### A PRELIMINARY REPORT OF ARCHÆOLOGICAL INVESTIGATIONS ON THE SINO-TIBETAN BORDER OF SZECHWANS

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#### INTRODUCTION

During the year 1930-'31, while holding a scholarship from the Harvard-Yenching Institute, I received permission from the Institute to engage in ethnological and anthropological research on behalf of the University Museum of the University of Pennsylvania. The Museum had arranged to cooperate with the Academy of Natural Sciences of Philadelphia in its West China zoological expedition and I was privileged to represent the University Museum.

It was my good fortune to meet at Yachow J. H. Edgar F.R.A.I., of the China Inland Mission Station in Tatsienlu, a man of long experience. His special knowledge of the frontier regions was invaluable and I have to thank him for his wholehearted cooperation and interest in all of my undertakings.

I had the pleasure of having J. H. Edgar with me as a traveling companion on four successive trips. The first followed the regular route to Batang as far as Hokow and thence through northern Minya and back to Tatsienlu by the Yülong valley. The second was up the long earth rent from Tatsienlu to Sharatang, this side of Luho (Hordrangu), and then over the high Tanli (Lhajamindara) Pass to Geshichia, Damtong, Bawang, Badi, Choschia, and the Chinese colonies of Hsüching and Tsonghua, returning to Tatsienlu by way of Maoniu and the Ta Pao Pass. The third trip was to the Gonka Gompa at the foot of the Bula Gonka and return. Finally, we returned to Chengtu by way of Mungkung, the Hong Chino Pass and Lifan, arriving at Chengtu in the middle of November. From thence I returned down the Yangtze river to the coast.

<sup>§</sup> Manuscript received in July, 1932.

Since my primary work was ethnological and somatological I had not anticipated undertaking any archeeological investigations when consulting with the Academia Sinica and the government while in Nanking. In consequence, specimens collected were left in deposit at the Museum of the West China Union University pending the conclusion of some arrangement suitable to that Museum, to the Academia Sinica and to the University Museum of the University of Pennsylvania.

I have to thank Generals Liu Wen Hwei and Ten Hsi Ho of Chengtu, the magistrates of Tatsienlu and Sampa, Messrs. Lung and Yang, and the numerous authorities local and provincial for permission to travel and for protection en route. I have also to thank the museum authorities of the West China Union University, in particular Mr. Daniel S. Dye, Dr. M. Kilbourn and Dr. G. Sparling for their interest and cooperation in seeing that the specimens are properly cared for in the museum.

Lastly, I am greatly indebted to my friend Dr. V. K. Ting of the Geological Survey, in whose hands I leave this manuscript, for his painstaking work in editing this paper, and I can only hope that his efforts will have borne fruit by awakening interest in a more extensive and better equipped expedition which will continue work in this new archæological field of Eastern Tibet.

#### GEOGRAPHICAL DESCRIPTION

In order to appreciate more completely the conditions under which the archæological materials referred to in the next few pages have been discovered, it will be necessary to have some idea of the geographical and topographical features of the area beyond the plains of Chengtu in the region now known as Chwan Pieu, the immediate area in question.

Chengtu lies about 1,600 feet above sea level and fifty miles due east of the eastern extremity of the tremendous crescentic continuation of the great Himalaya range which encircles the entire southern and southwestern borders of the Tibetan plateau. Only here and there where some mighty river forces its way through treacherous and narrow gorges is the series of mountain ranges broken.

Although a careful survey of the eastern mountainous ranges is wanting it is generally conceded that the main spine reaches an average height well above the snow line (17,000 ft.) and in numerous points is considerably over 22,000 ft., reaching its peak within a week's journey of Tatsientu where the Bula Gonka\* rises to over 25,000 ft. Beyond this intermediate barrier region lie the grasslands which form the bulk of the plateau of Tibet. The barrier region itself is of two kinds: the high wooded valleys, which lead from the large river valleys up to the high passes over which alone one can reach the grasslands; and the desert valleys by which the larger rivers (Min, Yalung, Tatu etc.) unite with the Yangtze below the 28th parallel.

This trifold division into grasslands (generally above 12,000 ft. \*\*) wooded valleys (between 6,000 and 12,000 ft.), and desert river valleys, (3,000-6,000 ft.) should be borne in mind in considering the archæological materials. Although not a consistent rule, it may be taken as a working basis that all loess deposit finds are in the grasslands; rock shelters are in the wooded valleys; and the desert river valleys are practically devoid of any archæological material. Casual specimens dissimilar to both the loess and rock shelter artefacts occur throughout both the wooded valleys and the grasslands.

