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ANTHROPOLOGICAL COMPOSITION OF THE POPULATION OF CENTRAL ASIA, AND THE ETHNOGENESIS OF ITS PEOPLES: II

BY

L. V. OSHANIN

Translated by Vladimir M. Maurin

Edited by Henry Field

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PREFACE

This study forms the second of three parts of Dr. L. V. Oshanin's "Anthropological Composition of the Population of Central Asia, and the Ethnogenesis of Its Peoples," Transactions, New Series, No. XCVI, Historical Sciences, Vol. 16, pp. 1–145, published by Yerevan [formerly Erivan] University, 1957, in collaboration with the Ministry of Higher Education of the USSR and the V. I. Lenin State University of Central Asia.

This volume was translated by Mr. Vladimir M. Maurin, who has had special experience in the translation of Russian documents for the past sixteen years. Frequent conferences were necessary with Mr. Maurin, Mr. Mark Grant and myself on the style, headings and the arrangement of the statistical tables in order to present these data as clearly as possible.

Mr. Eugene V. Prostov, with whom I have published a number of summaries of Soviet Archaeology and Physical Anthropology (*see* No. 1, footnote, p. i), checked the translation and corrected many technical terms.

The spellings of tribal and geographical names follow standard usage in the United States. In some cases the exact transliteration has been used. For comments on the transliteration of proper nouns, geographical names and bibliographical references, the reader is referred to paragraphs by Mr. Prostov (*see* No. 1, pp. i–ii).

Certain arbitrary spellings of place-names have been followed with variants in parentheses the first time the name is used. Wherever possible I have selected the preferred spelling used in my "Contributions to the Anthropology of the Soviet Union," *Smithsonian Miscellaneous Collections*, Vol. 110, no. 13, pp. 1–244, 1948.

As Editor, I inserted the anthropometric terminology, often using our standard forms or abbreviations in headings; in a few cases Oshanin's style (tables 34, 36, and 38) was retained. The statistical data are arranged to conform to the Harvard System of presentation. This simplifies the comparison of Oshanin's results with those from south of the Soviet border ranging from Anatolia to India (*see* No. 1, footnote, p. ii).

In order to elucidate the text, I have added some references and dates in brackets. However, the numbers in brackets relating to titles in the References were inserted by Oshanin.

Since there are numerous references to major and minor racial groups, it was decided to capitalize Race only when referring to the main group of the Mediterranean, Europeoid, Mongoloid and Negroid Races. Oshanin usually refers to these Races as the Great Mongoloid Race, etc.

Since Soviet anthropologists prefer to be referred to by their surnames, this procedure has been followed; their full names or initials may be found in the References.

Attention must be called to the following:

(a) In most cases we have followed Oshanin's paragraphs.

(b) Anthropologists usually mean physical anthropologists.

(c) In our terminology anthropological should generally be read as anthropometric.

(d) Kirghiz has been used for singular and plural forms.

(e) Turkized is preferred to Turkicized.

(f) Region does not always mean Raion. In these cases the former has been retained.

(g) Certain arbitrary decisions were made. For example, Sayan-Altai highlands not Highlands. Sayan has been used instead of Saian.

(h) Sacae has been used in preference to Saki or Se, the alternate form often being retained in parentheses.

(i) Diameter has been replaced by breadth as in bizygomatic breadth.

(j) Anterior Asia has been used in preference to Near East or Asia Minor.

(k) Central Asiatic Interfluvial Region has been used in preference to Interfluminal.

(l) For Eastern, Western and Southern Kazakhstan, etc., we have followed Oshanin's capitalization.

(m) Oshanin sent some substitutions for the racial types in the Illustrations.

For example, No. 49 is missing because Oshanin sent No. 48 to substitute for Nos. 48–49. All the photographs were taken by Oshanin during 1926, 1927, 1930 and 1935 except for Nos. 40, 41, 44 and 45 which were taken by K. Nadzhimov during July, 1954.

Gratitude must be expressed to the following:

1. Professor H. A. R. Gibb, Harvard University, who corrected spellings for some Arabic names.

2. Professor Herrlee G. Creel, University of Chicago, who corrected spellings for the majority of Chinese names.

3. Dr. Frank Paddock, Pittsfield, Massachusetts corrected the medical terminology relative to Tamerlane's injuries (p. 38).

4. Mrs. Edith M. Laird, who contributed editorial revisions to the typescript, checked the tables with the Russian text, and proofread the IBM copy.

5. The typing of the first draft was prepared by Mrs. Birdie P. Levine from Mr. Maurin's handwritten copy. After revision by Mr. Maurin, Mrs. Laird, Mr. Prostov, Mrs. Stratton, and myself, the final typescript was also typed by Mrs. Levine, whose care and accuracy are appreciated.

6. Mr. Mark Grant, who prepared the copy for photo-offset on my IBM electric typewriter at my Research Center in Coconut Grove, Miami 33, Florida. His editorial and technical skills are greatly appreciated.

7. Mrs. Naomi Stratton, Editor Peabody Museum Publications, who contributed valuable suggestions for clarity of presentation and made editorial changes to conform to Vol. I, nos. 1–3 in this Russian Translation Series.

Work is now progressing on the third and last part of Oshanin's monograph. When this is published, we shall have available in English a major contribution to the anthropometry of the peoples of Central Asia, a welcome complement to our studies of the physical characters of the peoples of Southwestern Asia to the south. This vast area of Soviet Central Asia has long been the major lacuna in our knowledge of racial types from Africa north of the Sahara eastward to the Bay of Bengal.

From the point of view of Prehistory, History and Anthropology the cultural and racial links between Soviet Central Asia and the area from the Nile to the Indus and from the Caucasus to the Arabian Sea have long been established. However, it remained for Oshanin, IArkho, Debets, Miklashevskaia, Zezenkova, Cheboksarov and others to record and analyse the anthropometric data on large series of dwellers in Soviet Central Asia from 1926–55 and finally for L. V. Oshanin to publish the results in this monograph.

Dr. J. O. Brew, Director, Peabody Museum, encouraged the publication of this summary of Dr. L. V. Oshanin's lifework on the anthropometry of the peoples of Central Asia.

HENRY FIELD

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I. ETHNOGENESIS OF THE KIRGHIZ AND KAZAKHS ACCORDING TO DATA ON THE HISTORY OF SETTLEMENT OF THE TIEN SHAN AND OF THE KAZAKHSTAN STEPPES BY EUROPEOID AND MONGOLOID RACES

In chapter II, part I, we discussed in detail the geographical distribution of the basic anthropological characters of the population of Central Asia. We can divide Central Asia into three regions with different anthropological components of the population: (a) the northern region, covering the broad northern steppe belt of Central Asia, Semirechie and the Tien Shan Mountains; (b) the central or Central Asiatic Interfluvial Region, which includes the plains between the Amu Darya and Syr Darya and the Pamir-Alai mountain system; and (c) the southern region extending south of the Amu Darya within the limits of the Transcaspian steppes.

Earlier than in other regions of Central Asia, there occurred on the territory of the northern region basic ethnogenetic processes which were reflected in historically produced changes of the racial, tribal and linguistic composition of the population. As a consequence of the mixing of the ancient, autochthonous population, which was Europeoid Iranian-speaking, and the Turkic-speaking Mongoloid tribes which came from the east, there developed in the northern steppe belt of Central Asia and in the Tien Shan Mountains a population stratum which served as a kind of reservoir from which spread the Mongolization of type and the Turkization of language of the Europeoid Iranian-speaking population south of the countries of the Syr Darya.

During the Middle Ages the territory of the northern region, as defined by us, was called the Dasht-i-Kipchak on the west and Mogulistan on the east. Upon the territory of the present-day Uzbekistan and Tadzhikistan were distributed ancient cultural regions of Central Asia: Khwarizm (Khorezm), Chach (Tashkent Oblast), Davan (Ferghana Oblast), Sogdiana (the basins of Zarafshan [Zeravshan] and Kashka Darya) and Bactria (southeastern Uzbekistan and southwestern Tadzhikistan). On the Transcaspian steppes there lived tribes which historians of classical antiquity termed Scytho-Sarmatians or Asiatic Scythians, while Parthia extended south of Transcaspia.

Tables 4-14, which show the differences in the racial composition of the Kirghiz, Kazakhs, Uzbeks, Turkomans and Tadzhiks (part II, Russian text pp. 61-71), reflect very clearly the spreading of the Mongoloids from Mogulistan and the Dasht-i-Kipchak. The Mongoloids left clear "anthropological traces" of their spreading over the territories of Khwarizm, Chach, Davan, Sogdiana, Bactria and Transcaspia. However, these "traces" disappear in the Pamir-Alai mountain system. The Mongoloids bypassed the territory of present-day Tadzhikistan from the north and west. Inasmuch as the basic processes of the changes in the racial, linguistic and tribal composition of the population of Uzbekistan and Turkmenia originated on the territory of Kirghizia and Kazakhstan, the study of the anthropology and the palaeoanthropology of Kazakhstan and Kirghizia is of particular importance. As a direct result of the extensive investigations of Moscow and Leningrad anthropologists in recent years, the anthropology of Kirghizia and Kazakhstan has been well studied, while in regard to palaeoanthropology the material collected, although not extensive, is, nevertheless, very indicative.

1. Qualitative and Quantitative Characters of the Present-day Territorial Groups of the Kirghiz and Kazakhs

A. Kirghiz (Table 1-15)

Prior to the October Revolution, anthropological data on the Kirghiz were collected by physicians, who were amateur anthropologists, in accordance with programs which were on the contemporary level of the science of Anthropology of those times, but which lacked a carefully developed methodology for determining qualitative characters. An intensive study of various tribal and territorial groups of the Kirghiz was undertaken only after the October Revolution.

During the summer of 1924, for the purpose of collecting anthropological materials among the Kirghiz, I participated as a physician in an expedition of a medical research group of the People's Commissariat of Health which went to Issyk Kul and to central Tien Shan. The preponderance of time devoted to medical work reduced the quantity of anthropological material collected. I used as a base for the program of the investigation the pre-Revolutionary instructions prepared by the Anthropological Section of the Society of Friends of Natural History, Anthropology and Ethnography. For this reason, the materials collected at that time cannot be compared in a great many characters with those obtained during subsequent investigations. That material was later published [31].

All subsequent investigations were conducted in accordance with a unified program, approved by the Institute of Ethnography of the Academy of Sciences of the USSR, the Museum of Anthropology of the Academy of Sciences of the USSR, the Chair [Department] of Anthropology of Moscow State University, and by the Chair of Anthropology of the Central Asiatic State University [SAGU].

During 1928 the anthropological expedition led by the late A.I. IArkho collected voluminous material. This expedition crossed the whole of central Tien Shan, passing from Issyk Kul to Son Kul, and further in the valleys of the Naryn, Atbash and Chatyr Kul, emerging through the Kugart Pass into the Ferghana Valley, where material was also collected on the anthropology of the Kirghiz. Unfortunately, these materials were only partially published together with a general summary [49].

In 1929 I led an anthropological expedition into the Talass Valley, where I studied some Kirghiz along the middle course of this river, according to a detailed program. In 1935 during an anthropological expedition to the Pamirs, I also investigated smaller groups of Kirghiz in the Alai Valley and on the Pamir Plateau. The results of these investigations were published in part [38, pp. 26-30 and 114-15]. The latest investigations were conducted in 1953 by the Institute of Ethnography of the Academy of Sciences of the USSR and the Institute of History and Archaeology of the Academy of Sciences of the Kirghiz SSR. This expedition, led by Moscow anthropologist Professor G.F. Debets, collected extensive data in a wide area including the shores of Issyk Kul, the northern and southern Tien Shan, the valleys of the Chu and Talass rivers, the northern, eastern and southern districts of the Ferghana Valley and the Alai Valley. Debets sent me these statistical data for publication as comparative material. This material appeared in the dissertation of N.N. Miklashevskaia. I had the opportunity to become acquainted in detail with this dissertation not only from the author's abstract [28], but also from the complete text. A year later, very extensive material was published by Miklashevskaia [29].

Thus, up to the present time, various groups of Kirghiz have been investigated, from Issyk Kul and the Chu River in the north to the Alai Valley in the south, from the Talass Valley in the west to the Atbash and Lake Chatyr Kul in the east.

In spite of the fact that the material was collected in accordance with standardized programs and a methodology generally accepted in the USSR, there are among the observations of some characters differences which must be attributed to an unavoidable degree of subjectivity in the determination of qualitative characters.

Eye color (table 1). Prevailingly dark, however with a considerable admixture of mixed, i.e., lighter, to some degree depigmented eyes. According to observations by IArkho and Miklashevskaia, such an admixture of individuals with lighter eyes fluctuates in various groups of Kirghiz from 36.3 – 44.6 per cent. In general, from among all the nationalities of Central Asia, the greatest depigmentation of the iris was observed among the Kirghiz (part 1, table 17). This fact has a certain significance in answering the question concerning the admixture of the so-called "white-skinned" Dinlin race among the Kirghiz. We shall deal with this question later.

Our observations stand alone. From the means I noted the depigmentation of the eyes infrequently in the Talass Valley (M = 1.19), only as an exception in the Pamirs (M = 1.08), and in the Alai Valley not at all.

Beard Development (table 2). Sparse or absent is characteristic of the Kirghiz as typical Mongoloids. However, in all regions individuals with a medium beard growth were encountered in significant numbers, from 12.1 per cent in the Tien Shan (IArkho) to 33.1 per cent in the northern districts of the Ferghana Valley (Miklashevskaia). A somewhat higher percentage of individuals with medium beard growth was noted in the Ferghana Valley (Miklashevskaia and IArkho).

Horizontal Facial Profile (table 3). Flat faces clearly predominate among all investigated groups. A flat face is the most characteristic trait of the Mongoloid Race. The greatest percentage of individuals with a medium facial profile was observed by Miklashevskaia and IArkho in the Ferghana Valley.

Malar Protrusion (table 3). All groups were in the medium category. Thus, "high cheekbones," if by that we understand strongly protruding malars, is not characteristic for the Kirghiz despite their facial flatness and considerable bizygomatic breadth.

Forehead Slope and Supraorbital Crest (table 4). IArkho considers the Kirghiz and Kazakhs as typical representatives of the South Siberian Mongoloid race. A markedly sloping forehead and a well-defined supraorbital crest are, in his opinion, characteristic of this race (Russian text, part 1, p. 121). Meanwhile, a very sloping forehead is seldom encountered among all the groups studied and still less frequently a markedly developed supraorbital crest.

Nasal Bridge Height and Transverse Profile of Nasal Ridge (table 5). The characteristic of all territorial groups of the Kirghiz is a low or medium nasal bridge. A high nasal bridge is encountered only as an exception. The transverse profile of the nasal ridge is above medium for all groups. The very high percentage of "flattened" noses recorded by Oshanin in the Alai Valley and in the Pamirs should be attributed to unavoidable subjectivity in the determination of qualitative characters.

Nasal Profile and Position of Nasal Base (table 6). Characteristic for all groups is a straight or wavy nose. The position of the nasal septum is either sloping upward or horizontal except in a few cases. The downward sloping septum is seldom observed.

Nasal Alae (table 7). A medium sloping axis is characteristic for all groups.

Height and Profile of Upper Lip (table 8). Characteristic for all groups is a medium height of the upper lip and procheilia (= protruding lip; orthocheilia = vertical lip; opisthocheilia = lip sloping backward). Characteristic for the Mongoloids is a medium or high lip and procheilia.

Epicanthic Fold (table 9). This is the most significant Mongoloid character. It occurs in half of all the cases observed. Such a high percentage of the presence of the epicanthic fold is also characteristic for all other Mongoloids: the Arctic, Baikal and Central Asiatic (part I, table 19). IArkho recorded only half as large a percentage in the Tien Shan and in the Ferghana Valley. His observations differ con-

siderably from those of other investigators; this must be attributed to his subjectivity in the determination of this character. We studied this character very carefully. Our observations agree fully with those of Miklashevskaia.

In IArkho's opinion, in contrast to the representatives of the race of the Central Asiatic Interfluvial Region, one rarely encounters the epicanthic fold among the South Siberian race (Russian text, part 1, p. 88). In fact, among the Kirghiz which IArkho regards as the representatives of the South Siberian race, the epicanthic fold is not less frequent than among the Central Asiatic, Baikal or Arctic Mongoloids.

Width of the Eye Opening (table 9). There is a widespread opinion that Mongoloids are characterized by a narrow eye opening. This has not been noted in the observations made by Miklashevskaia.

Cephalic Index and Component Diameters (table 10). A marked brachycephaly with large dimensions of the longitudinal and transverse diameters is characteristic for all territorial groups of the Kirghiz. The broad heads distinguish the brachycephalic Mongoloids of Central Asia from the brachycephalic Europeoids (part 1, tables 13-14). The cephalic index is somewhat smaller among the Kirghiz of the Alai Valley and the Pamir Plateau whom Oshanin investigated.

Morphological Facial Index and Component Diameters (table 11). Leptoprosopic faces with large dimensions of facial height and particularly of bizygomatic breadth is characteristic for all groups. Leptoprosopic faces are also characteristic for Europeoids of Central Asia with considerably smaller dimensions of facial height and breadth (part 1, tables 10-12). The facial index is considerably smaller among the Kirghiz of the Alai Valley and the Pamir Plateau studied by Oshanin. This decrease is evidently the result of a different location of subnasale by Oshanin and Miklashevskaia. A wide bizygomatic breadth is particularly characteristic for the Mongoloids. According to IArkho and Miklashevskaia, the bizygomatic breadth of the Kirghiz of the Ferghana Valley is smaller than that of the Tien Shan Kirghiz.

Nasal Index and Component Diameters (table 12). All groups are typically leptorrhine. The nasal length and breadth vary within narrow limits.

Minimum Frontal Diameter, Bigonial Breadth and Stature (table 13). In these measurements the Kirghiz are also relatively homogeneous. In stature they belong to the medium group.

Thus, in spite of the vastness of the territory which they occupy, the Kirghiz are a relatively homogeneous group. The greatest admixture of Europeoid characters is observed among the Kirghiz of the Ferghana Valley, who possess a somewhat more abundant beard growth, more individuals with an average horizontal facial profile, and with somewhat smaller longitudinal, transverse and bizygomatic diameters. We are inclined to attribute this "Europeoid element" [lit. "cast"] to the mixing of the Kirghiz with the Europeoid race of the Central Asiatic Interfluvial Region, the area including the Ferghana Valley [38, p. 27]. The same point of view is also favored by Miklashevskaia on the basis of new, extensive data [29, p. 26]. However, in spite of this admixture of an Europeoid component, the Kirghiz of the Ferghana Valley remain typical Mongoloids. The most Mongoloid appearance proved to occur among the Kirghiz of the Tien Shan, Issyk Kul, Alai and the Pamir Mountains. The Mongoloid component, which prevails so clearly throughout the vast territory of Kirghizia, was designated by IArkho as the South Siberian race. A sufficiently detailed description of this race was given in chapter 3, part 1.

B. Kazakhs (Tables 14-27 of the Appendix)

At the present time Soviet anthropologists have collected extensive material on the anthropology of the Kazakhs of various Kazakhstan Oblasts. In 1929 Oshanin

investigated the Kazakhs of the Talass Valley in the Dzhambul [formerly Aulie Ata] Oblast [38, pp. 26-30]. In 1936 Debets studied in Alma-Ata a group of Kazakhs (aged 20-25), natives of Alma-Ata, Karaganda, Eastern, Western and Southern Kazakhstan. In 1940 Debets also studied a group of Kazakhs in the lowlands of the Ili River. In 1947 a joint anthropological-ethnographic expedition, organized by the Institute of Ethnography of the Academy of Sciences of the USSR and the Institute of History, Archaeology and Ethnography of the Academy of Sciences of the Kazakh SSR [46], collected extensive material on the anthropology of the Kazakhs of the Kegen, Narynkol, Panfilov (Dzharkent) Raions, on Kazakhs of the Great Horde in the Alma-Ata Oblast and of the Little and Middle Hordes of the Kyzyl-Orda Oblast. All this extensive material has been published [11].

In 1953 another joint anthropological-ethnographic expedition, sponsored by the Institute of Ethnography of the Academy of Sciences of the USSR and the Institute of Language, Literature and History of the Academy of Sciences of the Kirghiz SSR, which collected comprehensive material on the anthropology of the Kirghiz mentioned above, investigated Kazakhs of the Kegen region and the two southernmost groups of Kazakhs in the Dzhambul and Chimkent regions. This material has also been published [29].

In general, the material at our disposal covers Northern Kazakhstan, the Karaganda region, the Alma-Ata, Kegen, Narynkol, Panfilov (Dzharkent) Raions of Eastern Kazakhstan, the Dzhambul, Chimkent, Kyzyl-Orda regions of Southern Kazakhstan and parts of Western Kazakhstan. We present the most important qualitative and quantitative characters of various territorial groups of Kazakhs.

Eye Color (table 14). Like the Kirghiz, the Kazakhs possess dark eyes, with a smaller but nevertheless significant admixture of mixed eyes than among the Kirghiz. In general, the Kazakhs are homogeneous in this character.

Beard Development (table 15). The Kazakhs are characterized by a weak beard development (M = 2). A very light beard development was recorded by Debets (1936); however, this was among military recruits aged 20-25. The greatest number of individuals with a medium beard growth was observed in Kegen (Ginzburg and Miklashevskaia).

Horizontal Facial Profile (table 16). A flat face predominates in all groups. The greatest percentage of a medium profile was noted in Kegen, Narynkol and Panfilov (Dzharkent).

Forehead Slope and Supraorbital Crest (table 17). According to Debets' observations in 1936, the Kirghiz are characterized by a straight or slightly sloping forehead with a weakly developed supraorbital crest. Observations of other authors noted a considerably higher percentage of individuals with an average forehead slope and average supraorbital crest. However, these observations also included a small percentage of individuals with a marked forehead slope and a highly developed supraorbital crest. Together with the Kirghiz, IArkho considers the Kazakhs as typical representatives of the South Siberian race. Subsequent extensive investigations of the Kazakhs and Kirghiz revealed that a marked forehead slope and a highly developed supraorbital crest are not at all characteristic of this race. Meanwhile, IArkho considered exactly these traits as being characteristic of the South Siberian race.

Nasal Bridge Height and Transverse Profile of Nasal Ridge (table 18). Observations by Debets and those of subsequent investigators diverge considerably in the determination of the height of the nasal bridge; this must be ascribed to an unavoidable amount of subjectivity. According to Debets, the Kazakhs are characterized by a low nasal bridge, and according to observations by Cheboksarov, Ginzburg and Miklashevskaia the nasal bridge of the Kazakhs is of medium height. The smallest percentage of individuals with a low nasal bridge, and the greatest percentage with a high nasal bridge, were recorded in the Narynkol, Kegen and Panfilov regions, where a higher transverse profile of the nasal ridge was also observed.

Nasal Profile and Nasal Base (table 19). A straight or wavy profile and a sloping upward or horizontal position of the nasal septum are characteristic of all groups.

Position of Nasal Walls and Axis of Alae (table 20). An inclined position of the nasal walls prevails in all groups.

Height and Profile of Upper Lip (table 21). All groups possess an average height of the upper lip, with procheilia predominating.

Epicanthic Fold and Width of Eye Opening (tables 22 and 27). Various investigators obtained sharply differing indices: Cheboksarov, 6.3 – 7.0 per cent; Oshanin, 72.0 per cent (!); Debets' expedition, 12.7 – 22.6 per cent; and Debets' observations in 1936, 27.9 – 39.3 per cent. The only indubitable fact is that all investigator noted that the epicanthic fold occurred far less frequently among the Kazakhs than among the Kirghiz. The width of the eye opening was only recorded in three groups. Significant differences are noted in the observations of Oshanin and Miklashevskaia.

Cephalic Index and Component Diameters (table 23). Kazakhs as well as the Kirghiz are pronouncedly brachycephalic with large longitudinal and transverse hea diameters.

Facial Index and Component Diameters (table 24). All groups are characterized by leptoprosopy with a large morphological facial height and wide bizygomatic breadth.

Nasal Index and Component Diameters (table 25). Kazakhs of all regions were typically leptorrhine with considerable length and moderate width of the nose.

Minimum Frontal Diameter, Bigonial Breadth and Stature (table 26). In these measurements there were no sharp differences among territorial groups. The Kazakhs may be grouped among those peoples of medium height.

Debets, in his work on the territorial distinctions in the anthropological type of the Kazakhs, comes to the conclusion that "the anthropological type of the Kazakhs is strikingly homogeneous throughout the extensive territory of Kazakhstan" [11]. On the basis of all the above data, we share fully this opinion. Debets notes a considerable admixture of the Europeoid component in that group, which he calls the Southern Kazakhstan. Judging by the more abundant beard development, lesser facial flatness, higher nasal bridge, and more prominent transverse profile of the nasal ridge, a considerable admixture of the Europeoid component may also be observed in the eastern regions, in Narynkol, Kegen and Panfilov (Dzharkent).

Nevertheless, throughout the vast territory of Kazakhstan among the various territorial groups of Kazakhs, as well as among the Kirghiz, the Mongoloid racial component as described by IArkho under the name of the South Siberian race clearly predominates. On the basis of all the material in our possession, we deduced that the racial composition of the Kazakhs does not differ essentially from that of the Kirghiz [38, p. 26]. The far more extensive material, which we have at our disposal at the present time, made it possible to compare the Kazakhs with the Kirghiz in all principal qualitative and quantitative characters. The above-cited comparative anthropological tables indicate that the admixture of the Europeoid component is considerably greater in the composition of the Kazakhs than in the composition of the Kirghiz (part 1, tables 4-18). The Kazakhs exhibit an epicanthic fold less frequently, beard development is more abundant, the horizontal facial profile is less flattened, the nasal bridge is higher, nasal walls are less inclined and the eyeballs are deeper in the sockets. Miklashevskaia reached the same conclusion [29, p. 29].

Accordingly, we distinguish two subtypes in the South Siberian racial type: a more Mongoloid southeastern type with the center of distribution in Kirghizia; and a less Mongoloid northwestern type whose area of distribution covers the steppes of Kazakhstan (Russian text, part 1, p. 90). In both subtypes, however, the Mongoloid component prevails.

of the same epoch in the western Baikal region, in the Minusinsk depression and in the Sayan-Altai highlands.

This material is divided geographically into two groups: the Baikal; and the Sayan-Altai. The northernmost subgroup of the Baikal group is a series of crania excavated by Okladnikov along the middle course of the Angara. This group is represented by very pronounced Mongoloids without any Europeoid admixture. Considering their dolichocephaly, combined with considerable height of the cranium, Debets relates them to the Eskimo type. He is inclined to identify a separate Palaeo Siberian Mongoloid race with Baikal, North American and Ural variants [19, p. 58]. Further south, in the upper reaches of the Angara and Lena, some mesocephalic Europeoid crania were associated with typical Mongoloids. These Europeoid settlers of the southern Baikal region revealed a similarity with the Europeoids of the Minusinsk depression obtained from graves of the same epoch. The Europeoid type penetrated from the Sayan-Altai highlands only as far as the southern districts of the Baikal region. In general, during the Neolithic Period and the Palaeometallic Epoch, the western Baikal region was settled by typical Mongoloids and only in southern districts can a considerable admixture of Europeoids be noted.

Further west, within the limits of the Sayan-Altai highlands, the picture changes radically. During the Neolithic Period and Palaeometallic Epoch, typical Europeoids lived along the upper course of the Yenissei, and the upper tributaries of the Ob, Katun and Biya rivers. At the end of the third and during the first half of the second millennium B.C., the so-called Afanasievo culture (named after the village where typical examples were found) was widespread along the Upper Yenissei and into the Altai Mountains. The bearers of this culture were dolichocephalic Europeoids of tall stature, who were distinguished from contemporary Europeans by a broader face. Debets relates them to the Upper Palaeolithic crania of Western Europe, "to the Crô-Magnon type in the broad sense of this term" [19, p. 65]. These Europeoids penetrated the Sayan-Altai highlands from the west. Alekseev is of the same point of view on the basis of new material [1]. The expansion of the Mongoloids into western Siberia took place along more northern routes, along the Angara and other right bank tributaries of the Yenissei. "The southern steppe belts, however, were settled by Europeans even during the Palaeolithic" [19, p. 68].

In other words, the Mongoloids spread further to the south and southwest toward Central Asia during later periods.

During the second half of the second millennium B.C., the Afanasievo culture in the Minusinsk depression was replaced by the so-called Andronovo culture, which was widespread not only in western Siberia but also on the steppes of Kazakhstan. Judging from the crania available in sufficient number as palaeoanthropological material (22 males, 9 females), the population of the Andronovo epoch in Minusinsk Krai was also represented by typical Europeoids, who were fairly close in type to the settlers of the preceding Afanasievo culture, namely, "the Crô-Magnon type in a broad sense" [19, p. 70].

The series of the Minusinsk Andronovo crania was studied by N.M. Komarova, who also examined those from burial grounds of the same epoch in the northwest and along the Ural and Nura rivers in the central districts of Kazakhstan. In type, the Kazakhstan Andronovo people are very close to those from Minusinsk, and are related to the same Proto-Europeoid Crô-Magnon type [15].

Debets, Ginzburg and Alekseev consider the steppes of Kazakhstan as the territory on which the formation of the Andronovo variant of the Great Europeoid Race took place.

Geographically, the spreading of the Andronovo culture and of the Andronovo Europeoid type from the Urals to the Upper Yenissei was "connected with the migration of people from the Kazakhstan steppes to those of the Minusinsk depression" [19, p. 76].

A Mongoloid admixture in this ancient Europeoid population of the Sayan-Altai highlands appears only in the graves of a later period, the so-called Karasuk culture (end of the second – beginning of the first millennium B.C.). From graves of the Karasuk epoch considerable palaeoanthropological material (37 crania and skeletons) was obtained. In addition to typical Europeoids, this series of Karasuk crania included some with Mongoloid characters. Their Mongoloid complex of features was combined with a narrow face, which is characteristic of the Far Eastern branch of the Great Mongoloid Race. Apparently, this narrow-faced Mongoloid race did not penetrate further to the west.

Nevertheless, during the same Neolithic Period and Palaeometallic Epoch, there appeared Mongoloid admixtures in the forest belt of Siberia and Europe as far as the Baltic region; these were introduced by other groups of the Great Mongoloid Race. West of the Yenissei "the boundary between the European and Asiatic racial stems coincided in general with the basic 'Landscape zones: forest and steppe'" [19, p. 110]. The penetration of the Mongoloids westward took place along the northern forest belt of Siberia, while the extensive steppes of the western Siberian depression which separates Central Asia from the Yenissei basin were inhabited by Europeoids. Only much later, on these steppes appeared representatives of the broad-faced Mongoloid race which prevails even now among the Kirghiz and Kazakhs.

3. Palaeoanthropological Data Regarding the Expansion of Europeoids and Mongoloids in the Baikal Basin and in the Sayan-Altai Highlands During the Epoch of Transition from the Bronze to the Iron Ages (First Millennium B.C.)

Debets places the epoch of the gradual transition from the Bronze to the Iron Age in eastern Eurasia approximately in the first millennium B.C. The zone of direct contact between Europeoids and Mongoloids was in this, as in the preceding epoch, far to the east of Central Asia, in the very same Baikal Basin.

During this time, typical Mongoloids continued to live in Transbaikalia. A series of crania of this epoch was obtained here by Tal'ko-Grintsevich from graves in the so-called "larch tree log cabins." From these interments Debets investigated sixteen crania during 1929. The diagnosis of this racial stem was not difficult. These were typical Mongoloids of the same heterogeneous Great Mongoloid Race, which clearly predominated in Neolithic graves of the western Baikal region, and which Debets described as the Palaeo-Siberian Mongoloid race.

In Cisbaikalia, in the Sayan-Altai highlands, and on the Upper Yenissei (Minusinsk depression), the Europeoid racial type clearly predominated as in the preceding epochs. During the first millennium B.C., there existed here the so-called Minusinsk kurgan or Tagar culture with a settled agricultural and cattle-raising economy. According to S.V. Kiselev's data, this culture may be divided into three stages: (1) eighth-sixth; (2) sixth-fourth; and (3) fourth-second centuries B.C.

The first two stages of the Tagar culture are characterized by the dominance of bronze; iron appeared during the third stage.

The excavations of the Tagar culture, which have been conducted by various investigators since the end of the nineteenth century, yielded very extensive palaeoanthropological material. Debets had at his disposal a series of 262 crania, two-thirds of them male. Furthermore, because of accuracy in dating, it was possible to classify them according to the three periods of the Tagar culture.

Under these circumstances, this material became a most valuable primary source for the history of the spread of the two basic races of Eurasia. This entire series studied by Debets, who is regarded as the most competent anthropologist in the racial diagnosis of skeletal material, proved to be typically Europeoid. This

fact was fully confirmed by subsequent investigations [1]. Two variants are distinguished among the Europeoids: dolichocranial and brachycranial. Historical accounts, Chinese as well as Moslem, refer to the Kirghiz type living beside the Yenissei, their neighbors the Dinlins and the Issyk Kul Wusuns or Usuns [see part 1, Introduction, footnote 6]. It is quite probable that the inhabitants of the Upper Yenissei during the epoch of the Tagar culture were characterized by light pigmentation (light hair and light eyes). This point of view was also held by Debets in one of his earlier published works concerning the so-called "blond Dinlin race," which at the time Debets wrote gave rise to an extensive literature. The "northern features" of the Tagars are explained by Debets not as a direct relationship with the Nordic type of Europe, but as "a certain closeness of both types which comparatively nearly approach the Proto-European" [19, p. 128]. The origin of the brachycephalic Europeoid type remains unclear.

The fact that the Mongoloid admixture with these autochthonous Europeoid inhabitants of the Upper Yenissei Basin was still entirely insignificant during the Tagar culture (eighth-second centuries B.C.) is of paramount importance in the determination of the beginning of Mongoloid expansion from Transbaikalia.

A not less important historical primary source for the determination of the problem of Mongoloid penetration into Central Asia is the skeletal material obtained from graves of the subsequent Tashtyk culture of Minusinsk Krai (second century B.C third-fourth centuries A.D.). The craniological material is very limited but very indicative. The paucity of material is explained by the fact that cremation was practised during the Tashtyk epoch. However, the preservation of the female crania is possibly explained by the fact that sometimes women were buried rather than cremated. The racial diagnosis proved difficult. Nevertheless, this series reveals an indubitable Mongoloid admixture. This conclusion, made on the basis of the craniological material, is fully confirmed by the most valuable iconographic material in the shape of 43 plaster masks made by the Tashtyks from the faces of the deceased. The first investigators of these masks, Goroshchenko (1902) and Kiselev (1932), found both Europeoid and Mongoloid types.

However, Debets applied to these masks his own original method of investigation consisting of a precise anthropological analysis. This investigation agrees fully with the data which were obtained from the craniological material. As a result of these parallel investigations, Debets arrives at the following conclusion: "During the Tashtyk Epoch, representatives of the Asiatic stem penetrated Minusinsk Krai and mixed with the autochthonous population."

In comparison with the preceding Tagar Epoch (eighth-sixth centuries B.C.), the specific weight of the Asiatic component increases sharply during the Tashtyk epoch (second century B.C. – third-fourth centuries A.D.) [19, p. 134]. Alekseev also mentions that in "Tashtyk times, individual representatives of the Central Asiatic type of the Great Mongoloid Race penetrated the Minusinsk depression" [1].

West of Minusinsk Krai, in the foothills and highlands of the Altai (in the Biya and Katun basins), the anthropological composition of the population of the first millennium B.C. reveals the same picture: "In the middle of the first millennium B.C., there appears from the East, most probably in connection with Hunnish conquests, a dolichocranial Mongoloid element" [19, p. 143].

4. Reports on Ancient Tribal Unions of Kirghizia and Kazakhstan: the Sacae, Wusuns and Yuechis, and the Problem of Their Language Affinities

At the present time we possess sufficiently varied material on the palaeoanthropology of some ancient tribes of Kirghizia and Kazakhstan.

Reports on tribal unions of Kirghizia and Kazakhstan at the end of the first

millennium B.C. to the beginning of the first millennium A.D. originate from Chinese Annals. Chinese chroniclers used for these peoples the designations Wusuns, Yuechis, and Se. The Se nation is usually identified with the Sacae of Persian cuneiform writings, and with the "Asiatic Scythians" of Greek authors.

The majority of scientists are inclined to believe that linguistically the entire group of tribal unions (Se, Wusuns and Yuechis) belongs to the Iranian branch of the Indo-European linguistic family.

Nevertheless, it is necessary to note that at present we still do not have any documentary remains of the language of the tribal unions of the Se, Wusuns and Yuechis. W.W. Barthold [Russian text V.V. Bartold] refers to this whole group as "the nomadic Iranian tribes of Semirechie" [58, p. 7]. He classifies them in the Iranian branch of Indo-European languages, referring to documents found in Eastern Turkistan by Gruenwedel (1902-1903) and [Sir Aurel] Stein (1901 and 1906-1907) [59, p. 11]. Some of these documents found in the Kucha (Kuche) District were designated as Language I; those found in the region of Khotan as Language II. The Yuechis of Chinese Annals are identified as that tribal union which was known to classical authors under the name Tokharians. There were no Yuechis-Tokharians in the Kucha District where Language I was found. On the contrary, the Yuechis-Tokharians definitely inhabited the area of Khotan. Language II, in which the documents found here were written, proved, according to Barthold, to be "Iranian in grammatical structure and, to a considerable degree, Indian as to vocabulary. However, regardless of borrowings from a foreign language, Language II remains as Iranian as English is Germanic" [59, p. 12].

This discovery, which points out the simultaneous existence in one and the same place of the Iranian language (II) and the Tokharians identified as the Yuechis, is apparently the only argument for classifying the whole group of the Wusuns, Yuechis and Se in the Iranian linguistic group. The relationship of the Yuechis and Se to the Iranian linguistic group is also supported by F.A. Rozenberg [98, 99].

