

JETTMAR: The Altai Before
the Turks.

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THE ALTAI BEFORE THE TURKS

BY

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The excavations which were undertaken in the Altai towards the end of the nineteenth century, threw a strong light on ancient times in Central Asia. They provided us suddenly with an unexpectedly detailed survey of the life, culture, and even the world of thought of those human beings whose descendants were to change the face of Europe a few centuries later.

These excavations were peculiarly favoured by fortune. As was the case some sixty years earlier, a kurgan from the last centuries B. C. was discovered near Pazyryk, in which, thanks to its extremely high and rough situation, even perishable substances were found preserved as if in a refrigerator. Certainly it had been robbed, but the horses, complete with harness and saddles, had remained unimpaired, and could be examined and compared down to the last detail, even to the contents of the stomach. A second piece of good luck was helpful in this case. It is probable that, during the work on the last wall which protected the horses, the axe broke, and the grave-robbers had no time to make the attempt again with a new tool.

The West could take only an indirect, yet unlimited part in these discoveries. The most important publications appeared outside Russia, and were illustrated with far better reproductions than parallel Russian works. The authors were the excavators themselves, and this fact warranted an exhausting report. When the Russians attached special importance to a discovery (e. g., the very similar Noin Ula finds), the Russian publication immediately appeared in French or English.

Since 1947, new treasures have been being brought to light out of the Pazyryk refrigerator. The situation has, however, fundamentally changed. The news that a »tattooed Scythian« had been found in Altai was made public by the press of the whole world. (That is, all the more, misleading, because it is based on the idea of a »Scythian Stage«, which in Russian terminology embraces all cultures in the Steppes between 700—200 B. C.,¹⁾ a conception which is not generally accepted in the West). Exact reports are to be found in Russian works only. Their scientific value is conspicuous, but they are difficult to get at. The illustrations are rather poor and the articles lack a resumé in any foreign language. There is little hope of a rapid alteration of these circumstances. There is also little prospect — as far as I can see — of an authorized Russian scientist publishing an official report for the rest of the world.

These circumstances give me a certain right to attempt a short summary of these new excavations. It is also clear that I am limited to Russian printed publications.

Since the nineteen-thirties, however, further important progress has been made. We know, today, not only of the great kurgans, but also of:

1. Monuments which mark the long and complicated road to the origin of this fascinating culture and show the local roots of its development. They put a limit to speculation

¹⁾ See the excellent summary by Hančar 1950, pp. 69—70.

which warns us against trying to explain the Pazyryk Kurgans by far-fetched migration theories only.

2. Further, we know now of the graves of the «little man» of the same time. In this we are in the same happy position as in Transbaikalia. Just as Noin Ula does not stand alone, but rears up out of poorer burial-sites, so is the situation in Altai.

3. Today we know the various neighbouring cultures essentially better than we did in 1929. (In the Pamirs and in the Alai district, through the excavations of Bernshtam, in the northern and western anterior of Altai, through Griaznov's excavations, in Mongolia and Tuva through the only recently published results of Teploukhov's work, and in the further eastern districts, through the explorations of Sosnovskii and Kiselev's «Mongolian Journey»).

4. Thanks to the works of Debets, we can survey today the skull types which correspond to each phase of culture.

I believe it would not be fair to present-day research if I attempted, without this framework, a summary of the publications which are to hand, up to date, on the subject of the new Pazyryk Kurgans. Therefore, I have had to take it upon myself to present the whole development of Altai — more or less from the first appearance of the Europoids in Central Asia, up till the time of the erection of the last great kurgans.¹⁾

As we shall see, this is a continuous story, namely the story of the fate of the Europoids of Altai up to their highest cultural blooming, and also up to their great crisis caused by the invasion of those groups whose final establishment leads to a new era in the history of Central Asia, which culminates in the Khaganate of the Turks.

I. PRE-AFANASIEVO PERIOD.

I omit the Palaeolithic and Epipalaeolithic sites as they neither allow themselves to be torn away from the unity of the Siberian culture-province, nor are there any concrete relations traceable in the later cultures of Altai. As will become clear in the process of examination, the existence of such relations is, owing to other considerations, extremely problematic.²⁾

Therefore I begin with the Neolithic phase, and here I should like to make an advance survey of the neighbouring findgroups, so as to gain, at least, a few «solid points» in the surroundings.

In *Cisbaikalia* and the *Angara district* the excavation work was carried out already in the 19th century. But before the excellent excavations and summaries of Okladnikov we had neither clarity nor chronological system.³⁾ He provided, here, proof of a continually developing culture of Taiga hunters, which, in its inventory shows living connections with the local Epipalaeolithic. The skulls discovered belong to a long-headed, broadfaced and clearly Mongoloid type, which perhaps can be rated as a result of heritage, as the few Late Palaeolithic skull remains found in Siberia, seem to belong also to the Mongoloid

¹⁾ I have had to restrict myself very much, owing to the wide choice of material. With a few exceptions, I have included only photos which have not already appeared in western publications. The same restriction applies to the description of the great kurgans. A further restriction is given by the Russian frontier. The Mongolian Altai is archaeologically unknown.

²⁾ The material up till 1940 is contained, listed, in MIA SSSR Nr. 2 (Paleolit i Neolit SSSR). Supplementary statements in Kiselev 1949, pp. 9—13. Levin offers an appreciation 1950b. The previous summary of Merhart (1928) includes many important observations — also for today. The critique of Kiselev (1951, p. 17) is not fair to a work written in 1928.

³⁾ Most important and most easily available works of Okladnikov are 1935, 1936a, 1937, 1938, 1939, 1949c, and 1949d.

division of race. Economic development makes its way slowly from the hunting of large animals to ever-increasingly intensive fishing. Stock-breeding, except of the dog, is not found. Reindeer-breeding, claimed for this culture by some students, is highly disputable.¹⁾ It is an important fact, that an age-old tradition of woodcarving exists here. We can discern an Isakovo and a Serovo stage.

The cultures of the steppe-belt stand opposite this Taiga province, to which others may be joined of which we cannot yet quite get hold, In *Kazakhstan* there is that complex which we, following Tolstov and Formozov, call »Early Keltiminar».²⁾ The people were rambling hunters in the great steppe districts, and fishermen by the rivers and in the oases. The stone tools show signs of certain microlithic traditions, but the geometrical silices, which are characteristic of large parts of Europe and the Near East, are completely lacking. The pottery yields pointed and round bottomed vessels, and shows a superficial relationship to Pit-Comb Ware. Domestic animals are missing.

In the *Gobi* some other complexes have been pointed out by Teilhard de Chardin.³⁾ Maringer has made valuable contributions and has, above all, shown that a certain similarity of form can be confirmed between the more eastern finds and the Baikal culture.⁴⁾ Besides this, a certain amount of borrowing from the Painted Pottery of the South has taken place.

Between the steppes and the northern forests we find an intermediate zone, from which the Krasnoïarsk region and the Minusinsk district are best known.⁵⁾

What is the situation of *Altai* in relation to these surroundings, now?

We know of the following finds from there:

1. A site near the village of *Kuïum* on the Katun river, which Sosnovskii (1936) discovered during the excavation of Afanasievo kurgans.⁶⁾ The great age of the find is proved by stratigraphy: Under the mound of the kurgan was found an Afanasievo layer, with arrow-heads and remains of bones. Under them, separated by twenty sterile centimetres, a layer of Neolithic character. It contained scrapers, nucleus-like tools, knife-like blades with lateral retouche, and finally fragments of bone-tools, into chinks of which were sticking flint blades. The pottery remains came mostly from a large vessel ornamented with herring-bone designs, which corresponded in form with the ovoidly elongated pots of the following Afanasievo Period. The technique, however, was essentially different. The characteristic roughening of the walls which was brought about by rubbing with a tuft of grass, and which calls to mind certain forms of Chinese Neolithic pottery, was entirely missing.

Kiselev compares this material with the pottery which we know from the Keltiminaric

¹⁾ Most of the Russian specialists have now taken up this point of view. (See Vasilevich and Levin, 1951, pp. 86—87). The contrary position is once more presented by P. W. Schmidt 1951. The author is surely a great figure in the history of Ethnology but does not survey the archaeological material. He cites the important excavations of Okladnikov, not directly, as he quotes Myrov, who quotes Sosnovskii, who heard it from Gerasimov and he, in turn, from Okladnikov — so that not much is preserved, not even the correct name of the excavator nor the deciding fact that related sites had metal inventory and domesticated cattle and horses. All further discussion on this subject is omitted. (Cf. Flerov, the many works of Sosnovskii and Okladnikov himself). So the author has not even all the facts at his disposal which might support his theory. (Cf. the facts quoted in the above article). Thus I will not say he is wrong, but we cannot solve such an important question with such a scanty material.

²⁾ Tolstov 1946, 1948a, 1948b. Formozov 1949 and 1950.

³⁾ Teilhard de Chardin 1944.

⁴⁾ Maringer 1950, pp. 167—200, and especially p. 206.

⁵⁾ Kiselev 1949, pp. 11—13. Here further literature. Okladnikov 1949a.

⁶⁾ Kiselev 1949, p. 13.

Culture of Kazakhstan. He also finds a corresponding resemblance in flint material. Here, as there, the same knife-like blades with lateral retouche, nucleus-like tools, and similar scrapers. Kiselev believes he is also able to assign certain stray finds from the same district to this complex.

2. Perhaps still more archaic is a grave, which was brought to light under the culture layer of the *Chudatskaia Gora* site near Barnaul.¹⁾ In a 75 cm. deep trench without a mound was found the skeleton of a grown-up man, stretched out and lying on his back. As gifts, four horn angling-hooks joined together, were confirmed which are very like the Kitoi hooks of the Angara-Cisbaikal district, also a horn harpoon and some twenty stone objects, among these the usual series of knife-like blades with lateral retouche, parallel with Kuium and the Kelteminaric Culture. The complete lack of pottery is noticeable, and this, together with the outstretched position of the skeleton, gives the grave its peculiarly antique stamp.

3. Two graves, which Rudenko²⁾ brought to light by the *IAn-Ulagan* river in High Altai, are, as regards the stone inventory and the position of the skeletons, very similar. Here, also, pottery is missing, but intensively scattered ochre and the first appearance of a mound betray the transition into the Afanasievo Period. Debets includes these graves also, on account of the one skull which could be examined in detail, in the Afanasievo material.³⁾

In comparison with the situation previously described, the finds have the following significance:

a) They allow Altai to be included in the intermediate zone. It stands, however, much nearer to the Steppe culture than to the Minusinsk and Krasnoiarsk district.

b) Out of the whole steppe-belt we have no burials belonging to this period. Later, however, we find here only pure Europoid groups.

The skull of IAn Ulagan points out to us, that Europoids, also, were bearers of the Neolithic cultures of the steppes.

When we now imagine that the Baikal-Angara cultures, with their Palaeomongoloid skeletons, carry on the tradition of the Siberian Palaeolithic,⁴⁾ we are inclined to assume that the deviating Steppe cultures, with their Europoids, do not go back to the Siberian Palaeolithic, but immigrated from somewhere else. We could even produce reasons for this. The Siberian Palaeolithic apparently took the step towards the Mesolithic very slowly. Thus, other more highly organized complexes were given the chance to gain possession of wide districts of Central Asia.⁵⁾

These are, however, speculations, made the more difficult by a number of very divergent matters.

a) We know of no complex, from which we can, without objection, derive the Kelteminaric Culture and those related to it. Perhaps, as Maringer assumed, connections with Eastern European complexes really exist.⁶⁾ A fact which speaks for this, is that the typically geometrical forms belong to a late wave in Eastern Europe also.

¹⁾ Described in Griaznov 1930b, p. 4 Figs. 1—3, and 6—9. Kiselev 1949, p. 14.

²⁾ Rudenko 1926, Griaznov 1930b, pp. 4—5 Fig. 10. Debets 1948, p. 14. Kiselev 1949, p. 14.

³⁾ This skull is published among the Afanasievo skulls in Jettmar 1950, Pl. 10 Fig. 2. It resembles a Cromagnon skull. Cf. Debets 1948, p. 68.

⁴⁾ The Siberian Palaeolithic begins with forms which yet show resemblance to Europoid ones. In the latest layers this resemblance completely disappears. The parallels to hand point to China. This probably explains the connection of Sinides and Tungoids in one racial division.

⁵⁾ This would be a parallel to the occurrences in South-East Asia.

⁶⁾ Above all the Desna group would come into the question. Cf. Voevodskii 1950. Voevodskii and Formozov 1950.

b) A find in a cave, from Uzbekistan, and the skeletons from the Mariupol burial-site¹⁾ seem to point to the fact that, besides the Cromagnon type which we find in Altai, Europoids of more slender build were represented also, among the rambling hunters and the fishermen of Central Asia. Thus various migrations come into the question.

c) We have no idea if these Europoid groups really filled the whole steppe-belt, as far as Manchuria and the Amur district (for related microlithic sites reach so far).²⁾ Perhaps Maringer's interesting and important observation that the eastern groups of the Gobi show strong resemblance, in the stone inventory, to the Baikal district, points to the fact that, from the far past, tribes lived here which belonged to the Mongoloid division of mankind or to transitional forms.

We can only attempt accurate dating to a very small degree of exactitude. The Kelteminaric sites, for example, show agreement with more or less datable monuments in South Russia. In the Baikal district one can draw half-reliable conclusions from the arrangement of river terraces. Most point to the beginning of the IIIrd millennium B. C.

The affinities of the steppe-finds of Central Asia to the contemporary cultures with painted pottery in the South are very vague.³⁾ There must have been a distinct cultural frontier between the peasants and stock-breeders of Anau and their northern neighbours.

II. AFANASIEVO PERIOD.

In the next phase, we reach firmer ground. The situation is as follows:

In the wooded districts of *Cisbaikalia* and *Angara* the Kitoi and Early Glazkovo Cultures bear the mark of the consecutive further development of the former Serovo stage. They show the peak point of fishing.⁴⁾

In the *western Steppe district* also, no breach has appeared. The Late Kelteminaric sites have yielded only meagre metal remains at one place. Pottery shows signs of local traditions clearly, yet also signs of the invasion of elements which come from the great melting pot of South Russia, where, influenced by Middle Europe, the Tripolye Culture is split into a number of movable and partly even nomadic cultures. So it is not strange that remains of domestic animals appear for the first time in the Late Kelteminaric sites. They are sheep and cattle bones.⁵⁾

In the *Gobi* we cannot yet put matters into chronological order accurately enough to be able to recognize a similar phase. Kiselev's statements are also not sufficient.⁶⁾

The Bazaikha finds have yielded the fact that the *Krasnoiarsk* district has retained its intermediate position.⁷⁾

The excavations from this period made in the *Minusinsk Basin* are thus all the more interesting. Since Teploukhov, they have always attracted the attention of scientists.⁸⁾ Teploukhov recognized that the *Minusinsk* district at that time played a leading part in

¹⁾ Ginzburg 1949. Makarenko 1933.

²⁾ Gorodov 1936.

³⁾ Cf. the not very happy attempts made by Tolstov 1948 a, pp. 65—90. This is the more remarkable as Tolstov reports finds of shells from the Indian Ocean in one of the Kelteminaric sites. Had the microlithic cultures of India anything to do with the microlithic cultures of Central Asia? Nobody has tried to compare these two complexes.

⁴⁾ More detailed statements above this period are contained in the works which were mentioned in the previous chapter.

⁵⁾ Cf. the excellent statement in Passek 1949.

⁶⁾ Kiselev 1947c, pp. 357—359.

⁷⁾ Okladnikov 1949a, Kiselev 1951, pp. 65—66, Debets 1948, pp. 61—63.

⁸⁾ Lastly Kiselev 1951, pp. 22—54.

Siberia. For the first time we come across kurgans whose erectors knew of all large domestic animals, cattle, sheep, horses, perhaps also yaks, also that they not only used copper, but as the mortuary gifts of stone sledges (parallel to finds in mines) clearly show, they knew how to obtain it.

Among the pottery, painted vessels appeared. The chief types, though, are vessels with pointed bottoms, ornamented with herring-bone design and furnished with the typical roughening of the walls. The pottery differs noticeably, in all characteristics, from that of the neighbouring Taiga cultures.

The simultaneous appearance of so many new elements caused Okladnikov to assume that the Afanasievo Culture (this is what this particular facies is called) was brought into the Minusinsk district in some migration. At least, very strong Southern cultural influences are noticeable.¹⁾ (Vessel-painting cannot be confirmed either earlier or later, in Siberia, with one exception in the last centuries B. C.). The conjunction of cattle and horse-breeding with this culture, coming from the South, points decisively against any possibility of a local origin in Siberia, and against horsebreeding having sprung from reindeer-breeding.²⁾ Russian scientists attributed even agriculture to the Afanasievo Culture. The assumption is a probability, but is not vouched for.³⁾

As to the dating, we only know that the beginning of this culture must go back to the IIIrd millennium B. C.⁴⁾ The usual figures, 2500—1700 B. C. are unfortunately only a «cherished habit» (as Herzfeld once said).

Kiselev attributes the following *Altai* monuments to this stage:

1. Eleven burials near the village of *Kuivum* at the Katun river, the same graves during the exploration of which Sosnovskii (1936) discovered the previously mentioned Neolithic site:⁵⁾ Under low kurgans, consisting of a mixture of earth and stone, lay single graves. As an exception, children were, in two cases, buried with their elders. On one child, a separation of the head from the trunk could be proved. The skeletons lay on the back with the feet pulled up, only one skeleton lay on the stomach. Four graves showed a scattering of ochre. Among the gifts are mentioned sheep bones, nine egg-shaped vessels of the usual Afanasievo type, worked at with bunches of grass, and ornamented with herring-bone designs. A characteristic difference from the Minusinsk vessels exist in that a straight or flaring neck appears on the shoulder of the vessel (Pl. IA: 5), and two vessels have loops. An awl and the handle of a copper knife were of bone. This knife is clearly different from the inarticulate copper daggers which appear in the Minusinsk district and in the old Pit Grave Culture of the West (Pl. IA: 6). It is asymmetrical. The thickened handle forms an exact continuation of the back. The blade is wide and rounded at the point and base.⁶⁾

¹⁾ We cannot say where this movement comes from. Okladnikov thought of Iran, but without being able to bring in any detailed conformation. Thus it is only possible to make guesses at the linguistic and ethnic relationship of this old layer.

²⁾ It is curious that the reindeer seems lacking from the list of fauna in the Altai graves at that time. Perhaps, it only came to the Sayan and Altai with the worsening of the climate in the Ist millennium B. C.

³⁾ Kiselev 1951, p. 48.

⁴⁾ The question of the appearance of the horse in this culture is much more important than Lundholm believed, and cannot therefore be disposed of, as easily Lundholm disposed of it (1947, p. 167).

⁵⁾ Cf. Sosnovskii 1941, pp. 304—306, and Kiselev 1949, pp. 34—35.

⁶⁾ It is reminiscent of the knives from the Catacombs in South Russia.

2. As already mentioned, Sosnovskii believes he can join up, together with the kurgans, a dwelling-site which lies above the Neolithic one. Here he found flint blades, pottery fragments, arrow-heads, and animal bones.

3. Kiselev describes more exactly nine earth kurgans, which he himself excavated on the east bank of the *Kurota*, 1 1/2 km. from where it flows into the Ursul.¹⁾ Two of these were surrounded by stone circles. Also there were three other simple stone circles with a grave in the middle, two of which he explored. The covering of the actual grave (about 2.5 × 1.7 m., depth 1.5 m.) was achieved by means of beams or massive stone slabs. Wall furnishings were not noticeable. Scattering of ochre was confirmed again and again. There were mostly single graves. The skeletons lay flat on the back, the hands either stretched out by the body or pushed under the pelvis. One grave contained two, one three, one even five bodies, all lying on the left side, with drawn-up knees, each close behind the other. The orientation was chiefly with the head towards the east or northeast, (two towards the west, two towards the north-west). From the inventory of these graves, Kiselev reports a stone sledge (the use of such tools in mining has already been mentioned), a pestle, copper rings for ornament, horn fingerings, and little bone tools like shovels, which perhaps served as weaving tools. Animal bones are rare. Once the lower leg-bone of a yak was found, but in the next grave the claws of a king-eagle, so that any conclusion about yak-breeding seems extremely questionable. The pottery was again represented by two egg-shaped vessels with clearly defined shoulders (Pl. IA: 1), but also by flat-bomb-shaped vessels which show some characteristics of Andronovo pottery (Pl. IA: 2,3). A similar transition situation can be concluded also from the ornamentation, which besides the usual herring-bone design shows geometric patterns, made by a dented stamp. On the other hand one finds patterns which consist of crescent-shaped impressions reminiscent of certain Late Keltiminaric ornamentations, yet also material which Bernshtam reported from Issyk Kul in the South.

A problem of its own is a shallow bowl with low foot, cord ornamentation, and a handle at the side (Pl. IA: 4), which all specialists bring into connection with the cross-footed burners of South Russia, perhaps even with the burners of the Pazyryk time of Altai.

When we consider this material, we can, in spite of its dearth, reach some general conclusions as to the cultural position of Altai:

- a) Altai is a part-province of the Afanasievo Culture.
- b) The deviations to hand, from Minusinsk material, point toward an active connection with South Russia, above all with the culture of the Catacomb Graves, the significance of which, for the ethnogony of Central Asia, cannot yet be foreseen.²⁾
- c) A peculiarity of Altai development seems to be that hunting comes more strongly to the fore here, than it does in the Minusinsk Basin.³⁾
- d) The people who lived in the Altai during this period were Europoids with Cromagnon features.

¹⁾ Kiselev 1949, p. 35.

²⁾ If we consider, that this culture has actual connections with the Danube Basin, we must think also of linguistic affinities. The opinion that this culture is the propagator of Indo-European languages can be neither rejected nor finally asserted. In the Minusinsk Basin also stone battle-axes were found. (Kiselev 1951, p. 55.)

³⁾ Kiselev has used the appearance of Andronovo features in the Afanasievo Culture of Altai to construct a local origin of Andronovo forms in Altai. It seems to me, rather, that a hint is contained therein, that Altai preserved the Afanasievo forms at a time when the Andronovo complex was already an accomplished fact in other districts. Altai is essentially rougher in climate and is not an original ground for agriculturists as the Andronovo Culture is.

III. ANDRONOVO PERIOD.

Essentially different was the constellation in which the inhabitants of Altai took their place some centuries later.

In *Cisbaikalia* we meet with a culture, which simply represents the consecutive development of the Glazkovo stage.

It may be noted as its most peculiar feature that the dead were laid in the grave clothed and with ritual objects which show a striking similarity to the present inventory of the Tungus peoples.¹⁾ The skull-form of the Glazkovo people also corresponded with that which has been confirmed in the case of the Tungus tribes of today, North of the Baikal.²⁾ These observations stand in direct opposition to the assertions of Shirokogoroff who saw the Tungus as original pig-breeders, and as fairly late immigrants from North China into the forest districts.³⁾

I should like to bring this to the fore, because Eberhard, in identifying his »North-East Culture» with the forerunners of the Tungus⁴⁾ had a cultural picture before his eyes, which goes right back to Shirokogoroff and certainly stands and falls with Shirokogoroff's assertions. I consider this a typical example of the consequences which speculative ethnology basing its judgement only on more modern conditions before the existence of excavation can have for neighbouring sciences.⁵⁾

The Glazkovo Culture was in any case borne by a numerous fishing and hunting population, who, however, had not yet their own metallurgy, and can therefore count as Neolithic. Extensive trading relations existed, which reached as far to the West as the Urals.⁶⁾

In the South stood Cisbaikalia in contact with a culture group which also still lived at a Neolithic level, but maintained close relations with China or, at least, with the Chinese borderland. Okladnikov's find of a tripod of Ting type on the Selenga⁷⁾ is extraordinarily characteristic. This culture seems to have reached from *Transbaikalia* fairly far to the South, right into the territory of the present day People's Republic of Northern Mongolia.

The *Western Steppes* form quite a different province. The Minusinsk district and Kazakhstan melted, then, into an amazingly uniform culture, the Andronovo Culture. We owe our knowledge of the Minusinsk Basin to Teploukhov and Kiselev, who wrote the first summaries.⁸⁾ Griaznov⁹⁾ and Podgaetski¹⁰⁾ worked in the West.¹¹⁾ The exploration started, everywhere, from the burial-sites. In low earth kurgans and shallow graves, which were only marked by a stone fence, a metal inventory was found, which, according to its agreement with Caucasian finds and other such finds from the Timber Graves, also from Seima, could be comparatively easily dated. The actual unity is proved by pottery.

1) Okladnikov 1950a, with good illustrations.

2) Debets 1948, pp. 56—61.

3) E. g. Shirokogoroff 1923 and 1926.

4) Lastly, Eberhard 1948, p. 20.

5) Such a far-reaching part taken by the Tungus in the formation of the Chinese ethnos seems to me very doubtful. Cf. the modern works of Zalkind (1948 and 1950) and Vasilevich (1946 and 1949a), further Vasilevich and Levin (1951).

6) Cf. Jettmar 1950, pp. 119—120.

7) Okladnikov 1950b, p. 86.

8) Kiselev 1949, pp. 40—52.

9) Griaznov 1927.

10) Podgaetski 1940.

11) The excavations in Khorezm form a further supplement. There also we meet with only a local facies of the Andronovo Culture. Cf. Tolstov 1948 a, pp. 76—77.

Bowl-and flowerpot-shaped vessels were found, well smoothed, decorated with cog-like patterns or scratched drawings. Beside triangles and dog-tooth patterns, meanders appear repeatedly. Now and then come complicated carpet-like patterns. The food gifts show that the Andronovo people bred cattle, horses and sheep. Naturally, in such a wide-spread district, there were certain local differences. Most strongly differentiated is a complex which has become better known only in the last few years, and on which Bernshtam reported,¹⁾ that is to say, sites with an inventory like the Andronovo one in Semirechia and in the anterior of T'ien-shan.

We have at present no idea from which district the formation of this great unified complex started. The skull finds, which were brought to light in connection with Andronovo graves, are everywhere Europoid. They differ from older skull finds in the same districts owing to a shortening of the maximum head length, and owing to a rounded tendency which brings them near to the modern Pamir-Ferghana type. Kiselev attributed a Southern origin to this culture. Also the fact that the meander is best traced back to the Painted Pottery supports this thesis. At present, no special connections with Europe can be proved,²⁾ and this does not exactly simplify the problem regarding the Indo-Europeans. The Andronovo Culture also deserves our attention in the question of the mounted nomads. It shows everywhere, a strong tendency to settle. All signs of nomadism or mounted warfare are lacking. The Russian scientists look upon it as the peak point of the complex economy with cattle-breeding and agriculture in the Steppes.

The problem as to which threads, if any, of this culture pass over into West China is also unexplained. In any case, we can hardly believe, that China got its knowledge of metallurgy from the Andronovo Culture, where metallurgy is very limited and dependent on other centres. The few plausible parallels between China and the West³⁾ hint at the southern mountainous region, especially at Luristan.

For *Altai*, at this time, we have at our disposal, as regards finds:

The excavations of Kamenskii near *Malyi Koitas* on the river Kysyl-Su (80 km. from Semipalatinsk on the road to Ust-Kamenogorsk) (Pl. I B: 1,3—13), near *Kara-Uziak* (16 km. from Ust-Kamenogorsk) (Pl. I B: 2) and near *Kokpekt* (near Karadzana, 25 km. from Ubinskaja).

These have been discussed repeatedly, first by Teploukhov,⁴⁾ then by Griaznov⁵⁾ and finally by Kiselev.⁶⁾ As early as 1926, the sherds left no doubt that here it was a question of vessels of the Andronovo type.

This permitted a number of stray finds, containing similar fragments, already partly collected by Radloff, to be attributed to the same period.

Fragments of an Andronovo vessel were, as Teploukhov and Kiselev remarked⁷⁾ found in a half-destroyed grave near the Lake *Sary-Bulak* (Chingis-Chain).

In a later work, Griaznov mentions Andronovo graves near the village of *Klepikovo*, in the Uch-Pristansk district (on the Ob between Barnaul and Biisk).⁸⁾

¹⁾ Bernshtam 1949b and 1950.

²⁾ If one is of the opinion that the numerous similarities to the Proto-Hallstatt pottery ornamentation point to a cultural relationship, one cannot yet trace Andronovo from the West. These features are, according to my knowledge, older in Asia than in Europe. Thus only an eastern origin, or an origin from the same source, would come into the question. Cf. Hančar 1947.

³⁾ Cf. Arne 1940.

⁴⁾ Teploukhov 1927, pp. 85—87.

⁵⁾ Griaznov 1930b, pp. 200 and 209, Figs. 22 and 25.

⁶⁾ Kiselev 1951, pp. 89—90.

⁷⁾ Kiselev 1949, p. 52.

⁸⁾ Griaznov 1930b, pp. 5 and 10—11, Figs. 29 and 30. Kiselev 1949, p. 52.

Finally, some finds, which Sergeev made in 1929/30 in graves near the village of *Krasnoarskoe* (Smolensk district, Kemerovo province).

The few places where dwelling-sites were found¹⁾ are, as in the Minusinsk district, much destroyed. We know of such from the river district of the Biia and the Katun, also they were confirmed in the upper Irtysh district.

As characteristic of all these finds, Kiselev brings to the fore:²⁾

The uncommonly wide variation in the construction of these *graves*, shallow graves, above ground, marked only by a stone circle, are found next kurgans surrounded by square stone fences. Sometimes the stone fence is entirely missing. The dead lay in stone chests. According to inexact reports, single graves appear, as do also collective burials of men, women, and children.

The manifold character of all this finds its parallels in West Kazakhstan.

Regarding the *metal inventory*, as in West Kazakhstan, the extremely irregular distribution of it, in the various graves, is conspicuous. Kiselev thinks he recognizes even a social differentiation here, especially as the kurgans show objects which are more richly and carefully made. Gold is very frequent, used mostly in the form of covering plates, on copper or bronze (Pl. I B: 7, 9, 10). We must not forget that in Altai, we are in a gold-bearing district of significance which had been exploited for centuries.

The shapes of ornaments conform essentially to those of the Minusinsk district. Here, as there, are the same little bronze tubes, cast or bent, rolled together from bronze plates. The nailshaped earrings (Pl. I B: 10), the animal-tooth pendants (Pl. I B: 8) and the stone plates bored through (Pl. I B: 11).³⁾

A flat Andronovo dagger, with light carving at the base of the blade, is characteristic (Pl. I B: 13).⁴⁾ The armrings conform very much to the examples in West Kazakhstan. The golden pendants (Pl. I B: 12) from such a grave represent, perhaps, the original form of the pediform pendants of the Karasuk Culture.⁵⁾

The *pottery* can be fitted into this picture without difficulty. The two main groups of the Andronovo pottery are to be found, namely, the bowl-shaped (Pl. I B: 3,4), which is strongly reminiscent of the Afanasievo time, and is correspondingly ornamented, and also the progressive flowerpot-shaped pottery, which sometimes bears highly developed meander ornamentation (Pl. I B: 1, 2, 5, 6). Kiselev⁶⁾ thinks that children, especially, were furnished with little vessels of an old type. Griaznov⁷⁾ confirms that the conformation to the Minusinsk group is stronger than it is to the sites of Western Kazakhstan.

Thus the complete picture of the Andronovo finds in Altai and its anterior shows, on the one hand, strong relations with Western Kazakhstan, and on the other hand, with the Minusinsk Basin.

A comparison with the finds reported by Bernshtam⁸⁾ from Semirechia and the T'ien-shan shows, further, that Altai also held a certain intermediate position between the two other provinces of the Andronovo culture and the newly-appeared one. The types described in Griaznov⁹⁾ can be used as dazzling proof, as they have complete analogies in this new Andronovo province.

¹⁾ Kiselev 1949, p. 54.

²⁾ Kiselev 1949, pp. 53—54.

³⁾ Cf. Griaznov 1927, p. 209 Fig. 25.

⁴⁾ reproduced by Griaznov 1927, p. 209 Fig. 25/1.

⁵⁾ Cf. Jettmar 1950, p. 93 Pl. 2 Figs. 1—4.

⁶⁾ Kiselev 1949, p. 53.

⁷⁾ Griaznov 1927.

⁸⁾ Bernshtam 1950.

⁹⁾ Griaznov 1930b, p. 155, Figs. 13 and 14, further p. 160 Fig. 6, I/3.

Thus the confirmations which we can make, are relatively simple:

- a) Altai belongs to the Andronovo Culture.
- b) Altai shows a strong continuous survival of Afanasievo elements, and this, as already mentioned, presumably goes back to its functioning as a retreat district, where hunting was still important.
- c) Altai holds an intermediate position between the Andronovo provinces which are known to us.
- d) Altai was, as far as evidence exists, inhabited by Europoids only.

IV. KARASUK PERIOD.

While *Cisbaikalia* undergoes no fundamental changes during the transition into the Shiversk stage, Okladnikov's explorations in *Transbaikalia* and *Northern Mongolia*, especially at the *Selenga*¹⁾ have shown the appearance of a new culture. This has, on the one hand, clear relations with the Taiga, on the other hand, it knows of cattle-breeding, and has types of metal at its disposal which are familiar to us from An-yang and the oldest known Ordos types. Okladnikov dates an angle knife of archaic shape back to the 13th century B. C. Together with this metal inventory (the first that we can confirm in *Transbaikalia*), appears pottery with pseudotextile decoration, which shows close affinity to the Shang pottery, but also to the finds of Ch'eng Tzu Yai.

In the *Ordos region* there must have existed a similar culture at which, owing to the complete lack of systematic excavations, we can, of course, only guess from stray finds and its connections with neighbouring cultures.²⁾

In contrast to these new centres characterized by their relations to China, the *Andronovo district of the West* goes fairly straight ahead in its development. The Late Andronovo time brings a stronger development of agriculture. We know of widespread, strong settlements, on whose places of sacrifice bread and grain were laid. This best characterizes the situation.³⁾

Broad districts, however, are torn out of the old Andronovo complex:

1. Tolstov⁴⁾ claims to have established the invasion of a culture from the South, in the basin of *Lake Aral*, which perhaps harmonizes with the statements of the early Islamic historians, and in any case with the view of those scientists who bring the Khorezmians (Khwarazmians) into especially close touch with the Persians.⁵⁾

2. The *Minusinsk Basin* is lost through the breaking in of a Sinide group, which brings with it an inventory of Ordos type. Through this immigration the Karasuk Culture, in a restricted sense, originates.

A similar complex appears in *Semirechia* and in the *anterior of T'ien-shan*.⁶⁾ The metal types, the pottery and the burial customs, are all related, but not identical with the types of the Karasuk Culture. At first, this complex was thought to have been derived from the *Minusinsk Basin*,⁷⁾ but in the last few years it became clear that here we find so many

¹⁾ Okladnikov 1950b.

²⁾ I do not need to say more about this Ordos culture here. The few facts which can be confirmed have been brought together in my article of 1950, and in the previous detailed discussion between Karlgren and Loehr. I cannot say anything on this subject about Japanese research. Professor Oka informed me of several further results, but most of them are not yet published.

³⁾ Cf. Krivtsova-Grakova 1948, and Kiselev 1949, p. 55.

⁴⁾ Tolstov 1948a pp. 77—78. (Suiargan Culture).

⁵⁾ E. g. Altheim 1950, pp. 283—289.

⁶⁾ Bernshtam 1949b and 1950, pp. 104—106.

⁷⁾ Kiselev 1949, pp. 87—93.

peculiar types not represented in the Minusinsk finds, but only in the Ordos district and in China, or exclusively in China,¹⁾ that we must assume that there was an independent connection between Semirechia and the Far East.

Has a similar but independent migration taken place here? Or, more probably, a cultural diffusion originating from metallurgical centres in China or the Chinese borderland (no Sinide skulls have been reported in Semirechia up to now)?

Or was there, here in Semirechia, a culture which has strongly influenced China?

The finds of Semirechia are scanty and difficult to classify. Thus we have no basis for such bold migration theories. I only wish to point out that the types which are especially related to Chinese finds, cannot be derived from the local Andronovo Culture nor from other Siberian complexes known up to now. They are much closer to Iran, perhaps also to the Near East. Perhaps we have, here, only a side-branch from another southern complex, between which and China a continual cultural exchange existed.

In any case, it is very important that we now have several cultures all called «Karasuk» by the Russians and all related to China of the Shang. I do not believe, we should decide which is older and which is younger, before we survey these cultures to their whole extent. Some of these cultures had an Animal Style (An-yang and Ordos, the Minusinsk Basin and Transbaikalia). Kiselev thinks we must assume an Animal Style for Semirechia also.²⁾ This is perfectly possible, but cannot be confirmed up to now.

Let us try again to find a place for Altai material in this picture:

Already in 1930 it was clear to Griaznov³⁾ that graves existed among the material which had been found in the course of the nineteen-twenties, in the river district of the Ob between Barnaul and Biisk, that is in the *anterior of Altai*, namely graves which, at least, were contemporary with the Karasuk Period.

In the same year, Sergeev's⁴⁾ excavations brought the confirmation. He discovered graves near the village *Krasnyi IAr* in the Smolensk district and near the village of *Kamyshenka* in the district of Uch-Pristansk. The excavations near Kamyshenka, which were also continued in the following years, yielded, under shallow kurgans, twenty-five graves, in twelve of which it was possible to judge the burial customs fairly exactly.

In trenches, the measurement and shape of which could no longer be established, single burials lay mostly at a depth of 1/2—1 1/4 m. Only two graves contained a male and a female skeleton, and one held four skeletons next to each other. The dead lay without exception with the feet slightly drawn up, and on the right side, in six cases with the head to the west, in five to the southwest, and in one to the south. There were usually two vessels next the head, and sometimes a bronze knife. If there were a third vessel, it stood near the feet. The forehead was adorned with a diadem of beads, or with a closed bronze ring round the head. Remains of neckwear could be confirmed. Sometimes rings for the temples lay by the side of the head. Armrings were round the wrists and the fingers were adorned with rings.

On considering these rich gifts more closely, one can easily separate the objects which are well-known in the Minusinsk district. For instance, the wire-rings which were found on the hands and temples, bronze buttons which appeared, here, as part of the diadem, and, with the characteristic loop at the back, represent a guiding element. Also the combination of several little bronze discs, joined together in a row, is very frequent. Pendants and beads of bronze sheathing are frequently found.

1) Bernshtam 1949b, p. 344.

2) Kiselev 1951, pp. 177—183, and 288.

3) Griaznov 1930b, pp. 5—6 and 37—45.

4) Kiselev 1949, pp. 88—90.

Other objects, however, show, in spite of their affinity to Karasuk forms, a characteristic local note, e. g. the knives. They are short and massive and furnished only with a little opening on the upper part of the handle. A single example has the light curve and the greater length which characterized the older types. Most of the knives are much more strongly reminiscent of Early Tagar types than of those of the actual Karasuk time.

A long awl and a nail-like needle, which presumably served to pin up a garment, are also singular.

Sharpening stones are frequent, and extend from here far into the Scythian epoch, in the same shape.

Also the diadem of thin bronze is a form appearing here for the first time and reaching far into later periods. The temperings or earrings which look as if they had been made out of a nail, find their closest parallels among the remains at the «older cemetery» of Tomsk. They are, also, not unknown among the Ananino finds. The singular broad armlets of thin bronze presumably represent a development of the Andronovo spiral. Cylindric beads of white paste represent a highly archaic and exceptionally widespread type.

The technique and shape of the pottery conform to that of the Minusinsk district. In Altai, however, the flat bottom of the Andronovo vessels has completely remained, and the neck is distinguished from the shoulder by a clearly seen cut. In this we trace a consecutive tradition. In ornamentation, too, the local element seems to dominate. Kiselev¹⁾ delivers an exact description of the designs and regards as characteristic the continuation of ornaments which were already present in the Andronovo time.

A certain tradition may lie in the fact that no finds of bones of domestic animals have been made in the graves.

Krasnyi IAr can, unfortunately, only supplement this picture by very little. Pendants of wild sheep's teeth (maral) can probably be considered as amulets, and biconic beads as a heritage from the Andronovo time.

The graves excavated in 1935 by the Biisk Museum near the village of *Surtaiskoe* in the Staro-Bardinsk district, on which Kiselev reported²⁾ are at present inadequately described, only the pottery was published by him (Pl. II: 17—22).

The graves which Griaznov³⁾ discovered can therefore serve as the most important supplements. They lie in the dune-land *Blizhnie IElbany* near the village of Bolshaia Rechka, not far from the Ob, about halfway from Barnaul to Biisk.

There were five earth graves without outward characteristics. The dead lay on the right side, crouching, with the head to the south-west. Again the usual little copper and bronze ornaments were found, also the large temple-rings, in the shape of a nail bent into a ring. At the side of the head stood Karasuk pots, but with flat bottoms. The ornamentation, geometric and of the usual Karasuk type, was impressed with a smooth unindented stamp. Sometimes there were signs of incrustation with white paste, which may probably connect up with the co-existence of this technique in the Lake Aral district, in the Caucasus and in the Danube Basin.

In one grave, three male skeletons were found next to each other.

In this connection Griaznov draws attention to the stray finds near *IEniseiskoe*, *Fominskoe*, *Dalnye IElbany* and *Bolsherechenskoe*. The result up till now is confirmed by these finds.

¹⁾ Kiselev 1949, pp. 90—91.

²⁾ Kiselev 1949, p. 88.

³⁾ Griaznov 1949, pp. 112—114.

We could, so far, observe a clearly outlined complex. The excavations in the *Kurai-Steppe*, which were undertaken at two stone circles, and which revealed shallow graves, seem to hint that this complex stretched even as far as *South Altai*. Unfortunately, there is only insignificant material, which in no way differs from that already mentioned.

Also in *South-West Altai*, in the Semipalatinsk district, we know only stray finds. Thus we are referred back to the attributions. Griaznov took the line of assigning all types, which went beyond the mutual original remains of Andronovo forms, yet were not yet Scythian, to the Karasuk Period. Thus he arrived at highly singular types of knives (Pl. II: 4—9 and 12—14), which, now, on the one hand, connect up with the knives of North Altai which we mentioned before, but one the other — and that is exceptionally significant — find clear parallels among the Ordos knives.¹⁾ Also the daggers (Pl. II: 1—3), picks (Pl. II: 10, 11) and flat axes (Pl. II: 15, 16) are highly specialised.