#### CULTURAL DIVISION

There are two general categories into which the artefacts fall: 1) those associated with deposits of loess or in the vicinity of loess and 2) those bearing no proximal relationship to it.

The former category is, with two exceptions, limited to loess deposits between Dawo and Sharatang. One exception is to be found about fifty li (15 m.) to the northwest of Tatsienlu, likewise associated with loess; while the other exception, although showing similar workmanship has, at least at present, no connexion with loess.

The latter category is of a different type of workmanship and is to be found scattered at random along the main routes, along valley bottoms and more

Sometimes referred to as the Minya Gonka.

These estimates are only general approximations. The different valley systems may vary as much as 2,000 ft. or more from the above quoted figures.

especially at points of juncture of rivers, streams or roads. The principal distinctions between the workmanship and materials of the two categories may briefly be tabulated as follows:

#### ARCHÆOLOGICAL SITES

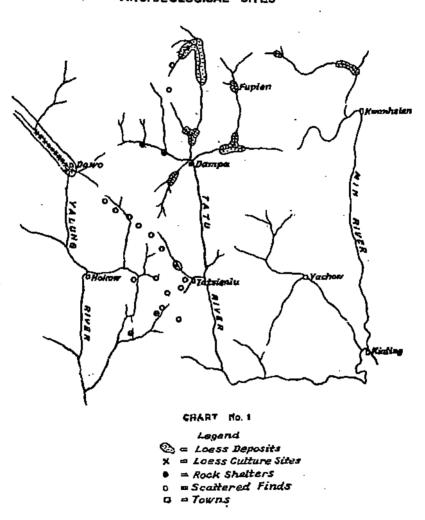


Fig. 1.—Map indicating the position of the archaeological sites.

- 1. Specimens from the loess regions are inclined to be smaller and show much finer secondary work than those disassociated with loess.
- By far the greater majority of artefacts from the loess regions show definite attempts to produce points and gouge-like cutting edges whereas the scattered finds are seldom pointed or sharpened.
- 3. Most of the specimens of the former category are of hard stone and are suited to conchoidal or sharp fracture whereas the large majority of the latter are of softer stone and are often considerably worn.
- 4. Most of the artefacts from the loess regions appear to be household utensils (scrapers, borers, gouges etc.) and the uses to which they have been put are more readily determined than in the case of the other specimens which appear to be associated more with tilling, digging and other agricultural pursuits.
- 5. Only in the loess deposits were there other associated articles such as pottery, bone utensils, charcoal, red ochre and human remains, with one exception, which will be noted below. This may be explained, however, by the fact that invariably these latter were found embedded and only revealed along the vertical cleavages of the loess deposits whereas in the case of the scattered finds none was found embedded in situ.

### ARTEFACTS AND HUMAN REMAINS ASSOCIATED WITH LOESS DEPOSITS<sup>1</sup>

Since the various artefacts found in the loess deposits were found either definitely embedded in it, or undeniably from certain strata or layers in which

In the present paper, the word losss is obviously used in its lithological meaning of eolian grey silt and does not convey the express assumption that this formation is definitely Pleistocene. Although similar to the N. China losss, the W. Szechuan losss, because it contains a Neolithic industry, is apparently of a younger age. Anyhow, the question can only be settled by a general physiographical and palæontological survey of the area.—Concerning the redeposited losss, it must be observed also that this expression is equivocal. Stratified and torrential losss-like deposits may really correspond to the desintegration of an older losss. But very often, also, they represent the basal, torrential beds of a lossic cycle, contemporaneous, or even older, than the colian lossic sheet spread over the slopes.—On another hand, specimens collected in the front of partly ortificial terraces, such as they are illustrated on plate I, fig. I may be secondarily intruded. (Note of Editor).

pottery, red ochre, bone utensils and human remains were discovered, their importance both from the chronological and cultural aspects is of far more importance than the more casual and unassociated occasional specimens from the other regions. For this reason it seems best to give in considerable detail their peculiar relationships both to the loess deposits and to the present day culture of the regions in which they occur. Chart illustrates the location of the loess deposits. The identity of the loam has been established by Prof. Dr. A. Heim (Zürich), formerly of the Sun Yatsen University of Kwangtung. They vary in thickness from four to thirty feet and in no place do they extend over an area of more than forty or fifty square metres. Usually they occur in patches a few hundred feet in diameter.

