

T. S. KONDUKTOROVA

SCYTHIAN DESCENDANTS ON THE LOWER DNEIPER RIVER ACCORDING TO THE ANTHROPOLOGICAL MATERIAL FROM THE NIKOLAEVKA-KAZATSKOE CEMETERY (*Second part*)

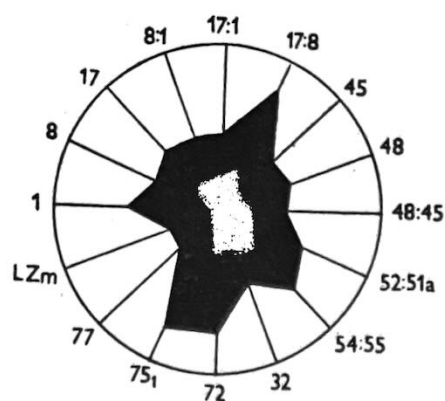
The analysis inside the group should be checked through inter-group analysis. First of all we must know the morphological characters of those groups that might have participated in the formation of the population in Nikolaevka-Kazatskoe, especially of the Scythians and their descendants, of the Sarmatians and of the inhabitants of the ancient Crimea of similar age, and also of some other populations. Some of them have been mentioned above. The numerical data used for intergroup analysis in this paper are presented in comparative table (*tabl. 12 to 24*). It is natural that the special position of all these groups should be studied on the background of morphological characteristics of the studied Nikolaevka-Kazatskoe series.

In the intergroup analysis we often compare the groups with the help of the Chi-square with the coefficient of the racial likeness. The mean difference obtained in individual characters eliminates their taxonomical racial differences. The characters for this study should be chosen with the utmost care. In our case the differences between the mean arithmetic values of the groups to be compared are often of little importance in most characters (See the tables). If they differ, then it is only in one or

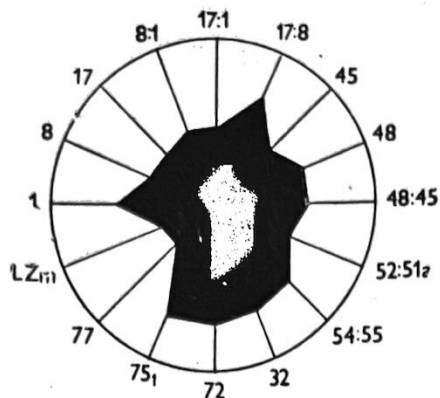
two characters and the group comparison is therefore of little help.

If the differences between the mean arithmetic values are slight, we must find out their trends. This paper will not deal with the differences as such, but mainly with their trends. Besides the results obtained through the comparison of the main arithmetic values it is necessary to take into account also the results of the intra-group analysis, alongside with variability parameters of the series, correlations of the individual dimensions and observations of special features of the chronological groups of the burials in the studied cemetery. With the help of all these finds we hope to find the ways how the relations of the population of Nikolaevka-Kazatskoe with other groups were formed.

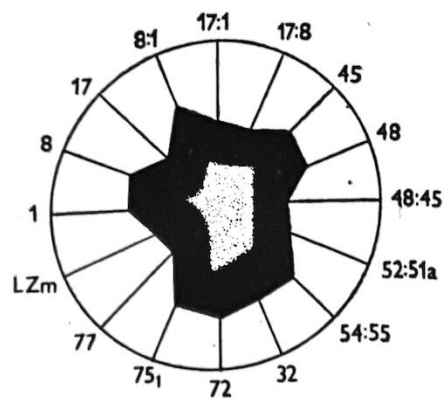
The peculiarities and special features of the groups being compared can be well expressed by suitable graphic methods, such as combinatory polygons, widely used in the publications of G. F. Debets (1948). In our study 16 characters were used for the construction of combinatory polygons. For criterion we have chosen the intergroup value of the character. The names of the characters and limits of their variations follow (in the brackets is the number of dimension according to Martin).



II. Zolotaya Balka.

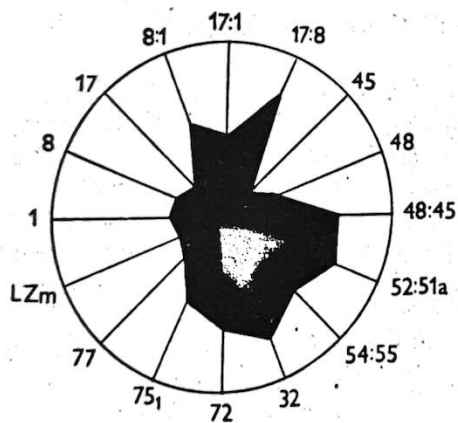


I. Nikolaevka-Kazatskoe.

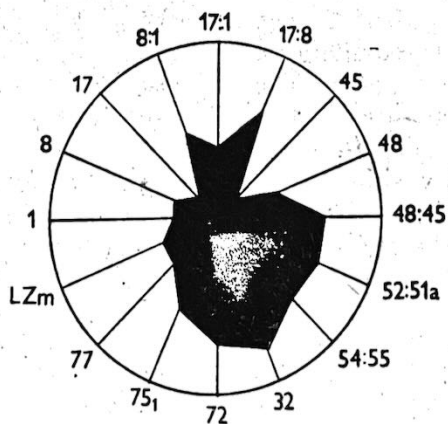


III. Sarmatians.

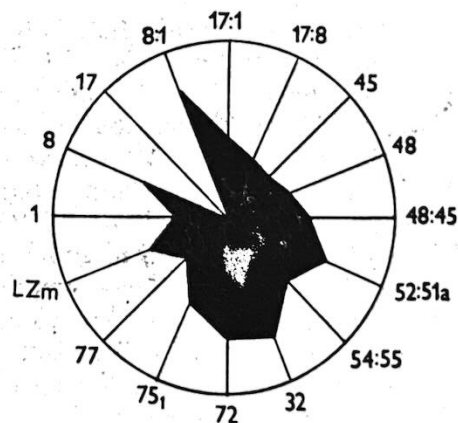
FIG. 17. Polygonal diagrams of male groups from the Ukrainean North Black Sea steppes of Sarmatian age compared with the male group of Nikolaevka-Kazatskoe.
(Explanations: LZm — zygomaxillar angle, in remaining cases the numbers of Martin's measurements.)



II. Zolotaya Balka.



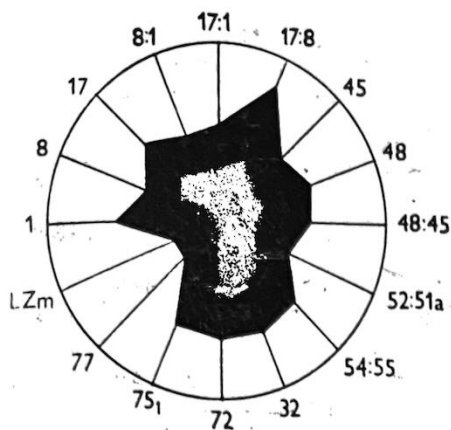
I. Nikolaevka-Kazatskoe.



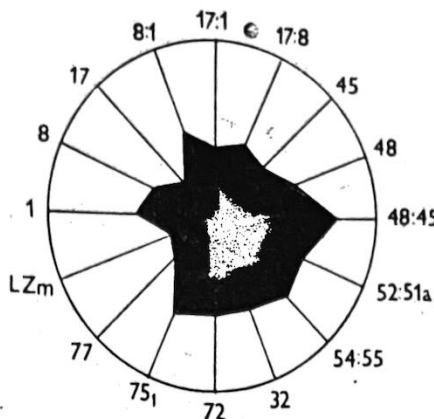
III. Sarmatians.

FIG. 18. Polygonal diagrams of female groups from the Ukrainean North Black Sea steppes of Sarmatian age compared with the male group of Nikolaevka-Kazatskoe.
(Explanations: LZm — zygomaxillar angle, in remaining cases the numbers of Martin's measurements.)

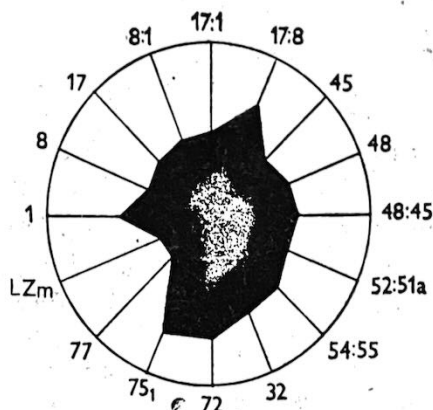
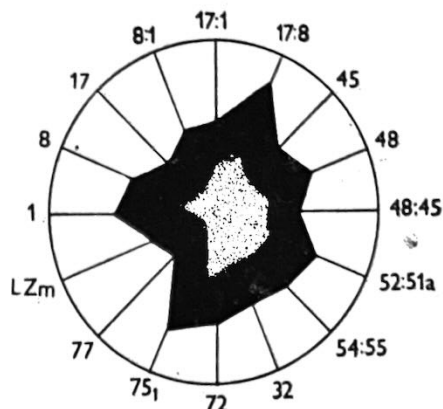
II. Scythian Neaple.
Eastern cemetery.



III. Scythian Neaple.
Stone construction graves
and mausoleum.



IV. Zavetnoe.



I. Nikolaevka-Kazatskoe.

FIG. 19. Polygonal diagrams of male groups of Sarmatian Age from Crimea, compared with the male group of Nikolaevka-Kazatskoe.
(Explanations: LZm — zygomaxillar angle, in remaining cases the numbers correspond to Martin's measurements.)

1. Greatest cranial length (1)	168—198
2. Greatest cranial breadth (8)	126—160
3. Cranial height (17)	125—145
4. Cranial index (8 : 1)	66— 86
5. Length-height index (17 : 1)	63— 84
6. Height-breadth index (17 : 8)	80—102
7. Facial breadth (45)	120—150
8. Upper facial height (48)	60— 80
9. Upper facial index (48 : 45)	48— 58
10. Orbital index (52 : 51a)	75— 90
11. Nasal index (54 : 55)	40— 58
12. Frontal angle n-m with the horizontal line (32)	76— 88
13. Total facial angle (72)	75— 90
14. Nasal bones angle with the profile line (75)	13— 40
15. Naso-malar angle (77)	126—160
16. Zygomaxillar angle — zm	113—156

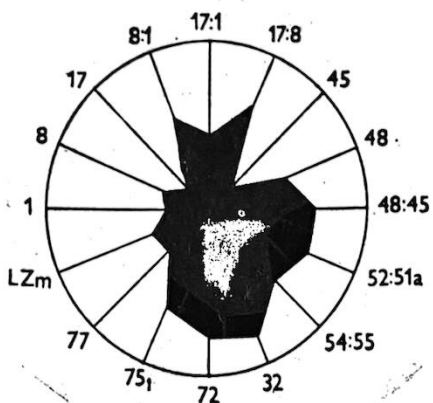
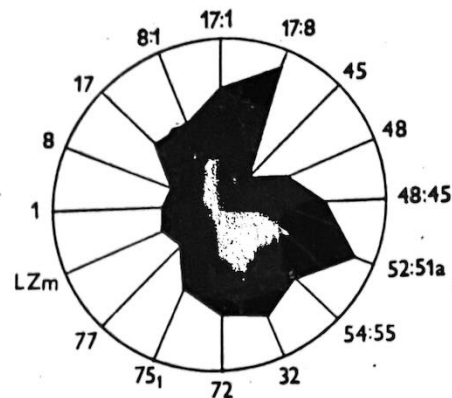
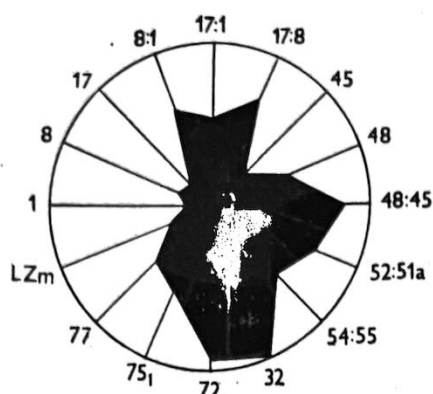
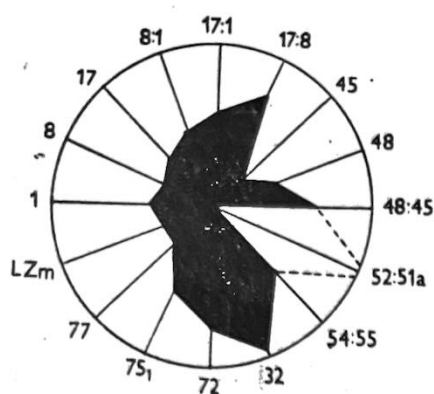
The polygons have been constructed according to the following male and female groups: groups from the Sarmatian period from the Ukrainian

steppes near the Black Sea (see tables 12—13) and figs. 17—18; Konduktorova, 1972); groups from the Sarmatian Period from the Crimea (see tables 14—15 and figs. 19—20; Konduktorova, 1972); a group from the Scythian Period of Ukraine (see tables 14—15 and figs. 21—22; Konduktorova, 1972); groups from Greece and a Taurid group from the Crimea (see tables 14, 16 and figs. 23; Angel 1944, Sokolova 1960); groups from the Crimea from the 1st millenium A.D. (see tables 17—18 and figs. 24—25; Sokolova 1958b, Zinevich 1973); groups from the Crimea from the break of the 1st and 2nd millennium A.D. (see tables 17—18 and figs. 26—27; Debets 1948, Sokolova 1958a); groups from the Neolithic Age from Scandinavia and Germany (see tables 19—20 and figs. 28—29; Bröste et al. 1956, Fürst 1912, Retzius 1900, Schlitz 1908, Steinberg 1943); groups from the Iron Age from the Scandinavian countries (see tables 19—20 and figs. 30—31; Steffensen 1953); groups of the Chernyakhov culture from the Ukrai-

II. Scythian Neaple.
Eastern cemetery.

III. Scythian Neaple.
Stone construction graves
and mausoleum.

IV. Zavelnoe.

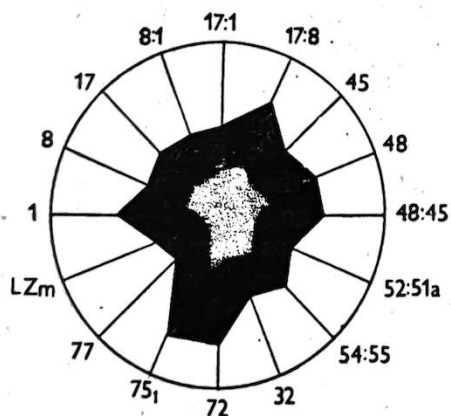


I. Nikolaevka-Kazatskoe.

FIG. 20. Polygonal diagrams of female groups of Sarmatian Age from Crimea, compared with the female group of Nikolaevka-Kazatskoe.
(Explanations: LZm — zygomaxillar angle, in remaining cases the numbers correspond to Martin's measurements.)

