient and late; plants high and plants of somewhat lower regions; and animals strange and unique. This map is one large question mark, and it is so presented.

Who was the man there beyond Taofu? When was he there? Why was he *there?* What had the loess to do with his being there, or to his not being there? Was he there by choice? Or did he find the pressure from other peoples from below too severe? Or was animal and vegetable life below too much for his wit and tools? How high was the "ceiling" for living then in these regions?

What of the plant and animal life in these regions? What is the influence of stream and mountain barriers? What does temperature and cloud and shine do to life? What does characteristic vegetation and terrain and temperature do to dentition, to skeletal framework, to the *tempo* of vital processes? What constitutes effective barriers in determining life zones or locale?

Pioneer work has been done in these regions, and a tithe of that work is herewith presented as a challenge to prepared men or to men to prepare to exploit this region for the kingdom of knowledge. The challenge is to enter into this field and patiently and persistently collect data and facts that will lead to careful correlation and the clearer understanding of the world picture, to earth tectonics, to human dynamics, to organic development. Challenge! Advance and give the countersign!—if you have the stamina of Mr. Edgar.

D. S. Dye.

PROCEEDINGS

of the

West China Border Research Society

1934—1935

ON THE HIGHLAND ROAD TO LAMA-LAND

A. J. Brace

Set to music by Blanche Brace. Sung by Dr. H. J. Mullett.

On the highland road to Lama land,
Yellow-robed monks on every hand;
Pilgrims climbing their weary way
Turning prayer wheels all the day.
High o'er the pass yak-caravans wend
As Chinese tea to Lhasa they send.
Down the valleys wild cataracts roar
From glacial peaks where eagles soar.
Across the slender bridge of rope
With many a prayer and pious hope.
By night is heard the monastery bell;
At even-song their beads they tell,
While over all is cast the spell,
Of incense sweet and chanting rare
From deep bass voices of lamas there,
Om-ma-ni-pad-me-hom their prayer.

PRESIDENTIAL ADDRESS

A. J. Brace

Delivered at the Annual Meeting of the Society. June 1 1935.

T. Swann Harding, author of *The Degradation of Science* has recently written an article *Can Science Long Remain Inhuman?* which raises some questions which in my mind have a direct bearing on our Society. He says among other pertinent remarks, "The Goddess of Science is named Impersonality; she is an austere and forbidding, not a voluptuous creature. In order to worship that Goddess the scientist finds himself in perpetual conflict with himself. Hs sets out to clarify his own judgment; to keep his emotions on ice, to make due allowance for his idiosyncracies, and thus to reach unprejudiced conclusions. He is at war with his own organism, and with the common customs and habits of mankind. To aid himself in his work he deliberately cultivates an arid and extreme personality, which tends to lack life, vigor and human touches. Rather than use the first personal pronoun he will undertake almost any verbal circumlocution no matter how horrid or offensive".

Then he applies his thesis to human life, and here I wish to summarize his position briefly, and add a few personal reactions for your consideration.

In one sense the scientist has been specially trained to brush the humanities rudely aside. There was a long period when the humanities brushed science rudely aside. Science was compelled to struggle desperately hard to win and hold a place in university curricula. This is ancient history except in educational backwaters. True, scientists but rarely go on record as to the actual truth that, in so for as they are actually scientists, they are out and out materialists. But then, they are never, in actuality, as dehumanized as their technical papers might lead one to think! As Eddington said in the 1927 Gifford Lectures, when you write "the body of the elephant slid down the grassy slope" your true scientist is left cold. But when you add the frictional coefficient and that his weight is twenty tons he is interested at once. For he has been trained in abstract weights and pointer readings from the vastness of his physical environment, and to proceed to his broader deductions, which he may or may not later be able to apply to humanity in general.

Eddington, Jeans and others have gone so far towards humanizing physics that they have given their abstractions unwarranted values. Whereupon Einstein gently reminds us that these "thaum-

atergic gentlemen do actually reason logically and scientifically in their respective laboratories!"

Science may become so abstract and otherworldly as to have no human significance whatever, and after all we answer the scientist as we do the philosopher who expatiates on the puny unimportance of man in our human scale of values, humanity, its acts, its beliefs, desires, impulses, aspirations and happiness are supremely important. Science must not only accumulate the dry bones of facts; it must clothe its system with flesh and blood. It must consider sensations, the technique of apprehending knowledge, and the motives and feelings which lie behind the gathering of knowledge, subtly affecting this or that paper on pure research in this or that way. Even the human values that seep out of the driest and most inhuman papers by scientists are important, and should properly come within the scientific ken. Even governments are seeing the need of social scientists, and are bringing to bear trained minds, and expert advice upon the vexed problems of the day, and when the Chief Executive of a great Republic can say: "We shall try to do this in one way if possible; if not we shall try another method, but do it we shall" a new epoch has dawned.