If one compares these finds with those in neighbouring districts, one sees that there is obvious agreement with those of the T'ien-shan district. In pottery also, the South-West district differs from the rest of the find-material, and points in the same direction.

Thus, one can sum up in the following statement:

The culture of Altai forms a singular variation of the Karasuk Culture. Characteristic of it are the following points:

a) Very strong Andronovo elements, with which the persistence of the ancient racial type corresponds.²⁾

b) Borrowing of certain elements from the Minusinsk district.

c) Other features, which suggest the Karasuk, nevertheless certainly do not spring from the North-East.

d) They connect up the Altai with the «Karasuk» province in Semirechia and the anterior of T'ien-shan, but also with the Ordos province.

V. MAIEMIRIC PERIOD.

In the beginning of the first millennium B. C., there was a definite frontier of culture between West and East (Andronovo and Karasuk) in the steppes. In the next period, the region of the steppes grows to be a uniform territory, which stretches from the Pannonic steppes to China, and in which warlike mounted groups appear everywhere.

Western research is often inclined to make the extensive migration of certain peoples responsible for the appearance of mounted warriors in so many places.³⁾ In opposition to this, Russian research tried, for years, to show that simultaneous processes at several points, fairly independent of one another, have led to the formation of «mounted cultures», namely the splitting up of the agricultural and cattle-breeding complexes (i. e. in this case, of the Andronovo and the Karasuk peoples) into settlers on the one side, and cattle-breeding nomadic tribes on the other.

There, where we have enough material at our disposal, for instance, in Middle and East Europe, the excellent work of Harmatta⁴⁾ has shown that the truth in most cases lies nearer to the Russian extreme. The typology teaches us that the European tribes received the idea of the metal bit from abroad, probably from Caucasia — this presumably means a warlike attack by the Cimmeric or some other mounted people — but they created their own forms, beginning with the native string-snaffle with horn cheek pieces.

¹⁾ Such ordos knives are mentioned by Kiselev 1949, p. 52.

²⁾ Kiselev 1949, p. 93.

³⁾ E. g. Haloun 1937, Janse 1930, p. 99.

⁴⁾ Harmatta 1948.

This means again that they were not driven away but reformed themselves after the first shock: They became mounted peoples themselves, in their turn forcing their neighbours to follow their example.¹⁾

In addition, migrations can also be confirmed, which led to permanent settlement of the migrants among the native peasants.

The clearest and best-known examples of this are the Scythians. Russian explorers have upheld for years,²⁾ for theoretical reasons, the idea of the autochthony of the Scythians, and, by the failure of their thesis, they have supplied the best proof that the ancient truth uttered by Herodotus cannot be refuted even by modern excavations: The »Royal Scythians», with their Animal Style, their cauldrons, their iron weapons and their bloodthirsty rites, came from Asia.

Therefore we must now ask ourselves, as regards the Asiatic Steppe region, which mounted peoples immigrated there? Which originated from native peasants and from the cattle-breeding stock? In what order did these people go through such a change? Who was the »initiator» of this change?

The stock tribes *North of the Caspian Sea*, described in ancient sources as Sauromatians, are considered by Rostovtzeff³⁾ to be just such immigrants from the East as the Royal Scythians. Grakov⁴⁾ and Smirnov⁵⁾, in emphatic contradiction, have defended the autochthony of these groups, and pointed to their connection with the local Late Andronovo Culture. In my own opinion, their works show only a strong local component which has bound itself up with components of the immigrants. The Animal Style, in any case did belong to the foreign components.

The simultaneous development in the territory *East of the Caspian* and in the *Aral district* has first become clear owing to the observations of Tolstov.⁶⁾ He confirmed mighty refuge fortresses (dated, by arrow-heads, 6th—4th century B. C.) in the Khorezm Oasis. The walls of these were divided into habitable rooms and the free space inside these fortresses served to take in the flocks and herds. The builders were probably intensive cattle-breeders, and only later on did they become mounted warriors. The Massagetic confederation was created out of stock from this district.

In the *Minusinsk territory* the appearance of the Tagar Culture, which embodies a moderate mounted warrior element, is closely connected with an almost complete change of racial type. Instead of Sinides, we suddenly encounter Europoids. All the same, the continuance of the Karasuk tradition can be clearly recognized in pottery and metal tools. We do not know how this can be explained. Presumably the Tagars did immigrate, and only took over the native technique.⁷⁾ Because of this change alone, any idea that the Scythians or their Animal Style originated from the Minusinsk Basin⁸⁾ is hardly credible.

In the *T'ien-shan* and *Pamirs*, thanks to the work of an expedition led by Bernshtam, a complex was confirmed, which is distinguished by Animal Style and mounted nomadism.

¹⁾ This process reminds of an infection or better of a »chain reaction». A similar process has taken place in the full light of history in North and South America among the Indians of the steppes.

²⁾ Cf. Hančar, 1950.

³⁾ Rostovtzeff 1931, pp. 477—484.

⁴⁾ Grakov 1947.

⁵⁾ Smirnov 1950.

⁶⁾ Tolstov 1947c and 1948a, pp. 91—107.

⁷⁾ Or the bearers of the Andronovo culture never died out, and only constructed their burials more simply (e. g. above ground) during the domination of the Karasuk people. Cf. Jettmar 1950 and Kiselev 1951, pp. 184—260.

⁸⁾ Cf. Grousset 1948.

Bernshtam¹⁾ claims that it originated locally, from the Karasuk Culture of the district, and that it was completely developed by the 8th century B. C. He considers these peoples to be identical with the Sakas of the antique tradition.

In *Transbaikalia* and *Northern Mongolia* a transition to nomadism and mounted warrior conditions can be observed. This appears so clearly in local forms, and includes so much preservation of the native Mongoloid type that no doubt is left as to an autochthonic origin. Yet the graves still contained no horses. Guiding elements of this culture are the »stag steles», i. e. standing stones, on which stags are represented in Animal Style. We describe this facies as Stone Tombs Culture, Type I.²⁾

In this connection, I should like to mention that Kyzlasov and Margulan³⁾ created a small sensation when they made it probable that the *Karaganda group* of the Karasuk Culture is, in reality, of later date, and could be joined up with the Stone Tombs. Thus we can presume, for the first time, the push forward of a Far East group to Kazakhstan, as early as the first half of the 1st millennium B. C.

We do not know what was happening in the *Ordos region* at this time. Stray finds suggest that things took their course as in Northern Mongolia or T'ien-shan. But it is not possible to judge how much autochthonic development, or immigration, may have taken place.

To this time belong finds in the Altai district which Griaznov reports in a popular publication⁴⁾ and which he summarizes as »Maiemic Stage» according to Adrianov's excavations in the Maiemic Steppe. From this results the fact⁵⁾ that the difference already arising in the Karasuk time between the southern mountainous Altai and the northern foreland, is intensified to such an extent that one can summarize the finds of the northern district as a special culture district.

I. Anterior Altai. Bolsherechensk Culture.

In 1949, Griaznov speaks of a Bolsherechensk Culture and means these same finds which he denoted earlier as a northern subgroup of the Maiemic complex. The site of *Bolsherechenskoe* on the Ob, 60 km. above the town of Barnaul, led to the name.⁶⁾ It was explored by Griaznov in 1925. He was able to set apart a dwelling-site with various layers, one of which belonged to the Maiemic time, two others, however, can presumably be reckoned to about the time of the birth of Christ. All three layers contained plenty of bones of domestic and wild animals, also plenty of fish bones and scales. Horses, cattle and sheep were bred. Bones of wild animals (maral, deer, wolf, fox, hare, otter, sable) were present, which show that besides the breeding of domestic animals and fishing, hunting, especially of fur-bearing animals, played a very important part in the life of the old Bolsherechensk people. As to pottery remains, sherds of round-bottomed vessels were found, which differed from Karasuk vessels owing to a more indefinite form and ornamentation (e. g. Pl. III A: 10). Arrow-heads of bone and bronze are reported by Griaznov as well as various small articles of horn and bone. Kiselev adds that there is no evidence of agriculture, but that the tendency to settle is proved by the thickness of the layer and by the highly developed pottery. He speaks of cup-shaped vessels and

¹⁾ Bernshtam 1949b and 1950. Bernshtam's dating is to be taken with precaution. Cf. Griaznov's severe critique (1945).

²⁾ Cf. Sosnovskii 1940 and 1941. Kiselev 1947c, pp. 361—367 Figs. 3—5.

³⁾ Kyzlasov and Margulan 1950. Accepted by Kiselev 1951, p. 318.

⁴⁾ Appeared in »The history of the peoples of the USSR», 1939, which is not generally accessible.

⁵⁾ Griaznov 1947a, pp. 9—17.

⁶⁾ Griaznov 1949.

reports that the walls of the vessels are frequently indented from outside and inside alternately as decoration (Pl. III A: 11). Also the quality of the clay is different from that of the Karasuk time. It finds its parallels in the vessels of the Early Tagar Period in the Minusinsk district.

The knives seem to be still more primitive than the oldest known Tagar ones. Also, the four-edged awls without knob at the end represent an archaic element in this late period. The same is true of the arrow-heads (Pl. III A: 8). They are rhombic, or furnished with a small hook.

Griaznov collected plenty of sherds in 1925, from a dwelling-site on the dunes near the *Bystriansk Kordon* on the Ob, 50 km. from the town of Biisk. Among these, besides bones of domestic and wild animals, there are also fish remains. Broken pieces of crucibles and drops of melted copper are also important, as evidence of local metallurgy.

In 1946, Griaznov examined another dwelling-site on the dunes near *Blizhnie IElbany*, at almost the same place where Karasuk graves were found. He was able to distinguish seven dwelling-pits, three of which were excavated systematically. One was well-preserved. The dwelling-pits were about one metre deep, surface measurement about 15 × 12 m². The well preserved pit must have been left suddenly. The fragments of vessels lay partly in good order, and partly scattered over the whole floor. The larger vessels were cup-shaped, with bulging side-walls which narrowed towards the ground. There were also small half-round bowls. As decoration there was the same alternation between outside and inside indenting, also a number of comb-indentments which took the form of garlands, rhomboids, and other geometrical patterns. These decorations are assessed as a degenerated derivation from the local Karasuk pottery.

The find of milling-stones is important, also that of bone hemp swingles and small combs for vegetable fibres, which leave no doubt that, here, we have to do with an agricultural settlement. Bones of domestic and wild animals were plentiful, as well as fish bones.

Bronze finds could only be made singly. Iron was lacking.

A few kurgans could be reckoned to the culture appertaining to these dwelling-sites. Here, the finds made by Gulaev in 1912 should be mentioned first. He opened six kurgans at *Bolsherechenskoe*. There is no diary, and the inventories have been confused.¹⁾ Three kurgans probably belong to the 7th—10th centuries A. D., but the kurgans I, II, and III to our cultural phase. Griaznov has published three knives (Pl. III A: 5,6), two arrow-heads, and a buckle with a fixed spike (Pl. III A: 7), from these finds.

A supplement came about only in the year 1930 through Sergeev who excavated the kurgans near *Berezovka I* on the Katun, 40 km. from Biisk. Fourteen kurgans correspond with Gulaev's finds. Out of these fourteen, only one had been left untouched by grave-robbers.²⁾ Again it was a question of crouching skeletons, lying on the right side. By the heads of the dead were the remains of provisions for the journey into Eternity in the form of sheep's ribs or vertebrae. Pottery was lacking. In these fourteen graves there were found altogether only a bronze knife and a fragment of a second (Pl. III A: 2,3), also a piece of a horse's head at the end of a pole made out of antlers (Pl. III A: 9). Besides these, there were some rings of copper wire, some pendants, tubes of copper sheathing and a gold bead in the form of a ring of thin wire. In view of the fact of the notable existence of pottery in dwelling-sites of the same time, one must consider whether the lack of it in the graves should be due to a singular tradition which had manifested itself several times in earlier periods of Altai.

¹⁾ Griaznov 1947a, pp. 15—16.

²⁾ Two kurgans belonged to the next epoch and six were so completely pillaged that no determination was possible.

Finally, Griaznov excavated fifty-three graves of a burial-site near *Blizhnye IElbany*.¹⁾ Shallow graves contained crouched skeletons, lying on the right side, the head towards the south-west. They were very poorly equipped, but the great number of graves made possible a satisfactory survey. In three graves little cups were found, with rounded bottoms, and, at the head end, rather poor ornaments in bronze, in the form of wire rings and pendants. Only in the case of one girl was an interesting neckwear discovered, made out of bronze and paste discs and various beads and pendants, also a broken arrow-head of Early Scythian type, made into a pendant. Women had been given, besides simple ornaments and bronze needles, clay whorls and weaving combs. Among the men, two bronze spear-heads were found, also bone and bronze arrow-heads, a stone club, an antler-hammer, etc. In many graves there lay, obviously with the man's belt, the broken tip of a knife, or occasionally a tiny piece of something like this, and in one case, a pointed stone, which was plainly meant to serve the same symbolic purpose. Griaznov points to the close relation of this burial-site with that of Tomsk. He thinks that, here, we have to do with the same ethnic group as in Tomsk, which on the one hand differs fundamentally from the people of the Minusinsk Basin, and, on the other, from those of Altai itself. Several stray finds related to Tagar I. are attributed to this phase (Pl. III A: 1,4).

2. High Altai.

The actual Maiemiric Culture corresponds to these finds in the anterior. Griaznov ascribes all finds to it, which date later than the Karasuk graves, the characteristic point of separation being the appearance of the co-burial of horses. The Maiemiric is separated from later stages by the lack of iron, the shape of the bronze mirrors, and a particular kind of horse-bits.

Griaznov writes on this subject:²⁾ »In the Scythian time one can differentiate between two types of bridles in the whole breadth of the Steppe from the Yenisei to the Danube. In the first case the ends of the bits are stirrup-shaped (Pl. III B: 7, 8) and hang parallel to the cheek pieces, the psalia. The psalia belonging to them have three openings for the cheek-strap which is split into three branches. The middle strap goes through the bit-ring (Pl. III B: 1, 4, 5). In Siberia and Kazakhstan there are variations of this type, psalia with a little hook, or with a longer branch-rod at the side instead of the opening in the middle (Pl. III B: 2, 3, 6, 9, 10, 11). In this case the opening in the bit is put over the side-branch.

The second type of bridle has a bit with a ring at the end, which stands horizontally. The psalia have only two openings and are passed through this ring. The first type is characteristic of the Early Scythian kurgans on the Kuban and Dnieper, up to the 6th and the beginning of the 5th centuries B. C. at latest. The second appears in the same districts, but only from the 5th century B. C. on. The first type is to be considered as one of the fundamental signs which differentiate the inventory left by the Maiemiric epoch from that of the later one.»

By reason of this criterion Griaznov summarizes thus:³⁾ The kurgans and the so-called Treasure of the *Maiemiric Steppe* which was found through Adrianov's excavations at the upper reaches of the Naryn.⁴⁾

Here a chain of five kurgans stretched from north to south, two of these were opened

¹⁾ Griaznov 1949, p. 114.

²⁾ Griaznov 1947a, p. 10.

³⁾ Griaznov 1947a, pp. 9—10.

⁴⁾ Rudenko 1930, Kiselev 1949, p. 168 (here also older literature).

by Adrianov. Both had been robbed, one completely, but the other contained the skeletons of a fully grown man, and that of a young person, a bronze mirror (Pl. IV: 16), and sheep bones.

The treasure was brought to light, when Kiselev was digging in a circle of seven stones which lay about 3—400 m. from the kurgans. Kiselev considers the objects found here to be robbers' booty from the kurgans which had been hidden here, for further use. Among these objects are mentioned, especially, ten pieces of gold leaf with designs of an enrolled animal (Pl. IV: 15), which perhaps were meant to cover wooden discs, further gold strips, two bronze buttons, one like a cuff-link (Pl. IV: 17), the others covered with gold (Pl. IV: 14), and a buckle with a fixed spike.

In the same excavation season, three more kurgans were excavated, out of a similar chain near *Solonechnaia Belka* on the Bukhtarma. In the first was found at the bottom of a square trench which had obviously been covered with birchwood beams, the skeleton of a full-grown man. As gifts a bronze knife and the fragment of a sharpening stone appeared.

The second kurgan contained a horse's skeleton in anatomically perfect condition, with a bronze bit of the Maiemiric type between the teeth, also bronze buckles with fixed spikes, and bronze beads and buttons for the straps (Pl. IV: 11, 12). In the third kurgan there was no trench, but in the mound three skeletons were found. By a female skeleton lay a bronze needle, the terminal shaped like an animal (Pl. IV: 7). A mirror of Maiemiric type is also mentioned. This had a raised edge at the back, and a loop in the middle, as fastening. Also a horn tube (Pl. IV: 8), a sharpening stone (Pl. IV: 5), little beads of white paste or turquoise, and glass-beads shaped like cylinders were found.

Kiselev adds the fact that the mounds of these kurgans, differing from the following epoch, are not only of stone blocks but of mixed rocks and earth, so that these kurgans differ from the later ones in view of the thicker overgrowth. The size of the trench was usually 2:1.5 m., depth up to 2.5 m. In the south part of the trench stood a kind of chest about 85 cm. high, covered with thinnish wood. In this lay the dead man with his gifts. In the north part of the trench was a step at the height of the wooden chest, on which, judging by the remains, which were left over from the robbery, one or two horses were buried, heads towards the west. Kiselev emphasizes together with Rudenko, the appearance of a bronze knife with an animal-shaped terminal (Pl. IV: 4), a mirror with raised edge and a loop in the middle, and also one of a different shape with a handle at the side, and bronze and bone arrow-heads, some with tangs which correspond to the oldest Scythian types. Others find a parallel with the Sauromatic graves of the 5th century B. C. The bronze bits with the stirrup-like ends are like the Scythian ones of the 7th—6th century B. C. Boar-tusks bored through, were also present in these graves, as well as horn imitations. According to the result of other finds they belonged to the harness. Pseudo-buckles are often met with (Pl. IV: 18).

Griaznov¹⁾ reckons a grave which Sosnovskii²⁾ excavated, 1936, near *Ust'Kuiuma* on the Katun, to this period. It lay in a little kurgan among a group of Afanasievio burials. At the bottom of the grave which was laid out with stones, was a female skeleton. Among the gifts are mentioned a bronze knife (Pl. IV: 3), about thirty cylindric beads of white paste, and one bullet-shaped one of cornelian. Two and a half metres further was the skeleton of a horse, the skull of which lay by itself on a stone disc with three neck vertebrae, and thus had obviously been cut off while still in fresh condition. By the horse's skull were horn psalia.

¹⁾ Griaznov 1947a, p. 13.

²⁾ Sosnovskii 1941, p. 306.

Griaznov reckons the finds on the *Zmeinogorsk mines* (e. g. Pl. IV: 19) to this group. They have been lost in the meantime, but satisfactory drawings exist. Also two bridle-trappings from the Semipalatinsk Museum and numerous stray finds, including axes, daggers, knives, mirrors (Pl. IV: 1, 2, 6, 9, 10, 20, 21), and, finally, a helmet of early Scythian type (Pl. IV: 13), which Rabinovich declares to have been imported from the Kuban to the Irtysh. We shall have dealings with it later.¹⁾ The axe should merit further attention, but as there is only this one find, it is not possible to proceed further.

Let us now draw conclusions:

We see not one, but two groups. Both come from the local Karasuk cultures.

a) In the one complex, in the High Altai, the dead are laid on the grave with their warhorses, also with weapons and tools which were necessary for mounted warfare. Pottery has nearly disappeared. There is every sign that here we have to do with warlike nomads. Remains of dwelling-sites are accordingly missing. The peculiar shape of the bit as well as the strongly traditional forms of the remaining tools betray the fact that here it was a question of a local reaction on the part of the native tribes. This group possesses its own special Animal Style which we find otherwise in the purest form in the territory of the Sauromatae.

b) In the other complex, in the anterior, there is, on the contrary, a certain degeneration, signs of growing poverty in every line of existence. Alongside this, agriculture and a tendency to settle are preserved and supplemented by intensive hunting of furred animals.

Griaznov thinks these signs are to be traced back to the influence of the bearers of that first complex, who, in between, became mounted nomads. They plundered their neighbours and made them dependent — thus the degeneration. They needed grain, because they no longer went in for cultivation themselves — thus the continued existence of agriculture among the dependent tribes. Finally, they organised fur-trading (as in Scythia) — thus the intensification of hunting.

Griaznov sees an example in this of the splitting up of a complicated culture into land-workers on the one hand and cattle-breeding nomads on the other. Engels claimed a development of this kind as a law of Economy. Perhaps that is why Griaznov does not inquire further about the initiators of this change.

So far, we can make only vague assumptions about these initiators. All peoples come a priori into consideration, among whom such a change can be observed as having taken place earlier, that is primarily the peoples of the Caucasus and Luristan. Yet happenings in Europe (where a tremendous expansion of the Urn-Field Cultures become visible) and in the territories bordering on the Chou Empire should not remain unnoticed.

The Caucasus and Luristan centres seem to me, for the moment, the most important, e. g. because Kiselev found Caucasian bits among Mongolian bronzes, and several of the East-West parallels observed by Janse started obviously from common centres in the belt of mountains.

I should like now to go further than the results of the Russian research, regarding several points:

a) The observations in Altai make it very probable that Bernshtam took the right line in the Pamirs and in the anterior of T'ien-shan when he worked out a complex here, with »Scythian» culture and early Animal Style.

b) These two groups, Altai and the T'ien-shan territory, which grew up upon the basis of western Karasuk Culture, possess, alone among all archaeological complexes of the

¹⁾ Rabinovich 1941, pp. 113—114.

Asiatic Steppes, the qualities which we demand for the ancestors of the Nomad Scythians and Sauromatae, i. e. Europoid racial type, great age, and the lack of all evidence that they first came into the country with an immigration belonging to Scythian times.¹⁾

c) It is therefore possible that the nomadic kernel of the Scythians and Sauromatae (perhaps even of the Ananino Culture) developed in the territories of the western Karasuk province. The name »Scythian» clings to these territories throughout the whole of antiquity.

d) Within this relationship between East and West, Altai and the Sauromatic territory stand particularly close together.²⁾

e) Such a close tie is not to be found between the Pontic Scythian element and any eastern district. This might, on the one hand, be accounted for by the inadequate exploration of that vast stretch of country, in which Karasuk-like forms were native, yet, on the other hand, by the fact that the Pontic Scythians had a much more variegated past behind them, before they settled down into their new home. Their knowledge of iron, and the strong elements of Oriental art, which are lacking in the Sauromatic complex, could only have been obtained during their campaigns in the Near East.

f) If the Scythian tribes were formed within the framework of the western Karasuk province, then it is possible that they undertook similar campaigns towards the East, that is to say, to China³⁾ (before they invaded the Near East), and, from there brought artistic ideas away with them (maybe in the form of kidnapped handworkers). Only recently has an article been written, concerning the so often puzzling, yet so long known affinities between Scythian and Chinese art.⁴⁾

We must then expect to meet with objects in the oldest kurgans, which one can look upon as »souvenirs» of such a visit. We do this, especially, in the Kuban group. Most important evidence is shown by the pole-tops, the eastern origin of which (Ordos) can hardly be doubted, as we now possess a modern summary.⁵⁾

In addition, Kiselev reported a surprisingly large number of Scythian cauldrons from the collections in Northern Mongolia.⁶⁾ The form of the handles is undoubtedly dependent on Chinese examples which go back to the Shang time. Casting in one piece is an East Asiatic speciality. The local cauldrons of Kazakhstan are made of plates joined together. All these Far Eastern elements have been pointed out by Rostovtzeff.

I should like to supplement this with one point:

Rabinovich⁷⁾ confirms that the oldest Scythian helmets are not of Greek origin. They are restricted to the oldest kurgans of the Kuban group, and cannot be derived from an Anterior Asiatic or European helmet. Matsunaga⁸⁾ denotes a group of North Chinese

¹⁾ And, if Kiselev is right in his »attribution of an Animal Style to the Karasuk of Semirechia», perhaps also an Animal Style which has a local tradition, and does not come into the country as an invader.

²⁾ See Rostovtzeff 1931, pp. 483 and 484.

³⁾ The distance is not greater than to South Russia, and the way is sketched through old cultural connections.

⁴⁾ Frisch 1949.

If Kiselev is wrong and the Karasuk province of Semirechia had no Animal Style, it could be assumed that Animal Style was developed by contact with the Chinese borderland.

⁵⁾ Shleev 1950. The author himself, however, comes to another conclusion, which can surely not be maintained.

⁶⁾ Kiselev 1947c, pp. 365—366.

⁷⁾ Rabinovich 1941, pp. 105—119.

⁸⁾ Matsunaga 1934. I have to thank Dr. Slawik for calling my attention to this material and for the translation from the Japanese text.

helmets of Ordos type as »Scythian» in the widest sense (e. g. Pl. V: 2). He brings in the Solokha helmet as an object for comparison, but in this, the helmets of Kelermess (1 and 2) (Pl. V: 1) and, further, those of Staryi Pecheur (Pl. V: 3) and several other finds of not precisely known origin show much more typical agreement, namely a singular ring on the top, by which the helmet could be hung up.

One cannot overlook the differences. The Scythian and the Ordos helmets belong only to the same group of forms. This group, however, (namely, casting at such a late time) comes rather from Eastern Asia than from Europe where these helmets concentrate round one point, the Kuban group, and then disappear without successors.

It seems that the classification of Ordos helmets as »Scythian» is problematic. Perhaps, the other way round, Scythian helmets are a singular further development of a type which is Chinese in the broadest sense of the term.

In this situation we must ask ourselves, if it is really out of the question whether the name of the Scythians appears in Chinese sources¹⁾, and whether the bloodthirsty burial-customs of the oldest Scythian kurgans are really something nomadic and not much more likely to be something taken over from princely Chinese burial-rites.²⁾

Ebert has separated the Kuban group from the other kurgans and attributed it to some of the Eastern Nomads. Perhaps there is a kernel of truth in this. Their founders were far more reminiscent of East Asia than the founders of the others.

Naturally all this is only a hypothesis which must be compared with other theories and divergent facts³⁾. I only intend to show the possibilities resulting from the study of the »Karasuk Cultures» regarding the explanation of Scythian Animal Style.

VI. PAZYRYK PERIOD.

During the Maiemiric Period equestrian nomads or semi-nomads had been formed, in the steppe-belt, which were aggressive, quick to strike, and no longer autarchic, and thus, according to their whole construction, were prepared for political agility. Among these only a few conservative blocks of agriculturists and cattle-breeders were left, who took no part in this aggressive development.

From this it is clear, that the time which followed is determined by the history of the quarrels which these mounted groups fought out, first with their more highly organized neighbours, and then, naturally, among themselves. The decisive difference in the circumstances of the eastern and western Steppe peoples depended upon the fact that the peoples in the East except for a few weaker neighbouring countries, e. g. Korea, had to do with the Chinese Empire exclusively, which in the very next centuries, was approaching the height of its cultural and military development. Thus the whole political, social and military development of the East reverts to one factor.

In the Europoid West, there existed no such permanent foe. Violent quarrels had taken place over a limited period (in the 6th century B. C.) between the Persian Empire and its Nomadic neighbours in the North, but a long period of peace is included in this time, which finds its expression in the fact that Sakian and Massagetian auxiliary troops could be counted among the most reliable warriors of the Achaemenids. The Oxus Treasure,

¹⁾ Haloun 1937, p. 316.

²⁾ Minns (1942) confirms Chinese elements in the Scythian Animal Style. He is, however, convinced that the Scythians never originated in China. In this, he is right. Perhaps the Scythians were in China, once upon a time. Maybe the end of the West Chou Empire (about 780 B. C.) marks the beginning of the Scythian Animal Style.

³⁾ Cf. Eding 1940, Hančar 1950.

with its numerous Persian Empire and Near East relations, is an exact symbol of this close and long-lasting contact.

The shock came, when the Greek conqueror removed the political basis of the mutual relationship. The natural flow of mercenaries was stopped, and the basis for a different and warlike expansion was formed. Therefore, the pressure by the Steppe population could have a still stronger effect, because, as Tolstov has so ingeniously worked it out, the heavy armour was developed by the collaboration of nomads and manual workers in the cities, which made possible the transition from fighting with bows and arrows from a distance, to »push-tactics» carried out by mounted lancers in close formation. This led to an expansion effected by various tribe groups going one after the other in quick succession, in various directions: Once to South Russia, where the Sarmatians relieved the Scythians of their position as rulers in the Steppes, then East of the Caspian into the former territory of the Persian Empire, in connection with the frontier inhabitants of this territory, as »Parthian Storm», and lastly, East of these, as »Sakian Migration», to East Persia and finally to India.

The liquidation of the Graeco-Bactrian Empire accompanied the movement towards East Persia, and, in this, the leadership may have been in the hands of tribes which wandered to the West out of the Chinese borderland already under pressure from the Huns.

In the face of these manifold and very complicated movements, more complicated than one can state in a short survey, the unity of China, which was just being formed, caused the unity of the nomads in the East.

Although the facts are so well known by Chinese sources, and the reasons are so easy to understand, it is yet very difficult to grasp the centres and the creators of this unity, from our archaeological material. The fact that scientific excavations exist, unfortunately, only in Transbaikalia and in Northern Mongolia may play an important part in this. The Ordos region and Manchuria, which are perhaps much more important centres, have not been clarified by systematic examination.

Regarding *Northern Mongolia* and *Transbaikalia*, we know that the first phase of Stone Tombs was replaced, in the 4th and 3rd centuries B. C., by two other groups, which run partly parallel to each other, i. e. by the so-called Stone Tombs II and the »Figure Graves». Their metal inventory always goes back into the Karasuk Culture. The anthropological type is well known. They are Mongoloid with a well-rounded brachycephalic skull (Pl. XIII: 2). We do not know from archaeology what was happening in the *Ordos territory* at the same time. We have reason to assume that the old Tibetoid Karasuk people were no longer dominating here. Among the stray finds a group can be recognized, which shows a fairly strong relationship with the West, but there are also others which perhaps connect up with the Mongoloid groups of the North.

A fact of exceptional importance is that, about the beginning of the 1st century B. C., we meet with a new and complete group in Northern Mongolia and Transbaikalia, that of Noin Ula¹), that is to say, princely burials and some much simpler cemeteries, belonging to them, which, however, shows import goods which are essentially the same. First it was thought that the Noin Ula group represented a logical continuation of the Stone Tombs, only modified by an overwhelming increase in luxury, which was made possible by the Hun successes. We know now that this is not correct. The predominating skull type of the Noin Ula group is also Mongoloid, yet dolichocephalic. The people of the Noin Ula group were not like their forerunners in Transbaikalia, but like the Bronze Period population of Cisbaikalia and the Tungus of the present day in the same territory. In the burial customs also, and in art (e. g. in the prominent position of the elk)

¹) Teploukhov 1925, Borovka 1925, Trever 1932, Sosnovskii 1934, 1935, 1940, 1941, 1946, 1947.

characteristics are found, which point back to the Northern forest zone.¹⁾ Debets has, therefore, assumed that the Hiung-nu, or at least their »royal stock», were a Taiga group²⁾ who, with all the advantages of such, broke into the Steppe and, there, assumed domination over the former »Stone Tombs» population.³⁾

Meanwhile, through the dating of the latest Stone Tombs, and the earliest Noin Ula cemeteries, it has become clear that things here become still more complicated. Today we must say that, if such a North-South movement existed, it took place somewhere else, presumably East of Transbaikalia, and was first carried out, in a roundabout way, in Transbaikalia also. In other words: The Noin Ula group was in any case not the formation-centre of the Huns. It could have been a side-branch of the Huns or another forest group, which moved towards the South within the framework of the Hun Empire. Or, perhaps, the dating of the earliest Noin Ula burial-sites is incorrect.

Thus we must leave the whole problem of the Huns in the air, which is understandable, as extremely large territories have, still, not been examined. We must, therefore, be content with the proof that it is dangerous to take the Noin Ula group as representative of the Hunnic expansion, as, for example Sosnovskii and Debets⁴⁾ did (and the West, glad to receive a starting point, followed them).

Let us now go over to the quarrels which came to a head among the Steppe peoples themselves. These quarrels and fights are extraordinarily important as regards Altai in particular, as, thanks to its situation, it found itself in an intermediate zone, which came into direct contact neither with China nor with the Near East. Naturally, the extensive movements inside the steppe-belt are more difficult to grasp than those between the steppe peoples and their history-writing neighbours.

The most important quarrels were now carried on between the peoples of the eastern and those of the western part of the steppes, in a whole set of warlike advances and migrations.

Tolstov tried to work out such a migration.⁵⁾ He claims that just as the heavy armour of the lancers was brought to the South by the campaigns of peoples (Parthians and Sarmatians), this same form of armour reached East Asia borne by a great invasion. The Great Yüeh-chih of East Asia were, according to him, no other than the »Great Getae», the »Massagetae», who, as far back as the 4th century B. C. may have dominated the whole of Southern Mongolia. Defeated by the Huns, they returned (according to Tolstov's theory) to their old hunting grounds, and in doing this, liquidated the Graeco-Bactrian Empire.

This theory sounds wonderful. But Tolstov does not even try to compile all the material which we have to hand from Western and Eastern sources, and makes no mention at all of the many and divergent explanations which European students have offered in the course of the last few decades. This is easy to understand, if one considers how many and divergent theories are still in the air, concerning this difficult matter. But by the omission of so much previously obtained knowledge, Tolstov robs his theory of all force of conviction.

¹⁾ Cf. Okladnikov's Lena-finds. He found pottery which resembled the Noin Ula group together with Tungoid skeletons. See Debets 1948, p. 123.

²⁾ Debets 1948, pp. 119—123.

³⁾ That would be a parallel to later happenings, when hunter-groups of the Taiga repeatedly showed themselves as the tougher, and thus were called to domination, as the »Secret History of the Mongols» describes so plastically.

⁴⁾ Sosnovskii 1941, pp. 308—309. Debets 1948, pp. 185—190.

⁵⁾ Tolstov 1948a, pp. 140—154.

It is clear, therefore, that Tolstov's opinion is not even accepted by all specialists in Soviet Russia.

Bernshtam wants¹⁾ to show, in opposition to this, that it were the descendants of ancient Sakas (not Sarmatae and Massagetae), who played the leading part in the steppes. Bernshtam believes that they extended to the West and to the East, and thus brought the forms to the West and the East, which up to now have been called «Sarmatian». This theory would rather agree with the archaeological facts than Tolstov's.

In any case, we know of the Chinese and Western sources that the great time of Sakian or Sarmatian peoples was followed by the supremacy of the Huns. They created a new Hunnic centre in the Balkash region and dominated the western steppes as far as the Urals and the Volga. In all these regions they mingled with the local Iranian tribes, thus given existence to new mixed peoples, perhaps to European Huns and to Ephthalites.

But all this is well known.

Bernshtam²⁾ thinks he can confirm traces of these Western Huns in a necropolis which he excavated in 1939, near Kenkol'. It belongs to a Mongoloid group with skull deformation, without Animal Style (in this widely differing from Noin Ula), and with many Chinese import goods.

This theory was generally accepted, just as other related burial-sites have been found.

In the last year, an important critic has raised his voice against this effort. Smirnov³⁾ points out, that a group like that of Kenkol' was present in Sarmatia as early as the 3rd century B. C. It was a Far Eastern group, but not identical with the «Huns» of whom we know, so far, from East Asia.⁴⁾ Thus, up to now, we are not very successful in our archaeological identification of the Huns.

Let us turn back to the monuments of *Altai*, now.

The first attempt at classification and grouping was undertaken by Griaznov. He considered⁵⁾ the Pazyryk Kurgan I, which shows no sign of foreign importations, as typical of the 5th—3rd centuries, but regards the Shibe Kurgan as typical of the following period (2nd century B. C.—2nd century A. D.), and, accordingly, makes a distinction between a Pazyryk and a Shibinsk Period of Altai.

He conceived the Mongoloid skeleton in the Shibe Kurgan as a proof that the Huns had, at that time, drawn Altai into the territory which lay in their hands. His system has the advantage that one finds in it, again, the traditional chronological differentiation, made between the Scythian and Sarmatian Periods, just as one finds the traditional idea of the political development of Central Asia in it.

Rudenko has taken this idea as a basis for the interpretation of his excavations. He goes further than Griaznov, and puts the Pazyryk Kurgan II into the 5th, at latest the 4th century B. C.⁶⁾ To support this dating, he looked out, with the greatest possible industry, all indices which point to an especially close relationship with Achaemenidic Persia.

¹⁾ Bernshtam 1947e, 1949b.

²⁾ Bernshtam 1940a, 1947a, 1947b, 1949b.

³⁾ Smirnov 1950.

⁴⁾ Maenchen-Helfen (1945) has rejected the identification of European and Asiatic Huns, showing that there were not much affinities between Ordos and Noin Ula, on the one side, and the European complex called Hunnic on the other. It is, however, necessary to compare Central Asiatic and European «Huns». I think they were related.

⁵⁾ According to Debets 1948, p. 136.

⁶⁾ A similar discussion about the dating of Sarmatian and Scythian designs see Salmony 1937.

This dating would result in the fact that we could trace back many elements so far described as Sarmatian, to an original source in Altai.

Unfortunately, Rudenko has not explained the appearance of several objects from the Pazyryk Kurgans II.—VI. in later complexes of the neighbouring territories, or has not even mentioned them.¹⁾ If we put together the objects which do not fit into Rudenko's picture, we must then come to the conclusion that the Pazyryk Kurgans I. and II. cannot be separated from the other great kurgans²⁾ which include the Shibe Kurgan. The difference in time can only be a minimum. As regards anthropology, there is no considerable difference. In Pazyryk Kurgan II lies a man of Manchurian-Tungus type, and in the Shibe Kurgan we meet a member of the same racial division.

Thus, following Griaznov's arrangement of material, we would come across the paradox result that the whole of the Pazyryk Kurgans belong to the Shibinsk Period. This not only upsets Rudenko's dates, but makes it impossible to use the arrangement advocated by Griaznov.

Therefore I have followed Kiselev,³⁾ who summarizes the whole period from the end of the Maiemiric time, right into the 1st century A. D. into a large group, the Pazyryk Period. This combination seems all the more correct, because, in it, it is shown that in Central Asia no breach can be confirmed, acute enough to be compared with the Scythian/Sarmatian change in the East European Steppe. In Central Asia, many Scythian features exist up to the time about the birth of Christ.⁴⁾ The change of culture progresses gradually, and without breach, and even the expansion of power of the Hun Empire, only finished off a process which had begun long ago. Kiselev's arrangement of the material corresponds much more nearly with that which was applied to the Sarmatian monuments of Kazakhstan (Maiemiric: Sauromatian, Pazyryk: Sarmatian I, II, III). Naturally, inside such a large unit, as the Pazyryk time represents, one can distinguish a whole number of sub-groups according to territory, social position, and time.

The Altai anterior forms a little world on its own. However, the difference from the mounted nomads of the mountains, which we saw so clearly in the Maiemiric time, lessens and disappears, in the course of the period. Perhaps the original plundering of the tribes settled there by mounted nomads had really become a symbiosis, as Griaznov presumes. Griaznov was able to distinguish later and older monuments here (just because we know of dwelling-sites) and named them according to the districts where the main finds were discovered. I have combined the facts according to this.

In High Altai the situation is much more difficult. Dwelling sites are missing (as is to be expected), and the kurgans can, by means of the number of horses, be divided into three groups, which presumably represent the princes, the nobility, and the free people. A sign of schematism is recognizable, as if there had been exclusive castes. Sometimes one feels oneself reminded of Chinese conditions, in which every group of clerical officials received a different form of burial.⁵⁾ As perishable stuffs are preserved in those great kurgans which lie in the high mountains, yet so much is missing owing to robberies, which we find in the smaller kurgans, we can perhaps achieve some order in the smaller kurgans, and even arrange the greater ones in a chain, according to time, but it is

¹⁾ This criticism concerning Rudenko in no way refers to the punctiliousness and high quality of his outstanding excavation work. Cf. also Rostovtzeff's unlimited appreciation (Rostovtzeff 1931, p. 587).

²⁾ Kiselev 1951, pp. 289—291.

³⁾ First published by Kiselev 1947b.

⁴⁾ Such survivals led Rudenko to his dating which is much too early.

⁵⁾ Spiegel 1933, p. 66.

difficult to synchronize the chains. Therefore, Kiselev has not gone far in the setting up of such parallels. The dating is also difficult, because the great kurgans show signs of great antiquity of ritual, and, because the suspicion exists, that the builders of the various kurgan groups had, simultaneously, very varied forms of favourable trade-contacts with abroad. Thus, lack of imported goods does not necessarily mean great age. In other words, it is still too early, to transmit too fine a division into the Pazyryk Period. Thus I have restricted myself to repeating here the arrangement which Kiselev thought out,¹⁾ and to mentioning particularly conspicuous cross-relationships. Only at one point does my combination deviate from Kiselev's, i. e. the Tuiakhta Kurgans, and Vavilonka, which Kiselev reckons as belonging to the Maiemic Period, which, however, possess a later form of psalia, mirrors, and especially, iron — these I have included as a group which leads further towards the various socially differentiated groups of the High Altai, in the Pazyryk Period.

1. Biisk and Berezovsk Culture of Anterior Altai.

Griaznov has treated and presented the material of the Altai anterior in a summarized and shortened form.²⁾ Thus he could start from the results of the excavations which he began in 1946 in the hilly country of *Blizhnie IElbany* between Biisk and Barnaul on the Ob. He found there remains of settlements which had been disturbed by winds, yet which yielded enough pottery finds to allow for an exact dating, i. e. between 5th and 3rd century B. C. The find of cast forms and copper drops was particularly interesting, as it showed the existence of foundries.