At present it is generally accepted that the ancient population of Kirghizia and Kazakhstan spoke the language of the Iranian branch. In any case, in the last edition of the "History of the Uzbek SSR," the ancient local population of Semirechie is called Iranian-speaking. This population was later Turkized. Apparently this process of Turkization began with the epoch of Hunnish migration. Further on in the course of time the language of the Turki tribes, who settled here, became the "conquering language," displacing ancient languages and dialects [77, p. 371].

5. Palaeoanthropological Data on the Europeoid Type of the Sacae (Se), Wusuns and Yuechis, and of the Population of Kazakhstan During the First Millennium B.C.

At the present time from Kirghizia we possess material on the craniology of all three tribal unions described in the Chinese Annals, namely, the Se (Sacae), Wusuns and Yuechis.

Sacae. 1. Some material was obtained from excavations of the Tien Shan-Alai Expedition, under the leadership of A.N. Bernshtam, which operated in the Naryn Basin and in the Alai Valley during 1945-47. This material includes the period from the seventh-first centuries B.C.: one cranium from the seventh-sixth centuries; one from the fourth-third centuries; one from the third century B.C.; one from the first century B.C.; and one from the first-third centuries A.D. This small series of five crania was described by V.V. Ginzburg: "The racial type of all crania is Europeoid. Basically, the type is that of the Central Asiatic Interfluvial Region" [7]. This entire series is very similar to the Wusun crania studied by T.A. Trofimova (see below).

2. This material was supplemented from subsequent excavations by A.N. Bernshtam (1948-50) in Central and Southern Kirghizia. Thanks to this, Ginzburg had at his disposal a relatively adequate series of 10 male and 6 female crania. Bernshtam classified this series with the Sacae and early Wusuns of the seventh – third centuries B.C. The entire series also appears to be related to the same type of Europeoid race of the Central Asiatic Interfluvial Region [16].

Wusuns (Usuns). 1. The first material on the craniology of the Wusuns was obtained by Griaznov and Voevodskii from kurgans near Przhevalsk. The whole series was studied by Trofimova [43] and later by Debets. It appeared to be typically Europeoid. Trofimova classified 2 mesocephalic crania as belonging to the "Mediterranean Europeoid race," and 5 brachycephalic crania to the Europeoid race of the Central Asiatic Interfluvial Region.

2. A series of Wusun crania was obtained in 1953 by the Archaeological Section of the Tien Shan Joint Expedition. These were studied by N.N. Miklashevskaia and incorporated into her dissertation. The whole series (number not mentioned in the author's abstract) was attributed to the first centuries B.C. and proved to be typically Europeoid with transitional forms from the Andronovo type to the Central Asiatic Interfluvial Region race [28].

Wusuns-Yuechis. Under this heading there are, among Ginzburg's material, 6 male and 1 female crania obtained from the central regions of Kirghizia. The whole series is attributed to the period from the second century B.C. – second century A.D. Similar to the preceding series, this group proved to be clearly Europeoid with transitional forms from the Andronovo type to that of the Central Asiatic Interfluvial Region.

From Eastern and Southern Kazakhstan were obtained materials dating from the first millennium B.C. which, however, was ethnically not determined. The racial composition of the population of the steppes of Kazakhstan during this period repeats precisely that of the population of Kirghizia. The material covers the time interval of eight centuries, from the ninth to the first century B.C.

In Eastern Kazakhstan [15a], the most ancient group (ninth-eighth centuries B.C.) was obtained in the Semipalatinsk Oblast on the Upper Irtysh [Irtish]. The material from Chiliktin Valley is dated from the fifth – fourth centuries, those from Sary-Kola littoral from the third – fourth centuries [sic] B.C., those from Kula-Zhurga on the Upper Irtysh from the third-second centuries and those from the region of Baty during the first century B.C. From this material Ginzburg succeeded in examining 16 crania, all related to the Europeoid type, except the Baty cranium attributed to the first century B.C.

Similar to those from Kirghizia, these Europeoid crania are represented by transitional forms from the Andronovo type to that of the Central Asiatic Interfluvial Region [15a].

From Southern Kazakhstan, crania were obtained covering the period from the third-second centuries B.C. to the twelfth-thirteenth centuries A.D. These crania were also studied by Ginzburg [15]. The most ancient among them were four crania obtained from Chulak-Tau, northwest of Dzhambul. Bernshtam dates them in the third – second centuries B.C. Three crania appeared to be clearly Europeoid, transitional from the Andronovo type to that of the Central Asiatic Interfluvial Region, while one may be suspected to have a Mongoloid cast. However, Ginzburg observes that this is "not clearly expressed."

Thus, the palaeoanthropological material revealed that during the first millennium B.C., the Europeoid race inhabited Kazakhstan. The same race entered into the composition of the ancient Iranian-speaking tribes of Kirghizia, known to the Chinese under the name of Se (Sacae), Wusuns and Yuechis.

This Europeoid type was apparently a transitional form from the more ancient

Andronovo to the later type of the Central Asiatic Interfluvial Region, which even at present clearly prevails among the Uzbeks and Tadzhiks.

6. Historical Reports on the Europeoid Type of the Sacae (Se), Wusuns and Yuechis

The above-cited palaeoanthropological materials which testify to the Europeoid type of the ancient population of Kirghizia and Kazakhstan, and the widespread distribution of Europeoids far to the east of Central Asia, close to the Sayan-Altai highlands, is confirmed by historical reports. We have in mind reports on the Europeoid type of light color [blonds], which for more than a century has been known in [anthropological and historical] literature as the "Dinlin" or "blond" race, which once inhabited the extensive territory from the Upper Yenissei to Issyk Kul. Topinard, in citing numerous authors of the first half of the past century, came to the conclusion that this "blond type played a significant role in Asia" [42, p. 441].

As bearers of the "blond type," he names the same groups of the Wusuns or Usuns (U-siny), Dinlins (Ting-ling) and, apparently, Kirghiz (Chien-k'un), which even now appear in corresponding works of historians and anthropologists as the representatives of the Europeoid Dinlin race [42, p. 435]. In the West it was represented by the Wusuns of the Chinese Annals, in the East by the Dinlins of the same Annals. The headquarters of the Wusuns, Ch'ih-ku, was located at the turn of our Era on the southern littoral of Lake Issyk Kul [55, p. 4].

The Chinese historian (Yen) Shih-ku (seventh century A.D.) reports the following about this people: "The Usuns [Wusuns] are in appearance different from other foreigners of the western lands. The present-day Turki [in Chinese text 'Hu' = barbarians] with blue eyes and red beards, resembling monkeys, are their descendants" [68, p. 65]. Evidently, the Chinese, being typical Mongoloids with dark eyes, dark hair and scanty hair on the face, were impressed first by those characters of the Wusuns not commonly observed among the Mongoloid Race: abundant hair cover (which in their eyes made the Wusuns appear like monkeys) and light color, i.e., blue eyes and "red" beards.

The enumerated palaeoanthropological material showed that the Europeoid type was characteristic not only of the Wusuns but also of the Sacae and of the Yuechis. This is indirectly confirmed in historical accounts. In the translation of Chinese Annals by Iakinf Bichurin, it is indicated that the country of the Wusuns was first settled by the Se [Sacae] people, then by the Yuechis, and only later by the Wusuns who included the above-mentioned two peoples in their composition.

> Originally this country [of the Wusuns] belonged to the Se people. The great Yuechi in the west defeated and drove out the Se ruler. The Se ruler moved south over the hanging pass. The great Yuechi went west and subjugated Dakhi; the ruler of the Usuns remained in his lands; accordingly, branches of the Se and Yuechi tribes are living among the Usuns [68].

Independently of Bichurin's translation, there exists a German translation of the same part of the Chinese Annals. The German historian, Herman, cites the part from the Chinese Annals of the Han dynasty, in which the country "A-sun," that is, the country of the Wusuns, is mentioned.

> Originally it was the country of the Saki [Sacae]. The Yuechis moved west and drove out the King of the Saki. The King of the Saki went south using the hanging pass. The great Yuechis took over this country. Later, the ruler of the Usuns attacked the great Yuechis and expelled them. When the great Yuechis moved west and subjugated the Ta-shih [Tokharians (?); in Iakinf Bichurin's

> translation Dakhi. (L.V.O.)], the ruler of the Usuns occupied their country. For this reason the Usuns contain racial elements of the Saki and of the great Yuechis [106, p. 1614].

Thus, the German translation of the Chinese text repeats exactly Bichurin's translation.

Both translations report that the shores of Issyk Kul were originally occupied by the Se nation, which was replaced by the Yuechis who, in turn, were replaced by the Wusuns. At the same time not all tribes which preceded the Wusuns in the northeastern part of Semirechie were displaced from their original habitations. The Se and Yuechis, who remained, became a part of the Wusuns, who later occupied their territory. It is possible to suppose that the race of Europeoid blonds entered to some degree into the composition of the whole ancient ethnic stratum of Semirechie.

The above-cited palaeoanthropological materials testify that not only the Wusuns but also the Yuechis are Europeoid types. This is indirectly confirmed not only by the cited but also by other historical sources. The Yuechis of Chinese Annals are identified with that people which was known in Western sources under the names of Tokharians and Ephthalites. Barthold points out that the Tokharians-Ephthalites, "came from among those fellow countrymen who remained in the east--the Yuechis" [60, p. 5]. On the other hand, in later Byzantine sources, the Ephthalites-Tokharians are called Huns-Ephthalites or "White Huns." Procopius, sixth century historian, characterizes them as follows:

> Although the Ephthalites are a people of Hunnish tribes, they are not mixed with the Huns whom we know. Among all the Huns, they are the only ones without a repulsive face, and have a white body [69, p. 11].

Evidently, the Byzantine author understands as the "Huns whom we know" the Hunnish hordes, who at that time had already invaded Europe. These Huns were emigrants from Mongolia, that is, from the very center of distribution of Mongoloids. They were well-known not only to Procopius, but also to other historians, particularly to the Roman historian, Ammianus Marcellinus (fourth century) and to the historian of the Goths, Jordanes (sixth century). Rome as well as Byzantium were in close contact with these Hunnish hordes who, after the disintegration of Attila's empire, led a nomadic life in "Pontic countries," that is, in present southern Russia. These nomadic Huns appeared so ugly to the above historians that they "seriously assumed that the Huns purposely distorted their faces from childhood" [84, p. 78].

Procopius was mistaken in assuming that the people who were known under the name of the Huns-Ephthalites (actually the Tokharians and Yuechis of Chinese Annals), belonged to "Hunnish stock." However, these Huns-Ephthalites were in physical appearance so very different from the Huns who migrated to Europe that Procopius noted the most distinguishing features: white bodies and facial traits to which the European eye was accustomed, traits which made Ephthalites not at all "with ugly faces" to the European taste.

The above-cited palaeoanthropological material showed that up to the end of the first millennium B.C. the area inhabited by Europeoids extended far to the east, up to the Sayan-Altai highlands, and to the Upper Yenissei in particular. This fact, which is now firmly established by palaeoanthropological investigations, fully confirms the historical accounts known before.

The Chinese Annals refer to a lightly pigmented or blond type as characteristic for a nation known as the Dinlins, who inhabited the area of the Upper Yenissei. As it is known, the ancestors of the present Kirghiz also lived there. They mixed with

the Dinlins and absorbed into their anthropological composition the blond elements [lit. the lightly pigmented type] which characterized the Dinlins. Thus, according to the Chinese chroniclers, in the Kirghiz country (on the Yenissei) "the inhabitants mixed with the Dinlins...are generally tall, with red hair, red-cheeked and blue eyes" [53, p. 322].

The same anthropological peculiarities, which pertained to the Kirghiz during the epoch of their dwelling beside the Yenissei, were also noted by Moslem sources, which for this reason even related them to the Slavs. Thus, Gardizi, historian and geographer of the eleventh century, writing in the period of Sultan Abd-ar-Rashid (1050-1052) in a work entitled "Illustrated News" [lit. "Adornment of News"], reports that the "traits of Slavic origin of the Kirghiz are still visible in their appearance, that is, red hair and light skin" [54, pp. 108-109]. In another place Barthold notes that even before Gardizi, the historian Ibn al-Muqaffa (eighth century) "considered the Kirghiz to be kin to the Slavs" [62, p. 10]. The emphasized resemblance to the Slavs indicates of course that the light color was not characteristic of the Mongoloid, but of the Europeoid type. Arab geographers could probably report on the blond Slavs whom they could encounter among the Volga Bulgarians.

These reports, recorded by various authors in different countries and at different epochs (in China and in Persia), appeared so convincing to Barthold that he wrote:

> All that we know from Chinese sources about the Kirghiz language indicates that it is Turkish in character, but at the same time there are anthropological traits in evidence which point out a non-Turkish origin, as for instance the light hair. The Chinese evidence in this case is fully confirmed by that of the Moslems who, in view of the above-mentioned anthropological traits, supposed that there was a kinship in origin between the Kirghiz and the Slavs. In any case, exist the indubitable fact of the existence of such anthropological traits, and the equally indubitable fact of their almost complete disappearance during the following centuries [60, p. 23].

Unfortunately, up to now these reports have not yet been confirmed by palaeoanthropological material. In the northern part of the Minusinsk depression a small series of crania (20 male and 10 female crania from the sixth-twelfth centuries) was obtained. This series was studied by V.P. Alekseev. However, this author writes that "their ethnic connection with the 'Yenissei Kirghiz' may only be supposed" [2, p. 112]. For this reason this series appears in his work as "Yenissei Kirghiz" within quotation marks. Alekseev points out that the Mongoloid component clearly dominates among them. In his opinion, the similarity of these "Yenissei Kirghiz" with the contemporary Kirghiz "permits one to give an affirmative answer to the question of their genetic kinship" [2, p. 115]. However, Alekseev could muster only very insignificant material (6 male crania) for purposes of comparison. In addition, the chronological dating from the sixth to the twelfth centuries covers a period of six centuries during which the Mongolization of some groups of the inhabitants of the Minusinsk Krai could have taken place. One such group appears quite provisionally under the name of "Yenissei Kirghiz." In other words, reliable palaeoanthropological material on the Kirghiz type from the epoch of their habitation along the Yenissei is still lacking. Only the above-cited historical reports are at present beyond doubt.

Beyond doubt also are the above-enumerated palaeoanthropological and historical data, which testify to the fact that up to the end of the first millennium B.C. the population of Kirghizia and Kazakhstan was represented by Europeoids, in all probability by Iranian-speaking tribes.

7. Penetration of the Territory of Kirghizia and Kazakhstan by the Europeoid Iranian-speaking People from Sogdiana

The ancient Europeoid Iranian-speaking population of Kirghizia and Kazakhstan was, to some degree, replenished by emigrants from the very center of the Central Asiatic Interfluvial Region, namely Sogdiana. The latter covered the Zarafshan and Kashka Darya basins. It is definitely established at the present time that the Sogdian language belongs to the Iranian branch of the Indo-European languages. The anthropological type of the Sogdians is also known. It was represented by the Europeoid brachycephalic race of the Central Asiatic Interfluvial Region. Thus, the Sogdian colonization of Kirghizia and Kazakhstan, which came from the south, did not effect any essential changes in the linguistic and racial composition of the ancient population of Kirghizia and Kazakhstan.

However, the Sogdians, as one of the ethnic components, did undoubtedly participate in the ethnogenesis of the Kirghiz and Kazakhs. It is well-known that their colonies were being established not only in Kirghizia and Kazakhstan, but also in Eastern Turkistan, and reached close to Lob Nor. According to historical sources, a sedentary agricultural Sogdian population was known in Semirechie at least from the seventh century. The Sogdian element was apparently relatively numerous because Mahmud of Kashgar (eleventh century) reports that in his time the population of the city of Balissagun [Balassagun or Balasagun] was bilingual and the Sogdian language was spoken, in addition to Turki.* In Bernshtam's opinion, the Sogdian colonization of Eastern Turkistan originated in Semirechie [64].

A. IU. IAkubovskii points out that in Northern Kashgaria, in Kao-ch'ang, the Uigurs, who appeared here in the ninth century, were preceded "by the local autochthonous Iranian as well as by the Sogdian population" which came from Semirechie [89, p. 436].

Probably the Sogdian colonization from Semirechie penetrated even further to the east. "In the seventh century, there existed in the Lob Nor area a flourishing Sogdian colony which during the eighth century attained full autonomy under the rule of its own Princes" [98, pp. 82-83]. Barthold mentions Sogdian colonies south of Lob Nor [61, p. 19].

The Europeoid Iranian-speaking stratum, which was formed in Kirghizia and Kazakhstan from the ancient local autochthonous population and the people who came from Sogdiana, subsequently became completely Turkized in language, and to a large degree Mongolized in type by stratifications of tribes coming from the East. This parallel process, Turkization of the language and Mongolization of the type, began in the second century B.C., with the epoch of the migration of the Huns.

8. Migration of the Huns and the Beginning of the Mongolization as to Type and Turkization as to Language of the Ancient Iranian-speaking Europeoid Population of Kirghizia and Kazakhstan (First Centuries B.C.-First Centuries A.D.)

The spreading of Mongoloid characters among the local Europeoid ancient population of the Sayan-Altai highlands and of the westward extending broad steppe zone of Eurasia coincided with the beginning of the expansion of the Huns "from the Selenga to the Danube," that is, from Mongolia to Central Europe.

*From L.V. Oshanin's record of W.W. Barthold's lecture read at the Department of Eastern Studies of SAGU in 1927. From among published works see W.W. Barthold: "Contribution to the Problem of Sogdian and Tokharian languages," Iran, vol. 1, p. 36, Leningrad, 1927.

It is necessary to determine precisely what is actually meant by the term "Huns," which is just as hazy as the term Scythians, and which is used in various connotations. This term is used in this case in an ethnic sense, which denotes that union or association of tribes which the Chinese called "Hsiung-nu" and in Western sources appears under the name of Huns. There is no doubt that the tribal and racial composition of this union changed over the vast territory from Mongolia to Hungary. In the course of their 500 years of migration westward, the Huns had to incorporate increasingly more new tribes. However, as the following palaeoanthropological data show, some of these tribes which had become united while still in Mongolia brought their characteristic racial type to Hungary. Evidently, these groups occupied a separate, closed position on top of the social scale of the tribal union which uninterruptedly changed its anthropological composition.

In the given case, under the name of Huns should be understood the original complex of tribes, which had already united on the steppes north of the Huang-ho River, in the very center of the homeland of the Mongoloid Race.

It was said above that during the first millennium B.C., typical Mongoloids lived beyond Lake Baikal. This is supported by previously mentioned material obtained by Tal'ko-Grintsevich from graves in the so-called "larch clearing log cabins." This is also confirmed by material collected by the Kozlov Expedition from the "Czars' kurgans" at Noin-ul in Mongolia. These graves in the "larch clearing log cabins" belong to the lower strata, those of the "Czars' kurgans" to the upper social class of one and the same people. In accordance with data from Chinese Annals, K. V. Trever assigns these "Czars' kurgans" to the Huns.

Thus, we possess at the present time palaeoanthropological material which characterizes the racial type of the eastern Huns. Debets connects the sharp increase of the Mongoloid component west of Lake Baikal during the growth of the Tashtyk culture on the Upper Yenissei (Minusinsk Province, second century B.C. – third century A.D.) with the expansion of the Huns. Quoting from G.P. Sosnovskii, Debets notes that according to "reports of Chinese Annals, this country bearing the name Han-hun (He-hun), and later Khakas (Khakass) was conquered by the Huns who then mixed with the Dinlins" [19, p. 130].

For the problem of the ethnogenesis of the peoples of Central Asia, it is quite essential that we now have the possibility of not only determining accurately the time of the initial significant spreading of the Mongoloids from their original area, but also to connect this event with the beginning of the expansion of the Huns.

In this respect, the comparison of the anthropological type of the two extreme branches, the eastern and western, of the Huns, is of the greatest interest. It was found that the Palaeo-Siberian (Debet's terminology) variant of the Mongoloid Race was characteristic not only of the eastern, but also of the western Huns. As Bartucz' investigations (1929) showed:

> The Palaeo-Siberian Mongoloid type (whose proper diagnosis is beyond doubt) appeared in Hungary together with the Huns, that is, with that people to whom are also attributed the Transbaikalian graves in "log cabins." Thus, there is an additional reason to identitfy the Chinese Hsiung-nu with the Huns of Europe [19, p. 121].

The way of the Huns to Europe led through the steppes of Kazakhstan and Kirghizia. In the light of all these facts, we have sufficient reasons to date the beginning of the spread of Mongoloid characters among the population of Central Asia in the period of the appearance of the Huns. The admixture of Mongoloid characters among the population of Central Europe also began with the movement of the Huns. This is brought out not only by the above-mentioned investigations by L. Bartucz,

but also by the data which N.N. Cheboksarov gives in his work entitled, "Mongoloid elements in the population of Central Europe."

Cheboksarov noted that typical Mongoloids of "Central Asiatic type," with a large, flat face, a great morphological facial height, and a wide bizygomatic breadth, were unknown in Europe until the appearance of "steppe nomads in the fourth century A.D.," i.e., the very same Huns [45]. The Mongoloid character of the anthropological type of the Huns, who penetrated Europe in the fourth century, is also confirmed by historical sources. As it is known, the Huns, after defeating the tribal union of the Alans on the Ciscaucasian steppes in the years 370-71, moved far into Western Europe [74, pp. 31, 37].

The historians Ammianus Marcellinus (fourth century) and Jordanes (sixth century) recorded those peculiarities which obviously distinguished the Huns from the average Europeoid type: short stature; broad shoulders; absence of hirsuteness; wide face with prominent malars; narrow eyes; and flat nose. These traits leave no doubt that the Huns belong to the Mongoloid Race [84, p. 78].

The Huns appeared in Semirechie during the second century B.C. The German historian Herman even attempts to narrow this date down to the year 160 B.C. [106, p. 1611]. Comparing the time of the appearance of the Huns in Semirechie during the second century B.C. with the time of the defeat of the Alan tribal union in the fourth century A.D., it is permissible to think that the territory of present-day Kirghizia and Kazakhstan began to be saturated with Mongoloid elements fully 500 years earlier than that of the European steppes.

This is fully confirmed by the palaeoanthropological material obtained in recent years. The first material on the craniology of the Huns was obtained by A.N. Bernshtam from the well-known Kenkol burials on the Talass River. Of 20 well-preserved crania, examined by Ginzburg and Zhirov, 9 belonged to an "attenuated Mongoloid type"; 8 were mixed, combining Mongoloid and Europeoid features; and 3 were typical brachycephalic Europeoids [8]. On the basis of archaeological and historical data, Bernshtam dates the Kenkol crania to the threshold of the present Era, and supposes that the Mongoloid crania belong to the newly immigrating Huns and Europeoids, i.e., to the local brachycephalic races of Central Asia, which had its center of distribution in the Central Asiatic Interfluvial Region. It is proper, however, to point out that Debets' comparison of the Hunnish crania from the Kenkol burials with Wusun crania did not reveal any stronger Mongoloid features of the Kenkol "Huns" as compared with those of the Wusuns. Without rejecting Bernshtam's hypothesis, which regards the Kenkol burials as belonging to the Huns, Debets supposes that the palaeoanthropological data should be excluded from the series of arguments which support that hypothesis. Debets writes, "It is, of course, possible that the Huns who came to Kirghizia were assimilating a great number of representatives of other peoples, Europeoid in anthropological type and non-Turkic in language" [21, p. 13]. It seems to us that such a point of view is more than plausible, judging by analogous processes of assimilation, in the Central Asiatic Interfluvial Region, of the local population by the immigrants.

Such a proposition is fully corroborated by the bone material obtained from Hunnish graves in the eastern Tien Shan and in the Alai Valley during the activities of the Tien Shan-Alai Expedition led by Bernshtam in 1945-48. This material covers the period from the first century B.C. to the fourth century A.D. The entire series of Hunnish crania was examined by Ginzburg [7]. Out of 9 crania, 3 were Europeoids of the Central Asiatic Interfluvial Region type, and 6 were of a mixed type. The whole series is close to that of the crania from the Kenkol cemetery. Comparing both series, Ginzburg comes to the--from our point of view--completely correct conclusion that the Huns included in their composition the local Europeoid population, the Sacae and the Wusuns who preceded them.

The 1949 excavations yielded another 10 crania from Hunnish graves in Kirghizia. Thus, Ginzburg had at his disposal a total series of 19 crania dated from the first century B.C. to the fourth century A.D. [16]. Eleven crania of this series were obtained from central Kirghizia, 6 from the Alai Valley (Chon-Alai), and 2 from the northern littoral of Lake Issyk Kul.

Analyzing all material from the excavations of 1945-48 and 1949, Ginzburg relates it to the Europeoid type of the Central Asiatic Interfluvial Region with only an insignificant admixture of Mongoloid characters. The entire series is similar to the Kenkol Huns, but less Mongoloid than the latter.

The most recent material obtained from Hunnish graves in Kirghizia is that from the excavations of the Archaeological Section of the Joint Expedition (1953). Miklashevskaia [28] included this material in her dissertation. According to her conclusions, there are no marked differences between the Tien Shan and Talass (Kenkol burials) Huns. All Hunnish crania are very heterogeneous from the anthropological point of view. Among them one encounters typical Europeoids, as well as typical Mongoloids and mixed types. In Miklashevskaia's opinion, all this material reflects the process of intrusion of Kirghizia by the Huns.

Following the movement of the Huns and paralleling the process of Mongolization of the ancient local population according to type, also began the process of the Turkization of this Iranian-speaking population in regard to language.

The language of the Huns has always been classified in the Turkic linguistic family. Isolated is the opinion of Pelliot, who relates the language of the Huns to the Mongolic linguistic family. Barthold points out that this opinion contradicts the generally accepted concept, according to which the Mongolic-speaking tribes lived eastward of the Turkic-speaking groups and moved westward later than the Turki [63, p. 5]. In the broad steppe belt of Central Asia, Turki tribes appeared first, and only later the Mongolian. As is known, these Mongolic-speaking tribes on the territory of Central Asia soon became Turkized.

Soviet historian A.N. Bernshtam points out that the process of Turkization of the language of the ancient local population of Kirghizia began with migration of the Huns during the second century B.C., and wrote:

> The hegemony of the Huns during the first centuries of the new Era in Semirechie...and the mestization of the Huns with Usun tribes determined the Turkic ethnogenesis of the Usuns, who had entered into the composition of the Turki tribes of Semirechie [67, p. 100].

In Bernshtam's opinion, it was this invasion by the Huns which constituted the most important condition for "the creation of the linguistic Turkic character of the local nomadic Sacae-Usun tribes who, during the Hunnish period, had finally entered the main stream of Turkic ethnogenesis. The Usuns were Turkized by the Huns" [67, p. 105].

The invasion of the Huns constituted only the initial penetration of Mongoloid Turkic-speaking tribes into the territory of Kirghizia and Kazakhstan. The Mongolization of the type and the Turkization of the language of the ancient population of these countries, to that full degree we can observe among the present-day Kazakhs and Kirghiz, was effected only by later stratifications of Mongoloid Turkic tribes who came from the east following the Huns.

All this is supported by palaeoanthropological material and historical accounts, which depict the further spread of these tribes.

9. Reports on the Further Spread of Turkic-speaking Mongoloid Tribes (Second Half of First Millennium - First Half of Second Millennium A.D.)

During this epoch, as during the preceding one, Transbaikalia was inhabited by typical Mongoloids who were, however, brachycephalic and broad-faced. Twenty skeletons were excavated by G.P. Sosnovskii near the Selenga River basin. He dates them as belonging to the eighth-tenth centuries and to the "ancient Turki." In the middle of the second millennium A.D., the Selenga basin was inhabited by the same brachycephalic, broad-faced Mongoloid racial type. In favor of this theory is a series of crania excavated by Tal'ko-Grintsevich, later examined by Debets. Comparing both series (eighth-tenth centuries and middle of second millennium), Debets reaches the conclusion that the crania of the Transbaikal region "which can be attributed to the ancient Turki are characterized by the same racial features as the majority of the present-day Turkic peoples of Northern Asia (Tuvans or Tuvinians, Oirots, Kazakhs)" [19, p. 19].

As previously pointed out, the ancient local population on the Upper Yenissei (Minusinsk Krai) was represented by typical Europeoids. It was not until the epoch of the so-called Tashtyk culture (second century B.C. - third century A.D.) an admixture of Mongoloid elements appeared. The same relationship of the basic interrelationships types may be observed in the Altai. The Mongoloid element becomes stronger only during the period of Hunnish expansion.

After the migration by the Huns, the Mongoloid element already clearly predominates again in the Minusinsk Krai and in the Altai. Thus, all the crania (20 males, 10 females) from the Upper Yenissei, attributed to the seventh-thirteenth centuries, are classified in the Great Mongoloid Race. "Europeoid admixture is merely admissible, but not proved." In the Altai, during this time, "the traces of the ancient Europeoid population became almost completely obliterated. During this epoch the anthropological type of the population of the southern Altai is completely identical with that of the population of the Minusinsk Krai, and very similar to the Transbaikal population" [19, pp. 204, 210].

This indicates a movement of new successive stratifications of Mongoloid tribes from the east in the wake of the Huns.

Unfortunately, the palaeoanthropological material, which could be related to some people appearing in the wake of the Huns on the steppes and in the mountains north of Syr Darya, is still lacking at present and palaeoanthropological material which is chronologically dated, but ethnically undefined, is scarce. Because of the paucity of palaeo-materials, linguistic affiliation may be utilized in order to determine whether a given people are in-migrants or autochthonous. However, this may be done only in those cases when it is determined by linguists on the basis of documents, and when historians are able to report on the basis of contemporary [lit. critically verified] sources the time of the appearance of a given language, and the territory where the original core of the tribe--bearer of that language--was formed.

In the course of its formation upon a definite territory, a given tribe--bearer of a definite language--should also have included in its composition that race whose center of distribution at the time or earlier was the same definite territory.

Of particular importance in this regard are the stratifications of Turkic-speaking and Mongolic-speaking tribes which were moving into the territory of Kirghizia and Kazakhstan from the east, from the original center of distribution of the Great Mongoloid Race.

It is possible that the process of Turkization of the ancient Iranian-speaking population of the Tien Shan and of the steppes of Kazakhstan began even before the epoch of the migrations of the Huns. However, beginning with this epoch, the diffusion of Turkic languages spread more and more, not only in the northern broad

steppe belt of Central Asia, but also in countries extending far to the west, even to the Danube. Paralleling the Turkization of the language, the Mongolization of the population of these countries occurred.

Let us note some of the high points of this parallel process. During the first century of our Era, the rule in Mongolia passed from the Huns to a people known in Chinese Annals as Hsien-pi [Russ. Sianbi]. On the basis of a study of dictionaries compiled in ancient times by the Chinese, Pelliot supposes that that people should be grouped among those of Turkic linguistic affiliation [63, p. 5]. However, for the discussion [lit. judgment] of their racial type, we have neither palaeoanthropological nor historical data. Yet, judging by their habitation in Mongolia, there is no reason to doubt that the Hsien-pi belonged to the Great Mongoloid Race. There is nothing to indicate how far the Hsien-pi moved to the west. If they succeeded, however, in penetrating at some time the territory of Kirghizia and Kazakhstan, they could have only reinforced the process of the Mongolization of the type and the Turkization of the language of the local population which began with the Hunnish epoch.

During the fourth-fifth centuries, the rule in Central Asia passed to another people whom the Chinese Annals mention as the Juan-Juans [Russ. Zhuzhans or Zhuan-Zhuans]. To the extent that the Juan-Juans are identified in Russian sources as the Obri, and in Western sources as the Avars, definite data are available in regard to their expansion. The Obri-Juan-Juans appeared on the South Russian steppes during the sixth century and in this same century they penetrated the territory of future Hungary, which at that time was called Pannonia. Here they organized an independent Avar State which existed until the ninth century.

Shakhmatov considers the Avars to be a nation of the "Uigur root," therefore speaking a Turkic language [101]. Pelliot relates their language to the Mongolic group [63, p. 5]. However, the majority of scientists consider the Avars to be Turki [91]. Apparently, the palaeoanthropological material obtained in Hungary may be attributed to a large extent not only to the Huns but also to the Avars. In referring to the previously mentioned work of the Hungarian anthropologist [Lajos] Bartucz, who studied many burials of "the Hun-Avar period," Ginzburg observed that in the work which "summarizes the results of the latest investigations (1934) Bartucz wrote that 'Hunnish burials are not known at present, since those which were attributed to the Huns are considered now to be those of the Avars'" [8, p. 263].

At present, Hungarian anthropologists have at their disposal extensive palaeoanthropological material obtained from Avar burial grounds of the eighth century. A series of 85 crania obtained from Iullë settlement near Budapest in 1931-32 was supplemented in 1950-51 by a series of 51 crania obtained from nearby Avar graves also of the eighth century. This rich material was studied by P. Liptak. In both series (Iullë I and Iullë II) there are among the various Europeoid types (Mediterranean, Alpine and Northern) Mongoloid types which compose about one-third of the total population of the Avar graves of the eighth century. These Mongoloids are represented by variants which Sovïet Anthropologists describe as the Baikal, Central Asia and North China types. The latter "testifies that ethnic elements from the Far Eastern part of the Zhuan-Zhuan [Juan-Juan] State [105] also participated in the tribal union of the Avars." In regard to the Europeoids, if one takes into consideration the fact that the Mediterranean type from the Avar graves may be traced back to the Bronze Age, "it is possible to assume that the Europeoid part of the population was at least partly autochthonous" [105, p. 315].

The palaeoanthropological material obtained from Avar burials in Hungary fully confirms the Mongoloid character of the Juan-Juan-Avar type. Their stratifications in countries through which they passed from Mongolia to Hungary could only

strengthen the Mongolization of the type and Turkization of the language which began during the epoch of the migration of the Huns.

In this manner this simultaneous process could have begun in the northern steppe belt of Central Asia before the formation of the first vast Turki Khakanate of the sixth century. The formation of this Khakanate began in 552, at a time when the united Turki tribes of Mongolia and Altai defeated the Juan-Juans [75, p. 49].

According to Barthold, the basic mass of the Turkic-speaking tribes which formed this Khakanate came from Mongolia, the very center of distribution of the Mongoloid Race. In any event, to them are attributed the famous Orkhon inscriptions in Mongolia. In Mongolia, these tribes were called Togus-Oguzes, and in the seventh century were in a ruling position [63, pp. 6-7]. In Kirghizia and Kazakhstan their composition should have been augmented by the ancient local Europeoid population, which was already partly Mongolized by preceding Turki Mongoloid tribes (Huns, Juan-Juans).

This is confirmed by a small amount of palaeoanthropological material from the Alai Valley and from Southern Kazakhstan dated from the sixth-eighth centuries.

In Southern Kazakhstan four crania were obtained from Shignak-Sai near Arisa. They are being attributed to Turki (Kenegeres or Keneges) and are dated from the sixth - eighth centuries. Ginzburg attributes this small series to a Europeoid type with only a slight admixture of Mongoloid characters [15, p. 384].

In Southern Kirghizia, in Kiukelda (Kiukeldy), in the Kyzyl Alai Valley and in the Alai Mountains, Bernshtam obtained a small series of crania (7 males and 4 females) which he dates in the fifth-seventh centuries. He considers these burials as belonging to the Ephthalites. As has been pointed out previously, it is customary to identify the Ephthalites with the Tokharians or Yuechis of the Chinese Annals. The Europeoid type of the Yuechis (Tokharians and Ephthalites) has been discussed before in sufficient detail. Ginzburg discovered in the "Ephthalite" series from Kiukelda a large variety of types: 1 cranium was typically Europeoid; 3 were typically Mongoloid; the rest were Europeoids with Mongoloid admixture in various degree [16]. There is no reason to ascribe this Mongoloid admixture to the Turki tribes, who created the Turki Khakanate in the sixth century. It is probable that it had already been brought into the Alai Valley by the Huns, as we stated above.

After the partition of the Turki Khakanate at the end of the sixth century into eastern and western parts, the center of the latter became the city of Suyab (Suiab) in the Chu Valley.

Such short episodes as the invasion of the Chinese, who destroyed Suyab in 748, and the invasion of the Arabs, who defeated the Chinese in the famous battle on the Talass in 751, could hardly change the ethnic, linguistic and anthropological composition of the population of the northern steppe belt of Central Asia. In their relations with the northern Turki tribes, the Arabs occupied a defensive position, building walls against their raids in the Chirchik and Zarafshan valleys [61, p. 26].

During the successive changes in the ethnic composition of the population of Kirghizia and Kazakhstan, the same process of expansion of the Turki Mongoloid tribes continued without respite.

Thus, Barthold considers the Karluks, who destroyed the city of Suyab on the Chu in 766, and who then built the city of Balassagun in the same Chu Valley, as Turki who came here from the Altai region [63, p. 8]. Let us recall that the Altai was at this time already settled by typical Mongoloids. According to Bernshtam, the rule of the Turki-Karluks was a long one, from 766-992 [65, p. 20].

The fairly extensive palaeoanthropological material collected by the Archaeological Section of the Joint Kirghiz Expedition is attributed to the period from the sixth-tenth centuries. Miklashevskaia distinguishes in this material two types: a Europeoid similar to the Wusuns; and a Mongoloid similar to the Kirghiz type. Nevertheless,

of the nomads buried near Sarkel. Probably the Mongoloid skeletons from the burials in the environs of Sarkel do not belong to the Khazars proper as an already formed ethnic entity, but to immigrant nomads. On the other hand, there are indirect indications that among the top social stratum of the Khazars, the Mongoloid type was fairly common.

Moses Kalankatvatsi, the Armenian historian, reports that in the year 626 the Khazars besieged Tiflis. The defenders of the city, Georgians and Persians, exhibited on the walls the face of the Khazar Emperor Dzhebukhan carved on a pumpkin. The description of this image (wide face, broad nose, scant hair, narrow eye slits) underlines the exaggerated features of the Mongoloid type [19, p. 118]. In Ginzburg's opinion "the ruling class of the Khazars and, above all, the Khakan and his immediate circle were, without doubt, emigrants from the region of Eastern or Central Asia" [13, p. 311].

Thus, the presence of the Mongoloid component among the tribes which composed the Khazar State is beyond doubt.