Morals have long been imbedded in folklore, superstition, customs, religion, even whim. There are no reliable criteria of ethics in a scientific sense. Creeds have disintegrated, but science has failed to formulate any sound doctrine. Why has science thus failed? Because humanism is tabu among most pure scientists. Yet Science has the key to all problems in human relations. It alone can temper emotion with accurate, critical observation; theory with reliably ascertained and carefully validated facts of experience. The fact that a man is an engineer does not mean at all that he is a scientist or a practitioner of the scientific method. He may only have mastered certain technical processes. Here is where team work is as absolutely necessary as in a winning football team. This and the fusing of the scientific method with practical humanism will help solve some of the pressing problems of real everyday life which alone matter to the great masses of humanity.

With these as introductory observations I wish to enquire where our Society would fit into the picture. As missionary scientists and researchers I do not think we shall be charged with lack of humanism, but I do feel that we may be accused of lacking unity and penetration, in a vital sense, into the real fundamental objects of our research. Perhaps the time has come in our brief span of life to dig deeper instead of going wider afield.

There is naturally some misunderstanding of our aims and objects, as the nature of our Society has changed to some degree as the Society has grown larger. Nevertheless we have not departed radically from the "Purpose of the Society" formulated in the organization meetings fourteen years ago, and phrazed by Dr. W. R. Morse, our first President, in the following words; "The

purpose of this Society shall be the study of the country, peoples, customs and environment of West China. To this end, the Society shall promote study by the encouragement of investigation, loans of equipment, meetings, lectures, papers, the publication of a Journal, and by any other means decided upon by members." The fact remains that the spirit of this purpose has been followed carefully since the beginning, and the amendments of Constitution and By-Laws by successive Annual Meetings have left this purpose intact, and it is still our "marching orders."

True we started ambitiously to keep the membership of the Society limited in numbers, and to travellers in the Border country, who were required to give their findings annually in so far as it was found possible. However after the evacuation of 1927, in the lean years that followed, the Executives under the able Presidency of D. S. Dye, in noble efforts to weather the financial storms, and maintain the Journal of the Society as an annual publication, opened the membership wider, following the lead and precedent of learned societies such as the Royal Geographic Society of London, the National Geographic Society of Washington, and the Royal Asiatic Society. Also during the evacution such societies as the Fortnightly Club for Chinese research in the city and the Saturday Night Club for literary evenings had lapsed and the wish of the Executive was to make the Society cater more widely to the catholic tastes of the community to prevent the reorganization of competing societies. Still the purpose of the Society was maintained. The only difference discernible was the opening of a small number of open meetings for the study of topics applicable to China as a whole, and also that practically all the meetings have been open meetings. The problems and dangers of such a course are obvious. Lectures must of necessity be brief, and neither too technical nor too formal. Study of programs and Journals will reveal concentrated *Border Research*.

A brief glance at the subjects covered this year will reveal the fact that exactly two thirds of the lectures were strictly on West China research subjects; and this applies equally to the three special meetings. The general lectures were highly instructive and well above the average in general interest. Again practically all the meetings were confined to an hour and a quarter, the quarter for business and discussion, and the hour to the lecturer. To the credit of our speakers may it be remarked, that none overstepped the time limit imposed by the Executive.

The first meeting of the season was a new departure in introducing four members of the Society to report, in fifteen minutes each, the findings of the four exploration parties they represented last summer. Mr. H. D. Robertson, Dr. W. R. Morse, Dr. R. O. Jolliffe and Dr. D. C. Graham succeeded admirably in giving a kaleidoscopic and panoramic view of the activities of these parties in very telling manner.

Dr. Harold Smith of Upsala University Royal Herbarium placed us all in his debt by a lecture of rare scientific value. He displayed scores of beautifully mounted specimens from Hsi Kong revealing himself an accomplished artist as well as a first rate scientist.

J. Huston Edgar, our beloved Honorary President, in his admirable "Unexplored Regions of the Hsiang Cheng," again displayed his unusual acumen in uncovering in a delightful way most valuable historical and anthropological lore of the high table lands with which he is more familiar than probably any other trained scientist in the Tibetan Border lands.