Similar material consisting of sherds was also discovered at further range. Vessels were dug up, out of destroyed burial-sites. This pottery had much in common with the old Bolsherechensk. A belt of parallel lines, or slanting network, which encircles the vessel, is new to us, or the impresses of a little shovel, which were introduced in between the bendings or the edge.

The most interesting collection of pottery up till now came from the town of *Biisk*. Thus Griaznov summarized it as «Biisk Culture». He shows that a number of other finds belong to this: *IEniseiskoe II*, *Monastyr* near Biisk, *Kamyshenka I*, a site near the town of *Kuznetsk*, and, finally, the gorodishche *Chertova*.

Beginning with the same excavation season, at *Blizhnie IElbany*, Griaznov was able to differentiate from this Biisk Culture other forms peculiar to the 2nd and 1st centuries B. C. This determination of the time was particularly clear at one point, where the layer of this phase stratifies the dwelling-pits of the older Bolsherechensk Culture (6th—5th century B. C.). The pottery has not changed, in comparison with the form of the Biisk Culture, but the ornamentation is much simplified. The vessels are decorated only with rows of humps filled in, between, with grooves or little slanting lines. Plenty of vessels are, however, quite undecorated,

In *Blizhnie IElbany*, graves of this time were confirmed. The dead were buried in deep trenches in wooden chests which were covered by means of several tree trunks at the top. A burial ritual is carried out here, which goes back, in High Altai, to a much older time, right into the Maiemic Culture. The skeletons lie stretched out on the back, the head orientated towards the west. The graves became much richer in comparison with those

¹⁾ Kiselev dates all the great Kurgans in the 3rd—1st centuries B. C. Pazyryk Kurgan I. may be one the most ancient. We cannot say more before Rudenko's excavations are completely published. Why did the Russians not examine the annual-rings of the great tree trunks used for the construction? Thus we should have a relative date.

²⁾ Griaznov 1947b and 1949.

of older stages. Remains of clothing and copper, iron and bone ornaments were constantly found. Iron knives with a ring at the end were also given to the dead. One or two clay vessels belonged to each grave, evidently with liquid nourishment, and the fatty tail of a lamb.

Pottery of this kind was already known, through stray finds, from *Klepikovo*, *Viatkina*, *IEniseiskoe I*, and near the *Vikhorevsk* ferry, not far from the town of Biisk, but especially through the excavations of Sergeev in the gorodishche *Berezovka*. Griaznov calls the whole phase »Berezovsk Culture«, and lays considerable value on the fact that during this period are found, on the one hand, signs of transition to the culture of High Altai, on the other hand, significant signs of enrichment, in comparison with the former phases. Griaznov believes there is a connection between these two. The settled land workers had perhaps now found a complete *modus vivendi* with the nomads. The collaboration may have consolidated itself and thus led to a general economic uptrend.

So we find, also among the kurgan finds of this phase, next to a group which corresponds purely to the settlements mentioned (*Klepikovo*, *Blizhnie IElbany*, already mentioned, *Srostki II*, and a great part of the *Biisk* burials), another which clearly represents a transition to the rider graves of High Altai. As such, the burial-sites of *Bystrianskoe* and *Krasnyi IAr* are specially to be considered.

Kiselev has now made more detailed statements about some of these kurgan groups. Regarding the burials which came to light during the building of a silo in the town of Biisk¹⁾, he emphasizes that vessels painted with yellow ochre were found. The patterns represented wavy bands and spirals. As no more painting of vessels could be established in Altai since the Afanasievo time, this is an isolated appearance of great importance. It is all the more significant, as Sergeev and Markov found broken copper sheathings in the wall of the silo trench, decorated with drawings. They represent the same scenes which we know from the felt carpets of Noin Ula, namely a cervid breaking down while running, and fallen upon by a fantastic griffin. In this, the carvings in the representation correspond with the appliqués which give to the Noin Ula carpets their many-coloured impression.

In these burials some eastern element has probably had an influence, from a region where vessel-painting existed, i. e. from outside the territory which one surveys with the help of the Russian excavations.

Kiselev also gives information about the excavations which Sergeev undertook in 1930 in the large burial-site of *Bystrianskoe*.²⁾ Here he opened kurgans in whose stone chests chiefly single burials were found, with the heads towards the west. They had a rich inventory with them, vessels with decoration of applied clay bands, spinning whorls, iron knives, needles and fragments of mirrors, ear-rings of gold wire, neck ornaments, put together from golden pendants, cowrie shells and bronze beads, glass and stone in various shapes and colours. The find of a milling-stone is especially interesting, also a square stone disc deepening in the middle, which Kiselev, probably rightly, declares to be a primitive form of the stone incense altars of the Pazyryk time.

In 1935 further excavations were undertaken by the Sayan-Altai Expedition. The find material which came to hand simply provided confirmation of the picture obtained in 1930.³⁾

By reason of this material Kiselev established the facts that:

1. The ear-pendants of gold wire conform to those from the »Hun burial-site of Derestui« in Transbaikalia, about the time of the birth of Christ,⁴⁾ yet also to the Late

¹⁾ Kiselev 1949, p. 180.

²⁾ Kiselev 1949, pp. 179 and 180.

³⁾ Kiselev 1949, p. 179.

⁴⁾ Sosnovskii 1935.

Tagar ones of the Minusinsk Basin. They are also found in the »Uzun culture» of Semirechia.

2. The various beads correspond with those of the Late Tagar kurgans.

3. The pottery shows vessels, which correspond with the Tagar ones, also others which are related to the Sarmatian ones of the South Uralic kurgans, and singular types, which we can consider as characteristic of the Pazyryk time.

Other kurgans of the same burial-site belong to the »transition» group.¹⁾ They differ outwardly from those mentioned before. They are covered with a stone layer. Again, in spite of robbery (the great mass of the graves mentioned before were plundered), they contained very many gold ornaments, hollow half bullet-shaped metal objects, rings, gold beads, typical of the Later Tagar graves of the 2nd and 1st centuries B. C. Kurgan Nr. 8 contained a rich find, namely many arrow-heads, among which the older bronze socketed arrow-heads and also the later ones, with tangs, were represented. It is impossible to overlook their close relation to the Sarmatian finds of the 3rd century B. C. Daggers and battle-axes are again the same shape as in Minusinsk Basin. In spite of these older types, the pottery leaves no doubt that the date of these kurgans can be considered as Later Pazyryk Period. Among the kurgans of High Altai the closest relationship to the Aragal Kurgan seems to exist, and it includes much which is Tagaric.

To the oldest finds of this transition group belong the little earth kurgans which Griaznov opened near the town of *Biisk*.²⁾ It is typical of this transition group that it approaches very closely, as regards shapes, to the kurgans already represented, but it contains also graves with horses. In their inventory we find barrel-shaped vessels of Eastern Sarmatian type, three-edged bone arrow-heads, iron knives, bone buckles with fixed spike, iron bits and horn psalia which are pointed on one side, bronze representations of boar tusks, as in the Kurai group and Pazyryk. These also belonged to harness. Little bronze objects in the form of petals with convoluted carvings, show complete agreement with finds in the great Berezovka Kurgans on the Katun river. As these belong to the 4th century B. C., this means that this Biisk group is relatively early.

Only one contribution from Sergeev himself has been published, which is easy to obtain. He treats of the excavation of a kurgan near *Krasnyi IAr*, one kilometre from the village of Krasnoiarškoe on the Kamenka.³⁾ This kurgan had, like most of the group, a stone covering, and had been thoroughly plundered. As far as we can see, the dead lay in a wooden chest, and outside its northern wall lay the horse. This order speaks for the fact that here we have to do with the usual west orientation. On the dead, only a clay button was found. From other finds, Sergeev deduces that it was used to hold the clothing together at the breast. The grave-robbers took no notice of the co-burial of the horse, as it yielded no valuable metal. Hollow, ribbed bone tubes were found here, sometimes bored through. They certainly served to fix straps and strap crossings. A very beautifully carved boar head bored through in cross form probably served the same purpose. A second example was completely destroyed. A boar tusk which had been formed into a griffin head also belonged to the harness. At the horse's head lay the S-shaped bone psalia finished off at the end with a singular stylized griffin-head. The bit was probably of iron, as some traces of rust could be seen. Sergeev mentions the appearance of similar, but undecorated psalia, near the village of Srostki and the Piket mountain. According to all these details, this burial forms an immediate transition to the Tuiakhta group of High Altai.

¹⁾ Also excavated by Sergeev, 1930, described by Kiselev 1949, p. 181.

²⁾ Described by Griaznov 1930b, Figs. 71, 73, 76, 78, 82, 84, 88, 91—93, and Kiselev 1949, p. 180.

³⁾ Sergeev 1946.

2. Tuiakhta Group.

The four kurgans near the village of *Tuiakhta* on the Ursul¹⁾ belong to a group which is conspicuous for its shallow round tumuli, 70 cm. high and 12 m. through. They are constructed out of large stone (30—40 kg. in weight), but with plenty of earth throughout. Thus they are overgrown, like the Maiemic ones, and, in this, are different from the later ones. All have been plundered.

Under the mounds lay trenches lengthwise east to west, about 2.5 m. long, 2 m. wide, and 3.5 m. deep. At Kurgans Nr. 6 and Nr. 8, the ground on the south side is deepened. There were found the remains of a chest of larchwood standing in the pit which was so thickly covered with larchbark that it came to a level with the shallower end of the grave. In this shallower north part lay the skeleton of a horse, with the tail towards the west, again in accordance with the Maiemic ritual.

In Kurgans Nr. 10 and Nr. 11, the floor of the trench was level. In Kurgan Nr. 11 stood a block-construction, as once in the southern part of the graves, but in such a way that a space between remained not only on the north side, but also on the west side. There horses were found. The horse on the northern side lay, as in the first kurgans, with the tail towards the west, the one on the west side, with the tail towards the south. In Kurgan Nr. 10 the block-construction filled up the whole breadth of the trench, and only a narrow space by the west wall remained free. Here lay the horse, with the tail towards the south. Owing to the addition of great stone blocks all round the wooden chest, the Nr. 10 and Nr. 11 burials were more complicated.

In spite of these differences, the inventory was about the same in all four graves, as far as one could judge, in view of the plundering.

Only in Kurgan Nr. 6 was the skeleton sufficiently preserved. It lay in a crouching position on the right side, with the head to the east, as once in the Bronze Period, but the skull revealed a striking change. Debets²⁾ writes about it: »It is like the skulls of the (modern) Kazakhians, and establishes a definite proof that, already at this time, single representatives of tribes of south-eastern origin penetrated into Altai.» We have, here to do with the first Mongoloids.

Among the gifts in those graves, the remains of two iron swords were found. They both have the wing-shaped hilt-basis of the Scythian akinakes (Pl. VI: 12). The pommel of one is reminiscent of the cross-daggers of the Minusinsk Basin, but the end of the other seems to be formed out of two griffins' heads, or perhaps the claws of a bird of prey. The considerable damage done by rust unfortunately does not allow the shape of these weapons to be reconstructed. Kiselev thinks he can say that these weapons are not like the light, elegant, Tagar daggers, but more similar to the heavy akinakes types of the Persepolis reliefs.³⁾

In Kurgan Nr. 11, a huge ferrule was found, within the rest of a handle. This obviously belonged to a battle-axe. The form of the ferrule, according to Kiselev, corresponds with the oldest Tagar types.

Bronze arrow-heads were found in two kurgans, in Kurgan Nr. 6 these were among the remains of a leather quiver, which lay at the left knee of the skeleton. It was apparently carried thus, as we know from Scythian representations. All six arrow-heads were three-edged and socketed. The sides were flat and slightly rounded over the points. At the base there were deep cuts (Pl. VI: 13). Such arrow-heads are extremely rare in

¹⁾ Kiselev 1938, p. 237, 1947b, p. 157, and 1949, pp. 170—172.

²⁾ Debets 1948, p. 137.

³⁾ Cf. the representation by Herzfeld 1941, Pl. XLI.

Siberian finds. Kiselev knows of only one specimen found by Rau in the lower Volga district.

Two arrow-heads from Kurgan Nr. 11 are similar but narrowed in the middle. It is of importance that Scythian arrow-heads, which at least show certain analogies, are dated 5th—3rd century B. C. The types of the 5th century are the most similar.

Also there are bone arrowheads of a type widely extensive, as regards both time and locality.

Several small bronze objects seem to have belonged to the belt (Pl. VI: 4,8). An iron hook served perhaps for the fastening of the sword. We know of bronze hooks, which served the same purpose. They are not decorated in any way. At the belt hung, presumably, needle-like bronze pendants (Pl. VI: 7). As they also appear many centuries later, in the Kudyrge Kurgan,¹⁾ they seem to have a long tradition in Altai. They show to us, how the bronze ornaments of the same type so frequently found in among the Ordos finds, were used.

In the same connection, a glass bead is of importance. It was found in Kurgan Nr. 6. It has a cream-coloured ground and blue »eyes», surrounded by white circles (Pl. VI: 14). According to the accompanying (poor) drawing, the bead belongs to the same type over which Seligman and Beck²⁾ report from Lo-yang. Thus, there is evidence of a far-reaching trade between West and East. The time of its appearance in China is in accordance with the timing which we obtained from the rest of the inventory.

In the same kurgan, eleven bored-through cowrie shells were found together, as if they had been in the form of a chain (Pl. VI: 15). They belong to the paste imitations of such shells, which appear in the Tagar graves of the IInd stage. Such imitations were produced in China at the same time, and served as a substitute for money.³⁾ Corresponding finds in the Volga region hint at how far these connections may reach.

There are four horse bits of iron. They correspond with the Scythian type which was usual, from the 6th century B. C., on. The psalia are straight. They are put through the rings on the ends of the bits. They have two openings for the cheek straps. One bit only is made of bronze. To this belong integral-shaped psalia like the Scythian psalia of the 5th century B. C. The strap crossings were fastened and ornamented with boar tusks (Pl. VI: 1). The bronze bit is so well preserved that it is possible to make a complete reconstruction of the bridle (Pl. VI: 16). On the nose, the horse wore a bronze button with four openings, in which the nose-strap and a strap leading down from the forehead crossed (Pl. VI: 5,6). This button corresponds in its function with the crossed tubes which have already been frequently described.⁴⁾ In one place, instead of such a button, there was a bronze copy of a carved boar's tusk. As in the original tusks, the broad end was changed into the open mouth of a beast of prey (Pl. VI: 2). We find nearly-related forms in the Minusinsk district, also in the Sarmatian kurgans of the end of the 5th century B. C. Such representations are otherwise lacking in Siberia, and hint at a close connection between the three districts, whereby it is to be noted that unornamented tusks were used very much in the Maiemic kurgans, and thus represent the preliminary step to the later artistic shape. It is possible that this use of tusks started in Altai. Bone buckles can be mentioned as part of horses' harness, and had either no spike (Pl. VI: 10) or a fixed one (Pl. VI: 11). Various small bone objects (Pl. VI: 3,9) belonged also to the harness.

The nearest parallels to the one vessel of which pieces were found, exist in Tagar pottery.

¹⁾ Rudenko and Glikhov 1926, p. 46, Figs. 15/4—9.

²⁾ Seligman and Beck 1938, Pl. IV, Nrs. 3 and 4.

³⁾ Gibson 1940.

⁴⁾ Similar specimens in Janse 1932, Pl. IV/10, 11.

In 1927, Rudenko explored a kurgan between the villages of *Vavilonka* and *Zarechnoie* on the Uda, East of Semipalatinsk.¹⁾ The mound again consisted of large stone blocks and earth. Below lay a square trench (3 × 3 m.²) orientated towards the cardinal points. The floor (1.75m. deep) was laid out with stone slabs, and the walls covered with horizontal beams which were supported by stone pillars at the corners. To judge by their height the construction did not quite reach to the surface. Traces of burning could be found on the pillars.

In Kiselev there is no mention of the persons themselves buried there. Among the gifts, there was a massive iron dagger (Pl. VII: 1). It is like the weapons from the *Tuiakhta* Kurgans, and is thus nearer to the Scythian and Persian types than to those of the *Minusinsk* Basin.

There was also a sharpening stone bored through (Pl. VII: 2). We know this shape already from the *Maiemic* finds.

On a fragment of a strap was found a heart-shaped ferrule, and, which was strange, x-shaped bronze sheaths for strengthening (Pl. VII: 8) This bit of leather presumably belonged to a belt.

Broken knife blades (Pl. VII: 3), also thin needles and a sword-hook (Pl. VII: 9) were of bronze. This signifies an ancient feature in comparison with the *Tuiakhta* Kurgans. A broken bronze mirror also belongs to an earlier form (Pl. VII: 7) (in the Sarmatian district about 5th—4th century B. C.) A three-edged arrow-head with tang (Pl. VII: 4) can also be reckoned to the 5th—4th century B. C.

At the north wall of the trench lay a golden neck-ring (Pl. VII: 5) and a piece of gold leaf (Pl. VII: 6) It represents the head of a bird of prey with a sharply curved beak, dissolving into spirals. Kiselev considers this representation with the specific spiral ornamentation as definitely of Chinese origin, and as leading on to the many which are similar, belonging to the later Sarmatian time.

3. Simple Burials of High Altai.

In 1933, the Sayan-Altai Expedition under the leadership of Kiselev²⁾ explored the small, but completely stone-built kurgan in the surroundings of the village of *Kurai* of the Aimak Kosh Agachok in High Altai. It was so shallow that in the 8th century A. D. it could be included without difficulty in a new kurgan. The dead man lay, together with his steed, above the old mound. After this later burial had been examined and was finished with, a square trench of about 2 × 2 m.² was found under the shallow layer of stone, through-measurement about 7 m. In this was found a low larchwood chest of about 1.4 m. in depth. The bottom was laid out with boards, and the roof also was of boards. This chest did not fill up the grave, but left room on the north side. Here lay the horse, on its belly, the tail towards the north-west. Obviously a second one had lain there, too, but the remains had been entirely destroyed by grave-robbars. On the left side of the skull of the first horse were found four carved wooden imitations of boar tusks, bored through at the base (Pl. VIII: 16). Another imitation lay under the horse's skull. As usual they obviously belonged to the harness.

¹⁾ Material in the Semipalatinsk Museum, only described by Kiselev 1949, p. 173. *Vavilonka* lies on the extreme western slopes of the Altai, but both, culturally and geographically, it approaches more nearly to the High Altai sites than to those of the northern anterior. Thus it is mentioned at this point.

²⁾ Kiselev 1949, p. 178.

In the badly destroyed and plundered wooden chest were found the remains of a man and two women. Debets¹⁾ considers the skulls to be Europoid.

In the inventory, Kiselev mentions iron objects, which were covered with thin goldleaf, and remains of two wooden sculptures representing the mouth of an animal and a griffin-head with round eyes which are surrounded by a raised ring (Pl. VIII: 8). Kiselev sees in these eyes an accordance with the «Hun» bronzes of the Ordos region.

Mention of three kurgans, which Rudenko examined near *Aragol*, are only accessible in Kiselev's statement.²⁾ There were graves of riders, which are very similar to the Tuiakhta ones, in the way they are built. The appearance of bronze bits (Pl. VII: 12), hints that they are ancient. They differ from the Tuiakhta finds, in that in all three kurgans miniature representations of single-edged knives were found (Pl. VII: 10). In one kurgan, still more bronze miniatures were discovered, also a battle-axe (Pl. VII: 15) and a dagger (Pl. VII: 11). The battle-axe was fixed as Late Tagar by Kiselev, but the dagger was attributed, more exactly, to the second half of Stage II of the Tagar Culture, that is, the 3rd—1st century B. C. Sword-hook (Pl. VII: 14) and pseudo-buckle (Pl. VII: 13) represent the usual forms. These kurgans have, of all the contemporary Altai monuments, the closest connections with the Minusinsk Basin. Features in accordance are also to be confirmed at the grave Bystrianskoe Nr. 8.

In 1937, the Sayan-Altai Expedition on the Ursul river, near the village of *Kurota* opened a very modest burial-site.³⁾ On the surface, the grave was marked with a round stone circle, diameter 5 m. In the middle of the circle, a right-angled trench was found, 2.7 × 1.9 m. along the side. At the bottom of the trench stood, at a depth of 3.2 m., a wooden framework made of two layers of beams, covered with similar beams. On the north side, space had been left again, and there lay a horse, with its tail towards the west. Among the few pieces, which escaped the notice of the robbers, were S-shaped earrings of gold wire, and cross-shaped pieces of gold leaf, finished off with volutes. Kiselev declares that these volutes represent the stylization of animal motifs. In the burial-place itself, except for destroyed bones, only the fragments of two vessels could be found. One was of Tagar shape, but the other belonged to a later type, as we shall get to know it from the Shibe Kurgan.

An interesting complex was discovered near *Kumurtuk*, on the bank of the Chulyshman, and was given to the Barnaul Museum.⁴⁾ It included, as well as arrow-heads (Pl. VIII: 2), three arm-rings which were bent out of bronze rods, and a bronze arm-ring with carving on the outer side, a bronze chain (Pl. VIII: 3), a silver neck-ring, a bronze leaf ornamented with a raised spiral (Pl. VIII: 5), a bronze leaf with the design of a panther (Pl. VIII: 7), a strong little bronze disc with an opening in the middle, another, ornamented with three strongly stylized griffins (Pl. VIII: 6) and, finally, a half-bullet-shaped bronze metal object, with designs of boars (Pl. VIII: 4). Kiselev believes he can clearly recognize the effect of the Graeco-Bactrian culture province in this style.

Finally, Kiselev reports a bronze dagger, the pommel of which is ornamented with two griffin-heads opposite each other (Pl. VIII: 1). Here it should be a question of a Minusinsk product, for which the patina might speak.

It is natural, that the whole time, in Altai there were burials without the inclusion of horses. Kiselev's excavations in 1934 furnish a proof of this. On the lower terrace of the river *Karakol*, the largest tributary of the Ursul, he opened three earth kurgans.⁵⁾

¹⁾ Debets 1948, pp. 140—141.

²⁾ Kiselev 1949, p. 181.

³⁾ Kiselev 1949, pp. 178—179.

⁴⁾ Kiselev 1949, pp. 181—182.

⁵⁾ Kiselev 1935, pp. 97—98. A rich stone kurgan of the same excavation season is dealt with later on.

Under the mound, trenches were found, about 2.5 m. long, 2 m. wide, and 3 m. deep. They were filled with pieces of stone and earth. The traces of the robbers' digging were clearly seen. Just above the bottom of the trench, a layer of stone slabs was found, which, earlier, had rested on wooden cross-supports, 50 cm. above the ground. They had been broken into and the skeletons had been knocked to pieces.

Only in two cases was it possible to decide the position of the dead. They lay, as usual, stretched out, on the back, with the head towards the west. Only a minimum amount of remains were preserved, among them a whorl of stone, small beads of blue and white paste, thin gold leaves, and unidentifiable pieces of iron.

The pottery is surprisingly similar to the Late Tagar of the Minusinsk Basin. The beads, also, accord with finds in this district. Bones were found, of cattle and sheep, but no horses' skeletons.

The spinning whorl suggests that here it is a question of the burial of women. Kiselev does not concern himself with this matter.

4. Middle Kurgans of High Altai.

Only a round mound on the surface, 18.5 m. through, 85 cm. high, showed the presence of a burial-site, which Kiselev¹⁾ dug out in 1934, in the immediate neighbourhood of those already mentioned on the upper terrace, on the *Karakol*. It was, however, built of stone, including bits of rock 80 kg. in weight.

In the mound, bones of sacrificed cattle, horses, and sheep were found. Under the middle of the kurgan, a relatively small trench opened up, which only measured 4 × 3 m. from east to west. It was filled with earth, stones and gravel. The signs of the passage of grave-robbers were clear, and sheep bones, the lower jaw of an elderly person, and fragments of flat-bottomed vessels, reminiscent of the Tagar kind, were found in it.

Above the floor of the trench, at a depth of 5.5 m., a powerful supporting structure once stood. At the corners, also 50 cm. from the wall of the trench, were thick posts, bound together in pairs by the cross-supports. Above lay a floor of beams which had to carry three layers of heavy stone slabs (up to 200 kg.). On the ground, in the trench, was a low wooden chest, the bottom and the walls of which were clearly recognizable. Of the top, hardly any remains could be confirmed.

The supporting structure had fallen in, a long time ago. This made it easier for the grave-robbers to get at the middle of the burial place, which was, accordingly, completely cleaned out. The slabs which lay crooked had, however, protected everything which was deposited at the north and south wall of the chamber. Along the north wall lay three horses with heads to the east, the lowest and highest on the belly with legs under them, and the middle one on its back. They had been killed by a blow on the forehead with a battle-axe with rhomboid cross-section. Slabs had been placed to keep them one above the other. Otherwise the way they were deposited did not give the impression that special trouble had been taken.

On the uppermost horse there was a saddle. Its position showed that it had only been put there at the end of the proceedings. Rein-fittings of bone (Pl. VIII: 13, 14) were preserved (as known from Shibe), and, above all, four bent bone objects, which could only belong to the saddle-bow, a buckle, ferrules, and the remains of the forward saddle-bow, made of wood. The shape of the back bow could be reconstructed from the parts of bones. Near these pieces of bones, gold foil was found, which had presumably covered them. A neckstrap belonged to the saddle, but only three wooden pendants and a little bronze bell remained preserved. In this bell, the clopper was hanging in a strange way,

¹⁾ Kiselev 1935, pp. 98—106, and Kiselev 1949, pp. 189—193.

attached to a fastening which was stretched between two openings in the bell (Pl. VIII: 11). Between the teeth of the uppermost horse, a ring snaffle of an early shape was found. At the skull, there lay numerous gold leaves, which probably ornamented the straps of the harness.

In the plundered middle part were found solely potsherds which fit in with those from the robbers' gang, and some overlooked pieces of gold leaf. Here lay, probably, the dead man whose lower jaw was found where the grave-robbers had passed.

At the south wall, the skeleton of a young woman was found, orientated towards the east, stretched on the back, the hands laid to the sides. She rested upon a layer of mouldered bark. Over her body was a covering which, as far as could be confirmed from pieces under the skull, was made of bright red silk. It was embroidered over and over with little metal leaves of different shapes, most of which had kept their original position, even where the stuff had disappeared. Thus one could recognize the measurements and position, and also the pattern. The woman had obviously been completely wrapped up in the covering. Fastened to the edges, like a chess-board, were 150 round, gold-covered bronze sheaths. The middle part of the covering formed a pattern, with fourteen smaller and ten larger half-round metal sheaths, also of bronze and gold. The rest of the inner surface was covered with 130 square metal sheaths, in chess-board pattern. The space between the inner part of the surface and the edge was filled up by 1180 gold spangles (3×3 mm.²), also arranged in chess-board fashion. The edges of all the metal sheaths were bent downwards, which lent them a massive appearance. In reality they are much too fragile, for the covering to be an object of use. According to Kiselev, it must have been a show piece for state occasions destined to be used only for the burial.

Under the covering, traces of clothing could be confirmed, presumably not of wool, but of leather and fur. At the pelvis, single beads were found, which had obviously once been sewed on. Round the neck lay a strange kind of spiral ring. It consisted of bent, ribbed bronze tubes, drawn up on a strap, and, on the outside, wound round with goldsheaths. This construction of gold, bronze, and leather gave on the one hand the impression of massive gold, and, on the other, made the ring elastic and light. The ends of this neckring were decorated with wood and gold-covered panther-heads. One of these is better preserved and represents an amazing little work of art (Pl. VIII: 9). The little knobs were stuck into the neckring with a wooden peg. Kiselev thinks they could be changed over, according to wish. At the side of the skull lay ear-rings of gold wire (Pl. VIII: 10), such as we have already come across. Goldleaves and smaller pieces of gold wire belonged to a headdress which the stone slabs had broken and which could not be reconstructed. On the gold, traces of bright red were seen, the remains of painting.

Near the head was a wooden cassette, crushed by the stone slabs. It was once decorated with leather appliqué. Its lid could be lifted with one iron ring. Between the mouldering sides, gold foils were found, also a bronze needle and a bronze mirror shaped like a medal, the loop on which represented a schematic figure of an animal (Pl. VIII: 15). It accords with the Late Tagar finds. Next the cassette, stood a square stone table, hollowed out like a trough, and with four low feet (Pl. VIII: 12). Traces of fire were to be seen in it, but also goldfoils like those which appeared in the headdress. It doubtless belongs to the »portable altars», of which Tallgren treats.¹⁾

In 1947, Kiselev²⁾ examined Kurgan Nr. 1 of the chain of Kurgans *Kurota I*. The Kurota brook belongs to the basin of the Ursul. Under a stone mound (20 m. through, and 1 m. high), a trapezoid-shaped trench was found. It was fairly large (from north-east to south-west 6.8 m. long, width at south wall 5.4 m., at north wall 4.4 m.), and unusually

¹⁾ Tallgren 1937a, pp. 51—68, and pp. 206 and 207.

²⁾ Kiselev 1949, pp. 194—195.

orientated, perhaps because the Kurota and the mountain chain which accompany it, run from north to south and not east — west, like the Ursul and the Karakol.

The trench was filled with stones to a depth of 2.7 m. Below, the remains of a floor were discovered. It rested on stone walls, which had been made about 50 cm. thick at the south, west, and north walls of the trench. This floor and the walls of the trench were covered with a layer of mud, which showed that the trench had stood open long after the erection of the inner structure. Perhaps it had already been built in reserve. The remains of a robbers' passage could be confirmed, which, as an exception, went from the side, to the place of burial. In this, human bones were found, also gold spangles and remains of charred birchwood, which came from a torch. Under the floor, once more, sand and stone were found. It was also seen that, besides the stone wall, three huge cross-supports, which were held up by only one pillar at the east and west sides of the grave, carried the floor of beams. Only at a depth of nearly 5 m. was a low wooden chamber discovered. The tree trunks which formed the top, the larchbark covering them, and the meagre remains of the chamber walls were crushed into an indefinable mass. Only scraps of woven stuff, pieces of gold leaf, copper pyrites, a heavily gilded iron button, and completely destroyed human bones could be confirmed.

At the east wall of the chamber, between the supports, the skeletons of two horses were found, one on the top of the other. This position we know already, from the Karakol Kurgan, but here the horses were cut in half and put together again in such a way that the skull lay by the tail. The uppermost horse was saddled, but, except for a small quantity of wood and leather remains, only a great many goldleaves of all kinds of shapes (commas, little combs, triangles and plates) could be defined. On the croup lay little cylinders of gold leaf which had once adorned the tail-strap. Separated from them were the remains of bridles. Owing to a little heap of earth, they had escaped the notice of the robbers. The straps of the bit were adorned with little pieces of wood of which only the gold covering still remained. This also was badly damaged and crushed.

The construction of this kurgan represents a strange variation of the Karakol Kurgan. The appearance of three pairs of pillars, as we shall see, points towards the princely kurgans of the Pazyryk type.

Here, the stone *Kurgan Nr. 7* near the village of *Tuiakhta* which was examined in 1933 (presumably by the Sayan-Altai Expedition)¹⁾ can be mentioned.

This kurgan covered with a mound of stones, 20 m. through and 1.40 m. high, a trench, 4.10 m. long toward the northwest-southeast, 3 m. wide and 5.2 m. deep. In the lower part, as in the Kurota Kurgan, the stone walls reached a height of 1.80 m. Just so, a floor of larch beams rested on their outer edge. On the ground, in the trench, filling up the southern half, stood again a low structure of larch beams wedged into each other. The floor was also of wood. The covering was probably destroyed by the grave-robbers who plundered the Tuiakhta Kurgan when the ceiling was still intact. The robbery was conducted with special enthusiasm. In the robbers' passage were found only much-destroyed human bones. In the wooden structure itself, there were bits of mouldered wood, covered with copper pyrites, indefinable remains of gold leaf, and finally scraps of thin leather with traces of copper pyrites and seams made of sinews. They probably belonged to clothing. As was to be expected, horses' skeletons were found in the northern part of the trench, but not one on top of the other. They were, instead, one behind the other, in a row. At the heads of the horses were found again, ring snaffles, as known from the Kurai and Karakol Kurgans. At the skull and on the forehead of one of the horses, amorphous thin gold leaf was confirmed, bearing traces of red colouring. It should

¹⁾ Cf. Kiselev 1949, p. 195.

be noticed, that one side was always intensively dyed. Perhaps the dye which was certainly made with resin served also to stick the leaves on to the straps.

In 1935, a kurgan was excavated near *Kurai*, by the Sayan-Altai Expedition (Group II, Kurgan 1), which was distinguished by a specially complicated burial rite.¹⁾

The trench measured 3 m. square, by 2.80 m. depth. As space for burial, a low chest of larch beams served, which was covered with larch boards. This structure had double walls. The outer chamber measured 2.80 m., east to west, width 2.70 m. In it stood a smaller one, 2.50 × 1.25 m. The southern wall was the same for both. The walls of the inner chamber were wedged into those of the outer. In the inner one, which was, owing to robbery, in great disorder, lay the bones of three people, much broken and damaged, and between them the fragments of an iron knife and fragments of gold leaf. Besides these, there were found in the middle of the chamber, the sacrum of a horse and sheep vertebrae, and, at the east corner, pieces of a flat-bottomed vessel of red clay, decorated with imposed clay-bands and notches. Such vessels are characteristic of the Pazyryk time of Altai.

Three horses were confirmed. Two lay next each other with the head towards the east, on the right side, parallel with the north wall. In the bits, iron snaffles were again found with a ring at the end. On their backs a belt of black humus showed the place where the saddles or rugs had presumably mouldered away. By the horse which lay nearer the south wall, this saddle or horse-rug had been covered with two round pieces of gold leaf.

A third horse lay considerably higher, near the north part of the ceiling, i. e. at the north wall of the trench, with the belly downmost, the feet beneath, the neck slightly raised and the head turned to the north. It had the same iron bit, and on the forehead was gold leaf of indefinable shape. In the middle of its back was a round bone disc with a projection at the side, and a small hook. It was strongly reminiscent of the usual buckles of the Pazyryk time, with fixed spike.

This kurgan represents an extremely interesting monument. The plan of the death-chamber conforms completely to the double-walled wooden structure of Noin Ula, which is constructed in just the same way, and in which the inner chamber is also stuck on to a wall of the outer. This detail cannot be a coincidence. In the *Kurai* Kurgan, the inner chamber is not only drawn nearer to the southern outside wall but also purposely joined to it.

Kurgan *Nr. 5* in the *IAkonur*-Steppe (Ust'-kansk Aimak, in the High Altai district) is worth a whole chapter in itself. Griaznov excavated it for the Altai Expedition of the Hermitage, in 1939.²⁾

The fact that such an extensive mound (25 m. through), consisting of earth only, existed, was unusual. After the earth had been cleared away, two frameworks, made up of tree trunks, one inside the other, were discovered at the level of the surface of the earth. Inside the fencing, circles made of stones were found. The trench itself was oval, in contrast to the burial customs observed uptill then, and filled with earth. It also appeared that the west side of the trench wall contained a large niche. In this stood a sarcophagus made from a hollowed-out tree trunk. In spite of the robbery, it could be confirmed that the skeleton of an old woman lay there, stretched out on the back, the head towards the north. She wore a headdress, ornamented with gold leaf (Pl. XVII: 1). The complicated spiral scroll patterns remind Kiselev of the polychrome appliqués on the felt carpet from Noin Ula, but Griaznov compares this ornamentation with Chinese works of art of the

¹⁾ Kiselev 1949, p. 193.

²⁾ Griaznov 1940, pp. 17—18.

Kiselev 1949, pp. 195—196.

Han Period. An openwork plastic from Chaatas Uibat in Khakassia is also brought into comparison.

A similar ornament appears on a little bone comb in this kurgan (Pl. XVII: 2). Unfortunately, otherwise, only single pieces of gold trimming for large beads with facets, a wooden knob and an iron knife are preserved.

The peculiarities of the above-mentioned kurgan are all the more striking as the one opened immediately next it, *I Akonur Kurgan Nr. 8* again resembles the Karakol Kurgan.¹⁾

In its simple right-angled trench were found two full-grown people and a child. At the side lay two horses. Unfortunately, the destruction by grave-robbers did not allow further confirmation of the inner structure and of the original position of the skeletons.

According to the scanty remains, the kurgan must have been a very rich one. The clothing of the dead was apparently sewn with gold leaf, but only about sixty pieces of this were well preserved. Three clay vessels, maral horns and two bronze mirrors (Pl. XVII: 3) were also left. These bronze mirrors were medal-shaped, with a handle strongly plastic, but otherwise they resemble the Late Tagar ones. A find of Chinese lacquer is very significant. It must have belonged to a vessel.

Regarding Kurgan Nr. 5, Griaznov assumes that the dead woman was of noble foreign blood and was buried here according to her native ritual in one of a row of kurgans belonging to a clan of high rank. This assumption seems completely justifiable.

5. Princely Burials of High Altai.

From such rich grounds as Karakol it is only a step to the princely kurgans. They differ from the smaller ones in that there is a greater number of horses. Doubtless, the more horses, the more dignified had been the recognized position of the dead. We know of such special rules for princely burials from the Scythians far into the Mongol time.

The most significant, and maybe earliest among them are the Pazyryk Kurgans. They lie in eastern Altai at a height of about 1500 m., 2 km. from the Ulagan river, in the old bed of a glacier. Once upon a time there was, in the big shallow basin, a lake, which must have dried up before the erection of the kurgans. The next large settlement is the Aimak-centre Ulagan. The name «Pazyryk» comes from a little settlement about half an hour away. Here it is again a question of one of the usual kurgan chains stretching from north to south. To this belong five large and some smaller kurgans, the number of which is not given exactly. They were discovered in 1924.

Pazyryk Kurgan I.

The first kurgan was examined by the Russian State Museum Altai Expedition in 1929, in the short space of time limited by the shortness of the summer. The expedition was led by Griaznov and Rudenko. Both have made, at different times and independently of each other, statements about the brilliant results, which, unfortunately, do not quite agree.²⁾ The reports were taken over by the West and commented upon with enthusiasm.³⁾ Therefore, I need only summarize.

This kurgan consisted of a mound (50 m. through, 2 m. high) which, as customary with the smaller kurgans, had a covering of stone. Under the middle of the mound, there

¹⁾ Griaznov 1940, pp. 16—17.

²⁾ Griaznov 1929, 1937, and one not yet available work from 1950. S. I. Rudenko 1931 and 1944. S. I. and N. M. Rudenko 1949.

³⁾ Griaznov and Golomshtok 1933, Amschler 1933, Tallgren 1933a, Morgenstern 1936, Field and Prostov 1940a and b, to Alföldi 1950. The list could be made still longer.

was a square trench, 7.20 m. long at the side, orientated to the cardinal points. As progress was made, here, a many-layered «armour» of tree trunks was again found. Under this, as with the middle kurgans, stood two chambers, one inside the other. The outer one consisted of rough beams, the walls of the inner one were skilfully hewn. So that the structure should not be crushed in by the heavy layer of tree trunks and stones, a supporting scaffolding had been erected, consisting of three huge cross beams, each borne by one pair of pillars, one of which stood at the north wall, and the other at the south. The chamber took up only the south part of the trench. The north side remained free, and served for the horses. The invasion of this structure by grave-robbers was obvious. The robbers had taken endless trouble to hack their way through the various beams, and finally slipped into the chamber through a narrow hole. Just above the inner chamber, their archaeological successors struck ice. As they went further, it was revealed that the complete burial-place, including the horses, was frozen, in one large block of ice. This created the best conditions for preservation which could possibly be wished. The excavators reported that the wood still felt perfectly fresh, and a strong smell of resin issued from it. Only a very small part of the ice had come from condensation water inside the chamber. Muddy water had flowed through the grave-robbers' open shaft, and frozen, so that the chamber was full of ice. The robbery had taken place so soon after the erection that perishable material, without being frozen till then, was not destroyed.

The construction of the kurgan played an essential part in the formation of this strange ice-block. The loose stone covering reflects the sun's rays, but lets in ice water and cold air without hindrance. The ground, surrounding the grave, was not at all permanently frozen.¹⁾

When the chamber had been thawed, it was seen that it had been thoroughly plundered. Even the corpses had been taken to the surface, so that they could be undressed more easily. In any case, there was no trace of them. Only a large wooden sarcophagus remained, in the form of a hollow tree trunk with a lid, an extremely interesting wall-covering of variegated felt, the foot of a table, and some gold spangles, also felt rings which could not be classified.

The robbers had known very well that the horses with their valuable harnessing, lay at the north side of the chamber. The wall of the inner chamber had been hacked through, and, in the outer one, yawned a hole, large enough to touch the horses. As a broken handle which once belonged to a socketed celt was found in the robbers' passage, Griaznov following somewhat in the footsteps of Sherlock Holmes assumes that the robbers' tool broke during this resolute activity and that they had no time to repeat the attempt.

These «Two Thousand Years Old Horses of Altai» so well preserved for us, and ten in number, are certainly of noblest breed. They resemble the best strains of Turkmenistan or Ferghana. They have nothing to do with the «Mongolian» horses, which were to be expected here in Central Asia. They are too fine and too sensitive to come from the rough High Altai, and on a level with the quality of sheep wool used, which comes from animals found under very favourable climatic conditions, or from animals kept in a shed. Here we find little connection with local products. Also, the examination of the contents of the stomach showed feeding with grain, an appearance which is not usually to be expected in nomad horses. The horses were marked with cuts on the ears, and the marks on each horse were different.

All the richly ornamented trappings were as well preserved as the horses themselves. The psalia consisted mostly of carved and expensively gilded wood. They bore designs in Animal Style. The snaffles were of iron, in only one case of bronze. No set was exactly like any other.

¹⁾ Delegates sent specially by the Soviet Institute for Frozen Ground Research worked with the expedition which examined Kurgan II.

The saddles were amazingly primitive. They were simply cushions stuffed with reindeer, or deer hair, with felt underneath, and over them were felt saddle-coverings, expensively decorated with animal designs. They are more like modern reindeer-saddles than ordinary horse-saddles. By them lay various trappings, little shields made from small staves of wood, leather bags, etc.