II. Scythians from the North Black Sea
steppes.

III. Scythians of the Middle Dnieper
region.



I. Nikolaevka-Kazatskoe.

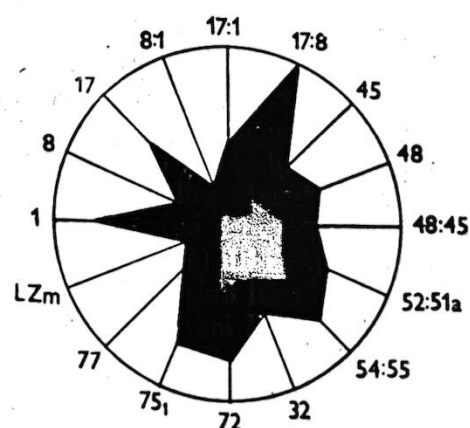
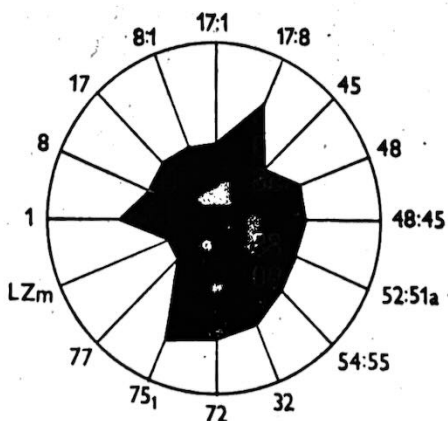
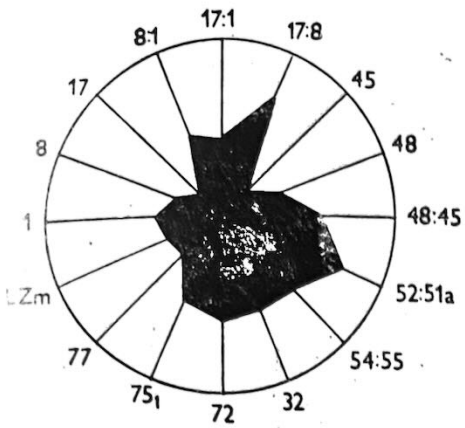
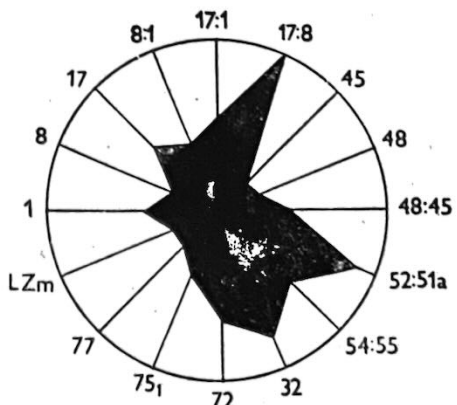


FIG. 21. Polygonal diagrams of male groups of Scythian period from Ukraine compared with the male group Nikolaevka-Kazatskoe.
(Explanations: LZm — zygomaxillar angle, in remaining cases the numbers correspond to Martin's measurements.)

II. Scythians of the North Black Sea steppes.



III. Scythians of the Middle Dnieper region.



I. Nikolaevka-Kazatskoe.

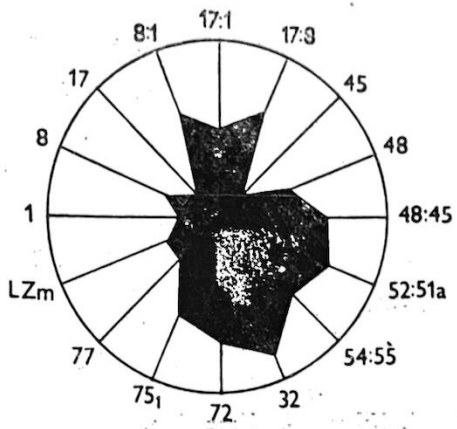
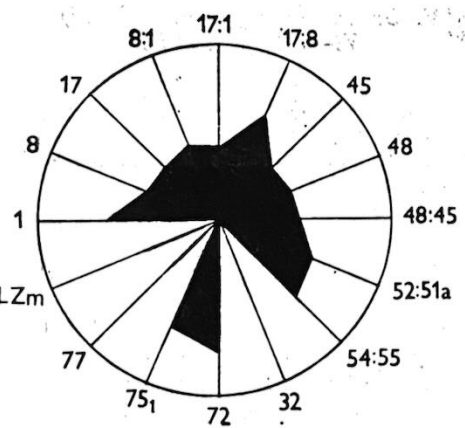
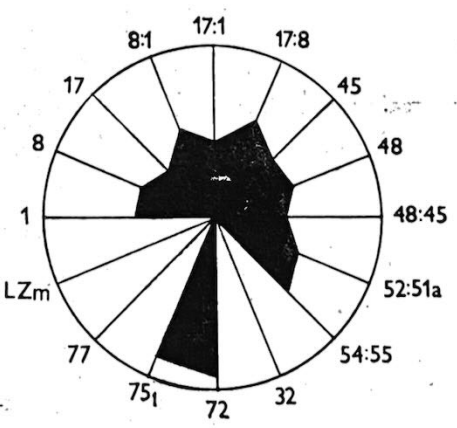


FIG. 22. Polygonal diagrams of female groups of Scythian period from Ukraine compared with the female group from Nikolaevka-Kazatskoe.
(Explanations: LZm — zygomaxillar angle, in remaining cases the numbers correspond to Martin's measurements.)

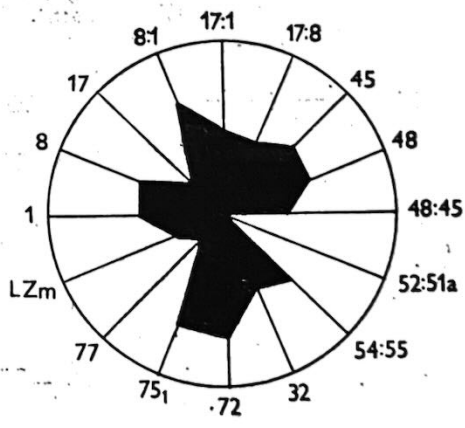
II. Greeks 650—150 years B.C.



III. Greeks 150 years B.C. — 450 years A.D.



IV. Crimean Taurids.



I. Nikolaevka-Kazatskoe.

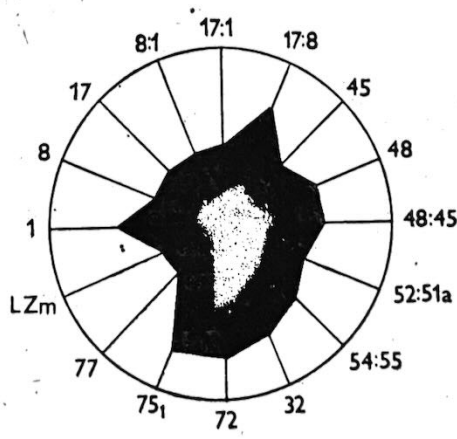
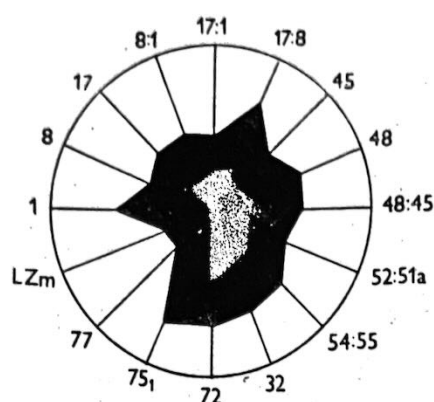
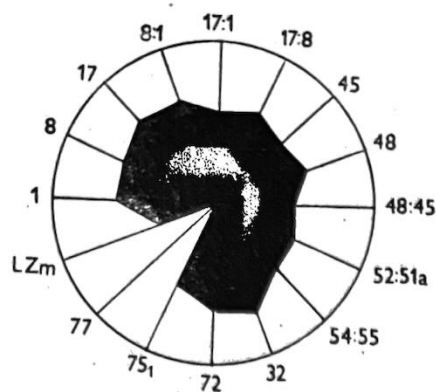
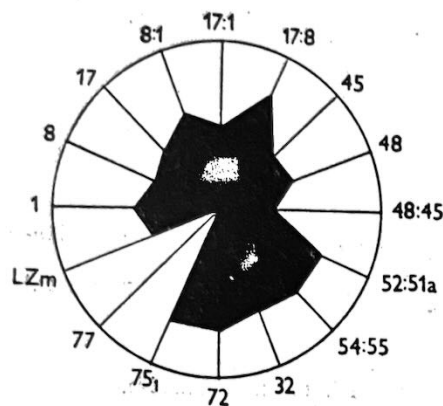


FIG. 23. Polygonal diagrams of some male groups from Greece and of Taurid male group from Crimea compared with the male group Nikolaevka-Kazatskoe.
(Explanations: LZm — zygomaxillar angle, in remaining cases the numbers correspond to Martin's measurements.)

II. Tchernoretchensk and Inkerman
II—IV cent. A.D.

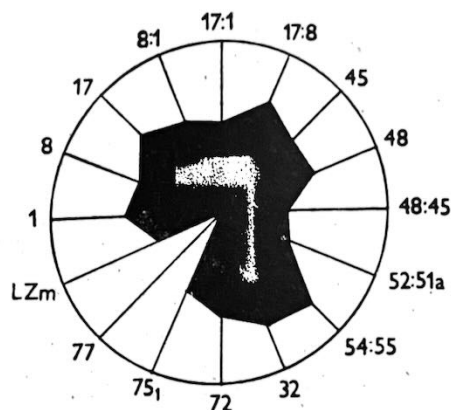
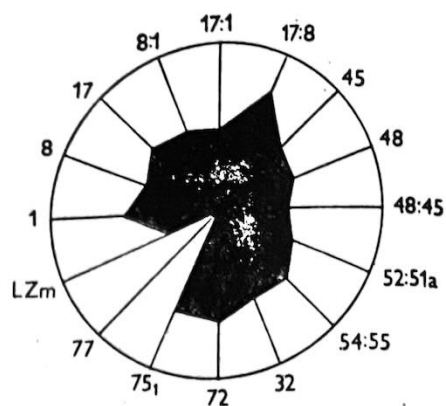


I. Nikolaevka-Kazatskoe.



IV. Sakhar'naya golovka IV—VII cent.
A.D.

III. Tchufut-Kale V—VII cent. A.D.



V. Bashtanovka (form. Pytchki)
VI—VII cent. A.D.

FIG. 24. Polygonal diagrams of some Crimean male groups from the Ist millennium A.D. compared with the male group Nikolaevka-Kazatskoe.
(Explanations: LZm — zygomatic angle, in remaining cases the numbers correspond to Martin's measurements.)

ne (see tables 23—24 and figs. 34—35; Alexeyeva 1971); groups of town-dwelling Poljans and rural Severjans and Drevljans) (see tables 23—24 and figs. 36—37; Alexeyeva 1971).

As mentioned above, another burial place, with a dating very close to that of the Nikolaevka-Kazatskoe site, has also been explored on the lower Dnieper River. It was situated near the village Zolotaya Balka (Symonovich 1960, Vyazmitina 1972). We shall use the finds from this site for a comparative analysis (Konduktorova 1971, 1972).

The comparison of the craniological group from Nikolaevka-Kazatskoe with the group from Zolotaya Balka has shown either identical mean arithmetic values of skull dimensions, or differences not overpassing the errors of the mean values (Tables 12—13, figs. 17—18). According to the morphological characters of these finds we can conclude:

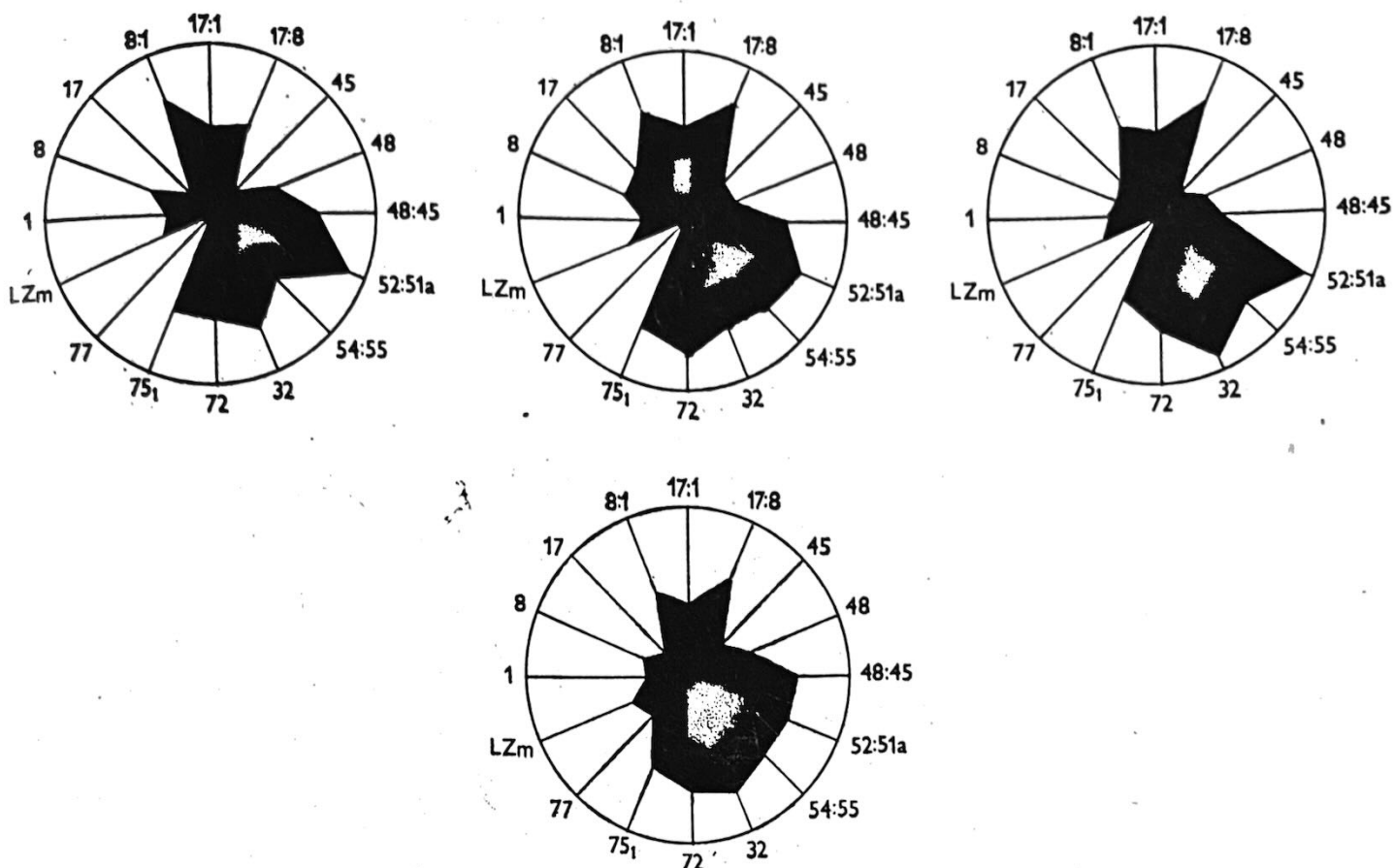
The mean height value (measured from the porion) in the Zolotaya Balka group is on the average two units below the Nikolaevka-Kazatskoe

group. In the female group this dimension is somewhat bigger. There were practically no differences in the mean height measured from the basion. On evaluating contemporarily the height of the skull both from the basion and porion we cannot see any significant differences.

There are some insignificant differences in the facial height, but only in the male groups. In the Zolotaya Balka series the facial height of the male skulls is somewhat lower. But the differences of this dimension with regards to the skull height are more clear.

The glabella is relatively weak in males from Zolotaya Balka and is better pronounced in females. In other words in the Nikolaevka-Kazatskoe series the sexual differences in this character are better expressed than in the Zolotaya Balka group. This feature is very conspicuous also when we compare the studied group with other groups.