An historical report regarding the Mongoloid type of the Turki, who moved far to the south of the Syr Darya, deserves attention. It is dated at the end of the Karakhanid period, at the very beginning of the eleventh century. The Arab historian, Utbi, reports that in 1008, the Turki "with broad faces, small eyes, flat noses, scant hair growth (on face)" suffered a crushing defeat by Ghaznevid Sultan Mahmud [19, p. 186]. The Mongoloid character of the type of these Turki is beyond doubt.

The above exhausts the palaeoanthropological and historical data of the Karakhanid period for the time being.

With regard to the Kipchaks, the Polovtsi of Russian Annals, very valuable data were obtained for the western branch of this people, more precisely for tribes close to it. Referred to are the burials of Turki nomads in the Ukraine where the deceased were buried together with horse cadavers or heads. The close relation of the Polovtsi to such tribes as the Turki and Pechenegs is well-known. A precise delimitation of these three tribes proved to be difficult. All of these date from the eleventh-twelfth centuries.

In the series of 35 crania of this period which were excavated from kurgans of the Dnepropetrovsk and Kharkov oblasts, the Mongoloid type of the South Siberian variety clearly predominates. The presence of Europeoid admixture is beyond doubt [19, p. 262]. It is probable that the eastern Kipchaks were more Mongoloid than the western.

The Mongolic-speaking Kitai (Khatai), who invaded Semirechie from Mongolia in the twelfth century, could only reinforce the Mongolization of the type of the preceding population, but could hardly make any essential changes in the spreading of the Turkic language which had already taken place here.

It is known that in the subsequent movement of Genghis Khan (thirteenth century), Turki and not Mongolian tribes constituted the principal mass of the new immigrants Furthermore, it is known that the splinters of all Mongolic-speaking tribes soon became Turkized.

The palaeoanthropological material of the epoch, which succeeded the Tatar invasion, was obtained from the center of the Golden Horde, the Lower Volga area. This material was investigated by Trofimova and Debets [19, pp. 268-72; 43; 44].

Considering the motley character of the ethnic composition of the Golden Horde, it appeared more practical to divide the material into series as follows: 40 crania from urban burial grounds; 6 crania from kurgans of the Bukeev steppe; and 19 crania from kurgans from the steppes of the Saratov Trans-Volga area. There were difficulties in the dating of some kurgans which, possibly, belong to an earlier period (tenth-twelfth centuries). It proved that the Europeoid racial type clearly predominated in the urban population of the Golden Horde, with, however, a

Mongoloid admixture. The same interrelationship of the basic racial types may be observed in the series of crania of the Bukeev steppe. However, among the nomads of the Saratov Trans-Volga area the interrelationship of the basic racial types is reversed: among them, the South Siberian Mongoloid type is clearly predominant, the type which is so characteristic of the contemporary inhabitants of the eastern Dasht-i-Kipchak, namely the Kazakhs. Debets properly considers that this type undoubtedly came to the South Russian steppes from the east. There is no doubt that the northern steppe belt of Central Asia, which was a part of the eastern Ulus Juchi [Russ. Dzhuchiev], was at that time much more Mongolized than the western Golden Horde. For this reason, we may assume that the racial composition of the population, which composed the Kazakh people, was basically completed by the end of the thirteenth century. Judging from studies by Miklashevskaia, the racial composition of the Kirghiz was completed not earlier than the end of the thirteenth century [28].

During the subsequent period of the rule of Genghis Khan's descendants, and also of Timur's descendants in Mawerannahr, other ethnic changes could have taken place in the population of the Dasht-i-Kipchak and Mogulistan without essentially affecting the racial composition.

10. Place and Time of the Formation of the Kirghiz and Kazakh Peoples

The huge territory, extending from the Urals to the Sayan-Altai highlands, in the course of millennia was settled by the local autochthonous Europeoid Race and by the Mongoloid Race which had come from the east. As a result, there was formed in Kirghizia and Kazakhstan a type mixed as to origin, but with a clearly predominant Mongoloid component. IArkho called this the South Siberian race.

The Kirghiz and Kazakhs included in their composition one and the same races, only with some differences in their quantitative interrelationships; the admixture of the local Europeoid component was preserved to a greater degree on the steppes of Kazakhstan than in the Tien Shan Mountains. However, also among the Kazakhs, the incoming Mongoloid component clearly predominates. The same basic mass of population coming from Inner [Tsentralnaia] Asia entered into the composition of both peoples. In this sense, the Kirghiz and the Kazakhs are closely related as to their origin.

Nevertheless, territorially, chronologically and also partly ethnically, the Kazakhs and the Kirghiz have a quite different origin. The original cores of these peoples were formed on different territories, at different times, and partly by different ethnic components.

> The Kirghiz belong to the most ancient peoples of Central [Sredniaia] Asia. However, of all the peoples now living in Central Asia, there is none whose name could be as early encountered in history [62, p. 5].

The Kirghiz are first mentioned about 201 B.C. At this time, as well as during the following several centuries, the Kirghiz lived on the Upper Yenissei River [62, p. 6].

The origin of the name Kyrghyz, as that people calls itself, remains disputable. In a special work dealing with the origin of this name, Ligeti cites various opinions of authors [104]. The most widespread interpretation is that already given by Radloff [107, p. 163], according to which Kirghiz is derived from "Kirk-Kiz," meaning "40 maidens." This is confirmed by one of the stories regarding the history of the Mongolian Yüan dynasty. In this story it is said that this people originated from 40 Chinese maidens and the same number of men, "U-se," and, therefore, was

called Ki-li-ki-dzi, i.e., Kirghiz. Barthold refers to this same legend [62, p. 29]. Ligeti is inclined to believe that the original form of this name was not Kirk-Kiz (40 maidens) but Kir-Kiz, which is only the ancient plural form of the word "Kirk," meaning 40. Pointing out the very close relationship between the Turki and Mongols in their remote origin, Ligeti presents numerous examples which show that among the Turki as well as among Mongols, numbers in general are frequently used for clan and tribal designations.

In Pelliot's opinion, the Kirghiz correspond to that people which was known in the third century B.C. to the Chinese under the name of "Han-hiun." Later, during the period of the Tang dynasty (seventh-eighth centuries), the Kirghiz were known as the "Khakas." The existence of the name "Kyr-gyz" during the period of the Mongolian Yüan dynasty when the designation "Ki-li-ki-dzi" is mentioned, can be definitely assumed [104, p. 371].

During the period of the first Turki Khakanate of the sixth century, the Turki who lived in Semirechie apparently came into contact with the Kirghiz. Thus, Menander the Protector reports that at the time when Emperor Justin II sent an ambassador to the Turki Khan Dizavul in 568, the latter presented to the Byzantine Ambassador, Zemarchus of Cilicia, a Kirghiz woman slave [104, p. 372]. However, the basic mass of the Kirghiz appeared in Semirechie only a thousand years later, at the beginning of the sixteenth century.

The original homeland of the Kirghiz was, as mentioned before, the Upper Yenissei River region. Miklashevskaia succeeded in making a comparative anthropological investigation of a series of crania of present-day Kirghiz, and a series of crania of the "Yenissei" Kirghiz. The two series appeared to be very similar. "The admixture of Europeoid elements in present-day Kirghiz and in ancient Yenissei Kirghiz was roughly the same" [28]. Thus, the Kirghiz possessed an Europeoid component already during the period of their habitation along the Yenissei. This is confirmed by the historical accounts regarding the type of the Yenissei Kirghiz as mentioned before. The Kirghiz possess the "lightest eyes" among all the peoples of Central Asia. Apparently, their Europeoid component was one of fair color, which is confirmed by the fact that the "blond" Dinlin race already entered into their composition on the Yenissei.

According to Barthold, the expansion of the Kirghiz proceeded in the following stages. The first Russians encountered them on the Yenissei, but their mass migration from there began much earlier. During the ninth century, they moved from the Yenissei to Mongolia where in the year 840 they destroyed the Uigur State [60, 62]. From Mongolia they were forced out by the Kitai. It is possible that also during the tenth century, part of the Kirghiz went to Semirechie where they appeared as the allies of the Karluks against the Tokuz-Oguzes [55, p. 20]. Their basic mass, however, moved to Semirechie considerably later. The Kirghiz were first mentioned in their present homeland in 1503, and from then on their name appears frequently in the history of Semirechie [55, p. 93]. During the seventeenth century, the Kirghiz were forced out of Semirechie by the Kalmyks (Kalmucks) and migrated to Ferghana. It is possible that this migration was not complete, as at the beginning of the eighteenth century the Russian envoy, Captain Unkovskii, mentioned that they were the only Turki peoples who led a nomadic life on the littoral of Issyk Kul during the period of Kalmyk domination [55, p. 93].

After the fall of the Dzungarian (Kalmyk) State and the mass extermination of the Kalmyks by the Chinese in 1758, the main body of the Kirghiz returned from Ferghana to Semirechie [55, p. 97].

The southernmost Kirghiz, the Pamir-Alai group, is separated from the Tien Shan Kirghiz by the broad belt of the Ferghana Valley, the center of distribution of the Europeoid brachycephalic race of the Central Asiatic Interfluvial Region.

As has already been mentioned, the Ferghana Kirghiz included in their composition the Europeoid component in a greater degree than the Tien Shan Kirghiz. On the other hand, the Pamir-Alai Kirghiz are not at all more Europeoid than the Tien Shan Kirghiz. They represent, as it were, the direct continuation of the Mongoloid stratum in the Tien Shan. It is very probable that a part of the Kirghiz moved, still in the seventeenth century, immediately after the Kalmyk invasion, into the Alai Valley without stopping in Ferghana. I was unable to find a direct reference to this event. On the other hand, the migration of the Kirghiz into the Alai Valley could have taken place not from the north through the Ferghana Valley, but from the east, from Sinkiang. Thus, according to the people's tradition told to Bobrinskii, the Kirghiz were preceded in the Alai Valley by the Chung-Bagysh who moved in from Kashgaria [90, p. 23]. In 1935 I had the opportunity to investigate a small group of 35 male Kirghiz of the Alai Valley and 37 males who migrated from there to the Pamir Plateau. These have a lower cephalic index and a smaller bizygomatic breadth. However, we have no data allowing us to connect these differences with the penetration of the Mongoloids from Sinkiang.

Apparently, at that same time, during the seventeenth century, a part of the Kirghiz of the Alai Valley penetrated further westward, to Karategin, and from there southward, to Hissar and Kuliab. The Alai Kirghiz preserved only hazy traditions about these events. They told Bobrinskii that their ancestors lived in Hissar and Kuliab [90, p. 24]. Barthold gives the exact date of their settlement in Hissar in the winter of 1635-36. Between December 11, 1635 and January 9, 1636, 12,000 families arrived in Hissar. It is not mentioned whether they moved further south to Kuliab. However, their leaders visited the Uzbek Khan in Balkh. Later, after accepting the Moslem faith from the Uzbeks, they moved back to the east and settled in the eastern part of Karategin, where they now live [55, p. 39]. We happened to see a small group of Karategin Kirghiz who came to work in the cotton-ginning plant of Tashkent. They appeared to be typical Mongoloids.

Let us summarize the above:

1. The group of Turkic-speaking and Turki tribes has been known by the name of Kirghiz since the end of the third millennium B.C.
2. The "original" core of the Kirghiz was formed in the Upper Yenissei area.
3. During the ninth century they moved from the Yenissei to Mongolia.
4. Apparently they began to penetrate into Semirechie in the tenth century, but their basic mass appeared there only at the beginning of the sixteenth century.
5. During the seventeenth century, after the destruction of the Khanates by the Kalmyks, part of them migrated to the Ferghana Valley, and, apparently at the same time, also to the Alai Valley in the Pamirs and to Karategin. Notwithstanding the vast territory which they traversed, the Kirghiz preserved their racial type, which had already developed during the period of their habitation along the Yenissei. This type has a sharply pronounced Mongoloid component with a small admixture of the Europeoid element. The basic mass of the Kirghiz is a people that came from the east, a people of Inner [Tsentralnaia] Asiatic origin.

As mentioned above, the Kazakhs are closely related as to origin to the Kirghiz, in the sense that the same stratum of a population, consisting mainly of numerous Mongoloid Turki tribes, which in the course of many centuries moved from the east and absorbed the local Iranian-speaking tribes, entered into the composition of those two peoples. However, the initial "original" core of the Kazakhs was formed

far to the west of the "original homeland" of the Kirghiz, and fully 1,500 years later. The process of the formation of the Kazakh people took place toward the middle of the fifteenth century [75, p. 98]. This occurred on the broad steppe belt of Central Asia which was called the Dasht-i-Kipchak. On this same vast territory and during the same period the Uzbek people were formed. During the fifteenth century, the Kazakhs and the Uzbeks formed one people on the steppes of the Dasht-i-Kipchak [83, pp. 31-32 and 36]. The division of the unified Kazakh-Uzbek people is usually believed to be the result of internal unrest and internecine conflicts. A part of the tribes, who did not get along with the Uzbek Khan Abulkhair in the sixties of the fifteenth century, migrated to the Chu Valley where they were first named "Uzbek-Kazakhs" [83, pp. 31-32], and after the departure of the basic mass of Uzbek tribes to Mawerannahr, adopted the name simply as "Kazakhs." Subsequently, this name spread to all tribes which remained in the Dasht-i-Kipchak after the departure of the Uzbeks. Inasmuch as that part of the tribes which moved to the Chu Valley removed themselves from the authority of Uzbek Khans, it was called the "Kazakhs," i.e., "free people." A.A. Semenov gives a different interpretation of this term. In his opinion, the term is connected with the designation of "home-wagons" [dom-povozka] which were widely used by the nomads in the Dasht-i-Kipchak. "A distinct peculiarity of the Kazakhs' way of life was their migration on the steppes in dwellings on wheels" [83, pp. 33-34]. In this translation by Semenov of the manuscript of Ruzbehan, fifteenth century historian, it is said that "the dwellings of the Kazakhs are built in the form of arabas placed on wheels and drawn by camels or horses" [83, p. 36]. Semenov assumes that this characteristic feature of tribal life, moving in wagons, became reflected in the name of the Kazakhs, as such wagons were called khazakh-tergen. However, Semenov advances this assumption merely as a possibility.

Regardless of the origin of the designation "Kazakhs," it is firmly established that during the fifteenth century they formed one people with the Uzbeks on the steppes of the Dasht-i-Kipchak and that subsequently this people became divided: one part, which remained in the Dasht-i-Kipchak, was called the Kazakhs and the other, which migrated to Mawerannahr, preserved the name Uzbeks. The probable origin of the latter name we shall discuss later.

Here we should like to mention that subsequently various masses of people entered into the composition of this once single people. From the anthropological point of view, the Kazakhs, as the Kirghiz, are the descendants of Mongoloid tribes of the Dasht-i-Kipchak, and the Uzbeks the descendants of the local autochthonous Europeoid population of the Central Asiatic Interfluvial Region.

II. ETHNOGENESIS OF THE KARA-KALPAKS ACCORDING TO HISTORICAL DATA ON THE SETTLEMENT OF THE ARAL REGION BY TURKI AND IRANIAN-SPEAKING TRIBES, AND ACCORDING TO DATA OF COMPARATIVE ANTHROPOLOGY

The steppes of the northern Aral region are located in the center of the mediaeval Dasht-i-Kipchak, whence came the Mongolization of the type and the Turkization of the language of the population of countries situated south of the Syr Darya.

The Kara-Kalpak ASSR occupies the southeastern, southern and southwestern Aral region, and the lowlands of the Amu Darya. However, the basic mass of the Kara-Kalpaks appeared here only during the eighteenth century [92, p. 140]. In reports of the sixteenth century, the name Kara-Kalpak is first mentioned as belonging to a people living on the lower course of the Syr Darya. However, the initial "original core" of the Kara-Kalpak peoples was formed on the Dasht-i-Kipchak steppes, which covered the vast territory from the Dnieper to the Irtysh and Lake Balkhash.

During the eleventh century, this territory was occupied by the Kipchaks after whom this huge steppe zone was named the Dasht-i-Kipchak [73, pp. 12-13].

In Russian Annals the Kipchaks were called the Polovtsi, in Byzantine sources the Komani. As we shall see below, the Kipchak-Polovtsi undoubtedly entered into the composition of the Kara-Kalpaks as one of their most important ethnic components. Unfortunately, we do not have palaeoanthropological material which could be assigned to the Kara-Kalpaks on the territory of Central Asia. However, at the present time, we do possess sufficiently extensive material on the anthropology of the present-day Kara-Kalpaks, Kipchaks and neighboring peoples.

In addition to the Kara-Kalpak ASSR, part of the Kara-Kalpaks settled in the eighteenth century in Uzbekistan in the Ferghana Valley and in the Khwarizm and Bukhara oblasts. According to the 1939 Census, the total number of Kara-Kalpaks was 185,800 [95]. The Kipchaks live in a relatively compact group in the Ferghana Valley, mainly in the Pap Raion of the Namangan Oblast. In the same Raion also live the basic mass of the Ferghana Kara-Kalpaks. Before the Great October Revolution [1917], the Ferghana Kipchaks constituted an isolated ethnic group and did not consider themselves to be Uzbeks, although in the tribal composition of the Uzbeks, the "Kipchak" clan was known long ago. After the delimitation of national boundaries in 1924, the Ferghana Kipchaks became a part of the Uzbek Soviet Socialist nation.

Anthropological investigations were conducted among the Kara-Kalpaks in the Kara-Kalpak ASSR and in the Ferghana Valley and among the Kipchaks in the Ferghana Valley. Both groups were first studied in detail by the Moscow anthropologist A.I. IArkho. In 1928 he measured 100 male Kara-Kalpaks in the Narym raion of the former Andizhan District. In the same year IArkho also studied a group of Kipchaks in the Ferghana Valley. In 1931 an expedition under IArkho's leadership studied 300 male Kara-Kalpaks in the Chimbai and the Kegeili raions of the Kara-Kalpak ASSR. These data were published after IArkho's death [52]. In 1946 an anthropological expedition of the Institute of History and Archaeology of the Uzbek Academy of Sciences, led by V.IA. Zezenkova, studied 87 male and 138 female Kara-Kalpaks in the Kara-Kalpak ASSR. In 1948 another expedition of the same institute, also led by Zezenkova, studied 85 male and 115 female Kara-Kalpaks in

the Pap Raion of the Namangan Oblast in the Ferghana Valley, and also 159 male and 202 female Kipchaks of the same Raion. The qualitative and quantitative characters of the Kara-Kalpaks and Kipchaks which had been studied during expeditions led by Zezenkova are given in tables 33-38. Thus, at the present time we have at our disposal very substantial material for the anthropology of the Kara-Kalpaks (572 males and 253 females) and Kipchaks (259 males and 202 females).

In the absence of palaeoanthropological material, reports on the history of the settlement of a given territory by various local and immigrating ethno-linguistic groups acquire special significance. These data also determine the selection of the necessary comparative anthropological material.

1. Successive Changes in the Ethnic and Linguistic Composition of the Population of the Steppes of the Aral Region and of the Lower Syr Darya and Amu Darya

For more than 150 years the theory prevailed that the Kara-Kalpaks were the direct descendants of the Pechenegs, more precisely of that portion of the Pechenegs who are known in Russian Annals under the name of "Black Hoods" [chernye klobuki]. However, this hypothesis was based on traditions only among the Kara-Kalpaks, according to which they once inhabited the South Russian steppes, where the "Black Hoods" used to live, and the semantic identity of the Russian designation "Black Hoods," i.e., "Black Caps" or "Black Hats," with a Turkish name [93, p. 13]. As is well known, up to now the national headgear of the Kara-Kalpaks has been black sheepskin caps. During the twelfth century (in the year 1146, according to Ipatiev's annals), "Black Hoods" are first mentioned in reference to that part of the Pechenegs who were driven by the Polovtsi-Kipchaks from the South Russian steppes into the zone settled by Slavic tribes [73, p. 13]. The people, now known as Kara-Kalpaks, appeared during the second half of the sixteenth century, and much further to the east of the habitations of the "Black Hoods," in the lowlands of the Syr Darya [92, p. 134]. Investigations by Soviet historians revealed that the Pechenegs--at least that part known as the "Black Hoods"--undoubtedly entered into the composition of the Kara-Kalpaks.

According to S.P. Tolstov:

> Of exceptional significance for the early stages of the Kara-Kalpak ethnogenesis is the history of the union of those Turki and Turkized tribes, who are known as the Pechenegs of the tenth-twelfth centuries, and that of the "Black Hoods" of Russian Annals or the "people of the Black Caps" of Oriental sources of the twelfth-fourteenth centuries. The geographical basis for the formation of these unions embraced the territory from the Volga in the west to the eastern Aral region, and from Khorezm [Khwarizm] in the south to the foothills of the Urals in the north, i.e., the steppes of the Aral region in a broad sense and Ciscaspia [86, p. 73].

In other words, this territory embraces the center of the mediaeval Dasht-i-Kipchak. The area of distribution of the Pechenegs extended far to the west of the Volga, as far as the Danube. This vast territory was being settled, in addition to the Pechenegs, by a number of other Turki tribes who entered into the composition of the Kara-Kalpaks in various degrees.

The Pechenegs are only one of numerous ethnic components, who entered into the composition of the Kara-Kalpaks, similar to the nomadic Uzbeks of the fifteenth century who are one of the numerous components forming the Uzbek people, while the Oguzes are only one of the many components in the composition of the Turkomans,

Turkic-speaking tribes of Mongoloid type moved from the steppes of the Dasht-i-Kipchak to the present-day Kara-Kalpak territory. In the Aral region and in the Amu Darya and Syr Darya lowlands, they were preceded by Iranian-speaking Europeoid tribes. These constitute the deep-lying and the most ancient local substratum in the composition of the Kara-Kalpaks.

Thus, the population of Kara-Kalpak ASSR, as well as the population of other Central Asiatic Republics, were formed by two strata: an ancient local one of Europeoid type and Iranian-speaking; and a later immigrant element, Turkic-speaking and Mongoloid in type.

The most ancient local population was represented by Sacae-Massagetae tribes, the so-called Massagetae of the swamps and islands, or the "water Sacae" [86, p. 72]. Later, these tribes, speaking an Indo-European language of the North Iranian group, became known as the Alan-Arsi (Aorsi) or Yasi (IAsi) [85, p. 100]. The Alans were one of the numerous Sarmatian tribes. Classical authors connect the legend of the Amazons to the Sarmatians. The Greeks considered the Sarmatians as "gynarchic," that is, a nation governed by women [84, p. 46].

The Kara-Kalpak Epic, known as the "Kyrk-Kyz" (40 maidens), "extremely archaic in its theme," has preserved the legend of the Kara-Kalpak Amazon Gulaim and her forty companions who engaged in war and hunting [86, p. 72].

During the period of their habitation in the Aral region, the Alans entered not only into the composition of the Kara-Kalpaks, but also that of the Oguzes, the ancestors of the Turkomans. It is of interest that this same legend about the Amazons is also preserved among the traditions about the Oguzes.

In addition to the Sacae-Massagetae-Alan tribes, ethnologists place the Kara-Kalpak tribe "Muiten" among the ancient local tribes. Included in this tribe is the clan "Samat" (i.e., Sarmatian) [94, p. 5]. A number of ethnographic particulars indicate the antiquity of the habitation of the Muiten in the southeastern Aral region. There were attempts to identify the ethnonym Muiten with the Near Eastern name Mitanni of the people who founded a powerful state in the Euphrates basin during the second millennium B.C. [92, p. 100]. The late A.A. Sokolov discussed this hypothesis in great detail. His work remains unpublished although it has been presented in detail in the dissertation by A.S. Morozova. However, Zhdanko points out that there are no historical data in existence which would indicate a grandiose migration from Mesopotamia to the South Russian steppes and further east to the Aral region [92, p. 100]. The ancient local tribe of the Muiten included the clan called "Kerderli." This ethnonym has its origin in the name Kerder, a locality in the Amu Darya Delta. In Kerder lived the Ephthalites (or Kidarites), who also were known under the name of "White Huns" [92, p. 479]. The probability that the Ephthalites or White Huns were of Europeoid type was discussed previously. Later, during the sixth-eighth centuries, the Ephthalites became Turkized [92, p. 100].

In chapter I we discussed in detail that the Mongolization of the type and Turkization of the language of the ancient Europeoid, Iranian-speaking population of all Central Asia, including also that of the Dasht-i-Kipchak steppes, began at the threshold of our Era with the migration of the Huns.

The Huns crushed the Alans of the Caucasus at the end of the fourth century of our Era [74, pp. 31, 37]. It was probably also at this time they first appeared on the Aral steppes. Legends preserved in Kara-Kalpak folklore, regarding the fact that their ancestors worshiped the bull--a former totem of the Huns--indicate that the Huns entered into the composition of the Kara-Kalpaks to some degree [93, p. 479].

It seems that the Huns brought to the lowlands of the Amu Darya the custom of artificial cranial deformation by means of ribbon-like bandages. The archaeologists Guliamov and Mirgiiazov obtained a small series of crania from ossuaries at Mangyt

in Khwarizm Oblast. This series, dating from the fifth-eighth centuries, was studied by Zezenkova. Out of 6 crania, 5 were clearly deformed. The character of the deformation of these crania indicated a very close relation to "Hunnish" crania obtained by A.N. Bernshtam from the Kenkol burials on the Talass River [26].

However, it should be mentioned that in Debets' opinion, the question is whether or not the deformed crania from the Kenkol burials belong to the Huns; according to Debets this has by no means been solved [21, pp. 10-12].

Part of the tribes, which moved westward from the area of origin of Turkic-speaking Mongoloids following the Huns, remained on the steppes of the Aral region and entered to some degree into the composition of the Kara-Kalpaks. Such are, for example, some Altai tribes of the Turki Khakanate, the Oguzes who formed the original core of the Turkoman people, the Karluks and others [93, pp. 479-80].

By the eleventh century, Turki tribes were already settled on the southern Eurasian steppes from China to the Dnieper River [63, p. 10 et seq.]. However, in the eleventh century the Turkization of the Iranian-speaking local population of the Kara-Kalpak territory was not yet completed. At the time of Al-Biruni, the Alans of Ust'-Urt spoke a mixed Khwarizm-Pecheneg language [86, p. 75].

As previously stated, the theory long prevailed that the Kara-Kalpaks were "direct descendants" of the Pechenegs. The basis of this theory was the identification of the ethnonym Kara-Kalpak with the "Black Hoods" of Russian Annals. These "Black Hoods" were a part of the huge Pecheneg union which occupied the South Russian steppes during the ninth-eleventh centuries. During the eleventh century, the Pechenegs were partly forced out, partly absorbed by the Kipchaks-Polovtsi. P.P. Ivanov notes that, coming from the banks of the Irtysh River in the eleventh century, the Kipchaks "occupied the vast spaces of the South Russian and Central Asiatic steppes which, from this time on, were called the Dasht-i-Kipchak" [73, p. 18]. At the same time, the Kipchaks occupied a considerable part of the territory where the Pechenegs led a nomadic life. "Gradually, the Kipchaks, outnumbering the Pechenegs, absorbed the latter, including that group called the 'Black Hoods'" [73, p. 18]. The Pechenegs as well as the Kipchak-Polovtsi, who replaced the former, entered into the composition of the Kara-Kalpaks as important ethnic components.

The process of Mongolization of the ancient Europeoid population of the Aral region was undoubtedly strengthened with the appearance of Pecheneg and Kipchak tribes in this area. This is indicated by palaeoanthropological material obtained from Pecheneg and Polovtsi (Kipchak) burials in the Ukraine. It proved impossible to delimit these two peoples who occupied consecutively one and the same territory. However, the entire series of these crania (eleventh-twelfth centuries) exhibits clearly the South Siberian Mongoloid race which is now so characteristic of the Kazakhs and Kirghiz [19, pp. 261-65].

In the following centuries, the process of settlement of Central Asia by Turki and Mongoloid tribes continued steadily.

The Mongolic-speaking Kitai (the Kitai, Khtai and Kidani tribes of Chinese Annals) who, coming from Mongolia, invaded Semirechie in the twelfth century and created in 1141 a vast empire from Eastern Turkestan to the Caspian Sea [63, p. 16], entered beyond doubt into the composition of the Kara-Kalpaks. T.A. Zhdanl calls the Kitai the most numerous tribe among the Kara-Kalpak tribes recorded in the nineteenth century [93, p. 482].

At the beginning of the thirteenth century, the hordes of Genghis Khan conquered Central Asia. This period is called by S.P. Tolstov the "nodal point in the ethnogenesis of the Kara-Kalpaks" and equally of other peoples of Central Asia [86, p. 7

After the Mongolian conquest, the maximum Turkization of the language and Mongolization of the type of the old Europeoid, Iranian-speaking population of Central Asia took place. In Khwarizm the process of sedentation of the nomadic Oguzes was completed in the thirteenth century. Barthold points out that this process was accompanied by an "almost complete Turkization of the Khwarizmian language heretofore in use" [7, p. 371].

It is known that the basic mass of the tribes entering into the composition of the Hordes of Genghis Khan were Turkic-speaking and that the insignificant minority of Mongolic-speaking tribes soon became Turkized.

Among the ethnonyms of Kara-Kalpak tribes and clans are a number of Mongolian tribal names, as, for instance, Kongrad (Kongrat), Kiiat, Mangyt and others. The presence of Mongol ethnonyms among Central Asiatic peoples is explained by the fact that the conquered Turki tribes assumed the names of Mongolian tribes which constituted the élite in Genghis Khan's armies [93, pp. 482-83]. Among such tribes, Mongolian in name only but Turkic in language, were the Mangyts who played an important role in the ethnogenesis of the Kara-Kalpaks. The Mangyts were the most numerous among those tribes of the Golden Horde which, during the second half of the thirteenth century, united under the rule of Emir Nogai and became actually independent from Sarai, the capital of the Golden Horde. They led a nomadic life, having first pre-empted the Black Sea littoral [77, p. 372].

These tribes were called the Nogais or Nogaitsi after the name of Emir Nogai. Subsequently, this term, which originally had a political meaning, assumed an ethnographic character as a designation for the conglomeration of clans and tribes dominated by the Nogais. Inasmuch as the most numerous among these tribes was the Mangyt, the ethnonyms Mangyt and Nogai became to some degree synonymous.

Ivanov observes:

> According to their own tradition, the Kara-Kalpaks derive their origin from the Nogais and consider the Volga banks between the Astrakhan and Kazan empires as their ancient homeland [73, p. 24].

The fact that the Mangyt-Nogais participated to a considerable degree in the ethnogenesis of the Kara-Kalpaks, is indicated by the so-called "Nogai stratum" of the Kara-Kalpak Epic [Russ. epos] and a number of clan names common to both the Kara-Kalpaks and the Nogais [92, p. 124]. However, it is clear that the Kara-Kalpaks cannot be considered as "direct descendants" of the Mangyt-Nogais. The conglomeration of larger and smaller ethnic units included in that term is merely one of the many ethnic components which entered into the composition of the Kara-Kalpaks.

2. Comparison of the Kara-Kalpaks with Dasht-i-Kipchak Mongoloids and with Europeoids of the Central Asiatic Interfluvial Region

In the Introduction it was pointed out that one of the most important ethnogenetic problems is the question of which is the basic mass of the population in the composition of a given people: the most ancient, local one or that of the immigrants, and, if it is the latter, from which country it came. This problem has to be solved on the basis of comparative anthropology.

As indicated above, the Kara-Kalpaks were formed by two strata of the population--the ancient, local Europeoid Iranian-speaking element, and the later strata of the Turkic-speaking Mongoloid tribes which came from the Dasht-i-Kipchak. Anthropologically, the former was represented in the various regions of Uzbekistan, including Khwarizm, by the brachycephalic race of the Central Asiatic Interfluvial

Region. Tadzhiks are clearly expressed representatives of this race. In our comparative anthropological tables are given the Tadzhiks who were studied in Bukhara by Oshanin, and in the Ferghana Valley by IArkho. Among the Uzbeks, however, the same brachycephalic Europeoid race of the Central Asiatic Interfluvial Region clearly predominates with an admixture of Mongoloid characters. As representatives of such slightly Mongolized Europeoids of the Central Interfluvial Region, given in our tables, are the Khwarizmian Uzbeks, investigated by Oshanin (1923) and by IArkho (1930).

The Mongoloid South Siberian race, which formed on the Kazakhstan steppes and in the Tien Shan Mountains, is represented by the Kirghiz and Kazakhs studied by Oshanin in the Talass Valley and by the Kirghiz, investigated by IArkho in the Tien Shan.

As indicated above, historians and ethnographers suppose that the Kipchak and Mangyt (Nogai) tribes formed a considerable element in the composition of the Kara-Kalpaks. In our tables are represented the Mangyts studied by IArkho in Khwarizm, and the Kipchak tribe also studied by IArkho and Zezenkova in the Ferghana Valley. They also investigated the Kara-Kalpaks in the Kara-Kalpak ASSR and in the Ferghana Valley.

Zezenkova studied females among the Kara-Kalpaks and Kipchaks, and compared them with Kirghiz, Kazakh, Uzbek and Tadzhik women.

Because of the unavoidable degree of subjectivity in the determination of qualitative characters, the data collected by Oshanin and Zezenkova, who worked together for many years and who adopted fairly close standards in the determination of qualitative characters, and those collected by IArkho, appear in different tables.

In all those characters, which differentiate Mongoloids and Europeoids, the male Kara-Kalpaks examined by Zezenkova in the Kara-Kalpak ASSR occupy an intermediate position between typical Mongoloids of the Dasht-i-Kipchak, Kirghiz and Kazakhs of Talass, and Bukhara Tadzhiks, typical Europeoids of the Central Asiatic Interfluvial Region.

As shown in tables 28, 28a, and 29 the Mongoloid Dasht-i-Kipchak stratum entered into the composition of the Kara-Kalpaks of the Kara-Kalpak ASSR to a considerable degree: among them the epicanthic fold occurs far more frequently than among the Tadzhiks; the tertiary hair growth (beard) is just as poorly developed as among the Kirghiz; the horizontal facial profile is markedly flattened when compared with that of the Tadzhiks; the nasal base is lower; and the nasal alae are more sloping than among the Tadzhiks.

Judging from several characters, noted by Oshanin in 1923, the Khwarizmian Uzbeks are considerably more Europeoid than the Kara-Kalpaks.

Also in tables 28, 28a, and 29 are represented Kara-Kalpaks and Kipchaks studied by Zezenkova in the Ferghana Valley. The former absorbed into their composition to a somewhat higher degree the Europeoid race of the Central Asiatic Interfluvial Region: among them one encounters the epicanthic fold somewhat less frequently; the tertiary hair cover is a little more abundant; the nasal septum is higher; the nasal alae are less sloping; and the average profile more often convex. The differences between the Ferghana Kara-Kalpaks and those of the Kara-Kalpak ASSR are very insignificant, but they show a definite trend. The Kipchaks, who live in the same Pap Raion of the Ferghana Valley, are very close to the Kara-Kalpaks in the degree of their Mongoloid features. Both groups differ widely from the Europeoid Tadzhiks who live in the same Raion. On the basis of all characters recorded, the Uzbeks of the same Raion occupy an intermediate position between the intensely Mongolized Kara-Kalpaks and Kipchaks and the Europeoid Tadzhiks.

The quantitative characters given in tables 28a and 30 confirm the data obtained for the qualitative data: in regard to basic head and facial measurements, the Kara-

Kalpaks occupy an intermediate position between the Mongoloids (Kirghiz and Kazakhs) and Europeoids (Tadzhiks). In the Kara-Kalpak ASSR the considerable admixture of the Mongoloid component resulted in an increased transverse head diameter and particularly in an increased morphological facial height and bizygomatic breadth.

The Kara-Kalpaks and Kipchaks of the Ferghana Valley, in regard to the degree of their Mongoloid features, appear close to the Kara-Kalpaks of the Kara-Kalpak ASSR (tables 33-38). The anthropometric data on female groups collected by Zezenkova fully confirm the results of comparisons among males. The Kara-Kalpak women of the Kara-Kalpak ASSR occupy, in all qualitative traits, an intermediate position between the Mongoloid Kazakh and Kirghiz women and the less strongly Mongolized Uzbek women of Khwarizm (tables 29-30). The Kara-Kalpak and Kipchak women of the Ferghana Valley are considerably more Mongoloid than their Uzbek and Tadzhik neighbors in the same Pap Raion. In regard to quantitative characters, the differences among female groups are less pronounced.

The results of investigations made by IArkho confirm fully the data which we obtained (tables 31-32).

Regarding the presence of the epicanthic fold, beard growth and horizontal facial profile, the Kara-Kalpaks of the Kara-Kalpak ASSR are much closer to the Mongoloid Kirghiz than to the Europeoid Uzbeks of Khwarizm. IArkho noted some characters lacking in Zezenkova's observations. Traits characteristic for the Mongoloids are the following: a greater incline of the axis of the nostrils; a higher and more pronounced procheilia of the upper lip. In these characters the Kara-Kalpaks occupy an intermediate position between the Kirghiz and the Uzbeks. As mentioned before, the Mangyt (Nogai) tribe entered into the composition of the Kara-Kalpaks. This tribe is also widely distributed among Uzbeks of various areas. The Mangyt tribe of the Khwarizmian Uzbeks is close to the Kara-Kalpaks in regard to the degree of Mongoloid features. According to IArkho and to our own observations, the Kara-Kalpaks and Kipchaks of the Ferghana Valley do not differ very much from the Kara-Kalpaks of the Kara-Kalpak ASSR and are clearly different from the Europeoid Tadzhiks and the weakly Mongolized Uzbeks. The differences in quantitative characters of the groups investigated by IArkho are less distinct.

Judging from the above data, the Kara-Kalpaks, whose original core was formed by splinters of numerous Mongoloid tribes who wandered on the vast Dasht-i-Kipchak steppes, absorbed to a considerable degree the Europeoid race of the Central Asiatic Interfluvial Region which preceded them in their present habitat. With regard to the admixture of the dolichocephalic Europeoid race, which entered into the composition of the neighboring Turkoman tribes of the Chaudyrs and Yomuds (Iomuds), it appears that this admixture probably occurred, but to a very insignificant degree. At any rate, the Kara-Kalpaks, as all the remaining peoples of Central Asia with the exception of the Turkomans, are typical brachycephals. According to Zezenkova, the cephalic index was 84.20 – 84.43 and in females 87.4 – 87.6. IArkho obtained a range of 83.76 – 84.23 for males. The Turkoman Yomuds measured by IArkho had a cephalic index of 75.1; the Chaudyrs, 77.2.