Besides the normal adornments, masks had been allotted to two horses. They were fantastic compositions of felt, leather and hide, in Animal Style. In one case, the horse seemed to be disguised as a reindeer, in the other, as a winged griffin.

Pazyryk Kurgan II.

This kurgan was examined, during two summers, by the Leningrad Branch of the Institute of History of Material Culture, under the leadership of S. I. Rudenko. It lies to the South, near that excavated in 1929, on the former bank of the lake. The reports come exclusively from Rudenko.¹⁾ The relatively long duration of the excavation was due to the care with which the ice-block in which the complete burials were contained, had to be thawed out.

The Pazyryk Kurgan II is very like the first in construction and is nearly as high, though the through-measurement is less (36 m.). Outside, it is covered with a layer of stone. Under this is the mound, which, this time, consists of clay and stones. The pit is 7.10 × 7.80 m., thus a little wider than in the first kurgan, but only 4 m. deep.

At the bottom of the trench was a stone layer, over that earth, and over that again a flooring of beams, on which the wooden structure was erected. Once more, two chambers stood one inside the other. The inner one, which was constructed out of carefully smoothed tree trunks, enclosed a space, 3.65 × 4.90 m, by 1.50 m. high. Between the outer and inner chamber there remained a free space, not filled up with stones, 15 cm at the east side, 20 cm. at the north, and 30 cm. at the west.²⁾ The ceilings were covered with birchbark and shrubs. Above the chamber again was erected a supporting scaffolding of stakes (35 cm. thick), three at the north, three at the south-side, bound together by cross-supports. On these rested nine layers of beams. Between them and the northern trench-wall, a space remained free, which was used for the disposal of the horses. Thus they lay on a step. The two upper layers of beams covered the horses' mortuary also. They were also covered with bark and shrubs.

Let us take a look at the finds outside the burial chamber.

To begin with, one could again confirm the usual signs of grave-robbery. It had been achieved perpendicularly through the layers of beams into the chamber. In the rubble, which filled this shaft, were found various pieces of woven stuff, which should be discussed together with the rest of the textiles.

At some places, wooden shovels and wedges were met with, that is to say, building tools, which had been thrown into the pit while filling it up. A clumsy wooden wheel (30 cm. through), cut from a tree-trunk, and with an inner opening of 10 cm., can be reckoned to the building and transport material.³⁾

The horses were frozen into the ice, but, owing to the level at which they lay, they

¹⁾ Rudenko 1948, 1949a, 1949b, 1949c, 1950a and 1950b. The excavations of the year 1948 are only considered in the popular article which appeared in 1950. Certain short remarks of Kiselev are important for the dating (Kiselev 1949, p. 214 and 1951, p. 392).

²⁾ It is not reported, whether an intermediate space existed between the southwalls. On the other hand it would have been noticed if the two had been joined together.

³⁾ Perhaps there were axles of wheels in the loops of the coffin, and the coffin was transported on such wheels.

had obviously been thawed out repeatedly, thus they were in a very decayed condition and had been very much crushed by the layers of beams.

The trunks and heads of the seven animals, which lay behind each other, heads towards the east, on the left or right sides, were badly preserved. Thus one could not see if the ears were marked. All had been killed by a blow with a battle-axe, which had made a rhomboid cut on the forehead. Their extremities were better preserved, also the hair, so that one could see that all were dark-coloured. The manes were cut close, the tails partly plaited and artistically twisted.

As to the harness, the bits remained wonderfully preserved. Five were of forged iron, two of cast bronze, and all were of the usual shape.

The psalia were missing on two horses. One wore horn psalia in the form of a slightly crooked wedge, four pairs of psalia were of wood artistically carved. Three were of the usual S-shape, with two openings for reins and covered with gold leaf. The ends of these were formed into animals' heads, one a wild-cat (Pl. XIX: 1), one a goose (Pl. XIX: 2), and one a sheep (Pl. XIX: 4). Only one pair of psalia were straight. Their coverings were of tin and gold, and they had ram's heads (Pl. XIX: 3) at the ends. All four were complete masterpieces.

The harness also had ornamental plaques. But only two sets were more richly accoutred.

The horse with the horn cheek pieces was decorated with a forehead-plate of stag-horn (Pl. XVIII). On this were two geese, heraldic fashion, in the jaws of a beast of prey with horns and long ears. The right and the left half each forms a complete composition in itself. The half-head of the wild beast looks like the profile of a beast of prey with open jaws. The work shows remains of yellow and red painting. Button-like discs of stag-horn, which presumably covered the crossing point of reins, belonged to the same harness (Pl. XIX: 7). They display a lotus motif, entirely suggestive of the oriental, and were also painted yellow and red.

Small plates, on which wooden figures of supine cat-like beasts of prey were carried out in full plastic style (Pl. XIX: 5,6), belonged to the harness with the wild beast psalias. The material was wood. The plastic items were covered with gold. The design is masterly. Owing to its plastic form it constitutes a great rarity.

A flat round forehead-plate with a hump in the middle forms part of the same harness.

The leather parts of the harnesses are destroyed out of all recognition. Only various little bone pseudo-buckles and buckle-like objects possibly fastened to straps (and if so, the forerunners of the strap-tongues later so important), and other small details were reported.

As in the first kurgan, two horses were allotted masks. On one there is what seems to be a ram, attacked by a bird. The state of preservation does not permit closer description.

The saddles, as in the first kurgan, consisted of leather cushions and felt-blankets. The cushions were, however, stiffened by wooden bows in front and at the back. The outer saddle rugs are decorated in two cases with many-coloured felt appliqués, in the first case with a griffin (Pl. XX: 1), and in the second with an elk (Pl. XX: 2). The third saddle is adorned with the scene of fighting animals, a leopard attacking an elk (Pl. XX: 3). Here the appliqué material is leather once thickly covered with colour. Such saddle coverings were certainly not made to be used. The saddle bows were covered over with leather and overlaid with tin and gold. Only one saddle had chest and tail straps. Behind the saddle hung leather straps as in the first kurgan. They were weighted by bullet-shaped objects, into which hair was inserted as tasseling.

Little shields made of parallel rods were found near hide bags (Pl. XXI), which had obviously contained provisions (in one, cheese was confirmed). Rudenko thinks that their only purpose was to protect the provisions from contact with the warm bodies of the horses, in opposition to the earlier theory that they belonged to war equipment.

Of special artistic value is a whip-handle, which represents a fleeing horse (Pl. XXV: 1), attacked by a wild beast. The middle part is, alas, much destroyed. The artist has curled the body of the animal in a spiral round the whip handle in an extraordinarily clever way (Pl. XXV: 2). The handle has two openings, one for a handle-loop, the other for the whip-strap.

In the chamber the conditions for preservation were much better than in the horses' burial place, but even here more easily destructible stuff had already decayed. The ice had formed into two sections. The ground was covered with clear transparent ice, some 12 cm. high, which came from condensed water and was formed before the robbery. Various objects, thrown away carelessly by the robbers, lay on this ice-layer. Over these the chamber was filled with dirty yellow ice from the water which had dripped through owing to the robbery. Only the complete filling-up put an end to the process of destruction.

The ice could only be thawed out after much trouble had been taken, and it took a long time as warm water had to be used. The technique of this process led to the unfortunate fact that it is often not known exactly where the objects were lying.

The chamber consisted of wooden beams. The floor and walls were covered with black felt to a height of 65 cm., and the felt was secured with wooden pegs and bronze nails. The felt had no pattern, as was the case in the first kurgan, but, in place of this, it had very probably been decorated with ornamental borders, which the robbers had torn off and taken away. Only two modest remains were left. They were of white felt, on to which variegated feltpatches were sewn or fastened with woollen threads. One border has a lotus motif (Pl. XXII: 1) and the other has lotus blossoms on strange-looking stands which are tied to each other with garlands (Pl. XXII: 2)

Narrow runners found in the rubble were perhaps spread over the felt on the floor between the objects. They will be dealt with in the summary devoted to textiles.

This rubble fallen from the robbers' shaft took up nearly the whole centre of the chamber. The most important finds were grouped at the east, south and west sides round this cone. It is easiest to form a picture of the situation, when one sees it thus:

At the east wall, the domestic utensils (tables, food, vessels, musical instruments).

At the south, the sarcophagus.

At the west the burners and the other ritual objects.

At the north, outside the chamber, the horses.

Let us begin, according to the order in which the discoveries took place, with the east side.

The most revealing inventory is provided by four little tables with oval dishlike tops on which meat had probably lain (Pl. XXIII: 4). They had been broken up by the robbers, partly so as to bring their booty up into daylight on the tabletops and probably partly to provide something, on which they could cut up the corpses.

The construction of the tables helped towards this purpose, as all the feet were inserted quite loosely into the tops, and most of them remained stuck into the lowest layer of ice. The fact that the tables could be taken to pieces probably hints at the nomadic life led by their owners.

One of these tables had turned legs (Pl. XXIII: 3), and the legs of the other one looked the same, but were made by hand (Pl. XXIII: 2). In the case of two other tables the legs took the form of a lion standing on its hindlegs (Pl. XXIII: 1 and Pl. XXIV), which in its plastic form and perfect naturalness suggests oriental connections. The feet were partly overlaid with tin and goldfoil, and partly also painted. The tables can to a certain extent be reckoned as an intermediate form between a table and a dish. They connect up with the other vessels, which were also found in their immediate neighbourhood.

A clay vase of 50 cm. height corresponds with a type which is widespread in smaller kurgans of the Pazyryk time also. The body is ornamented with leather appliqué which is overlaid with tin, in the usual technique (Pl. IX: 7). It forms a frieze of strutting cocks, each one of which has been made separately. The second vessel may have been of equal size and shape. The body was decorated with a frieze of lotus blossoms, but it is impossible to be sure about this as it was so badly preserved.

The wooden vessels which belong to the same set, are especially important. They are made by hand, and this was accomplished with a knife which had a blade crooked at the side and which must have been prepared specially for this purpose. The first vessel has a rounded bottom and the neck is slightly curved outwards (Pl. XXVI: 3). Its height is 13.5 cm., through-measurement 15.5 cm. The handle is long and lends to the vessel the appearance of a dipper. It is bent in a remarkable way. The part leading downwards is of cattle-horn and ends in a horse's foot. In the wooden part of the handle there is a cleavage, which served to hang it up. We know of vessels of this kind from the burial grounds of the Tashtyk Culture. Curiously enough, this coincidence is not in any way emphasized by Rudenko.

The other wooden vessel is of the same measurement (height 14.5 cm., width 13—14 cm. respectively) (Pl. XXVI: 2). It has only a short, yet high handle.

These round-bottomed vessels were set upon rings made of strong black felt, some 2 1/2—3 cm. in height, overlaid with thin black or red felt and sewn with woollen thread. Their through measurement accords, naturally, with the size of the vessels. The find of such »stand rings» is of great importance. It explains how the transition from flat-bottomed vessels to round-bottomed ones came about. It is strange that remains of a carpet were also found, on which such felt rings were sewn. This suggests a modern tray supposing that it had saucers fixed to it. Inconveniently enough, however, a vessel with a flat bottom was standing in the stand ring.

As all these finds lead to the conclusion that food was left for the dead at the east wall, it is clear that a knife (Pl. IX: 6), found near them, was probably included in the necessities for the table. The knife was 20 cm. long, but the handle alone formed 12.5 cm of this measurement. The handle had an E-shaped ornamentation of gold leaf and was not sharply distinguished from the blade. Only the pommel was thicker and had an opening. Further off, the sheath of the knife was found (Pl. IX: 5). It is only a long flat rod of wood, with a deep notch in the narrow side. Into this notch the whole knife could be fitted, and only at the tip was it secured against falling out. Such sheaths explain to us amazingly well, why the distinction between handle and blade disappears in South Siberia in the last centuries B. C., and the ornamentation became concentrated on the pommel.

Musical instruments lie close to this. Rudenko considers them to have been used in connection with religious ceremonies. I am more inclined to think that they may have served to make music while dining and, thus, they lay near the objects connected with eating and drinking.

A drum was shaped like an hourglass (Pl. IX: 4). It was 18 cm. high, 10 cm at the top, 6 cm. in the middle, and underneath 8 cm. wide. The body consisted of horn plates sewn together. Over the seams, gold leaf was applied, trimmed with cord ornamentation. Only insignificant remains of the membrane were left.

Close to this lay two hollow cases carved out of large wooden blocks (Pl. XXV: 3,4). They belonged, certainly, to string instruments. As they were carved out of two sections of the same original tree, one may assume that here we have a kind of composite harp or lute. In both cases, the necks are broken, so it is impossible to decide this important question.

The purpose of a stag-horn hammer remains unexplained. It is in one piece, a branch of the antlers serves as handle and the head is cut of the main horn. It is too large to have been used to beat the drum.

At the south wall stood the sarcophagus, a huge hollow tree, 4.20 m. long. At the narrow sides, it was furnished with two massive loops which perhaps were used for transport or for letting it down into the chamber. On the outside it was covered with birchbark, with leather appliqué on it. These represented reindeer (maybe male and female) instead of cocks as in the first kurgan (Pl. IX: 3). As the two dead presumably lay also one behind the other in the long coffin, a connection with some religious idea may lie hidden there.

Inside, the tree was lined with a double layer of black felt. The bottom was covered with a carpet which we must consider more closely by looking at the textiles.

The coffin had been handled very roughly by the grave-robbers. The lid was torn off and lay by the west wall of the chamber. As the corpses had been frozen to the coffin, the whole front wall had been knocked down and destroyed. Nevertheless, the coffin contained plenty of objects, possibly also some which had not been originally there before.

A wooden pillow with leather covering probably lay under the head of the dead.

A leather bag with a flap lay at the head end. The upper part was stiffened with a rod finished off with a lion's head. It had straps for carrying. Evidently it was part of a lady's equipment, and its contents were almost inexhaustible.

To begin with, it contained a flat leather case of extremely simple yet unique shape (Pl. XXVII: 2). The case consists of a largish piece of leather to which a smaller piece is sewn on three sides. This forms a case not entirely unlike the brush-bags of our fathers. The end and the middle part are decorated with appliqué. The motif is of plant type. One could recognize lotus ornamentations. In the middle part of the smaller piece a beautifully rounded S-curve is to be seen. Rudenko makes the perceptive remark that, here, the «contorted animal», so frequent in Central Asian Animal Style, has been transmitted into a plant motif.

A leather bottle (21.5 cm. high) is similarly decorated (Pl. XXX: 2). The seams are so fine and so firmly sewn with sinews that it was probably possible to keep liquids in it, though perhaps it was used for contents of a solid kind.

Unique and apart is a pouch of 5½ cm. through-measurement. It is made of leather, and consists of two parts, shaped like half a globe. One part is slipped into the other. The inside part has an opening at the top of the «hemisphere», the outside part has none. The inside part has a ring at the base of the «hemisphere» by which it can be pulled out. The base is ornamented with a peculiar wave decoration and the top with a threeleaf design unto which gold leaf is sewn. This pouch contains Coriander. Rudenko points out that Coriander was much valued in ancient times, both as a spice and also for medicinal purposes, and as a charm. Here in Altai it certainly represents an import from the South.

In the same leather bag a mirror was found (Pl. XXXI). Its metal parts consist of a silver mirror-plate, which is equipped with a short flat staff, and a strongly outlined back plate. This has a cone in the centre, and close to this a round wall with another larger one, right to the edge. Between the raised walls, an ornamentation of concentric circles is visible, between which run light zigzag lines. This back part is fastened to the mirror plate at five points. The staff of the mirror is inserted into a cattle-horn handle, shaped like the octagonal well-polished trunk of a pyramid.

Here lay also an iron fork with diverging prongs. As it would hardly have served to eat with, its use was not clear to Rudenko.

A hide purse was found which, judging by the leather strips firmly sewn unto it, was worn round the neck. It contained hair. It is further mentioned that cut finger-nails

were also found in this little purse. This is a clear sign that here it was the question of an amulet.¹⁾

At the bottom of the coffin lay some other objects, which had perhaps fallen out of some bag or maybe belonged, earlier, to the clothing of the dead. Among them a fragment of a horn comb was confirmed, about 5 x 6 cm. large. A bow forms the upper end. Inside the bow is a little loop with a thin leather strap pulled through it. Just above the teeth a horizontal wall runs across the whole breadth of the comb.

Actually at the bottom of the coffin lay a broken ear-ring. Another one of similar shape was found on the neck of the woman in a wrinkle of her skin. Both heads had bored lobes to the ears. The significance of this simple ear-ring lies in the fact that, on a thin gold wire it had a setting once filled with precious stones or coloured glass. This shows us that the polychrome jewelry which was so important in Sarmatia at the same time, was also known and appreciated here in Altai.

Comparatively few beads of various materials, size and form were found, in the sarcophagus or scattered over the floor, or partly, in the robbers' passage. The material is mostly coloured glass or glass-paste, sometimes cornelian, or bone. The poor illustrations and inexact descriptions permit of no further comparisons.

A diadem (Pl. XXXII: 2) which lay under the leather pillow, ranks among the most remarkable finds. It consists of one band of wool, covered with leather, 6 mm. wide. Along the band struts a whole procession of cocks. They are carved out of thick leather. At their feet the leather is split into two, so that they could be stuck on to the band of wool. The wings are pressed outwards on both sides, so that the figure stands out plastically from the flat leather. Bits of sable hang from the band and they are enriched by the addition of other materials.

Under the pillow lay also some wooden figures covered with tin or gold foil. The extremities (wings, horns, ears) are mainly made of leather. The most beautiful object among them is the figure of a stag which stands on a little grooved ball (Pl. XXXIII). On the basis of the ball we notice a peg for fastening. This little plastic deserves to be ranked among the show pieces of Animal Style.

Two other similar stag-figures are less well preserved. According to the leather remains probably about six were present.

Two griffins are equipped with huge combs. The head, which is rather disproportionately large and the short wings, are reminiscent of the famous griffins from the Berel Kurgan. The little head of a horned lion, also covered with gold, is note-worthy. This head, too, had been fastened on to something. Rudenko thinks all these animals form part of a diadem, which he rather imagines to be like the famous heavy gold diadem of the Treasure of Novocherkask.

In the coffin, a peculiar piece of sculpture was found, which represents the head of a griffin, carrying the head of a stag before it in its open mouth (Pl. XXXIV). The flat parts of the plastic are covered with reliefs of a griffin with a goose in its claws. To these griffin designs on the flat sides, belong plastic wooden heads which are fastened in at suitable places. The whole thing is covered with gold, and the ears and comb are of strong leather. This piece must also be counted to the masterpieces of Animal Style.

We come across the same composition yet a second time, carried out, however, in a different way. The said piece was found outside the sarcophagus and had a leather strap. It had also been bound to something. Among the remarkable features of this composition must be noticed that the ends of the antlers were crowned with birds' heads.

The first piece must have been broken somewhere. It is beyond doubt, that the peculiar combination of griffin with stag's head in the mouth had a religious or heraldic

¹⁾ Rudenko 1950b, p. 158.

significance. We cannot, however, guess what, as we do not know the object to which they belonged.

The chief inhabitants of the sarcophagus were not found lying in it. Instead, the corpses of a man and a woman were found at the bottom of the first ice-layer. The robbers had hacked at them and cut them to pieces, so as to be able to remove the valuable ornaments more easily. Thus no complete article of clothing remains. Only a few of the garments can be reconstructed with any certainty.

The largest object preserved is a long coat of squirrel fur, the hairy side turned inwards. The sleeves are exceptionally long, and so tight that it was impossible to get one's arms into them. It was obviously made to hang over the shoulders, like the Persian kandys. The outside of the coat has strong parallel sinew seams which form a peculiar pattern, and at the most important places there are leather appliqué. Their motif consists of cocks combs and, set on to them, are gold-covered copper leaves. The coat is edged with horse hide.

A stomacher is made of the same material and decorated in the same technique. The edging is of sable and otter fur. This object evidently belongs to the same costume as the coat.

In a later work, Rudenko¹⁾ reports a man's shirt, cut exceptionally long and wide, and the sleeves became tight toward the wrists. There is a simple opening for the head, and this represents a great difference from the shirt found in Noin Ula.²⁾ The stuff was like linen, made out of plant fibres. — We do not know the purpose of small strips of fur on to which coloured leather patches were sewn and which were decorated with rhomboids of gold foil (Pl. XXVIII: 1—3).

Remains of at least three belts were found. They were of rather thin leather, but so closely sewed with sinews that they looked like belts made of stuff. They are stiffened with tinfoil. On to one, strips of leather are sewn, and it is overlaid with gold and tin (Pl. XXIX: 3). Thus a beautifully geometric tendril results of a shape which we know in Minusinsk bronzes, especially on knives.

In comparison with the first, the ornamentation on the second belt is static. It is decorated with leather appliqué in the form of rhomboids, between which are set typical »horse-shoes», »triangles», and »commas» of tin or gold leaf. At some places, obviously at those where straps should go, ornamental plaques are applied (Pl. XXIX: 2) These square plaques are of cast silver, and represent a ram with the head turned back, attacked by a lion (size 43 x 46 mm.) (Pl. XXIX: 1). The body of the ram is, once more, decked with half horse-shoes and commas. The neck of the lion has a herring-bone design on it. Rudenko thinks this represents a peculiar antique speciality. Such treatment appears already in Assyrian representations.

The third object is a piece of a narrow, and very simple belt, finished off with a simple buttonhole (Pl. XXIX: 4).

The male footwear is not well preserved, though two pairs of women's boots were easily determinable. One pair was on the feet of the woman. They had been hacked at by the robbers like the feet themselves. A design is cut into the strong leather soles of these boots, and represents two lotus blossoms (Pl. XXX: 1). The uppers are undecorated and laid in folds, so as to be better adaptable to the shape of the foot. A cross-border runs about 5 cm, above the sole, and to this leopard-skin shafts are joined. Only the upper edge is sewn over with straps, covered with tin and gold. The edge is surrounded with a woollen border.

The other pair of boots is much more complicated. They are real show-pieces. The

¹⁾ Rudenko 1950a.

²⁾ Rudenko 1950b.

leather soles, like the first pair, flat and without heels, are doubly framed with embroidery in wool (Pl. XXX: 3). Inside this, three rhomboids are embroidered on the sole, the largest under the ball of the foot, and the middle-sized one below the heel, again divided into many small rhomboids. The smallest rhomboid is under the arch of the foot. Twenty-four pyrite crystals are sewn into these rhomboids, on each foot. This pyrite must have been obtained as a by-product in mining. The upper leather of the boots is ornamented with embroidery and leather appliqués, which form a wonderful tendril pattern on the forepart of the foot (Pl. X.). Over the instep runs a cross-border, decorated with little swimming birds. The shaft above is decorated even more richly, and in this we chiefly come across the lotus motif. At some places, little glass beads are worked into the pattern. At the back, the boot-shaft is slit.

It is clear that such artistically decorated soles would only be shown off when sitting on a flat cushion with the feet doubled up.

There are felt socks, belonging to each pair of boots. From a later remark of Rudenko's, we learn that several different styles of cut were used in such socks. Along with those which are made entirely in one piece there are others with the sole attached. The back seam always runs somewhat sideways from the heel to avoid pressure.

Strewn about the ice-floor, were found more ornamented plaques with figure designs. They probably belonged to garments. Perhaps they also adorned the musical instruments, or some object in the inventory which had been destroyed. Embossed copper sheaths, covered with gold, are worth of notice. One represented two rams, opposite each other as in heraldry, with combs at the neck (Pl. IX: 1). The other, in the same position, showed two eagle-griffins (Pl. IX: 2), the bodies decked characteristically with half horse-shoes and circles.

The well known half horse-shoes are also used for the decoration of a plastic pendant in the form of a horse. This otherwise fully realistic object is cast and, further, worked with a chisel.

A very fine and equally realistic representation of an elk is of leather.

Near the wall of the coffin was found a thick leather strip decorated with a frieze of strutting cocks.

Little plaques, designed as griffins, reminiscent of Assyrian style, were probably sewn on to clothing. Other fragments show bodies of animals, arranged heraldically.

After all these things destined in the broadest sense for the adornment of the dead, we turn to the corpses themselves which, owing to mummification and freezing, had remained in an extraordinarily good condition.

The woman was about forty. She was tall and strong but gracefully built with delicate hands and feet. She certainly belongs to the Europoid type (Pl. XXXV: 2). The hair was shaved off presumably in conjunction with the trepanning, yet it seems that the plait, which was found in a case of its own, and consisted of soft black wavy hair (which does not fit in with the Mongoloid type) belonged to her.

The woman was, as far as could be seen, quite healthy except for alveolarpyorrhoea. There were no traces of a violent death to be seen. In the Ancient East, snake-poison was used in similar cases.

The changes in connection with the mummification are nevertheless very telling: The scalp had been folded back, on the right bone of the crown, the skull had then been cut open, the brain removed and the space filled with plant material. The piece of bone had been put back cleanly, and the scalp sewed down with horse hair. The same had been done to the belly. It was cut through from xiphoid to symphysis, the intestines had been removed and replaced with plant material. The belly had then been carefully sewed up again.

It is strange that similar cuts run from the buttocks to the thighs. A mass of muscle was removed here, and the hollowed-out space stuffed full. It is extremely questionable, whether this was done in connection with mummifying. It seems to me much more likely that the flesh which was removed formed eventually part of the mourning feast and was consumed among the funeral bake meats.

In favour of this idea, Herodotus reports,¹⁾ concerning the Issedones who were at least immediate neighbours of the Altaians, that they devoured their deceased fathers as part of the proceedings at the funeral feast. Injuries to the skull seem to lie at the door of the grave-robbers, and to have been inflicted by blows from an axe. The head is cut off, also the hands and feet, and even fingers are cut off the hand. The purpose of this is obvious, namely to get the precious jewellery.

The man was about sixty at the time of his death, very strongly built, and a typical Mongoloid with wide cheekbones (Pl. XXXV: 1). He was much less well preserved. Injuries to his skull could be seen, inflicted by the grave-robbers.

He had obviously been roughly handled even while still alive. In the right bone of the crown of the head there are two oval openings, and in the left, one. These were evidently made by picks. We do not know if he was fatally wounded earlier, and merely killed off by these blows, which caused the openings, or if these were decisive blows received in battle. The fact that they came from different directions speaks in favour of the latter. In any case, the old gentleman fell in battle.

In addition to this, he was scalped. A slash was made from ear to ear, and the scalp pulled off. After the dead man had been won back from the enemy, this damage was repaired, for the burial, by fitting a false scalp on to the bare place, and sewing it down firmly with horse hair.

In other ways the body has been handled similarly to that of the woman. As in her case, the skull has been trepanned and the belly opened, to remove the slightly decaying intestines. At the thighs one could not see that any muscle-substance had been removed, but a number of cuts were to be seen, through which some preserving liquid had presumably been inserted. A peculiar point is a false beard, which was bound over the shaved chin of the dead man (Pl. XXXV: 3). It was of horsehair, and hung down in a fringe, from a strip. It was so thickly dyed with black, that whole lumps of the dye could still be seen. A stiff black beard like this is immediately reminiscent of representations of kings in the Ancient East.

The most remarkable thing of all was, however, the tattooing which covered parts of the breast, back, and also the extremities (Pl. XI and XII). The tattoo marks had apparently been inserted under the skin by means of cuts and the introduction of soot, at a time when the individual was a good deal younger and considerably thinner. Unfortunately large portions of the skin are so badly preserved that the pattern could not be exactly confirmed. The best preserved parts, especially the arms and the right lower leg, show that the tattooing was carried out in fine and fantastic Animal Style. Whoever performed it must have been an exceptionally gifted artist, as he produced row after row of firm and bold compositions. A preference is shown for turning the animal's hind quarters upside down, so as to form the «contorted animal» (Pl. XI: 4, 5, Pl. XII: 2, 3, 5, 6), in the shape of a supine S-curve which we met also in purely ornamental compositions.

The objects which lay at the west wall of the chamber were only dug up and examined in the second excavation season in 1948. Besides a few figures of wood or leather, so far not described singly, and various small beads, yet another bronze mirror was found. It was in a leopard-skin case which was ornamented with small beads.

Much the most important find was a bronze cauldron, with a narrow foot and a handle

¹⁾ Herodotus, vol. IV, chapt. 26.

at each side, the handles covered with birchbark (Pl. XXVI: 1). The vessel had a layer of black felt at the bottom, and was filled with large stones, right to the edge. Between the stones, seeds of wild hemp were found, partly charred. As hemp contains fairly strong narcotic (hashish), the bronze kettle doubtless represents a burner for producing narcotic vapours. Above stood a peculiar structure, six-footed, made of little rods. A leather bottle ornamented with appliqué, was tied to one of the rods. In this, hemp seeds could again be confirmed (*Cannabis sativa* L., actually, *C. ruderalis* Janisch, obviously wild). The six-footed structure and the incense-bowl under it had a leather covering over them, ornamented at the edge and in the middle part with representations of winged lion-griffins falling upon elks. The covering was badly damaged and measured 1.50×1.75 m. All this evidently forms a whole set, which is actually an apparatus for inhalation.

In the south-west corner of the chamber were found leather remains with traces of a covering of lacquer, copper ornamented plaques in the form of animals opposite each other, as in heraldry, a piece of a neck-ring with carved griffin-heads, and a scrap of leather, sewn at the corners (an amulett?).

Here a stone table with four feet was found, which probably served in the offering of burnt sacrifices. It is doubtless one of those »portable altars» to which Tallgren¹⁾ has devoted his important study. Various remains of clothing and fragments of a narrow leather belt which had various metal parts to it came to light also.

In the outermost corner, under a second six-footed structure, covered with birchbark, was found another bronze burner on four feet, and also filled with stones. To one side-wall a short handle is fastened, to the others, loops for hanging up. Under the stones, hempseeds were also found.²⁾

Quite near the wall, a shirt of woven hemp was found. It should be identical with the object, the cut of which is described by Rudenko elsewhere, and which has already been mentioned together with the clothing of the dead.

In Rudenko's work³⁾ are included the results which the examination of textiles yielded, as to material and type of weaving.

Thus, in some scraps of once white woven stuff it was confirmed that they were of simple linen weave. The fibres were of plant stuff, their maximum diameter 25 micron.

Otherwise, felt and other stuffs were almost exclusively made of sheep's wool (with the exception of the man's shirt already mentioned). Rough wool, containing much hair, has only been discovered, so far, in the foundation-tissue of those narrow patterned strips which Rudenko calls »runner borders». The material used is, normally, very delicate. The diameter of the fibres is never more than 50 micron. Mostly it is between 12—27 micron, which is the same as the best quality sheep's wool used nowadays.

In the horses' burial place a narrow strip of sheepskin was found. The wool had only a strength of 10—14 micron. This confirmation is very important. A strip of such purely practical use was certainly not imported. Thus one may assume that the finer kinds of wool also were produced by the Altai population themselves.

Red woven stuffs from the horses' mortuary were also examined, which once formed saddlebow-covers. The number of threads per sq. cm. is 17×11 .

Examination of the runners already mentioned resulted in the fact that cross weaving was also known and used. Through this form of weaving an interesting range of patterns was achieved.

The narrow runners were, as already noted, sewn with borders at the edge. These

¹⁾ Tallgren 1937a.

²⁾ In a later article, Rudenko remarks that also melilot was used for narcotical purposes.

³⁾ Rudenko 1948, pp. 32—35.

evidently took the fancy of the grave-robbers, thus only insignificant remains of them are left. These borders consisted of a foundation tissue, shot with threads of different colours, which formed a peculiar pattern, which differs from any patterns known in Altai up till now. Rudenko names this technique »proto-gobelin» (Pl. XXVII: 1).

The carpet which covered the bottom of the coffin, also another carpet, only parts of which were found in different places in the chamber, consist of square pieces, about 29×42 cm. The outer edge and the joins were covered with felt. The loops, made by the drawing out of threads, were not in every case cut in the way which forms a fringe.

Various ribbons were examined. They were of wool and produced in a simple weaving technique.

In addition, we come across very complicated work. The woman's plait lay in a case which consisted of two tubes, one inside the other. Both pieces were of plaited wool, the inner one is a simple single-stitch net, but the outer one is like patterned crochet work.

The chemical examination showed that the dyes used were mostly of an indigo character.

Pazyryk Kurgan III.

While the final work on Kurgan II was still in progress, (the thawing could only be achieved gradually), the Pazyryk Kurgan III was opened in 1948.¹⁾

When the stone covering had been removed, it was realized that especially huge blocks had been used for its construction. In addition, the grave, on top, was sealed not only with tree trunks, but with trunks alternating with closely packed stones. In these layers of stones were found mouldy wooden shovels, seven wooden wheels cut from tree-trunks, also the remains of some light carriage. Traces of wooden panelling were confirmed, meant to prevent the walls of the trench from falling in.

Under the last layer of beams the usual structure of pillars was found, i.e. three upright posts on the north side, three on the south side bound together by strong cross-beams, on which rested the upper structure. Meanwhile it became clear that the preservation conditions were much more unfavourable in this trench than in the two others. The wood was mostly badly rotted.

Below the cross-beams, one came across the top layers of the outer chamber, namely shrubbery, then began larchbark and birchbark in thick and equal layers. The spaces between were stuffed with moss of kinds, which are still found in High Altai. From their condition one could assume that the burial place had been closed up in early summer.

At the level of the cross-beams, and owing to the weakening of the structure, partly inside the chamber, the skeletons of fourteen horses were found. Except for a few lumps of ice, which still contained hair and decayed flesh, all the more perishable parts were already destroyed. Nothing recognizable was left, even of the harness or saddling equipment. According to the remains, one could assume that the best and most richly harnessed horses lay in the east part. These particular horses were also furnished with masks. This confirmation is especially significant, as Rudenko states that he observed the same arrangement in the Kurgans I and II. Near the ones in the middle lay the remains of three small rod-shields already known from other kurgans. The saddles had, evidently, rather high saddle bows. The assumption that the wooden cheek-pieces represent show-pieces, but the bone ones, only, objects for daily use, found confirmation here. The ornamented plates (Pl. XXXVI: 1, 2, 4, 5) and other objects hung on to the harness straps were made of bone and often incrustated with lacquer.

¹⁾ Cf. Rudenko 1950a and 1950b.

The research party pressed on further, along the passage made by the robbers. Once again they came upon two chambers, one inside the other. Here, the eternal ice began. The space between the outer and inner walls was packed with stones on three sides.

The walls of the inner chamber (height 1.28 m.) had not been smoothed. Inside, a long coffin was found, made of a hollowed tree trunk with a very small opening (35 cm wide). It was empty. The skeleton lay on the floor, head to the east, flung out by the grave-robbers. The anatomic order of the bones was undisturbed, so the robbery had taken place, while the muscles and sinews were still intact. It was the skeleton of a strong middle-aged man. He must have been mummified as the skull showed signs of opening by trepanning. In a piece of ice, frozen hair off the head of the dead man was found. It was dark chestnut-brown and slightly curly. Thus, the man can hardly have been a Mongoloid. No further details about the skull are reported.

The rest of the inventory conformed, to a very great extent, to the kurgans already known. Once more, those peculiar dish-shaped tables were found, just as much destroyed and knocked to pieces, as the others. As the ribs and vertebrae of sheep and horses lay directly beside these fragments, we have further evidence of the fact that these tables must have served a purpose at meals. In the north corner, as in Kurgan II, a small drum made of cattle-horn, was found near a little table of this kind.

The find of a leather helmet lined with thin felt, at the east wall of the chamber — i.e., at the head end of the coffin — is significant. Close to it lay a wooden cushion of the same kind which served as a head-rest for the dead in the Kurgans I and II. Between the skeleton and the cushion lay wooden rods with openings at the thickened ends. They belonged to a burner set. At the skull of the skeleton lay twenty-four arrow-shafts. The heads were missing, perhaps the robbers took those with them. The shape of the shaft-ends shows that they must have had sockets. By the knee of the skeleton lay a little wooden shovel. As regards remains of clothing, scraps of fur-edging and silk were reported, also a silk purse and a square piece of ornamented woven silk. The appearance of silk is significant and differentiates this kurgan from those already excavated.

One can, once again, recognize the two layers of ice: 10 cm. clear ice at the bottom, and, over this, yellowish and dirty ice, which was formed from water which seeped in later.

In a newer work,¹⁾ Rudenko states further that the trousers of the buried man consisted of two layers of thin felt. They were very wide, and cut straight, thus not in the shape of riding trousers. The statements of Herodotus are in agreement with this shape, so are the Scythian representations of South Russia — also the famous gold plaques of the Siberian Collection.²⁾

Pazyryk Kurgan IV.

This kurgan, which Rudenko opened at the same time as Kurgans II and III, in 1948,³⁾ is much smaller than those already mentioned. Its through-measurement is only 24 m., height 1.40 m. It lies south of Kurgan III and north-east of Kurgans I and II, in a natural hollow, which was skilfully used by the builders to simplify working at the earth. After the removal of the top-layers, the trench was found to be in the form of a not quite regular square (5.30 × 5.60 m.) orientated towards the cardinal points. It lies not exactly in the centre of the kurgan, but a little towards the northwest, so that the robber gang, making for the middle, struck only the east wall.

The trench was filled with huge stone blocks. Kurgan III, therefore, represents an

¹⁾ Rudenko 1950b.

²⁾ Cf. Rostovtzeff 1929, Pl. XI Fig. 55.

³⁾ Rudenko 1950a, pp. 21—23.

intermediate type between Kurgans I and II on the one hand, and Kurgan IV on the other.

After the stone filling had been cleared away, a huge layer of beams was found. Under this, in the south part, stood a simple wooden chamber (not double). Beside this, in the north part of the trench, the horses were buried. On the ceiling of the chamber lay shrubbery and bark. The spaces between the vault and the wall of the trench were filled with stones, except on the north side, where the horses were deposited. Perhaps a structure like this one forms the first step towards the usual principle of filling the space between the walls of the inner and outer chamber with stones. The walls were carefully smoothed.

The chamber was filled with ice. After this had been thawed, two sarcophagi could be confirmed which had the well known loops at the narrow sides. They were made of huge larch trunks. In the larger one (3 m. long) at the south wall was found the skeleton of an elderly man, lying on the left side, the head towards the east. In the other coffin, which was 2 1/2 m. long, lay the skeleton of a girl of about fifteen, on the back, and likewise with the head towards the east. The skeletons were badly preserved, but postmortal trepanning is recognizable in both cases.

The coffin lids had been torn off by the grave robbers, and were found on the floor.

Among the objects dug up in the chamber and in the robbers' passage, feet of tables and table tops were again mostly found. Two of them were carved and covered with tin, but others were of very primitive work. One table top had the sockets missing, into which the feet were usually inserted. Instead of these, there were merely simple holes in the wood.

The peculiar wooden pillows were again found, also the little rods, which had been confirmed in Kurgan II, with the burner set.

Only a bird's head with reindeer horns is mentioned from among the artistic objects in the vault. This design represents the opposite form of the usual cervids with bird-heads on the antlers, which were found previously.

Outside the vault another trunk was found 1.40 m. long, in which steps were cut. This evidently served as a ladder, in building.

The fourteen horses, which were found after the removal of some layers of beams, were very much destroyed. Only snaffles and parts of trappings made of bronze and wood, the latter frequently covered with gold, could be found, but among these there were beautiful specimens in Animal Style (Pl. XXXVI: 3). A whip handle was unfortunately badly damaged.

Pazyryk Kurgan V. (and VI?).

Only one article written for the general public by Rudenko 1949 is to the hand, up to date, concerning Kurgans V. and VI.¹⁾ Unfortunately, supplementary facts from previous kurgans have been mingled into this survey, so that it is sometimes difficult to differentiate clearly, but it follows from this that the most important find of that year was made in Kurgan V.

This is a many-coloured velvet carpet, 4 m.² in size, of exceptionally fine work, which is not inferior to the best Turkmenian and Persian carpets. This carpet is richly decorated with plant ornaments, but bears also designs of griffins, riders, mounted on steeds or leading their horses, and designs of stags. Rudenko reports that the griffin is according to its workmanship of Anterior Asiatic origin. The horses are represented with typical Iranian harness, and have clipped manes, bunches of feathers as headdresses, and tails rolled in a spiral. The whole rider-composition is said to show closest relationship

¹⁾ Rudenko 1950b. Cf. Kiselev 1951, p. 392.

with the well known designs on Persepolis reliefs. The riders wore short closely fitting jackets, tight trousers, and soft tightly fitting boots.

Kiselev, who deviates somewhat in his description, finds it wholly superfluous to look for the parallels in far Iran. He thinks instead that the closest parallels are to be found in the material of the Tarim Basin.

From Kurgan VI., Rudenko reports the find of a mirror, which represents a Chinese import, and is said to belong to the end of the Chou Period. Kiselev, on the contrary, speaks of a mirror, which was found in Kurgan V., and which is exceptionally near to the Chinese type «TLT» (?). This form should, according to the statement of Chinese specialists, belong to no period earlier than the Tsin dynasty. I cannot decide whether there is here a question of two different mirrors or whether there has been a mistake in the number of the kurgan.

It is not stated in which kurgan a female headdress with wooden base and tiara-like upper structure was found, but presumably it was in one of the two latter, or such an important object would have been mentioned more often.

The Shibe Kurgan.

A giant burial is closely joined to the Pazyryk Kurgans, near Shibe on the Ursul river. Griaznov opened this in 1927 and worked at it in an incredibly short space of time.¹⁾ The mound consisted of huge crumbled rocks. It measured 45 m. through and was 2 m. high. Under it opened the trench, which was no less than 7 m. deep. On the bottom of this stood a block structure of larch beams, 5 m. long and 3 m. wide. The ceiling was also of larch beams, which were laid lengthwise. In this was, again, the actual smaller chamber. Between walls and ceiling, about 20 cm. free space remained. In the inner chamber stood the sarcophagus, a huge trough-shaped tree trunk.

The free space between trench wall and structure was filled with stones on three sides. Only the north wall remained free. Here lay fourteen horses.

Thirteen layers of beams were laid over three massive cross-beams above the chamber. The top-layer was covered with brushwood.

The construction of the grave is very reminiscent of the princely grave of Noin Ula. Only the burial of horses is missing in Noin Ula, and the space between the chambers is different.