The deposits are of two kinds: undisturbed and re-deposited. The quality of the loess, in both cases, is identical, the difference lying in their appearance. In the former, the loam retains its original unstratified condition, which suggests an aeolian origin. In the latter, there is distinct stratification and mixtures with gravels and lenses of extraneous silts. The numerous earth-quakes not unfrequently, either through changing a river's course, or blocking its passage, cause the formation of lakes where, if the nature of the blockage permits, the beds, when drained by the erosion of some new outlet, will reveal level plains of fairly pure loess. Such lacustrine redeposits are found at Dawo and Sharatang, where they form the river bed; while, on the hill slopes, are the zones of undisturbed loess.

Some years ago, near Sharatang, Mr. Edgar came across what appeared to him human remains embedded in the loess. That they were either partially burned or mixed with ashes is testified to me by Mr. Edgar who discovered them at a depth of ten to twelve feet embedded on the vertical racing of a terrace of undisturbed loess.\*

The appearance of ashes in conjunction with the bones would seem to indicate a burial; but the fact that the find was not intrusive proves that the bones must have been laid at a time when the loess was yet forming and before the overlying layers of untouched soil were deposited.

At the spot marked X in Diagram.

Fig. 2.—Two implements from the toess, Tatsienlu. Slightly reduced

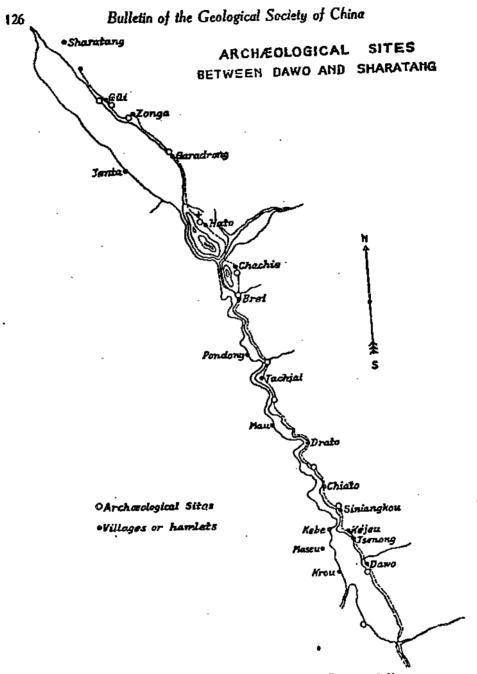


Fig. 3.—Map of the archeological sites between Dawo and Sharatang.

It is this discovery which Edgar kept in mind and which later led to the eventual disclosing of extensive cultures associated with loess of which we shall treat in the next few pages.

Early last spring, while in Shanghai, in conversation with Prof. Dr. A. Heim of Zürich, I learned of Edgar's second discovery; two stone artefacts at the same site, and practically the same location as the former discovery. One artefact (fig. 2) was found in situ at a depth of about 10 feet and the other (fig. 3) at the foot of the creft on the terrace floor. Dr. Heim carefully avoided dating the deposits but was certain that the material in which the artefacts occurred was loess.

Following this latter clue Mr. Edgar kindly consented to take me to the spot in order to make more extensive investigations. On our first trip together we came across a score of implements, all scattered surface finds, and it was not until after we had reached Dawo and had come into the loess zone that we discovered any concentrated number of sites. Between Dawo and Sharatang I listed twelve different localities from where implements or pottery were recovered (fig. 3). One other site I found later after crossing the river at Dawo. In this connexion it is of importance that we followed the river along its left bank. Had we pursued also the opposite side of the valley we must undoubtedly have come across other sites.

Concerning the location of the various sites in relation to the loess deposits, the following conditions usually obtain:

- a. loess deposits occur chiefly along the eastern face of a valley.
- b. they occur generally at the junction of valleys or on plateau regions near junctions.
- c. the deposits are deepest in the valley bottoms and thin out towards the top.

Of the thirteen sites located in the valley, two are of special importance, considering the number of artefacts found which total nearly one hundred. One is at Güi near Sharatang and the other between Chachie and Bréi. All of the sites are located on the southern extremities of the deposits where there

is the most shelter from the driving winds which sweep down the valleys in the winter.

The deposit at Giii (Pl. II, b) is by far the largest and richest as regards the number of artefacts recovered and the possibility of future excavations. At Chachie, although the site is smaller and the number of artefacts collected not as great, the workmanship is more refined and the implements more carefully formed into types, something which cannot be said of the variegated lot from Gii.

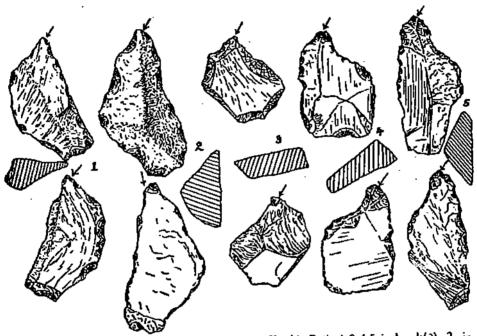


Fig. 4.—Borers and scrapers, from the loess, at Chachie-Bréi. 1,3,4,5 in basalt(?). 2, in red sandstone. Reduced to 2/3.