We could mention also a smaller frontal angle in the group from Nikolaevka-Kazatskoe. The other characters did not show any definite trend — but



I. Nikolaevka-Kazatskoe.

FIG. 25. Polygonal diagrams of some Crimean female groups from the Ist millennium A.D. compared with the female group from Nikolaevka-Kazatskoe.

(Explanations: LZm — zygomaxillar angle, in remaining cases the numbers correspond to Martin's measurements.)

we emphasize once more that if any differences exist they are not significant.

Our study proves that both the burial place in Nikolaevka-Kazatskoe and that in Zolotaya Balka belonged to peoples with the principal characters of the same anthropological type.

We know about the Ukrainian Sarmatians from the skeletal remains found in the barrows of the Zaporozhye and Dniepropetrovsk regions (Konduktorova 1956, 1972, Archaeology of the USSR, 1973).¹⁾

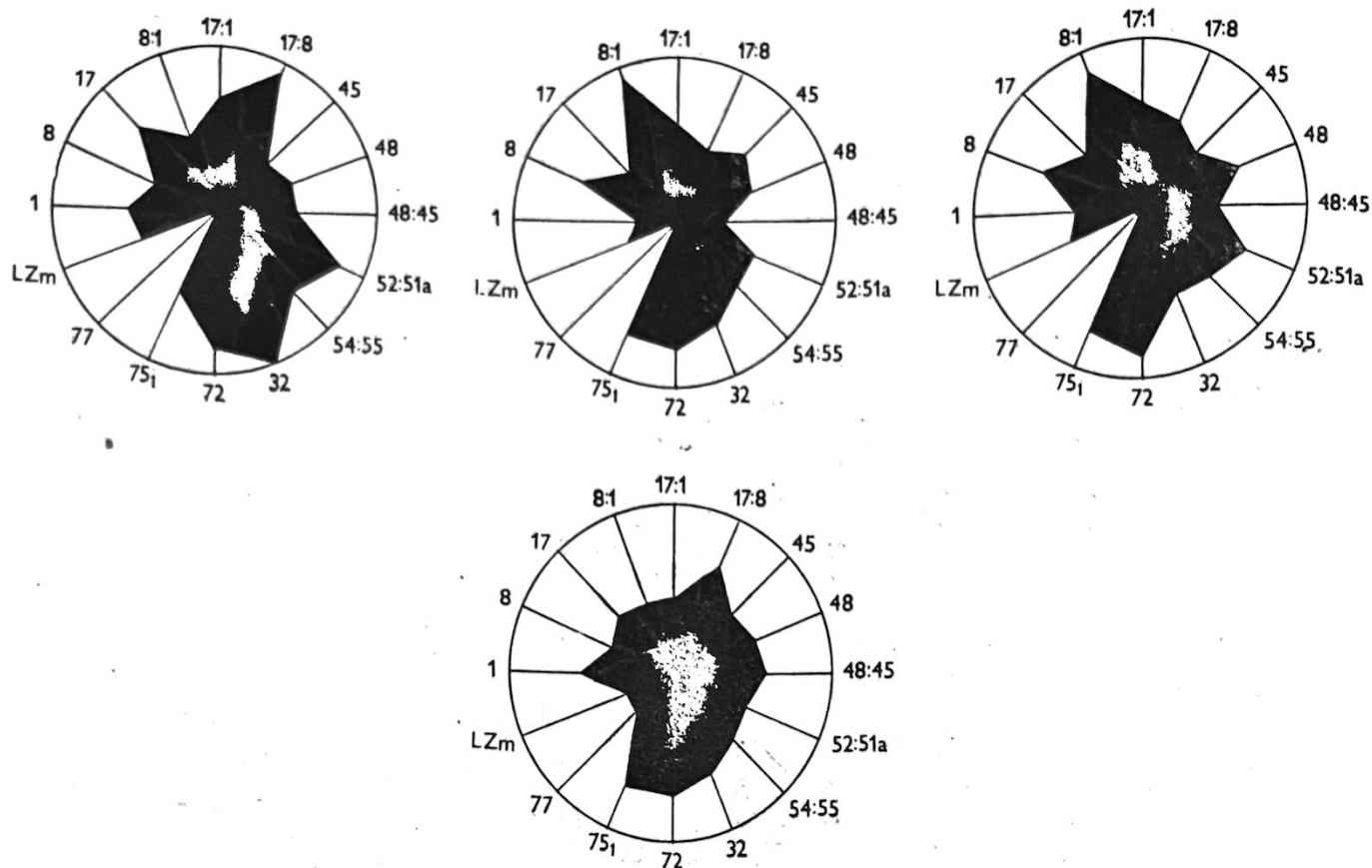
The skulls have mesocranial braincase of medium dimensions, ortho- mesognathic medium-high face, medium-wide and slightly protruding nose, medium-high orbits, high nasal root and slightly stressed horizontal profile. According to the known characteristics the Sarmatians greatly differ from the people from Nikolaevka-Kazatskoe in cranial

and facial breadth and also as regards the relation of these dimensions to other dimensions. There are differences also in some other characters. The Sarmatians have larger cranial volume, less protruding nose and more stressed alveolar prognathism. Their muscular relief is somewhat less developed. The values of the other dimensions are very close (tables 12—13 and figs. 17—18).

The comparison of Sarmatians with Scythians from the Black Sea area has shown a similar picture. Only the nasal angle of the females in the Scythian group is not in keeping with the above trend. The degree of these differences is also very close. The share of Sarmatians in the population of Nikolaevka-Kazatskoe could not have been great, since there were no considerable morphological changes in the descendants of Scythians compared with the Scythians proper.

The studied burial site reveals certain peculiarities in the burial rites — they can be attributed mostly to the Sarmatians. Some of the buried skeletons had their legs crossed and three skulls were

¹⁾ A detailed bibliography on the Ukrainian finds from the Scytho-Sarmatian Period has been published earlier by the authoress (see Konduktorova, 1972).



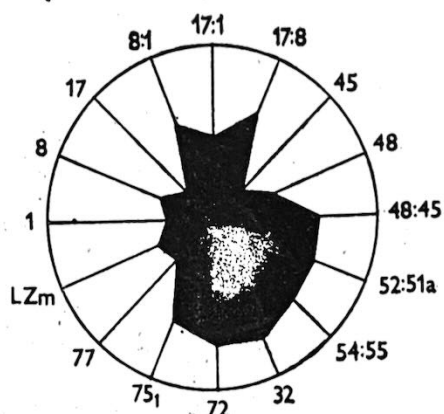
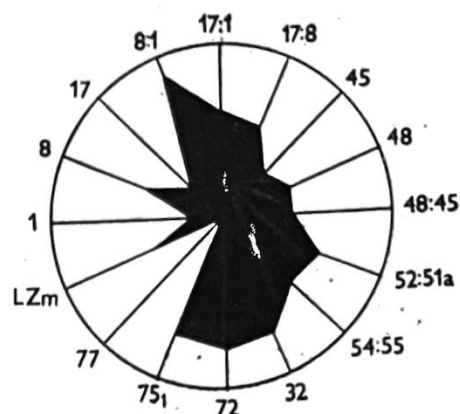
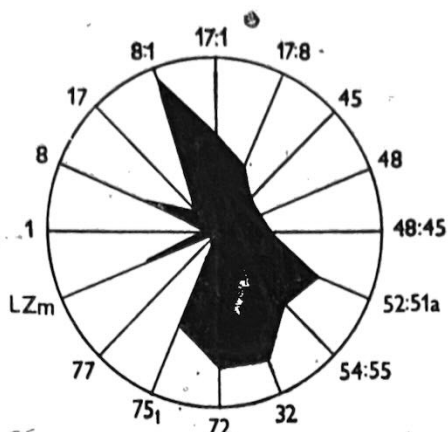
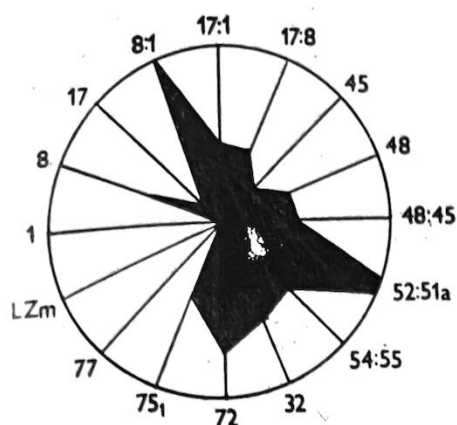
I. Nikolaevka-Kazatskoe.

FIG. 26. Polygonal diagrams of some Crimean male groups from the end of I st — beginning of II nd millennium A.D. compared with the male group Nikolaevka-Kazatskoe.
(Explanations: LZm — zygomaxillar angle, in remaining cases the numbers correspond to Martin's measurements.)

slightly deformed. For the morphological description of these skeletons see the above characteristics of the whole group (Table 9). We have been unable to find any relation between the ritual peculiarities and morphological characters. If the above burials had been brought here by the Sarmatians these burials hardly represent their first generation. The matter is more complicated with in the side excavated graves. The Sarmatians often used this type of grave. However, it was used also by the ancient Greek population of Crimea (Kozub 1974). The males in the side excavated graves of the studied site are similar to Greeks, while the women remind of the Sarmatians. In the females of the later chronological group there is also certain likeness to the Sarmatian complex of morphological characters (table 11). We must therefore conclude that even if there had been a slight Sarmatian influx demonstrated by the finds of the studied site, it happened in women, not in men. This influence is presumably connected with the late period of the existence of this burial ground. The coefficients of

sexual diformism are not in contradiction with the given assumption (table 6). Their values of the greatest breadth and of facial breadth are in the group smaller than the values of the sexual dimorphism of medium category (for the limits of medium category see Alexeyev, Debets 1964). The greater cranial and facial breadth of Sarmatian females could diminish the sexual differences in these dimensions. Naturally these considerations hold good only for the first generation.

There is also other reason for which we cannot strictly refuse some connection of the Scythian population with the Sarmatians. To wit, the variability parameters, similarly as the individual correlation coefficients indicate that there is an increasing variability of certain characters distinguishing the late Scythian population from the Sarmatians. The higher variation coefficient values have main skull diameters and nasal angles. Between the longitudinal and transversal diameters there is only weak relationship, while the relation between the greatest



I. Nikolaevka-Kazatskoe.

FIG. 27. Polygonal diagrams of some Crimean female groups from the end of Ist beginning of IInd millennium A.D. compared with the male group Nikolaevka-Kazatskoe. (Explanations: LZm — zygomaxillar angle, in remaining cases the numbers correspond to Martin's measurements.)

breadth and facial breadth is somewhat stronger. These are however slight value changes.

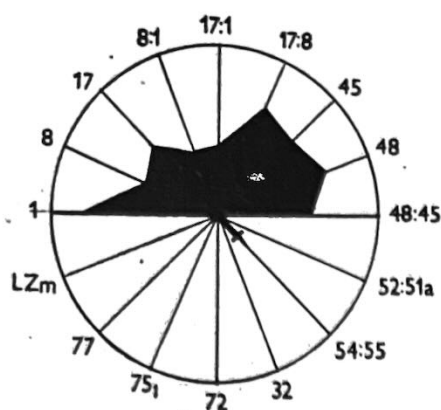
We can conclude that the people from Nikolaevka-Kazatskoe had contacts with the Sarmatian population, but these contacts are only slightly reflected by the morphological character of the skeletal finds. They appear more definitely in the cultural characters. Let us remind our readers that similar conclusions have been made earlier also according to the finds from Zolotaya Balka (Konduktorova 1971, 1972).

The Scythian population that moved away after the Sarmatian incursion can be studied by the anthropologists from two craniological groups unearthed in the former capital city Scythian Neaples. One group comes from stone tombs and from the mausoleum, with the burials of the nobility. The other group comes from the so-called Eastern Cemetery, with the burials of the common people (Konduktorova 1964, 1972). We shall use the data of these groups for analysis — more attention will be paid to the second group since it com-

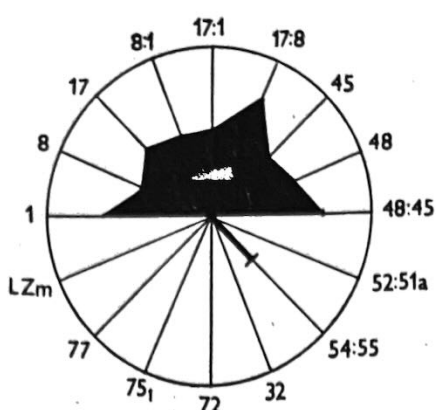
prises a larger number of observations (tables 14 to 15, figs. 19–20).

The comparison of the finds from Nikolaevka-Kazatskoe with the finds from the Eastern Cemetery shows, similarly as in comparison with the finds from Zolotaya Balka, morphological identity of most of the characters. The longitudinal and transversal diameter of the skull, facial breadth and height, orbital and nasal dimensions, depth of the fossa canina, degree of the horizontal profile and total facial angle have almost identical values. In some of the characters we cannot speak of differences, but of slight tendencies towards these differences. For example in the finds from the Eastern Cemetery the cranial volume was somewhat larger, the alveolar prognathism was more pronounced, while the simotic index and the nasal angle were smaller. The sexual dimorphism in the degree of the nasal root development was — similarly as in the Zolotaya Balka group — less conspicuous. There are slight differences in the height of the skull, i.e. also in its relation to other dimensions. In the group

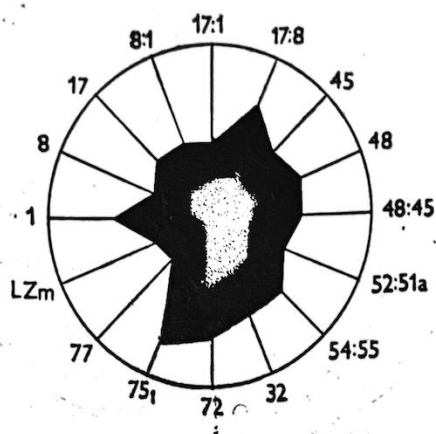
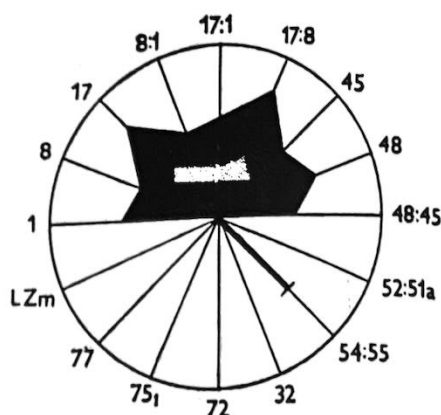
II. Gotland island.



III. Sweden.



IV. Denmark.



I. Nikolaevka-Kazatskoe.

FIG. 28. Polygonal diagrams of some neolithic Scandinavian male groups compared with the male group from Nikolaevka-Kazatskoe.