Unfortunately this kurgan has also been robbed, but the horses, as so often, remained untouched by the robbers.

Only a few smaller objects, which had fallen off the pillaged clothing, are preserved. To judge from the remains, this grave must have been very rich indeed. Among these objects are fine golden buttons, small plaques for sewing on, like those which served to ornament clothing in the Black Sea district in the first century B. C. They include semi-circles, little rings, rhomboids, little stars with three or four points and ovals, as well as arrow-shaped objects. They are never completely of gold, but are of wood, covered only by a thin gold foil. One has the idea that the whole beauty of these objects has something fragile about it. They are reminiscent of theatrical illusion. On some larger plaques small heads and bodies of animals can be recognized, but the outline is emphasized, and only the silhouette of the former plastic design is preserved.

In the horses' burial place, larger objects were also present. On the one hand there are purely ornamental and geometric forms.²⁾ Cross-shaped gold fittings remind Griaznov of

¹⁾ Cf. Griaznov 1928a and 1928b (unfortunately nearly the same), Griaznov and Golomshok 1933, p. 32, Kiselev 1949, pp. 182—184, Debets 1948, pp. 139—141.

²⁾ Illustrations in Griaznov 1928a and 1928b, also in Kiselev 1951, p. 337, Pl. XXX, Figs. 12—37.

the Han Period in China. Beads and tassel-holders are frequent. Another part is, however, carved out in Animal Style. The S-shaped psalia are again finished off with animal-heads. A wooden plate shows the body of a wild cat, and a fish with large scales is quite unique.

Griaznov recognizes two groups in this material. The one has much in common with the Sarmatian monuments of the lower Volga. The objects in Animal Style belong here. The small golden ornamental plaques also point in this direction, as does the intensive polychromy. The gold had often been decorated by a covering red dye, so that the gold itself is many-coloured.

In contrast to this, stand art-forms which are found again in Han China and are also noticeable in Noin Ula. Griaznov has quite rightly emphasized that the folk-art of today of most of the Turk peoples goes back to these rich forms. This means, in a practical sense, that connections with the Han art of China can be established for the actual art of today, by way of this find-group.

The relations with Chinese art are intensified by the fact that remains of lacquered cups were found in the kurgan. They were examined by Umehara and judged to belong to the time between 86—48 B. C.¹⁾

In the sarcophagus lay, now, the corpses of an old man and a child. Both were mummified in an especially noticeable way. Not only the intestines but also the whole flesh had been removed. It was as if dolls had been buried there, containing the bones of the dead and covered with their skin. We find something like this in Oglakhty,²⁾ that is, in the Tashtyk culture of the Minusinsk district. The openings in the bodies were carefully sewn up. The removal of the muscle flesh of the woman from the Pazyryk Kurgan II creates a certain parallel. Perhaps in the case of the Shibe Kurgan also, the flesh was divided among the relatives.

Debets³⁾ examined the skull of the old man. It has pronouncedly Mongoloid features, but it is dolichocephalic. This skull looks very like the skull which was found in the princely burial place at Noin Ula. Debets calls this type «Tungus-Manchurian».

The Berel Kurgan.

As early as 1865, Radloff explored a large kurgan on the Berel-Steppe in South Altai.⁴⁾

Here also a superdimensional burial-site was found. The high rank of the dead was expressed by the fact that, to the north of the chamber four rows of four horses each were discovered. Eight of them (those above) were richly harnessed, the rest showed no signs of trappings.

In the south part, at the height of the horses, a half tree trunk was found, hollowed out, trough-like. Plastic griffin figures of copper were fastened to this. On the longer sides distinct right-angles of stone were marked out. Underneath, deep down in the trench were a much damaged human skeleton, also the remains of a seventeenth horse.

Zakharov, who had not yet the materials from the Pazyryk Kurgans at his disposal, took the trough for part of the ceiling and the griffin figures for guardians of the grave, set to prevent any breaking in to the chamber beneath. Kiselev thinks the trough was the coffin of the dead, which the grave-robbers had dragged up to the level of the horses. Against this, objection can be raised that it is incomprehensible why the grave-robbers

¹⁾ First mentioned by Griaznov and Golomshtok 1933.

²⁾ Cf. Tallgren 1937b.

³⁾ Debets 1948, pp. 139—145.

⁴⁾ Cf. Radloff, OAK 1865, and Radloff 1884, pp. 103—116. Zakharov 1928, pp. 133—140. Kiselev 1949, pp. 184—185.

left the copper figures just as they found them. It seems likelier that they broke into the vault through a passage at the side, and thus did not discover the figures which lay higher up at the level of the horses. It is impossible to arrive at a decision by means of Radloff's description, which, even in the original German version, is very hard to understand. The presence of a horse in the vault, which leads to conclusions that the ritual was different, points against Kiselev's opinion.

Apart from the huge griffin figures, which already represent, through the high combs, a later form, the most significant finds were in the horses' burial place. Wonderfully realistic stag heads formed part of the harness. Kiselev thinks the influence of Graeco-Bactrian art can be confirmed by these works of art. According to his opinion, a horned hypocamp points to the same connection. Objects somewhat horseshoe-shaped, of birch-bark, with crescent-shaped carving and covered with gold foil adorned the front saddle bow and find a parallel in similar specimens from Han-time China.

An iron dagger was also reported, which is reminiscent of an old Scythian form.

The Katanda Kurgan.

Another great kurgan was explored by Radloff, also in 1865, near the village of Katanda, on the river of the same name, at the foot of the Belukha mountain (South Altai).¹⁾

Even in the mound (2.20 m. high, 30 m. through), bones of six horses, badly disturbed human skeletons, and various inventory objects were found, which seem to belong to later burials from the 7th—10th century A. D. The trench measured only 4 × 5 m. It was filled first with earth, then deeper down, with large slabs. Between, remains of human skeletons and horse bones were found. At a depth of 3.50 m. a wooden structure was discovered, the narrower sides of which were made of short round pieces of wood arranged like a wood-pile. Lengthwise, the structure consisted of larchbeams, and so, presumably, did the much-destroyed ceiling. Strangely enough, under this came again large blocks of rocks, held up by cross-supports, the ends of which lay on steps of the north and south wall. Underneath there was a free space. On the floor of the shaft (6.40 m. deep), two couches stood in the ground-water. They were hewed out of massive trunks with an axe. On them lay two human skeletons, heads to the east. When touched, they fell to pieces in dust. Little square bronze plaques lay around them, overlaid with gold, also scraps of Chinese silk.

The point of greatest interest in the whole burial place was two bundles of clothing, frozen into lumps of ice. These were found on both cross-supports in the upper part of the chamber.

The one contained a wide fur-coat. Facings and sleeves were of ermine, dyed alternately green, yellow and brown, so that the result was a fish-scale pattern. In addition, the scales were edged with gold leaf. The skirts of the coat, the borders and the shoulder parts were of leather, and had been once thickly sewn with little wooden squares, also covered with gold leaf. All together, there were once 8 000 little wooden plaques and about 1 000 larger and 2 000 smaller leather patches, which were all covered with gold, and once must have made an overpowering impression, as if they were all real gold. Inside, the coat was lined with skin, and the sleeves were so long and tight, that they could only have been there for decorative purposes. This coat must have been worn hanging from the shoulders. Rudenko finds a similarity, in cut and ornamentation, to the festive costumes of important personages in the Achaemenid Iran.

¹⁾ Descriptions by Radloff 1884, pp. 68—143, Russian translation in the *Sibirskie drevnosti* series. Further Minns 1913, pp. 248—250, Zakharov 1925, pp. 37—57, Zakharov 1926b, Vidonova 1938, pp. 169—178, Kiselev 1949, pp. 185—189.

In the second bundle a fur garment was also found. It was not unlike a modern tail-coat with very long tails. The tail-coat had also once been sewn with gold leaf, but this was missing, and had perhaps been torn off by the robbers (?). Even Zakharov, who had for a long time concerned himself with Radloff's rather incomprehensible report, found the problem as to how this can agree with the condition of preservation of the kurgan, impossible to solve. This tail-coat is doubtless very like the famous »Tungus tail-coat», which was certainly, once, worn over an extensive area.

In the fur coat, various other things were wrapped up. Among them was found, first, a stomacher of fur, covered with silk and sewn over with gold leaf. This again fits in exactly with the modern Tungus »tails», which are always supplemented by stomachers of this kind. In addition, and strangely enough, wooden sculptures were found, some of which represented saddled horses. They were probably intended to be attached to the stomacher, as some bits of ribbon were discovered, remains of which were sewn on to the stomacher. Such a fashion, of wearing horse-figures as breast-ornaments, would correspond, to an amazing extent, with modern Shaman clothing. It is, however, possible that the wooden horses were a substitute for buried horses, which were not found in this grave.

Two of the figures seem always to belong together. We come across upright as well as supine figures. On the standing horses swellings run cross-wise over the back and represent saddle bows. They show traces of gold leaf, and so do the hooves. The heads of the animals are turned, obviously towards the spectator. The manes are close-clipped and stand up. This was also observed in the case of the Pazyryk horses. The skulls of the horses had four openings. Two were evidently for the ears, and the two others were fairly certainly used to take in antlers. Again we come across, here, a melting together of the cervid and the equid. The sculpturing is of great artistic value. Trever compares it with the finds from Noin Ula, but Eding compares it with the art of the northern forest zone, which we know from the Uralic finds.¹⁾

Near the horses was found a little statuette of a fantastic animal, the body of which is rather like that of a supine horse, though it has the head of a griffin.

To the same series belongs a little wood-relief with a scene of a fight between animals. On this is a cat-like wild beast with antlers, the points of which finish off as birds' heads. Another smaller, beast of prey, is seizing the larger one by the throat. Near this, two more beast-heads were found, with long muzzles and spiral stylized nostrils.

A square wooden plaque was sewn to a piece of a strap. It represents the head of an animal. Zakharov identifies it as a head of cattle. Kiselev thinks of a connection with the Chinese T'ao-t'ieh masks.

A famous object is a wooden hump which, on the outer side, is carved in the design of two fantastic animals swallowing each other. The two animals together form a circle and show close relationship to Chinese art.

In his summary Kiselev states that he sees the closest relationship between these works of art and those of the Treasure of Novocherkask. He considers this kurgan of rather more recent origin than Pazyryk I.

GENERAL SURVEY.

Taking the data discussed in the foregoing paper as a foundation, I should now like to attempt to present a picture of the material and mental equipment which Altai, in particular, possessed during the last centuries before the birth of Christ.

¹⁾ Trever 1932.

Eding 1940.

The actual *dwelling*s of the Altai people are only known to us by means of very exiguous dwelling-sites in the anterior, and from these it is impossible to tell for certain whether they were typical of the housing conditions of the whole population. Since Griaznov's researches¹⁾ there has been no lack of attempt to form conclusions as to the way people were housed, from the manner in which the great kurgans, which really form log-houses for the dead, were built. In any case, no one could have erected these kurgans, who had not been thoroughly acquainted with the technique of building log-cabins. The existence of such houses is, as regards the Minusinsk Basin, actually proved by means of a rock carving, the Boiarskaia Pisanitsa.²⁾ Thus there is the probability that such wooden buildings also existed in Altai.³⁾

The same rock picture shows also carvings which were explained as less stable yurt-like dwellings. It is not to be expected that one could obtain information about such structures by means of excavations. But in our data we have enough points to go by, in order, at least, to presume that migration took place according to season. Perhaps the Altai people kept their flocks and herds in the mountains in summer and on the plains in winter, as is the custom in mountainous countries in Europe today. In favour of this possibility, there are the oval tables which can be taken to pieces and put together again, the wooden vessels, the seats on flat cushions, the unusual development of wall-hangings. It is only necessary to visualize the wooden walls of the burial chambers reduced to a thin scaffolding, in order to see the principle of a yurt.

Correspondingly, the *furnishing* of the houses consists mostly of textiles, felt, and leather objects. From the Pazyryk Kurgans we know of cushions, carpets, wall-hangings, bags and purses in astonishing abundance. It is typical of the preponderance of soft materials that even bottles are made of leather, also that pottery has leather adhering to it, and, especially, that bendable metals were preferred, so thin that they could be treated as leather and combined with it. All these materials were combined with complete virtuosity, and treated with an astonishing variation of technique. Instinct for style and artistic interest are essentially incorporated in this material. Wood takes a back seat in the household inventory, although in this, also, amazingly artistic results were achieved, as we see in simple objects for daily use, like the little tables. Rudenko considers that their shape is borrowed from the Orient, and that the Altai people became acquainted with such tables while they were serving the Persian kings.⁴⁾

The *pottery* does not represent the artistic trend of the time in the same way. In the anterior it is possible to make a survey of its development. It leads from local tradition to an adoption of East Sarmatian and Tagar elements, and, finally, to a clearly marked degeneration in pattern and material. The reason for this fall can be grasped in the Pazyryk Kurgans. It is explained by the appearance of wooden vessels, better suited to a nomadic or half-nomadic mode of life.

One of the wooden vessels dug up in the Pazyryk Kurgan II shows connections which reach far towards the West, as far as the Novochoerkask gold vessel.⁵⁾ The other, the

¹⁾ Griaznov 1928a and 1928b.

²⁾ Griaznov 1933. The rock carving must belong to this time as «Scythian» cauldrons are pictured next the houses.

³⁾ The rock carvings of Altai are not used for historical purposes, neither by Kiselev, nor by Griaznov. Khoroshikh's publication (1947) is of preliminary character and does not contain many illustrations. Thus I had to decide not to include this material.

⁴⁾ We may compare the little tables from the Lop-nor territory. Bergman 1939, Pl. 19: 1—3, Pl. 27: 1 and 2.

⁵⁾ Cf. Kiselev 1951, p. 392.

handle of which is bent downwards, finds its parallel in the Tashtyk Culture.¹⁾ It seems as if the occurrence in the Pazyryk Kurgan is of somewhat earlier date than in the Minusinsk graves. This is an important observation, regarding the origin of the Tashtyk Culture.

The felt rings which belong to these wooden vessels give us to understand how the round bottom came into general use again.

Only quite a few types of pottery, for instance, vase-like vessels, persist really obstinately. We find them still in those kurgans, where the complete metal inventory has been taken over from the Minusinsk Basin.

The fact that painted vessels appear, is astonishing. They come upon the scene for the first time since the Afanasievo Culture. Kiselev naturally thinks, here, of a foreign influence without being able to say exactly whence it comes.

Metal vessels we only know as in use as burners for ritual purposes in the Pazyryk Kurgan II. Their shape, however, is so little specialized that they could have been employed equally easily (without the stone filling) as objects of practical use.

Of the *tools*, which were used to produce the houses and their inventories, we know very little. The development of knives runs parallel with the development in the Minusinsk Basin. The Aragol Kurgan even contains a miniature knife, which belongs to the Late Tagar Culture. It is important that, through the find of a sheath, the technical reason for the inarticulate shape of the Tagar knives is made clear.

We know of no find of an axe in a grave. Only in Pazyryk Kurgan I the broken handle of a socketed celt was found, and that had presumably been brought there by the grave-robbers. In this connection it is not clear whether the grave-robbers belonged to the stock in question. Rudenko believes, however, according to the traces of blows, that socketed celts can be presumed to have been used for building the chamber. Probably many stray finds which conform to a Late Tagar type, belong to this time.

Bones and especially horn were used, continuously, for a long time. Here, I am thinking of the antler-hammer, found in Pazyryk Kurgan II, and of the chisel found in Pazyryk Kurgan IV. Simple wooden shovels were used, thus, even in earth works which presented great difficulties. In connection with this, one should recollect that almost incredible results were achieved in moving stones, in primitive mining (e. g. in the Hallstatt Salt Mines), with wooden shovels.

Only in the anterior of Altai were objects connected with the daily work of the women placed in the graves. There we know of stone grinders and spinning whorls. The «little man» — and woman — and their needs, seem to predominate there.

The *musical instruments* of the Pazyryk Kurgans form a special group inside the «peace» inventory. The drums,²⁾ with their hour-glass shape show no connections with the Shamans' drums, which probably had their roots in the forest zone. Their shape is more nearly related to the South. Such forms are still owned by inhabitants of Persia and Afghanistan. The finding of string instruments is equally astonishing. Rudenko compared them with Ancient Oriental types. Their significance for modern ethnology consists of the fact that, for the first time a plausible linking-up occurs, of the Ob-Ugrian lyre, which, in the far North, seemed so «lost».³⁾

The mirror is, naturally, much the easiest object, among the ladies' *articles of dress*, to recognize. The one found in Vavilonka already has the medal shape which is typical of

¹⁾ e. g. in the Oglakhty finds (Tallgren 1937b, p. 81 Fig. 13), and in the Uibat finds (Kiselev 1951, p. 419 and Pl. XXXVII Fig. 7).

²⁾ Cf. reproductions of drums on wall-paintings in Toprak-kala (Khorezm) from the first centuries A. D. See Tolstov 1948a, p. 177.

³⁾ Cf. Väisänen 1931.

the Pazyryk time, but it has no loop on the handle, thus it becomes connected with the mirrors of the lower Volga territory. This dates it as belonging, at latest, to the 4th century B. C. Mirrors, the handles of which attached at the side mostly represent a standing animal, are characteristic of the whole subsequent period, about up till the time of the birth of Christ. They can be compared with finds of the Late Tagar time, or with similar finds from the Ordos territory.¹⁾ Rudenko calls the silver mirror of the Pazyryk Kurgan II, with its plastic back-plate and horn handle «unique». Kiselev²⁾ and Smirnov³⁾ have rightly pointed out that we know this type from the Sarmatian territory, where it belongs to the time around the 1st century B. C. This does not fit in at all with Rudenko's dating of the Pazyryk Kurgans.

Another mirror will, in the future, become still more archaeologically important. Rudenko found this one in the Pazyryk Kurgan V. or VI. According to the mutual agreement of statements made by all who worked in connection with this,⁴⁾ it should be an object imported from China. Kiselev adds the statement that it should belong to the «TLT» type, and in any case should not be classified as earlier than Ts'in.

In two cases the mirrors belonged to actual «necessaires», in Karakol, to a wooden case, and in Pazyryk Kurgan II to a leather bag full of surprises.

We also know of little one-sided horn combs. The one of these which was found in the Iakonur Kurgan Nr. 5 has a spiral pattern which Griaznov traces back to the Chou art of China.

Among the most decisive *weapons* used in campaigns, man against man, was undoubtedly the pick. Its development runs completely parallel to that of the Late Tagar type. In the Aragol Kurgan, we find it again in miniature form. In the pillaged kurgans it is, naturally, missing, but, instead, we find impressive traces of it on the horses, and on the slaughtered prince in Pazyryk Kurgan II.

The lines of development of the daggers and swords run otherwise. In the Tuiakhta group we meet with what are, without doubt, the oldest forms within the Pazyryk Period. These are rather massive swords, with iron blades and bronze handles, which differ strongly from the elegant Tagar shapes, and are to be compared with the Scythian and Sarmatian, especially, with the massive akinakes of the Persepolis Reliefs. Only later on do we find an approach to the Tagar types, and in the Aragol Kurgan the pure Late Tagar miniature dagger appears again.

Strangely enough, in spite of the many Sarmatian parallels, with which we have continually met so far, the Sarmatian sword is completely missing in its typical forms. Is the pillaging of the graves to be held responsible for this, or is it a question of an essential difference?

To the sword-set belonged bronze or iron hooks, which served to fasten swords to belts, also sharpening-stones, bored through. Both objects already appear in the Maiemic Period, and incorporate, to a certain extent, a local component.

Spears are completely missing from our find-material. In consideration of the fact that the spear was the cherished weapon of the mounted Parthians and Sarmatians⁵⁾, we should have expected that a spear would have been found, or at least shaft-remains of a spear, in the larger kurgans, and a spear-head, now and then, in the poorer burials of the anterior. But we find nothing of the kind.

¹⁾ See Salmony 1933, Pl. XLI: 1 and 2, and Kiselev 1949, Pl. XXI, Figs. 1—3, 5, 7, 9.

²⁾ Kiselev 1951, p. 392.

³⁾ Smirnov 1950, p. 103.

⁴⁾ Rudenko 1950b, p. 157. Kiselev and some Chinese scientists quoted by him. Cf. Kiselev 1951, p. 392.

⁵⁾ Blavatskii 1949, p. 98.

The chief weapons remained the bow and arrow. The most archaic bronze arrow-heads with socket are known to us again from the Tuiakhta group. They are related to the arrow-heads of the 5th and 4th centuries B. C., from the Volga and Ural regions, and, like the swords, they re-appear also in Persia. Later, the socketed arrow-head recedes into the background. In its place we find the long drawn-out bronze, iron and bone types with a tang, which all occur also in the lower Volga region. Kiselev thinks there is no immediate connection between the two districts, but rather that it was probably a question of borrowing from a common source, and he points out that the arrow-heads with tangs seem to have originated from an eastern centre within the Steppes.¹⁾ It is very typical of the cultural development of Siberia during the migration period, that all later arrow-heads go back to such arrow-heads, i e. with tang.

From the great kurgans of High Altai we know of hardly any arrow-heads, so that Kiselev already presumed no arrows were given to the dead, in order to prevent »long distance attacks» from the other world. As, however, arrow-shafts, at least, were found, the lack may be due to the pillaging.

As to defensive weapons, we only know of a leather helmet from Pazyryk Kurgan III, and the little rod-shields, concerning which we do not even know, exactly, whether they were part of armaments at all. Armour-remains are not known to us. This is in complete agreement with the lack of spears and long swords, as armour-plating was used to carry through a »push» on the part of lancers and sword fighters, clean through a rain of arrows.

Thus all elements typical of early Sarmatian weapons are missing: long swords, spears, and armour-plating. How Kiselev²⁾ can claim, in combination with Tolstov's theory, that Altai also was strongly influenced by the Sarmatian expansion, is not clear to me. It seems much more likely that the relations with Sarmatians, of which we actually know, were brought about by trade, rather than by contacts made by means of campaigns. The fact that long swords retreated into the background, about the time of the birth of Christ, in Sarmatia, can be explained by the influence of the East, with its improved bows.³⁾

In the matter of *harness*, we can again differentiate a relatively small group, which has retained essential characteristics of the Maiemiric Period. The kurgans of the Tuiakhta group, together with Vavilonka, are representative of this. In their harness, a great part is played, for example, by the ornamented tusks, and by the cross-shaped bored buttons, and iron psalia, bored through twice instead of three times. The connections of this group point to the West, to Sarmatia, and to Pontic Scythia. Later on, the psalia of integral form, with a few exceptions, made of iron, establish themselves. We find the nearest parallels on the lower Volga. The wooden psalia, beautifully carried out in Animal Style, and covered with gold leaf, are truly ostentatious pieces. Throughout the whole period, the horn psalia never died out. Even quite simple snaffles made of perishable material appeared, as we can prove from the Pazyryk finds which were unique in this respect.

Sometimes the horses had, as extras, wonderful forehead plates. It is possible that the masks merely represent a luxury version of these forehead plates, especially fantastically carried out. Again and again we find here the design of fighting animals. By a chance which involves difficult consequences, the best preserved of the horse-masks from Pazyryk Kurgan I is crowned with reindeer antlers. This led to widespread speculations.

¹⁾ For the extremely early appearance of the tang-group in the East, cf. the arrowheads from An-yang (Creel 1936, Pl. VIII).

²⁾ Kiselev 1951, pp. 319—321.

³⁾ Smirnov 1950, p. 111.

Marr¹⁾ presumed, according to linguistic considerations, that the reindeer was the first animal to carry human beings, and was only later replaced by the horse. In this mask he saw a brilliant confirmation of his theory. He thinks we might be able to see clearly the extent to which the reindeer was preserved in customs appertaining to cults, and that the mask represents a kind of compromise. This theory (without mention of Marr) is repeated again and again, even as late as Kiselev's second edition.²⁾

The leather part of the harness was decorated with numerous ornamental plaques and pendants, in which, after a short and strict initial period (recognizable in the Tuiakhta Kurgans) the whole spectrum of the Altai relationships appears before our eyes. Ancient Oriental palmettes are found beside abstract spiral ornaments, whose origin in China has already been established by Griaznov. Human heads are perhaps Graeco-Bactrian. But the most amazing find is that of full plastics, e. g. the supine beasts of prey in the Pazyryk Kurgan II. They are reminiscent of many woodcarvings in the East Urals.

The *saddles*, which were found in Pazyryk Kurgan I, consisted only of felt coverings and saddle cushions. The upper coverings bore designs in Animal Style, in which the northern elk was next to a lion-griffin suggestive of Assyria. The cushions were stuffed with reindeer hair(?), and have played an important part in the discussion concerning the relationship of reindeer-breeding to horse-breeding. In these cushions one seemed to recognize original reindeer saddles, not entirely suitable for horses. However, today we know of many more solid saddles with strong saddle bows, from the same period.

The whips of the Pazyryk Kurgans show close connection with Sarmatian specimens.

It is important that remains of a four-wheeled chariot apparently used with four horses, came to light in the latest Pazyryk excavations, along with very primitive cart-wheels, which were already known, from Pazyryk Kurgan I. The statement of Herodotus, also that of the Chinese, who tell that the cart was used in Ancient Central Asia has been confirmed by this.

Our knowledge of *clothing* has been obtained only by means of the great kurgans, and is not extensive. The cut of a shirt which was different from that of one found in Noin Ula, is described. Rudenko sees here a sign of a difference in period between the two finds. Yet it is difficult to see why two cuts of shirt should not have existed at the same time, next to each other.

As to trousers, we know of tight-fitting ones of Old Scythian cut, next to wide ones, cut out of two layers of felt.³⁾ Soft low-cut leather boots certainly belonged to these trousers.

Actually, we only know of boots from those of the woman in the Pazyryk Kurgan II. These have already been discussed in detail, because of their very great artistic value, and it has been mentioned that the ornamentation could only be fully appreciated when the wearer was sitting down, cross-legged.

The most remarkable peculiarities of the fur-coat from Pazyryk Kurgan II are the long very decorative sleeves. Rudenko compares the coat with the kind of garment worn by a high official on the Persepolis Frieze,⁴⁾ and sees in this, one of those Persian connections which he pursues so attentively. Perhaps, however, the Persian coats and the Altai coat have merely a common original form, i. e., the simple herdsman's coat, hung over the shoulders which can be followed right up into the present time.

¹⁾ Marr 1926. See also Meshchaninov 1932.

²⁾ Cf. Kiselev 1949, p. 207, with Kiselev 1951, p. 375.

³⁾ A cut of this kind is represented in Rostovtzeff 1929, Pl. XI Fig. 55.

⁴⁾ Cf. the often repeated reproduction, e. g. in Dalton 1905, p. 16 Fig. 9, according to Flandin and Coste, vol. II, pl. 95.

The origin of another article of clothing, which we called the »tail-coat«, is much clearer. Kiselev compares it¹⁾ with the modern costume of the East Taiga, the »Tungus tail-coat«. Actually, the same stomacher, typical of the Tungus costume, was also found in the same kurgan (Katanda). This stomacher played an important part in the question of the southern origin of the Tungus costume. It was considered to be a degenerated apron, and was traced back to the clothing-forms of Middle China. Today it is emphasized by Russian excavators that the people of the Glazkovo Culture already wore such »tail-coats«, and that this article of apparel was not limited to the Tungus but can be followed up as far as the North American Eskimos. The reason for the wide expansion in time and distance is probably that the combination of tail-coat and stomacher in the middle, which leaves each foot free, represents an excellent form of clothing for the Taiga hunters, who had to undertake long tramps every day. In a functional sense, the »tail-coat« is rather like a French infantry overcoat, with the corners turned back.

Today this costume is seen in far districts only as the costume of the Shamans, and the stomacher is hung with animal figures and other symbols. Thus it is all the more astonishing, that hangings consisting of animal figures were also found on the stomacher from the Katanda Kurgan. In any case, in the Katanda Kurgan, we have to do with a form of clothing which, according to its type, must be pursued back into the forest zone of the North.

Belts have been identified already in the Tuiakhta group by means of their simple, undecorated, metal equipments. Later these were replaced by ornamental plates in Animal Style, and in this, the Kumurtuk Kurgan perhaps betrays a Bactrian influence. The most prominent objects are the ornamental plaques from the Pazyryk Kurgan II. These silver plaques, of great artistic value, served, at the same time, another purpose. They strengthened the points where reins, to which objects were hung, went off from the belt. Thus we have to do with a whole set of straps or reins, playing a most important and characteristic part at the time of the migrations. The leather, in the belt, is strengthened by means of a complicated technique. In this, in one case, a tendril-pattern is formed, which shows a striking similarity to the decorative handle-terminals of some Tagar knives.²⁾ As these knives were exclusively of bronze, Tallgren³⁾ allotted them to the 4th century B. C. This would be of very great importance to the dating of Kurgan II, but cannot be upheld, without further investigation, as these knives with the tendril patterns have not been closely examined. They must have some foreign connection or other. Their style, in any case, contradicts the Animal Style of the Tagar Period completely. I shall return later to the ingenious interpretation, which Strzygowski linked with these style-elements.

The needle-like belt-pendants of the Tuiakhta group are not confirmed in any later kurgan. Thus their connection with similar shapes in Kudyrge is in a weak position.

The spangles, frequently sewn on to the garments, find convincing parallels which also lead to dating, in the ostentatious burial places of the Black Sea area, about the time of the birth of Christ.

We come, now, to *jewellery*. The headdresses worn by, or buried with the dead, are especially interesting. We know of several types of construction:

1) A woollen band, to which a row of gilded leather figures adhere, and from which ornamented strips of fur hang down.

2) Perhaps plastic animal figures belonged to a similar object.

3) A tiara of gold leaf raised above a wooden ring.

¹⁾ following the detailed study of Vidonova 1938.

²⁾ Martin 1893, Pl. 17.

³⁾ After Strzygowski 1917, pp. 108—113.

4) In addition to this, there appears, in the Iakonur Kurgan Nr. 5, a band-like diadem decorated with gold leaf.

The first are certainly to be connected with the heavy golden diadem from the Novoherkask Treasure (Pl. XXXII: 1). As this treasure most certainly shows signs of Asiatic influence, we must look for the explanation of this peculiar decorative principle in Asia, and must assume, that the very much simpler diadems of Altai approach, both, geographically and technically, much more closely to the original form.

Precisely in the face of the peculiar decoration with strutting cocks, stag-figures and griffins, we must ask ourselves whether they do not express some particular religious idea. Perhaps they hint at the connection of the wearer with protective animal spirits. In the spiral design found in the Iakonur Kurgan Nr. 5, as regards the meaning of such motif in the ethnology of East Asia, we could imagine that some solar idea played a part.

It seems to me that such considerations are important, because they would make it clear, how the principle of a crown, individual to each wearer, such as predominates among the Steppe peoples, was arrived at. Every Khorezmian prince, also every Sassanid ruler, possessed his own often fantastic «crown», which varied very much from ruler to ruler. Sometimes animal designs are present. If a religious idea is expressed in these crowns, than the changes are clear.¹⁾

The ear-rings are of thin gold wire, and because of their delicacy, were easily overlooked by the robbers. They are of very great chronological importance. They were found not only in the Late Tagar Culture of the Minusinsk Basin, but also in a grave of the Hun period of Transbaikalia, dated by means of Chinese coins, thus they supply the much sought-after chronological level.

Besides this, ear-rings were furnished with pendants, in which cells were kept for the reception of various coloured stones. This is one of the few proofs that this so typically Sarmatian technique²⁾ was also known in Altai.

The neck-rings begin with heavy massive forms, of bronze, presumably also of gold, and are replaced by hollow gold-covered bent tubes in the later kurgans. This is typical of the general trend of artistic development. If the animal figures at the ends have been exchanged, as Kiselev imagines, we have then a further reason to believe that the attitude towards the animal had not been free from a certain amount of religious tension.

The breast ornaments, so popular in ancient times, are not apparent, but perhaps beads and buttons, found scattered about, belonged to objects such as these.

Only very primitive arm-rings were found, that is to say, bent bronze rods. Yet, as the hands in the Pazyryk Kurgan II were hacked off at the wrists, arm-rings probably had their place among the ostentatious jewellery of the upper classes.

Conclusions concerning finger-rings, can only be drawn from the hacked-off fingers in the Pazyryk Kurgan II. We must imagine them to have been like those found in the Oxus Treasure.

Buttons were still more rare. Their most expansive time was that between the Middle and Late Bronze.

We come across beads of the most varied material, in several shapes. They are already present, in glass of many colours, in the Tuiakhta group. These peculiar «eye-beads» are also known to us from China, Lo-yang, and the Sarmatian region. It has been pointed out that they represent a western import in China. Thus Altai yields one of the necessary links. Cowrie shells show the same west-eastern expansion, and characteristically, paste

¹⁾ It is possible that the Shaman crowns found in Korea, are also individual and symbolic headdresses of this kind. The use of similar forms in Shamanism is certainly secondary. Shamanism adopted many forms which were primarily in common use and above all, it took over royal rites.

²⁾ The existence of this technique is made probable by the many-coloured felt-appliqués.

imitations appear in the Late Tagar Minusinsk Basin. In the Late Chou Period they were used as money.

The sporadically discovered gold beads, appearing in the same way in the Late Tagar complexes of the Minusinsk Basin and in the Noin Ula group made it possible again to recognize a chronological level. In Altai we find, among the paste beads, shapes which, later, become characteristic of the Tashtyk Period. Unfortunately illustrations and descriptions do not permit precise deductions to be made concerning the relationships.

It is striking, how greatly the late graves of the anterior increase in riches, and contain more and more of these little decorative objects.

Even when one considers the gold spangles not only as a principle of clothing or ornamentation, but as single specimens, the connection with Pontus still remains upheld, and even further strengthened.

I should like here to add a mention of some principles of ornamentation, which normally cannot be identified as regards prehistoric times.¹⁾ The appearance of *tattooing*²⁾ in Pazyryk Kurgan II is a great surprise, as otherwise, the very reliable statement of Herodotus reports, regarding the eastern neighbours of the Pontic Scyths, not tattooing, but at the most, painting of the body. The tattooing will lie at our disposal, as chief testimony, in the discussion of the artistic ideas of the Altai people.

Rudenko, who has described the tattooing in a detailed article.³⁾, tried, above all, to use them for the purpose of exact determination of the gold treasures of the Siberian Collection of Peter the Great. He has compared the famous gold plaques down to the stylistic details, with the single designs.⁴⁾ According to him, the antlers ending in bird-heads, the comb-like claws, and the «contorted animals» approach each other most closely. Against this it can be said that some animals, which appear on those gold-plaques, were never observed among the Altai monuments, e. g. the snake. The applications on the felt carpets of Noin Ula show, at times, much more detailed agreement. Thus it remains doubtful to me, whether or not it was really the Altai kurgans, from which the gold plaques originated. The whole Sakian territory comes into question, regarding the origin of these plaques, and this territory probably had closer relations with the East than Altai itself. The Altai kurgans were plundered at such an early date and so systematically, that no object in the Siberian Collection can have originated from the kurgan groups so far opened.

The *false beard*, with the intensively black dye, possibly had its origin in royal apparel which had its roots in the Ancient Orient. It is, however, also possible, that a Mongoloid, like the deceased in the Pazyryk Kurgan II, had too scanty and unimpressive a beard, and thus he fell short of the traditional ideal as a royal personage and was obliged to fall back upon artificial aid.

The *coiffure* of the woman is determined by the plait found in a case. The plait may have been a general part of the mortuary gifts, as we know of gifts of plaits from the Tashtyk Culture.⁵⁾

When we extract the artistic essence from all these objects, we see at once that all objects of everyday life, whether they are of wool, felt, leather, horn or wood, are handled according to the same methods. This shows, that it is not a question of imported goods, apart from the few easily recognized exceptions.

¹⁾ One exception would be the signs of tattooings on neolithic idols of Eastern Europe.

²⁾ From Assyria, of course, tattooing is known (Rudenko 1949c, p. 133—134).

³⁾ Rudenko 1949c.

⁴⁾ Here it is especially a question of the objects Nrs. 53—68, from Tolstoi's and Kondakov's well-known publication.

⁵⁾ Tallgren 1937b.

It is, however, only the same technical principle, that is to say, rich combination of various materials,¹⁾ but not the same style. With a little pedantry, one can differentiate:

1) A realistic Animal Style, which is expressed, e. g., by the running rams, in the tattooing.

2) A fantastic Animal Style, which is found, e. g., in the rest of the tattooing.

3) Master-craftsmanship in realistic full-plastic, rare in Pontic Scythian art. E. g. in Katanda.

Alongside these come also, especially among the textiles:

4) Pure geometrical patterns,

5) Plant motifs,

6) Abstract geometrical patterns, remotely derived from plants, among them, occasionally, «lobated tendrils».

7) Spiral patterns, e. g. in the Iakonur diadem.

8) A tendency towards realistic human designs, as noticeable, for instance, in the carpet in the Pazyryk Kurgan V., or the men's heads on the ornamentation plates from Pazyryk Kurgan I.

Polychromy plays, further, an essential part, and is connected with the habit of brightening up empty spaces, in animal designs, with points, commas, crescents and horseshoes.

Rudenko devoted a sketch of his own²⁾ to the style of the Altai people. He described the material, and worked out the Ancient Oriental and Persian connections. He finds that the co-existence of so many features is in no way contradictory, and declares that the Scythian Animal Style never predominated alone. The fact that we viewed it as alone is due to the preservation of neither woven stuffs nor leather in the Pontic area. The art of the Scythians was even richer than we have yet realized. As a social explanation, Rudenko applies the theory of Artamanov, i. e., Animal Style was only an art of a certain class, the art of the nobility, common to peoples of entirely different nations and races, as e. g., the European styles during the Renaissance and Baroque periods, etc.

In the course of my work, much has arisen in my mind which opposes the above.

To begin with, I doubt whether this co-existence of different styles, alongside each other, also applies to the Pontic Scythian art. The number of style-tendencies presented is smaller there, and the spectrum is not as wide as in Altai. The pictures of costumes appearing on Greek vases and other works of art show us this. The designs of these are always quite simple patterns, never so complicated, nor with geometrical tendrils, as in Pazyryk Kurgan II. Central Asia, also, was not so rich in various tendencies in the Karasuk time, and the pottery ornamentation is evidence of this. This abundance must have had a special reason for its existence. I think it is clear, from the material, that the reason lies in the transition situation of Altai, as to both place and time. This led to invasion by new groups, each of which incorporated a different art ethos. We can differentiate these new-comers, with their special taste, in the various kurgans.

A few examples: The Katanda Kurgan, whose dead approach anthropologically very nearly to the people from the Taiga, and to one of whom a «Tungus tail-coat» was given, possessed beautiful full plastics, whose tradition we can follow in the forest territory through thousands of years. Eding did not illustrate the horse-figures of this kurgan next to the finds from Gorbunov Moor without good reason.³⁾

¹⁾ Rudenko 1948.

²⁾ S. I. and N. M. Rudenko 1949.

³⁾ Eding 1940.

Or another example: The woman in Iakonur Kurgan Nr. 5, who according to the burial customs (which uphold close agreements with the Kenkol' burial-site, with its Mongoloid and deformed skulls) must have come from the Far East. She had spiral designs on her diadem, which can only be explained by the fact that they came from the Late Chou art. One thinks involuntarily of the Aino, who, up to the present time, fasten sun plates on to their headbands.¹⁾

Probably these changes in taste, owing to the appearance of new people, are much more important than the so-called cultural influences, i. e. the trade with Persia, and later with Bactria or China.

When one sees, here in Altai, how a new style tendency belongs to each ethnical factor, one would be inclined to believe as much in Maenchen-Helfen²⁾ who connected the Animal Style with particular wearers, namely with the Europoids, as, on the other hand, in Strzygowski,³⁾ who brought the appearance of abstract art, such as the geometrical tendril, into connection with the Turks. Both claims seem to agree with each other, here in Altai, and to fit in with the material. The stronger Mongoloid elements are, the more the Animal Style retreats into the background. For example, in Shibe which, according to the build of its kurgan and to the anthropological type of the dead prince, belongs strictly to the East, the Animal Style is much destroyed and liquidated.

Maenchen-Helfen's point of view is only to be revised at one point, namely, one must allow for the fact that there are also groups, in which members of Mongoloid races unite themselves with beautiful Animal Style designs, much as in the Noin Ula group. The best proof, however, that Noin Ula is an exception,⁴⁾ is the fact that the whole of the later art of the Turks and Mongols liquidated the Animal Style completely, and built upon those elements, which appear in single monuments of the Pazyryk time, and make themselves known much more emphatically in textiles than in metal.

This does away with the idea, that Altai was a starting point for so many tendencies. On the contrary, we see very clearly that the most varied deviations of style streamed towards it.

Extensive conclusions can be drawn, about the question of the *economy* of the Altai people.

Agriculture is to be expected, in the anterior. Because of the stomach-contents of the horses, found in Pazyryk Kurgan I, one assumed that grain was cultivated, but, owing to the royal rank of the dead, that which was found can only have been a tribute.⁵⁾

How important cattle-breeding was, is seen from the extensive use of leather, wool, and horn, also meat, including horse meat, and cheese. Thanks to the fine quality of the sheepwool, which stands in no relation to the high position of the kurgan and the roughness of the climate, Rudenko had drawn the conclusion that the sheep must have been kept in stalls. But here also the possibility of tribute should be emphasized. Yet above all it seems clearly pointed out that, at this time, High Altai was only the ancestral home of the Altaians, to which they returned only after death. In favour of this, there are the highly-bred and thus sensitive horses, which appeared in all kurgans observed up to date, and were therefore certainly not only imported from the West.

The question as to whether the reindeer was also a domestic animal among the Altai people, has recently been discussed by Vasilevich and Levin.⁶⁾ They contest this idea

¹⁾ Kind information by Dr. Slawik.

²⁾ Maenchen-Helfen 1935.

³⁾ Strzygowski 1917.

⁴⁾ One more exception in later time is the Kudyrga Kurgan.

⁵⁾ A review of Rudenko's book (Tokarev 1950) raised this point recently.