Quite unlike the implements from the scattered surface finds, those from the loess exhibit few types. The purpose has not been apparently to obtain form but cutting edges and in this respect they far outdo the larger and bulkier but less sharpened artefacts from the surface.

#### STONE ARTEFACTS

If an attempt were made to classify all of the types of implements from the loess sites, it would be necessary to list practically all of the specimens individually inasmuch as cutting edge and not shape, as suggested above, seems to have been the motive of the arteficer. Below are illustrated only a few of

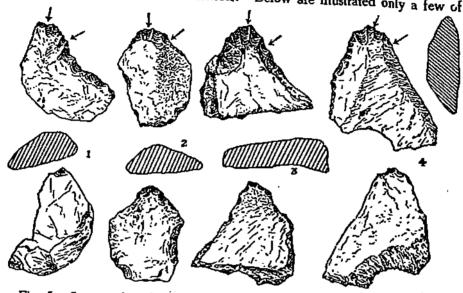


Fig. 5.—Scrapers, from the loess, at Chachie-Bréi, in basalt(?). Reduced to 2/3. the three hundred odd specimens which have been recovered. I have attempted to isolate the shapes of the cutting surfaces as a means of classification. Following this plan I have arranged them in some sort of series form as follows:

- I. Points: text-figure 4.
- 2. Scrapers: text-figure 5.
- 3. Combination of points and scrapers: text-figure 6.
- 4. Large scraper: text-figure 7.
- 5. Borers(?): Plate IIa.
- Scrapers or flakes in iron ore: text-figures 8 and 9. Those three specimens were found near Chachie-Bréi and at Gūi. The

specimens fig. 8a and 8b were lying by the roadside just beyond. Bréi, towards Tachiei. The specimen fig. 9 was recovered in silu at ten feet, on the wall of terrace B at Güi.

#### POTTERY

#### Distribution and Description.

Potsherds were recovered from various localities between Dawo and Sharatang, in the Dawo district; and at Lei and Drozer in Choschia. In every case the finds were embedded in loess, and were associated with lithic implements, and very often with charcoal, red ochre and bone utensils.

At Dawo, along the river front where the redeposited loess has been washed away by the river, I came across the first piece of pottery embedded at

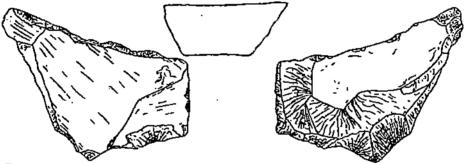


Fig. 6.—Combined borer and scraper, from the loess, at Chachie-Bréi. Reduced to 2/3.

a depth of six feet. It was lying in conjunction with portions of two human ribs and fragments of dog bones and teeth. The colour is light brick; finger marks are indicated on both surfaces, and the paste is rough and shale tempered (fig. 10a).

After careful investigation of the entire river front I found several other potsherds, but in no instance was there enough to give much clue as to the nature of the vessel. There were several rim sherds, and one fragment with an applique "pie rim", or scalloped pattern (fig. 10b).

On several sherds there was evidence of rubbing, but not of polishing; and there was no definite indication of wheel turning. Colours varied from black to ochre, and the average thickness was about five mms.

On the pass at Lato, at a point where the course of the river is diverted by a small hill, I recovered several broken fragments of the same colour and general consistency as those at Dawo (fig. 11a and 11b). They were found along the vertical cleavages of the loess deposits and were uniformly embedded

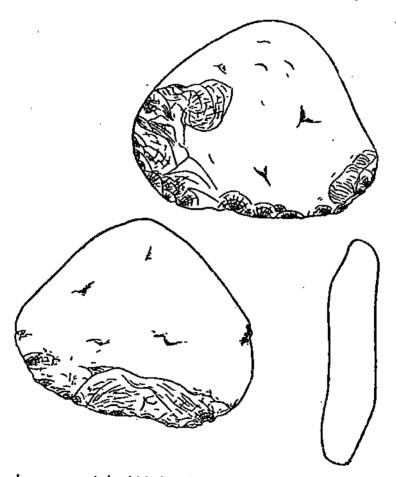


Fig. 7.-Large scraper, in basalt(7), from the loess, at Chachie-Bréi. Reduced to 2/3.

at a depth of four feet. The deposits appear to be of undisturbed losss and are situated several hundreds of feet above the present river valley.