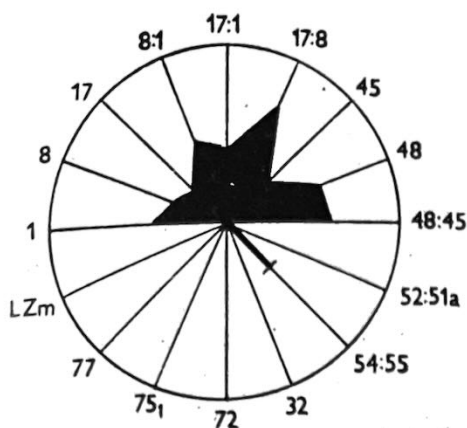
(Explanations: LZm — zygomaxillar angle, in remaining cases the numbers correspond to Martin's measurements.)

of the Eastern Cemetery the skulls are a bit higher. On comparing our finds with the finds of the stone tombs and of the mausoleum in Scythian Neaples no differences were observed as to the cranial height. In this respect there are even opposite trends. Such a situation in the latest finds can be explained by the admixture of Greek element, characterized with relatively low and small skulls (*table 16, fig. 23, Angel 1944*). It is quite difficult to determine the origin of this character in the finds of the Eastern Cemetery. We have very scarce data on the local Crimean population. We have only a small craniological group of Taurids, collected by G. P. Zinevich (1973) according to the materials of G. F. Debets (1948), E. F. Zhironov (1949) and K. F. Sokolova (1960) (see *table 14 and fig. 23*). The skulls of this group are not high. K. F. Sokolova holds that the Taurid population was not homogenous. These differing views are caused by the insufficient number of observations. We cannot exclude that some local Taurid groups had high skulls — but so far we do not

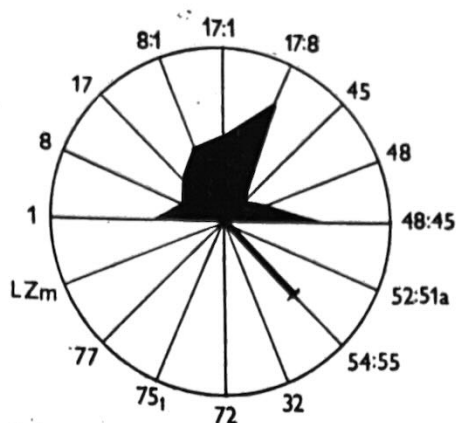
have the materials that could prove it. The above-mentioned peculiarity of the finds of the Eastern Cemetery can be also a mere chance, since it is expressed indistinctly and all the other characters of these finds show their close relationship with the late-Scythian groups on the lower Dnieper.⁴⁾ We cannot help mentioning the fact that in other Crimean group — in the group from the village Zavetnoye — mentioned below, the height of the skull reveals equal tendencies (especially in the group of female skulls). We must not forget that in the Late Bronze Age there were also people with high skulls in Ukraine. Due to lack of skeletal material it has been impossible to find the origin of the various Scythian tribes and thus we do not know enough about their racial affinity. The Scythian populations perhaps differed from each other somewhat in the individual characters and the share of the various

⁴⁾ The authoress uses the term "late-Scythians", similarly as in the previous papers, more on the basis of anthropological than archaeological facts.

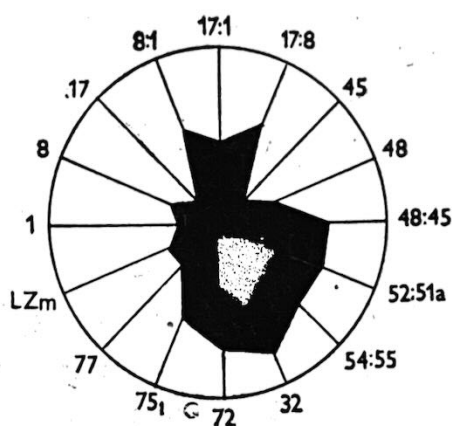
II. Gotland island.



III. Sweden.



IV. Denmark.



I. Nikolaevka-Kazatskoe.

FIG. 29. Polygonal diagrams of some neolithic Scandinavian female groups compared with the female group from Nikolaevka-Kazatskoe.
(Explanations: LZm — zygomaxillar angle, in remaining cases the numbers correspond to Martin's measurements.)

populations in resettling to the Crimea probably also differed. In other words due to lack of material we shall try to trace out the possible ways of research, instead of trying to point out the concrete groups with which the people from Scythian Neaples were in contact. Thus, with the help of comparative analysis we can speak of great morphological similarity of the finds of Nikolaevka-Kazatskoe and of Scythian Neaples.

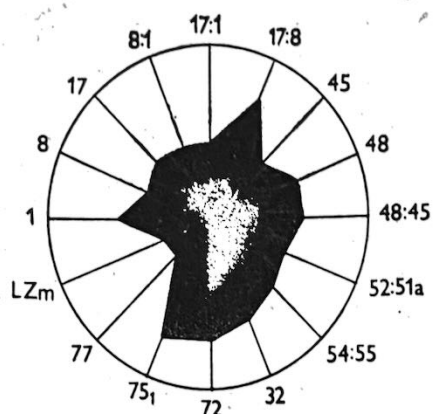
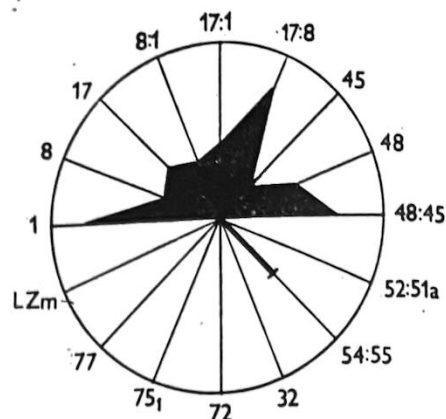
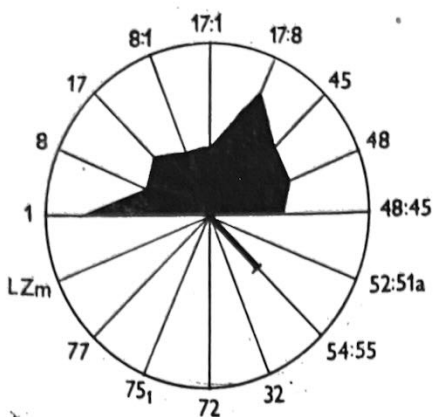
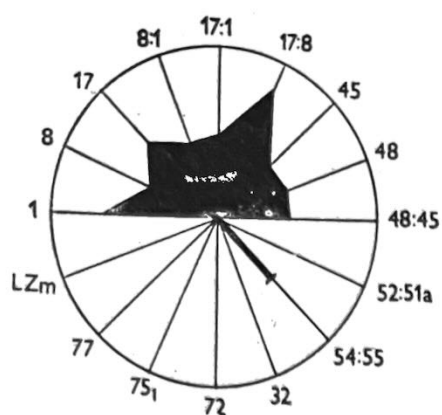
These observations do not contradict the possibility that these groups belonged to the same ethnic group. It must be also mentioned that the group from the Eastern Cemetery shows a slight tendency towards relatively high skulls.

* *

As far as Crimean materials are concerned, besides the finds from Scythian Neaples it is suitable to use for comparative analysis also the finds from the village Zavetnoye (near Bakchisarai) studied by G. P. Zinevich (1971) and by archaeologist N. A. Bogdanova (1963). The chronological

dating of the finds is very close to ours (1st century B.C. — 3rd century A.D. Tables 14, 15; figs. 19—20).

On comparing the groups we see differences in some characters. Some of these differences between our series and the series from the Eastern Cemetery (Scythian Neaples) appear more distinctly when we consider the finds from the village Zavetnoye, namely the female skulls. The skulls of this group are somewhat bigger, they have stressed alveolar prognathism, the nasal bones are less protruding, i.e. the simotic index is of lower value. The height of female skulls is higher. Naturally the values of its relation to the longitudinal and transversal diameters are higher, while the values of its relation to the facial height are lower. In men this situation was not very clear, since the height measured from the porion is great, while that measured from the basion is not too great. If we consider the height of the skull only from the porion, then all we have said about the female group holds also good for the group of males.



I. Nikolaevka-Kazatskoe.

FIG. 30. Polygonal diagrams of some Scandinavian Iron Age male groups compared with the male group from Nikolaevka-Kazatskoe.

(Explanations: LZm — zygoma-xillary angle, in remaining cases the numbers correspond to Martin's measurements.)

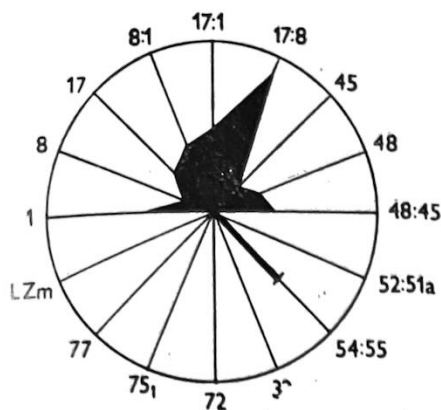
This general difference between our series and the series from the Eastern Cemetery and from the village Zavetnoye gives us certain basis for discussing the contacts of the Scythian population when settling the Crimea with the other Crimean populations. We must also add that the Zavetnoye finds bear stronger vestiges of these contacts. The question is, however, with what ethnic groups were the late Scyths in contact?

The Crimea was inhabited in that period, as generally known, by the descendants of Taurids and Greeks. The alveolar prognathism and low simothic value of the Zavetnoye finds may reveal certain southern contacts. According to J. Angel (Angel 1944) the Greeks had well-formed alveolar prognathism (we have no data concerning the simothic index). But too high skulls are not characteristic of the Greeks. High skulls appear only in the group of female skeletons in Zavetnoye. As we have mentioned, we have little information on the inhabitants of the Crimea. The morphological characteristic of the Taurids is not clear. We lack

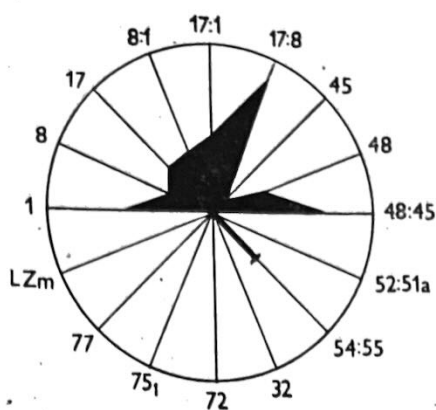
sufficient material for answering the question concerning outside influence on the inhabitants of Zavetnoye — anyhow, we cannot exclude the Taurids nor the Greeks. The Crimea of that period was inhabited besides Taurids and Greeks also by scattered Sarmatian groups — but Sarmatian influence upon the Zavetnoye population is practically out of question. Contacts with Sarmatians would be reflected by the main cranial index — but this is not the case in our material. It is interesting that in the later Crimean populations, namely in the early and late Medieval finds, there are strong morphological analogies with Sarmatians (tables 17–18, fig. 24 to 27).

The comparison of the Nikolaevka-Kazatskoe finds with those from the village Zavetnoye has shown less similarity than the comparison of our series with the finds from Scythian Neaples. The same tendencies in the differences of characters (even when not too strong) between the Nikolaevka-Kazatskoe finds and above-mentioned finds can be explained as indirect proof of contacts between late

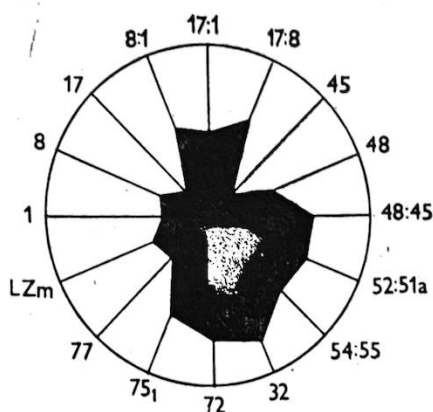
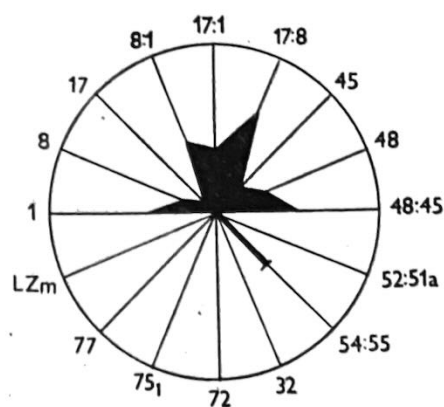
II. Sweden.



III. Denmark.



IV. Norway.



I. Nikolaevka-Kazatskoe.

FIG. 31. Polygonal diagrams of some Scandinavian Iron Age female groups compared with the female group from Nikolaevka-Kazatskoe.
(Explanations: LZm — zygomaxillar angle, in remaining cases the numbers correspond to Martin's measurements.)

Scythians and the neighbouring Crimean populations. We cannot exclude from these contacts either the Taurids or the Greeks. We can conclude that the comparative analysis has not provided us with further grounds concerning the presumed southern impact on the morphological character of the people from Nikolaevka-Kazatskoe.

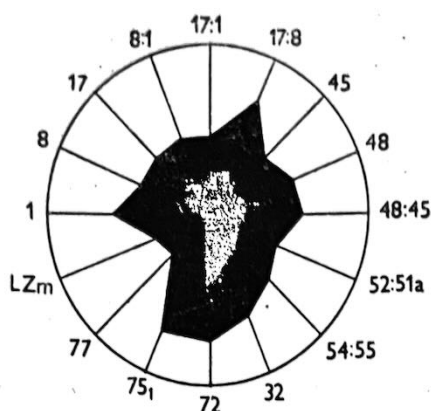
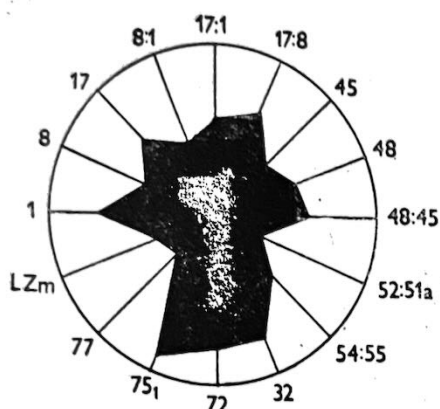
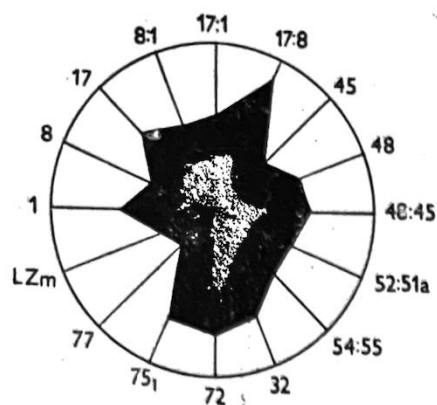
The skeletal remains from the previous periods from the steppe adjoining the Black Sea and also from the forest-steppe belt of Ukraine have also been studied. They are dated to the Scythian period, namely to the 7th — 3rd centuries B.C. They consist of two groups — one comprising the materials of the lower Dnieper Valley and the other of the middle Dnieper region (Konduktorova 1972). The second group was numerically little representative. Naturally we are focusing our attention on the materials coming from the lower Dnieper Valley (tables 12—13, figs. 21—22).

The Scythians from the steppes around the Black Sea show striking similarity with the finds from the Nikolaevka-Kazatskoe burial place, na-

mely in the values of cranial diameters and their relations. There is hardly a single character showing any differences of importance. But the group of Scythian males had wider faces. In relation to the greatest cranial breadth this dimension shows certain shift towards higher values in both sex groups. The group of Scythians had also lower orbits and less vaulted frontal bone. We mention these differences reminding you that they correspond to the chronologically bound changes. Their very slight degree indicates that the process of gracilization appeared only in a slight form in that period.