To a higher degree than any other peoples of Central Asia living south of the Syr Darya, the Kara-Kalpaks have preserved the "anthropological traces" of their Dasht-i-Kipchak origin. The Uzbeks, whose original core was likewise formed by nomadic tribes on the Dasht-i-Kipchak, absorbed to a much greater degree the Europeoid element of the Central Asiatic Interfluvial Region.

III. ETHNOGENESIS OF UZBEKS AND TADZHIKS OF UZBEKISTAN ACCORDING TO PALAEOANTHROPOLOGY, HISTORY AND COMPARATIVE ANTHROPOLOGY OF THE PRESENT POPULATION OF THE CENTRAL ASIATIC INTERFLUVIAL REGION

1. The Inseparability of the Problems of Ethnogenesis of Uzbeks and Tadzhiks. Ancient Areas where the Ancestors of the Uzbeks and Tadzhiks Lived

The ethnogenetic problem of the Uzbeks is inseparable from that of the Tadzhiks. This is confirmed by the entire history of the Tadzhik and Uzbek peoples. A.IU. IAkubovskii, the late historian of Central Asia, who devoted much attention to the problems of ethnogenesis [88], pointed out correctly even in his Introduction to the first edition [1941] of the "History of the Peoples of Uzbekistan":

> We can say with full conviction that the Turkic-speaking Uzbeks are much closer to the Tadzhiks, even though they speak a language of the Iranian system, than to other Turkic-speaking peoples of Central Asia [76, p. 11].

In B.G. Gafurov's work, which deals with the history of the Tadzhik people, the inseparability of ethnogenetic problems of the Uzbeks from those of the Tadzhiks is also most distinctly evident [71]. From the anthropological point of view this is beyond doubt, as both the Uzbeks and the Tadzhiks absorbed into their composition the same local Europeoid stratum which later in Uzbekistan was merely Mongolized in type to some degree, and almost completely Turkized in language.

The territory of present-day Uzbekistan, on which the common ancestors of the Uzbeks and Tadzhiks used to live, occupies vast plains and the foothills of the Pamir-Alai and Tien Shan between the basins of the Amu Darya and Syr Darya. Mediaeval Arab geographers called the plains of this Central Asiatic Interfluvial Region Mawerannahr [lit. "trans-river region"]. Originally, the Arabs gave this designation to all countries situated north of the Amu Darya which they knew well. Later, they applied this term only to the Central Asiatic Interfluvial Region, while the countries north of the Syr Darya were called the Dasht-i-Kipchak and Moguli-stan, which we have stated several times above. Prior to the Arab conquest ancient cultural areas were located in Mawerannahr. Here lived a settled agricultural population which utilized intensively the waters of the Chirchik, Angren, Zarafshan, Kashka Darya and Surkhan Darya for artificial irrigation of the fertile lands of the Central Asiatic Interfluvial Region. Khwarizm was one of these ancient cultural areas lying in the Aral region and along the lower course of the Amu Darya and Syr Darya. Chach (Shash) was located in the basin of the middle Syr Darya; this included the present Tashkent Oblast with the fertile valleys of the Chirchik and Angren. The easternmost part of present Uzbekistan, the Ferghana Valley, was called Davan (Davani) by Chinese sources. Apparently, Parkan was the correspond-ing term already used by Greek authors. This ancient term is reflected in the present name Ferghana [77, pp. 39, 89]. The center of Uzbekistan, the Samarkand Oblast, part of the Bukhara Oblast, and all of the Kashka Darya Oblast, whose agriculture was fed by the Zarafshan and Kashka Darya waters, was called Sogd (Sogdiana of Greek authors). In the Surkhan Darya Oblast the northwestern part of

Bactria (Bactriana of Greek authors) was located; this also included the southern part of Tadzhikistan up to the Hissar (Gissar) Range and northern Afghanistan. A part of Bactria situated in southern Uzbekistan and southern Tadzhikistan was later called Tokharistan after the Tokharis (Tokharians), who appeared here during the second century B.C. [77, p. 83].

2. Palaeoanthropological Material Testifying to the Autochthony of the Europeoid Race of the Central Asiatic Interfluvial Region

As pointed out in chapter 4, part 1, the clearly predominant component in the racial composition of the Uzbeks and Tadzhiks is the same Europeoid brachycephalic race of the Central Asiatic Interfluvial Region. Therefore, the question as to whether this race should be regarded as autochthonous or as one that immigrated into Central Asia, appears to be basic for the problem of the ethnogenesis of the Uzbeks and Tadzhiks.

The present area of this race is not limited to the boundaries of Uzbekistan and Tadzhikistan: this area also covers Sinkiang and northern Afghanistan. As is seen from tables 24-25 and 28-28a (chapter IV, part I), significant differences between this race and other Europeoid races of the second order which are closest geographically, namely the Transcaspian, Khurasan and Anterior Asian races, are clearly evident. Judging from these differences alone, it is possible to assume that the race of the Central Asiatic Interfluvial Region is autochthonous and was formed on the vast territory of Khwarizm, Chach, Davan, Sogd (Sogdiana) and Bactria. This point of view is fully confirmed by palaeoanthropological material which by now is sufficiently diversified. The most ancient of this material was obtained in former Bactria.

The investigations of Soviet archaeologists have shown that Central Asia was inhabited during the Palaeolithic. This was proved by the finds of the famous Neanderthal man in Teshik-Tash rock shelter in the Baisun Raion of the Surkhan Darya Oblast [81].

Debets observed on the Neanderthal cranium from Teshik-Tash "Europeoid" features, which contribute one more proof that, "the most ancient of the present racial types of man on the territory of Central Asia was undoubtedly Europeoid." This was, in his opinion, sufficiently proved by our investigations [19, p. 327].

However, the Teshik-Tash find represents only an evolutionary stage, a transitional form from Neanderthal to modern man.

The most ancient skeletons of the already formed race of the Central Asiatic Interfluvial Region were obtained in 1948 by M.M. Diakonov on the territory of ancient Bactria during the excavation of 29 burials at the Tup-khon locality in the Hissar Range [72, pp. 176-78]. Diakonov divided the burials into four types and determined their chronology as follows: (1) sixth-eighth centuries; (2) fourth-sixth centuries; (3) first-third centuries and first century B.C.; and (4) probably Bronze Age. The entire skeletal material was examined by the Leningrad anthropologist V.V. Ginzburg, whose most important conclusions follow:

> 1. The basic population of Bactria was related to the brachycranic Europeoid type of the Central Asiatic Interfluvial Region. Racially, it was entirely similar to the contemporary population of neighboring Sogdiana. In all probability the population of both countries was related to a considerable degree.
>
> 2. The present-day population to the south, as well as north, of the Hissar Range, belongs to the same racial type of the Central Asiatic Interfluvial Region. Therefore, we have every reason to regard the present inhabitants of these countries as the direct descendants of the Bactrians and Sogdians [9, p. 248].

The palaeoanthropological materials obtained up to the present time on the territory of other ancient regions of Uzbekistan (Khwarizm, Chach, Sogdiana and Davan) are dated in various periods.

The westernmost group of crania were those obtained in ancient Khwarizm.

A series of six crania was obtained in 1936 by the archaeologists Guliamov and Mirgiiazov from the ossuaries of Khwarizm. This series, dating from the fifth-eighth centuries, was examined by Zezenkova [26, pp. 101-104]. Among these 6 crania, 5 are obviously deformed. The deformation is annular, quite similar to these crania belonging to Huns from the Kenkol burial on the Talass River. All these crania belong to the Europeoid type.

Another series from the Khwarizm territory dates from a later period--to the eighth-eleventh centuries. These crania were obtained by the archaeological expedition led by S.P. Tolstov from gorodishches of the Turtkul Raion; they were examined by N.G. Zalkind [23]. This series includes: 2 male, 1 female and 3 infant crania from the gorodishche of Berkut-Kala dating from the eighth century; and 8 male, 2 female and fragments of several infant crania from the gorodishche of Narindzhan-Baba dating from the ninth-eleventh centuries. All these crania belong undoubtedly to the Europeoid race of the Central Asiatic Interfluvial Region. There are traces of artificial cranial deformation, apparently also of the "Hunnish" type, similar to the series examined by Zezenkova.

Skeletal material was obtained in ancient Sogdiana from Zoroastrian burials dating from a still later period, the thirteenth century. In 1936 G.V. Grigoriev conducted excavations of Zoroastrian burials in Frinkent, 45 kilometers from Samarkand. Part of the osteological material (14 crania) is now in the Museum of Anthropology of the Academy of Sciences of the USSR in Leningrad. This series was examined by the Leningrad anthropologist, the late E.V. Zhirov [22]. These data were published posthumously. All crania had been artificially deformed to some degree (partly from the use of the beshik = cradle). Zhirov's article deals principally with this deformation. We limit ourselves merely to noting the general conclusions regarding the racial attribution of the series examined by Zhirov, who wrote: "Among the racial characters, we emphasize particularly the indubitable and well-expressed Europeoid character of the whole series, as well as of each single cranium in it."

Another series of crania obtained by Grigoriev from the Zoroastrian cemetery in Frinkent is now in the Samarkand Museum. This series was examined by Ginzburg in Samarkand [6]. Out of these 14 crania studied by him, 12 were Europeoid and 2 Mongoloid. Nine of the former were classified by Ginzburg as typical representatives of the Europeoid brachycephalic race of the Central Asiatic Interfluvial Region; two crania, also undoubtedly Europeoid, were close to the type of the Mediterranean Race, and one Europeoid cranium "revealed similarity with inhabitants of Luristan" (?). The two Mongoloid crania resembled the South Siberian Mongoloid type, which is so characteristic for the present inhabitants of the Dasht-i-Kipchak and Mogulistan--the Kirghiz and the Kazakhs.

A. Investigation of the Timur and Timurid Skeletons

Skeletons from the mausoleum of Gur-Emir in Samarkand, dating from the period of Timur and the Timurids (fifteenth century), belong to the material from the territory of the ancient Sogd (Sogdiana).

In 1941 in the mausoleum of Gur-Emir the graves of Timur, of his sons Shah Rukh and Miran Shah, and of his grandsons, Ulug Beg and Muhammad Sultan were opened. Details of the opening of all these graves were published by M.M. Gerasimov [3, pp. 151-77]. A description of the opening of Ulug Beg's grave is given by Kary-Niiazov [79]. The entire material from the mausoleum of Gur-Emir was

belong to the same epoch. This mausoleum was built especially for the burial of women of the Timurid household. Out of 4 well-preserved female crania, 3 belonged to the brachycephalic Europeoid race of the Central Asiatic Interfluvial Region, and 1 mesocephalic Europeoid was similar to the Transcaspian type [26, pp. 104-107].

From ancient Davan (Ferghana Valley) a series of crania was obtained during the excavations of the Great Ferghana Canal. During this construction a team of archaeologists led by M.E. Masson dated all skeletal material in the first centuries of our Era (down to the fifth century). Four crania belonged to the Europeoid type of the Central Asiatic Interfluvial Region race, and one was close to the South Siberian Mongoloid type [26].

In recent years palaeoanthropological material has been obtained from various localities in the Ferghana Valley. This material was studied by Ginzburg [17]. The most ancient cranium dates from the second millennium B.C., the latest from the seventeenth-eighteenth centuries. The Europeoid type clearly predominates in all finds, the Andronovo type in the more ancient, and in those of later periods a transitional type from the Andronovo to the race of the Central Asiatic Interfluvial Region and very pronounced representatives of the latter type. Ginzburg considers that it is indubitable that Mongoloid admixture is present since the first centuries of our Era.

Palaeoanthropological materials found in the Tashkent Oblast, that is on the territory of ancient Chach, are rare and are not very expressive. Grigoriev obtained crania from supposed "Sacae" and "Hunnish" burials at IAngi-Yul in the Tashkent Oblast. Apparently, their chronological dating remains controversial. Grigoriev attributed them to the fifth-third centuries B.C., Oboldueva to the third-fourth centuries A.D. This material was studied by Ginzburg [4].

Only one Sacaean cranium is well preserved and this is a "typical representative of the long-headed Europeoid type with the characteristic traits of the Mediterranean Race." Sharply distinct from this Sacaean cranium were three crania excavated from the same site at IAngi-Yul from burials which Grigoriev assigned to the Huns. All of them were related to the Europeoid racial type, but with Mongoloid admixture. However, it is necessary to note that attributing these crania to the Huns proper remains conjectural. In Ginzburg's work they are designated as Huns, and in parentheses as Wusuns (Usuns) with a question mark.

At Vrevskaia Station in the same Raion of the Tashkent Oblast the late archaeologist M.E. Voronets obtained a small amount of craniological material from a kurgan burial ground dated in the first centuries of our Era. This material, studied by Zezenkova [25], is very fragmentary: one cranium is Europeoid, judging by the surviving parts of the face and mandible; one is Europeoid with Mongoloid traits; and one is a dolichocephalic Europeoid. We possess much more extensive material relating to later periods. The Chair of Anthropology of the SAGU has a collection of 300 crania from the Uzbek cemetery of Sheikhantaur in Tashkent. This series, which is dated from the sixteenth-nineteenth centuries, was studied by V.P. Matveev and V.IA. Zezenkova, associated members of the Department [26, pp. 110-11].

This entire series belongs undoubtedly to the type of the Europeoid brachycephalic race of the Central Asiatic Interfluvial Region with approximately the same admixture of Mongoloid characters as may be observed among the modern Uzbeks.

The sufficiently delimited area of distribution of this race, which embraces the Central Asiatic Interfluvial Region, Sinkiang and northern Afghanistan and also its [skeletal] remains found in all the ancient regions of Central Asia--in Khwarizm, Chach, Davan, Sogd, and Bactria--leave no doubt that this race was local, autochthonous, and had been formed upon the territory of these ancient regions.

Apparently, this race is genetically connected with the so-called Andronovo

see later, they formed the deepest substratum of the present inhabitants of Transcaspia, namely, the Turkomans.

The northern part of Anterior Asia and Iran [Persia] are the centers of distribution of two Europeoid races of the second order: the brachycephalic Anterior Asia; and the dolichocephalic Khurasan.

The Central Asiatic Interfluvial Region was connected with the peoples of Anterior Asia and of Khurasan prior to the conquest of Central Asia by the Persians during the Achaemenid period (sixth century B.C.). According to legends cited by classical authors, Central Asia, in the eighth century B.C., was part of Assyria. Assur-bani-pal (668-626) called troops from Bactria to his assistance, and according to Ctesias the Assyrians were subject not only to Bactria but also to Sogdiana [77, p. 40].

Assyria, being situated in the northeastern part of Mesopotamia, was the center of distribution of the brachycephalic Anterior Asia race. This is indicated by palaeoanthropological material, as well as by the rich iconographic material [83, tables 143-45]. The Assyrians spoke a Semitic language.

In the center of distribution of the dolichocephalic Khurasan race, on the territory of present-day Iranian Azerbaijan (southwestern littoral of the Caspian Sea, and Lake Urmia [Rezaiyeh] basin) was located the northern part of Media, one of the oldest areas where the Iranian language was spoken. It was noted before that in the period of disintegration of Alexander's extensive domain, this northern part of Media passed into the hands of one of his generals (the so-called Diadochi, Persian Atropates). The Greeks used to call this part Media Atropatene. The surrounding Armenian population changed this designation to Atrpatakan, and the Turk-Seljuks arriving later changed it into Azerbaijan [59, p. 44]. If this is the origin of the name of the country and the people now inhabiting it, then one may consider the Azerbaijanis of Iranian Azerbaijan as the ancient population of Media which became Turkized in language.

The present-day Azerbaijanis are typical representatives of the dolichocephalic Europeoid race which we have identified and which we call the Khurasan race. It is sharply distinguished from the race of the Central Asiatic Interfluvial Region by its dolichocephaly and Anterior Asia (Armenoid) facial features, namely, an abundant facial hair growth and an "Armenoid" nasal profile, resembling the longhand numeral 6. As was pointed out in chapter IV, part I, the Khurasanis are, as it were, sui generis dolichocephalic Armenoids. V.V. Trever adduces certain data, which testify to the ties of Central Asiatic peoples with the ancient Medes in the course of two centuries [77, pp. 40-41]. The possibility is not excluded that Medes, as well as ancient Assyrians, entered to some extent into the composition of the population of the Central Asiatic Interfluvial Region as an ethnic component. The Persians of Khurasan whom I have investigated also belong to the type of dolichocephalic Armenoids [77, pp. 41, 48]. Khurasan is the northern province of present-day Iran bordering on Turkmenia.

Anthropologically, the Persians of Khurasan who speak Iranian (Persian, Farsi) do not differ from the Azerbaijanis of the Tabriz region. They belong to the same Europeoid stratum of the population, the only difference being that it is Turkized in language in the western part where the Turk-Seljuks appeared during the eleventh century.

The relationship of the peoples of Central Asia with Persia was much closer than with Assyria and Media. In the course of more than two centuries, Central Asia was a part of the Persian Empire during the period of the Achaemenid dynasty (550-331 B.C.). Central Asia was divided into three satrapies (tax districts Nos. 12, 15, 16). However, these sources do not mention a colonization of Khwarizm, Sogdiana and Bactria by the Persians, but merely the participation of Khwarizmians,

Bactrians, Sogdians and Sacae in the armies of the Achaemenids. As warriors they participated in the Graeco-Persian wars.

During subsequent centuries, up to the nineteenth, there took place an influx of Persians, resold by the Turkomans as slaves, into the Central Asiatic Interfluvial Region. To some degree, Persians also entered into the composition of the population of Maweranṇahr as one of the components.

As it is known, the Persian Empire was conquered by Alexander the Macedonian in the fourth century B.C. All Persia, together with subordinated countries, were absorbed in the vast empire created by Alexander. After his death, this empire was divided up among his generals. Sogdiana, Bactria and probably Davan, came in 312 B.C. under the rule of one of these generals, Seleucus Nicator and his descendants, the Seleucids. Later, there emerged on the territory of Bactria, Sogdiana, probably Davan (Ferghana) and Margiani (Murghab basin with Merv as the center) the so-called Graeco-Bactrian kingdom which existed for more than a century (circa 250-150 B.C.).

However, it is hardly possible to doubt that the degree of participation of the Greeks proper in the ethnogenesis of the peoples of Central Asia was insignificant. It is sufficient to recall that Alexander began his conquests in the year 334 B.C. with only 30,000 infantrymen and 5,000 horsemen. With this army, Alexander subdued, in the next decade, in addition to the countries of Central Asia, all of Asia Minor, Syria, Phoenicia, Iran, India and Egypt [77, p. 57]. It is true that we do not have data on the number of Greeks in the towns and fortresses during the period of the Graeco-Bactrian kingdom. However, their number was probably insignificant compared with the general mass of the local population.

4. Change in the Ethnic Composition of the Population During the Period of Yuechi Rule in the Central Asiatic Interfluvial Region (Second Century B.C. – Fifth Century A.D.)

Considerable changes in the ethnic composition of the population of the Central Asiatic Interfluvial Region occurred during the period when the Graeco-Bactrian kingdom was conquered first by Kushans, then by Tokharians--peoples who were related to the Yuechis of the Chinese Annals [88, pp. 4-5].

Nevertheless, these changes in the ethnic composition were hardly accompanied by any significant changes in the Iranian language and in the Europeoid type of the population of the Central Asiatic Interfluvial Region. Changes in the ethnic composition were caused by the movements of local tribes.

Upheavals in the ethnic composition of Central Asia were a reflection of the so-called epoch of the Great Migration of peoples, the beginning of which coincided with the beginning of Hunnish expansion during the second century B.C. This is recorded in the Chinese Annals [77, p. 83]. According to these sources, the movement of the Huns in the second century B.C. displaced from their original homeland the entire groups of the Sacae, Wusuns and Yuechis--all wandering partly in Semirechie, partly in Eastern Turkestan. The migration of these peoples into the Central Asiatic Interfluvial Region and further south to Seistan, caused, during the second century B.C., the downfall of the Graeco-Bactrian kingdom. Meanwhile the Se (Scythians of Western writers and Sacae of Eastern sources) moved furthest south, and occupied the territory of present Seistan, which preserved in its name the trace of their habitation in that country [59, p. 83]. Following the Se (Sacae or Saki) the Yuechis occupied Davan (Ferghana), Sogdiana and Bactria [58, p. 1]. As a result of the conquests by these peoples, the Graeco-Bactrian kingdom ceased to exist in the second century B.C. (circa 140-130).

However, present-day Soviet historians consider the principal cause of the

downfall of the Graeco-Bactrian kingdom to be due not so much to "invasions" of new tribes coming from Eastern Turkestan and Semirechie as to "movements of liberation started by local tribes of Central Asia already in the middle of the third century B.C." [77, p. 76]. Among the most numerous of these rebelling tribes were the Massagetae. According to Tolstov, the Massagetae appear to be merely the western branch of the Yuechis. At some time in the past, part of the Massagetae wandered from the Transcaspian steppes to the Cis-Tien Shan area and to the border of Eastern Turkestan where they were called Yuechis by the Chinese. Thus, in Tolstov's hypothesis, the Yuechis, in conquering the Graeco-Bactrian kingdom, were in sui generis "returnees" into Central Asia [77, p. 84].

In place of the Graeco-Bactrian kingdom, there emerged new unified sovereignties [gosudarstvennye ob"edineniia]. During the last quarter of the second century B.C., a sovereign State was established in the Central Asiatic Interfluvial Region; this was called by the Chinese K'ang-chü and in Indian sources Kangkha. The latter included all countries north of the Amu Darya: Bukhara, Katta Kurgan, Shakhrasiab and the Tashkent and the Khwarizm oblasts. Tolstov identifies "Kangkha with Khwarizm." In his opinion "Khwarizm are one and the same thing." In other words, we have to deal merely with political subordination of a considerable part of the Central Asiatic Interfluvial Region under Khwarizm without any change in the ethnic composition of the population. Chinese sources note the similarity of the Kangkhas with the Yuechis.

At the beginning of our Era, the Kangkha State was conquered by the Kushans, who are usually identified with these same Yuechis of the Chinese Annals. A considerable number of the Kushans settled in the Zarafshan and Kashka Darya valleys. Together with the Yuechis-Kushans the Wusuns of the Chinese Annals likewise entered into the composition of the population of ancient Uzbekistan [88].

On the threshold of our Era, upon the territory of Southern Uzbekistan and Southern Tadzhikistan, a new sovereign State was formed; this was called Tokharistan after the name of the new people, the Tokharians. The Tokharians are identified with these same Yuechis [77, p. 91].

At the close of the fourth century, the Kushan State was conquered by peoples which various sources call by different names: Khaitals by the Arabs; Ephthalites by Armenian authors; and White Huns by Greek sources. This people is also related to the Yuechis. Thus, Barthold had already pointed out that the "Ephthalites have emerged from among their fellow-tribesmen the Yuechis who remained in the east" [61, p. 9]. In the Chinese Annals the Ephthalite State was called Yen-ta. Chinese Annals state directly that the Yen-ta kingdom originates from the Great Yuechis (of the time of the Han dynasty). P.I. Lerkh and N.I. Veselovskii once identified the Ephthalites with the Yuechis of these Chinese Annals. The same point of view is held by present-day historians, among them Tolstov, to the extent inasmuch as he considers the Ephthalites to be a part of the Massagetae tribes and the Massagetae, in turn, a part of the Yuechis [77, pp. 103-104].

At the beginning of the fifth century, Tokharistan was occupied by the Kedarit people who also emerged from the same Massagetae union [77, p. 105].

As pointed out in chapter I, part II, it is presently generally accepted that the most ancient nomadic peoples known to the Chinese as Se, Wusuns and Yuechis spoke a language of the Iranian group. The palaeoanthropological material given in the same chapter testifies that this whole group of peoples was of the Europeoid racial type. Historical reports likewise testify to the Europeoid type of these peoples, and in particular that of the Ephthalites who because of this were called the "White Huns."

The easternmost region, Davan (Parkan and Ferghana), was left aside from the conquest of Central Asiatic Interfluvial Region by the Kangiui and Tokharians, and

was an independent state [77, p. 90]. Records on Ferghana of this period are extremely scanty. They are limited to a narration of the Chinese traveler Chan-Tsan, who tells about the numerous settled population of Ferghana and its agricultural achievements which made a profound impression on him.

It has previously been mentioned that Chinese sources include the inhabitants of Davan (Ferghana) among the peoples who are closely related to each other in language and in type for "the inhabitants understand each other in conversations, and they have long beards and deeply set eyes" (Russian text, p. 59). Palaeoanthropological material also indicates the Europeoid type of the population of the Ferghana Valley during the first centuries of our Era [22].

Thus, judging from all the data cited, the Iranian language and Europeoid type of the population of the Central Asiatic Interfluvial Region was not affected to any significant extent during the rule of the Kangiui, Kushans, Tokharians and Ephthalites, who came from among the tribes called the Yuechis by the Chinese. The rule of these tribes in the Central Asiatic Interfluvial Region was interrupted in the sixth century by the incorporation of Central Asia into the western Turki Khakanate.

This annexation signified the first trustworthy appearance in the Central Asiatic Interfluvial Region of new ethnic, racial and linguistic components in the form of numerous Turki tribes. From the time when Central Asia became a part of the Turki Khakanate (sixth-seventh centuries) begins the processes of the Mongolization of the type and Turkization of the language of the local ancient population of Central Asia. For this reason, we have included the period from the sixth-seventh centuries in the following subchapter which deals specifically with the Turkization of the language and Mongolization of the type of the Central Asiatic Interfluvial Region population. These processes continued also during the period of Arab domination (eighth-ninth centuries). However, the Arabs participated to some extent in the ethnogenesis of the Uzbeks and Tadzhiks.

5. Question of the Degree of Participation of the Arabs in the Ethnogenesis of the Uzbeks and Tadzhiks

Europeoid races, which had their centers of distribution in the northern part of the Anterior Asia and Iran, could penetrate into the Central Asiatic Interfluvial Region during the epoch of Arab conquest and incorporation of Central Asia into the vast empire of the Caliphate (seventh-ninth centuries).

During the seventh century the Arabs conquered all of Iran. In the year 651 they took Merv. The territory of Mawerannahr, however, was invaded by the Arabs at first only episodically. A.IU. IAkubovskii believes that the conquest of Mawerannahr began in 704 when the famous general, Kuteiba ibn Muslim, was appointed Viceroy [Namestnik] of the Caliph in Khurasan [77, p. 136]. Under him took place the conquest of the Zarafshan and Kashka Darya basins and of Khwarizm. Simultaneously with this conquest began the colonization of Mawerannahr by the Arabs. This colonization began even earlier, as there are reports that the Viceroy of Khurasan in the year 671 sent 50,000 Arabs with their families beyond the Amu Darya [77, p. 142]. After the capture of Merv, Bukhara and Samarkand, half of the dwellings of these towns were requisitioned for the settling of the Arabs. However, neither the army of the Arabs nor these colonizers consisted only of Arabs. In addition to Arabs, these armies also included many Persians, and local inhabitants who had accepted Islam; the latter were called the "Mavali" [77, pp. 115 and 209-10]. Among the Arabs who settled in towns were many of these Mavalis.

As it is known, during the period of Arab domination, the cornerstone of the conquerors' policy was the effort to Arabicize the language of the local population and above all to spread Islam. The inclusion of Central Asia into the vast empire

of the Caliphs, and finally the adoption of Islam by all the peoples of Central Asia, gradually obliterated the distinction between the conquerors and the subjugated people, and resulted in "melting" of the new arrivals in the mass of the local population.

Only those groups of Arabs, who lived more or less isolated until recent times, succeeded in preserving linguistic, ethnographic and partly anthropological "traces" of their Anterior Asian origin. Such are the Arabs who by now are Tadzhik-speaking and who live in separate precincts called "Arab-Khona" [Arab-Khana] in the suburbs of Bukhara, Samarkand and Kermine. In 1926-27 I succeeded in entering the "Arab-Khona" of these towns. In the later twenties, the inhabitants of these "Arab-Khona" considered themselves neither Uzbeks nor Tadzhiks, but Arabs and "descendants" of the Arab conquerors. In 1927 we succeeded in investigating a group of Arabs in the kishlak of Kamasha (Kamashi) near Karsha (Karshi). All the inhabitants of this kishlak consider themselves Arabs. In order to determine the racial affiliation of the investigated Arabs, we compared them with typical representatives of the brachycephalic Europeoid race of the Central Asiatic Interfluvial Region, the Bukhara Tadzhiks and the Uzbeks of Shakhrasiab, and also with Jews living in the same towns who are typical representatives of the brachycephalic Europeoid Anterior Asia race. In chapter IV, part I, it was pointed out that the Central Asiatic Jews were used for the purpose of differentiating the brachycephalic Europeoids of Central Asia from those of Anterior Asia. We should mention that the Anterior Asia race differs from that of the Central Asiatic Interfluvial Region by a considerably more abundant beard growth, a narrower face, a higher nasal ridge and higher nasal alae, a more convex nose, which, together with the wing furrows, gives the nose the appearance of a longhand numeral 6, and by less sloping nasal alae. In all these characters the Arabs are considerably closer to the Tadzhiks than to the Jews (see table I, Russian text p. 67). In regard to the cephalic index and its component diameters, there are no distinctions between the Central Asiatic Interfluvial Region race and the Anterior Asia race. Thus, the Arabs preserved some anthropological traces of their Anterior Asia origin.

As is well known, Arabic belongs to the Semitic family of languages.

The Arabs of the Kamasha kishlak which we investigated are bilingual, and apparently seem to speak Arabic among themselves, as far as a non-philologist could observe. However, even when talking to us they called meat not by its Iranian name gusht, but by the Semitic name lyakhm [lahm], properly speaking meal or bread in general. Academician I.IU. Krachkovskii points out the importance of the ethnographic and linguistic investigations of the Arabs of Central Asia. Such investigations were conducted by Soviet ethnographers and philologists, such as M.I. Izmailova, N.N. Burygina, I.V. IUmashev, G.V. Tsereteli and I.N. Vinnikov. According to Krachkovskii, the results of these investigations must be evaluated as a scientific discovery. It was established with certainty that the Arabs of Central Asia are using, "a living Arabic dialect which is directly related to other spoken dialects in use in Arabic countries and evidently related closest to Mesopotamian" [97, p. 238].

On the basis of anthropological data, I came to the same conclusion that Central Asia was settled not by the southern group of Arabs (from Arabia) who are characterized by the Mediterranean dolichocephalic type, but by northern, Mesopotamian Arabs for whom the brachycephalic Anterior Asia race is typical [35, pp. 149-59]. The various groups of Arabs settled in Central Asia at various times. Krachkovskii notes that the appearance in Central Asia of that group of Arabs, which was investigated philologically, "should be related not to the period of conquest, but probably to a much later period, perhaps to Timur's time" [97, p. 238].

There is no doubt that the Arab conquerors and the Arab groups, which later immigrated into Central Asia, participated in the ethnogenesis of the Uzbeks and Tadzhiks as one of the ethnic components.

On the other hand, "anthropological traces" of the mixing of Arabs with the local population are quite insignificant. They can be merely suspected, but not proven. It is true that one encounters among the Uzbeks, and particularly among the Tadzhiks, individuals with Armenoid features, but in such cases it is difficult to exclude the intra-racial variability of characters, particularly descriptive, which play such an important role in racial diagnostics.

To the above-mentioned must be added the fact that the basic mass of the Arabs, as well as that of other peoples who settled in Central Asia at various times--the Persians, Greeks and even the Dasht-i-Kipchak Turki--remained in their permanent habitats. Only the latter of the enumerated peoples--the Turki (and Mongols who were soon Turkized)--left clear "anthropological traces" of their mestization with the local, autochthonous Europeoid population of Central Asia.

6. Data on the History of Settlement of the Central Asiatic Interfluvial Region by Turki Tribes

The movement of Mongoloid, Turkic-speaking tribes into countries situated south of the Syr Darya began long before the conquest of the Central Asiatic Interfluvial Region by that part of the tribes, which during the fourteenth-fifteenth centuries wandered in the Dasht-i-Kipchak steppes and were called "Uzbeks." As has been frequently mentioned before, these nomadic Uzbek tribes were only the last ethnic component that entered into the composition of the Uzbeks of present-day Uzbekistan. The process of Turkization of the language of the ancient Iranian-speaking population of the Central Asiatic Interfluvial Region certainly began in the sixth century of our Era, at the time of the formation of the first most extensive Turki Khakanate, and possibly even earlier, beginning with the period of Hunnish expansion at the beginning of our Era. The movement of the Huns covered the northwestern part of Uzbekistan, to which in particular is testified by the artificial cranial deformation of the "Hunnish" type of crania from ancient Khwarizm [23 and 26].

In chapter I, part II, was given an historical account of the successive strata of Turkic-speaking Mongoloid tribes which affected the ancient Iranian-speaking Europeoid population of the Dasht-i-Kipchak steppes. During the first century of our Era, in Mongolia, the rule of the Huns who had gone away to the west was replaced by the rule of a people whom the Chinese Annals call Hsien-pi (Russ. Sianbi). There is no indication that the Hsien-pi penetrated into the Dasht-i-Kipchak. The Juan-Juans (Avars of Western sources, Obri in Russian Annals), who replaced them in Mongolia, must have traversed the Dasht-i-Kipchak while moving westward; however, there is no indication of their penetration of Mawerannahr.

The vast Turki Khakanate was formed during the sixth century by the unification of various Turki tribes of Central Asia, Altai and Semirechie. According to Barthold, the original word "Turk" was not an ethnic term, but designated the political unification of various Turkic-speaking tribes, which formed the Khakanate of the sixth century. In the years 563-67 these tribes destroyed the Ephthalite State and conquered the entire Central Asiatic Interfluvial Region up to the Amu Darya. During the eighties of the sixth century, the Turki Khakanate split into the Western and Eastern Khakanate [77, pp. 119, 121]. During the period of the Khakanate, the basic mass of the Turki continued to live in Semirechie. The city of Suyab on the Chu River became the political center and residence of the Khakanate. Nevertheless, in the seventh century there lived in the Central Asiatic Interfluvial Region significant strata of Turki. IAkubovskii emphasizes that:

> There is hardly a specialized historian who would now deny the fact that in the seventh century, on the eve of the Arab invasion of Central Asia, there

> lived in Chach, Ferghana, Khorezm, Tokharistan and Sogdiana (the latter including not only the Zarafshan Valley but also that of Kashka Darya) a people that spoke a language of the Turkic system alongside the Sogdian, Tokharo-Bactrian and Khorezmian population which spoke Iranian languages. Archaeologists and historians possess considerable data which indicate that in the sixth-seventh centuries, there lived in the [Central Asiatic] Interfluvial Region, not only Turki nomads but also settled Turki [76, p. 9].

Turki tribes penetrated far to the south, as far as Mesopotamia. This is indicated partly by the fact that during the reign of the Abbassides in the seventh century, a Turki guard constituted the mainstay of the Baghdad government [56, pp. 138, 218]. However, in general, the Iranian-speaking agricultural population prevailed in the Central Asiatic Interfluvial Region. Khwarizm and Chach were governed by Sogdian princes, and on the territory of Sogdiana there were nine domains, whose "tsars" belonged to one and the same Kan [?T'ang] dynasty, originating according to the Chinese Annals from the "House of Yuechi" [77, pp. 122-23].

In the eighth century the Arabs had to fight not only against the Sogdians, Khwarizmians and Tokharians but also against the Turki. As mentioned before, having built walls in the Chirchik and Angren valleys, the Arabs assumed a defensive position against the northern, Dasht-i-Kipchak Turki tribes. However, the Turki, who by this time had already settled in the Central Asiatic Interfluvial Region, participated actively in the struggle of the local population against the Arabs. In Ferghana, in Southern Uzbekistan and Southern Tadzhikistan, the Arabs encountered, during the eighth century, the Karluks, who were a sizable military force. The Arabs found a large number of Turki in the Tashkent Oblast and between Bukhara and Samarkand [77, p. 177].

As it is known, during the subsequent ninth-tenth centuries, Central Asia became in effect independent of the Caliphate. On its territory were formed independent feudal States with independent dynasties of local Iranian origin. Of such dynasties a particularly powerful one was "the last Iranian dynasty" of Maweranahr--the Samanid dynasty. During the period of Samanid rule, already significant strata of Turki not only wandered along the periphery of the oases of the Central Asiatic Interfluvial Region, but also lived in cities, which is indicated by the Turki guard, which during that period played the role of the basic military force of the rulers. This guard assumed in Mawerannahr an every increasing significance* in the course of the interminable disorders and internecine clashes [56, pp. 235, 250, 254, 265 et seq.].

However, the basic mass of the population of Mawerannahr continued to be Iranian-speaking. In historical accounts of Central Asia it was even customary to contrast the "Sogdian-settled world" of Mawerannahr during the ninth-tenth centuries with the "Turko-nomadic world" of the Dasht-i-Kipchak. This is not entirely correct, as at this time a considerable number of Turki already lived in the rural localities of the Zarafshan and Kashka Darya valleys, in Tashkent Oblast and in Ferghana. The Turki element was particularly numerous in the last two regions. Here the Turkization of the language began earlier than in other areas of Central Asia. On the other hand, during the tenth century, Sogdian colonies were still surviving in the Dasht-i-Kipchak, the Turkization of which had just begun [77, pp. 238-39].

It is customary to regard the Karakhanid conquest in the eleventh century as the beginning of the particularly intensive Turkization of the population of Mawerannahr. As early as the tenth century, the Karakhanids, or the so-called Ilek Khans,

*See also the numerous examples of the role played by Turki guards during the Samanid period in "Istoriia Uzbekskoi SSR" [History of the Uzbek SSR], vol. 1, book 1, pp. 192, 194, 195, 204, 219, 221, 222 et seq., 1955.

headed the Turki tribes of Semirechie and Eastern Turkestan, having formed a powerful State with two centers, in Balassagun in the Chu Valley, and in Kashgar.