Rev. V. H. Donnithorne in his "Golden Age in Hanchow, or Nestorianism during the T'ang Dynasty" gave one of the most original pieces of research the Society has had recently. He has shown us the way to win the friendship and support of Chinese officials who co-operated in his archaeological work which resulted in the unearthing of cultural remains that have pushed time back a thousand years in West China: back to at least 1000 B.C. The best of these cultural remains now rest in the Union University Museum. Our Secretary, Dr. D. C. Graham rendered valuable assistance in this scientific archaeological expedition at Hanchow.

Your Chairman dealt with historical names and places adjacent to Chengtu, and made immortal in Tu Fu's poems written at Ts'ao T'ang Ssu. The social anthropology and historical research indicated here is of prime importance, and most of the translations from Chengtu history were made for the first time.

Rev. Clarence Vichert dealt in highly interesting fashion with Chinese Physical Culture a virgin field of research for our Society. He greatly delighted his audience by his informing lecture and demonstrations of the art of Chinese "Ta Chwan."

Dr. Lucius D. Porter exchanged places with Dr. Liljestrand. The latter was called to Shanghai, and the former expected to leave Chengtu before our Annual Meeting. Dr. Porter in his "Mencius' Defence of the Moral Insights of Confucius" gave as the "core of his defence" the teaching of Confucius "that our natures required nourishment and training, and there we find the source of energy, thus man's nature may become good." It was one of the most penetrating of the excellent lectures on Chinese Philosophy which Dr. Porter gave in his two months course here.

Mr. W. C. Ho, M. A. lectured on "Natural History of Szechwan Province" demonstrating that he has made scholarly researches of real value, and has given a great deal of time and care to the scientific mounting of specimens.

Rev. Gerald S. Bell, M.A. made his maiden speech before the Society and achieved the almost impossible by making the dry bones of "Land Settlement and Taxation in China" live and become real to his audience. He rapidly traced with a master hand the land question through all the dynasties from the time of Shi Hwang Ti.

Among the special lectures, the Sage West China Expedition of the American Museum of Natural History was well and worthily represented by Mr. and Mrs Dean Sage, Donald Carter, Assistant Curator of Old World Mammals, and Mr. W. G. Sheldon. They made a most valuable contribution to our Society by showing what a collection could be gathered together in three months almost at our back door.

Dr. R. Gordon Agnew gave a splendid evening of moving pictures: the first our Society has seen of the Bo Gungka, and Tibetan Snow ranges beyond Tatsienlu, with the rivers, valleys, and wild nomadic life of that entrancing region.

Last, but by no means least, Commander Settle of U.S.S Palos, held us enthralled while he lectured on his ascent into the stratosphere in 1933, with his fellow aeronaut Major Forney, when they made an official world record of 61,236 feet.

Dr. Liljestrand, who has taught us to expect a carefully arranged lecture of real cultural value, will speak later on "Animal Symbolism in Chinese Art".

The Society's Journal has appeared, No. VI, and certainly crowns all previous efforts in size, material and workmanship, reflecting great credit on the painstaking Editor, Dr. L. G. Kilborn, and the Publishers, the Canadian Press. If we hope to continue the annual Journal we shall probably need to cut down in size and illustrations consonant with our income. We are sure that the new Editor, Mr. W. G. Sewell, will enhance the traditions of our Journal as he sets to work immediately on No. VII. The exchanges and congratulatory messages received from many countries are very heartening to the Society.

Now I am finished, and wish to apologize for my shortcomings as your Chairman, and to promise all my support to my successor in office. In rendering the account of the year's stewardship by the Executive we are conscious of our failures, and earnestly request your constructive criticism, so that the new Executive can follow out your mandate. I have a passionate faith in the future, and the practical success of this Society. I wish to plead earnestly for the application of the principle with which we began today, co-operation in our aims and purpose, and a sincere attempt to do thorough scientific work in the broad spirit of humanity for all our West China peoples, Chinese and non-Chinese. We need to put every ounce of our strength into building up our Society on strong foundations, and to serve worthily the widest interests in West China, but by going deeper instead of being blandly expansive. We need also to use our best intelligence to move forward, and in the language of our Honorary President, J. H. Edgar, "Reach out to the untouched areas". George A. Dorsey, noted anthropologist said, "The more you use your brain the more brain you will have to use".