⁶⁾ Vasilevich and Levin 1951, p. 87.

energetically, and do not agree with the point of view (which can be followed up from Marr to Kiselev¹), that the saddles and reindeer mask of the Pazyryk Kurgan I. can only be explained by the existence of reindeer-breeding. The idea of Marr and Kiselev is that these are survivals of an older period, in which the reindeer was ridden. Vasilevich and Levin, however, declare that:

1) The horse was known in Altai much too long (2 000 years before the Pazyryk Period) for a memory of the transition from reindeer-breeding to horse-breeding to be easily combined with the mask.

2) We already know of several other horse-masks. They represent lion-griffins and panthers. Yet no one would wish to claim (as by Marr's method) that these animals were used, before the horse, as transport animals.

3) In art, the reindeer is always treated as a wild animal, and reproduced without saddle, while the horse is frequently represented with saddle.

4) Alongside the numerous rock-carvings from the Early Iron Period, we know of not one representation of a reindeer-rider.

The same sharp refutation of this theory of Marr's, seems to haunt the background of some of the older works by Russian scholars. The fact that this was never stated clearly, can be explained by Marr's position as a dogmatic authority.²)

From close observation of the wild animals which we notice in art, it is clear that hunting was practised. Hunting, however, had no decisive economic significance. Thus the Animal Style was, also in those days, no longer a «hunters' art»,³) as it was claimed to be in the «romantic phase» of Eurasiatic research. Fishing would have been at a minimum.

The Altai population must have had a highly developed metallurgy at their disposal. One wonders if they dug for the gold themselves, or obtained it as tribute. The great skill, which they developed in building the deep grave-shafts, with their supporting structures, speaks in favour of the former. The question is, whether metallurgy was such a special handicraft as in the Minusinsk Basin. In any case, domestic craftsmanship must have been very highly developed.

As regards trade, it certainly obtained its most important export goods from gold mining. Kiselev thinks that the richness in gold of the great kurgans depended upon the Greek conquest of Persia. This cut off the natural flow of gold into the Persian Empire. The Altai people were to a certain extent, suffocated in their own gold. Kiselev can find support for his statement in Greek sources. The Bactric Greeks appear to have undertaken a campaign towards the North, in order to achieve a resumption of exports of gold from Altai.⁴) Perhaps a heavy flow of gold to the West and with it, the increase of wealth in gold in the Pontic district, connects up with this cutting off of the South. It appears also to be mentioned that the Altai gold was found alloyed with silver, and is easily recognizable, everywhere, by its light colour.

A proof that trade reached very far to the South, is the appearance of Coriander in Pazyryk Kurgan II.

Presumably the Chinese imported objects are mostly also connected with trade.

Fur goods also come into the question, in view of the domination of the Altai princes over the North.

¹) Kiselev 1951, pp. 374—376.

²) Therefore, these refutations have been overlooked by P. W. Schmidt whose main conception is astonishingly closely related with Marr's theory (cf., at latest, 1951).

³) Cf. Andersson 1932.

⁴) Tarn 1938, pp. 109—112, and Kiselev 1951, pp. 357—359.

I think I cannot be contradicted, if I include here, under the heading of trade, the little which we can assume with regard to the warlike undertakings of the Altai people. We cannot assume that they were involved in great »foreign political» quarrels. They lived more protected than other groups (for instance, the Sakians) and their activities took the form of small pillaging expeditions and attacks. In favour of this idea, the »import goods» are present in some kurgans, but in others, obviously belonging to the same time, they are missing. The weapons also seem, in comparison with other groups, more conservative, not to say old-fashioned.

The custom of scalping fits excellently into the picture of such small-scale warlike activities, inter-tribal and individual quarrels.

When we turn to *sociology*, it strikes us first that women were buried with the men, yet equipped as richly as the men themselves. They have their diadems, which perhaps had a religious significance, perhaps they even had their horses with them. It is striking, how much more numerous the graves with mounted occupants are and how seldom graves with women in them are actually observed. I can naturally not decide, if incorrectness of observation comes into question here. I can only emphasize the fact that, in the Sarmatian territory, the burial of women with horses persists up to a late period, and the researchers of Altai have not devoted much attention to this problem. Therefore, surprises are possible at any time.

The social grading¹⁾ is so important, that I had to anticipate it, in order to make possible an understanding of the distribution of the finds. Over this, I have pointed out the peculiar system of classifying according to rank. The question is, now, who were the people in the great kurgans? Were they kings and princes, or simply chiefs? Were they people belonging to the nobility, yet equals among their equals? On this hangs the problem of what kind of political order predominated in Altai.

The manifold aspect, in spite of mutual »rules of the game», causes us to presume that it was a question of tribes loosely connected, over which none, not even the Huns, obtained an effective hegemony. At first, one considered the Mongoloid from the Shibe Kurgan as a Hun governor, but now, as the Mongoloids appear for the first time in an earlier period, I am inclined to think, here, of refugees from the Huns, emigrants who, inside the graded, yet relatively loose social order, could easily rise to a higher position. In any case, the burial of the princes in the Shibe Kurgan was fitted in to the local burial customs.

Griaznov's presumption that a *modus vivendi* and, thus, better living conditions for both, was formed between the anterior and High Altai, has already been mentioned.

Russian authors have often discussed the question of individual or common, respectively clan property among the Altai people, but I see no remarkable difference from the forms known of the later Nomads of Central Asia.

As regards *customs, habits and religion*, we have already spoken of tattooing, scalping, and the use of amulets.

There remain a few unique complexes for consideration. One can conclude, from the very intensive and somehow fascinating use of animals in art, that this often oppressive world of fighting animals must have had some religious significance. The Russian specialists have an easier time, in this respect. They speak of totemism and totemistic survivals. With this, the problem is settled for them. According to Central European terminology, there is not much trace of clan-totemism,²⁾ but an individual connection

¹⁾ One could ask where this strongly marked social differentiation comes from, but the answer cannot be found in the Altai material alone. Altai only followed examples which existed long ago in neighbouring districts.

²⁾ But it cannot be excluded, if we regard the manifold related features between Ugrians and Yakuts.

with certain animals seems present. I should like to point out, as an example, the fact that the gold plaques of the Hermitage show snakes and boars, to put it shortly, animals which we know, mostly quite singly, from the monuments already reported. Thus, certain animals obviously belong to certain monuments. In Pazyryk Kurgan II., for example, the connection between man and lion-griffin or stag, and on the other hand, woman and lotus, predominates. Such designs as the constantly re-appearing griffin with a stag's head in its mouth must have had a religious significance. I have already discussed the diadems and their animal ornamentation in general. War-booty certainly caused a muddle in respect of the harness, but something of a leading motif can still be seen on some harnesses.

It cannot be a coincidence, that the heroes of the Ugrians (in whose case much has remained preserved, of a kind which, on the Steppes, was destroyed) often had protective animals around them, which decided their victory.

I have already mentioned the actual «inhalation apparatus», which was used to produce narcotic vapours. We have here a proof of the close agreement with the Scythian West via another source, namely Herodotus, who did not understand the use of hashish, but described it.¹⁾

The question is, now, how far those other stone altars, namely simple stone slabs and stone tables on four feet, served the same purpose. This is possible, but it is more probable, that they were used for purifying, that is, they completed that peculiar purification by fire, which continued into the Mongol Period. These altars are a sign that we can presume religious ideas which are closely related to those of the Iranian fire-religion.

In the case of such equipments connected with a cult, their appearance in very similar forms in the Sarmatian territory, actually in a definite cultural group, is significant. We do not know if a Sakian centre formed a starting point for both territories. In any case, a Central Asiatic centre is possible, and this idea need not be excluded, even if one believes in a connection with the burner-dishes of the early IInd millennium B. C., as we have seen how such vessels reach towards the East. Anyhow, the religious ecstasies which are today limited to the Shamans, were once common property.

It is obvious that there is much to be said about the death-ritual. To begin with, one can differentiate between two forms of mummification, an ordinary one, in which the intestines were removed, and a «doll-technique», in which the dead, as in the Tashtyk Culture, were converted into dolls or bolsters. We do not know to which cultural connection these customs belong. We can only imagine that, then, a religious wave swept over Siberia, which encouraged the preservation of the human form, for survival after death. The famous portrait-busts of the same Tashtyk Culture form a classical expression of this tendency. Not only the skin but also the bones were carefully preserved. As we find the skeleton as bearer of the surviving soul among the beliefs of the Eastern Taiga in Siberia, it is possible that the idea comes in from this side, with one of the forest components.

What happened to the fleshy parts, we do not know, except that they may have been divided during the funeral feast, among the relatives, who thus united themselves for the last time, and for ever, with the dead. This presumption, which Professor Bleichsteiner, starting from Tibetan customs, pointed out to me, has now been made by Rudenko. He put forward the report of Herodotus, about the Massagetæ, who added corpses of their fathers to the funeral bakemeats at the death-feast.

The coffin, which consisted of a tree trunk, is only the innermost part of the coverings (wood and stone) in which the dead were encased. One thinks involuntarily of Sarmatian

¹⁾ Herodotus, vol. IV, chapt. 75.

rituals, which not only preserved the dead man himself, but also wanted to keep the sacred earth from contact with the unclean corpse. This explains the scattering of bark, which is much reported, from the more simple graves. Traces of a fire in the burial trench (like in the Vavilonka Kurgan) appear very frequently in burials in the Sarmatian territory.

The replacing of the sarcophagus by a simple couch, doubtless denotes a later development.

In simpler graves, the coffin is missing, and we only find the stone chest (already known from the earlier period) in the anterior, and the wooden chest in the whole Altai territory.

The chambers of the great kurgans came into being through the further development of these massive troughs: They were doubled and supplemented with stone packing.

In the case of the co-burial of horses, we see, quite consecutively, the beginning with one horse, then the doubling of this, and then a third horse is added. Thus, the level of nobility is attained. Only with princes does the number rise to seven, ten, or even sixteen. The notches in the ears which differ from horse to horse, point to a tribute, or to last gifts from faithful squires and attendants. Remains of vehicles in the rubble of the kurgans, point to the probability of a funeral procession, such as Herodotus described in the case of the Royal Scythians. How many horses were allowed to the dead man, in the procession, evidently depended upon the importance of his position. Doubtless a claim to power is hidden in these »gifts«. Numerical effect gained ground gradually more and more at the cost of quality. Among sixteen horses, eight were inferior and undecorated.

Out of the whole of the clearly defined rites, the fact stands out, that we observed the cutting up of the horse, and this can be perhaps connected with Sarmatian customs. On the other hand, the lack of horses, in only one of the greatest Kurgans supplies another pointer towards the East, where in Noin Ula, the same thing can be observed.

The Russian scientists use this connection as a means of dating. They follow the idea of dependence of the Altai Kurgans on Hun examples, e. g. Noin Ula.

I should like to point out, that the dependence of the Noin Ula group on Chinese examples is claimed by Spiegel¹⁾, and at certain points, convincingly stated. Therefore I call attention to the fact, that Noin Ula and the Pazyryk monuments do not connect up immediately with each other, but both can be traced back to a Chinese centre, or, better, to one in a territory bordering on China.

In connection with the kurgan mounds I should like to mention again that the developments run clearly, from the use of earth, to the use of stone. If at a later period we again come across earth kurgans, they fall, otherwise, out of the general picture. The Iakonur Kurgan Nr. 5 is so strongly differentiated, that it must have been a »foreigner» who lay in it.

Who, then, were the bearers of the Pazyryk Culture?

The *anthropological material* of this period has been worked at by Debets, and also, partly, by Komarova.²⁾

In the Altai anterior it turned out³⁾ that the skulls, which belonged to the Biisk culture (according to Griaznov) show strong resemblance to the Afanasievo type (Pl. XIV: 2, 3). This signifies a close agreement with the predominating type of the Minusinsk territory. The noses have become less pronounced, so that a Mongoloid mixture cannot be entirely

¹⁾ Spiegel 1933, p. 69.

²⁾ Debets 1948, pp. 136—145. In this work the measurements of the individual skulls are published for the first time (See supplement 4, p. 337). Debets brings excavations into this, which were not even mentioned in the extensive works of Griaznov and Kiselev, e. g. those of Kopitov in 1917.

³⁾ Debets 1948, p. 138, Pl. 46.

excluded. Debets, however, seems to think that it was more a question of an inner development (?).

The skull material of the Berezovsk Culture shows that this type continued to exist. Yet it retreated behind a new group, which Debets spilt into two components. He continually observed the union of a Mongoloid face with dolichocephaly, and on the other hand, the union of an Europoid face with brachycephaly. This signifies, in a practical sense, the appearance of two new types at once, one long-skulled Mongoloid, and one short-skulled Europoid.

In High Altai, Debets confirms the presence of Europoids during the whole Pazyryk time. These belong especially to the brachycephalic type (Pl. XIII: 1). Among these, short-skulled Mongoloids turn up, even in the older phase. Kurgan Nr. 6 in Tuiakhta offers the best example, and this is again a question of a short skull (Pl. XIV: 1). In the later phase, we come across Mongoloid long skulls, sometimes classic and extreme specimens, like the old man from the Shibe Kurgan (Pl. XIII: 3). In any lesson book he could form an illustration, as an example of the Tungoid group of the Mongoloid division of race, namely that form which is characteristic of wide territories of the Eastern Taiga. The skull from the Katanda Kurgan was also a Mongoloid one, although with an unusually high cranium. Yet, among these Mongoloids, in the same kurgans, the native Europoids continue to exist. (They are mostly represented by women.)

As a summary it can be said that the original type in the whole of Altai, also in the Minusinsk territory, was the Afanasievo long-skulled type. The rounding of the skull may be traceable partly to inner development, and partly to an influx from the South and West, where centres of brachycephalization (in the Sakian and Sarmatian territories) existed. The first Mongoloid invaders could have come from the immediate neighbouring territory, where the Stone Tombs show a similar skull-type, as appears in the Tuiakhta Kurgan.

The Mongoloid long skulls belong only to a later movement. It strikes one immediately, that they also belong to a later wave in Transbaikalia and Northern Mongolia. They seem to have been the first to succeed in penetrating into the anterior.¹⁾

Let us now try to outline the position of Altai as regards the culture provinces surrounding it, with the picture of the culture and the anthropological material as foundation.

There is a very clear echo of *Persian* influences. Rudenko thinks, that the prince in the Pazyryk Kurgan II. had served in the Persian army, and was familiar with the ceremonial of the Persian court.²⁾ The connection can hardly be united with the late period of the Pazyryk Kurgans, but may concern the period which is represented by the Tuiakhta group. In any case, the Persian Empire and its culture were for a long time an exemplary pattern followed by the whole of Central Asia, including Altai.

In the age of *Greek* domination there was evidently no such intensive flow of culture to the North and North-East, and we could only see traces of the Graeco-Bactrian influence in a few monuments. Tolstov has constructed an interesting explanation for this lack,

¹⁾ If their appearance is not be explained otherwise, namely with a migration from the North.

²⁾ The Persians called such northern mercenaries »Scythians». Rudenko, who calls the Altai people »Scythians», relies not only upon the idea of the »Scythian Stage», as he cautiously explains, but also on this application of the word. He probably even believes in a mutual ethnic connection between Pontic and Altaian Scythians but does not wish to re-construct any migration, mention of which was prohibited by Marr. The use of the term »Scythian» by the Persians probably explains why Hippocrates was able to describe the Scythians as »Mongoloids». In Pontic material all foundation for this is lacking. He may have had such Asiatic Scythians in mind among whom, as we see in Tuiakhta, Mongoloids appeared very early.

and suggests that the Graeco-Bactrian Empire formed an alliance with the Huns, as protection against their neighbours in the North-East, belonging to a Sakian-Massagetian confederation. This could be the reason why the Noin Ula group was so ready to accept Greek influence. This argument is pure fantasy, only supported by the fact that the dates of the Hun attacks fall in fairly accurately with the activities of the Graeco-Bactrian Empire (as Tolstov says, their attacks on the Sakians were arranged between them beforehand), but the situation fits in. The fronts are clear, and explain why the Greek influence is not more discernible.

Altai is strongly and continuously bound up with the *Sarmatians*. This connection, as regards time, belongs to the early and intermediate stage of the Sarmatian Culture.¹⁾ The Russian authors have mostly contented themselves with a statement of dates. The fact that Kiselev repeats Tolstov's fantastic theories shows clearly that we know the political changes only very superficially.

It is actually impossible to be completely clear in these matters, because Middle and East Kazakhstan are, at this time, only known by means of scanty finds. We know of the so-called Mysovsk Culture by means of Dmitriev's excavations²⁾ and of some older, unsystematic ones, among them those carried out by Heikel.³⁾ Yet ethnical movements also, can be approximated by means of the anthropological finds. These movements could have their basis in the especially strong inner tension between the different tribes of the Sarmatian territory, where so many groups fighting against each other, exist side by side.

To a certain extent these parallels can be explained, in a roundabout way, namely by influences, which flowed from the *Sakian* territory as well as to Altai and Sarmatia. Although we can say so little that is definite, yet it is clear that the Altai people, and the Sarmatian and Sakian peoples represent a unit with a common destiny, probably a family of peoples, in which the Altai people were the most conservative because they lived in a less accessible territory of retreat. Maenchen-Helfen⁴⁾ has presumed a connection of all these peoples with a great linguistic unit, that is the Iranian linguistic group, a theory the greatest supporter of which, in the past, was Barthold.⁵⁾ Naturally, we could not prove this from our material, but I should like to bring forward the fact that I have found nothing which contradicts the assumption of the existence of such a unit.

It is now of extreme importance, in order to understand the linguistic distribution that the *Minusinsk Basin* shows signs of having held a special position in regard to the territories mentioned up till now. Here, in spite of anthropological changes, the tradition of the Karasuk Culture (in the closest sense) has never been wiped out. The giant kurgans of the Tagar Period, with their clan and collective burials point to a history of this territory which progressed according to its own laws. The fact that groups whose linguistic attachments point towards the South-East (Keto) occur, later, in the Yenisei basin, can perhaps be connected with the archaeological history of the Minusinsk territory, which is separated from the West. Where, in Altai, we come across an inventory which is like that of the Minusinsk area, concentration on one clearly defined group is noticeable (Aragol). In the Tashtyk Culture of the Minusinsk district there are astounding parallels with Altai, but here it is probably only a question of influence from outside, which affects both territories equally. In any case, they run parallel, rather than influencing each other as regards direction.

¹⁾ According to the classification constructed by Smirnov 1950.

²⁾ Dmitriev 1925, pp. 187—190.

³⁾ Heikel 1918.

⁴⁾ Maenchen-Helfen 1935.

⁵⁾ Barthold 1922.

The *eastern contacts* were, up to date, reduced to a common form: results of Hun expansion were seen in them.¹⁾ I should like to emphasize, here, on the contrary, the manifold nature and longlasting continuation of these relationships. In our Altai data we can confirm:

1. Short skulled Mongoloid types, which bring no cultural changes with them. They probably originate from a neighbouring group. (Tuiakhta).

2. Long skulls, very similar to the material from Noin Ula. In their »gifts«, contrary to Noin Ula, no special tendency towards Animal Style is noticeable. Their burial customs also incline far more towards the Tashtyk Culture than towards Noin Ula. Taken together, this signifies that it is not a question of exactly the same tribe as that in the Noin Ula group. (Shibe).

3. Mongoloid long skulls seem to be further connected with cultural elements which belong to the Taiga, as for example the »Tungus tail-coat« and plastic carvings. This group is nearer to the Animal Style of the Noin Ula people. (Katanda).

4. We come across Mongoloid long skulls in the Altai anterior, without any subsequent cultural breach. (Berezovsk Culture).

5. The Mongoloid group, with skull deformation, to be found in the Kenkol' burial-site, must have made itself felt in Altai, as, in one case, we find a Catacomb Grave with a completely deviating motif (spiral) in its ornaments. ((IAkonur Kurgan Nr. 5).

One can, therefore, see clearly that one set of Mongoloid types were under strong Chinese influences, and the other set almost free from them. Also, many preferred the Animal Style, but most were furnished with gifts, in which the Animal Style has already completely disappeared. It can be presumed further, that other groups which we have not yet been able to determine also influenced the Altai-groups.

We can look for the explanation of this many-sided aspect in the fact the Huns represented a power complex, in which various stocks and cultures existed side by side. It would be very easy to unite such an explanation with historical sources. The explanation does not, however, hold good as regards everything which has appeared, not even for a majority. For example, the man from the Tuiakhta Kurgan Nr. 6 migrated to the West at too early a period, and at a time when the Huns were under the domination of other peoples. The Kenkol' group, too, showed itself unsuitable for a similar attribution.²⁾

A glance at the Volga Steppes shows us that our suspicion was correct. Here, also, we find the first newcomers from the Far East, already at a time when the Hun confederation had not yet been consolidated. In East Kazakhstan, into Karaganda, too, appeared a group of Stone Tombs, at latest in the 5th century B. C. I think, therefore, that we must keep to another wider formula than the Hunnic one, and say:

The transposition of the chief weight of the Hun power to the West, and the Hun domination over wide parts of the Western Steppes represent only the expression and the results of long-lasting migrations to the West which began a long time before. The movement included and swept with it various tribes of Mongolia, Northern China, Manchuria, and of the Northern Taiga. Many came from the immediate Chinese zone of influence, many out of the territory influenced by Sakian groups, with their Animal Style, many bear the stamp of a peculiar individuality. This movement went ahead in various forms. At one time it was single individuals who migrated, at another, whole tribes with their flocks and herds. The reasons for this must have been very varied. The effort to avoid

¹⁾ Kiselev considers that it was the Hun example rather than the Huns themselves that influenced the Altai people. I will not exclude this possibility, but I think that the imitation of Hun customs is not enough to explain the Mongoloid skulls in Altai.

²⁾ According to Kiselev (1951, p. 391), the Pazyryk Kurgan I. belongs to a time when the Huns were ruled by the Yüeh-chih.

Chinese pressure, the disinclination to be included in the Hun sphere of power, the possibility afforded, by the migration of Iranian groups to the South, all these played their part, as did marriage relationships, and kidnapping into slavery, and, only finally, the Hun expansion itself.

Just as this movement did not begin with the Hun Empire, it also did not end with it. The events of the Avarian Period show an immediate continuation.¹⁾

If we take such a continuous and long-lasting flow into our calculations, the conservative attitude of the Altai again requires explanation. Here we could confirm a native tradition, which includes a strong part of the anthropological material as much as the death-ritual, and the ornamentation in the same way as the weapons, and which is especially to be noticed, in religious connections. In any case, a fundamental difference from the Sarmatian territory exists, as this was, at the same time, by eastern influences split up into an abundance of varied burial customs.

I think now, that the explanation of this conservative attitude in Altai depends upon which way was taken by the main flow from East to West. This stream runs actually from Manchuria, along the northern border of the Gobi, over Dzungaria into the Balkash territory, and from here on, avoiding the Aral Lake and its powerful cities, into the Steppes north of the Caspian, i. e. it surrounds Altai and the Minusinsk territory in the South. Only the branches of these great waves reach Altai, and, later, the Minusinsk Basin. Thus the forms of entry into Altai are so manifold and subterraneous. It is questionable, whether Altai was really closely dependent on the Huns. The interpretation which Tokarev²⁾ gave, regarding the differences in the harness of the horses, in the Pazyryk Kurgan I. gives a striking picture of such social forms. He considers that, in this kurgan, we come across a prince for whom his ten vassals, perhaps representatives of dependent groups, each laid a horse in the grave as last tribute. The masks express specialities which exist in the ritual of these tribes and their leaders. One vassal felt himself connected with the reindeer, because he himself came from the forest, another preferred the griffin idea. Perhaps he had previously fought among the Parthians, among whom the lion-griffin played a decisive part in the death-ritual. Tokarev may be right or not, in any case, just as in the early Middle Ages, the heroes of varied origin performed their deeds of heroism, at one time in one royal camp, at another time in another, thus it probably happened here. We should not forget that the Sagas of the Ugrians, as old neighbours of the Steppe, tell us clearly of the journeys and adventures of the »pigtailed heroes».

It would now be very tempting to believe, that in the next centuries, the mingle process proceeded further along the same lines, and ended with the complete domination by the Eastern elements and their languages. The fact that Altai was finally Turkish seems to point out that the first invaders were essentially of Turkish origin. This is mostly stated by Russian scientists. They regard the Altai-Turks as the inheritors of the many thousand year old past which we have represented.

However, it is surprising, by how little archaeological material this theory is supported.³⁾ For the 2nd—5th centuries A. D. all finds are lacking (excepting perhaps a few badly described and long ago lost objects from Radloff's excavations). Only one

¹⁾ The early beginning of this migration can only be observed from now on, when we wish to explain appearances, such as that of Turkish names in the Volga region, already at the time of the birth of Christ, and also the strong differentiations between the Chuvash and the other Turkish languages.

²⁾ Other, perhaps better, explanations of the masks exist nowadays, but the difference between the horses is best explained by Tokarev.

³⁾ Kiselev 1949.

kurgan group of the later time, Kudyрге, shows distinct signs of connections with an older period. Only Kudyрге contains saddle-bows, decorated with Animal Style, and needle-like belt pendants, as we have already mentioned.

This extraordinarily negative situation, as regards finds, could be traced to three reasons:

1. Perhaps we cannot yet recognize the monuments of the 3rd—5th centuries A. D. Maybe our methods of division are not correct, or the burial-customs had changed in such a way, that no identifiable remains were preserved, as, for example, in burials above ground.¹⁾

2. The Altai population could have been decimated by a great military disaster (or by some infectious epidemic).

3. A migration of the population could have taken place. All these possibilities need not exclude each other.

After this problem had been passed by for years, and even remained unrecognized, Griaznov's excavations, published in 1950, brought completely new and surprising hints at a possible solution. They showed clearly a breach in the Altai anterior. After the Berezovsk Culture had ceased, a new people immigrated. Their metal inventory and pottery approach very nearly to the Pianobor Culture. Here it is, therefore, a question of some kind of Finno-Ugrians, perhaps relatives of the Magyars.

These finds made by Griaznov favour the fact that our methods of chronological classification are correct, and that the lack of finds in Altai also, is not accidental, but was caused by the decimating of the population, in any case, by some thorough change. In the Late Pazyryk Period itself, such a close symbiosis between High Altai and the anterior existed, that it is not very probable that a foreign group could have settled down, in the Altai anterior and preserved its cultural independence, while the builders of the great kurgans were still lords of the Altai.

In other words, the change of population in the anterior speaks entirely in favour of an evacuation of Altai which naturally cannot have been general and complete. It is very possible that the pillaging of the great kurgans, which took place very systematically, began only after the necropolis were deserted by their builders. The grave pillagings were carried out quite openly, although they took place relatively soon after the burials. If relatives of the dead had ever visited the place, we should have seen traces of attempts to repair the damage (as is, for instance, easily recognizable in the royal Egyptian graves).

How did the disappearance of, at least, a large part of the Altai population come about? Possibly through a great military catastrophe. Possibly (perhaps in connection with such an event) through the migration of whole tribes towards the West and the South, where, exactly in the first centuries A. D. the arrival of flocks of new peoples, from Central Asia, is reported. Perhaps a situation came about in Altai, similar to that in East Europe, when the migration of Germanic peoples in the 5th and 6th centuries A. D. left wide territories deserted.

The above facts point to the presumption that Turks (and, to an extent Samoyeds), the later inhabitants of Altai and its borderlands, are not, or are only distantly, the descendants of the old Europoid people, and also are not the descendants of the first wave from the East which mixed with the Europoids, but are newcomers, who, later, penetrated into territories which stood empty, or were only scantily inhabited.

The fact that I dare utter such a presumption, is supported by the following circumstances:

¹⁾ In favour of this point of view, is the fact that finds from this period are, in general, rare also in the Minusinsk territory. Yet systematic excavations have proved the existence of «transition forms». The situation in the Minusinsk Basin is quite different from that in Altai.

1. Groenbech¹⁾ has pointed out, how many extraordinarily peculiar grammatical features the Turkish of the Orkhon writings (that is, the language of people, who came from Altai in the 6th and 7th centuries A. D.) contains. These features are best explained by the fact that, here, it was a question of a group, which had not long ago left the hunter stage behind. Such people could not possibly be descendants of those tribes who bore the amazingly complicated and mixed culture of the Altai kurgans. It must have been a question of new peoples, who came from the Taiga or its borderlands. Otherwise, the Non-Turkish elements in the Orkhon inscriptions must have been more important.

2. Kiselev, in his great summary, relating to the connection between the Pre-Turkish and the Turkish Altai has, at least become uncertain.²⁾ Only between the cultural picture of the Shibe Kurgan, and the burial-site of Kudyrge does he find sufficient parallels. Yet the Shibe Kurgan belongs to exactly those monuments, which have least to do with the local history of Altai. In it probably lies a man from the Taiga. The parallel could originate entirely from an mutual foreign starting point.

3. The tribal sagas of the royal clan of the Turks, which are brought over by means of Chinese sources, as well as by Western, contain a number of statements which signify a late settlement in Altai, perhaps by people fleeing, after the collapse of the Hun Empire in East Asia. It is even once stated definitely that the Turks were »Northern neighbours of the Huns».³⁾ It is hardly possible that this should relate to their settlement in Altai.

However this may be, all later finds show complete victory and the crystallization of one, that is, of the Eastern principle, instead of the former existence of different principles alongside, or among each other, which we got to know in the Pazyryk Kurgans. A uniform covering stretches over Central Asia. »There is one God in Heaven, one Khan on earth» was, later on, the famous formula, and a political expression of this is the Turkish Khaganate, which, starting from the Altai Turks, included all Central Asia in one unit.

As is usual in history, this unit signified, here also, no cultural profit.

Only in certain territories, e. g. in the Minusinsk Basin, did the old complicated world continue to exist, and it formed the basis for an amazing blossoming of handicrafts and trade.

With this, however, we reach the limit of the statements which we have devoted to rich and ancient Central Asia.

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¹⁾ Groenbech 1936. This point of view about the Turkish element can be completely united with what Ramstedt and most Russian authors, state, e. g. Vasilevich (1946, 1949a, 1949b).

²⁾ Kiselev 1951, p. 494.

³⁾ Bichurin 1950, pp. 220—233.

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8. Kurai. 9. Aragol. 10. Kurota. 11. Kumurtuk. 12. Karakol. 13. Iakonur. 14. Pazyryk.
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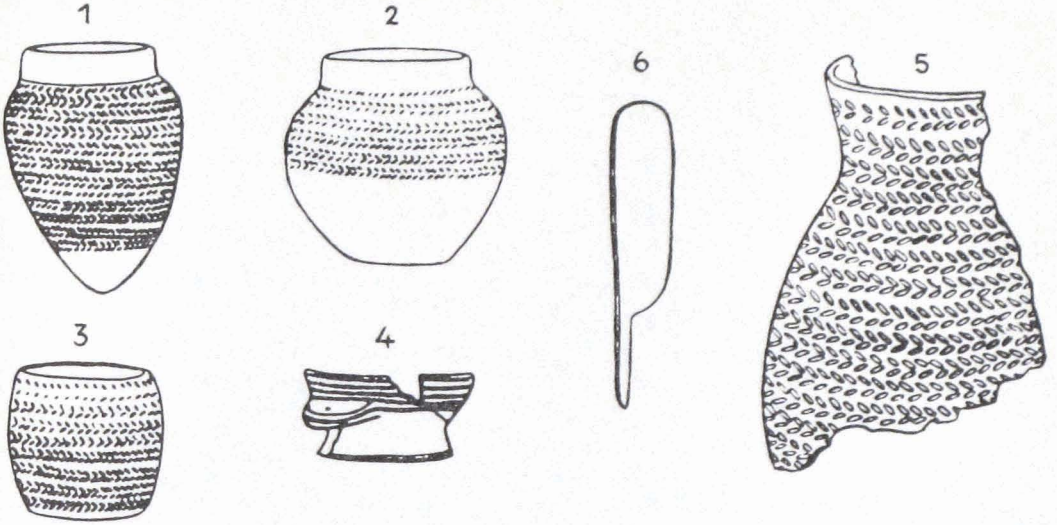
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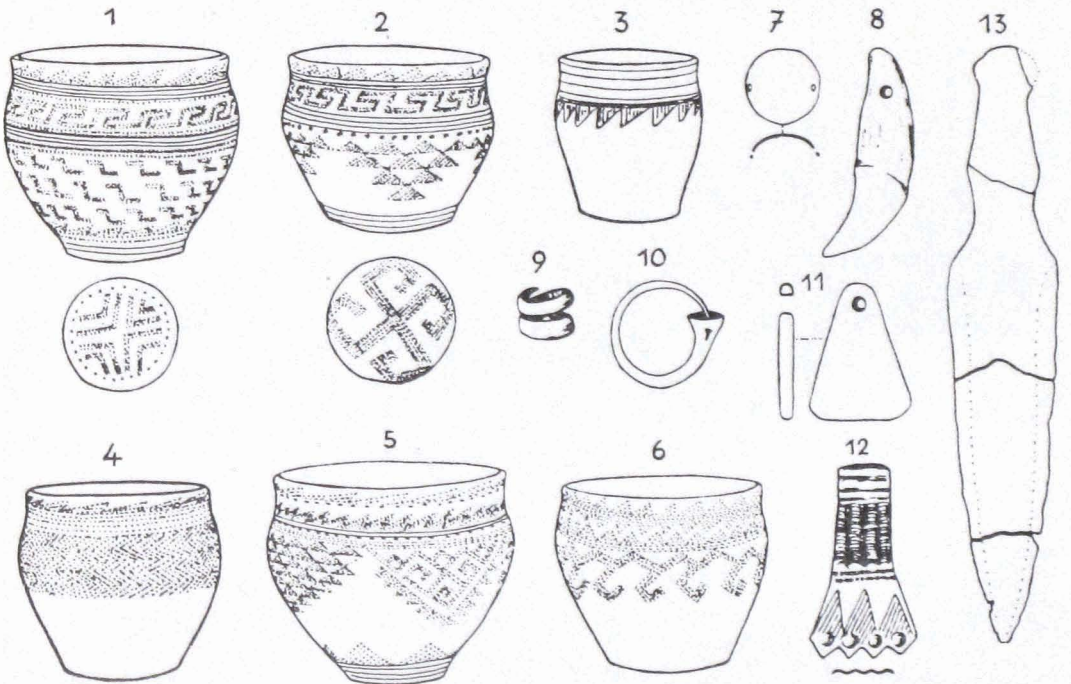
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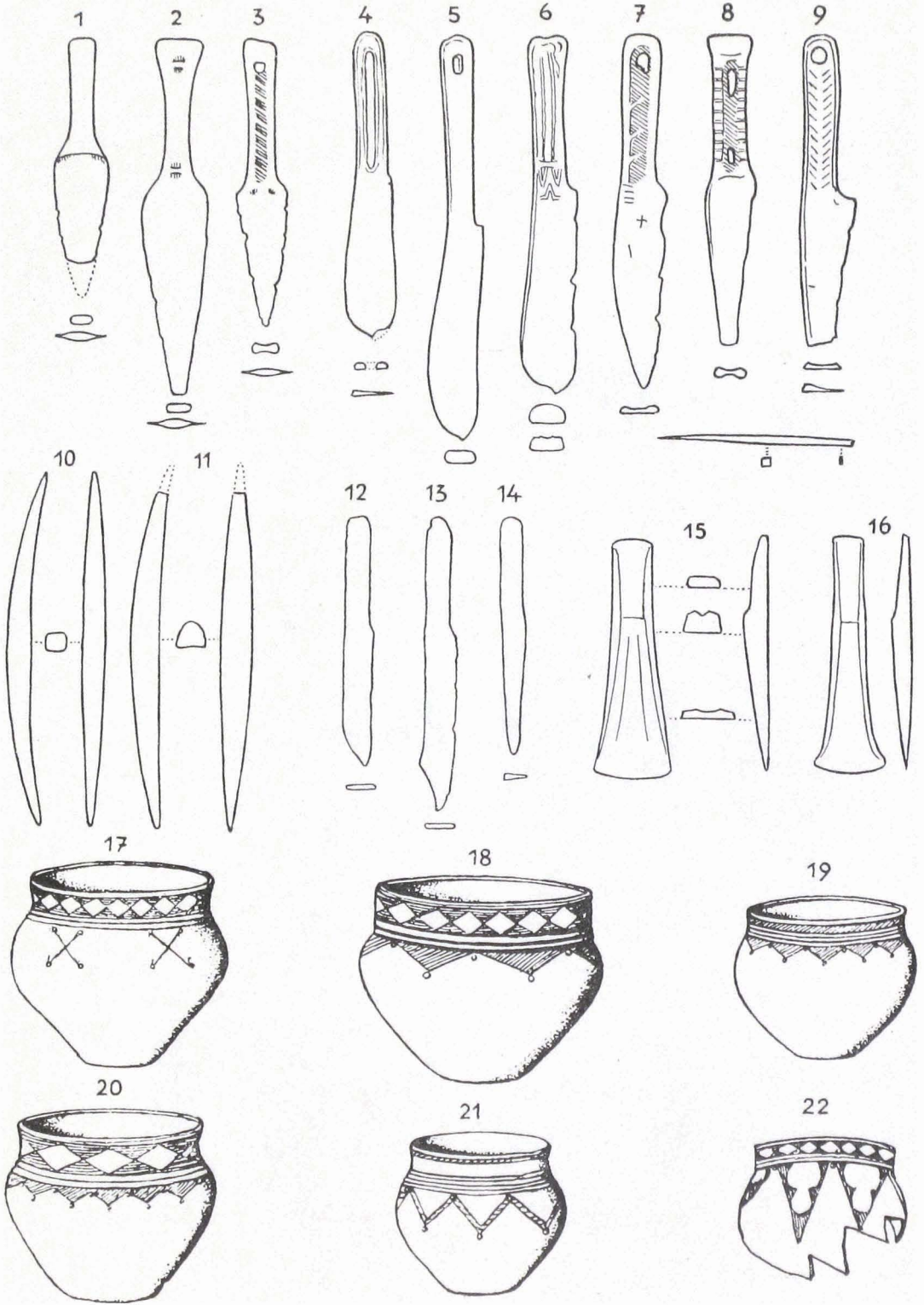
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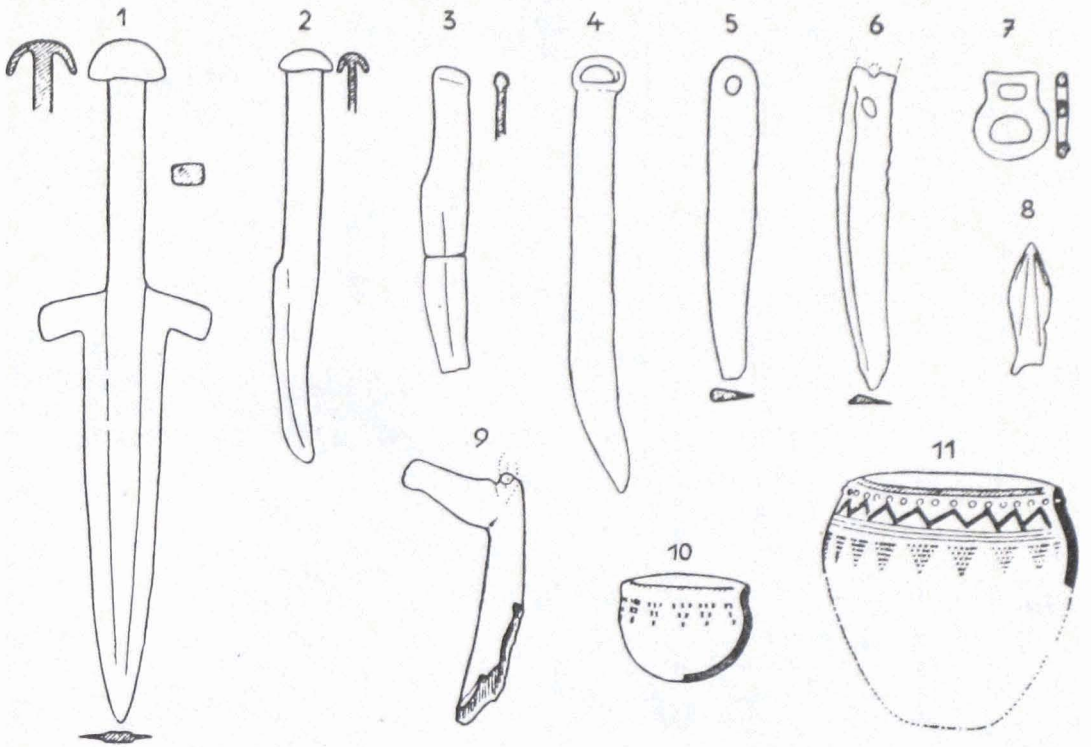


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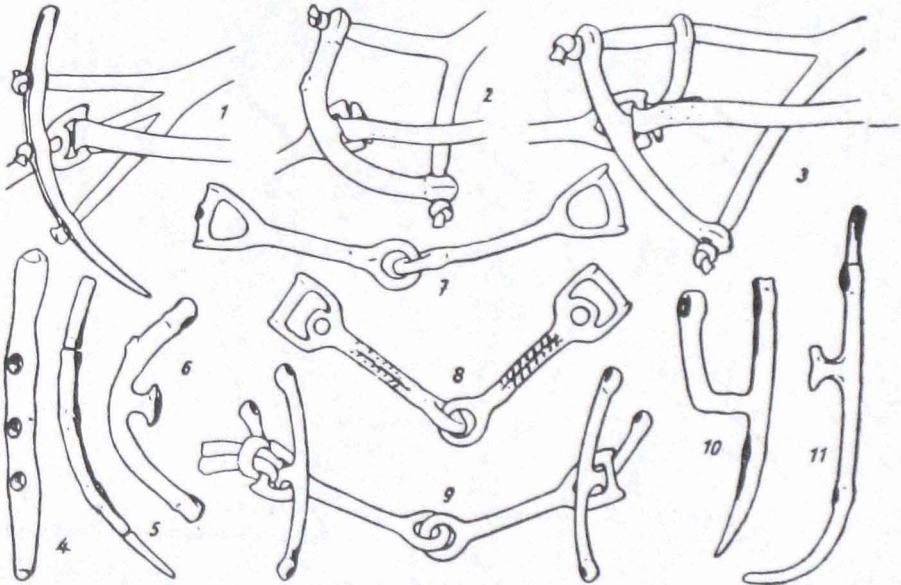