In the year 999 the Turki, led by Nasr, a Karakhanid, captured Bukhara, the Samanid capital. The "last Iranian dynasty" of Mawerannahr ceased to exist. The Karakhanid State covered the huge territory from Kashgar to the Amu Darya, including Eastern Turkestan, Semirechie, Chach (Tashkent Oblast), Sogd (the Zarafshan and Kashka Darya basins) and Davan (Ferghana) [77, p. 246]. In making Bukhara and Samarkand the residences of their Khans, the Karakhanids aimed at settling permanently in Mawerannahr. During the eleventh-twelfth centuries, the transition of a large part of the Mawerannahr Turki to settled life took place, and simultaneously the spreading of the Turkic language among the local Iranian-speaking population.

Soviet historians consider the Karakhanid period as the beginning of the formation of the Iranian-speaking Tadzhik nation, and of the Turkic-speaking Uzbek nation [77, pp. 269-70].

In the twelfth century Semirechie was conquered by the Kara-Kitais, a Mongolic-speaking people in the opinion of the majority of historians. Similar to other Mongolic-speaking peoples, the Kara-Kitais soon became Turkized. Their basic mass remained in Semirechie. Balassagun on the Chu River became their capital. In the twelfth century more than once they raided Mawerannahr, where they later entered into the composition of the Uzbeks, among whom the tribal name Kara-Kitai (Katai or Khatai) persists to this day.

The influx of Turkic-speaking tribes into Mawerannahr became particularly strong during the following period of Mongol invasion in the thirteenth century and of the formation of Timur's vast empire in the fifteenth century.

The settling of Mawerannahr by the Turki tribes in the course of nearly two millennia, which had become particularly intensified beginning with the Karakhanid period (eleventh century), meant that the Uzbeks, who had conquered Mawerannahr in the very beginning of the sixteenth century, found that their broad strata of population had become completely Turkized in language. The Uzbeks included the latter into their composition.

In chapter I, part II, it was indicated that the Turkic-speaking tribes moved into the Dasht-i-Kipchak and thence to Mawerannahr from the east, from the common original center of distribution of the Mongoloid Race. For this reason, the expansion of Turki tribes was accompanied by dissemination of Mongoloid characters. However, as the following comparative anthropological material shows, Europeoid characters are dominant among the Uzbeks. In other words, the basic mass of the population, which entered into the composition of the Uzbeks, was the local Europeoid population whose language was completely Turkized, but whose type became only to some degree Mongolized.

7. Comparative Anthropological Data of Present-day Uzbeks, Tadzhiks of Uzbekistan and Kazakhs. The Uzbeks as Well as the Tadzhiks Are the Descendants of the Local Khwarizmian-Sogdian-Bactrian Stratum of the Population

Among all the peoples of Uzbekistan, the Uzbeks have been particularly well studied from the anthropological point of view. The qualitative and quantitative characters of the Uzbeks from various oblasts and raions are given in tables 47a-61 of the Appendix to this chapter. As may be seen from these tables, the material on the anthropology of the Uzbeks of various oblasts and raions is so extensive that it makes it possible to analyze their anthropological composition in accordance with the territories of the ancient cultural regions of Central Asia, namely,

Khwarizm, Chach, Sogdiana, Bactria and Davan. As the above palaeoanthropological material showed, these regions have been inhabited "from time immemorial" by Europeoids of the brachycephalic race of the Central Asiatic Interfluvial Region.

The population of the Central Asiatic Interfluvial Region, long ago Turkized, lost its clan-tribal divisions. Nevertheless, among the Uzbeks of the Kashka Darya, Surkhan Darya and partly of the Samarkand Oblasts, tribal and clan names are well-preserved.

We also assigned the Uzbeks of the Angren Valley, who call themselves "Kuramas," to the group of clan-tribal Uzbeks. In the history of the Uzbek SSR, "Kurama" is the name of an Uzbek tribe [77, p. 413]. This is not quite correct. The Kuramas are a mixture, i.e., mestizos. At the time of the conquest of Maweranahr in the thirteenth century, the Mongols called "Karaunos" that part of the population which had already mestisized with the Turki, according to W.W. Barthold. The majority of Uzbeks in the Angren Valley continue to call themselves "Kuramas," but they consider themselves to be Uzbeks. The Uzbek-Kuramas of the Angren Valley, who were investigated in 1954 by K. Nadzhimov, were not subdivided into separate tribes. However, even as recently as a quarter of a century ago, IArkho's expedition collected extensive material among the Kuramas of the Angren Valley and found that the latter actually represent a mixture of many Turki tribes (Uishun, Keroit, Ivelek, Ungut, Dzhalair, Balgaly, Kanzhigaly and others).

A part of the Turki tribes and clans settled in Maweranahr long before its conquest by the Uzbeks in the sixteenth century. One of these, for example, was the Karluk tribe, which occupied Maweranahr in the eighth century; also the Kitai tribe which conquered Maweranahr in the twelfth century. Other clan and tribal names, which are encountered among present-day Uzbeks, are names of clans and tribes of the nomadic Dasht-i-Kipchak Uzbeks of the fourteenth-fifteenth centuries who conquered Maweranahr at the beginning of the sixteenth century.

Part of the Uzbeks settled down along ago to a sedentary life and "forgot" their clan and tribal allegiance. We also assign to those groups peoples who do not recognize tribal divisions as well as the broad strata of the local population who had adopted only the language of the Turki new arrivals without mestisizing with them.

One would expect that those Uzbeks preserving clan and tribal divisions would be more Mongoloid, that is, would preserve to a high degree not only ethnic but also "anthropological traces" of their origin on the Dasht-i-Kipchak.

For this reason, in our comparative tables, we divide the Uzbeks into two groups: those who have preserved their tribal entities; and those who did not know any clan and tribal divisions.

In addition to the Uzbeks, significant strata of Tadzhik population dwell in the ancient towns of Uzbekistan--in Bukhara, Samarkand, in the Ferghana Valley, and in the foothills of the Central Asiatic River Region. As our investigations showed, these Uzbekistan Tadzhiks of the plains and foothills are sufficiently typical representatives of the brachycephalic Europeoid race of the Central Asiatic Interfluvial Region. The admixture of Mongoloid traits in Tadzhiks is very insignificant. Their Europeoid characters are particularly prominent in comparison with typical representatives of the South Siberian Mongoloid race in Kazakhstan. According to all the characters, which differentiate the Europeoids from the Mongoloids, the Uzbeks occupy an intermediate position between the Kazakhs and the Tadzhiks, but are considerably closer to the latter. Moreover, the Uzbeks who have preserved their tribal division in regard to such important taxonomic characters as the presence of an epicanthic fold, developed facial hair growth, horizontal facial profile, position of nasal alae, transverse and general profile of the nasal ridge, appear to be actually more Mongoloid than the Uzbeks who do not know tribal divisions. There are no differences between these two Uzbek groups in regard to quantitative characters.

The foregoing is represented in our tables 2-3 where weighted general mean rades and magnitudes (M) are given, as well as minimum (M = min.) and maximum (M = max.) mean grades and magnitudes which are encountered among various local groups of Kazakhs, Uzbeks of specific clans, Uzbeks who do not maintain clan or tribal division, and of Tadzhiks.

Somewhat more pronounced Mongoloid features of Uzbeks, who have preserved heir tribal names, are evident in all ancient regions of Uzbekistan. This is seen n tables 39-45 of the Appendix to this chapter.

However, taken as a whole, among tribal groups of the Uzbeks, as well as mong Uzbeks who have lost their clan and tribal division, the race of the Central siatic Interfluvial Region, whose typical representatives are the Tadzhiks, clearly predominates.

Taking into account an unavoidable amount of subjectivity in the determination f qualitative characters, those observations which were made by one and the same erson are particularly convincing in this respect.

In table IV the Bukhara Tadzhiks whom I investigated [Russian text, p. 75] and who are typical representatives of the Europeoid race of the Central Asiatic Interluvial Region, are compared with non-tribal Uzbeks from Tashkent and Uzbeks rom the Kashka Darya Oblast, who preserved clan and tribal divisions; the latter were also studied by me. The Uzbeks of the Kashka Darya Oblast are so to speak monolithic massif of various clan and tribal groups, and it is for this reason that specially investigated them in 1927.

As is seen from table IV, there are no differences between the two Uzbek groups nd the Tadzhiks in regard to such important taxonomic characters as beard growth, yeball position, and the nasal alae. In regard to the horizontal facial profile, general nasal profile, and height of the nasal bridge, there are no differences between on-tribal Uzbeks and the Tadzhiks, while tribal Uzbeks exhibit a high degree of Mongoloid features.

Thus, not all characters reveal changes in the same direction with decreasing Mongoloid features from tribal Uzbeks to non-tribal Uzbeks and Tadzhiks. Both Uzbek groups are sufficiently near to the Tadzhiks.

It was pointed out in the Introduction that one of the basic problems of Ethnogenesis is the question as to which basic mass of the population is clearly predominant in the composition of a given people, the local autochthonous, or that of inmigrating people, and if the latter, then from what countries they came. The answer to this question is given by palaeoanthropological and comparative anthropological materials.

Inasmuch as the territory of all ancient regions of Central Asia was inhabited rom "time immemorial" by the Europeoid race of the Central Asiatic Interfluvial Region, which even today is clearly prevalent not only among the Tadzhiks but also mong the Uzbeks, we have every reason to consider as the "descendants" of the ocal Khwarizmian-Sogdian-Bactrian element of the population not only the Tadhiks of Uzbekistan but also the Uzbeks.

At the present time in addition to the history of the Uzbek people, which has now een clarified, the historical fate of some individual Turki tribes, which entered nto the ethnic composition of the Uzbeks, has also been traced.

Furthermore, the conclusions by ethnographers and historians found full confirmation in those investigations which had been conducted concurrently by anthropologists.

Particularly indicative in this regard are the joint investigations of ethnographers, istorians and archaeologists conducted in recent years in Southern Tadzhikistan. he latter is populated not only by Tadzhiks, but also by numerous ancient Turki ribes, who by now have entered into the composition of the unified Uzbek nation.

KEY TO TABLES 1 THROUGH 13

Kirghiz Males

Series	Raion	Observer	Year
1	Issyk Kul	Oshanin	1924
2	Issyk Kul	Miklashevskaia	1953
3	Tien Shan (North)	Miklashevskaia	1953
4	Tien Shan (South)	Miklashevskaia	1953
5	Tien Shan	IArkho	1928
6	Chu Valley	Miklashevskaia	1953
7	Talass Valley	Miklashevskaia	1953
8	Talass Valley	Oshanin	1928
9	Talass Valley	Oshanin	1929
10	Ferghana Valley	IArkho	1928
11	Ferghana Valley (North)	Miklashevskaia	1953
12	Ferghana Valley (East)	Miklashevskaia	1953
13	Ferghana Valley (South)	Miklashevskaia	1953
14	Alai Valley	Miklashevskaia	1953
15	Alai Valley	Oshanin	1929
16	Alai Valley	Oshanin	1935
17	Pamir Plateau	Oshanin	1929
18	Pamir Plateau	Oshanin	1935

TABLE 1: EYE COLOR[1]

Series	No.	I Dark[2]	II Mixed[3]	III Light[4]	M
2	213	55.4	44.6	...	1.45
3	166	58.5	40.3	1.2	1.42
4	281	59.5	39.8	0.7	1.43
5	782	....	....	...	1.44
6	124	63.7	36.3	...	1.36
7	333	59.8	39.0	1.2	1.41
9	100	....	....	...	1.19
10	292	....	....	...	1.30
11	216	63.0	37.0	...	1.37
12	165	59.4	40.0	0.6	1.42
13	259	55.6	43.6	0.8	1.45
14	101	66.3	36.7	3.0	1.37
15	35	....	....	...	1.00
17	37	....	....	...	1.08

1. According to Martin's and Bunak's scales.
2. Nos. 1-5.
3. Nos. 6-10.
4. Nos. 11-16.

TABLE 2: BEARD GROWTH[1]

Series	No.	I Very Weak	II Weak	III Average	IV Strong	V Very Strong	M
2	167	47.3	22.8	28.7	1.2	...	1.84
3	130	51.5	21.5	20.8	5.4	0.8	1.82
4	208	45.2	27.9	23.1	3.8	...	1.85
5	644	53.9	29.3	12.1	2.6	1.1	1.63
6	101	41.6	31.6	25.8	1.0	...	1.86
7	262	52.7	22.1	21.4	3.4	0.4	1.77
9	80	43.8	28.7	23.7	3.8	...	1.88
10	116	52.6	26.7	14.7	6.0	...	1.74
11	157	31.2	30.6	33.1	5.1	...	2.12
12	131	37.4	32.1	27.4	3.1	...	1.96
13	217	42.9	34.6	17.5	4.6	0.5	1.85
14	80	45.0	35.0	16.3	3.7	...	1.79
16	23	39.1	34.8	26.1	...	...	1.87
18	26	53.9	42.3	3.8	...	...	1.65

1. Aged 25+.

TABLE 3: FACIAL OBSERVATIONS[1]

Series	Horizontal Facial Profile[2]					Malar Protrusion[3]				
	No.	I	II	III	M	No.	I	II	III	M
2	213	83.1	16.4	0.5	1.17	213	5.6	78.8	15.5	2.10
3	106	73.5	26.5	...	1.27	106	6.0	82.5	11.5	2.05
4	286	86.2	13.8	...	1.14	282	5.0	79.8	15.2	2.10
5	686	77.4	22.3	0.3	1.23	...	...	....	....	....
6	125	76.8	23.2	...	1.23	125	5.6	84.2	10.2	2.05
7	333	68.7	31.0	0.3	1.32	333	8.7	86.2	5.1	1.96
9	100	89.0	11.0	...	1.11	...	...	....	....	....
10	153	57.5	39.2	3.3	1.46	...	...	....	....	....
11	216	63.9	33.8	2.3	1.38	216	19.9	73.3	8.8	1.89
12	165	75.2	24.2	0.6	1.25	165	12.1	74.6	13.3	2.01,
13	259	70.2	29.4	0.4	1.30	259	8.1	81.1	10.8	2.03
14	101	69.3	29.7	1.0	1.31	101	10.9	69.3	19.8	2.09
16	35	97.2	2.8	...	1.03	...	...	....	....	....
18	37	97.4	2.6	...	1.03	...	...	....	....	....

1. Under Series 9 the date is given erroneously as 1928.
2. I = flat; II = medium; III = narrow.
3. I = weak; II = medium; III = pronounced.

TABLE 4: FACIAL OBSERVATIONS (Continued)

Series	Forehead Slope[1]					Supercilium[2]				
	No.	I	II	III	M	No.	I	II	III	M
2	213	8.5	34.2	57.3	2.49	213	58.7	35.6	5,6	1.47
3	166	16.9	35.5	47.6	2.31	166	53.0	37.4	9.6	1.57
4	282	9.9	35.1	55.0	2.45	282	63.8	28.7	7.4	1.44
5	769	6.5	61.6	31.9	2.25	...	....	....	...	....
6	125	12.8	39.2	48.0	2.35	125	64.8	26.4	8.8	1.46
7	332	15.0	47.7	37.3	2.22	332	57.1	39.0	3.9	1.47
9	98	16.3	52.1	31.6	2.15	...	....	....	...	....
10	155	1.9	53.6	44.5	2.42	...	....	....	...	....
11	217	12.5	37.0	50.5	2.38	217	63.4	30.6	6,0	1.43
12	165	10.3	34.5	55.2	2.45	165	63.0	27.9	9.1	1.46
13	259	3.8	34.7	61.5	2.58	259	67.2	29.3	3.5	1.33
14	101	3.0	24.7	72.3	2.69	101	69.3	28.7	2.0	1.33
16	35	20.0	71.5	8.5	1.88?	...	....	....	...	....
18	37	10.8	78.4	10.8	2.00?	...	....	....	...	....

1. I = marked; II = medium; III = weak.
2. I = weak; II = medium; III = marked.

TABLE 7: FACIAL OBSERVATIONS (Continued)

Series	Position of Nasal Walls[1]					Position of Nasal Axis[2]				
	No.	I	II	III	M	No.	I	II	III	M
2	...	....	....	....	....	213	24.3	67.6	8.0	1.84
3	...	....	....	....	....	165	14.5	77.0	8.5	1.94
4	...	....	....	....	....	281	26.3	69.8	3.9	1.78
6	...	....	....	....	....	125	18.4	72.0	9.6	1.91
7	...	....	....	....	....	329	19.5	78.1	2.4	1.83
8	100	40.0	60.0	....	1.60	...	....	....	...	....
11	...	....	....	....	....	213	13.6	74.7	11.7	1.98
12	...	....	....	....	....	165	18.2	67.3	14.5	1.96
13	...	....	....	....	....	255	13.7	82.4	3.9	1.90
14	...	....	....	....	....	101	15.8	80.2	4.0	1.88

1. I = flattened; II = slanting; III = sagittal.
2. Literally Position of Axes of Nostrils.

TABLE 8: FACIAL OBSERVATIONS (Continued)

Series	Upper Lip Height[1]					Upper Lip Profile[2]				
	No.	I	II	III	M	No.	I	II	III	M
2	204	3.9	79.4	16.7	2.13	204	78.5	21.0	0.5	1.22
3	160	3.8	68.1	28.1	2.24	160	74.2	22.0	3.8	1.30
4	278	0.7	64.8	34.5	2.34	278	85.2	13.7	1.1	1.16
5	761	10.4	60.7	28.9	2.18	761	64.0	34.3	1.7	1.38
6	123	1.6	83.8	16.4	2.13	123	57.7	38.2	4.1	1.46
7	321	5.0	85.3	9.7	2.05	321	65.5	31.4	3.1	1.38
9	100	2.0	61.0	37.0	2.35	100	98.0?	2.0	...	1.02?
10	152	14.5	63.8	21.7	2.07	149	51.7	45.0	8.3	1.52
11	209	9.6	75.1	15.3	2.06	209	79.0	18.6	2.4	1.23
12	154	5.2	72.1	22.7	2.18	154	76.6	21.4	2.0	1.25
13	253	6.3	82.6	11.1	2.04	253	74.7	23.7	1.6	1.27
14	96	4.2	79.2	16.6	2.12	96	81.3	18.7	...	1.19
16	35	8.6	68.6	22.8	2.14	...	100.0?	....	...	1.00?
18	37	2.7	62.2	35.1	2.32	...	100.0?	....	...	1.00?

1. I = low; II = medium; III = high.
2. I = prohelic; II = orthohelic; III = opisthohelic.

TABLE 11: HEAD AND FACIAL[1] MEASUREMENTS

Series	Bizygomatic Breadth			Morphological Facial Height			Morphological Facial Index		
	No.	Mean	σ	No.	Mean	σ	No.	Mean	σ
1	100	148.6	5.9	100	118.0?	6.9	100	79.6?	5.4
2	213	149.9	5.0	207	132.0	7.2	207	88.0	...
3	165	149.0	5.2	165	131.7	6.5	165	88.4	...
4	281	148.5	5.5	280	132.4	6.7	280	89.2	...
5	769	149.8	5.2	769	133.2	7.0	766	89.5	4.6
6	125	148.0	5.1	123	130.3	6.1	123	88.0	...
7	331	148.3	5.2	325	130.6	6.8	325	88.1	...
9	100	148.9	4.7	100	130.0	6.9	98	87.1	4.6
10	292	144.0	5.8	290	131.3	6.9	284	91.3	5.1
11	217	146.4	5.4	217	128.7	6.8	217	87.9	...
12	165	147.2	5.7	160	130.1	6.9	160	88.4	...
13	259	145.8	5.1	252	130.5	5.9	252	89.5	...
14	101	147.3	5.3	97	131.1	7.0	97	88.5	...
16	35	147.5	5.3	35	125.6	6.2	35	85.1	4.8
18	37	145.8	5.4	37	125.3	6.1	37	86.0	4.4

1. The nasal point is for all groups at the lower end of the eyebrows, except for the measurements made by Oshanin at Issyk Kul in 1924 (L. V. O.).

TABLE 12: NASAL MEASUREMENTS[1]

Series	Nasal Height			Nasal Breadth			Nasal Index		
	No.	Mean	σ	No.	Mean	σ	No.	Mean	σ
2	213	62.2	4.5	213	38.1	2.4	213	61.3	...
3	166	62.3	4.5	166	37.7	3.0	166	60.5	...
4	282	62.5	4.0	282	38.0	2.7	282	60.8	...
5	780	62.4	4.2	780	37.6	2.9	777	60.8	5.8
6	125	60.4	3.7	125	37.5	2.5	125	62.1	...
7	329	62.3	4.8	329	37.3	2.3	329	59.9	...
9	100	58.9	4.5	100	37.2	2.6	100	63.5	6.4
10	292	59.6	4.4	292	36.5	2.9	291	61.8	6.5
11	214	58.1	3.8	214	37.3	2.7	214	64.2	...
12	165	54.4	3.9	165	37.4	2.7	165	64.0	...
13	257	59.7	3.9	257	37.3	2.8	257	62.6	...
14	101	58.3	3.5	101	36.9	2.7	101	63.3	...

1. Nasal point measured from the lower end of eyebrows (L. V. O.).

TABLE 13: MISCELLANEOUS MEASUREMENTS

Series	Minimum Frontal Diameter			Bigonial Breadth			Stature		
	No.	Mean	σ	No.	Mean	σ	No.	Mean	σ
1	...	.....	...	100	112.0	4.9	100	162.0?	5.6
2	213	105.1	4.8	213	113.7	5.4	192	166.4	5.5
3	166	104.0	4.3	165	112.4	5.9	163	165.8	5.1
4	282	103.4	4.6	281	114.0	5.3	271	165.6	5.7
5	...	.....	...	776	113.8	5.4	708	163.7	5.9
6	125	106.4	4.7	125	114.5	5.1	120	165.1	6.4
7	332	105.3	4.9	331	112.9	5.8	324	165.1	5.7
9	100	109.9	4.7	100	112.5	6.2	100	163.8	6.0
10	...	.....	...	187	112.3	5.3	286	164.9	5.7
11	217	106.9	5.0	217	115.3	5.6	206	166.2	5.6
12	165	107.1	4.1	165	114.5	5.8	158	166.5	5.8
13	259	105.9	4.7	259	112.2	6.1	254	166.4	5.7
14	101	106.9	5.2	101	115.5	5.4	99	164.8	5.6
16	34	109.2	5.2	35	112.3	5.3	35	164.8	8.5
18	35	107.8	4.6	37	110.4	5.1	37	166.9	7.0

KEY TO TABLES 14 THROUGH 26

Kazakh Males

Series	Raion	Observer	Year
1	Kazakhstan (Eastern)	Debets	1936
2	Karaganda	Debets	1936
3	Kazakhstan (Western)	Debets	1936
4	Kazakhstan (Southern)	Debets	1936
5	Alma Ata	Debets	1936
6	Narynkol	Cheboksarov	1947
7	Kegen	Ginzburg	1947
8	Kegen	Miklashevskaia	1953
9	Panfilov (Dzharkent)	Cheboksarov	1947
10	Lower Ili River	Debets	1940
11	Bolshaia Orda (Alma Ata Oblast)	Debets	1946
12	Srednaia Orda (Kzyl Orda Oblast)	Debets	1946
13	Malaia Orda (Kzyl Orda Oblast)	Debets	1946
14	Talass Valley	Oshanin	1929
15	Dzhambul, Chimkent	Miklashevskaia	1953
16	Dzhambul	Debets	1940

TABLE 14: EYE COLOR[1]

Series	No.	I	II	III	M
1	65	64.6	32.3	3.1	1.39
2	130	70.8	27.7	1.5	1.31
3	74	74.0	24.6	1.4	1.21
4	80	75.0	25.0	...	1.25
5	83	74.7	25.3	...	1.25
6	113	61.0	38.1	0.9	1.38
7	138	66.7	33.3	...	1.33
8	102	66.7	33.3	...	1.33
9	126	70.6	29.4	...	1.29
10	99	50.5	48.5	1.0	1.50
11	200	70.5	....	...	....
12	47	55.3	....	...	....
13	109	67.9	....	...	....
14	100	....	....	...	1.11
15	104	67.3	32.7	...	1.33

1. According to Martin's and Bunak's scales: I = dark (NN 1-5); II = mixed (NN 6-10); III = light (NN 11 = 16).

TABLE 15: BEARD GROWTH[1]

Series	No.	I	II	III	IV	V	M
1	64	73.4	25.0	1.6	...	...	1.28
2	128	84.4	15.5	3.1	...	...	1.19
3	71	74.6	24.0	1.4	...	...	1.27
4	78	78.8	14.1	7.7	...	...	1.29
5	83	72.3	22.9	4.8	...	...	1.33
6	88	44.3	36.4	12.5	6.8	...	1.82
7	108	18.5	43.5	31.6	6.5	...	2.26
8	73	38.4	23.3	30.1	8.2	...	2.08
9	90	52.2	35.6	12.2	...	...	1.60
10		....	....	...	...	...	2.03
11	167	....	....	...	...	...	1.93
12	41	....	....	...	...	...	1.73
13	100	....	....	...	...	...	1.86
14	86	26.7	38.4	20.1	5.8	...	2.16
15	79	30.4	29.1	38.0	2.5	...	2.13

1. Aged 25+ except for Series 1-5. In 1936 Debets recorded observations of Kazakh youths aged 20-25 (L.V.O.). N.B. I = very sparse; II = sparse; III = medium; IV = heavy; V = very heavy.

TABLE 16: FACIAL OBSERVATIONS

Series	Horizontal Facial Profile[1]					Malar Protrusion[2]				
	No.	I	II	III	M	No.	I	II	III	M
1	65	86.1	13.9	...	1.12	...	....	....	....	....
2	130	86.9	13.1	...	1.13	...	....	....	....	....
3	75	82.2	17.8	...	1.18	...	....	....	....	....
4	80	85.0	15.0	...	1.15	...	....	....	....	....
5	83	88.0	12.0	...	1.12	...	....	....	....	....
6	114	32.4	37.9	9.7	1.77	114	2.6	41.2	56.2	2.54
7	138	53.6	44.2	2.2	1.49	138	....	52.2	47.8	2.48
8	102	77.4	21.6	1.0	1.24	102	12.7	71.6	15.7	2.03
9	126	39.7	57.9	2.4	1.63	126	15.1	75.4	9.5	1.94
10	...	....	....	...	1.22	...	....	....	....	....
11	206	....	....	...	1.14	207	....	....	....	2.37
12	50	....	....	...	1.16	50	....	....	....	2.30
13	110	....	....	...	1.08	110	....	....	....	2.20
14	100	85.0	15.0	...	1.15	...	....	....	....	....
15	104	60.6	38.4	1.0	1.40	104	12.5	83.7	3.8	1.91

1. I = flat; II = medium; III = narrow.
2. I = weak; II = medium; III = marked.

TABLE 17: FACIAL OBSERVATIONS (Continued)

Series	Forehead Slope[1]					Superciliary Development[2]				
	No.	I	II	III	M	No.	I	II	III	M
1	65	....	15.4	84.6	2.85	65	95.4	4.6	....	1.05
2	129	....	16.3	83.7	2.84	129	93.8	6.2	....	1.06
3	73	2.8	16.4	80.8	2.78	73	90.4	9.6	....	1.10
4	80	1.2	13.8	85.0	2.84	80	92.5	7.5	....	1.08
5	83	....	20.5	79.5	2.80	83	89.2	10.8	....	1.11
6	114	7.0	51.8	41.2	2.34	114	34.2	53.5	12.3	1.18
7	138	4.4	42.0	53.6	2.49	138	39.1	58.7	2.2	1.63
8	102	16.7	52.9	30.4	2.14	102	59.8	30.4	9.8	1.51
9	126	11.1	38.9	50.0	2.39	126	58.7	38.1	3.2	1.45
10	99	....	....	....	2.42	99	....	....	....	1.65
11	207	....	....	....	2.10	207	....	....	....	1.48
12	50	....	....	....	2.38	50	....	....	....	1.54
13	110	....	....	....	2.33	110	....	....	....	1.55
14	98	15.3	60.2	24.5	2.09	...	....	....	....	....
15	104	10.6	37.5	51.9	2.41	104	73.1	19.2	7.7	1.35

1. I = marked; II = average; III = slight and straight.
2. I = poor; II = average; III = marked.

TABLE 18: FACIAL OBSERVATIONS (Continued)

Series	Height of Nasal Bridge[1]					Transverse Nasal Ridge Profile[2]				
	No.	I	II	III	M	No.	I	II	III	M
1	65	61.5	38.5	....	1.36	...	....	....	....	....
2	130	67.7	32.3	....	1.32	...	....	....	....	....
3	73	65.7	34.3	....	1.34	...	....	....	....	....
4	80	68.8	31.2	....	1.31	...	....	....	....	....
5	83	68.7	30.1	1.2	1.33	...	....	....	....	....
6	114	10.5	59.6	29.9	2.19	114	14.9	50.0	35.1	2.20
7	137	15.3	70.8	13.9	1.99	137	19.0	66.4	14.6	1.96
8	101	19.8	76.2	4.0	1.84	101	5.9	50.5	43.6	2.38
9	126	6.3	52.4	41.3	2.35	126	7.2	52.0	40.8	2.34
10	99	....	....	....	1.69	...	....	....	....	....
11	207	....	....	....	1.50	...	....	....	....	1.98
12	50	....	....	....	1.56	50	....	....	....	2.04
13	110	....	....	....	1.45	108	....	....	....	1.98
14	100	40.0	58.0	2.0	1.62	...	....	....	....	....
15	104	29.8	66.3	3.9	1.74	104	5.8	25.9	68.3	2.63

1. I = low; II = average; III = high.
2. I = flat; II = average; III = protruding.

TABLE 19: FACIAL OBSERVATIONS (Continued)

Series	General Profile of Nasal Ridge[1]					Position of Nasal Base[2]				
	No.	I	II	III	M	No.	I	II	III	M
1	65	7.7	70.8	21.5	2.13	...	....	....	....	....
2	130	9.2	75.2	14.6	2.06	...	....	....	....	....
3	73	8.2	81.1	13.7	2.06	...	....	....	....	....
4	80	17.5	75.0	7.5	1.89	...	....	....	....	....
5	83	10.8	75.9	13.3	2.02	...	....	....	....	....
6	114	13.2	67.5	19.3	2.06	...	....	....	....	....
7	137	12.4	70.8	16.8	2.15	...	....	....	....	....
8	101	6.9	75.3	17.8	2.11	101	48.5	37.6	13.9	1.65
9	125	16.8	62.4	20.8	2.04	...	....	....	....	....
10	99	3.1	84.7	12.2	2.09	...	....	....	....	....
11	207	16.9	57.5	25.6	2.09	207	....	....	....	1.55
12	50	10.0	60.0	30.0	2.20	50	....	....	....	1.51
13	110	16.3	56.4	27.3	2.11	110	....	....	....	1.61
14	100	24.0	60.0	16.0	1.92	100	34.0	57.0	9.0	1.75
15	104	12.5	73.1	14.4	2.01	104	44.2	43.3	12.5	1.68

1. I = concave; II = straight or wavy; III = convex.
2. I = raised; II = horizontal; III = depressed.

TABLE 20: FACIAL OBSERVATIONS (Continued)

Series	Position of Nasal Walls[1]					Position of Nasal Axis[2]				
	No.	I	II	III	M	No.	I	II	III	M
1	...	....	....	....	....	65	18.5	75.4	6.1	1.88
2	...	....	....	....	....	130	16.3	77.5	6.2	1.90
3	...	....	....	....	....	73	13.7	79.5	6.8	1.93
4	...	....	....	....	....	80	25.0	70.0	5.0	1.80
6	114	13.2	58.0	28.9	2.16	114	15.7	65.0	19.3	2.04
7	137	16.8	73.0	10.2	1.93	137	15.3	70.8	13.9	1.99
8	...	....	....	....	....	101	20.8	66.3	12.9	1.92
9	125	11.2	65.6	23.2	2.12	125	7.3	77.4	15.3	2.08
10	...	....	....	....	....	99	....	....	....	1.93
11	...	....	....	....	....	205	....	....	....	1.99
12	...	....	....	....	....	50	....	....	....	1.96
13	...	....	....	....	....	110	....	....	....	1.94
16	...	....	....	....	....	104	9.6	72.1	18.3	2.09
5	...	....	....	....	....	83	37.4	62.6	....	1.63
14	100	28.0	72.0	....	1.72	...	....	....	....	....

1. I = flattened; II = slanted; III = sagittal.
2. I = transverse; II = slanted; III = sagittal.

TABLE 21: FACIAL OBSERVATIONS (Continued)

Series	Height of Upper Lip[1]					Profile of Upper Lip[2]				
	No.	I	II	III	M	No.	I	II	III	M
1	65	6.2	76.9	16.9	2.11	65	63.1	35.4	1.5	1.38
2	129	5.4	74.4	20.2	2.15	129	63.5	35.7	0.8	1.37
3	73	4.1	71.2	24.7	2.21	73	61.6	38.4	....	1.38
4	80	8.7	72.5	18.8	2.10	80	75.0	23.8	1.2	1.26
5	83	4.8	72.3	22.9	2.18	83	69.9	30.1	....	1.30
6	...	...	....	....	....	114	40.7	56.6	2.7	1.62
7	...	...	....	....	....	137	60.3	39.0	0.7	1.40
8	99	...	71.8	28.2	2.28	99	71.7	28.3	....	1.28
9	...	...	....	....	....	125	38.1	51.6	10.3	1.72
10	99	...	....	....	2.19	99	....	....	....	1.37
11	...	...	....	....	....	189	....	....	....	1.53
12	...	...	....	....	....	47	....	....	....	1.66
13	...	...	....	....	....	102	....	....	....	1.84
14	100	2.0	50.0	48.0	2.46	100	80.0	20.0	....	1.40
15	104	3.8	83.7	12.5	2.09	104	66.4	31.7	1.9	1.36

1. I = low; II = average; III = high.
2. I = prohelic; II = orthohelic; III = opisthohelic.

TABLE 24: HEAD AND FACIAL MEASUREMENTS

Series	Bizygomatic Breadth			Morphological Facial Height			Morphological Facial Index		
	No.	Mean	σ	No.	Mean	σ	No.	Mean	σ
1	64	148.3	4.44	65	129.1	6.24	64	87.2	4.6
2	130	148.9	5.04	130	128.5	6.84	130	86.5	4.8
3	74	148.1	4.83	74	128.6	6.12	74	86.9	4.6
4	80	145.7	3.93	80	126.2	6.12	80	86.8	4.6
5	83	148.6	5.49	83	128.1	5.49	83	86.4	4.5
6	114	147.0	4.95	114	130.1	6.87	114	88.5	5.2
7	138	147.9	5.28	138	129.7	6.78	138	87.8	5.0
8	102	147.6	4.80	99	131.0	6.10	99	88.8	...
9	126	146.9	5.46	126	129.6	7.04	126	88.2	4.9
10	99	150.0	....	99	131.3	....	...	....	...
11	207	149.5	5.6	205	129.2	7.10	205	86.4	5.0
12	50	148.5	5.7	49	130.3	6.5	49	87.8	5.2
13	111	148.9	4.8	111	129.1	6.3	111	86.9	4.7
14	100	149.7	5.00	100	132.0	6.10	100	88.4	4.5
15	104	147.8	5.20	104	131.1	6.20	104	88.7	...

TABLE 25: NASAL MEASUREMENTS

Series	Nasal Height[1]			Nasal Breadth			Nasal Index		
	No.	Mean	σ	No.	Mean	σ	No.	Mean	σ
1	65	58.6	3.6	65	37.1	1.8	65	62.6	5.1
2	130	58.5	4.4	130	36.4	2.3	130	62.4	5.1
3	74	58.2	3.9	74	36.1	2.2	74	62.4	5.6
4	80	55.9	4.1	80	35.6	2.3	80	63.8	6.9
5	83	56.2	3.5	83	36.5	2.1	83	63.7	5.8
6	114	58.8	4.7	114	37.5	2.6	114	64.3	7.1
7	138	57.7	4.5	138	37.8	2.7	138	65.9	6.1
8	101	61.3	4.0	101	37.5	2.5	101	61.2	...
9	126	58.8	4.4	125	36.9	3.9	125	63.0	6.9
10	99	63.0	...	99	37.6	...	...	....	...
11	207	60.3	4.0	207	38.4	3.0	207	64.0	6.2
12	50	60.6	4.4	50	38.7	3.3	50	64.2	6.9
13	111	59.4	4.1	111	38.8	3.0	111	65.0	6.4
14	100	60.2	3.8	100	37.4	2.6	100	62.1	5.4
15	104	59.6	4.1	104	36.5	2.8	104	61.2	...