At Zonga I came across several fragments of a hand made pot containing red ochre and several pieces of charcoal (fig. 11c). They were lying by the

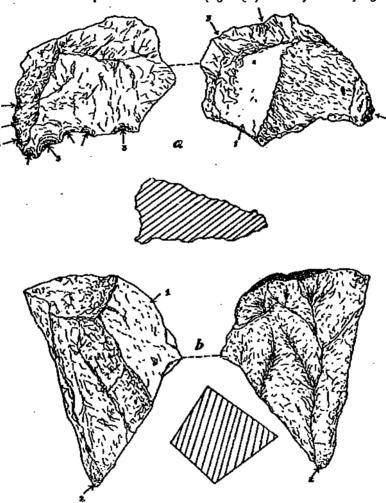


Fig. 8.—a, scraper in iron ore, collected on the surface, near Chachie-Bréi. b, pointed flake, in the same material, from the loess, at Chachie-Bréi. 1, original surface; 2, worn edges; 3, flaked zones. Reduced to 2/3.

roadside five feet below the original surface and had been partially exposed by constant wind and traffic erosion. The ochre formed a solid ball which crumbled into numerous pieces on extraction. Within a few yards of the pottery were several human lumbar vertebræ in position, but it was impossible

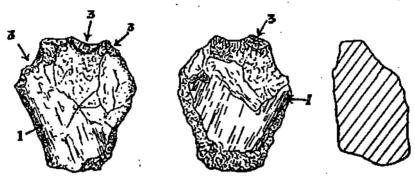


Fig. 9.—Scraper(?) in iron ore, found embedded at 10 ft. (terrace B wall) at Gili. Letters as in Fig. 8. Nat. size.

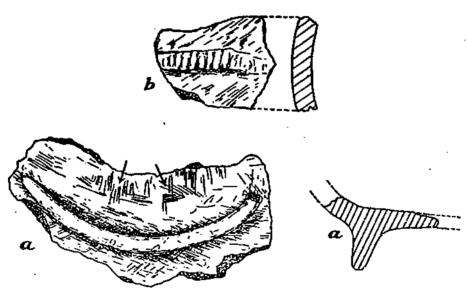


Fig. 10.—Potsherds, collected in the loess, at Dawo. Arrows indicate finger markings.

under the circumstances to make further investigations. It was also at Zonga, considerably below these finds, that I came across a hammer stone and a lump of red ochre embedded at a depth of seven feet in redeposited losss.

At Guy, I found a score or more of fragments, but only two of special interest: one with an incised pattern, and the other with a form of impression on the inner surface (fig. 12a and 12b).

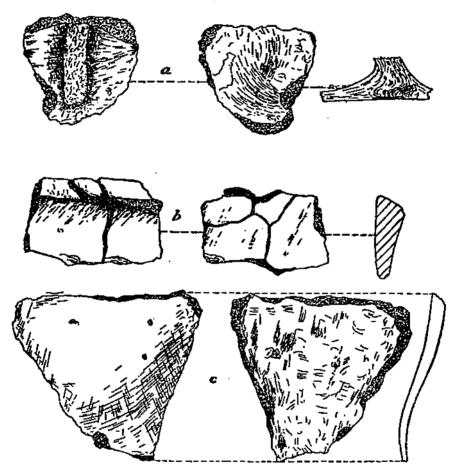


Fig. 11.—Potsherds collected in the loess. Colour light brown outside, black inside: a and b, at the Lato pass; c, at Zonga (with charcoal). Reduced to 2/3.

In Choschia, at Lei and Drozer, the fragments recovered show marked similarity to those from the vicinity of Dawo, and offer confirmatory evidence of a widespread distribution and association of pottery with loess.

Rims. The variety of form and thickness of the rim sherds (fig. 12c) indicates the existence of numerous forms of pots. From the curvature of the

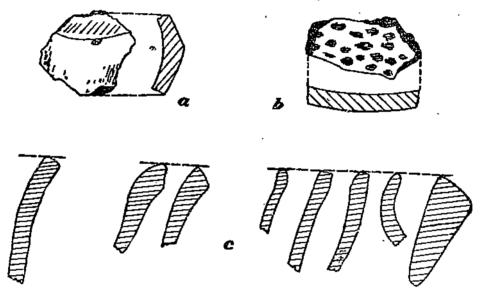


Fig. 12.—a and b, potsherds, from the loess, at Gūi: a, at 7 ft in terrace D; b, at 8 ft. in terrace A. c, various sections of rim sherds observed in the pottery found in the loess. Reduced to 5/6.

pieces, the opening varied from five or six centimeters to twenty or thirty. The thickness of the rims varies from five to fifteen millimeters, according the size of the pot.