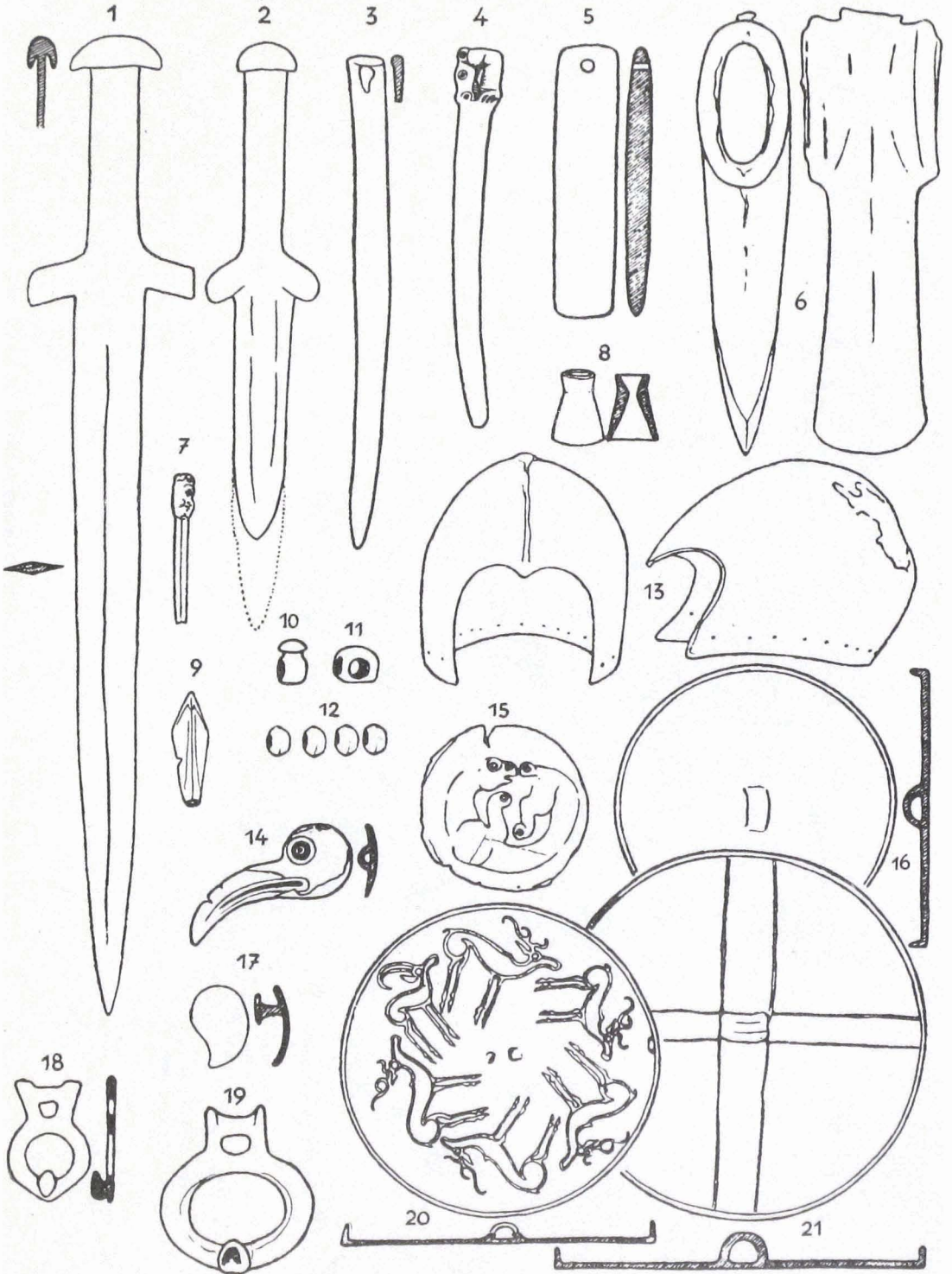


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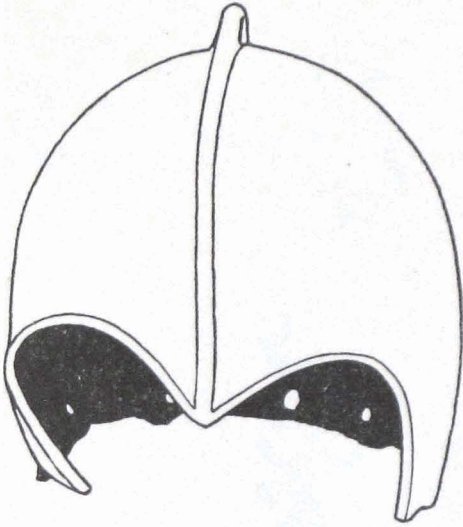


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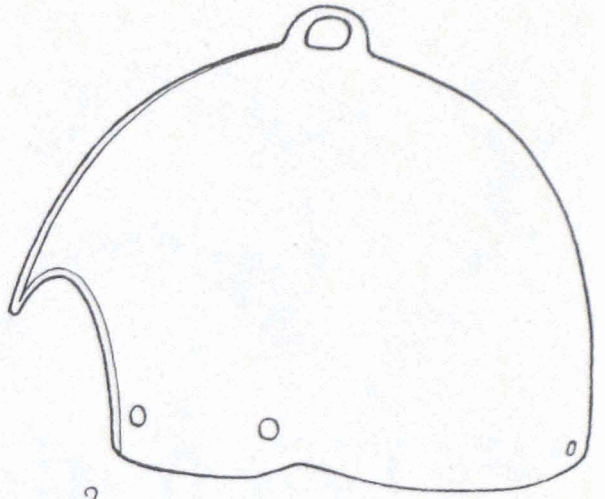




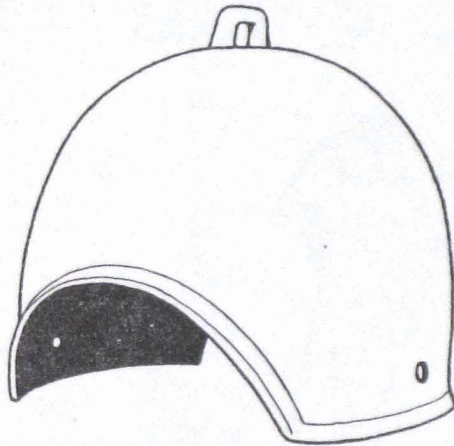
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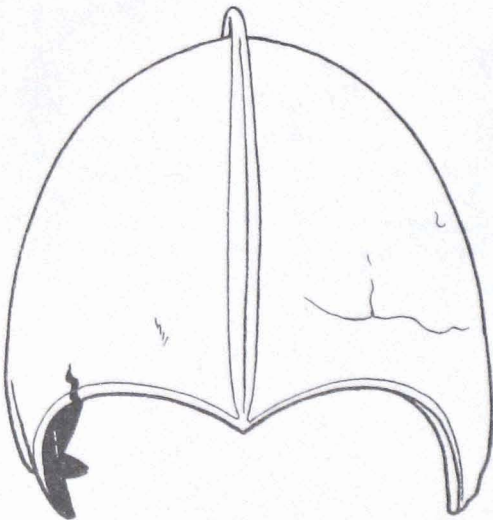
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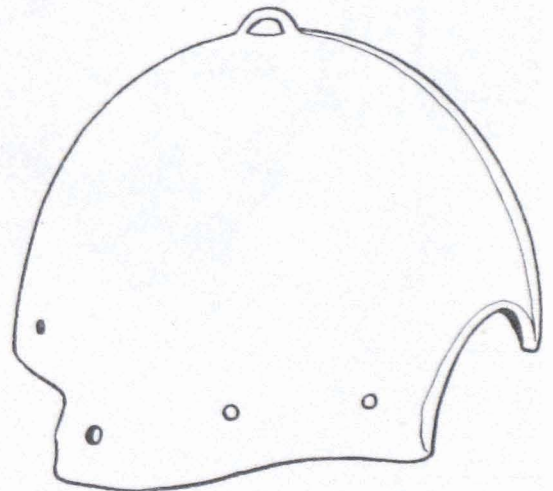
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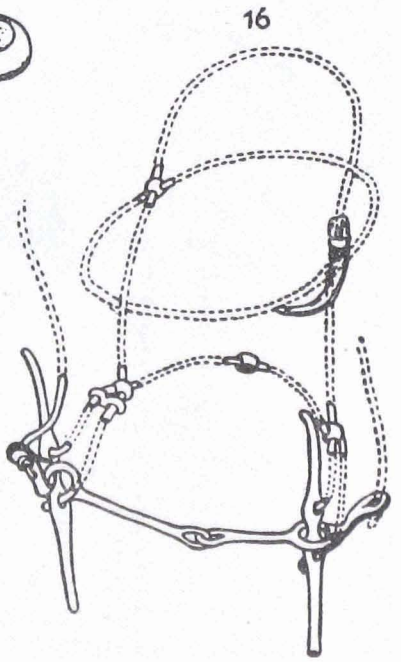
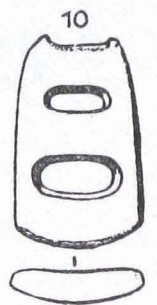
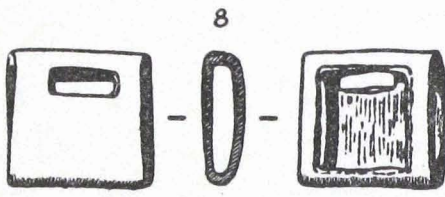
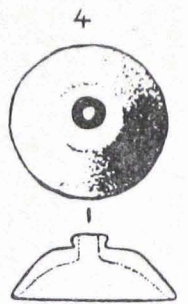
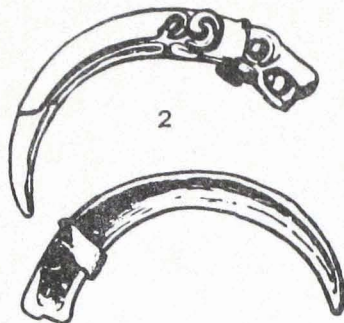


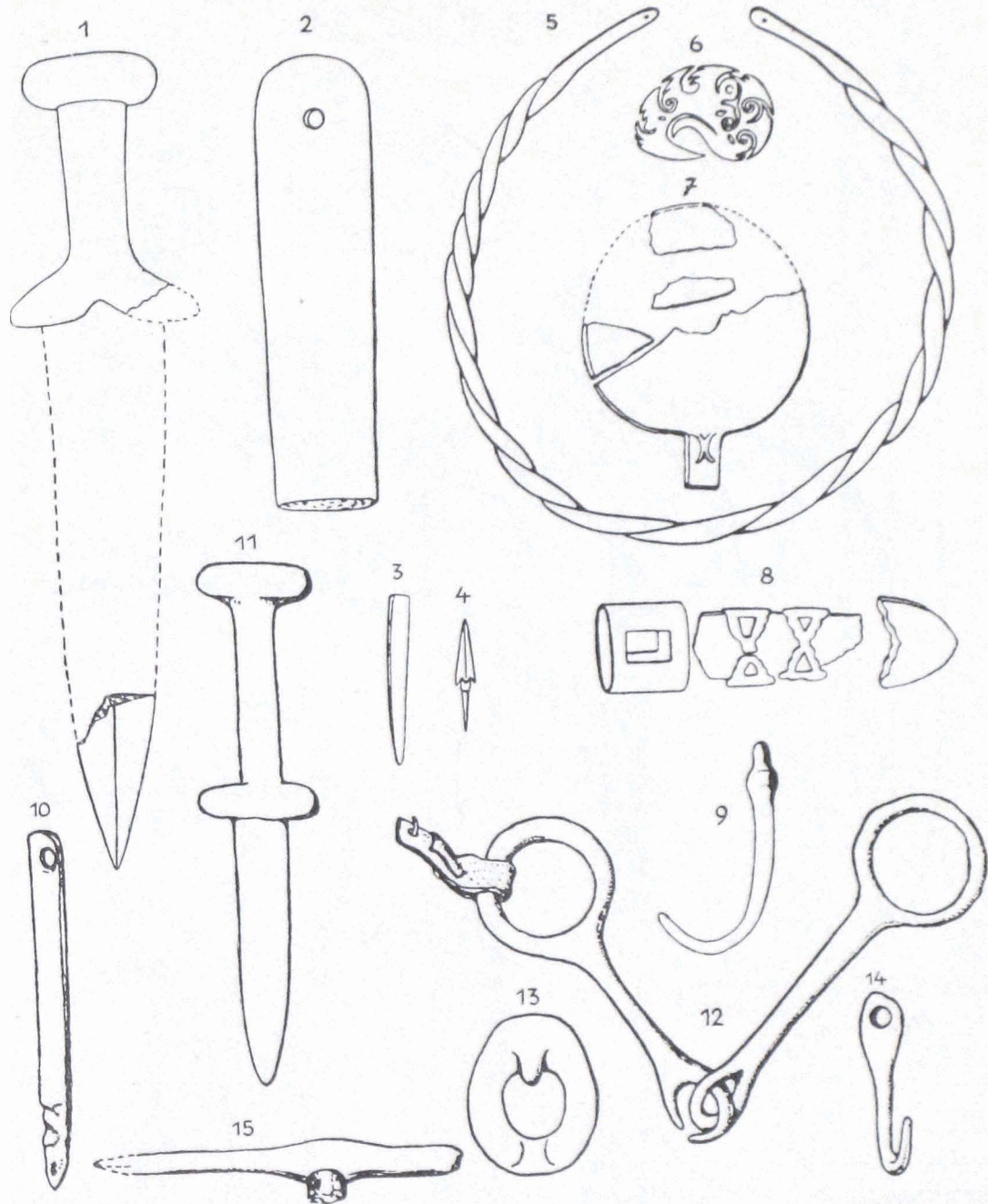
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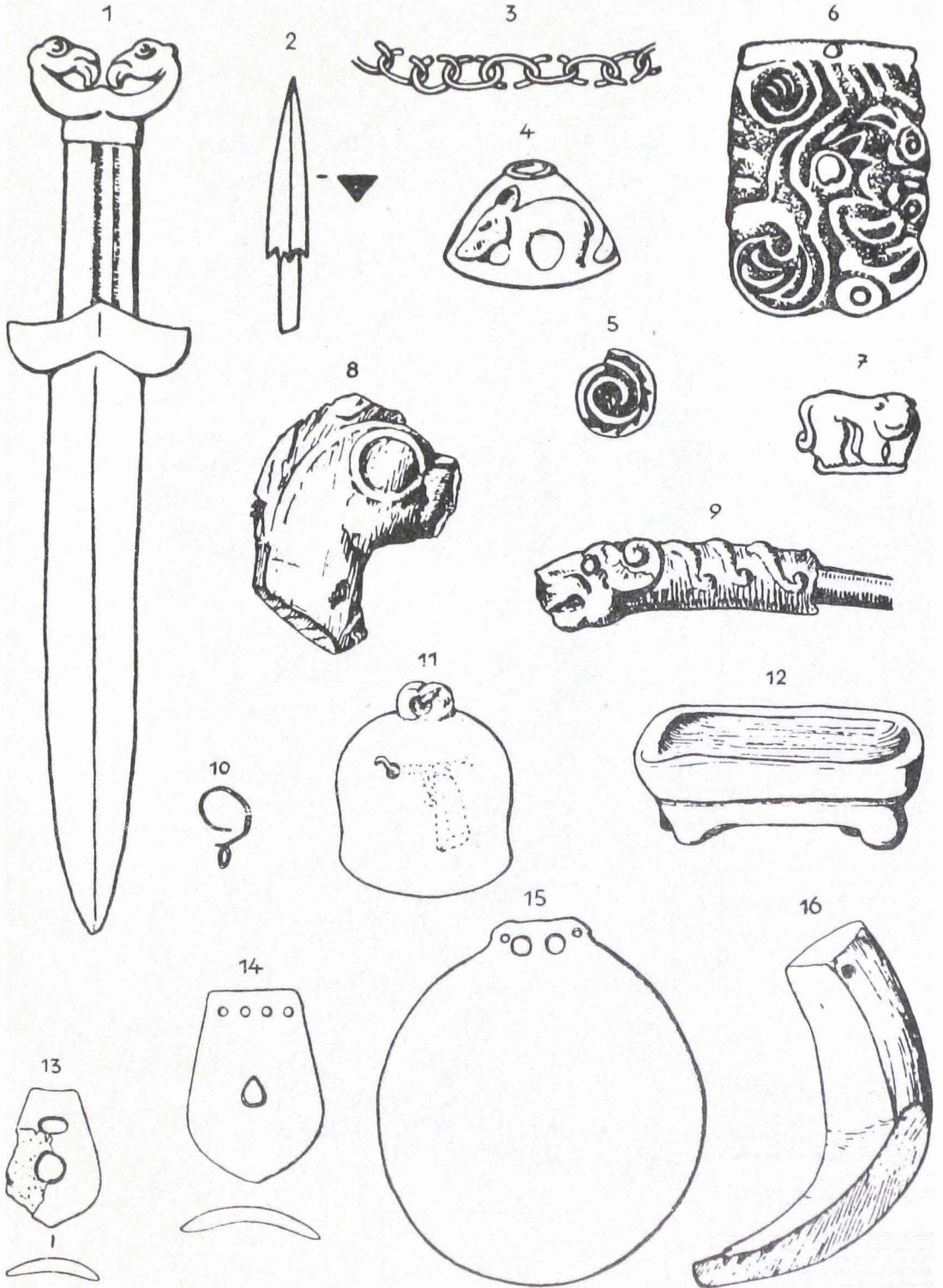


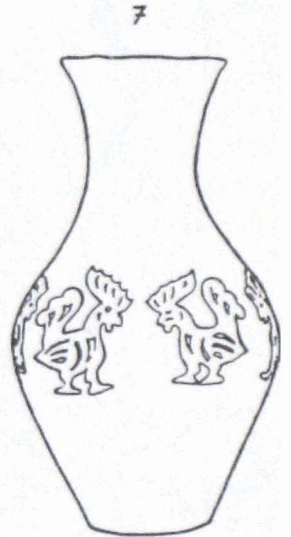
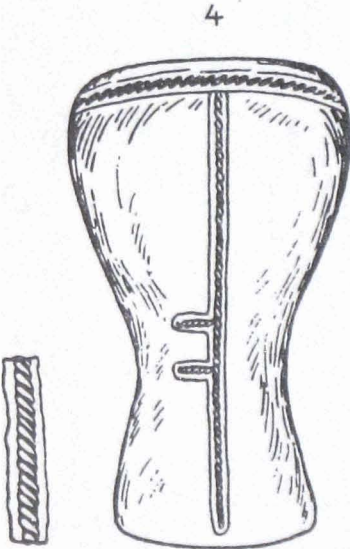
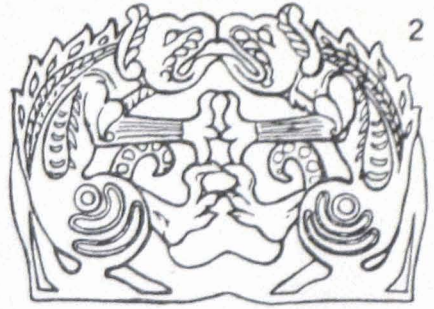
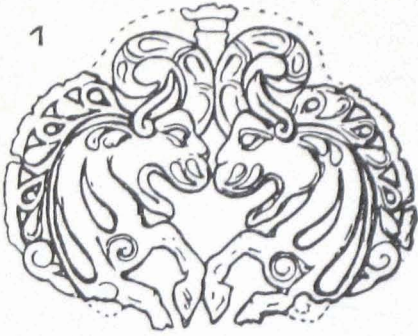
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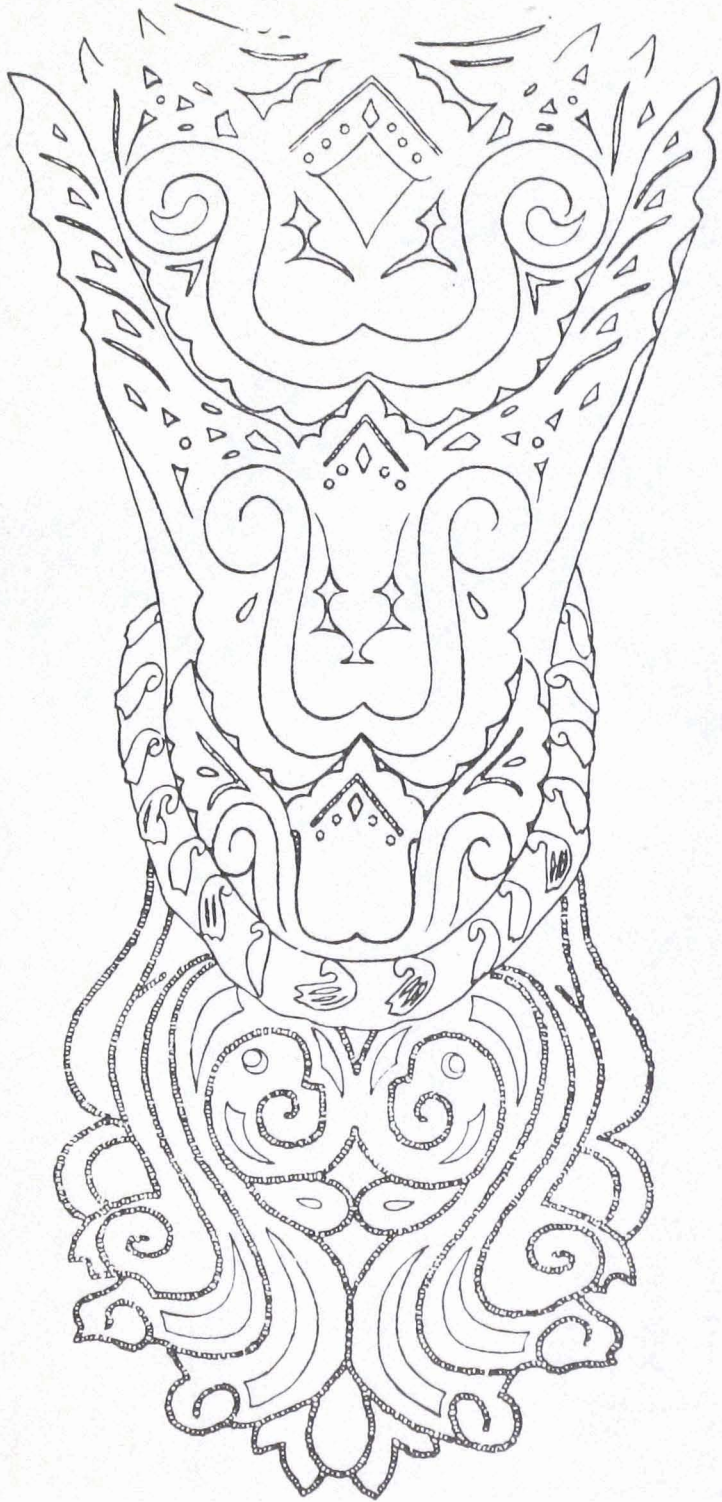


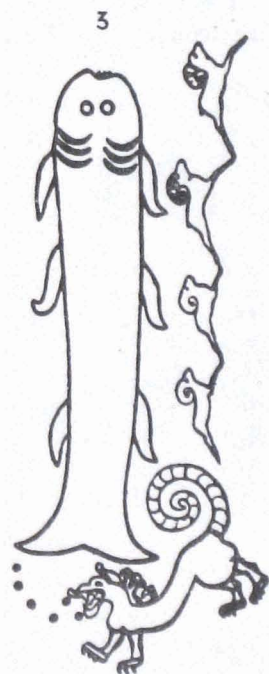
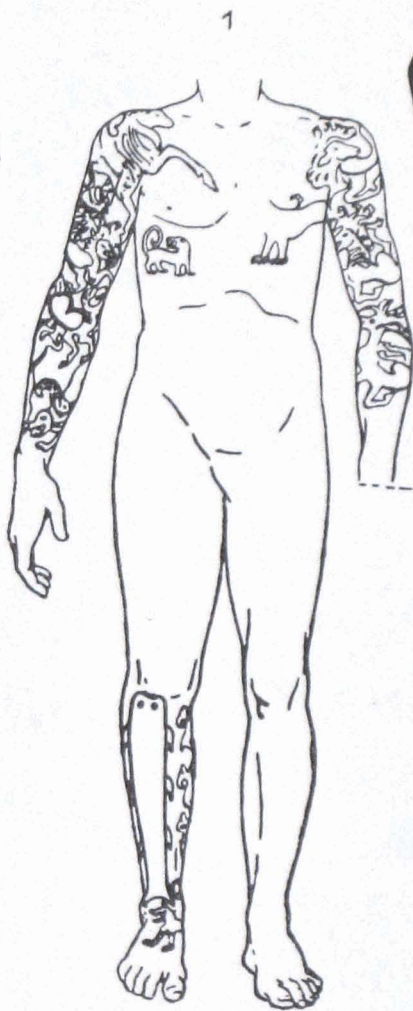






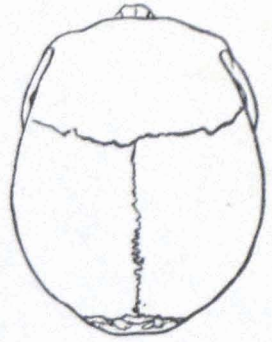
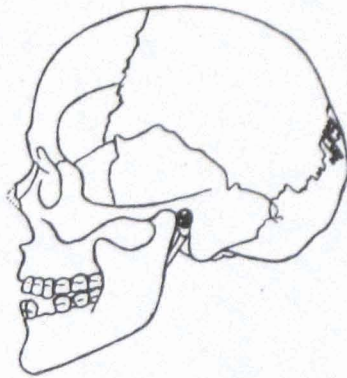
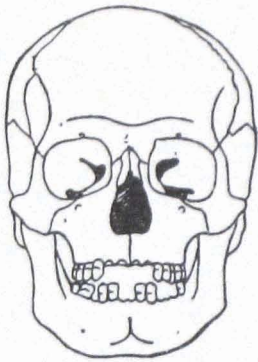




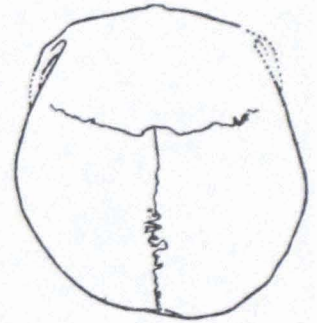
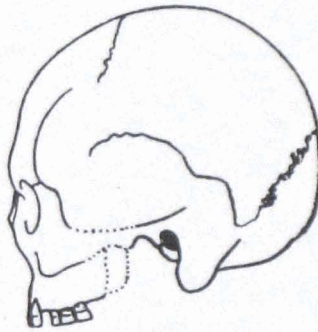
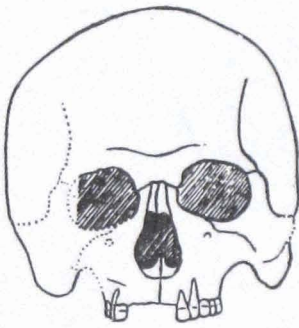




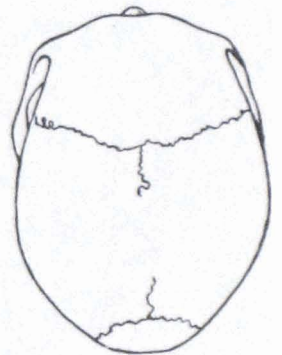
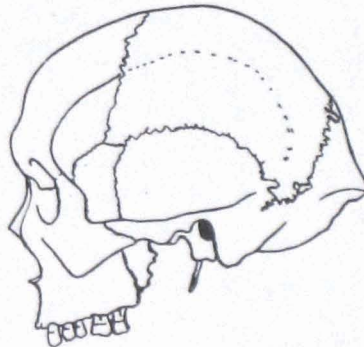
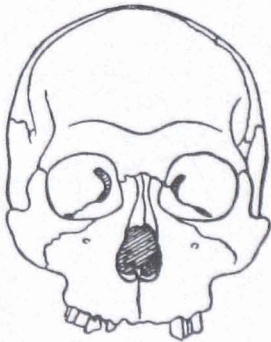
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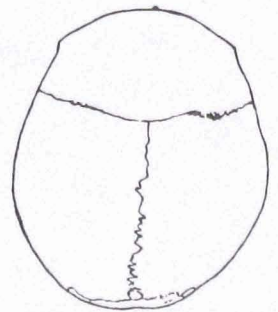
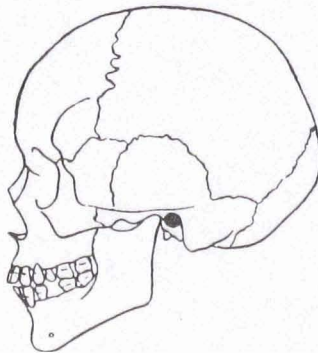
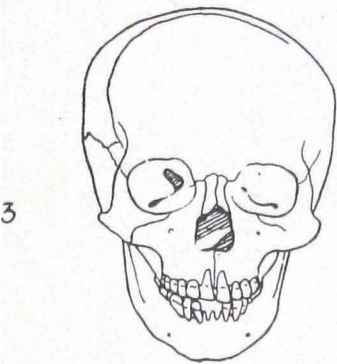
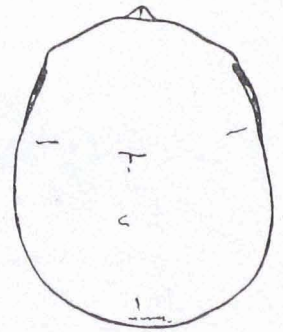
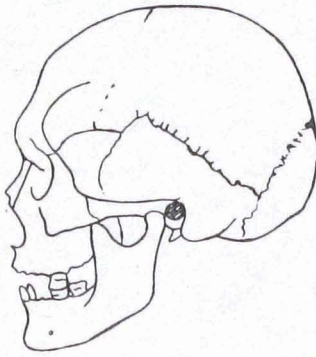
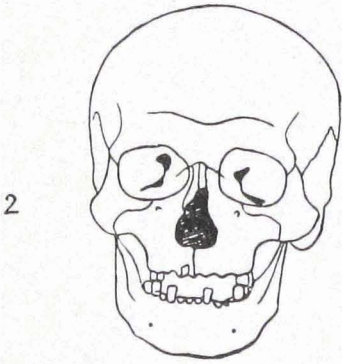
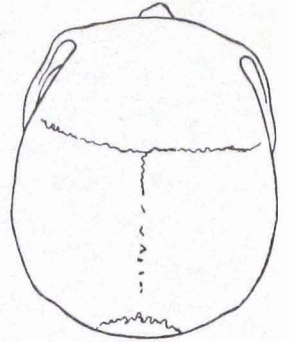
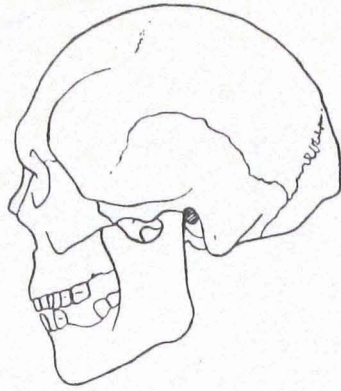
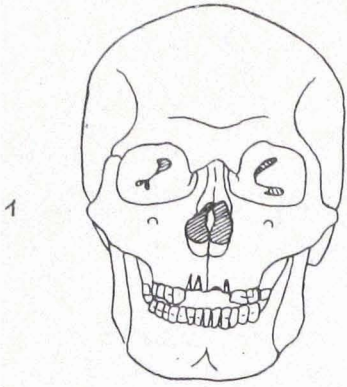


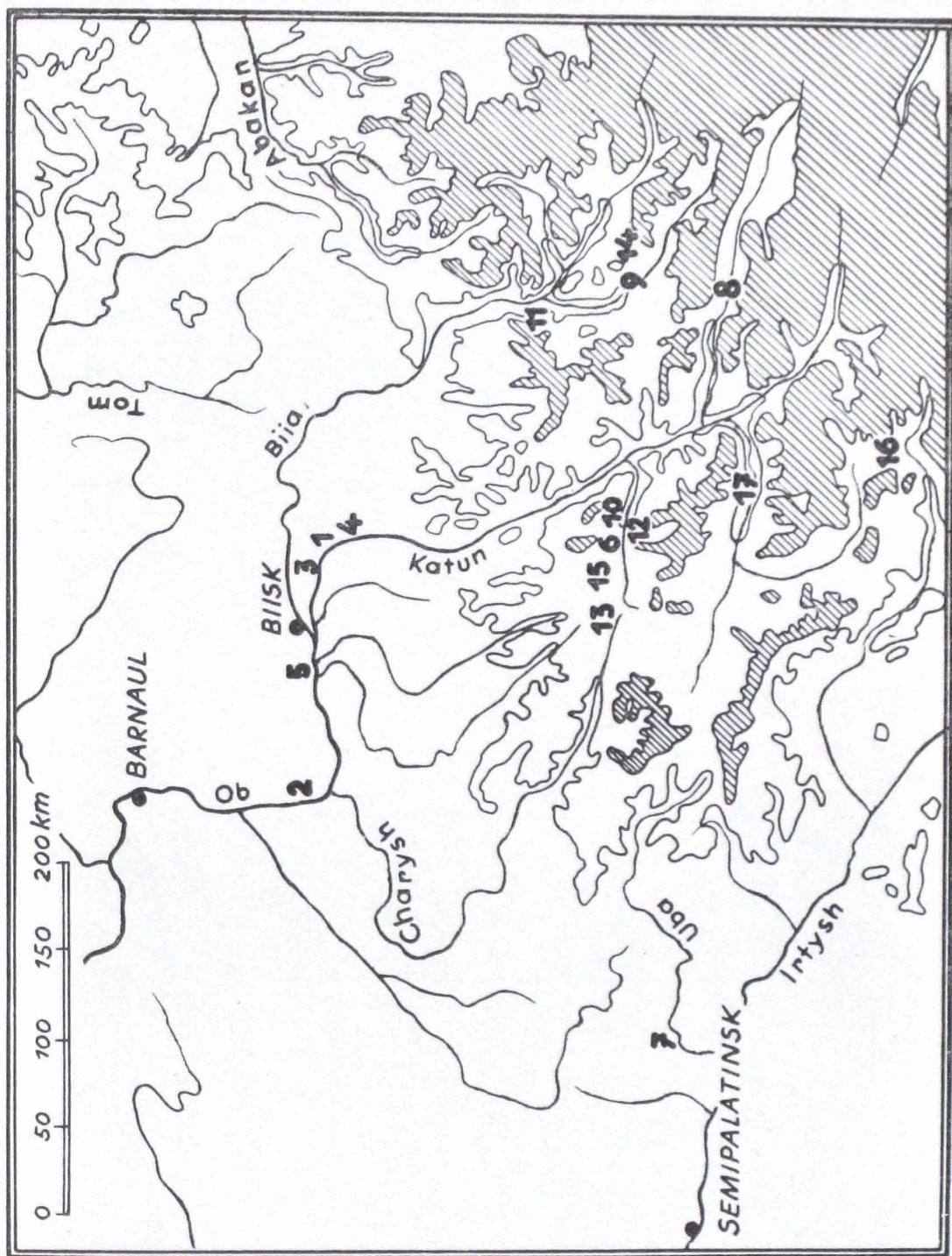
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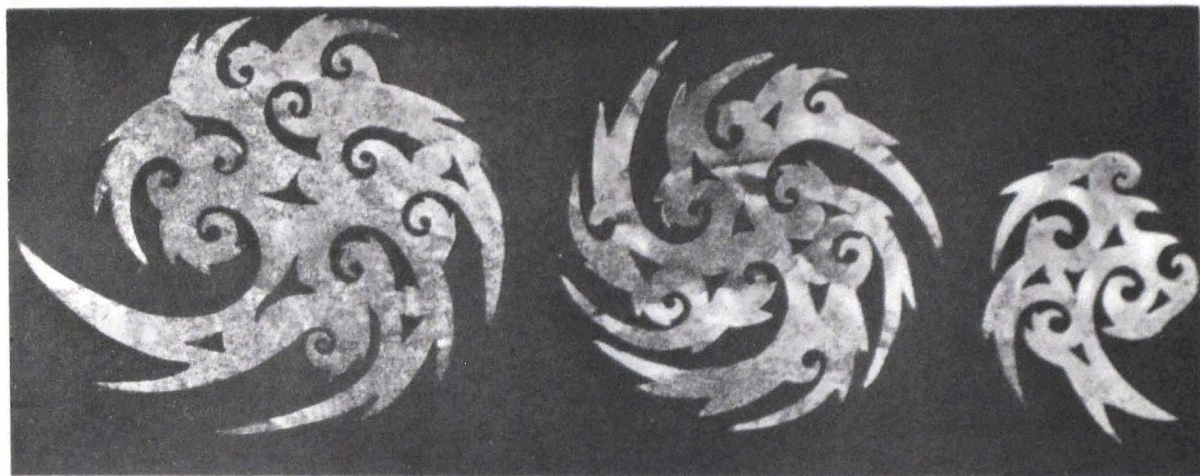






East Ukraine	West Kazakhstan	Khorezm	Semirechia	Altai	Minusinsk	Transbaikalia	Cisbaikalia
Pit Graves	Related to Pit Graves	Early Kelteminar		Pre-Afanasievo	Finds of Bateni		Isakovo
Catacombs		Late Kelteminar		Afanasievo	Afanasievo		Serovo
Timber Graves	Andronovo-like (Chvalinsk)	Andronovo-like (Tazabagiab)	Andronovo?	Late Afanasievo	Tes Kurgans		Kitoi
	Late Andronovo	Suiargan Amirabad	Karasuk?	Andronovo	Andronovo		Early Glazkovo
Scythian	Sauro-matian Sarmatian I	»Habitable Fortresses» »Kangli»	Sakian I	Maimeiric	Karasuk	Karasuk-like	Late Glazkovo
Sarmatian	Sarmatian II Sarmatian III	Kushan	Sakian II Usun Cult. Kenkol Gr.	Pazyryk Culture	Tagar I Tagar II Tagar III Tashtyk	Stone Tombs I Stone Tombs II Figure Graves Noim Ula	Shiversk

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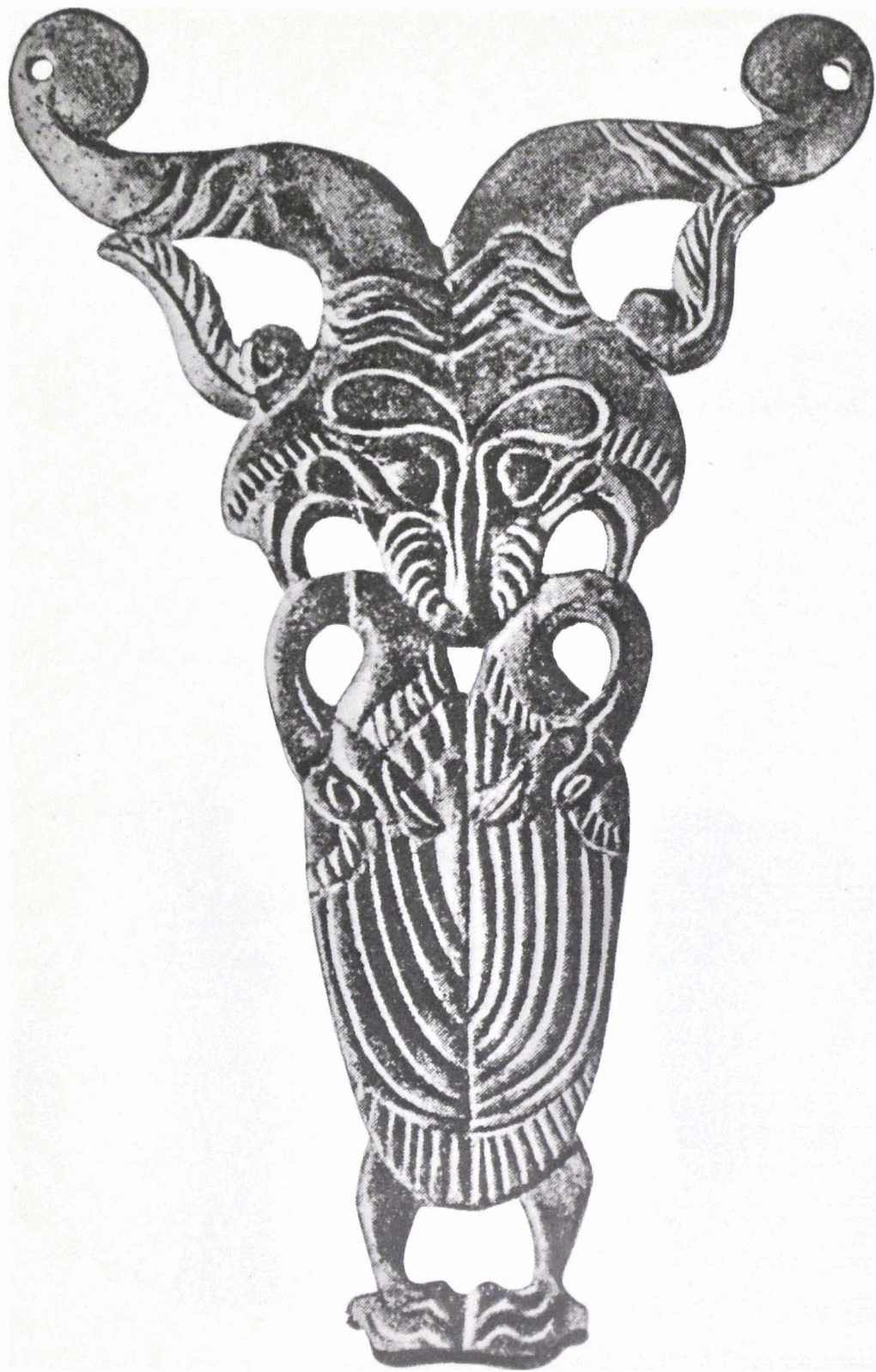