1. Nasal point at the lower end of eyebrows.

TABLE 28: COMPARISON OF KARA-KALPAKS WITH MONGOLOIDS OF THE DASHT-I-KIPCHAK, KIRGHIZ AND KAZAKHS AND EUROPEOIDS OF THE CENTRAL ASIATIC INTERFLUVIAL REGION, TADZHIKS AND UZBEKS

Group	Locality	Observer	Year	No.	Epicanthus[1]	Beard[2]	Horizontal Facial Profile	Nasal Bridge Height[3]	Nasal Walls	Nasal Ridge Profile	Eyeball Position	Eye Color
Kirghiz	Talass Valley	Oshanin	1929	100	85.0	1.88	1.15	1.61	2.40	1.98	2.67	1.19
Kazakhs	Talass Valley	Oshanin	1929	100	72.0	2.16	1.15	1.65	2.28	1.92	2.52	1.11
Kara-Kalpaks	Kara-Kalpak ASSR	Zezenkova	1946	87	42.3	1.83	1.74	1.93	1.93	2.04	1.98	1.16
Uzbeks (Clanless)	Khwarizm	Oshanin	1929	100	25.0(?)	....	....	2.22	....	2.10	....	....
Tadzhiks	Bukhara	Oshanin	1926	163	2.0	2.87	2.07	2.28	1.87	2.31	....	1.07
Kara-Kalpaks	Pap Raion	Zezenkova	1948	85	40.0	1.94	1.94	2.18	1.91	2.21	2.01	1.17
Kipchaks	Ferghana Valley	Zezenkova	1948	159	33.9	1.72	1.94	1.68	1.93	....	2.00	1.19
Uzbeks	Ferghana Valley	Zezenkova	1948	36	25.1	2.45	2.05	2.16	1.94	2.14	....	1.20
Tadzhiks	Ferghana Valley	Zezenkova	1948	35	9.1	3.20	2.20	2.36	1.95	2.10	1.95	1.18

1. Presence of epicanthus in percentages.
2. Aged 25+.

TABLE 28 A. METRIC DATA ON MALES

Group	Locality	Observer	Year	No.	GOL	GB	MFH[1]	Biz. B.	Big.B.	CI	MFI	NI
Kirghiz	Talass Valley	Oshanin	1929	100	187	159	130	149	112	85.08	87.15	63.49
Kazakhs	Talass Valley	Oshanin	1929	100	187	160	132	149	114	85.20	88.37	62.06
Kara-Kalpaks	Kara-Kalpak ASSR	Zezenkova	1946	87	182	155	128	146	111	84.43	.....	63.40
Uzbeks (Clanless)	Khwarizm	Oshanin	1929	100	186	153	...	...	...	82.20	.....	.....
Tadzhiks	Bukhara	Oshanin	1926	163	180	151	120	138	...	84.20	87.10	60.60
Kara-Kalpaks	Pap Raion	Zezenkova	1948	85	189	156	131	145	109	82.50	90.70	63.40
Kipchaks	Ferghana Valley	Zezenkova	1948	159	186	157	128	145	107	84.50	88.50	64.40
Uzbeks	Ferghana Valley	Zezenkova	1948	36	183	157	128	143	106	85.80	90.00	63.00
Tadzhiks	Ferghana Valley	Zezenkova	1948	55	185	158	128	142	108	86.00	89.50	64.20

1. MFH = morphological facial height.

TABLE 29: COMPARISON OF KARA-KALPAKS WITH MONGOLOIDS OF THE DASHT-I-KIPCHAK AND EUROPEOIDS OF THE CENTRAL ASIATIC INTERFLUVIAL REGION BASED ON DATA OBTAINED BY ZEZENKOVA

DESCRIPTIVE CHARACTERS OF FEMALES

Group	Locality	No.	Epicanthus[1]	Horizontal Facial Profile	Nasal Bridge Height	Nasal Walls	Transverse Nasal Ridge Profile	General Nasal Ridge Profile	Eyeball Position	Eye Color
Kirghiz	Kant Raion, Kirghiz SSR	118	83.1	1.19	1.81	2.05	1.92	1.93	1.95	1.05
Kazakhs	Alma Ata	96	67.7	1.31	1.69	2.15	1.79	1.86	1.92	1.19
Kazakhs	Kara-Kalpak ASSR	51	68.6	1.37	1.54	2.15	1.62	1.92	2.00	1.06
Kara-Kalpaks	Kara-Kalpak ASSR	137	55.1	1.56	1.71	2.07	....	1.94	....	1.06
Uzbeks	Khwarizm	86	14.0	1.96	2.02	1.91	2.03	1.98	1.97	1.18
Kara-Kalpaks	Ferghana Valley	115	53.0	1.84	1.87	2.10	1.85	1.78	2.02	1.12
Kipchaks	Pap Raion, Ferghana Valley	202	29.0	1.71	1.71	1.62?	1.75	1.68	2.00	1.04
Uzbeks	Pap Raion, Ferghana Valley	23	17.3	1.87	2.09	....	2.00	1.79	2.00	1.13
Tadzhiks	Pap Raion, Ferghana Valley	61	18.8	1.98	2.08	1.95	2.02	1.98	1.92	1.10

1. Presence of epicanthus in percentages.

TABLE 30: COMPARISON OF KARA-KALPAKS WITH MONGOLOIDS OF THE DASHT-I-KIPCHAK AND EUROPEOIDS OF THE CENTRAL ASIATIC INTERFLUVIAL REGION BASED ON DATA OBTAINED BY ZEZENKOVA

METRIC DATA ON FEMALES

Group	Locality	No.	GOL	GB	MFH[1]	Biz.B.	CI	MFI	NI	Stature
Kirghiz	Kant Raion, Kirghiz SSR	118	177	153	118	139	86.2	?	64.9	151
Kazakhs	Alma Ata	98	175	152	116	138	86.8	84.2	65.6	151
Kazakhs	Kara-Kalpak ASSR	52	175	151	119	138	85.7	....	....	155
Kara-Kalpaks	Kara-Kalpak ASSR	137	175	150	120	137	86.0	87.4	61.1	154
Uzbeks	Khwarizm	88	179	147	117	134	82.3	86.8	61.7	155
Kara-Kalpaks	Ferghana Valley	115	180	150	115	138	83.3	87.6	61.8	154
Kipchaks	Pap Raion, Ferghana Valley	202	178	153	120	138	85.9	87.2	63.0	152
Uzbeks	Pap Raion, Ferghana Valley	23	177	150	118	138	86.0	86.0	62.0	153
Tadzhiks	Pap Raion, Ferghana Valley	61	177	152	118	135	86.0	86.0	62.0	153

1. MFH = morphological facial height.

TABLE 31: COMPARISON OF KARA-KALPAKS AND KIPCHAKS WITH NEIGHBORING PEOPLES BASED ON DATA OBTAINED BY IARKHO

DESCRIPTIVE CHARACTERS OF MALES

Group	Locality	No.	Epicanthus[1]	Beard[2]	Horizontal Facial Profile	Nasal Bridge Height	Nasal Walls	Nostril Axis Slant	Upper Lip Height	Upper Lip Protrusion	Eye Color
Kirghiz	Tien Shan	784	24,0	1.64	1.23	1.74	1.92	1.54	2.19	1.38	1.56
Kara-Kalpaks	Kara-Kalpak ASSR	305	26.4	1.75	1.31	1.57	1.59	1.82	2.03	1.47	1.64
Mangyts and Uzbeks	Khwarizm	80	35.4?	2.15	1.48	1.57	1.56	1.81	2.24	1.48	1.78
Uzbeks (Clanless)	Khwarizm	100	6.0	3.22	2.01	2.00	1.82	2.18	1.82	1.73	1.59
Kara-Kalpaks	Ferghana Valley	100	22.0	2.14	1.66	1.79	1.92	1.92	2.20	1.54	1.75
Kipchaks	Ferghana Valley	100	23.0	1.75	1.70	1.89	1.92	1.97	2.12	1.61	1.65
Uzbeks (Clanless)	Ferghana Valley	399	7.1	2.58	2.01	2.11	2.02	2.25	2.05	1.75	1.71
Tadzhiks	Ferghana Valley	200	5.3	2.94	2.68?	2.03	1.96	2.12	2.07	1.82	1.34

1. Presence of epicanthus in percentages.
2. Aged 25+.

TABLE 32: COMPARISON OF KARA-KALPAKS AND KIPCHAKS WITH NEIGHBORING PEOPLES BASED ON DATA OBTAINED BY IARKHO

METRIC DATA ON MALES

Group	Locality	No.	GOL	GB	MFH[1]	Biz.B.	MFD	Big.B.	CI	MFI	NI
Kirghiz	Tien Shan	784	188.61	160.50	133.89	149.89	108.67	113.80	85.16	89.53	60.86
Kara-Kalpaks	Kara-Kalpak ASSR	305	185.35	155.76	134.65	146.39	107.73	113.90	84.23	91.98	58.90
Mangyts and Uzbeks	Khwarizm	80	189.92	153.61	132.88	143.94	107.05	112.22	80.70	92.46	60.51
Uzbeks (Clanless)	Khwarizm	100	185.81	155.01	127.84	142.99	107.08	110.26	83.50	89.30	62.33
Kara-Kalpaks	Ferghana Valley	100	185.84	155.66	131.29	142.78	108.14	111.67	83.76	92.04	59.58
Kipchaks	Ferghana Valley	100	185.60	156.38	130.60	143.98	108.64	112.42	84.42	90.34	59.36
Uzbeks (Clanless)	Ferghana Valley	399	183.32	155.12	129.32	140.83	110.18	110.07	84.68	91.88	60.46
Tadzhiks	Ferghana Valley	200	185.30	155.30	130.50	143.30	.....	.....	84.04	91.10	61.30

1. MFH = morphological facial height.

TABLE 33: KARA-KALPAKS FROM THE KARA-KALPAK ASSR (ZEZENKOVA)

Descriptive Characters	Males					Females				
	No.	I	II	III	M	No.	I	II	III	M
Eye Color (I = dark; III = light)	85	84.47	14.41	1.22	1.16	140	94.30	5.70	....	1.06
Horizontal Facial Profile (I = flat; III = narrow)	85	25.88	71.76	2.36	1.74	139	43.17	56.83	....	1.56
Nasal Bridge Height (I = low; III = high)	85	10.59	85.88	3.53	1.93	139	23.74	76.26	....	1.71
Height of Nasal Wings (I = low; III = high)	85	34.12	62.35	3.53	1.69	140	34.28	64.29	1.43	1.67
General Profile of Nasal Ridge (I = concave; II = straight or wavy; III = convex)	85	.....	96.47	3.53	2.04	138	5.80	94.20	....	1.74
Position of Nasal Walls (I = vertical; III = very sloping)	85	7.07	89.41	3.53	1.93	140	.....	92.14	7.86	2.07
Eyeball Position (I = sunken; III = protruding)	85	2.35	97.65	....	1.98	...	.....	.....	....	....
Degree of Epicanthus Development (if present)	36	27.06	7.06	8.23	1.55		22.46	21.01	11.60	1.78
Percentage of Epicanthus (present)	85	.....	.....	....	42.35	140	.....	.....	....	55.07

TABLE 35: KARA-KALPAKS OF FERGHANA VALLEY (ZEZENKOVA)

Descriptive Characters	Males					Females				
	No.	I	II	III	M	No.	I	II	III	M
Eye Color (I = dark; III = light)	82	85.38	12.20	2.42	1.17	115	92.05	5.22	2.63	1.10
Forehead Slope (I = straight; III = marked)	85	55.88	41.18	3.54	1.48	...	.....	.....	....	....
Superciliary Development (I = weak; III = strong)	85	35.29	54.12	10.59	1.75	115	79.13	20.87	....	1.21
Horizontal Facial Profile (I = flat; III = narrow)	85	11.76	82.35	5.89	1.94	115	18.26	79.13	2.61	1.84
Nasal Bridge Height (I = low; III = high)	85	5.88	70.59	23.53	2.18	115	15.65	81.74	2.61	1.87
Nasal Wing Height (I = low; III = high)	85	21.18	76.47	2.35	1.81	115	20.87	79.13	....	1.79
Transverse Profile of Nasal Ridge (I = flat; III = pronounced)	85	4.71	89.41	5.88	2.01	115	13.93	86.07	....	1.85
General Profile of Nasal Ridge or Nasal Profile (I = concave; II = straight or wavy; III = convex)	85	9.41	77.64	12.95	2.03	115	23.48	74.78	1.74	1.78
Position of Nasal Walls (I = vertical; III = very sloping)	85	14.12	81.18	4.70	1.91	115	1.74	86.09	12.17	2.10
Eyeball Position (I = sunken or deeply set; III = protruding)	85	.....	98.82	1.18	2.01	115	2.61	93.04	4.35	2.02
Degree of Epicanthus, if present (percentages)	85	20.00	7.01	1.18	1.33	115	38.26	13.04	1.74	1.39
Epicanthus present (percentages)	85	.....	.....	.....	28.22	115	.....	.....	....	53.04

TABLE 37: KIPCHAKS OF FERGHANA VALLEY (ZEZENKOVA)

Descriptive Characters	Males					Females				
	No.	I	II	III	M	No.	I	II	III	M
Eye Color (I = dark; III = light)	157	84.80	14.00	1.20	1.15	202	95.55	4.45	....	1.64
Forehead Slope (I = straight; III = marked)	159	56.00	41.50	2.50	1.45	198	89.40	10.60	....	1.10
Superciliary Development (I = weak; III = strong)	159	32.08	64.65	3.27	1.68	201	87.55	11.44	1.00	1.11
Horizontal Facial Profile (I = flat; III = narrow)	159	15.72	81.13	3.15	1.87	202	29.20	70.30	0.50	1.71
Nasal Bridge Height (I = low; III = high)	159	11.95	74.21	13.84	2.01	202	32.68	63.36	3.96	1.71
Nasal Wing Height (I = low; III = high)	159	17.61	80.50	1.89	1.84	202	22.76	76.24	1.00	1.78
Transverse Profile of Nasal Ridge (I = flat; III = pronounced)	159	6.91	80.99	3.14	1.96	202	2.75	79.70	0.50	1.75
General Profile of Nasal Ridge or Nasal Profile (I = concave; II = straight or wavy; III = convex)	159	10.13	80.17	6.91	1.96	202	31.68	67.82	0.49	1.68
Position of Nasal Walls (I = vertical; III = very sloping)	159	10.66	36.78	3.14	1.93	202	5.44	72.27	22.27	1.62
Eyeball Position (I = sunken or deeply set; III = protruding)	159	2.52	94.36	2.52	2.00	202	1.48	97.04	1.38	2.00
Degree of Epicanthus, if present (percentages)	159	72.22	25.92	1.86	1.30	202	64.03	33.33	2.64	1.30
Epicanthus present (percentages)	159	.....	.....	....	33.96	202	.....	.....	....	56.43

TABLE 38: KIPCHAKS OF FERGHANA VALLEY (ZEZENKOVA)

Metric Data	Males				Females			
	No.	M ± m(M)	σ ± m(σ)	v ± m(v)	No.	M ± m(M)	σ ± m(σ)	v ± m(v)
Longitudinal Head Diameter	158	186.08±0.56	7.05±0.40	3.78±0.21	202	177.77±0.45	6.39±0.32	3.59±0.18
Transverse Head Diameter	159	157.25±0.46	5.82±0.32	3.70±0.20	202	152.54±0.33	4.68±0.23	3.06±0.15
Morphological Facial Height	159	128.27±0.63	8.04±0.45	6.26±0.35	202	119.72±0.42	5.91±0.29	4.93±0.24
Bizygomatic Diameter	157	144.65±0.52	6.54±0.37	4.52±0.25	202	137.45±0.34	4.74±0.23	3.45±0.17
Smallest Forehead Diameter	159	108.84±0.51	6.48±0.36	5.95±0.33	202	106.62±0.41	5.79±0.29	5.43±0.27
Lower Jaw Diameter	157	107.28±0.59	7.47±0.42	6.96±0.39	201	100.86±0.43	6.09±0.30	6.03±0.29
Nasal Length	159	57.34±0.39	5.00±0.28	8.71±0.49	202	53.36±0.30	4.26±0.21	7.97±0.39
Nasal Width	159	36.74±0.25	3.16±0.18	8.60±0.48	202	34.02±0.19	2.82±0.14	8.28±0.41
Cephalic Index	159	84.50±0.32	4.08±0.22	4.82±0.26	202	85.92±0.27	3.96±0.19	4.48±0.22
Morphological Facial Index	157	88.50±0.47	5.79±0.32	6.59±0.36	201	87.19±0.33	4.68±0.23	5.36±0.26
Nasal Index	159	64.44±0.54	6.87±0.37	10.66±0.59	202	62.98±0.44	6.33±0.31	10.04±0.49
Stature	158	164.54±0.63	7.65±0.44	4.64±0.27	194	152.00±0.43	6.04±0.30	3.97±0.22

KEY TO TABLES 39 THROUGH 44

Series	Group
1	Uzbeks of specific clans
2	Uzbeks without clan divisions
3	Tadzhiks

TABLE 39: DISTRIBUTION OF CHARACTERS DIFFERENTIATING EUROPEOIDS FROM MONGOLOIDS OF MODERN POPULATION OF KHWARIZM (KHOREZM) AND CHACH (MALES)

	Epicanthus (Percentage)				Eyeball Position			
Series	No.	Min.	Max.	Mean	No.	Min.	Max.	Mean
1	855	3.33	19.50	16.19	186	1.85	1.85	1.85
2	514	0.00	18.00	9.25	514	1.74	2.00	1.86
3	212	0.00	7.70	5.59	58	....	....	1.65

	Beard				Horizontal Facial Profile			
Series	No.	Min.	Max.	Mean	No.	Min.	Max.	Mean
1	855	1.83	1.97	1.84	855	1.43	1.82	1.48
2	514	2.51	2.98	2.62	514	1.91	2.27	2.11
3	212	2.58	2.83	2.65	212	2.58	2.88	2.65

	Nasal Bridge Height				Nasal Walls Position			
Series	No.	Min.	Max.	Mean	No.	Min.	Max.	Mean
1	765	1.62	1.98	1.66	186	1.92	1.95	1.94
2	434	2.14	2.24	2.19	514	1.70	1.99	1.82
3	212	2.08	2.31	2.27	59	....	....	1.86

TABLE 40: DISTRIBUTION OF CHARACTERS DIFFERENTIATING EUROPEOIDS FROM MONGOLOIDS OF MODERN POPULATION OF KHWARIZM (KHOREZM) AND CHACH (MALES)

	Transverse Profile of Nasal Ridge				General Profile of Nasal Ridge			
Series	No.	Min.	Max.	Mean	No.	Min.	Max.	Mean
1	186	1.98	2.05	2.01	759	2.00	2.15	2.02
2	514	2.03	2.19	2.11	414	1.96	2.24	2.13
3	212	2.10	2.24	2.20	212	2.10	2.13	2.11

	Bizygomatic Breadth				Morphological Facial Height			
Series	No.	Min.	Max.	Mean	No.	Min.	Max.	Mean
1	855	143	144	144	699	...	...	129
2	514	141	144	143	433	126	128	127
3	212	139	142	140	154	...	...	129

	Head Breadth				Head Length			
Series	No.	Min.	Max.	Mean	No.	Min.	Max.	Mean
1	855	157	157	157	855	181	183	183
2	514	154	158	156	514	181	183	182
3	212	157	157	157	212	182	184	183

TABLE 41: DISTRIBUTION OF CHARACTERS DIFFERENTIATING EUROPEOIDS FROM MONGOLOIDS OF MODERN POPULATION OF KHWARIZM (KHOREZM) AND CHACH (FEMALES)

	Epicanthus (Percentage)			
Series	No.	Min.	Max.	Mean
1	265	11.33	16.67	15.61
2	599	0.0	20.70	14.38
3	147	0.0	15.00	10.21

	Eyeball Position			
	No.	Min.	Max.	Mean
	260	2.00	2.01	2.00
	599	1.73	2.15	1.90
	147	1.87	2.18	2.05

	Horizontal Facial Profile			
Series	No.	Min.	Max.	Mean
1	265	1.58	1.70	1.65
2	469	1.57	2.08	1.93
3	147	1.55	1.93	1.68?

	Nasal Bridge Height			
	No.	Min.	Max.	Mean
	114	....	....	1.90
	507	1.86	2.14	1.93
	147	2.08	2.31	2.23

	Nasal Walls Position			
Series	No.	Min.	Max.	Mean
1	265	2.06	2.14	2.09
2	516	1.88	2.00	1.93
3	147	1.55	1.89	1.66

	Transverse Profile of Nasal Ridge			
Series	No.	Min.	Max.	Mean
1	265	1.87	1.96	1.92
2	238	2.02	2.04	2.03
3	147	2.04	2.10	2.08

	General Profile of Nasal Ridge			
	No.	Min.	Max.	Mean
	265	1.95	2.09	2.01
	506	1.88	2.26	1.98
	147	1.97	2.22	2.14

	Bizygomatic Breadth			
Series	No.	Min.	Max.	Mean
1	265	136	137	136
2	599	133	135	134
3	147	131	134	132

	Morphological Facial Height			
	No.	Min.	Max.	Mean
	...	...	...	...
	171	116	117	117
	100	...	...	118

	Transverse Head Diameter			
Series	No.	Min.	Max.	Mean
1	265	149	150	150
2	599	148	149	149
3	147	146	150	147

	Longitudinal Head Diameter			
	No.	Min.	Max.	Mean
	265	173	174	174
	599	172	174	173
	147	172	174	173

TABLE 42: DISTRIBUTION OF CHARACTERS DIFFERENTIATING EUROPEOIDS FROM MONGOLOIDS OF MODERN POPULATION OF SOGDIANA
(MALES)

	Epicanthus (Percentage)			
Series	No.	Min.	Max.	Mean
1	954	5.20	20.00	10.88
2	86	....	.....	8.10
3	302	2.00	5.70	3.84

	General Profile of Nasal Ridge			
No.	Min.	Max.	Mean	
954	1.97	2.12	2.07	
86	....	....	2.10	
302	2.04	2.31	2.18	

	Beard			
Series	No.	Min.	Max.	Mean
1	954	2.54	3.34	3.02
2	86	....	....	2.85
3	302	2.87	2.93	2.89

	Horizontal Facial Profile			
No.	Min.	Max.	Mean	
954	1.57	1.81	1.72	
...	....	....	....	
163	....	....	2.07	

	Nasal Bridge Height			
Series	No.	Min.	Max.	Mean
1	954	1.92	2.31	2.05
2	86	....	....	2.16
3	302	2.28	2.62	2.43

	Nasal Walls Position			
No.	Min.	Max.	Mean	
859	1.98	2.12	2.05	
...	....	....	....	
163	....	....	1.87	

	Bizygomatic Breadth			
Series	No.	Min.	Max.	Mean
1	954	140	142	141
2	...	...	...	...
3	163	...	...	138

	Morphological Facial Height			
No.	Min.	Max.	Mean	
954	122	124	122	
...	...	...	...	
163	...	...	120	

	Transverse Head Diameter			
Series	No.	Min.	Max.	Mean
1	954	152	154	153
2	86	...	...	152
3	302	151	152	151

	Longitudinal Head Diameter			
No.	Min.	Max.	Mean	
954	179	181	181	
86	...	...	180	
302	180	180	180	

TABLE 43: DISTRIBUTION OF CHARACTERS DIFFERENTIATING MONGOLOIDS FROM EUROPEOIDS OF MODERN POPULATION OF BACTRIA
(MALES)

	Epicanthus (Percentage)			
Series	No.	Min.	Max.	Mean
1	845	0.0	5.9	3.67
2	53	...	...	1.90
3	221	...	...	0.0

	Eyeball Position			
No.	Min.	Max.	Mean	
845	1.73	1.81	1.79	
53	....	....	1.67	
221	....	....	1.51	

	Beard			
Series	No.	Min.	Max.	Mean
1	845	2.23	2.64	2.40
2	53	....	....	2.92
3	221	....	....	3.04

	Horizontal Facial Profile			
No.	Min.	Max.	Mean	
845	1.49	1.94	1.64	
53	....	....	2.01	
221	....	....	1.92	

	Nasal Bridge Height			
Series	No.	Min.	Max.	Mean
1	845	2.05	2.12	2.06
2	53	....	....	2.09
3	221	....	....	2.29

	Nasal Walls Position			
No.	Min.	Max.	Mean	
845	1.85	1.93	1.91	
53	....	....	1.69	
221	....	....	1.65	

TABLE 45A: DISTRIBUTION OF CHARACTERS DIFFERENTIATING MONGOLOIDS FROM EUROPEOIDS OF MODERN POPULATION OF DAVAN
(MALES)

	Transverse Profile of Nasal Ridge				General Profile of Nasal Ridge			
Series	No.	Min.	Max.	Mean	No.	Min.	Max.	Mean
1	822	1.73	2.17	2.05	727	2.02	2.22	2.14
2	55	....	....	1.99	255	2.10	2.10	2.10

	Bizygomatic Breadth				Morphological Facial Height			
Series	No.	Min.	Max.	Mean	No.	Min.	Max.	Mean
1	822	141	144	142	822	125	129	128
2	291	142	143	143	291	128	130	129

	Transverse Head Diameter				Longitudinal Head Diameter			
Series	No.	Min.	Max.	Mean	No.	Min.	Max.	Mean
1	822	155	158	156	822	182	184	183
2	291	155	158	156	291	185	185	185

TABLE 46: DISTRIBUTION OF CHARACTERS DIFFERENTIATING MONGOLOIDS FROM EUROPEOIDS OF MODERN POPULATION OF DAVAN
(FEMALES)

	Epicanthus (Percentage)				Eyeball Position			
Series	No.	Min.	Max.	Mean	No.	Min.	Max.	Mean
1	160	17.7	22.1	21.24	160	1.85	2.00	1.91
2	140	7.0	18.7	15.31	140	1.92	2.04	1.99

	Horizontal Facial Profile				Nasal Bridge Height			
Series	No.	Min.	Max.	Mean	No.	Min.	Max.	Mean
1	160	1.76	1.92	1.87	160	1.69	2.09	1.91
2	140	1.92	1.98	1.93	140	2.02	2.22	2.12

	Nasal Walls Position			
Series	No.	Min.	Max.	Mean
1	137	2.01	2.07	2.03
2	61	....	....	1.95

TABLE 47: DISTRIBUTION OF CHARACTERS DIFFERENTIATING MONGOLOIDS FROM EUROPEOIDS OF MODERN POPULATION OF DAVAN
(FEMALES)

	Transverse Profile of Nasal Ridge				General Profile of Nasal Ridge			
Series	No.	Min.	Max.	Mean	No.	Min.	Max.	Mean
1	160	1.93	2.00	1.98	115	1.79	2.00	1.96
2	140	2.00	2.10	2.04	140	1.86	2.00	1.96

	Bizygomatic Breadth				Morphological Facial Height			
Series	No.	Min.	Max.	Mean	No.	Min.	Max.	Mean
1	160	132	138	135	160	115	120	117
2	111	135	136	135	111	117	118	118

	Transverse Head Diameter				Longitudinal Head Diameter			
Series	No.	Min.	Max.	Mean	No.	Min.	Max.	Mean
1	160	150	151	150	160	173	177	175
2	140	148	152	150	140	173	177	175

TABLE 48: UZBEKS AND TADZHIKS OF THE ANCIENT PROVINCES[1] OF UZBEKISTAN, KHWARIZM (KHOREZM), CHACH (TASHKENT, PSKENT AND AKHANGARAN OF ANGREN VALLEY, BOSTANDYK RAION OF THE UPPER CHIRCHIK) (FEMALES)

Series	Group	Locality	Observer	Year
1	Uzbeks (Clanless)	Khwarizm Oblast	Zezenkova	1946
2	Uzbeks (Clanless)	Tashkent	SAGU[2]	1939
3	Uzbeks (Clanless)	Tashkent	SAGU	1948
4	Uzbeks (Clanless)	Pskent	SAGU[3]	1954
5	Uzbeks (Clanless)	Akhangaran	SAGU	1954
6	Uzbeks (Kurama)	Pskent	SAGU	1954
7	Uzbeks (Kurama)	Akhangaran	SAGU	1954
8	Tadzhiks	Akhangaran	SAGU	1954
9	Uzbeks	Upper Chirchik[4]	SAGU	1940
10	Tadzhiks	Upper Chirchik[5]	SAGU	1940

DESCRIPTIVE CHARACTERS

Series	No.	Epicanthus[6]	Horizontal Facial Profile	Nasal Bridge Height	Nasal Ridge	Nasal Profile
1	88	14.00	1.96	2.02	2.03	1.98
2	130	13.10	1.58	1.92	....	1.88
3	231	20.70	2.08	1.91	....	1.95
4	92	0.00	1.93	....	2.02	2.00
5	63	4.76	1.85	2.14	2.03	2.26
6	151	11.33	1.70	....	1.96	1.95
7	114	16.67	1.58	1.90	1.87	2.09
8	47	0.00	1.93	2.06	2.04	2.02
9	83	7.60	1.57	1.86	2.04	1.51
10	100	15.00	1.55	2.31	2.10	1.97

Series	No.	Nasal Walls	Eyeballs	Forehead	Supercilium	Eye Color
1	88	1.91	1.97	....	....	1.18
2	130	1.91	2.15	1.52	1.18	1.05
3	231	1.88	1.73	....	....	1.11
4	92	2.00	1.95	....	....	1.10
5	63	1.95	1.90	....	....	1.11
6	151	2.06	2.00	....	....	1.16
7	114	2.14	2.01	....	....	1.14
8	47	1.89	1.87	....	....	1.10
9	83	1.34	1.91	2.22	1.44	1.07
10	100	1.55	2.18	2.95	1.50	1.11

1. Series 1 from Khwarizm (Khorezm); Series 2-10 from Chach.
2. Students: Series 2-3 under Zezenkova.
3. Students: Series 4-8 under Nadzhimov; Series 9-10 under Oshanin.
4. Khumsan-Sidzhak.
5. Nanai, Bogustan and Brich-Mulla.
6. Presence of epicanthus in percentages.

TABLE 49: UZBEKS AND TADZHIKS OF THE ANCIENT PROVINCES[1] OF UZBEKISTAN, KHWARIZM (KHOREZM), CHACH (TASHKENT, PSKENT AND AKHANGARAN OF ANGREN VALLEY, BOSTANDYK RAION OF THE UPPER CHIRCHIK) (MALES)[1]

Series	Group	Locality	Observer	Year
1	Uzbeks (Clanless)	Khwarizm Oblast	Oshanin	1923
2	Uzbeks (Clanless)	Khwarizm Oblast	IArkho	1930
3	Uzbeks (Clanless)	Tashkent	Oshanin	1930
4	Uzbeks (Clanless)	Tashkent	SAGU[2]	1948
5	Uzbeks (Clanless)	Pskent	SAGU[3]	1954
6	Uzbeks (Clanless)	Akhangaran	SAGU	1954
7	Uzbeks (Kurama)	Pskent	SAGU	1954
8	Uzbeks (Kurama)	Akhangaran	SAGU	1954
9	Uzbeks (Kurama)	Angren Valley	IArkho	1929
10	Tadzhiks	Akhangaran	SAGU	1954
11	Tadzhiks	Upper Chirchik[4]	SAGU[5]	1940

METRIC DATA

		GOL		GB		MFD		MFH		Biz. B.	
Series	No.	Mean	σ	Mean	σ	Mean	σ	Mean	σ	Mean	σ
1	100	186.0	7.80	153.0	6.30	.....	....	.....	....	.....	....
2	100	186.0	7.35	155.0	4.80	.....	....	128.0	6.78	142.0	4.11
3	200	182.0	6.53	156.0	6.05	108.0	4.73	128.0	7.79	144.0	4.89
4	133	181.0	5.92	154.0	5.93	.....	....	126.0	6.56	141.0	5.76
5	80	183.43	7.05	155.99	5.94	.....	....	119.71?	5.83	142.09	5.25
6	101	182.18	6.09	158.09	6.18	.....	....	118.30?	6.00	142.93	5.88
7	90	181.31	6.60	157.04	6.39	.....	....	116.77?	7.11	142.03	5.43
8	96	182.63	6.57	157.19	5.82	.....	....	117.76?	6.12	143.98	6.00
9	669	183.00	7.02	157.00	5.79	.....	....	129.00	5.43	144.00	5.01
10	58	182.18	5.82	156.08	4.44	.....	....	118.03	5.49	142.45?	4.38
11	154	184.0	5.65	157.0	5.72	.....	....	129.00	8.91	139.00	5.05

1. Series 1-2 from Khwarizm (Khorezm); Series 3-11 from Chach.
2. Students: Series 4 under Zezenkova.
3. Students: Series 5-8, 10 under Nadzhimov.
4. Nanai, Bogustan and Brich-Mulla.
5. Students: Series 11 under Oshanin.

TABLE 51: UZBEKS AND TADZHIKS OF THE ANCIENT PROVINCES[1] OF UZBEKISTAN, KHWARIZM (KHOREZM), CHACH (TASHKENT, PSKENT AND AKHANGARAN OF ANGREN VALLEY, BOSTANDYK RAION OF THE UPPER CHIRCHIK) (FEMALES)

METRIC DATA

Series[2]	No.	GOL		GB		MFD		MFH		Biz. B.	
		Mean	σ	Mean	σ	Mean	σ	Mean	σ	Mean	σ
1	88	179.00	5.80	147.00	5.00	.....	....	117.00	6.90	134.00	3.90
2	130	172.30	5.74	149.50	6.34	107.30	4.98	111.8?	6.21	133.50	4.79
3	231	173.00	6.59	148.40	5.94	.....	....	.....	....	133.90	4.80
4	92	174.23	6.45	149.27	4.89	.....	....	108.07?	7.08	135.31	4.47
5	63	172.91	5.04	149.96	6.33	.....	....	105.25?	5.91	134.68	4.50
6	151	174.35	6.27	150.20	5.46	.....	....	108.13?	6.75	135.73	4.62
7	114	173.51	6.72	149.22	6.06	.....	....	105.61?	9.06	136.78	4.80
8	47	172.22	5.73	149.42	4.47	.....	....	106.30?	5.52	134.53	5.13
9	83	173.20	5.78	148.94	6.18	102.74	8.74	116.72	6.77	133.23	4.34
10	100	174.30	5.90	146.57	6.94	101.28	6.55	118.15	7.69	131.55	5.84

1. Series 1 from Khwarizm; Series 2-10 from Chach.
2. See Table 48.

TABLE 52: UZBEKS AND TADZHIKS OF THE ANCIENT PROVINCES[1] OF UZBEKISTAN, KHWARIZM (KHOREZM), CHACH (TASHKENT, PSKENT AND AKHANGARAN OF ANGREN VALLEY, BOSTANDYK RAION OF THE UPPER CHIRCHIK) (FEMALES)

METRIC DATA

Series[2]	No.	Big. B.		CI		MFI		NI		Stature	
		Mean	σ	Mean	σ	Mean	σ	Mean	σ	Mean	σ
1	88	.....	....	82.3	3.80	86.8	4.70	61.7	6.70	155.0	5.70
2	130	102.3	6.25	86.1	4.04	87.5	5.48	.....	....	153.1	5.56
3	231	.....	....	85.5	4.59	88.4	3.18	.....	....	153.4	5.44
4	92	.....	....	85.80	4.10	79.82?	5.56	71.44?	7.30	154.31	6.21
5	63	.....	....	84.50	4.64	78.14?	4.50	73.12?	7.66	153.80	4.80
6	151	.....	....	86.1	4.60	79.51?	5.06	72.24?	7.26	152.99	5.34
7	114	.....	....	87.44	4.02	73.30?	4.86	73.36?	....	152.54	4.89
8	47	.....	....	87.14	3.74	78.92?	5.13	71.18?	7.68	155.00	4.86
9	83	99.31	5.45	86.19	4.38	85.20?	4.13	60.17	4.63	154.23	6.25
10	100	102.07	5.84	81.28	3.39	89.25	4.78	56.00	6.74	154.02	5.42

1. Series 1 from Khwarizm; Series 2-10 from Chach.
2. See Table 48.

TABLE 54: UZBEKS AND TADZHIKS OF ANCIENT PROVINCES[1] OF UZBEKISTAN-SOGDIANA (SAMARKAND, KASHKA DARYA AND PART OF BUKHARA OBLASTS) AND BACTRIA (LATER TOKHARISTAN, SURKHAN DARYA OBLAST)
(MALES)

METRIC DATA

Series[2]	No.	GOL		GB		MFD		MFI		Biz. B.	
		Mean	σ	Mean	σ	Mean	σ	Mean	σ	Mean	σ
1	86	180.0	6.72	152.0	5.67	.....	....	.....	....	.....	....
2	139	180.0	7.41	152.0	7.76	.....	....	.....	....	.....	....
3	163	180.0	5.90	151.0	6.30	.....	....	120.0	6.70	138.0	5.60
4	95	181.0	6.65	152.0	5.57	.....	....	122.0	7.03	140.0	5.58
5	190	181.0	6.90	154.0	6.60	106.0	5.72	122.0	6.50	140.0	4.89
6	202	179.0	6.44	155.0	5.66	105.0	5.84	118.0?	6.54	141.0	5.24
7	200	181.0	6.30	152.0	5.10	107.0	4.23	122.0	6.20	142.0	4.92
8	267	181.0	6.39	153.0	5.96	106.0	4.58	124.0	7.40	141.0	5.44
9	474	184.32	6.92	156.01	6.09	106.88	4.93	127.54	7.02	144.45	5.40
10	116	183.36	6.04	157.10	5.94	107.44	4.32	131.74	7.58	145.10	5.05
11	87	183.67	6.40	155.80	6.40	106.13	4.62	127.14	6.47	143.55	5.26
12	168	183.03	6.42	155.61	5.73	105.80	4.79	124.60	6.62	142.34	5.27
13	53	181.32	6.40	155.17	5.11	105.76	4.18	125.36	6.04	141.83	4.05
14	221	181.92	7.04	155.18	5.51	106.40	4.76	126.55	7.28	141.36	5.10

1. Series 1-7 in Sogdiana; Series 8-14 in Bactria.
2. See Table 53.

TABLE 55: UZBEKS AND TADZHIKS OF ANCIENT PROVINCES[1] OF UZBEKISTAN-SOGDIANA (SAMARKAND, KASHKA DARYA AND PART OF BUKHARA OBLASTS) AND BACTRIA (LATER TOKHARISTAN, SURKHAN DARYA OBLAST)
(MALES)

METRIC DATA

Series[2]	No.	Big. B.		CI		MFI		NI		Stature	
		Mean	σ	Mean	σ	Mean	σ	Mean	σ	Mean	σ
1	86	.....	....	85.50	4.87	.....	....	61.80	....	165.0	4.96
2	139	107.0	6.02	85.30	4.61	.....	....	60.60	3.39	165.0	5.94
3	163	.....	....	84.20	4.60	87.1	5.00	60.60	5.93	164.0	5.51
4	95	107.0	5.72	84.30	4.22	87.50	5.55	63.20	7.99	166.0	5.45
5	190	107.0	5.19	85.30	4.72	87.80	5.00	63.50	6.18	163.0	6.15
6	202	105.0	5.65	86.50	4.28	84.80	4.28	66.00?	6.73	165.0	5.51
7	200	109.0	5.37	84.10	4.08	86.70	4.90	63.00	7.00	166.0	5.62
8	267	109.0	6.37	84.20	4.18	.....	....	62.30	7.40	165.0	6.18
9	474	109.77	6.48	84.79	4.46	88.52	5.12	63.46	6.75	165.88	6.08
10	116	112.30	5.29	85.89	4.47	91.15	5.44	61.31	5.98	165.53	5.83
11	87	109.10	6.42	84.99	4.53	88.86	5.08	63.55	5.95	165.07	6.19
12	168	106.89	6.04	86.20	4.10	84.47	4.57	63.26	5.83	165.23	7.08
13	53	107.11	5.88	85.92	4.01	88.55	3.93	62.63	6.29	166.19	5.80
14	221	107.75	5.98	85.51	4.20	89.50	5.49	61.35	6.91	164.94	6.17

1. Series 1-7 in Sogdiana; Series 8-14 in Bactria.
2. See Table 53

TABLE 57: UZBEKS AND TADZHIKS OF THE ANCIENT PROVINCE OF UZBEKISTAN-DAVAN (PARKANA, FERGHANA VALLEY)
(MALES)

METRIC DATA

Series[1]	No.	GOL		GB		MFD		MFH		Biz. B.	
		Mean	σ	Mean	σ	Mean	σ	Mean	σ	Mean	σ
1	200	184.0	6.93	155.0	5.88	111.0	....	129.0	9.76	141.0	5.13
2	199	183.0	6.60	155.0	5.70	109.0	....	129.0	6.45	141.0	5.34
3	95	183.0	....	155.0	....	114.0	....	128.0	....	141.0	....
4	200	182.0	....	155.0	....	113.0	....	128.0	....	142.0	....
5	91	184.0	6.70	158.0	5.10	.....	....	125.0	7.20	144.0	9.10
6	36	183.0	6.69	157.0	5.10	.....	....	128.0	7.83	143.0	5.70
7	55	185.0	6.51	158.0	5.76	.....	....	128.0	9.12	142.0	6.09
8	200	185.0	6.75	155.0	5.43	.....	....	130.0	7.11	143.0	4.77

1. See Table 56.

TABLE 58: UZBEKS AND TADZHIKS OF THE ANCIENT PROVINCE OF UZBEKISTAN-DAVAN (PARKANA, FERGHANA VALLEY)
(MALES)

METRIC DATA

Series[1]	No.	Big. B.		CI		MFI		NI		Stature	
		Mean	σ	Mean	σ	Mean	σ	Mean	σ	Mean	σ
1	200	110.0	....	84.6	4.37	91.9	5.10	59.5	6.12	164.0	5.52
2	199	110.0	....	84.8	4.60	91.8	4.88	61.6	....	165.0	5.34
3	95	109.0	....	85.1	....	89.8	....	63.6	....	165.0	....
4	200	109.0	....	85.2	....	89.0	....	....	....	166.0	....
5	91	111.0	5.40	85.8	4.20	85.9	5.10	66.1	7.30	165.0	5.70
6	36	106.0	3.60	85.8	3.84	90.0	6.36	....	....	166.0	3.12
7	55	109.0	6.78	86.0	5.31	89.5	4.77	64.2	7.32	165	....
8	200	.....	....	84.0	4.18	91.1	4.74	61.3	6.09	169.0	6.30

1. See Table 56.

TABLE 59: UZBEKS AND TADZHIKS OF THE ANCIENT PROVINCE OF UZBEKISTAN-DAVAN (PARKANA, FERGHANA VALLEY)
(FEMALES)

Series	Group	Locality	Observer	Year
1	Uzbeks (Clanless)	Leninsk (Assake)	SAGU[1]	1947
2	Uzbeks (Clanless)	Sharikhan	SAGU	1937
3	Uzbeks (Clanless)	Pap	SAGU	1948
4	Uzbeks (Clanless)	Pap	SAGU	1948
5	Tadzhiks	Chust	SAGU	1937
6	Tadzhiks	Ust-Kurgan	SAGU	1937

DESCRIPTIVE CHARACTERS

Series	No.	Epicanthus[2]	Horizontal Facial Profile	Nasal Bridge Height	Nasal Ridge
1	92	21.7	1.92	1.98	2.00
2	45	22.10	1.76	1.69	1.93
3	23	17.7	1.87	2.09	2.00
4	61	18.7	1.18	2.08	2.02
5	50	16.0	1.92	2.22	2.10
6	29	7.0	1.88	2.02	2.00

Series	No.	Nasal Profile	Nasal Walls	Eyeballs	Eye Color
1	92	2.00	2.01	1.85	1.06
2	45	....	2.07	1.97	1.09
3	23	1.79	....	2.00	1.13
4	61	1.98	1.95	1.92	1.10
5	50	2.00	....	2.04	1.10
6	29	1.86	....	2.03	1.15

1. Students: Series 1 under Zezenkova; Series 2 under Oshanin; Series 3-4 under Zezenkova here given as 1948 but 1949 in tables 60-61; Series 5-6 under Oshanin.
2. Presence of epicanthus in percentages.