Handles. Two handles were found which show clearly the relationship between the archæological and the present day pottery. The specimen fig. 13a was embedded at six feet on the face of the terrace D wall, at Gth, only a few feet away from the original lithic discovery. The specimen fig. 13b is from Dawo, along the river front, from a depth of nearly six feet. Both specimens are black outside and brown inside, and are molded with the hands. The texture in both cases is fine, and even throughout.

The accompanying illustration (fig. 13c) is of a modern vessel from Lato, and shows the position of the handles in relation to the pot. The modern pots are usually smaller, and the handles often small, or appear as lugs. The

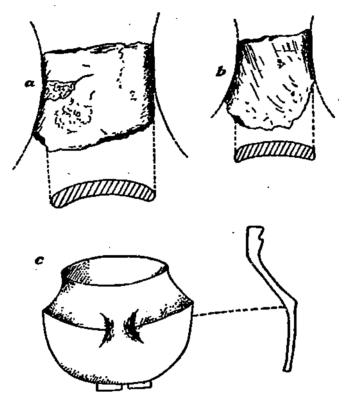


Fig. 13.—a and b, handles, from the loess, at Güi and Dawo. Reduced to 2/3.
c, modern vessel, for comparison, reduced to about 1/4.

walls are thinner, tempered with finer material, and darker in colour, usually black. Pot rests are more symmetrical, and higher; and the entire surface is often rubbed or polished.

#### RED OCHRE

As previously mentioned, a pot full of ochie was found at a depth of about five feet in undisturbed loess above the hamlet of Zonga. Several hundred feet below, in redeposited loess, another lump was found at a depth of seven ft. within a few inches of a hammer stone. At Gii, Dawo and Lato red ochre occurred scattered at various depths in relaid loess; in every case associated with pottery. Nowhere did I see red ochre in use today and none of those whom I questioned were familiar with it, but I have only negative evidence to offer. If it is used today it must be either only on special occasions or in restricted areas.

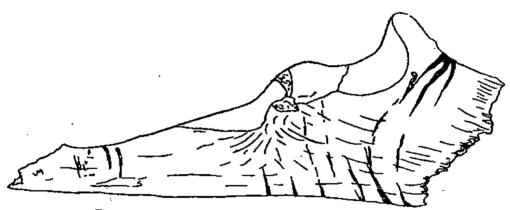


Fig. 14.—Bone implement, from the loess, at Lato. Nat. size.

#### CHARCOAL.

At Gin several pieces of charcoal were found lying together, and form additional proof that the position occupied by the charcoal must at one time have been on or near the surface. The loess in the immediate vicinity is untouched and it is hardly to be assumed as likely that charcoal would be buried without some form of associated objects, say bone or ashes or pottery.

At Zonga again, the occurrence of charcoal in relation to the pot of red ochre would indicate that when the pot came to be there it was either on or near the surface, but now it is five feet and more beneath it.

The only other instance occurrence of charcoal noted is at a point some forty li north of Tatsienlu where several fragments were recovered at depths ranging from five to eight feet in loess. In all cases the specimens are too small to indicate either the genera of the trees or the means by which the original wood was cut.

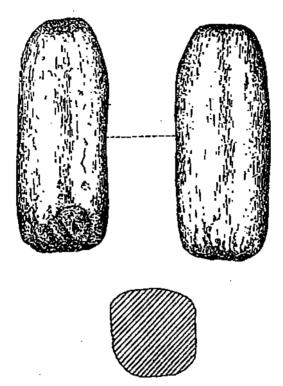


Fig. 15.—Hammerstone, collected on the ground. Reduced to 1/2.

#### BONE IMPLEMENTS

Only two undeniably worked bones were found embedded. Both were made from ungulate ulnæ (yak?). The implement illustrated in fig. 14 was found on the pass at Lato protruding from the loess by the roadside at a depth of four feet below the original surface. It has been cut near the base as for hafting and the point which was evidently the working end is broken off.

Another bony implement is very much worn at the point and was apparently used as a kind of borer. It is conspicuous for the patination which is a deep reddish brown. The patina is uniform throughout and is probably ferrous in nature as there are many hot springs in the vicinity. The specimen was found by Mr. Edgar near the bottom of an old gravel pit six or eight feet deep just above the central clustre of houses of the straggling hamlet of Cheto forty li above Tatsienlu. Lying near it was a hammer stone all round the edges and apparently associated with it.

#### HUMAN SKELETAL REMAINS

Exposed skeletal remains were found at Giii, Zonga, Chachie and Davio. At Giii two vertebræ (one cervical and one dorsal) were lying exposed at the side of the road, four or five feet below the original surface, in undisturbed loess, over one hundred feet above the present river bed.