REPORT OF THE SECRETARY OF THE WEST CHINA BORDER RESEARCH SOCIETY

During the year there have been ten regular lectures, including the annual meeting, and four special lectures. This is the heaviest, and in some ways the best, lecture program that the Society has ever had. All the lectures have been well-prepared and interesting. Some, like that of Mr. Donnithorne, have been the result of long and careful research. J. Huston Edgar, Dr. Lucius Porter, Dr. Harold Smith of Upsala University, Dean Sage, and Captain Settle are lecturers worthy of being on any program.

Thirty-seven new members have been added during the year, making a total of over one hundred and eighty. However, a few are allowing their membership to lapse, and in time will have to be dropped off the list.

An interesting fact is that increasing numbers of the Society's membership are from other parts of the province, from other provinces of China, and also from foreign countries. Still more interesting is the fact that among those who are welcoming or seeking membership in our Society are some scholars of high rank. Sir Eric Teichman, Dr. Lucius Porter, Dean Sage, Prof. Harold Smith, Mrs. Florence Ayscough and Mrs. Wimsatt have joined the Society during the past year, more than one of them as life members.

The program of the year was as follows: —

Sept. 29. Reports of Expeditions during the summer of 1934, by members of the Society.
H. D. Robertson,
W. R. Morse,
R. Orlando Jolliffe,
David C. Graham.

Oct. 20. Tu Fu, the Bard of Ts'ao Tang Ssu. A. J. Brace.

Nov. 24. Through Unexplored Regions of Hsiung Cheng in 1907. (A Visit to the Ogre's Den) J. Huston Edgar.

Dec. 5. Botanical Specimens from the Hsi Kang Region.
Dr. Harold Smith, Upsala University.

Dec. 15. The Golden Age in Hanchow, Szechwan. Rev. V. Donnithorne.

Dec. 18. Natural History Collecting in the China-Tibetan Border. Dean Sage, Mr. Carter, Mr. Sheldon.

Jan. 12. Chinese Boxing. Rev. Clarence Vichert.

Feb. 16. Moving Pictures of Tatsienlu and the Minya Konka. Dr. Gordon Agnew.

March 16. Mencius' Defence of the Moral Ideals of Confucius. Dr Lucius Porter.

April 3. An Ascent into the Stratosphere. Captain Settle, U.S.N.

April 27. The Natural History of Szechwan Province. Ho Wen Chuin.

May 18. Land Settlement and Taxation in China. Rev. Gerald S. Bell.

June 1. Annual Meeting, President's address; Animal Symbolism in Chinese Art. Dr. Liljestrand; Reports of committees; and election of officers and committees.

We may well be proud of our Society and its journal. Let us gladly correct any mistakes we have made, and cooperate in a friendly way so as to make the Society a continued success in the future.

Respectfully submitted,

DAVID C. GRAHAM

Secretary.

June 1st, 1935.

REPORT OF THE EXECUTIVE COMMITTEE OF THE WEST CHINA BORDER RESEARCH SOCIETY

During the year the Executive Committee has held seven meetings, as compared to three meetings held during the previous year.

On September fifteenth the program for the year was adopted, and it was decided to hold most of the meetings in the Education Building of the University on Saturday afternoons.

On November 27 a meeting was held, at which Rev. J. Huston Edgar was present, for the discussion of future plans of the Society. Mr. Edgar made many useful suggestions, and pointed out some still unexplored fields on the China-Tibetan border.

On March 16 a meeting was held to consider a letter from Mr. Chuang Shioh Ben suggesting that there be closer relations between our Society and the Chinese Border Research Society at Nanking. It was voted that a reply be sent suggesting the exchange of publications and stating that members of the Nanking Border Research Society, when visiting Chengtu, will be welcomed as visitors in the meetings of our Society.

The fourth meeting of the Executive Committee was held on April 9. It was voted:

1. That we recommend to the annual business meeting that hereafter only one copy of the Journal be given with one membership, and two with a "family membership."
2. That hereafter all articles for the Journal must be in the hands of the editor by September 15.
3. That all photographs and drawings must be in the hands of the editor by September 15.

Another meeting was held on May 17. It was voted that unless conditions improved in the near future, the editor be instructed to use in the next Journal a minimum of $800.00 and a maximum of $1000.00.