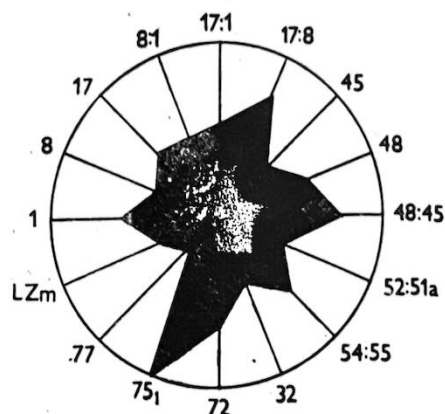
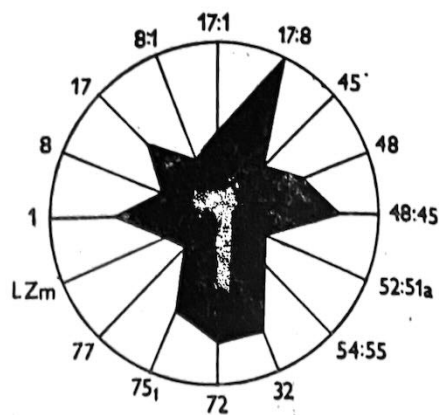
On concluding the comparison of Scythians from the steppes around the Black Sea with our group we could also mention that there was a strong sexual dimorphism in the glabella development in the skulls from Nikolaevka-Kazatskoe. It appears that in the Scythian group the glabella was stronger in females than in males. On the contrary, the males of the middle Dnieper had more developed glabella than the group from Nikolaevka-Kazatskoe. But we have no generally acceptable explanation for this

II. Zhuravka.



I. Nikolaevka-Kazatskoe.

III. Chernyakhov.



IV. Gavrilovka.

V. North Black Sea region.

FIG. 32. Polygonal diagrams of some Ukrainian Chernyakhov culture male groups compared with the male group from Nikolaevka-Kazatskoe.
(Explanations: LZm — zygomatic angle, in remaining cases the numbers correspond to Martin's measurements.)

situation. We must add, however, that this is a descriptive character and its evaluation can be connected with more errors than in the use of quantitative methods.

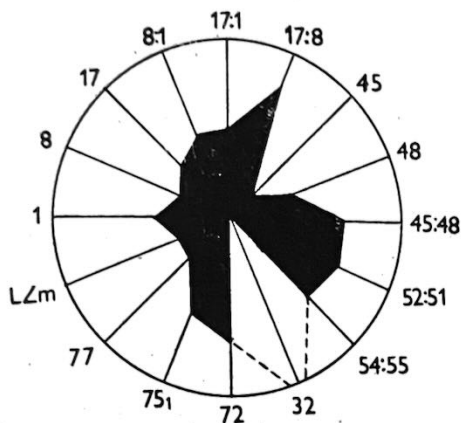
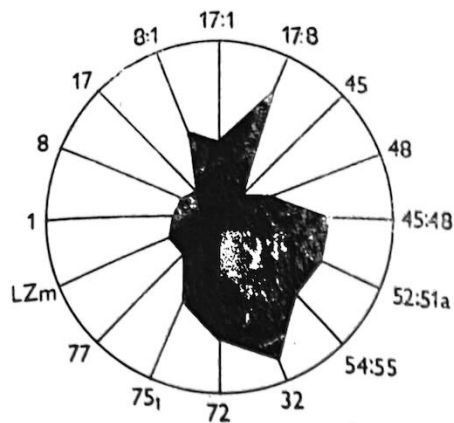
We can thus speak of close morphological relationship between the Scythian group of the lower Dnieper and between the series from Nikolaevka-Kazatskoe. We can presume that this similarity reflects the relationship between the people buried at the Nikolaevka-Kazatskoe and between their ancestors. The archaeological data are in no way in contradiction with the views on genetic continuity between these two groups.

There is no need to compare in detail our series with the series of the middle Dnieper — there were no definite differences between them and between the previous Scythian series, and what is most important, we must take into account also the limited number of finds on the middle Dnieper (Konduktorova 1972). The connection of dolichocephaly with relatively high skulls, conspicuous in the group of males on the middle Dnieper and

absent in the studied group of skulls, is quite interesting, especially when considered in connection with the characters of the Chernyakhov culture population. But we must bear in mind the limited number of finds from the middle Dnieper region.

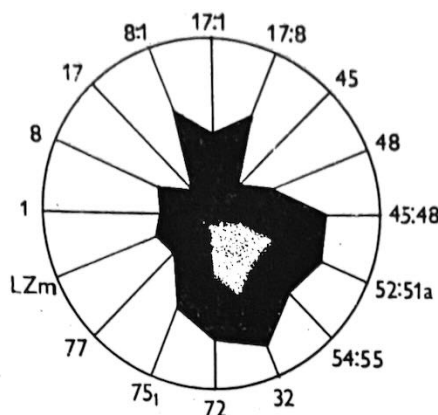
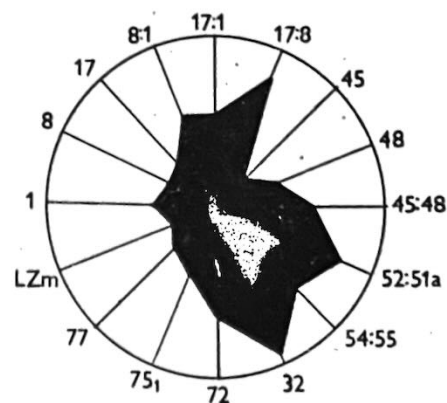
On determining the characteristic of Nikolaevka-Kazatskoe we must not neglect the problems connected with the Goths. As we know from the history the Goths — a Germanic tribe — moved from the area of the Baltic Sea and Lower Vistula River to the south and in the 3rd century A.D. they reached the northern shores of the Black Sea and Crimea. They might have reached also the area of the Nikolaevka-Kazatskoe burial site. Our attention to the Goths is due to the circumstance that the upper time-limit of the use of the burial place coincides with the time of the Goths' possible penetration to the area. Thus we cannot exclude the possibility that the latest burials of the site belong to Goths. The next logical step is therefore to check this idea with the anthropological materials. We must deal with this problem also because some Ger-

II. Zhuravka.

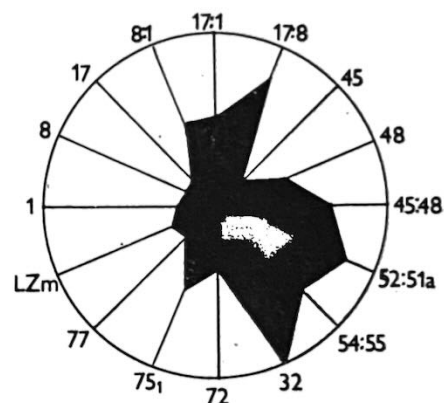


IV. Gavrilovka.

III. Chernyakhov.



I. Nikolaevka-Kazatskoe.



V. North Black Sea region.

FIG. 33. Polygonal diagrams of some Ukrainian Chernyakhov culture female groups compared with the female group from Nikolaevka-Kazatskoe.

(Explanations: LZm — zygomatic angle, in remaining cases the numbers correspond to Martin's measurements.)

man specialists, e.g. the archaeologist M. Ebert (Ebert 1913) and anthropologist A. Schlitz (Schlitz 1913) analysing the finds from 1912 held possible that the whole burial place was a Germanic one.

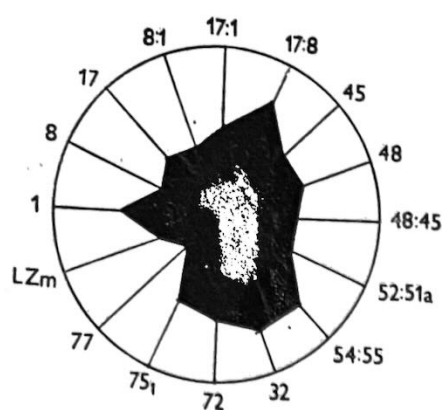
The views of A. Schlitz and M. Ebert that the Nikolaevka-Kazatskoe burials contain some Germanic or Gothic elements have been accepted in the archaeological circles abroad (Antoniewicz 1928) and also in the anthropological literature. These views have been accepted by the anthropologists J. Czekanowski (Czekanowski 1927, 1934, 1948) and his pupil K. Stojanowski (Stojanowski 1930). Both authors arrived to more or less similar conclusions on the presence of the "Nordic" type in the Nikolaevka-Kazatskoe population. The differences in their conclusions are limited only to the percentage of the type found with the help of J. Czekanowski's method (Czekanowski's percentage is higher) and also in differences in the percentage of other racial types (Czekanowski was inclined to see more southern "Greek"

elements, while in Stojanowski's work prevails the local element). In the later works there is considerable scepticism as to the presence of a sizable Gothic component at the Nikolaevka-Kazatskoe burial place. So e.g. J. Kostrzewski (Kostrzewski 1950) holds that material from Nikolaevka is too scarce to enable us to draw serious conclusions. W. Kočka (Kočka 1958) also criticizes the views on Gothic influence in southern Poland and Ukraine in the Roman period. His works contains also metric values of Medieval finds from Poland, Lithuania and Germany.¹⁾ He makes use also of the group from the Nikolaevka-Kazatskoe burial place. On the basis of all these data W. Kočka concludes that the Germanic groups differ from the Nikolaevka group.

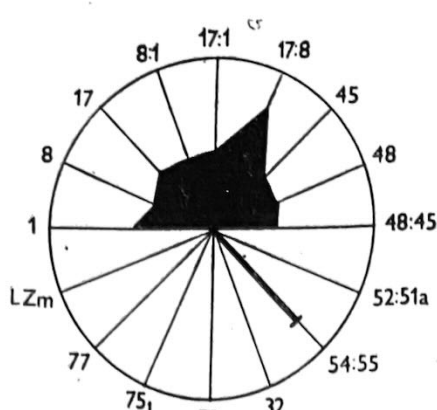
We must admit that among the European

¹⁾ It is a pity W. Kočka does not indicate the mean arithmetic values in individual characters, but the percentage share of these characters in the individual racial types.

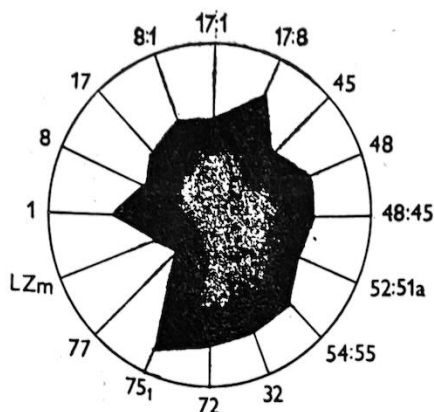
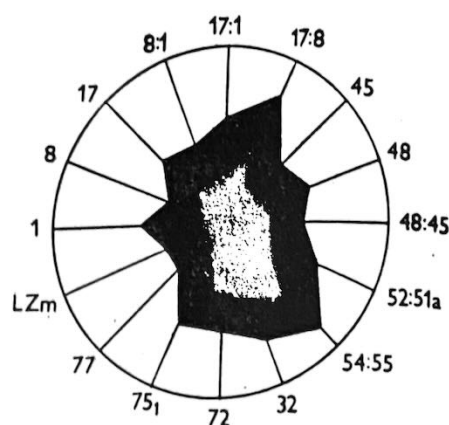
II. Pereyaslav Polyans.



III. Kiev Polyans.



IV. Chernigov Polyans.



I. Nikolaevka-Kazatskoe.

FIG. 34. Polygonal diagrams of the male groups of the rural populations of Polyans, XI—XIII cent. A.D., compared with the male group from Nikolaevka-Kazatskoe.
(Explanations: LZm — zygomaxillar angle, in remaining cases the numbers correspond to Martin's measurements.)

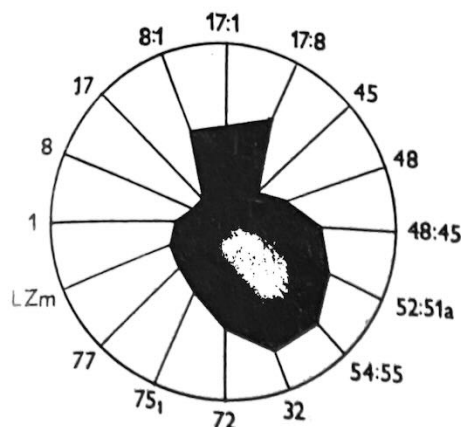
groups there are no clear morphological differences. A. P. Bogdanov (Bogdanov 1892) also pointed out that the lack of sufficient criteria does not allow the specification of types. Since then the situation has changed very little. The scientists many times faced the problem of craniological differences between the Nordic and Mediterranean races (Debets 1934, Schwidetzky 1935). This problem, however, has not been resolved satisfactorily. The difficulties are greater in cases when we have to deal with small groups similar to that used by A. Schlitz for his conclusions. In the 1912 excavations 12 skulls were unearthed. Three of them belonged to men, eight to women and one to a child. M. I. Vyazmitina (1970) strongly doubts the correctness of the dating of four of the skulls. A. Schlitz tries to divide this small group into three types. Two types represent in his view the eastern and the western branches of the Nordic race. The third type is in his opinion connected with Greek colonies. It is very difficult to consider the feasibility of these types. The second and third type com-

prise only two female skulls each. In the second type it is necessary to check more thoroughly the sex of skull I_K .

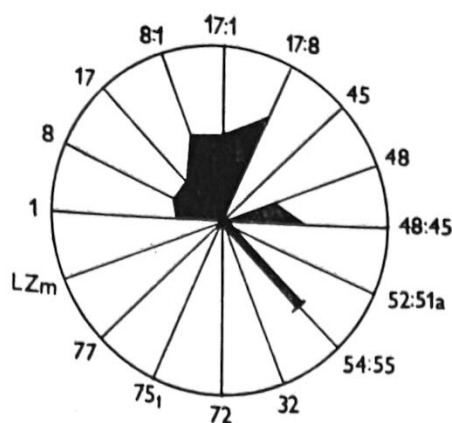
BUT IT IS NOT ALL

The basic shortcoming of the study of A. Schlitz lies in his conclusions. They may be bold, but they are not backed by sufficient material and he also committed several measurement errors. His metric values are therefore of very doubtful value. In one skull (I_K) facial height is almost identical with the nasal length (64 mm). In the second skull (I_N) it is even smaller: the nasal length is 70 mm and the face is 69 mm high. These errors cannot be misprints — A. Schlitz used these values for his indexes. The nasal index in the second skull (I_N) is e.g. 34, 41. The facial angle value of 97° in male skull O_a is also embarrassing. But these craniological materials were later taken out of Russia and have been lost; we cannot therefore repeat the measure-

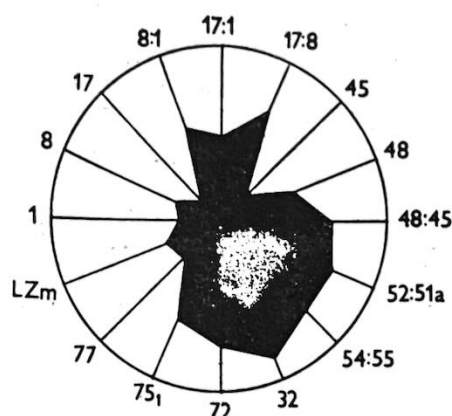
II. Pereyaslav Polyans.



III. Kiev Polyans.



IV. Chernigov Polyans.



I. Nikolaevka-Kazatskoe.

FIG. 35. Polygonal diagrams of the female groups of the rural population of Polyans XI—XIII cent. A.D., compared with the female group from Nikolaevka-Kazatskoe.
(Explanations: LZm — zygomaxillar angle, in remaining cases the numbers correspond to Martin's measurements.)