By chance, both at Zonga and at Chachie, several vertebræ, were exposed; and at Dawo, along the river front, portions of two ribs were found at a depth of seven feet.

The only cranial bones collected were from the "Heavenly Mountain" (T'ien Shan) beyond the lamasery at Dawo. The hillside and the valley below are littered with fragments, many of which are sawn in two, and may have been rejects thrown aside in making the human skull cups used in sacrificial ceremonies. It is of interest that, at the present, at Dawo, "heavenly burials" take place whenever there are any bodies to be disposed of. The writer witnessed three bodies (two male and one female) prepared and fed to the vultures. The report was that, subsequent to the removal of the flesh, the bones were dried, ground to powder, and mixed with zamba, and in this form offered to the vultures, thus completing the burial. The writer has his suspicions as regards the the skulls; for, although obviously many of the bones lying about were quite bleached and worn, there was no indication of any great age. It seems far more likely that the skulls are retained for the purpose above mentioned; at least in the majority of cases.

#### UNWORKED ANIMAL BONES

A careful analysis has not yet been made of the animal bones from the loess deposits. They appear, however, to be of fauna existing in the vicinity today. Those definitely determined are the dog and the yak. Several teeth of some small herbivorous animals, possibly sheep, and the jaw of a rodent, comprise most of the remaining specimens.

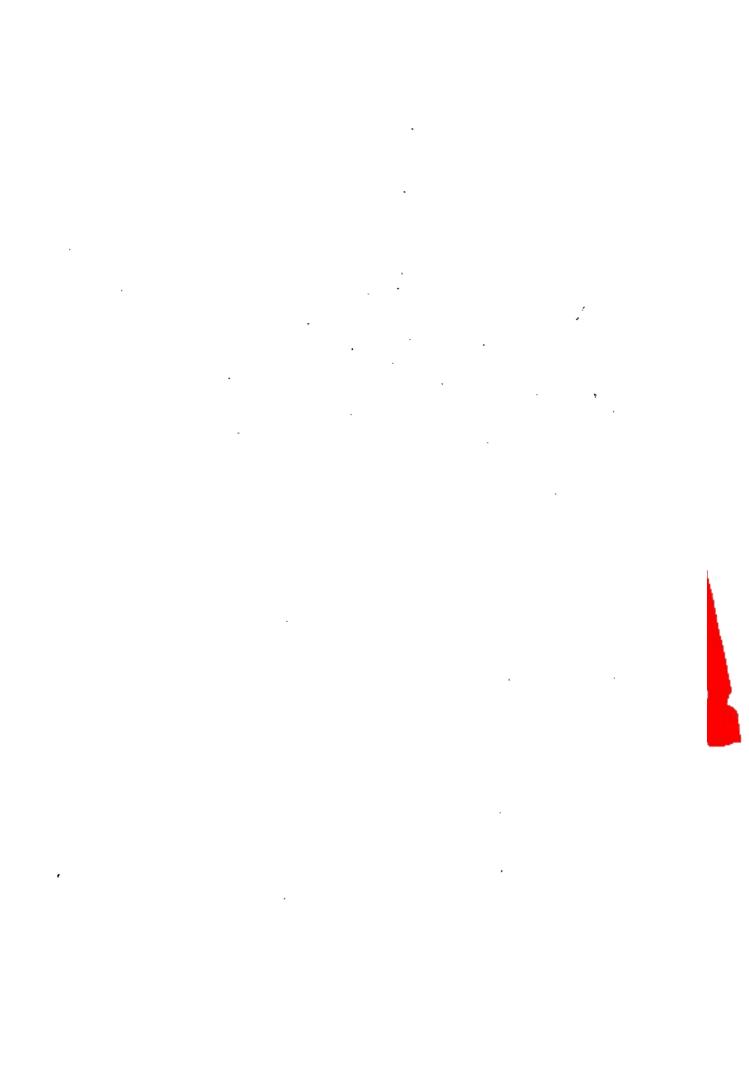
#### ARTEFACTS FROM NON-LOESS SITES

These fall into numerous categories such as rock shelters, caves, the junctions of rivers, valleys or roads, mountain passes, gravel pits etc. For purposes of a preliminary survey, it would only be confusing to enumerate each specimen and the individual circumstances under which it was found. It has seemed better to deal with them collectively, with the exception of the rock shelters which have produced only one type of implement, simple hammer stones (fig. 15) which were found lying about on the surface of the shelter floors. These particular hammer stones were found only in rock shelters and are similar to those in use today. In fact, it is questionable whether they may not be modern survivals. It was not to take the time to dig away any of the accumulated material forming the floors of the shelters. By so doing, it is more than likely that pottery would have been found and a relationship with the northern Yangtze culture might be established. Nothing approaching this latter culture is found beyond the high mountain berriers between the plains of Chengtu and grass lands of Tibet.