On May 27 the following motions were passed:

1. That we instruct the secretary, in consultation with Dr. Morse and Prof. D. S. Dye, to write to the National Research Council of the United States and the Carnegie Foundation requesting that our Society be given instruments needed for research in West China.
2. That at the annual meeting we ask members of the Society to send to the secretary a list of the instruments needed.

Respectfully submitted,

DAVID C. GRAHAM
Secretary.

JUNE 1st, 1935.

REPORT OF THE EDITOR

"From China to Peru" has real significance for the editor of the Journal. Copies now go to all the most important countries of the world: to the United States, to Great Britain, Canada, Argentine, Peru itself, Soviet Russia, India and Sweden. This list is not inclusive of all the lands from which learned societies, well known libraries, or distinguished individuals subscribe to our Journal or receive copies as members of the society, or in exchange for other publications.

Acquiring information about this interesting corner of the world is the most important function of the society. Only second in importance is making this information available for others. Our membership is not large and this latter task strains our resources to the utmost. The original edition of Volume II is already exhausted. Only a very few copies of Volume I remain, and these are reserved for libraries. We have therefore learnt that if we are to supply the demand we must print sufficient copies of each volume so that there will be some in reserve when needed. To do this we have had to tie up our money, but now because of lack of ready funds there is danger of having strictly to limit the size of future journals, unless more money is available. We must endeavour to increase our membership and encourage the sale of journals: we would urge all those with incomplete files to purchase the volumes they require without delay.

The Executive has wisely decided that subject to the agreement of the Annual Meeting only one copy of the Journal should be given to each member. At present by the extra payment of $2.00 the wife or husband of a member becomes entitled to an additional copy of the journal. Each copy distributed in this way represents in the case of Volume VI a definite loss to the Society of about $2.00.

The number of Journals at present on hand is as follows: Vol. I 15 copies; Vol. II (reprinted) 292 copies; Vol. III 141 copies; Vol. IV 153 copies; Vol. V 243 copies; and the English-Giarung Vocabulary 255 copies. This represents at a conservative estimate an asset of about $3500.

During the year Volume VI has appeared, being edited by Dr. L. G. Kilborn, who is now on furlough and to whom the Society owes a great debt. Volume II has been reprinted and is available for members and others who may desire to purchase it. It is hoped that Volume VII will be published at the end of the year.

Wm. G. Sewell
Editor

May 26th, 1935.
Chungking.

REPORT OF THE TREASURER

Statement of Account, June 1st, 1935

Balance reported to the Annual Meeting, June 9th, 1934			.58
Grant to Pub'n Journal			300.00
Received during the year from members fees			
28 double	@ 7.00	196.00	
62	@ 5.00	310.00	
3	@ 2.00	6.00	
		512.00	512.00
Received from sale of Journals, sundry agents and individual copies			559.94
Exchange on cheque and sundry			8.50
Grants to publication from Harvard Yenching Fund			325.00
			250.00
			1956.02
Postage on Journals - -		176.94	
Electric light - -		6.30	
Programs - -		3.00	
Curtains for windows - -		27.75	
Messengers - -		2.70	
Envelopes - -		13.50	
Book-case - -		15.00	
		245.19	
Publishing Kiarung Dict'y		140.00	
Publishing Reprints Vol II		195.00	
Publishing Vol. VI (1934)		2038.26	
		$2618.45	
Overdraft underwritten by a few friends of the Society			662.43
			$2618.45

W. A. ALBERTSON.
Treasurer

I have examined the accounts and am satisfied that this statement is correct,

GERALD S. BELL.

ANNUAL MEETING OF THE WEST CHINA BORDER RESEARCH SOCIETY JUNE 1, 1935

The meeting was held in the Canadian School, beginning promptly at 2.30 p.m.

President Brace gave the president's annual address. He reviewed the work of the year, and some of the problems that the Society is facing. He called attention to the increasing membership, the wide popularity of the Journal, and the noted people that have lectured to the Society or joined the Society during the past year. He declared that he would always do what he could for the Society, and urged others to cooperate helpfully. He express strong faith in the future of the Society.

Dr. Harry Liljestrand then gave his lecture, "Animal Symbolism in Chinese Art." He first gave a history of animal symbolism throughout Asia, and interactions of different cultures with each other and with China. He gave a bibliography for the study of Chinese symbolism, showed pictures illustrating animal symbolism in Chinese art, and finally illustrated his talk with jade, bronze, and embroidered figures from the University Museum of Archaeology.

The meeting then adjourned to the lawn, where tea was served by wives of executive members. A business meeting was held on the lawn.