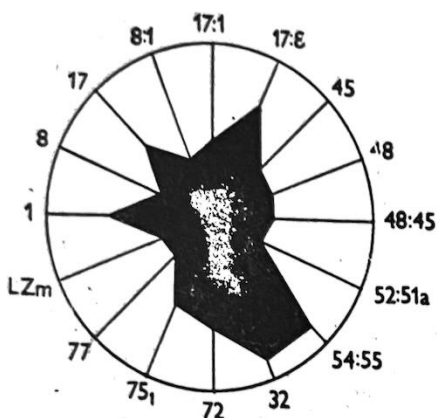
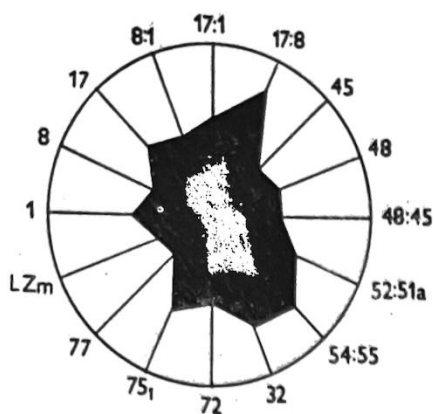
ments. We do not use Schlitz's metrical material because of these inaccuracies and errors. In the recent years we have unearthed the skeletal remains of some 209 individuals. The finds include a craniological group of 134 skulls of adult individuals. Now we are able to assess A. Schlitz's conclusions on the basis of reasonably extensive materials. First we shall try to formulate the morphological type of the Goths.

Unfortunately no Gothic skulls have been discovered yet, partly due to the custom of cremation burials, and also due to insufficient archaeological research of the respective areas. We can assume that the Goths in their Nordic habitat (south-east Scandinavia, the island of Gotland) differed very little from other Germanic peoples. But the data on the physical type of Germanic peoples in the first centuries A.D. are also missing. The existing materials belong in the best case to the late 1st millennium A.D. The anthropologists studied one Neolithic group from the island of Gotland (Steinberger 1943). We can assume that the Goths

were descendants of the Neolithic population of this island carrying their name — but we cannot take it for granted (tables 12, 20, figs. 28, 31).

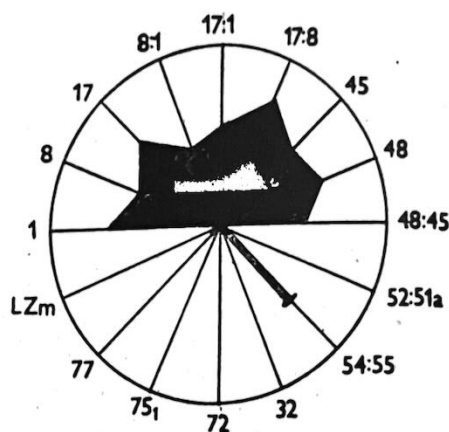
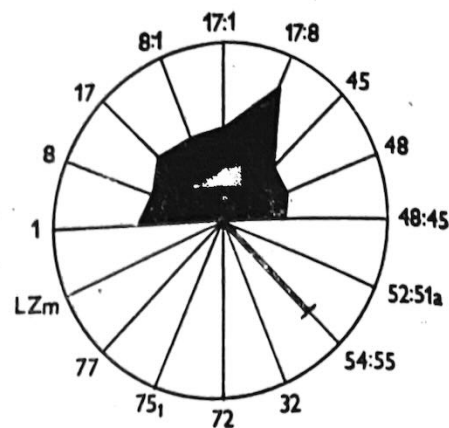
The Neolithic group from the island of Gotland has a massive, robust cranial construction. In the metrical characters it is very conspicuous in the cranial length and in facial breadth. In the Medieval Norwegians, Danes and Swedes (Schreiner 1946, Steffensen 1953) this character is less striking. The Goths in their Nordic homeland had most probably transitory physical features between the Neolithic and Medieval populations. Their skull-dimensions must have been larger, compared with the Medieval Scandinavian groups, and smaller than the Neolithic series from the island of Gotland. If the burial place at Nikolaevka-Kazatskoe is a Gothic one, then its craniological group must occupy a transitory position — but it is not the case. The cranial length of the Neolithic and Iron Age skulls from Scandinavia overpasses that of the Nikolaevka-Kazatskoe group. The upper facial breadth of the Scandinavian series as a whole does

II. Chernigov Polyans.



IV. Severyans.

III. Kiev Polyans.



V. Drevlyans.

I. Nikolaevka-Kazatskoe.

FIG. 36. Polygonal diagrams of the male groups of the town dwelling Polyans and of the rural population of Severyans and Drevlyans, dated XI—XIII cent. A.D., compared with the male group from Nikolaevka-Kazatskoe. (Explanations: LZm — zygomaaxillar angle, in remaining cases the numbers correspond to Martin's measurements.)

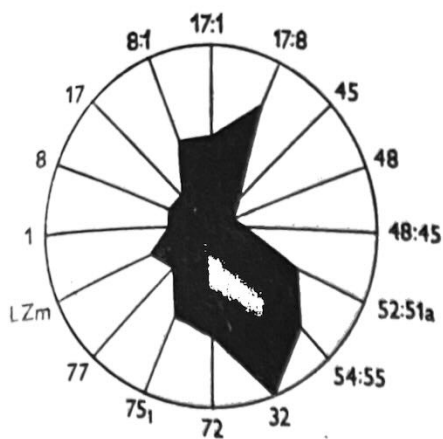
not give us a clear picture. Certain differences appear on comparing the value of the sum of the cranial length, breadth and height, i.e. of the principal cranial diameters. These values are: in Nikolaevka-Kazatskoe, men 459.4 mm (women 440.2 mm); the island of Gotland (Neolithic Age), men 473.4 mm (women 449.4 mm); Sweden, Denmark and Norway (Iron Age) 465.8 mm, 461.9 mm, 465.0 mm (442.8 mm, 448.6 mm, 440.3 mm). In the group of men of the agricultural Poljans of Pereyaslav the sum is 459.6 mm. In other words the population buried in the Nikolaevka-Kazatskoe burial place differs from the Goths in certain characters even more than the Medieval Scandinavian populations. The influx of the Goths, according to the historical sources, especially as far as men are concerned, can be expected in an earlier period and we cannot exclude the presence of their first generation at the burial place. If they are really present then the coefficients of sexual dimorphism following from the principal skull diameters must be higher, since we can presume that the Goths had

big braincases. It appears that the coefficients of sexual dimorphism in the mean cranial length and height of our group belong to the middle category and the cranial breadth considerably overpasses the lower limit of this mean category.

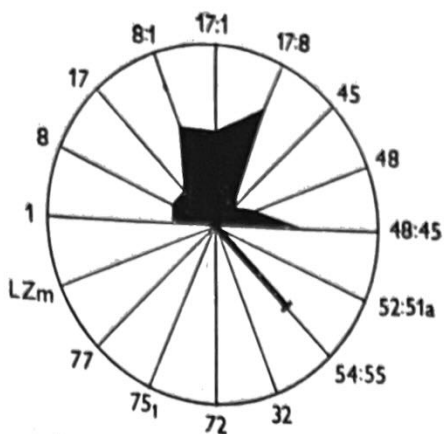
We shall try to reconstruct the looks of the Goths on the basis of the known Scandinavian materials. But it is very difficult to say to what extent had the Goths arriving at the north-western coast of the Black Sea and the Crimea preserved their original appearance. It is quite possible that on their way to the south they mixed with other Germanic populations. The historical sources do not give us a unanimous answer. We are forced to a certain extent to turn our attention to complete Medieval Germanic groups (Alexeyeva 1973, Velikanova 1965, 1970). We are forced to use such chronologically remote materials due to the lack of chronologically closer ones.

T. I. Alexeyeva has suggested as differential character for distinguishing Scandinavian and other Germanic populations the relation of the cranial

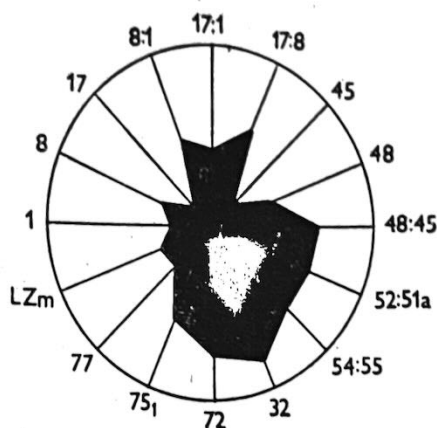
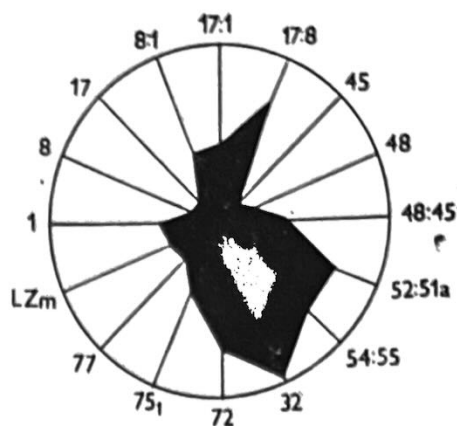
II. Chernigov Polyans.



III. Kiev Polyans.



IV. Severyans.



I. Nikolaevka-Kazatskoe.

FIG. 37. Polygonal diagrams of the female groups of the town dwelling Polyans and of the rural population of Severyans, dated XI—XIII cent. A.D., compared with the female group from Nikolaevka-Kazatskoe.
(Explanations: LZm — zygomaxillar angle, in remaining cases the numbers correspond to Martin's measurements.)

height with half of the sum of the cranial length and breadth, facial height and orbital height with cranial height, nasal breadth and facial breadth. The first three relations comprise characters which are only slightly physiologically correlated. The correlation among the last characters tends to be against physiological connection seen in the Slavonic groups. These relations helped to discover the differences between Slavonic and Germanic peoples. Their application for the solution of our task, however, is not efficient enough and it hardly could have been expected to be. In our case it did not give us the exact picture. The values of the three relations were in the variability field of the Slavonic groups. The relations between the facial and cranial heights have shown a higher deviation towards the Germanic group.

The absence of the above-mentioned differences in the studied group of characters between the Nikolaevka-Kazatskoe population on one side, and Germanic populations on the other raises a question: whether and to what extent does this burial place

reflect Germanic influence. On answering this question we must turn to the results of the analysis of our series and mainly to the results of their comparison with earlier series obtained from the same territory. The Nikolaevka-Kazatskoe group, as we have mentioned is in its morphological character very close to the Scythian finds from the steppes adjoining the Black Sea. Such morphological relationship can rightly be considered as a consequence of genetical relationship. We can expect Gothic influence in our group, but not in the early Scythian groups — since the appearance of the Goths north of the Black Sea is dated into the 3rd century A.D. We could give a positive reply only in case the differences between the Germanic peoples and Scythians were more determined than the differences between Germanic peoples and the group we were studying. It appears, however, that the values of the relationship of characters in Scythians are identical with the values in the Nikolaevka-Kazatskoe series. This means that we must explain the high values of the relation between

facial and cranial height of the Nikolaevka-Kazatskoe skulls as a heritage from their predecessors.

Here we must mention also the morphological characteristics of the skulls, which are of the final period of existence of the burial place (*Table 11*). It appears that the late chronological group does not differ morphologically from the remaining finds. They show a slight tendency towards low orbits and low skulls. If the given group contained Germanic admixture, we could expect just the opposite trend in the first character, i.e. high orbits. The Germanic populations have relatively low skulls, in other words their skull height is not great compared with other dimensions. But the absolute value of this dimension is not below that of our series. In the late chronological group it is smaller than in the earlier group — not only in its relative values, but also in the absolute ones. The males of the late group show also a tendency to a more clear-cut dolichocrany, larger facial height and relatively narrower nose. This tendency is combined with a relatively small cranial circumference. Germanic skulls are dolichocranous, with narrow noses and their face is not low and all these features are combined with a large braincase. If there were Gothic admixture we could rightly expect greater cranial cir-

cumference in the late chronological group than in the earlier one. In the given case it is the other way round. The sum of the diameters of the brain case in the males of the late group is smaller than in the other burials. Neither is the cranial length characterized with high values. In this way we cannot explain the higher variation coefficient value and the mean quadratic deviation in the Nikolaevka-Kazatskoe group with the appearance, especially in the later period of the burial place, of a population with larger brain case dimensions and partially with larger cranial length. The same applies for the higher correlation coefficient value between cranial length and breadth on males of our series. A higher value of this coefficient does not necessarily reflect late contacts. The chronological group of female skulls gives even less reason for speculations of this kind, since they show a tendency towards wide face.

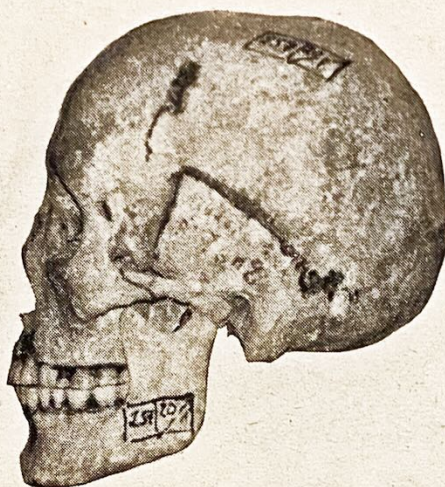
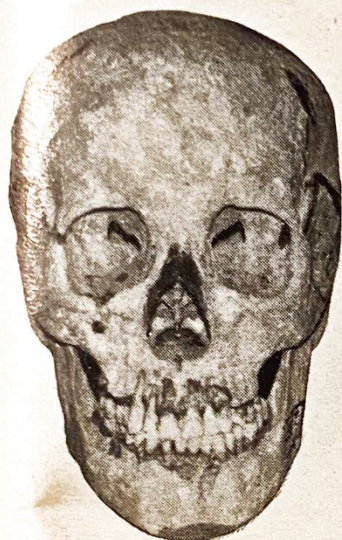
All the above materials indicate that the newcomers from the north — if they really arrived in this region, did not cause any changes of the morphological character of the late Scythian population. It is quite possible that the Nordic component is simply missing.

(Continued in the next issue)

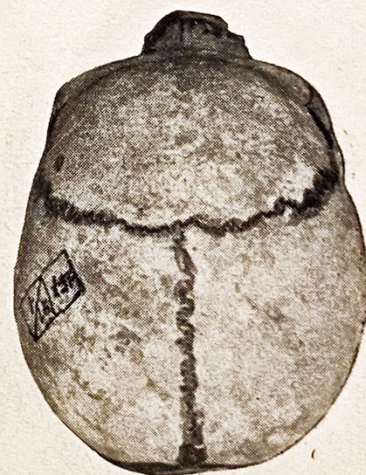
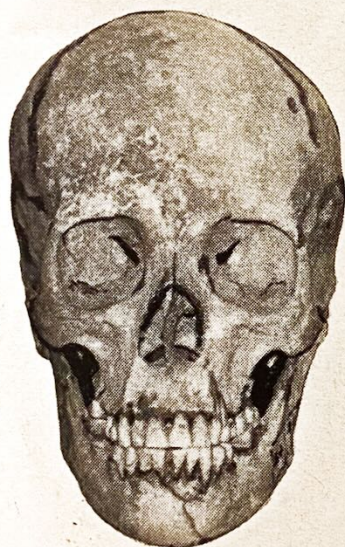
Dr. Tamara S. Konduktorova
Anthropological Institute
Moscow State University
Moscow, USSR
Prospekt K. Marksa 18



43



44



45

FIG. 43 a, b, c.

Female skull 16–19 years.

Grave 75, burial 4.