In addition to the hammer stones, the chief types of artefacts collected in those conditions may be classified in the following way:

1. Coulter type. Plate III, fig. 1-3.—Observed either obversely, or reversely, those implements present the appearance of a boomerang or coulter, the impression being given by a break in the main axis at about the mid point and by a tapering off at both ends, with the lateral borders more or less curved to form a crescent.—The angle formed by the axes of the two arms is approximately 135.—The implement is generally quite flat (compressed anteroposteriorly). Both ends are capable of use, and are slightly rounded.—Seven specimens.—Locality: generally where the path-crosses a stream-lying, by the roadside. Not necessarily near cultivated or tillable lands.

- 2. Pick type. Plate III, fig. 4, 7, 8.—Specimens pick shaped, pointed at one end, rounded at the opposite end, and bulbous in the centre.—When observed in cross section, the implements are somewhat rectangular in shape.—The length is uniformly about 8 or 9 inches.—Six specimens.—Locality: always found by roadside, and invariably in high regions, either on or just below passes, and not near water nor fields.
- 3. Hoe type. Plate III, fig. 5, 6, 9.—Hoe shaped. Three specimens.
- 4. Sickle type. Plate III, fig. 10, 11, 14.—Specimens crescentic in shape, retouched along the inner curve, but blunt along the outer edge.—One end more or less pointed, but generally worn as by digging or scratching. The other end blunt and broken off sharply.—No evidence of hafting.
- 5. Pitted stones. Plate III, fig. 12, 13.—Scattered along the road, in the grassland only, occur stones of irregular shape and size, with scratches or pits on one or both sides. Some of the stones have mere scratches, or a few nicks on one surface. In others, considerable pits are formed. In no case, however, is the boring or pitting completed through the center.—Three collected as type specimens, but scores observed in the field.—Locality: only in grasslands along the road, or in the vicinity of ruins, or areas under cultivation and habitation. Almost invariably in sandstone. Use: boring anvils, tent pegs pounders, agricultural tools.



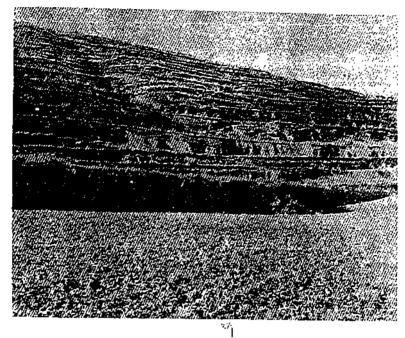
# Explanation of Plate I.

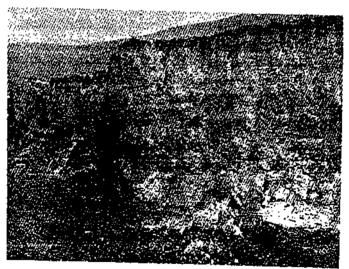
### PLATE I.

- 1.—Loess terraces (artificial?) at Fupien.
- 2.—Redeposited loess terrace, at Dawo.

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Pl. I.



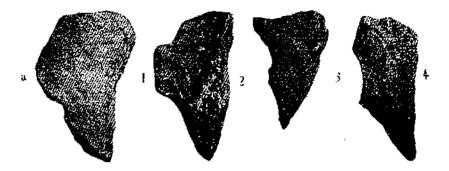




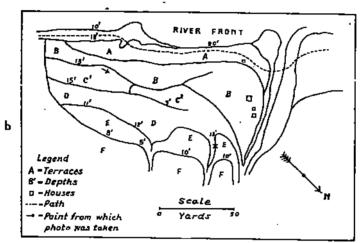
# Explanation of Plate II.

#### Plate II.

- a. Borers (?) or hasted axes (?), from the loess, at Chachie-Bréi. 1,2,4 in sandstone. 3, in chert (?). Reduced to 1/3.
- b. The Gui site, map.
- The Güi site, photograph. The white cross is marked by a cross on the map.



Gũi Site



Güi Site



X = Spot marked on Chart

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## Explanation of Plate III.

#### PLATE III.

Artefacts collected on the ground.

1,2,3 coulter type.—4,7,8 pick type.—5,6,9 hoe type.—

10,11,14 sickle type.—12, 13 pitted stones.

All reduced to 1/6, with the exception of 10,11,14, reduced to 1/4.