The membership committee then gave its report, and D. C. Graham read the report of the executive and of the secretary. Mr. Albertson read the treasurer's report, and the auditor's report followed.

On recommendation of the Executive Committee, it was voted that hereafter only one copy of the Journal be given with one membership, and two with a family membership.

All the other recommendations of the Executive Committee were approved.

The report of the Nominating Committee was received, and the officers and committees elected *(see page 9)*.

A vote of thanks was extended to the ladies for providing tea and refreshments. The meeting was adjourned.

Respectfully submitted,

DAVID C. GRAHAM.
Secretary.

LIST OF MEMBERS

Any change of address or errors in the following list should be notified without delay to the Secretary of the West China Border Research Society, The Union University, Chengtu, West China.

HONORARY MEMBERS

Date of election	*Name*	*Address*
1935	Chiang Kai-shek,	Generalissimo, Nanking
1935	Chiang Kai-shek,	Madam, Nanking
	Cunningham, R.,	Tatsienlu
	Edgar, J. H.,	F.R.G.S., F.R.A.I., Tatsienlu
1935	Smith, Prof. Harold,	D.Sc., Upsala University, Sweden
	Torrance, T.,	F.R.G.S., 25 Warrender Park Rd, Edinburgh

MEMBERS

*(*Indicates Life Members)*

1935	Abrey,	F.E.L., Chengtu
1928	Agnew,	Dr. R.G. ,Chengtu
1930	Agnew,	Mrs. R.G.. Chengtu
1933	Albertson,	W.B., Chengtu
1935	Allen,	Miss Mabel A., Chengtu
1934	Allen,	Dr. Stewart, Kiating
1934	Allen,	Mrs. Stewart, Kiating
1931	Anderson,	Dr. H.G., Chengtu
1934	Anderson,	Dr. R.M., Chengtu
1934	Anderson,	Mrs. R.M., Toronto, Ont., Canada
1932	Argetsinger,	Miss Minnie, Toronto, Ont., Canada
1931	Arnup,	Dr. J.H., 299 Queen St., W., Toronto, Canada
1935	Ayscough,	Mrs. F., (Mrs. H. F. MacNair) University of Chicago, Chicago
1935	Bacon,	R.L., Kiating
1932	Baranoff,	A.T., Peiping
1931	Bassett,	Miss B.E., Chengtu
1924	Beech,	Dr. Joseph, Chengtu
1932	Bell,	G.S., Chengtu
1932	Bell,	Mrs. G.S., Chengtu
1928	Best,	Dr. A.E., Chengtu

1934 Billington, Dr. J.G., Mienchu Hsien
1934 Bookless, A., c/o Salt Gabelle, Chungking
1934 Bookless, Mrs. A., c/o Salt Gabelle, Chungking
1931 Boreham, Archdeacon F., The Bible House, London
1931 Bowles, Dr. Gordon, Harvard University
1933 Bridgeman, C.A., Junghsien
1923 Brown, H.G., Chengtu
1930 Brown, Mrs. H.G., Chengtu
1934 Buzzell, A.B., Chengtu
1934 Buzzell, Mrs. A.B., Chengtu
1922 *Brace, A.J., Chengtu
1930 Brace, Mrs. A.J., Chengtu
1934 Brace, Brockman, Chengtu
1986 Brace, Carman, Chengtu
1935 Cairncross, Alex. T., Chengtu
1934 Carter, T. Donald, Am. Mus. Nat. Hist., New York
1934 Cavaliere, E.A., Chengtu
1933 Chang, C.C., Chungking
1934 Chang, H.L., Chengtu
1931 Chang, Dr. Lincoln G., Chengtu
1935 Ch'en Hsi Song, Chengtu
1933 Chiu, Charles, Chengtu
1934 Chuang Shioh-pen, Nanking
1934 Chu, Huan Chang, Chengtu
1931 Collier, Dr. H.B., Chengtu
1931 Collier, Mrs. H.B., Chengtu
1929 Cook, Thomas, Kiating
1926 Crawford, Dr. W. ,Chengtu
1932 Crawford, Mrs. W., Chengtu
1935 Creighton, G.W., British Consulate, Peiping
1935 Criswell, Dr. Marion I., Suifu
1932 Crook, Dr. R.L., Yachow
1931 Cunningham, Dr. E.R., Chengtu
1931 Cunningham, Mrs. E.R., Chengtu
1935 Dai, Dr. David S.K., Chengtu
1931 Darby, Miss L.W., Toronto, Ont., Canada
1934 Den, Kwang Lu, Chengtu
1930 Dickinson, F., Chengtu
1932 Dickinson, Mrs. F., Chengtu
1934 Dju, Huan Chang, Chengtu
1930 Donnithorne, V.H., Hanchow
1934 Donnithorne, Mrs. V.H., Chengtu
1930 Downer, Miss Sara B., Chengtu
1932 Duncan, Marion H., 569 Palmer Rd , Bellefontaine, Ohio
1922 *Dye, D.S., Chengtu
1930 *Dye, Mrs. D.S., Chengtu
1931 Fang, S.H., Chengtu
1928 Franck, G.M., Chengtu