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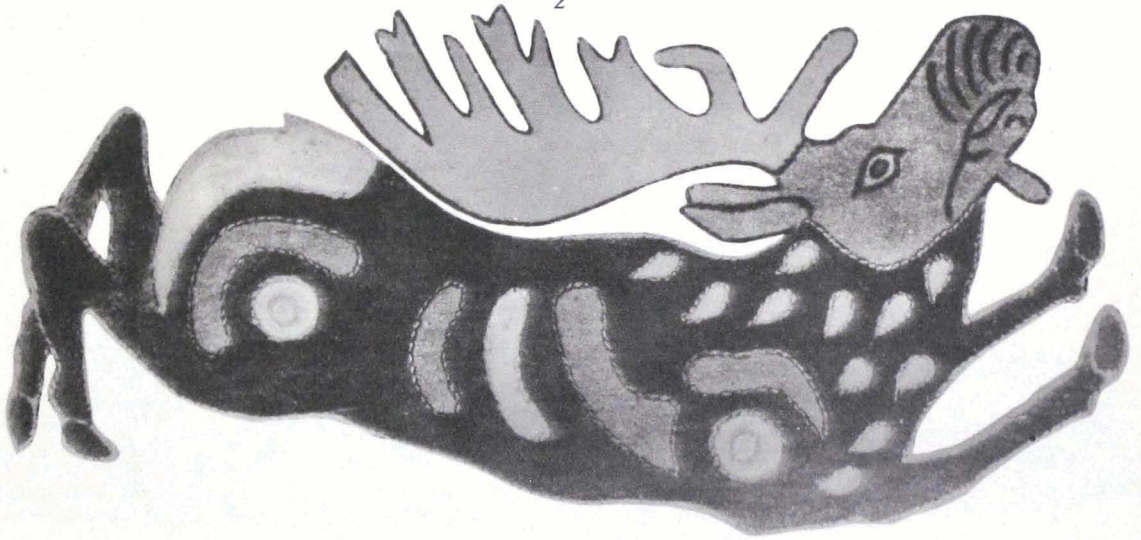
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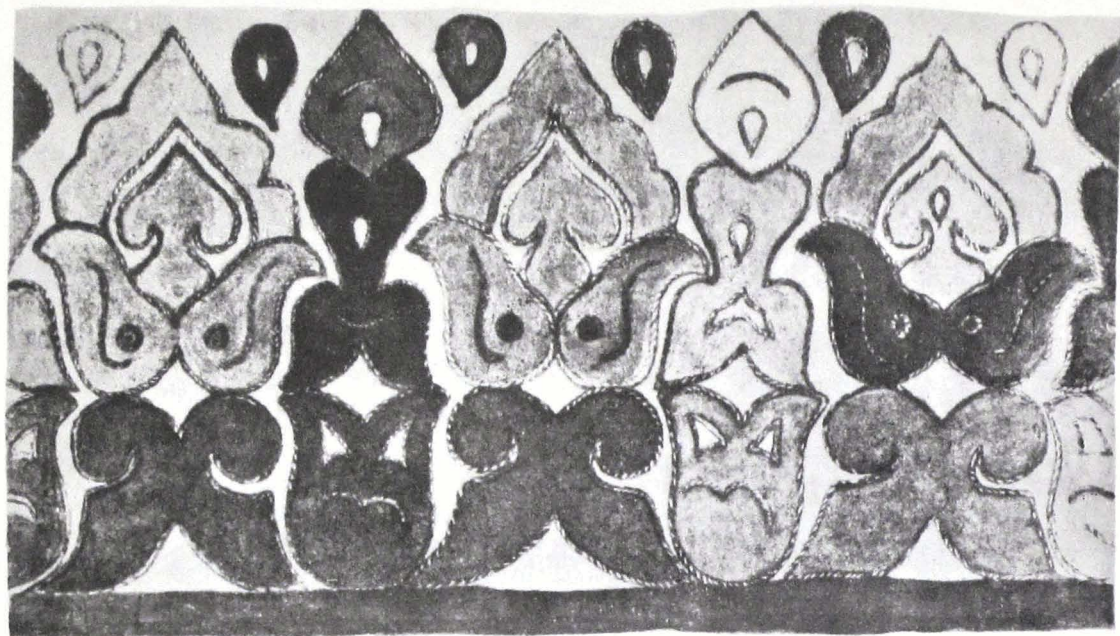


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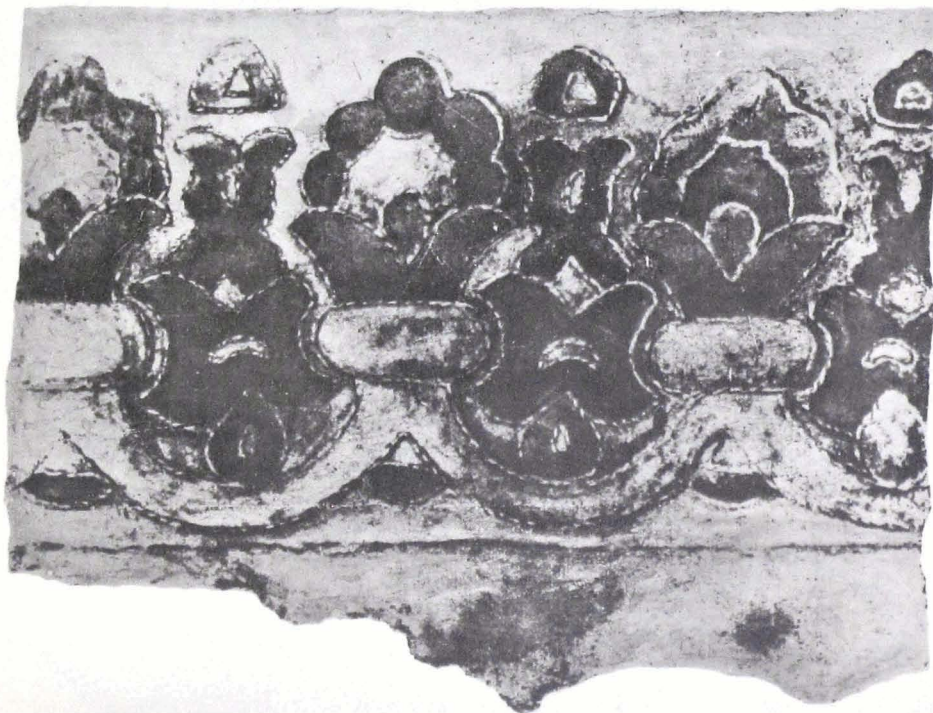


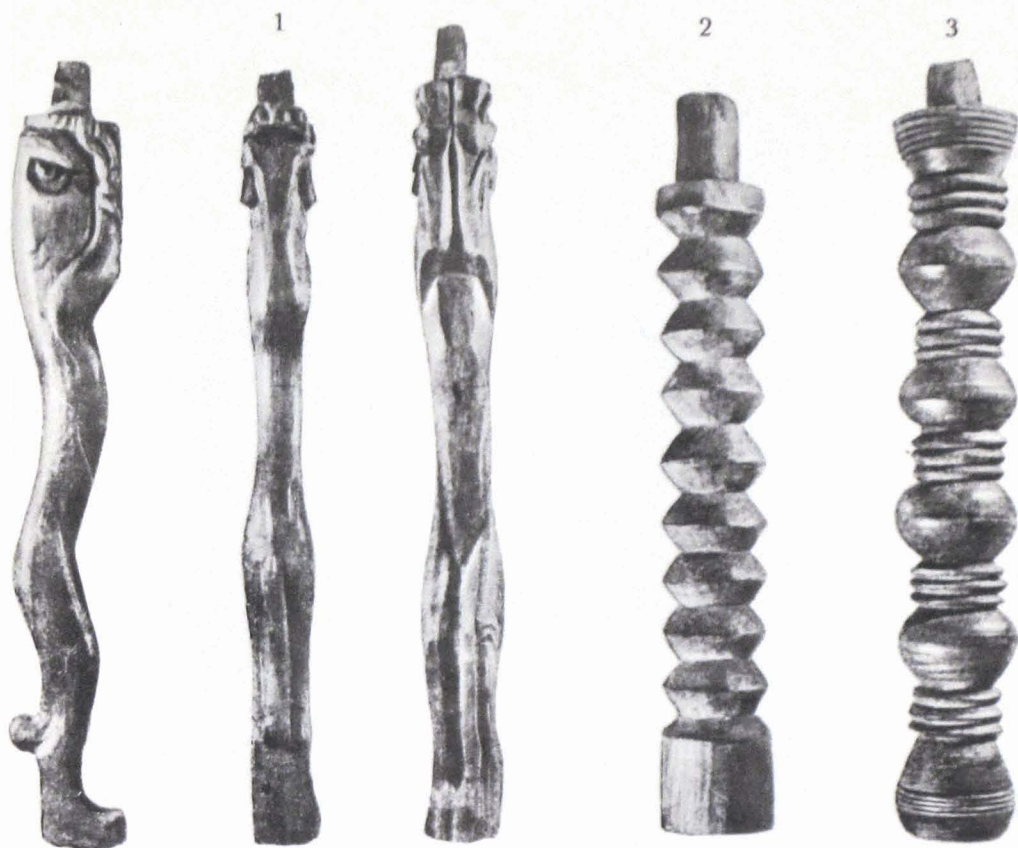


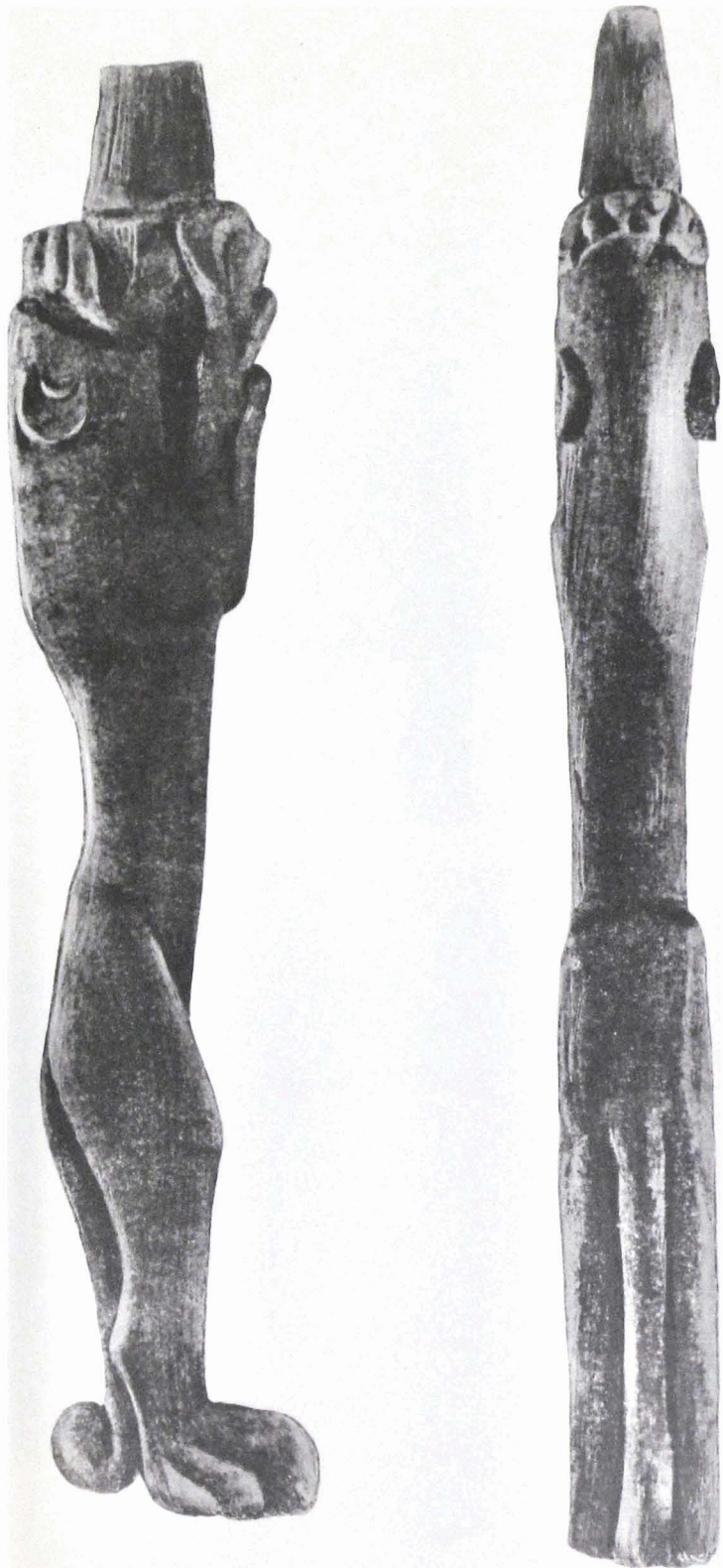
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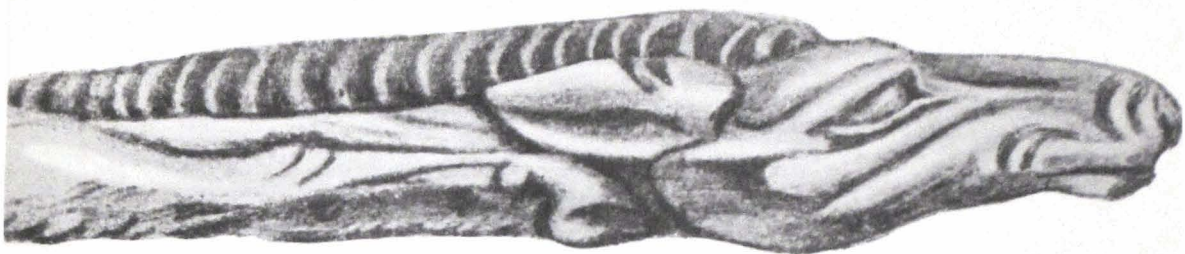
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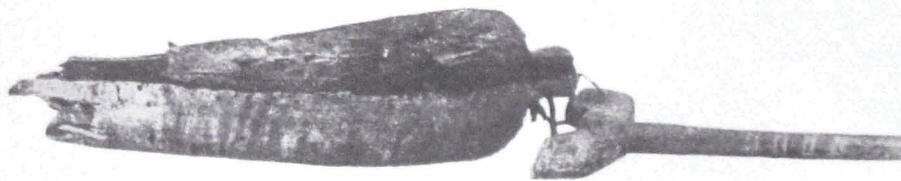
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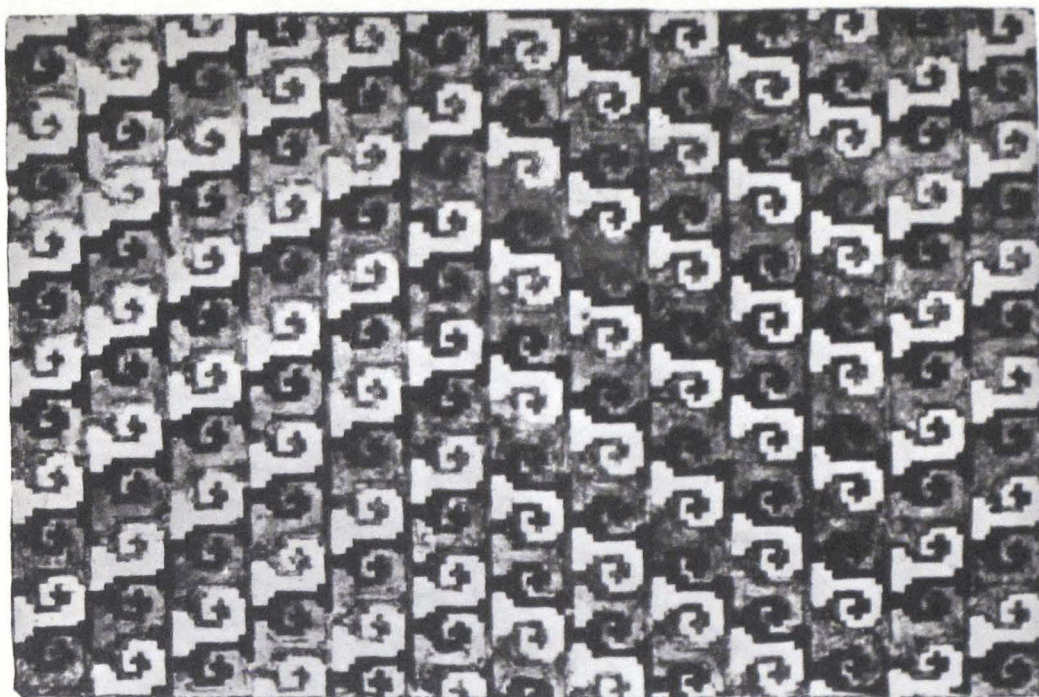
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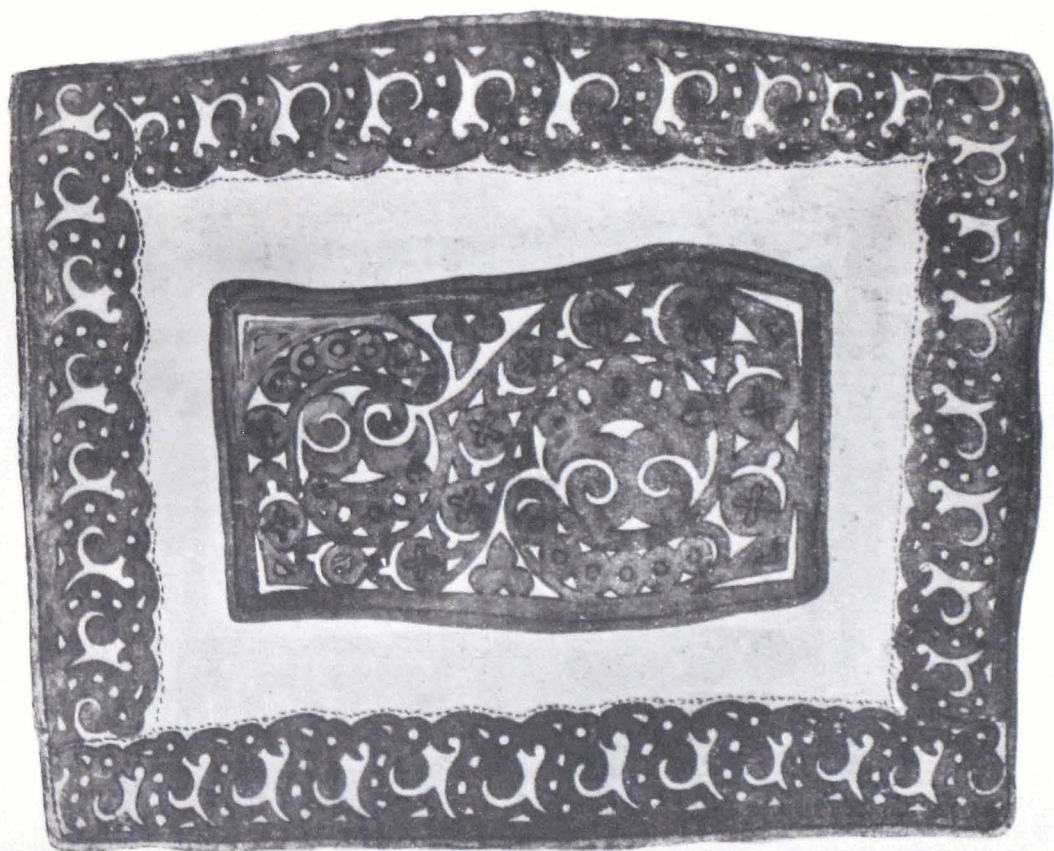
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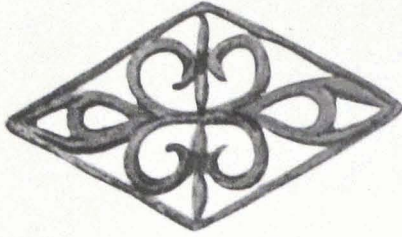
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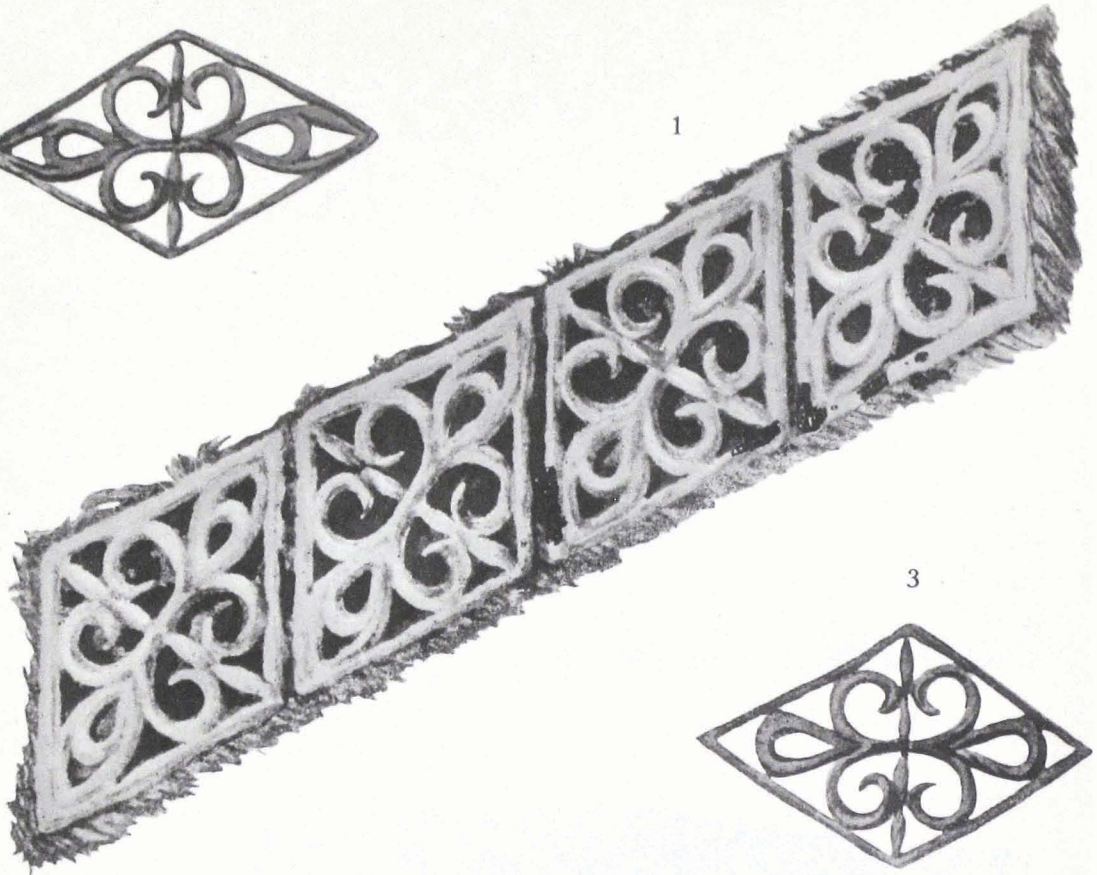
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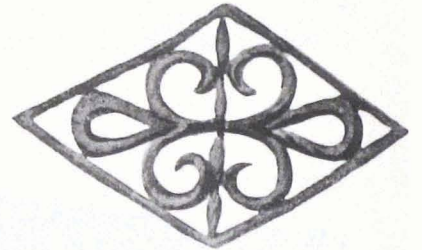
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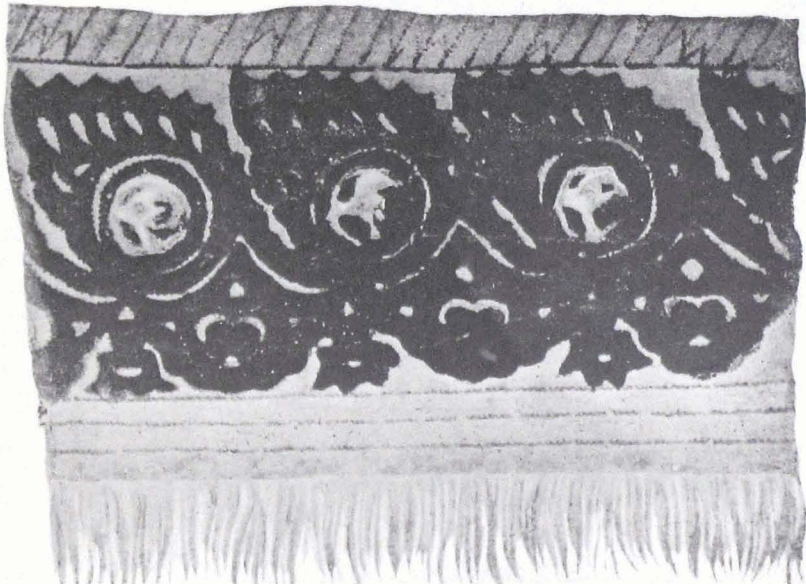
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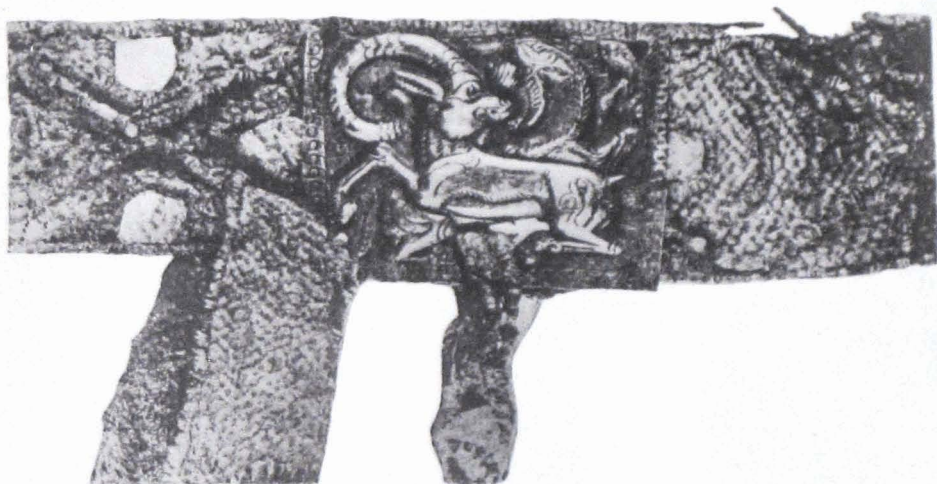


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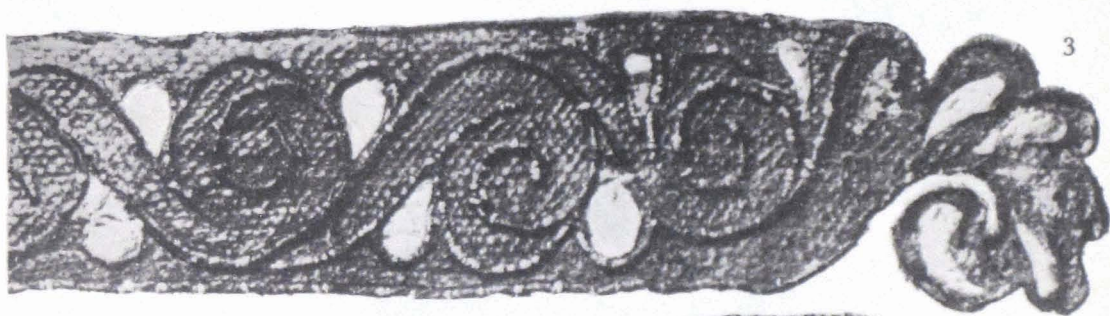




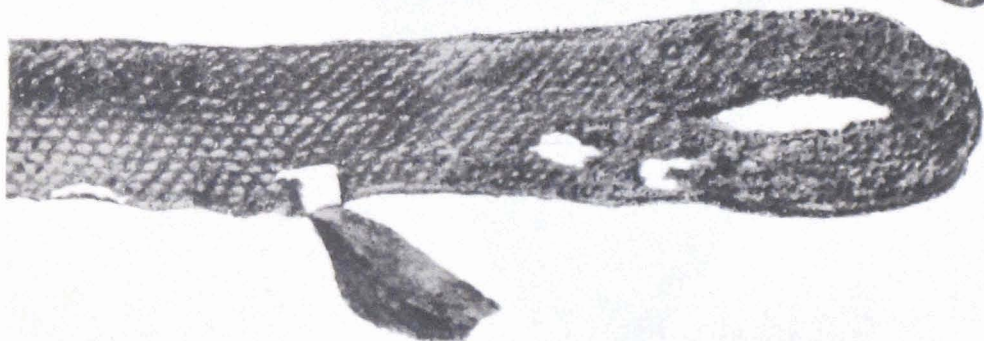
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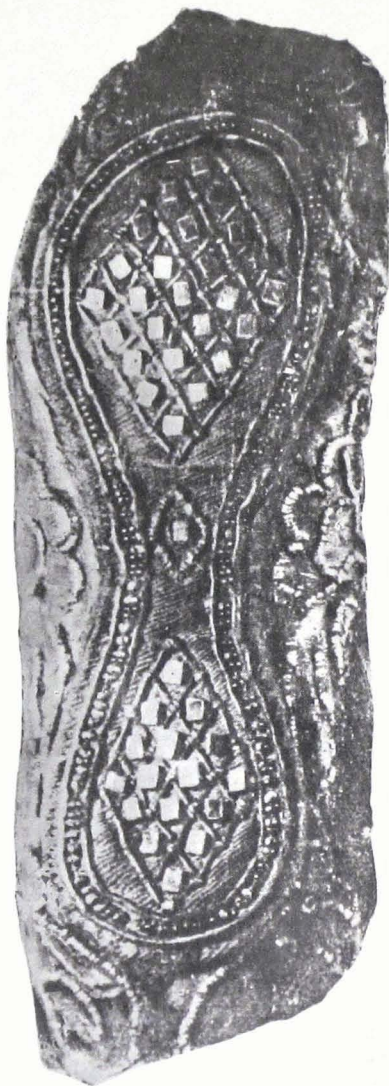


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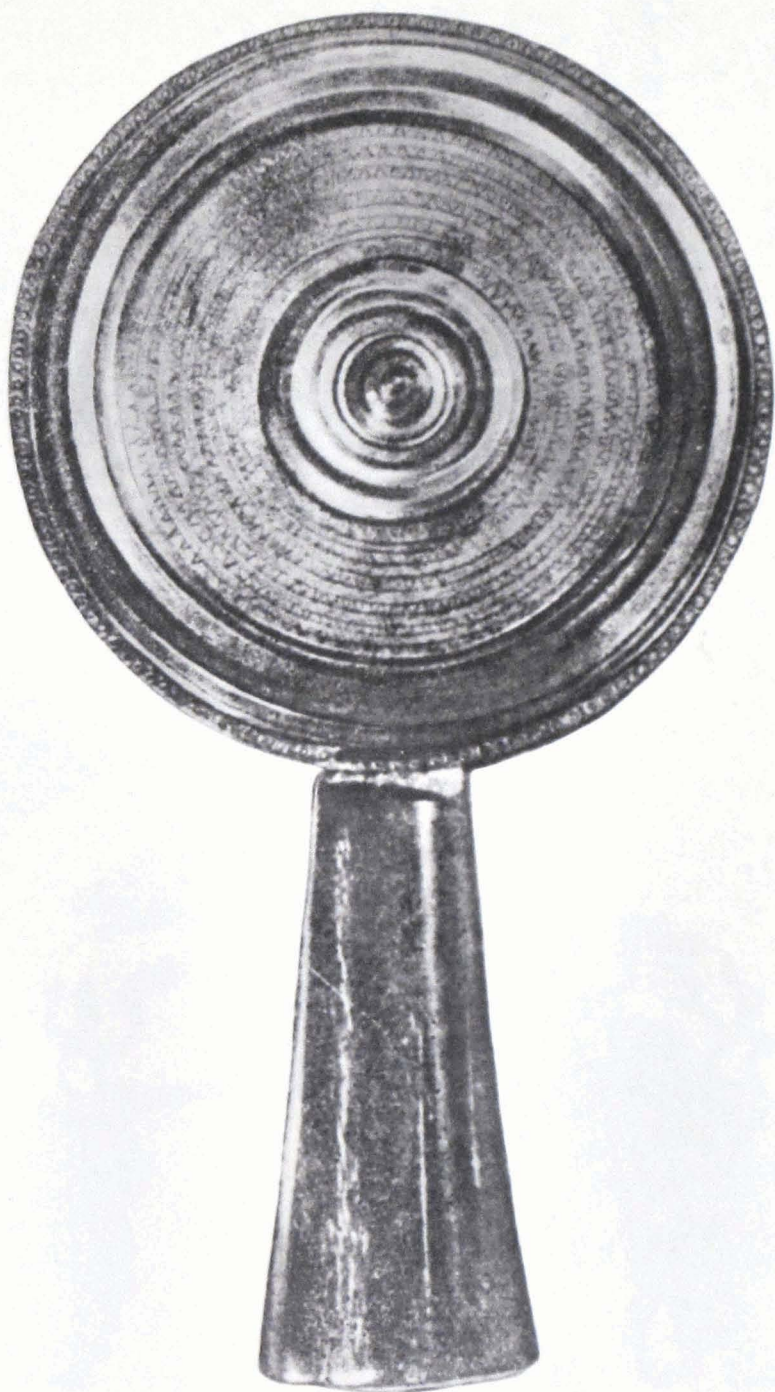


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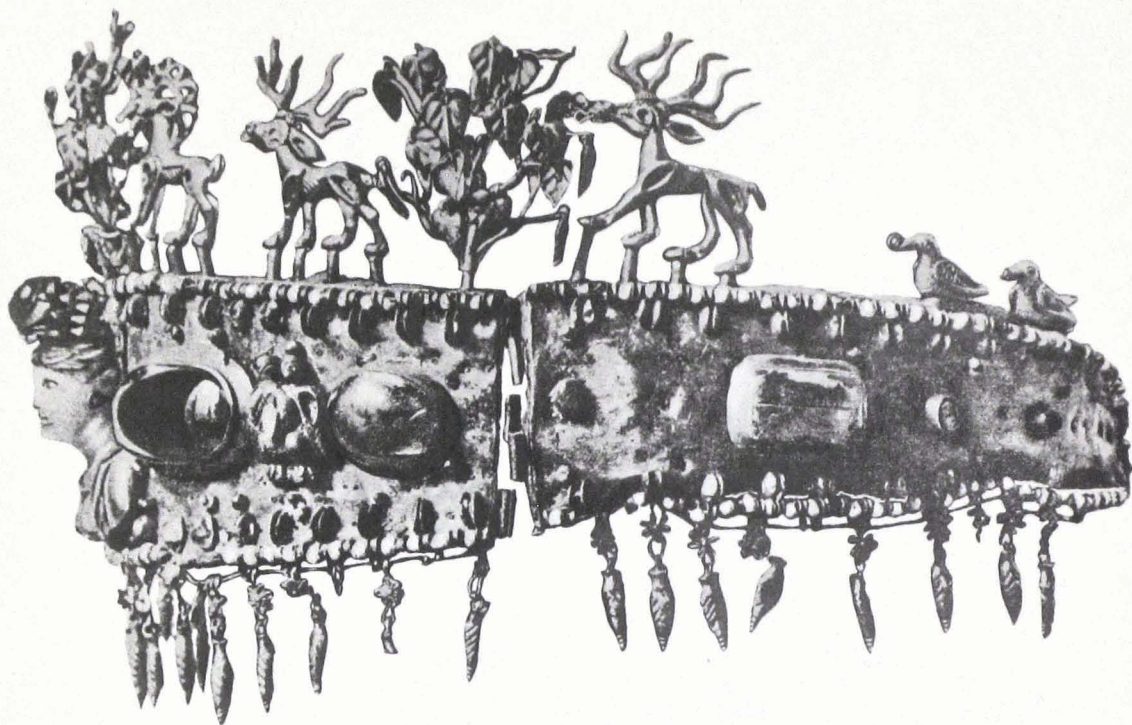


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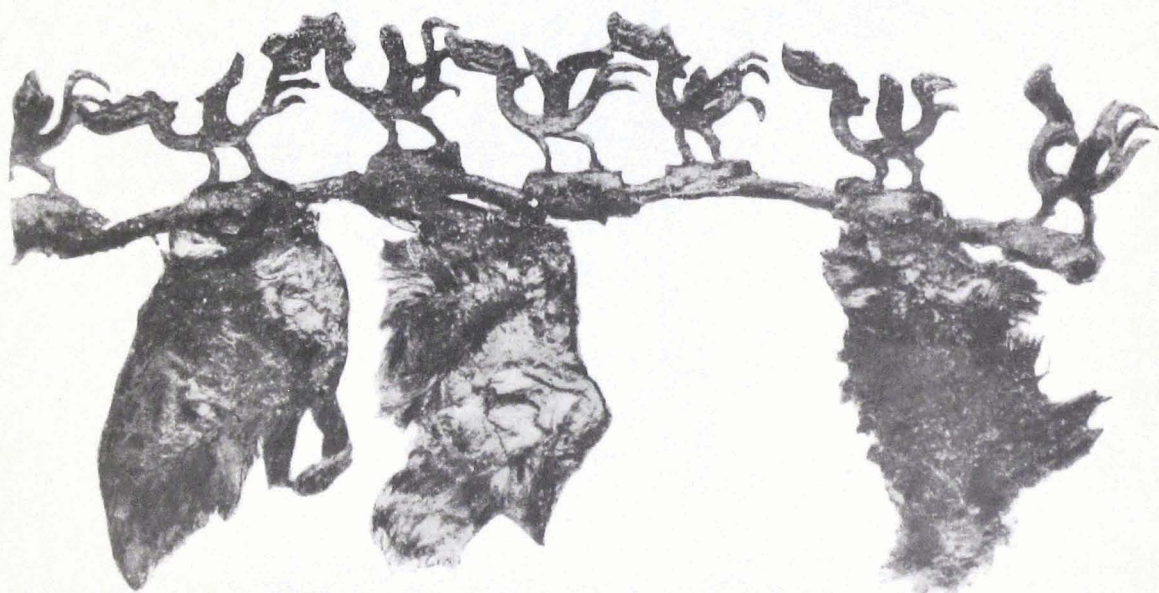




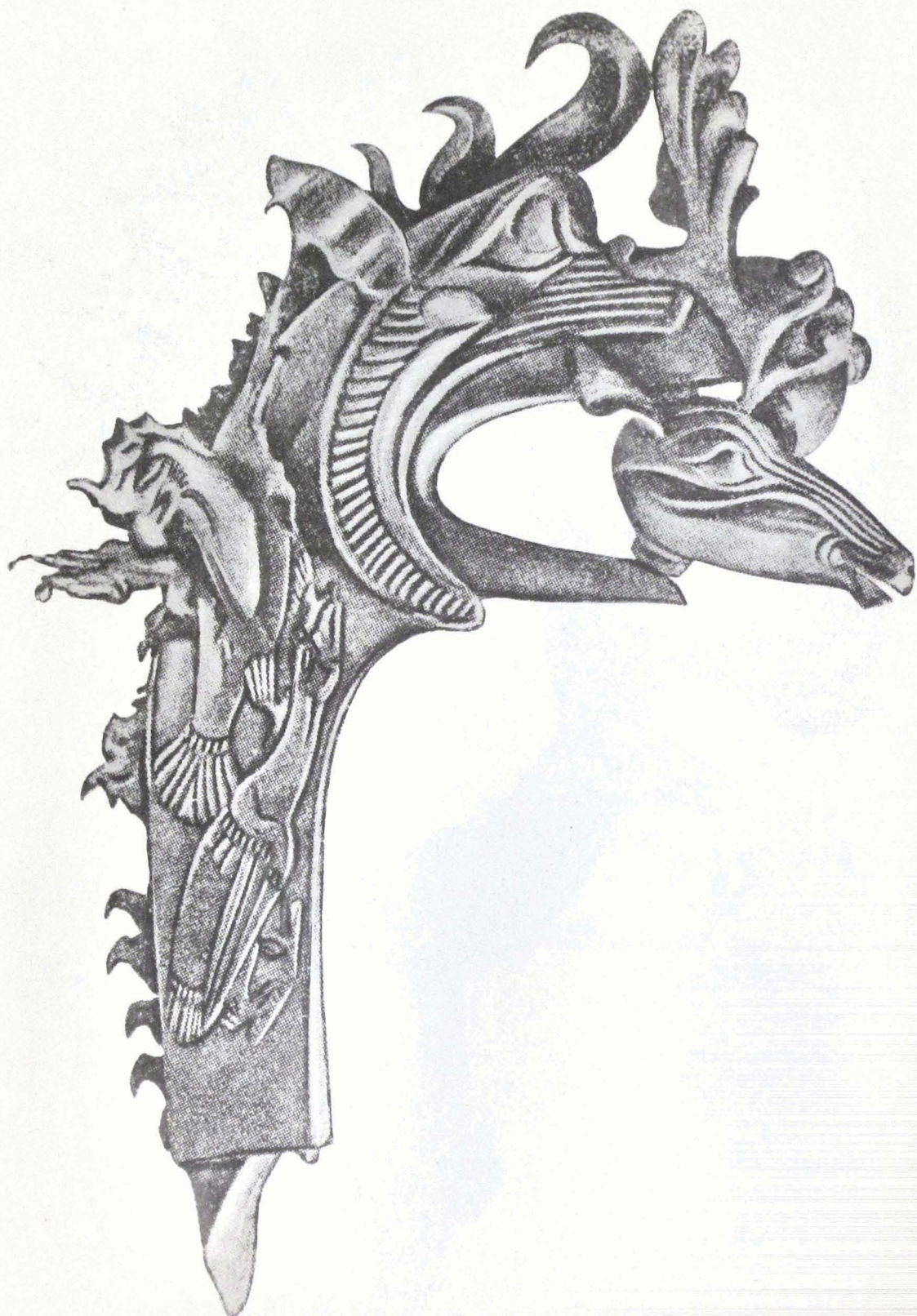
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