Inventory Nr. 257/18.

FIG. 44 a, b, c.

Female skull 40–50 years.

Grave 76, burial 2.

Inventory Nr. 257/20.

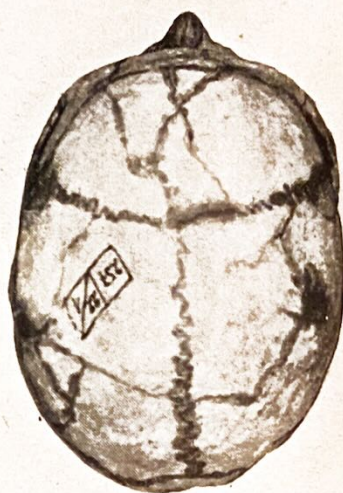
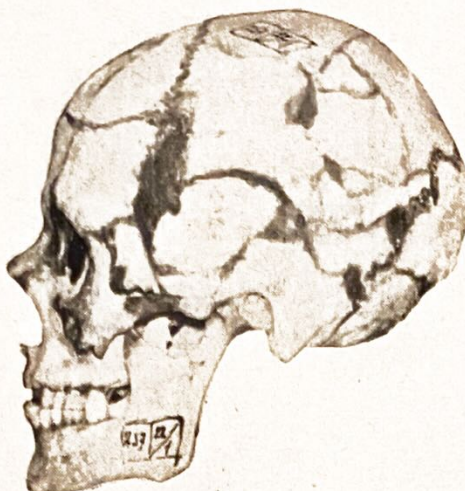
FIG. 45 a, b, c.

Female skull 35–45 years.

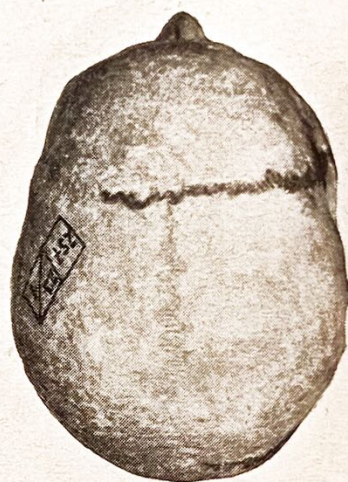
Grave 77, burial 1.

Inventory Nr. 257/21.

46



47



48

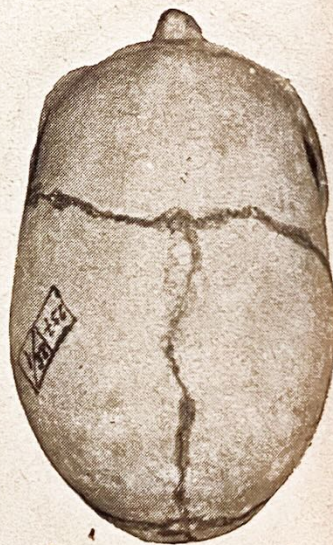
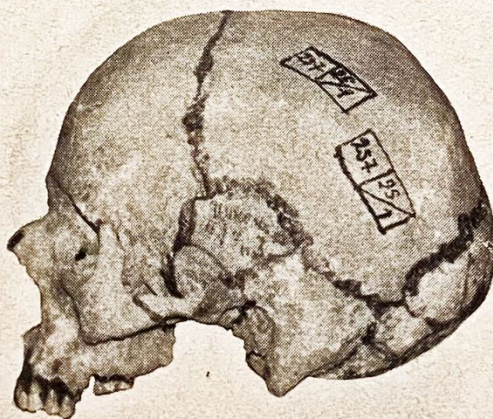
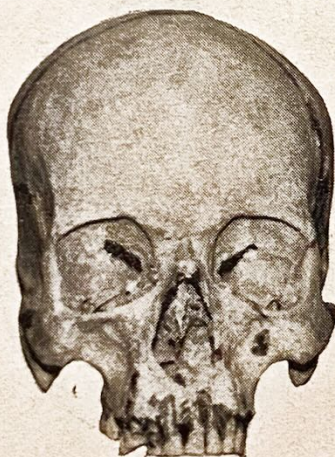


FIG. 46 a, b, c.

Male skull 40–50 years.
Grave 77, burial 2.
Inventory Nr. 257/22.

FIG. 47 a, b, c.

Male skull 25–35 years.
Grave 78, burial 1.
Inventory Nr. 257/23.

FIG. 48 a, b, c.

Male skull 40–50 years.
Grave 79, burial 3.
Inventory Nr. 257/25.

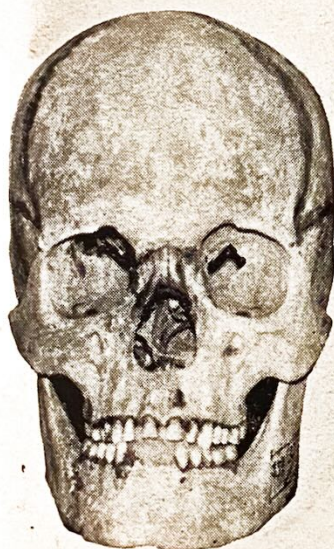
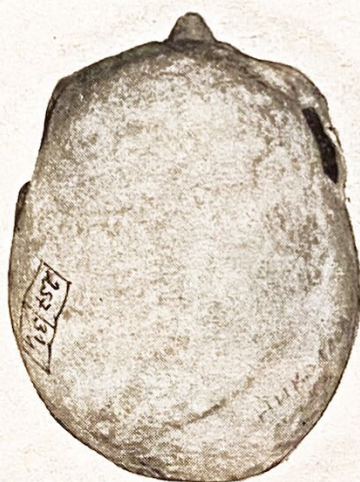


FIG. 49 a, b, c.

Female skull 25–35 years.
Grave 80, burial 1.
Inventory Nr. 257/26.

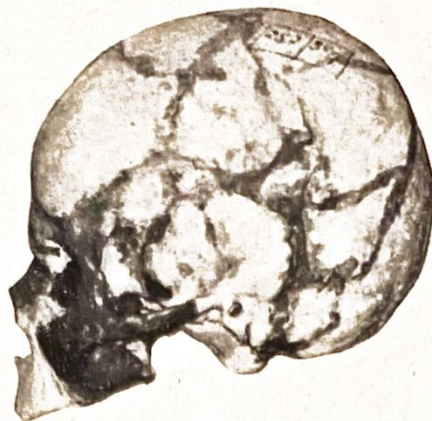
FIG. 50 a, b, c.

Female skull 45–55 years.
Grave 83, burial 2.
Inventory Nr. 257/31.

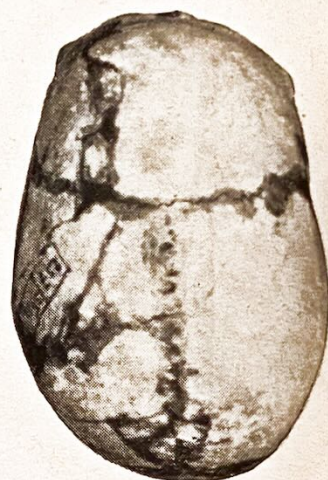
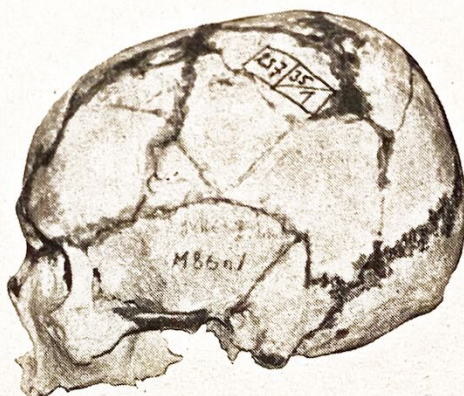
FIG. 51 a, b, c.

Male skull 30–40 years.
Grave 84, burial 1.
Inventory Nr. 257/32.

52



53



54

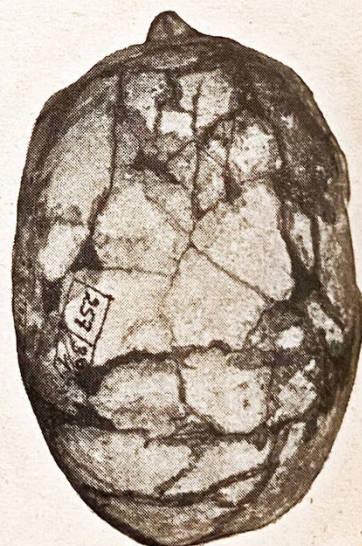
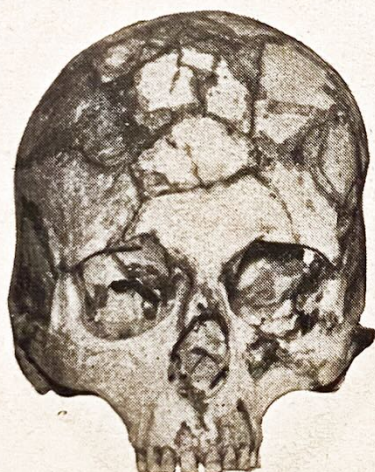


FIG. 52 a, b, c.

Female skull more than 60 years.
Grave 85, burial 2.
Inventory Nr. 257/34.

FIG. 53 a, b, c.

Female skull 40–50 years.
Grave 86, burial 1.
Inventory Nr. 257/35.

FIG. 54 a, b, c.

Male skull more than 60 years.
Grave 86, burial 2.
Inventory Nr. 257/36.

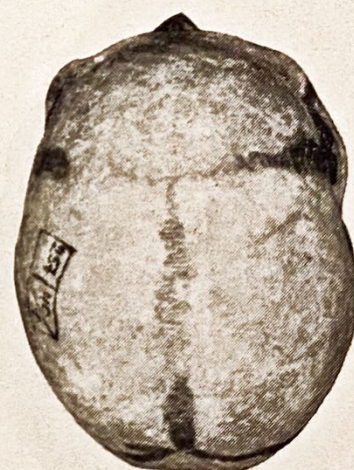
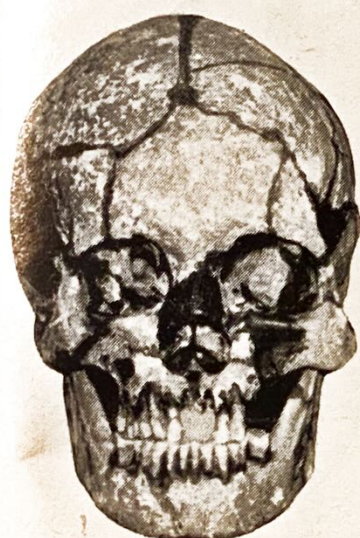
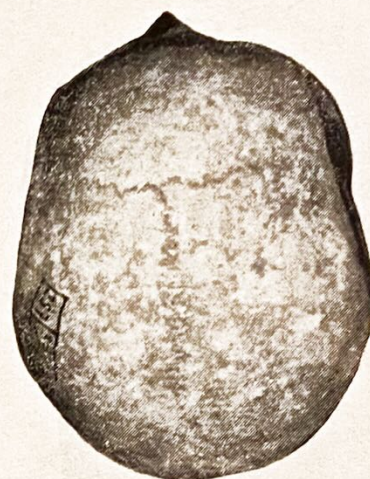


FIG. 55 a, b, c.

Male skull 40–50 years.
Grave 86, burial 4.
Inventory Nr. 257/38.

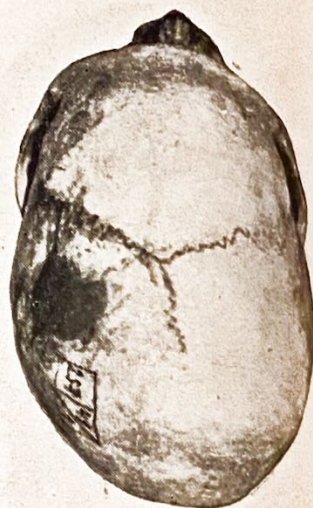
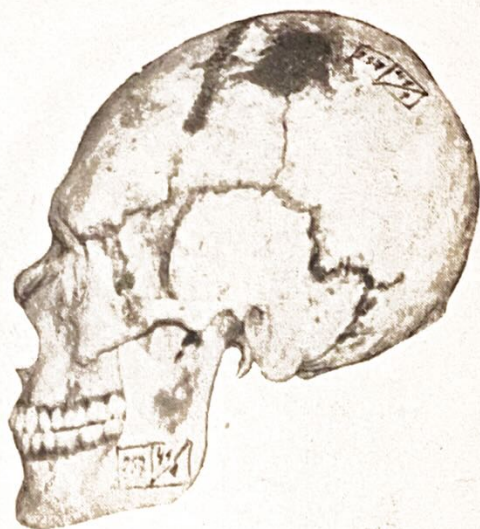
FIG. 56 a, b, c.

Female skull more than 60 years.
Grave 88, burial 1.
Inventory Nr. 257/39.

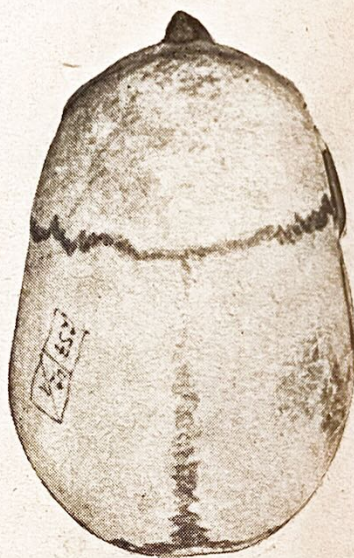
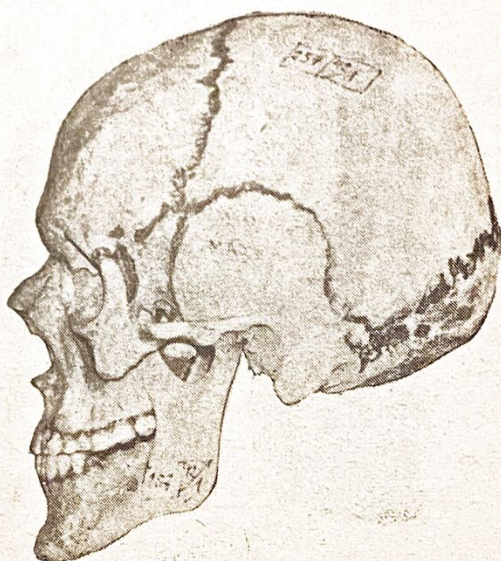
FIG. 57 a, b, c.

Male skull 16–18 years.
Grave 89, burial 1.
Inventory Nr. 257/40.

58



59



60



FIG. 58 a, b, c.

Male skull 20–25 years.

Grave 89, burial 2.

Inventory Nr. 257/41.

FIG. 59 a, b, c.

Male skull 30–40 years.

Grave 89, burial 3.

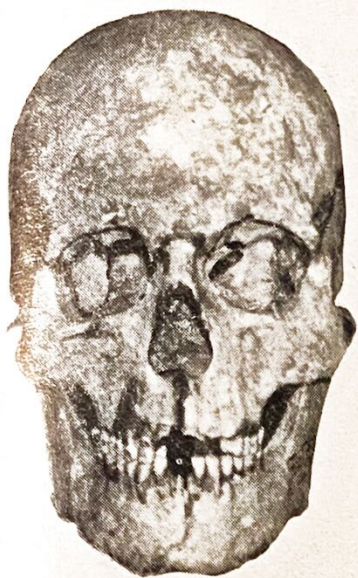
Inventory Nr. 257/42.

FIG. 60 a, b, c.