1935 *Flavelle, Sir Joseph W., Queen's Park, Toronto
1933 Fong Da Ran, Chengtu
1932 Fosnot, Miss P., Chengtu
1932 Foster, Miss B.L., Chengtu
1935 Gabosch, Miss Ruth, Chengtu
1934 Gentry, Dr. W. Max, Chungking
1922 Graham, Dr. D.C., Chengtu
1932 Graham, Mrs. D.C., Chengtu
1931 Hartwell, Miss L.G., Tzeliutsing
1929 Hibbard, E., Chengtu
1934 Ho Chin Fu, Chengtu
1934 Hockin, Mrs. L., Kiating
1934 Holden, Bishop J., Chengtu
1934 Holden, Mrs. J., Chengtu
1934 Holder, R.R., Tatsienlu
1934 Huang, Prof. F.K , Chengtu
1934 Huang, Mrs. F.K., Chengtu
1934 Hudspeth, W.H., Chaotung, Yunnan
1932 Hutchinson, Miss I., Chungking
1934 James, Harold, Tatsienlu
1934 James, Mrs. Harold, Tatsienlu
1935 Jarvis, R.Y., Am. Consulate, Hankow
1930 Jolliffe, Dr. R.O., Chengtu
1930 Jolliffe, Mrs. R.O., Chengtu
1933 Jolliffe, William, Chengtu
1933 Kao Yoh Lin ,Chengtu
1933 Kao, Mrs. Y.L., Chengtu
1925 Kilborn, Dr. L.G., Chengtu
1935 Kilborn, Miss Cora, Chengtu
1931 Kitchen, J., Chengtu
1931 Kitchen, Mrs. J., Chengtu
1930 Lechler, Dr. J.H., Mienchu
1931 Lenox, Dr. J.E., Chengtu
1932 Lewis, Dr. S., Chengtu
1932 Lewis, Mrs. S., Chengtu
1922 Liljestrand, Dr. S.H., Chengtu
1931 Liljestrand, Mrs. S.H., Chengtu
1934 Lin Min Guin, Chengtu
1924 *Lindsay, Dr. A.W., Chengtu
1931 Lindsay, Mrs. A.W., Chengtu
1932 Liu Shao Tzu, Chengtu
1935 Liu, D.K., 22 Passage 967, Ave. Joffre, Shanghai
1932 Liu Li Hsien, Chengtu
1930 Longley, R.S., Chungking
1928 Lovegren, L.A., Minneapolis, Minn.
1935 Lo Djung-shu, Chengtu
1934 Lü Dsong Lin, Dr., Chengtu
1934 MacGowan, Miss C., Chengtu