TABLE 60: UZBEKS AND TADZHIKS OF THE ANCIENT PROVINCE OF UZBEKISTAN-DAVAN (PARKANA, FERGHANA VALLEY)
(FEMALES)

METRIC DATA

		GOL		GB		MFH		Biz. B.	
Series[1]	No.	Mean	σ	Mean	σ	Mean	σ	Mean	σ
1	93	176.0	6.60	151.0	5.90	115.0	6.40	136.0	4.20
2	45	173.0	5.59	149.9	5.18	120.9	6.01	132.2	3.55
3	23	177.0	....	150.0	....	118.0	....	138.0	....
4	61	177.0	....	152.0	....	118.0	....	135.0	....
5	50	173.0	....	149.0	....	117.0	....	136.0	....
6	29	174.0	....	148.0	....	.....	....	.....	....

1. See Table 59.

TABLE 61: UZBEKS AND TADZHIKS OF THE ANCIENT PROVINCE OF UZBEKISTAN-DAVAN (PARKANA, FERGHANA VALLEY)
(FEMALES)

METRIC DATA

Series[1]	No.	CI		MFI		NI		Stature	
		Mean	σ	Mean	σ	Mean	σ	Mean	σ
1	93	86.2	4.80	90.0	4.5	64.2	6.40	153.0	5.20
2	45	....	....	....	...	....	....	152.9	5.03
3	23	86.2	....	86.0	...	62.0	....	153.0	....
4	61	86.0	....	86.0	...	62.0	....	154.0	....
5	50	85.0	....	88.0	...	62.0	....	149.0	....
6	29	85.0	....	86.0	...	62.0	....	152.0	....

1. See Table 59.

Figures 1-2: South Siberian Mongoloid type. Kirghiz from Talass Valley.

Figures 3-4. South Siberian Mongoloid type. Kirghiz from Talass Valley.

Figure 5: South Siberian Mongoloid type. Kirghiz from Talass Valley.

Figure 7: Central Asiatic Mongoloid type? Kirghiz from Talass Valley.

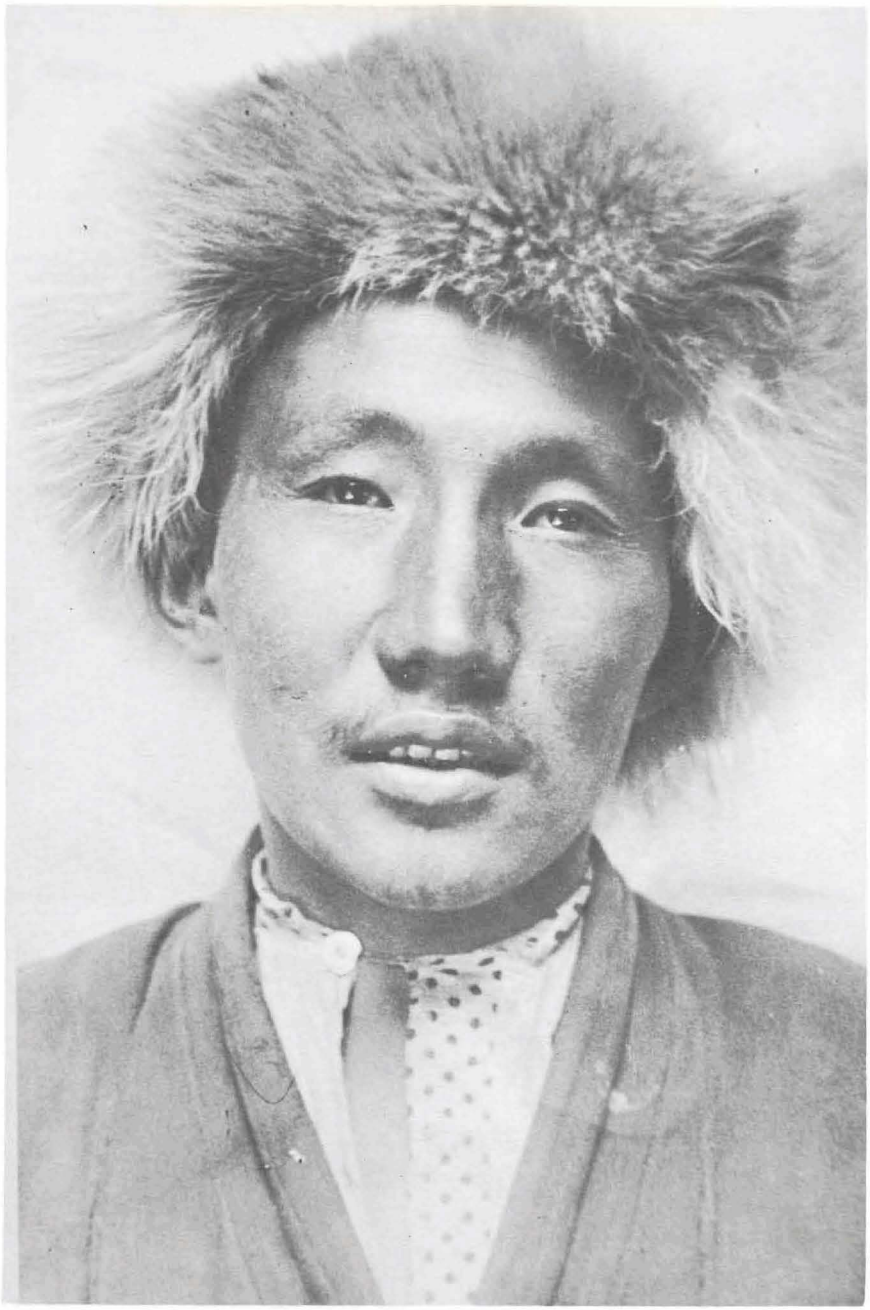

Figure 9: Mongoloid, narrow-faced type. Kirghiz from Pamir Plateau.

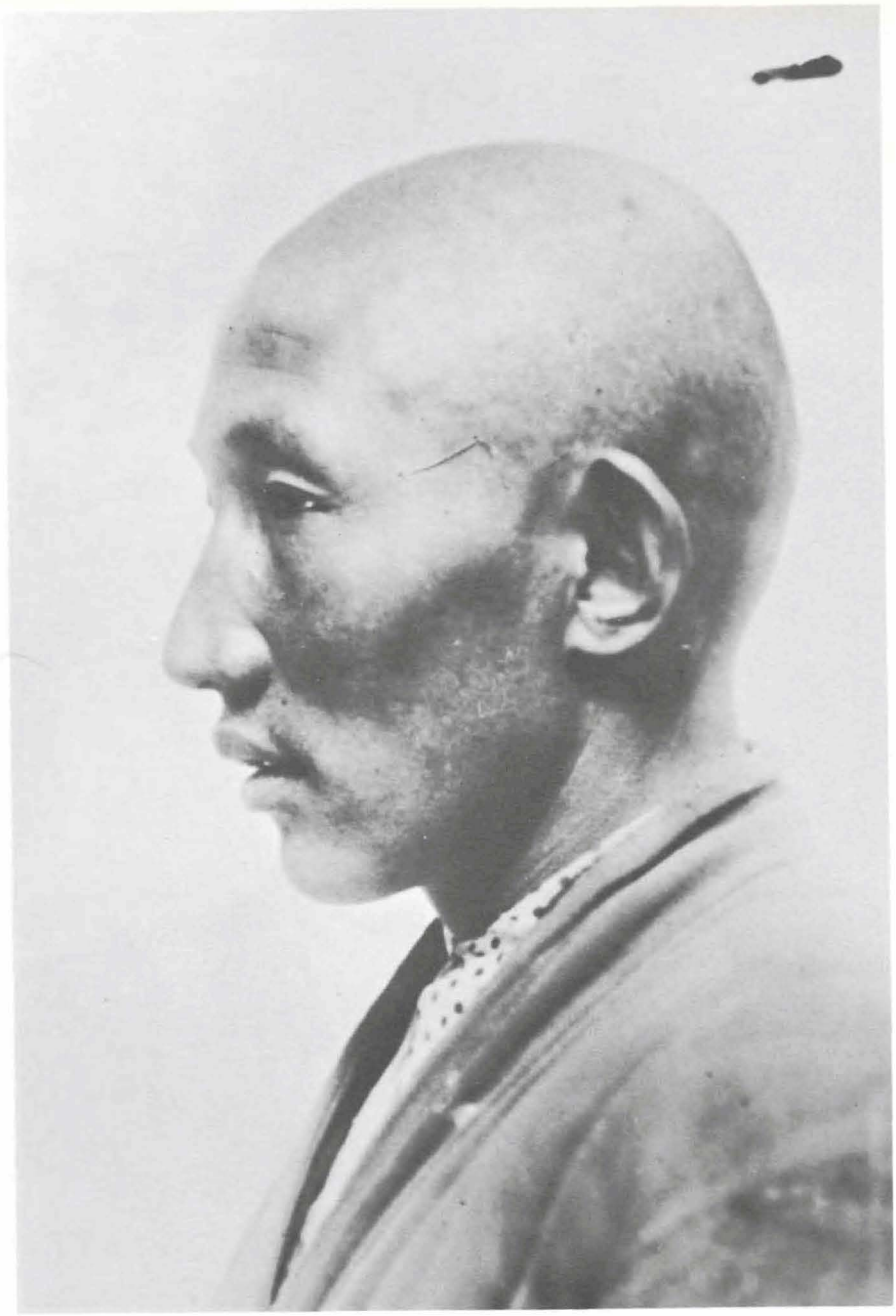

Figure 10: Mongoloid, narrow-faced type. Kirghiz from Pamir Plateau.

Figure 12: South Siberian Mongoloid type. Kirghiz woman from Talass Valley.

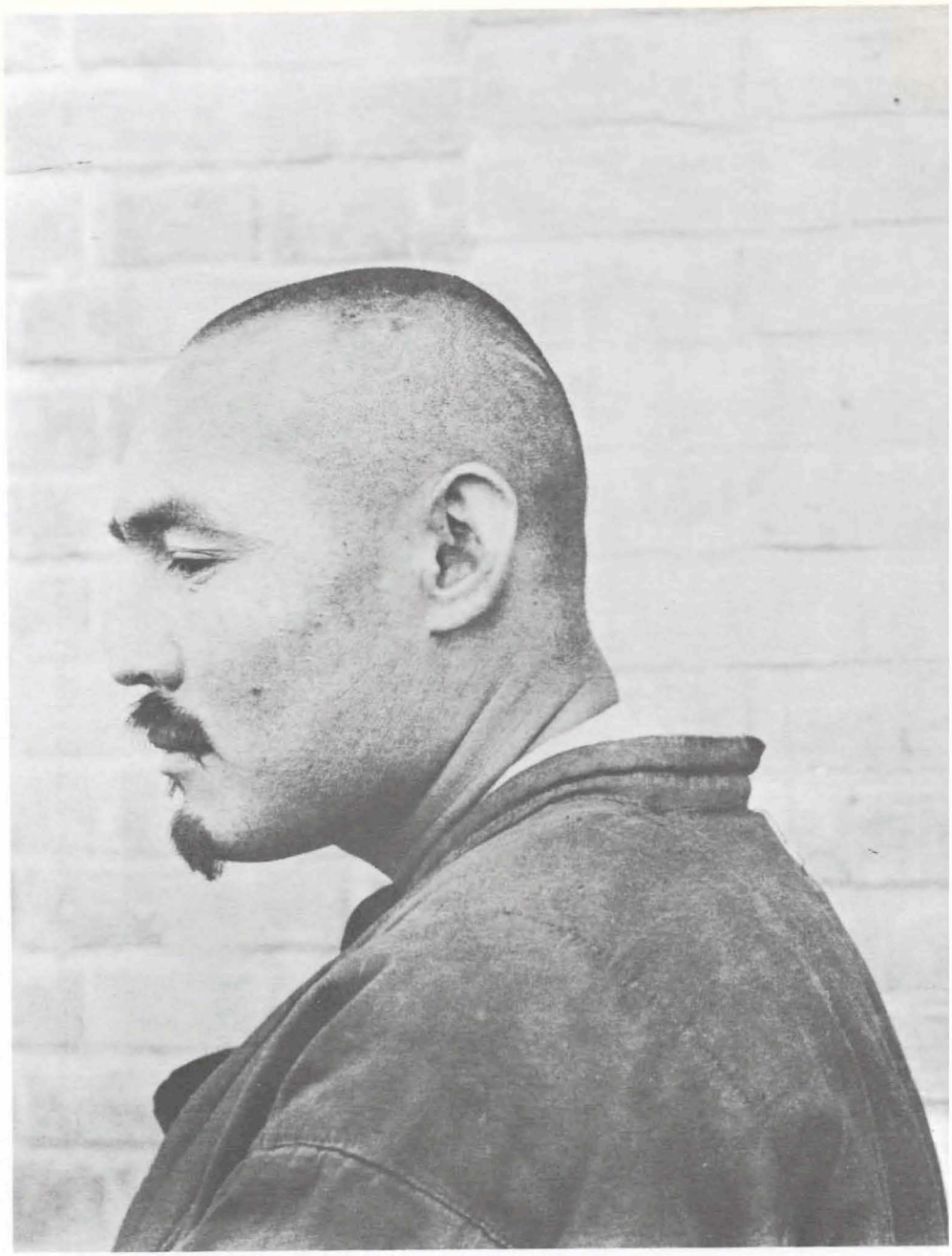

Figure 15: South Siberian Mongoloid type. Kazakh from Talass Valley.

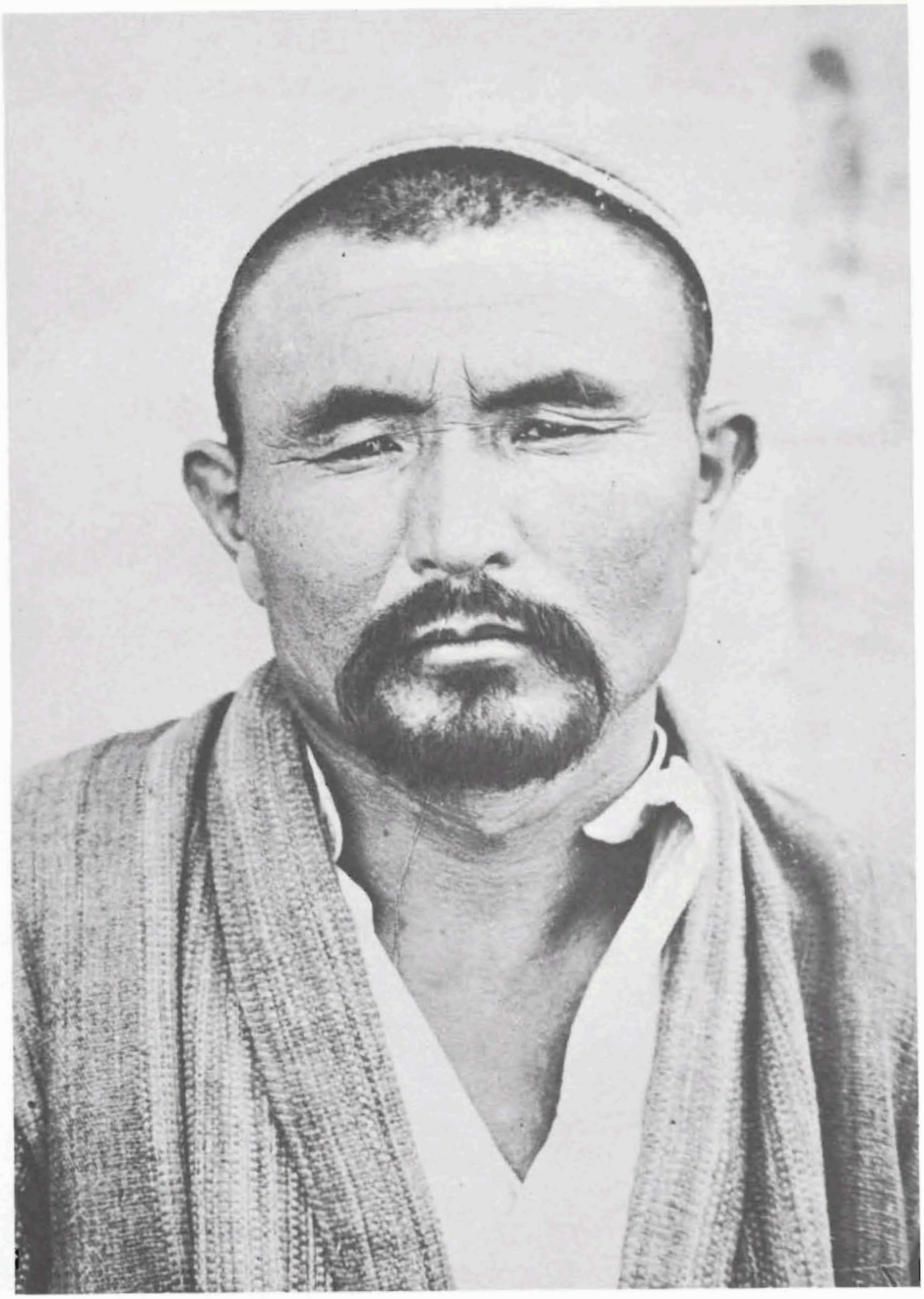

Figure 17: Mixed Mongoloid-Europeoid type. Kazakh from Talass Valley.

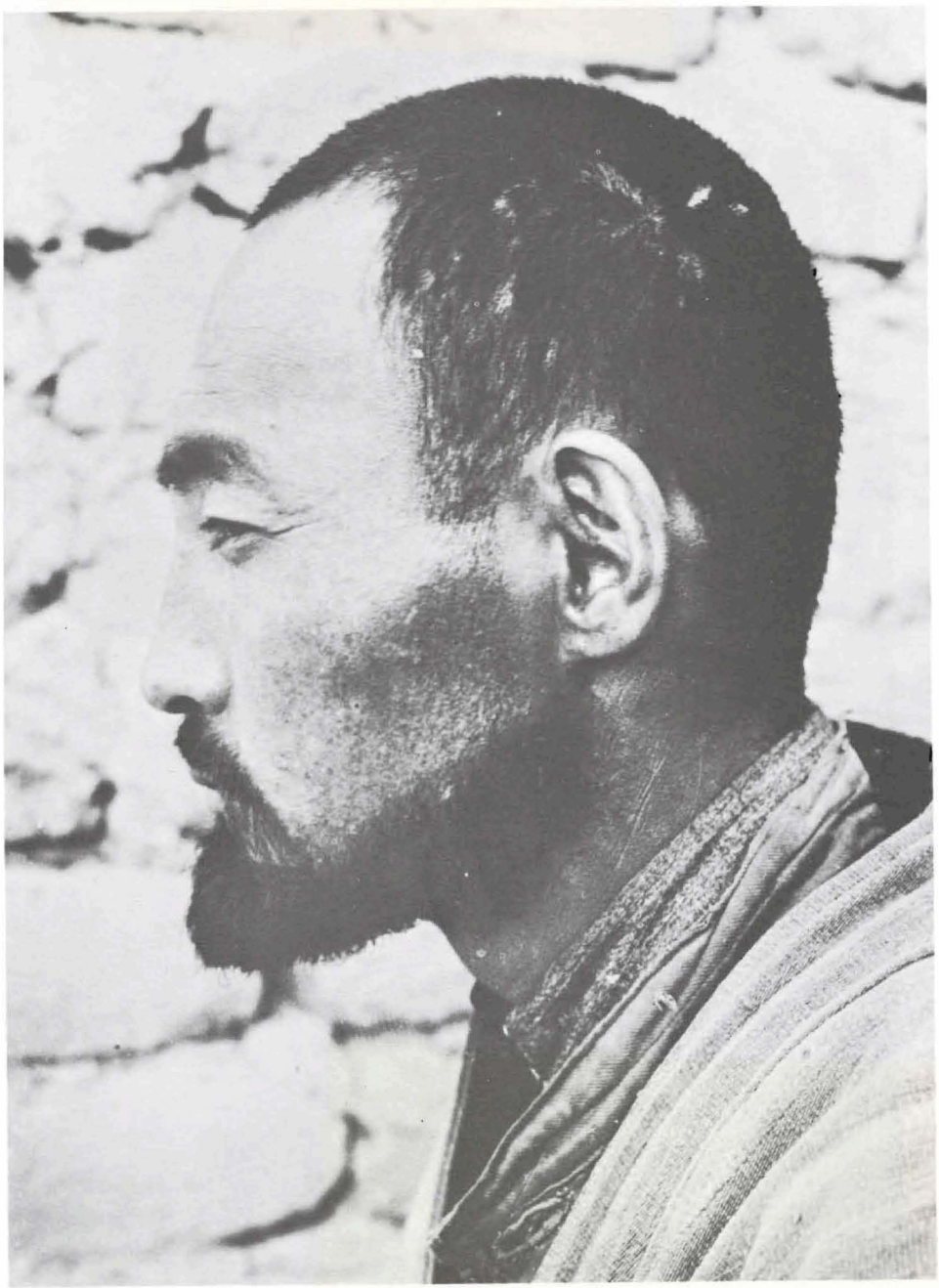

Figure 18: Mixed Mongoloid-Europeoid type. Kazakh from Talass Valley.

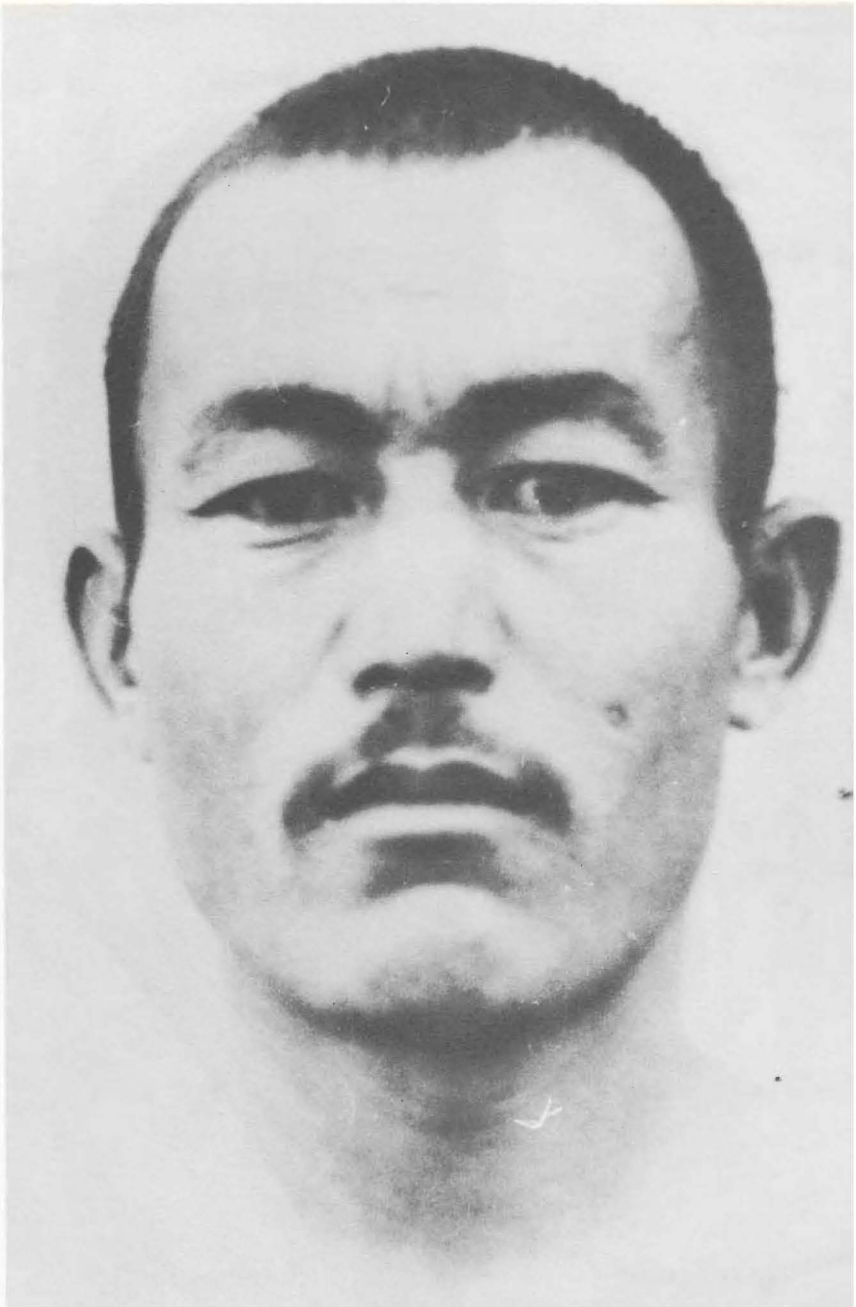

Figure 19: South Siberian Mongoloid type. Kazakh from Talass Valley.

Figure 20: South Siberian Mongoloid type. Kazakh from Talass Valley.

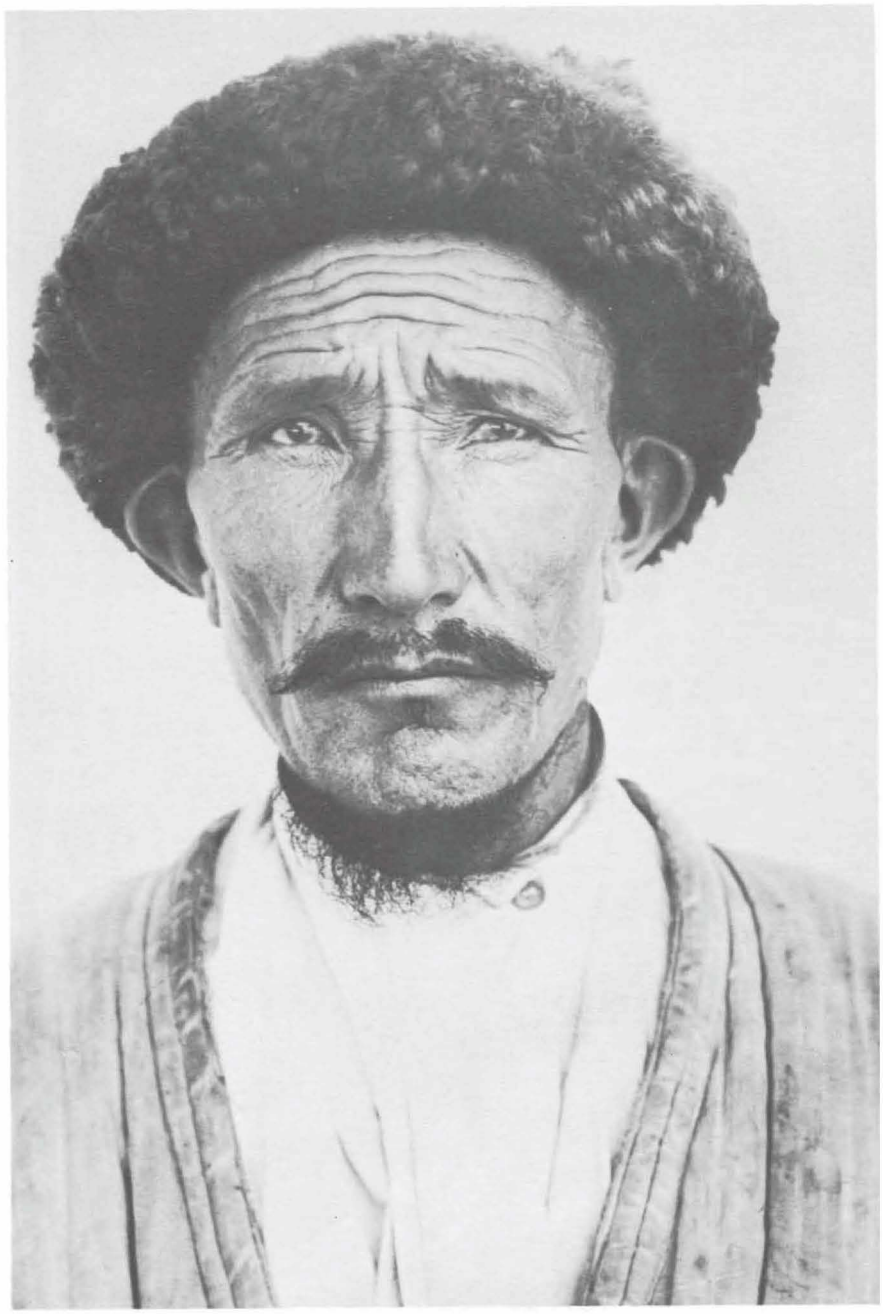

Figure 21: Mongoloid type, resembling the American Indian: prominent nose; absence of epicanthus. Kazakh from Talass Valley.

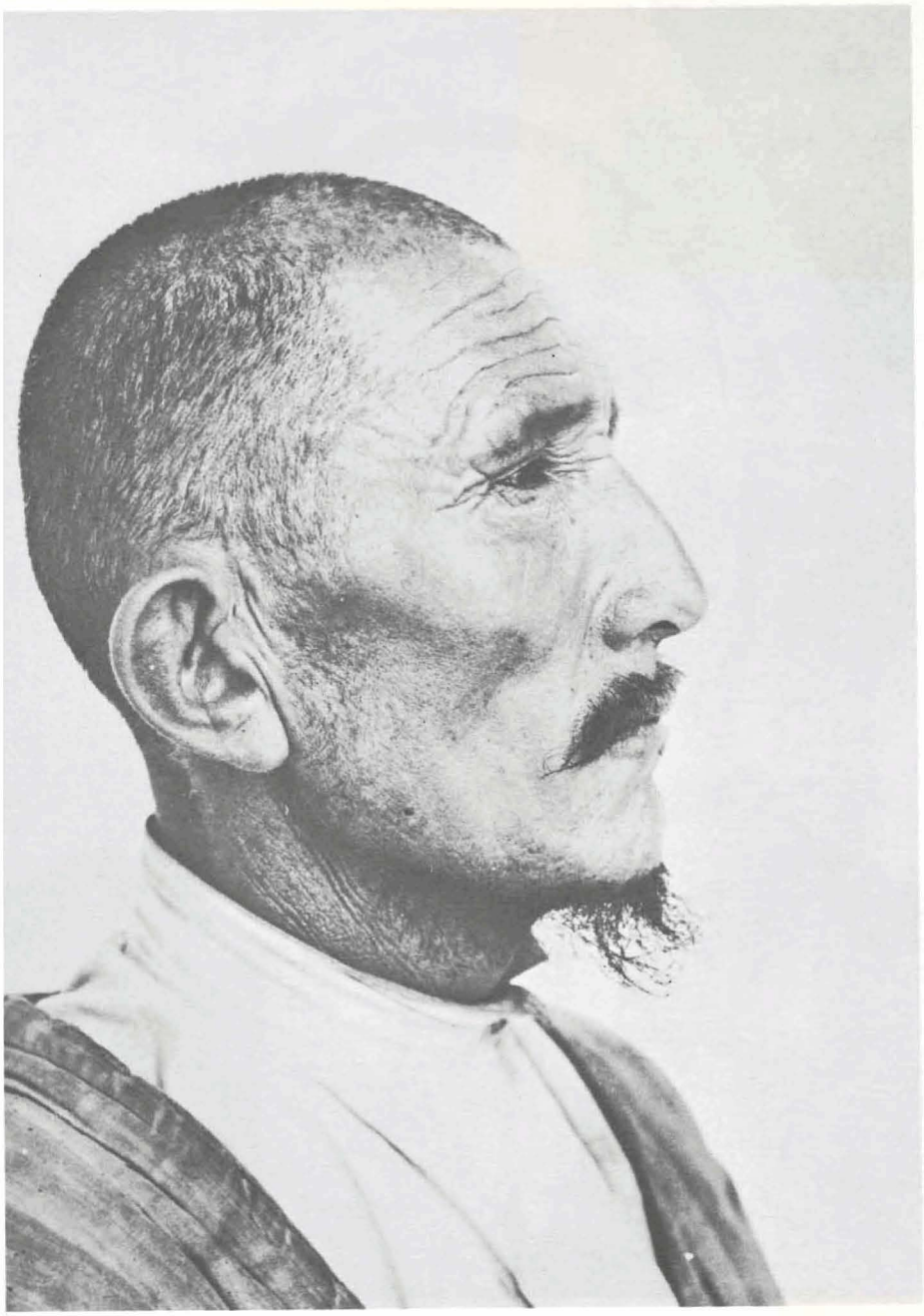

Figure 22: Mongoloid type, resembling the American Indian: prominent nose; absence of epicanthus. Kazakh from Talass Valley.

Figure 24: South Siberian Mongoloid type. Kazakh woman from Talass Valley.