Female skull 50–60 years.

Grave 90, burial 1.

Inventory Nr. 257/43.



1



62



63

FIG. 61 a, b, c.

Male skull 35—45 years.
Grave 90, burial 2.
Inventory Nr. 257/44.

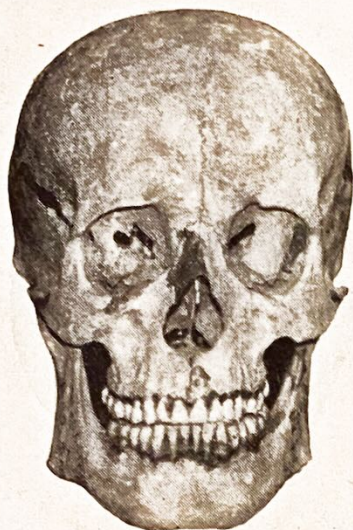
FIG. 62 a, b, c.

Female skull 25—35 years.
Grave 90, burial 3.
Inventory Nr. 257/45.

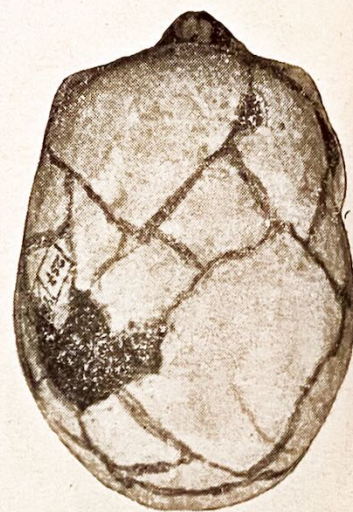
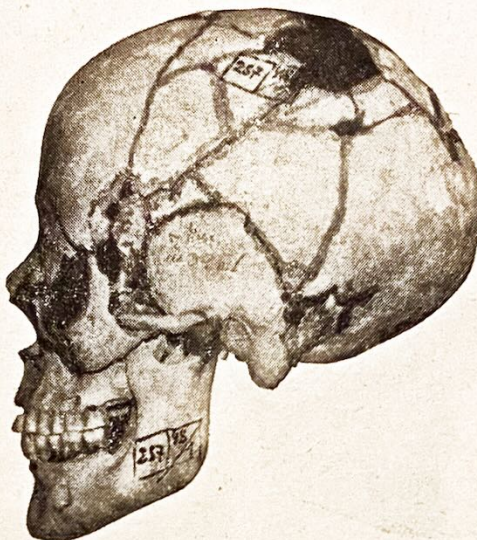
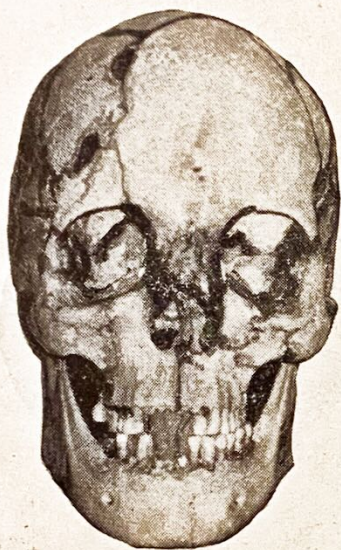
FIG. 63 a, b, c.

Female skull 20—30 years.
Grave 92, burial 1.
Inventory Nr. 257/46.

64



65



6

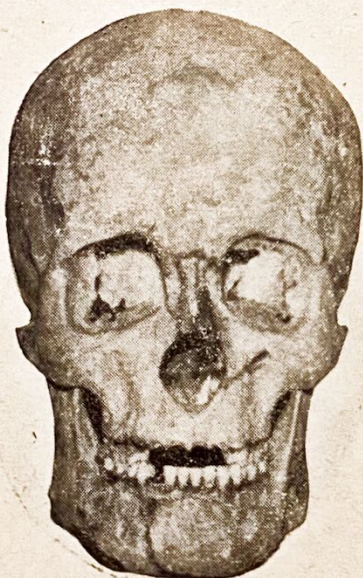


FIG. 64 a, b, c.

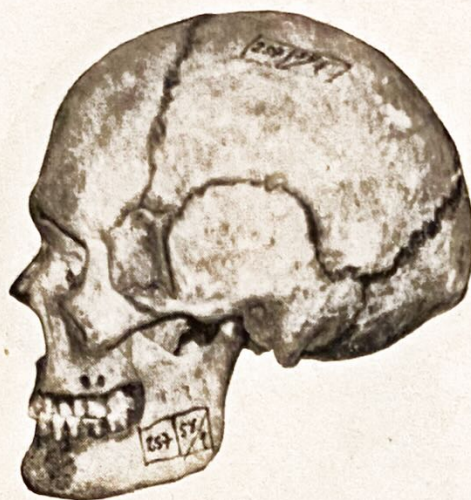
Male skull 30–40 years.
Grave 93, burial 2.
Inventory Nr. 257/47.

FIG. 65 a, b, c.

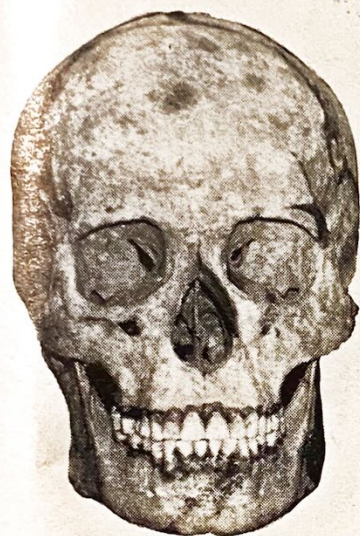
Female skull more than 60 years.
Grave 94, burial 1.
Inventory Nr. 257/48.

FIG. 66 a, b, c.

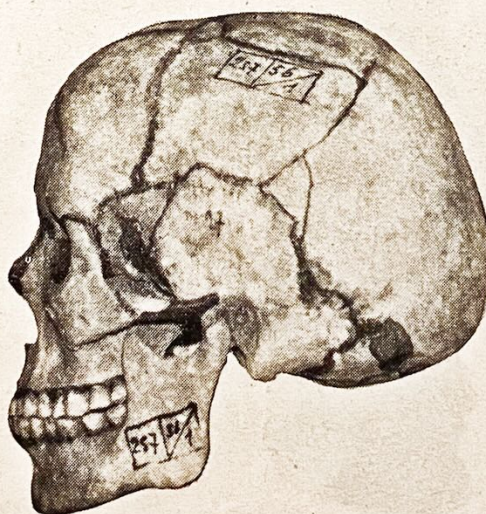
Male skull 30–40 years.
Grave 96, burial 3.
Inventory Nr. 257/53.



67



68



69

FIG. 67 a, b, c.

Male skull 45–55 years.
Grave 97, burial 1.
Inventory Nr. 257/54.

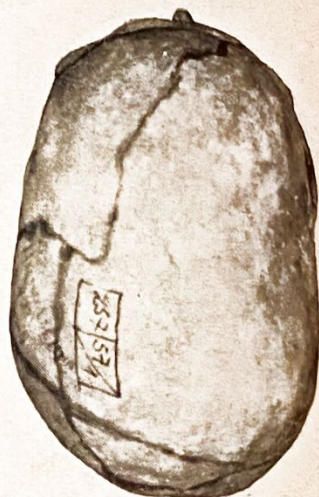
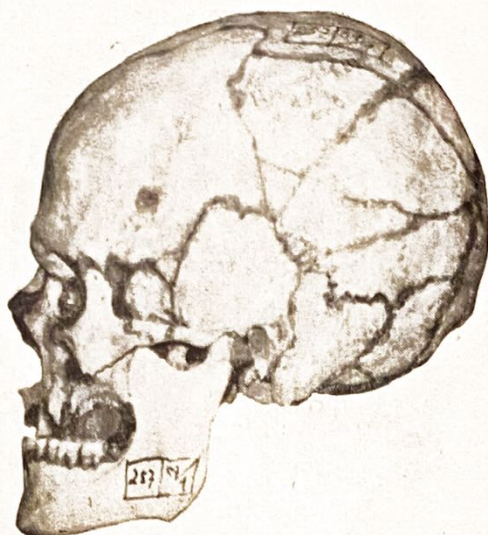
FIG. 68 a, b, c.

Male skull 35–50 years.
Grave 97, burial 2.
Inventory Nr. 257/55.

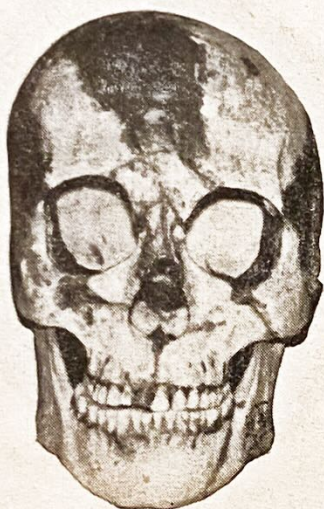
FIG. 69 a, b, c.

Female skull more than 60 years.
Grave 97, burial 3.
Inventory Nr. 257/56.

70



71



72

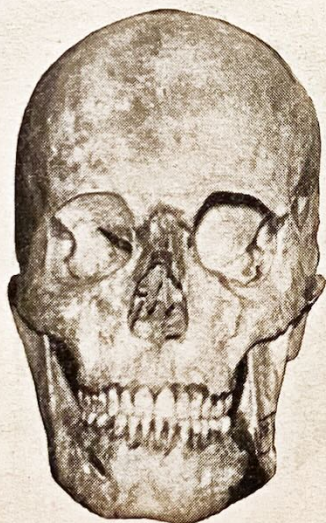


FIG. 70 a, b, c.

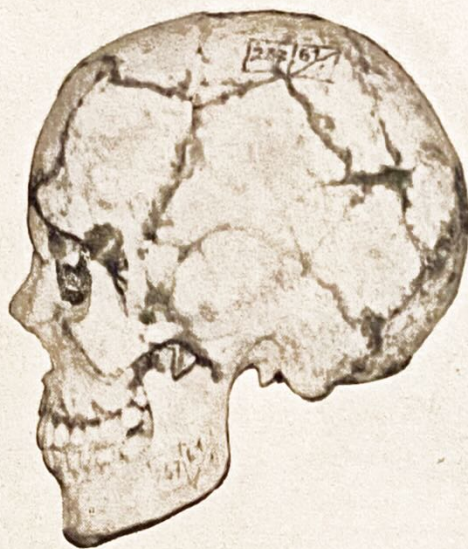
Male skull more than 60 years.
Grave 97, burial 4.
Inventory Nr. 257/57.

FIG. 71 a, b, c.

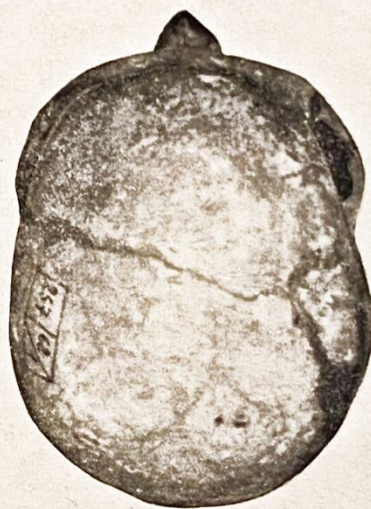
Female skull more than 60 years.
Grave 98, burial 1.
Inventory Nr. 257/58.

FIG 72 a, b, c.

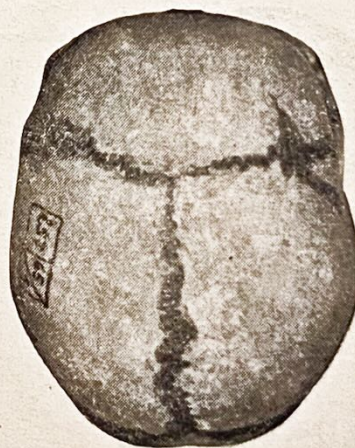
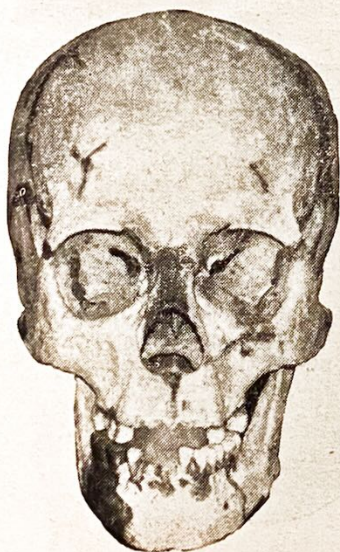
Female skull 20—30 years.
Grave 98, burial 4.
Inventory Nr. 257/60.



73



74



75

FIG. 73 a, b, c.

Female skull 16—18 years.

Grave 99, burial 1.

Inventory Nr. 257/61.

FIG. 74 a, b, c.

Male skull more than 60 years.

Grave 100, burial 1.

Inventory Nr. 257/62.

FIG. 75 a, b, c.

Female skull 35—45 years.

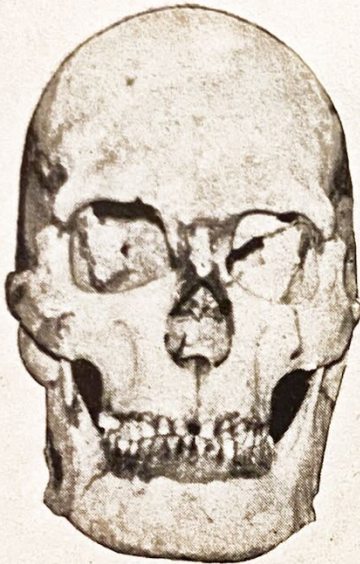
Grave 102, burial 1.

Inventory Nr. 257/65.

76



77



78

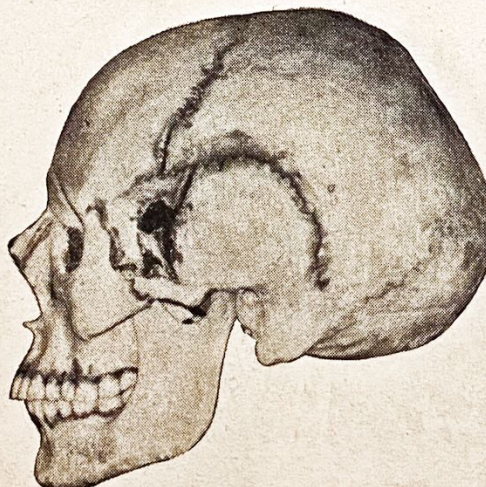
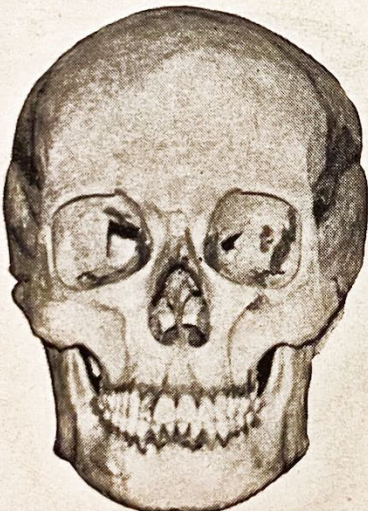


FIG. 76 a, b, c.

Male skull 45–55 years.
Grave 107, burial 1.
Inventory Nr. 267/3.

FIG. 77 a, b, c.

Male skull more than 60 years.
Grave 108, burial 3.
Inventory Nr. 267/5.

FIG. 78 a, b, c.

Female skull 20–30 years.
Grave 109, burial 1.
Inventory Nr. 267/6.

(Continued in the next issue)