1935 McCurdy, W.A., Chungking
1935 McCurdy, Mrs. W.A., Chungking
1933 Manly, Dr. W.E., Chengtu
1932 Mathieson, H., Wu Tung Chiao
1932 Mathieson, Mrs. H., Wu Tung Chiao
1935 Menzies, Prof. J.M., Cheeloo University, Tsinan
1932 Meuser, Dr. E.N., Chengtu
1935 Miller, Dr. Jean Ewald, Toronto, ont., Canada
1930 Moncrieff, J.E., Chengtu
1935 Moncrieff, Mrs. J.E., Chengtu
1935 Money, Miss Mabel, Chengtu
1922 *Morse, Dr. W.R., Chengtu
1930 Morse, Mrs. W.R., Chengtu
1926 Mullett, Dr. H.J., Chengtu
1930 Neave, J., Toronto, ont., Canada
1936 Nyholm, Erik, Chengtu
1934 Oliver, Dr. J.W., c/o Br. Consulate, Chungking
1930 Openshaw, Dr. H.J., 152 Madison Ave., New York
1928 Peterson, Dr. R.A., Chengtu
1933 Peterson, Mrs. R.A., Chengtu
1922 *Phelps, Dr. D.L., Chengtu
1933 Phelps, Mrs. D.L., Chengtu
1935 Pickens, C.V., 87, Wufu Road, Hankow
1922 Plewman, T.E., Chengtu
1935 Plumer, Mrs. J.M., Customs House, The Bund, Shanghai
1934 Pollard, Prof. R.T., University of Washington, Seattle, Washington
1935 *Porter, Lucius C., Yenching University, Peiping
1926 Quentin, A.P., Kiating
1934 Quentin, Mrs. A.P., Kiating
1925 Robertson, H.D., Chengtu
1935 Rock, Dr. Joseph, F., 28 Shih Chiao P'u, Yunnan Fu
1930 Russell, Miss L.E., Toronto, Ont., Canada
1935 *Sage, Dean, Am. Mus. of Nat. Hist , New York
1935 Sage, Mrs. Dean, Am. Mus. of Nat. Hist., New York
1934 Sargent, Douglas Neel, Chengtu
1933 Sax, G., Paris, France
1933 Sax, Mrs. G., Paris, France
1927 Sewell, W.G., Chengtu
1933 Sewell, Mrs. W.G., Chengtu
1934 Sheldon, W.G., Am. Mus. Nat. Hist., New York
1934 Sibley, W.E., Junghsien
1934 Sibley, Mrs. W.E., Junghsien
1933 Simkin, R.L., Chengtu
1933 Simkin, Mrs. R.L., Chengtu
1926 Small, W., Chengtu
1931 Small, Mrs. W., Chengtu
1934 Smalley, F.A., Chengtu

1935 Smalley, Mrs. F.A., Chengtu
1934 Smith, F.N , Yachow
1934 Smith, F. Tangier, Chicago
1928 Sparling, Dr. G.W., Chengtu
1933 Sparling, Mrs. G.W., Chengtu
1932 Spooner, R.C., Chengtu
1932 Spooner, Mrs. R.C., Chengtu
1934 Stanway, N., Fowchow
1934 Starrett, O.G., 150 Fifth Ave., New York
1934 Starrett, Mrs O.G., 150 Fifth Ave., New York
1934 Stewart, Miss A. Jean L., Luchow
1931 Song, Bishop. C.T., Chengtu
1934 *Teichman, Sir Eric, Br. Legation, Peiping
1930 Thexton, Miss A , Chengtu
1934 Tomkinson, L., Chengtu
1934 Tomkinson, Mrs. L., Chengtu
1935 Tong, Hollington K., China Press, Shanghai
1930 Vichert, C.L., Suifu
1934 Votaw, M. E. St. Johns U., Shanghai,
1930 Walmsley, L.C. Chengtu
1934 Walmsley, Mrs. L.C., Chengtu
1935 Wang. Yuan Hwa, Chengtu
1935 Wang, Wallace, Chengtu
1935 Ward, Miss A.I., Chengtu
1931 Weigolt, Dr. Hugo, Provincial Museum, Hanover, Germany
1935 Wellwood, Miss C., Chengtu
1934 Wheeler, Surg-Lieut, Chengtu
1925 Wilford, Dr. E.C., Chengtu
1934 Wilford, Mrs. E.C., Chengtu
1929 Williams, Dr. T.H., Chengtu
1932 Willmott, L.E , Chengtu
1934 Wimsatt, Miss G., 1511, 11th St., N.W., Washington, D.C.
1930 Wood, C.F., Suifu
1930 Yang, S.C., Chengtu

INDEX.

The Journal of the West China Border Research Society has been published since 1922, first as a biennial publication, and now as an annual journal. It prints articles on any phase of West China culture, either Chinese or non-Chinese. The results of any type of research dealing specifically with West China problems are welcomed. Authors are requested to use Wade's system of romanization, and to insert the Chinese characters in the manuscript. Place names should be spelled according to the system adopted by the Chinese Post Office. When small places on the border, not included in the Post Office Directory, are mentioned the Chinese characters should be included. All papers submitted should, if possible, be typewritten, using double spacing and leaving a broad margin. Articles, photographs or drawings for publication in Volume VIII must be in the hands of the editor not later than 15th September 1936.

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All correspondence relating to the Journal should be addressed to the editor:

William G. Sewell, Union University, Chengtu, West China.

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