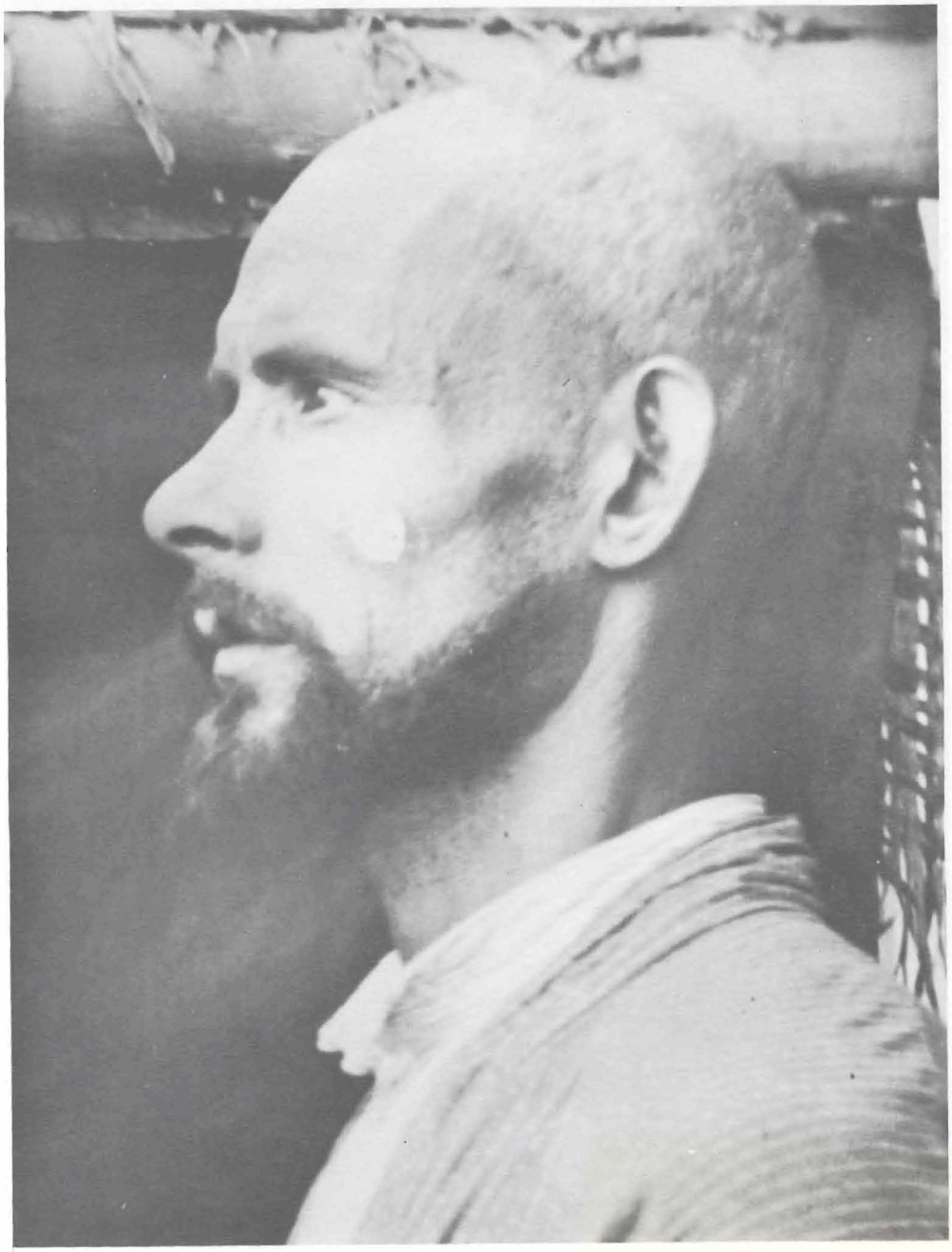

Figure 26: Slightly Mongolized type from Central Asiatic Interfluvial Region. Uzbek from Kermine.

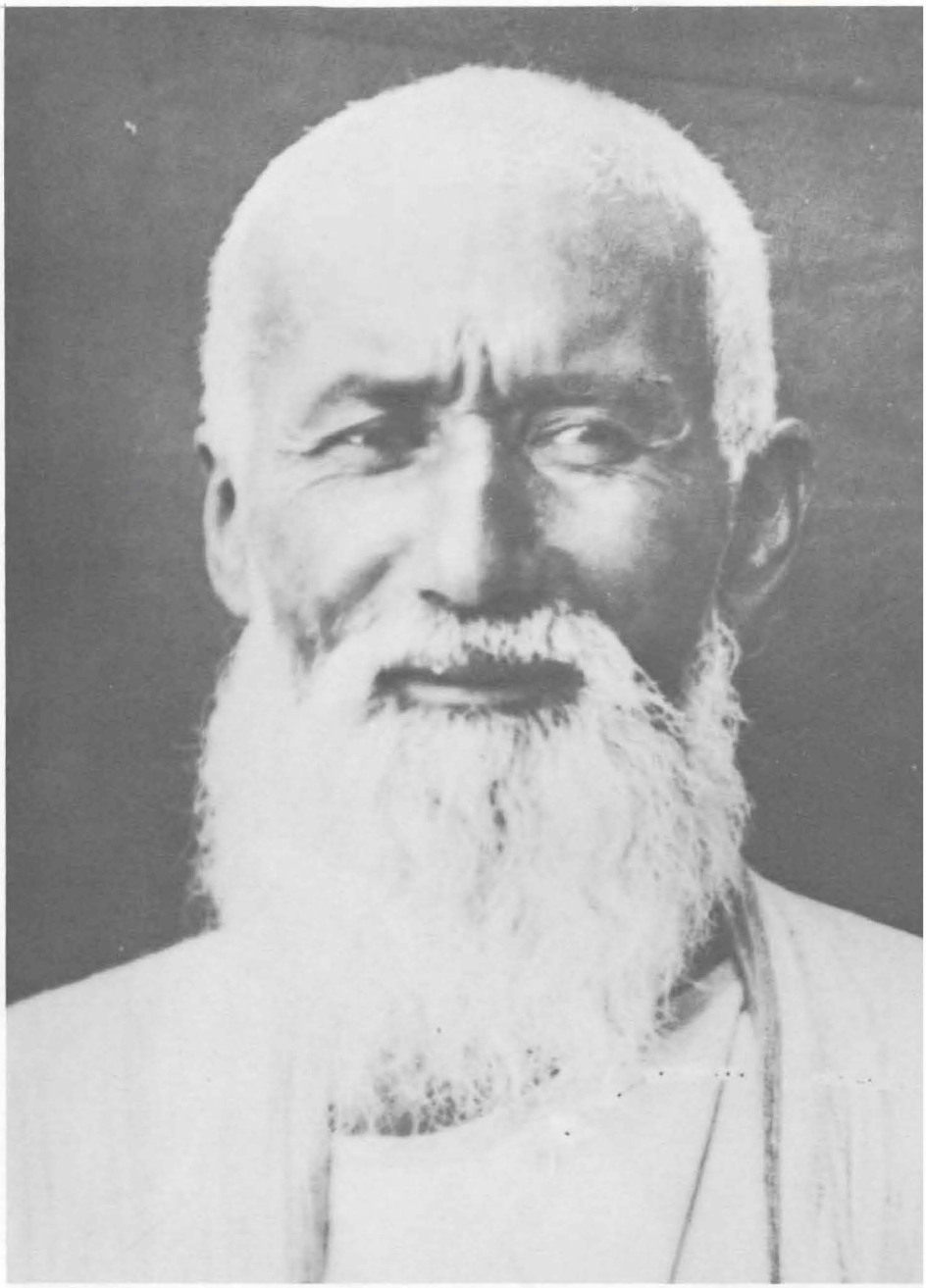

Figure 27: Markedly expressed Europeoid type from Central Asiatic Interfluvial Region. Uzbek from Kermine.

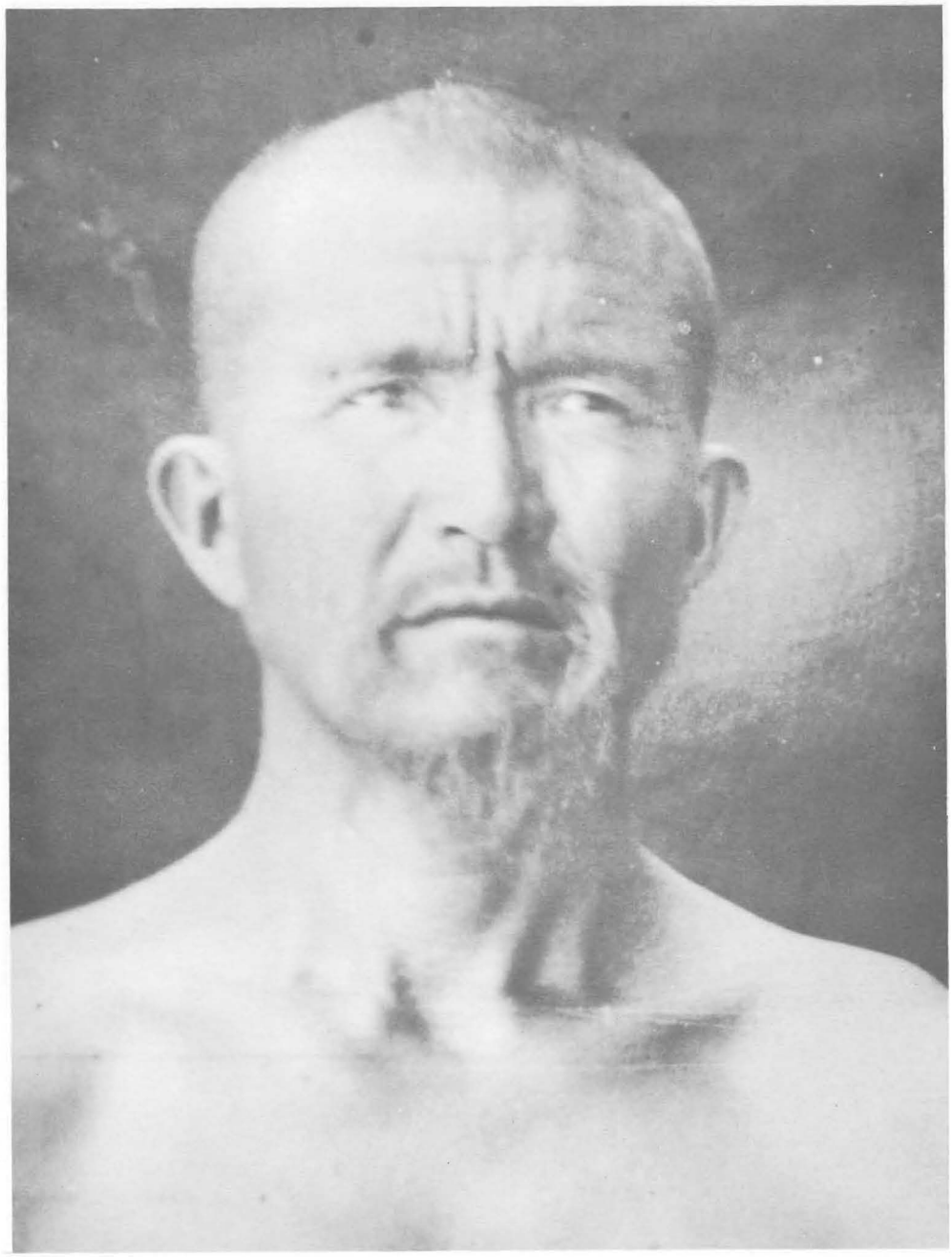

Figure 29: South Siberian Mongoloid type. Uzbek from Kermine.

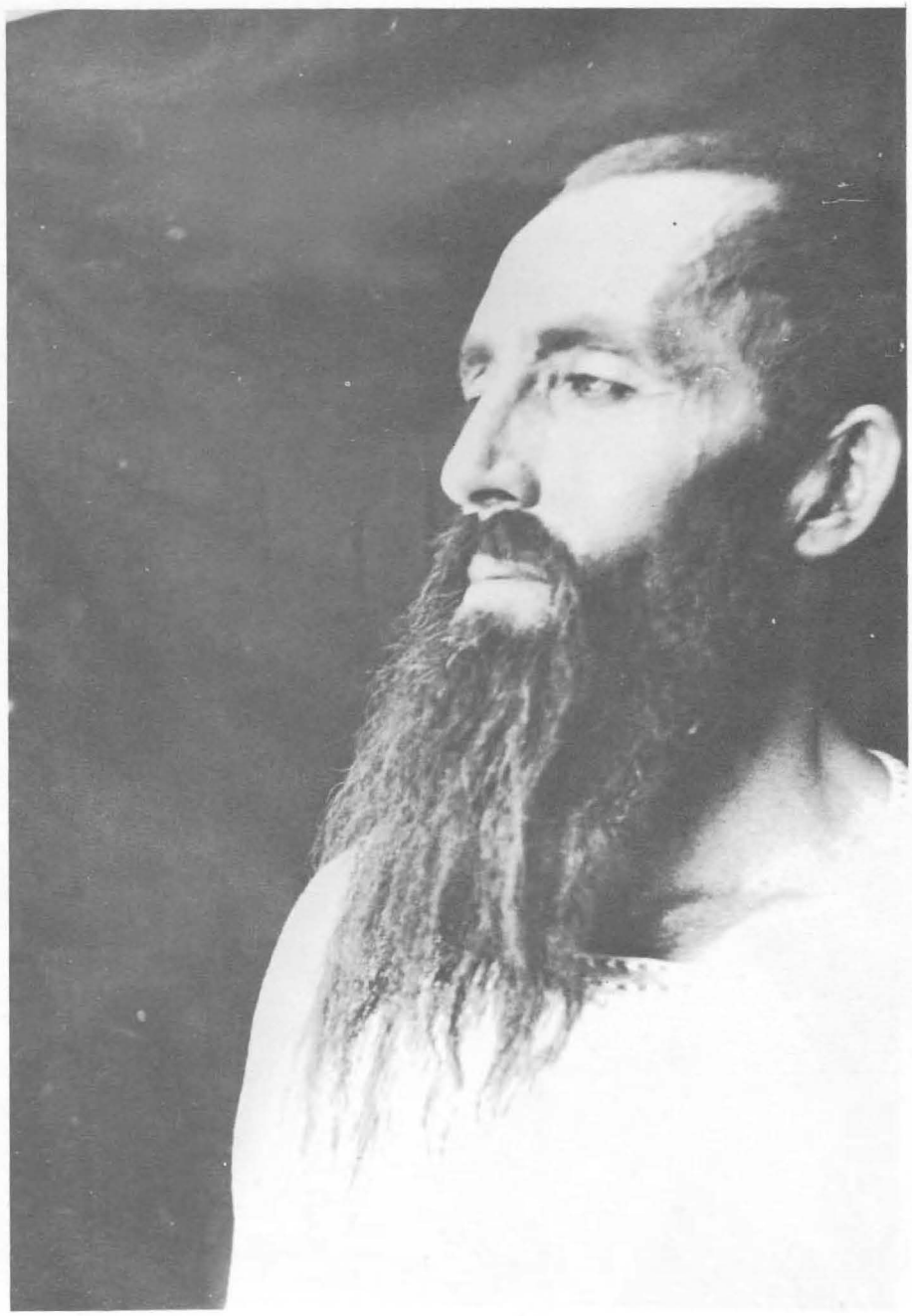

Figure 31: Type from Central Asiatic Interfluvial Region. Uzbek from Kermine.

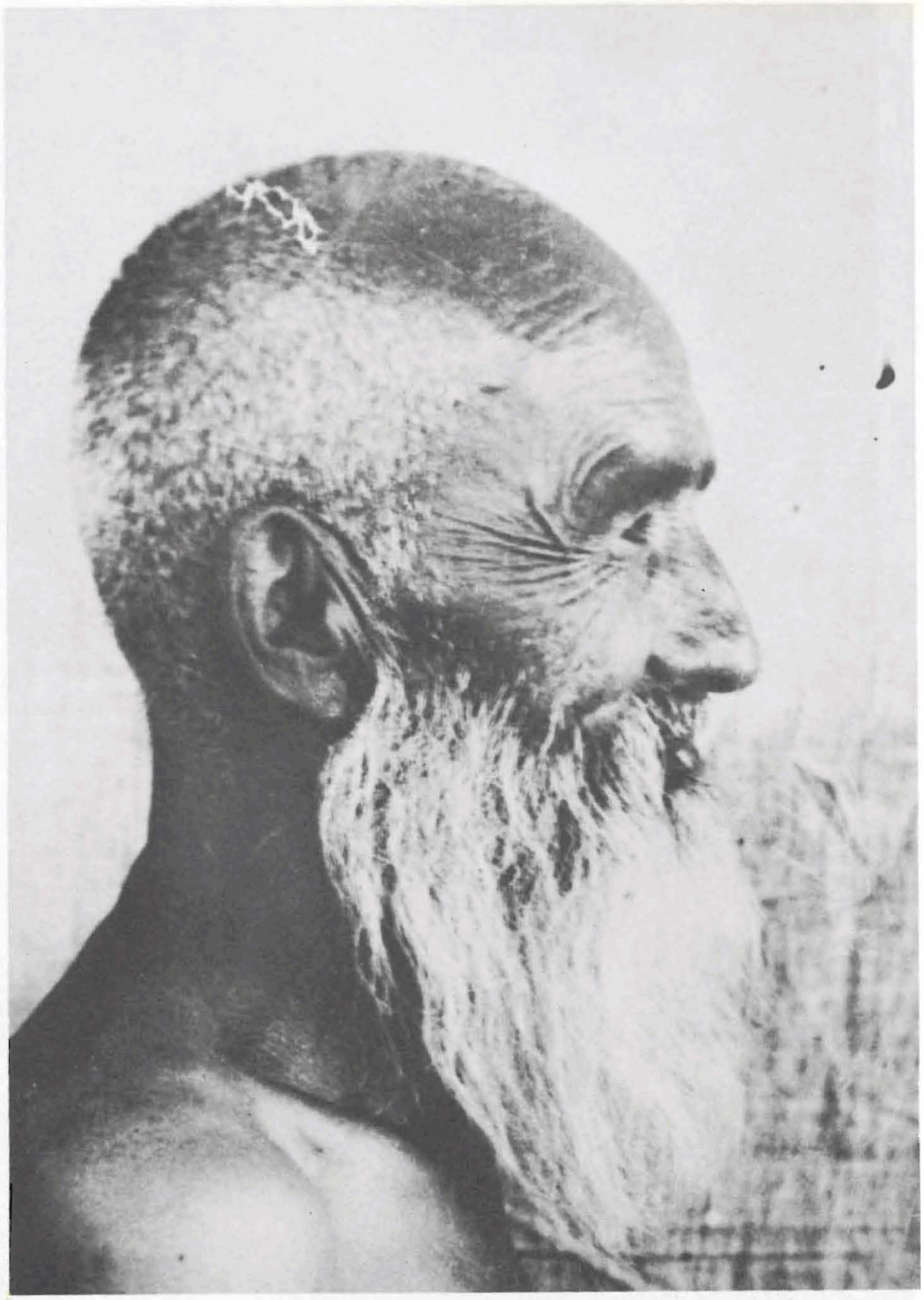

Figure 33: Well-expressed type of Europeoid race from Central Asiatic Interfluvial Region. Uzbek from Karshi.

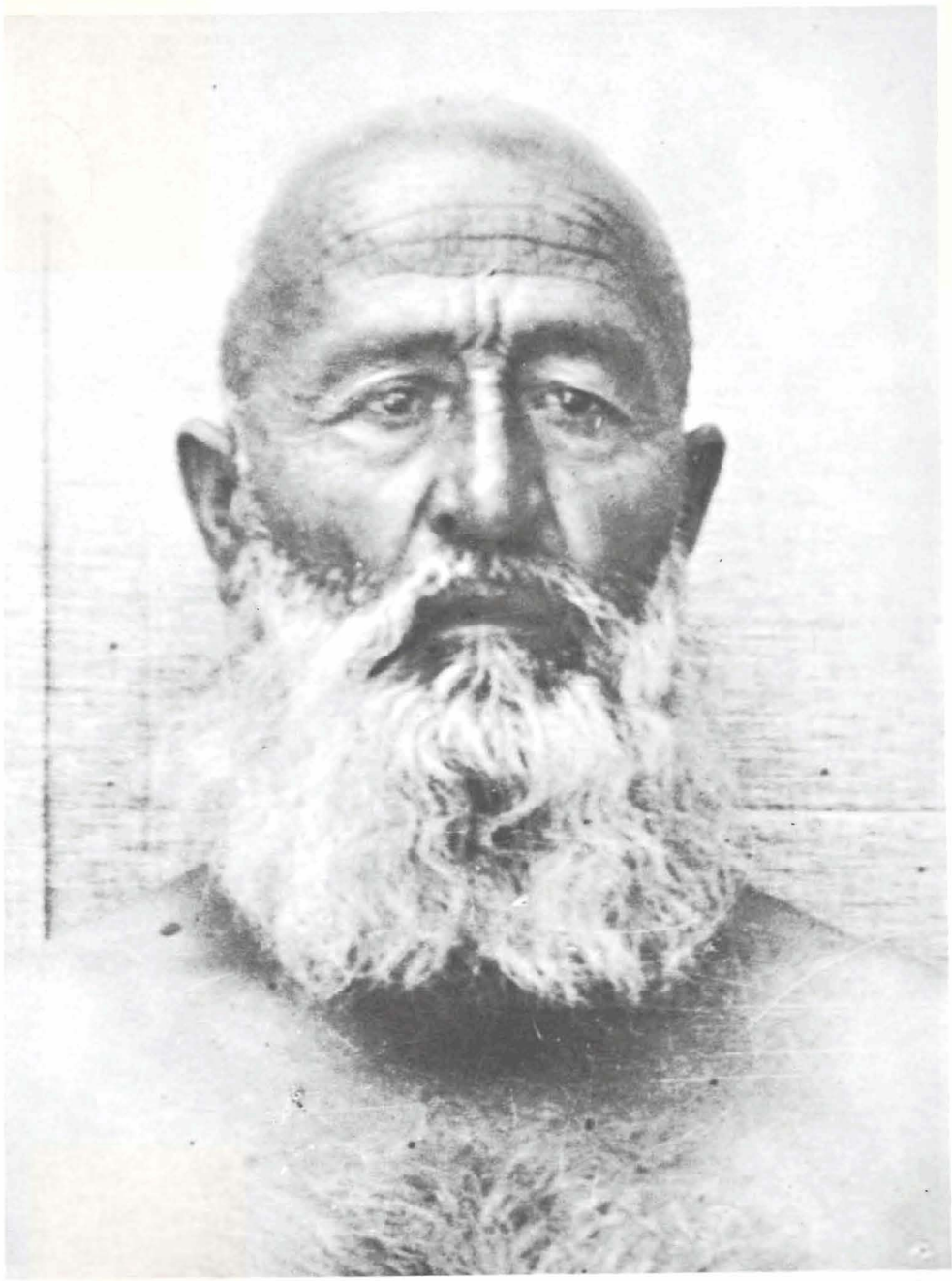

Figure 34: Markedly expressed type of Europeoid race of Central Asiatic Interfluvial Region. Uzbek from Kermine.

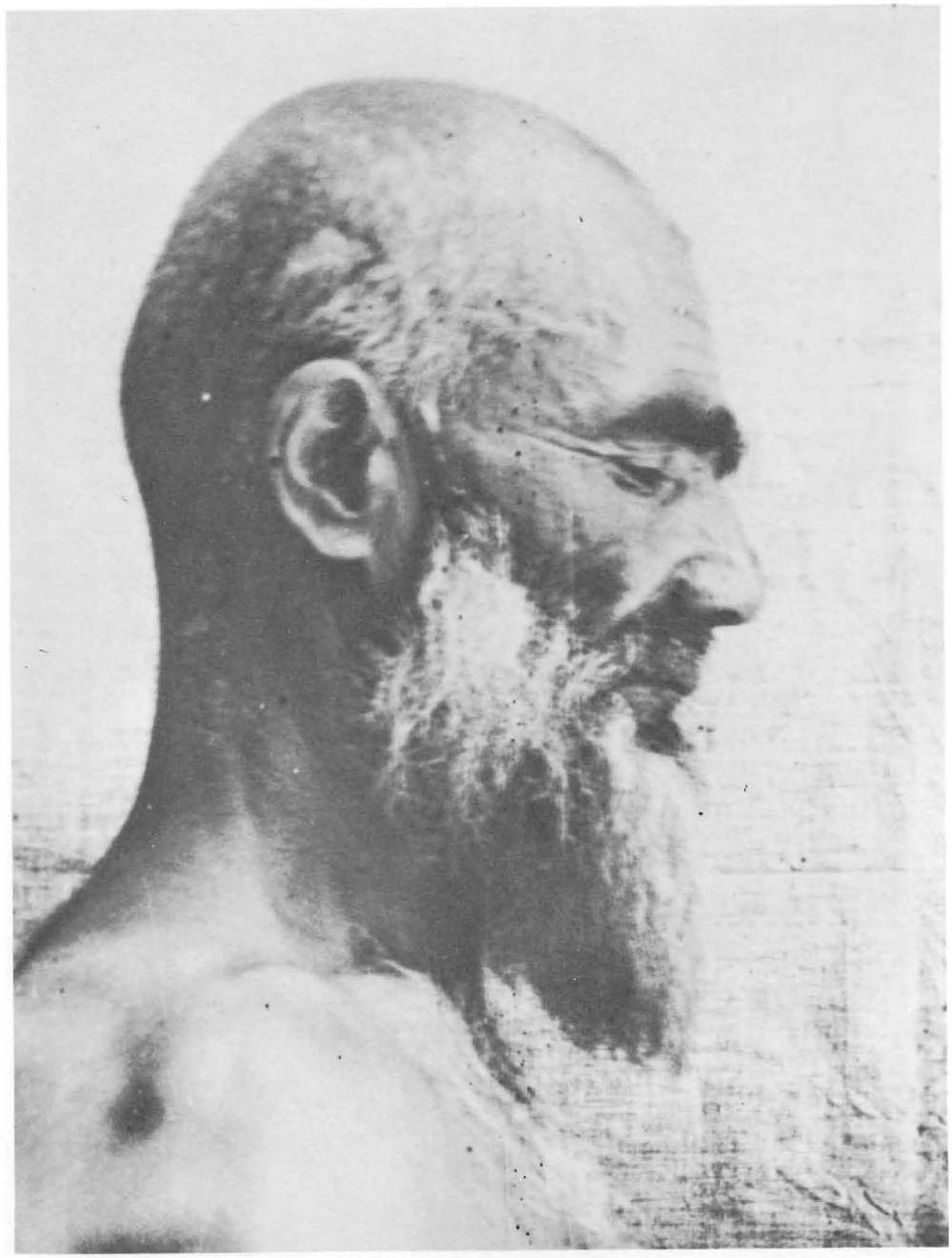

Figure 35: Markedly expressed type of Europeoid race of Central Asiatic Interfluvial Region. Uzbek from Kermine.

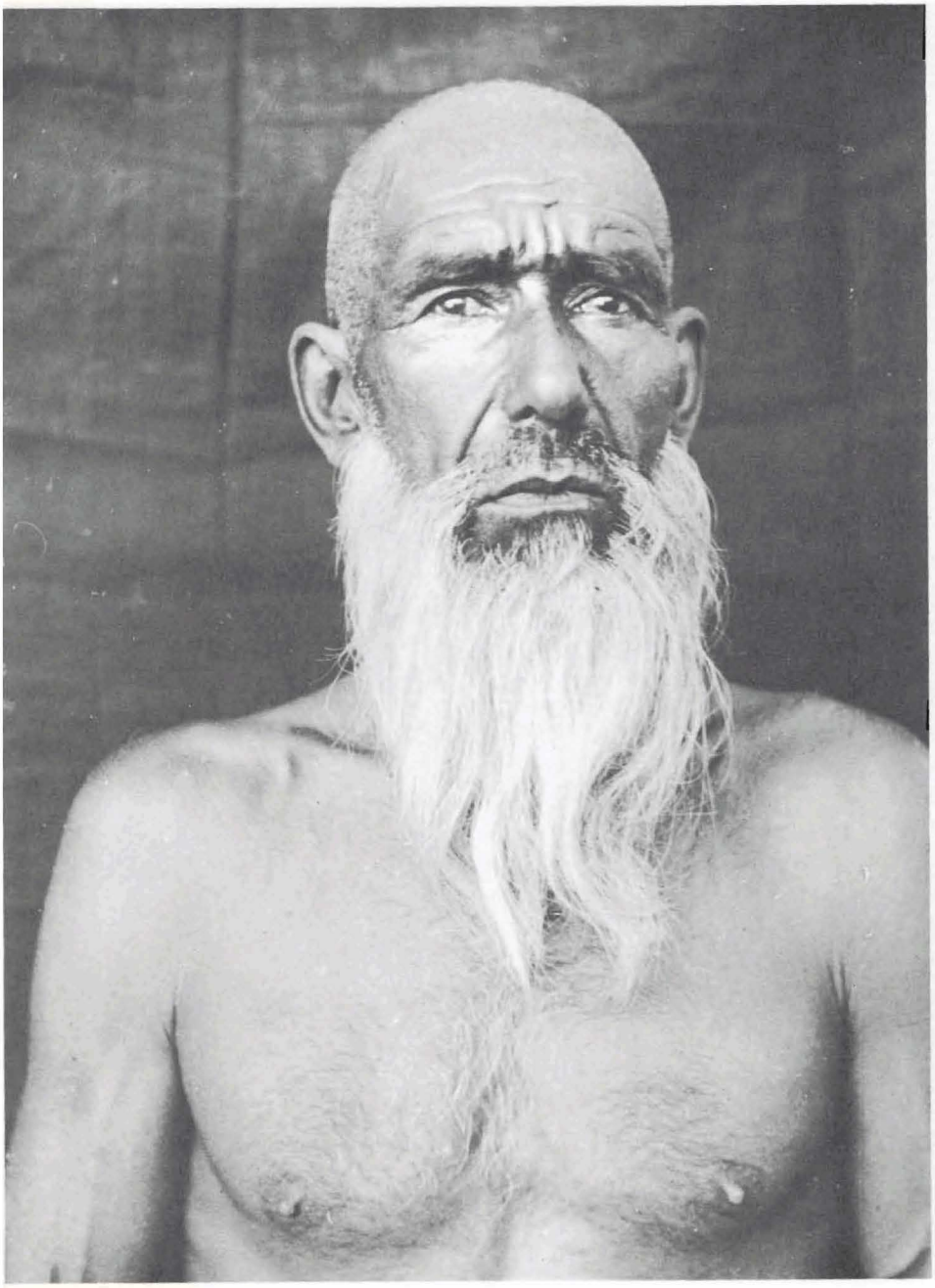

Figure 36: Type of Europeoid Race of Central Asiatic Interfluvial Region. Uzbek from Samarkand.

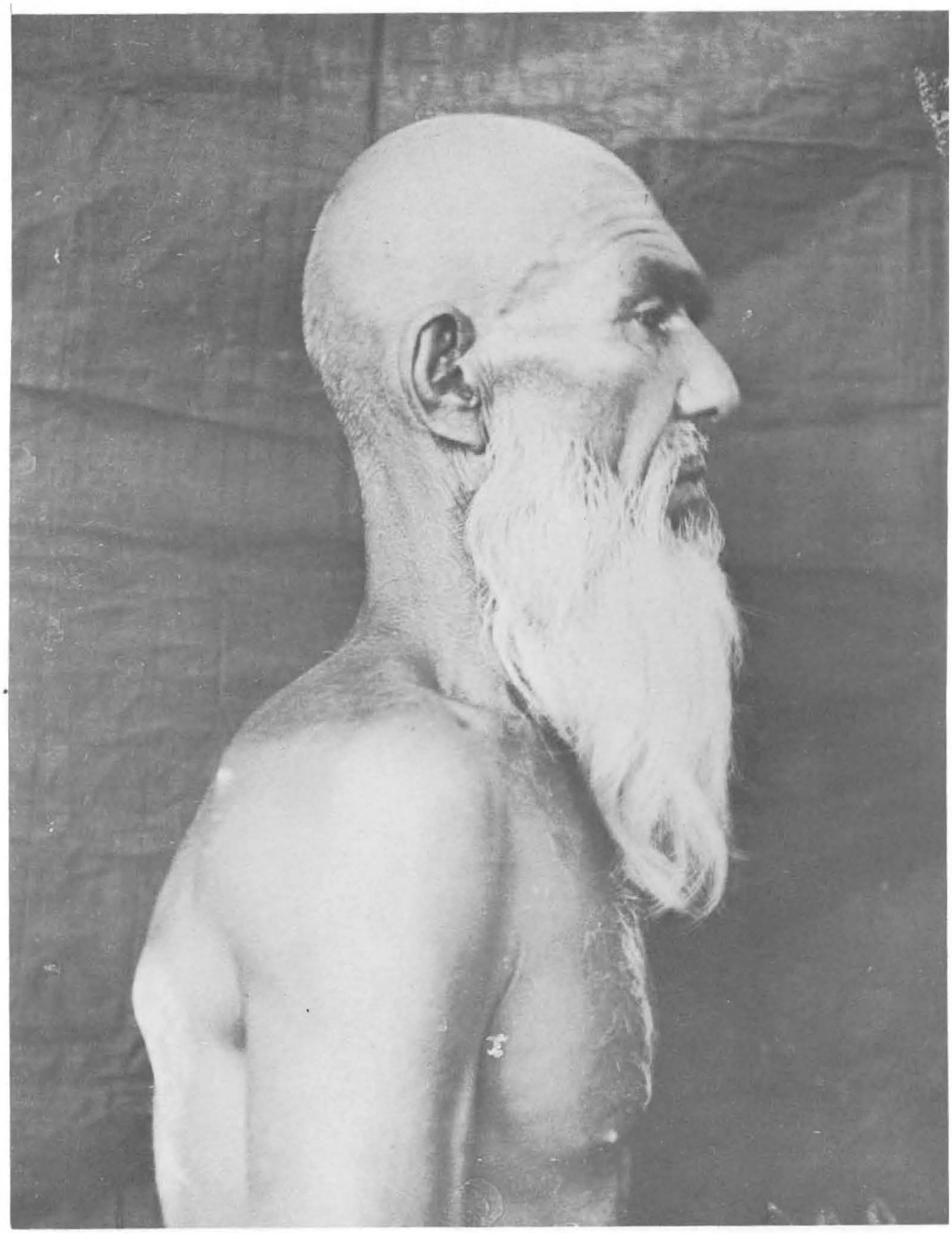

Figure 37: Type of Europeoid Race of Central Asiatic Interfluvial Region. Uzbek from Samarkand.

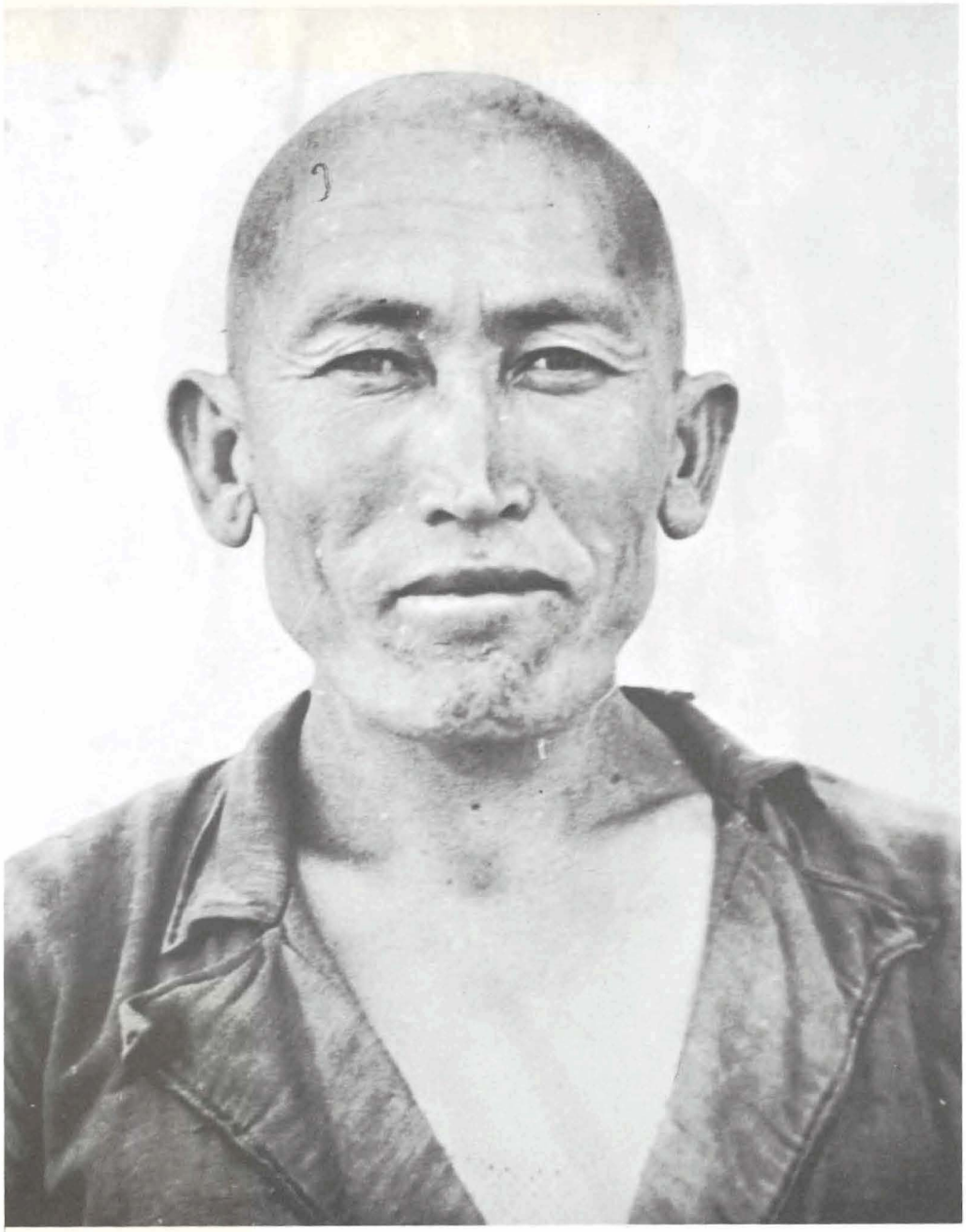

Figure 38: Markedly Mongolized type resembling South Siberian type. "Kurama" Uzbek from Angren Valley.

Figure 40: Europeoid type of Central Asiatic Interfluvial Region. "Kurama" Uzbek from Angren Valley.

Figure 42: Europeoid type of Central Asiatic Interfluvial Region. "Kurama" Uzbek from Angren Valley.

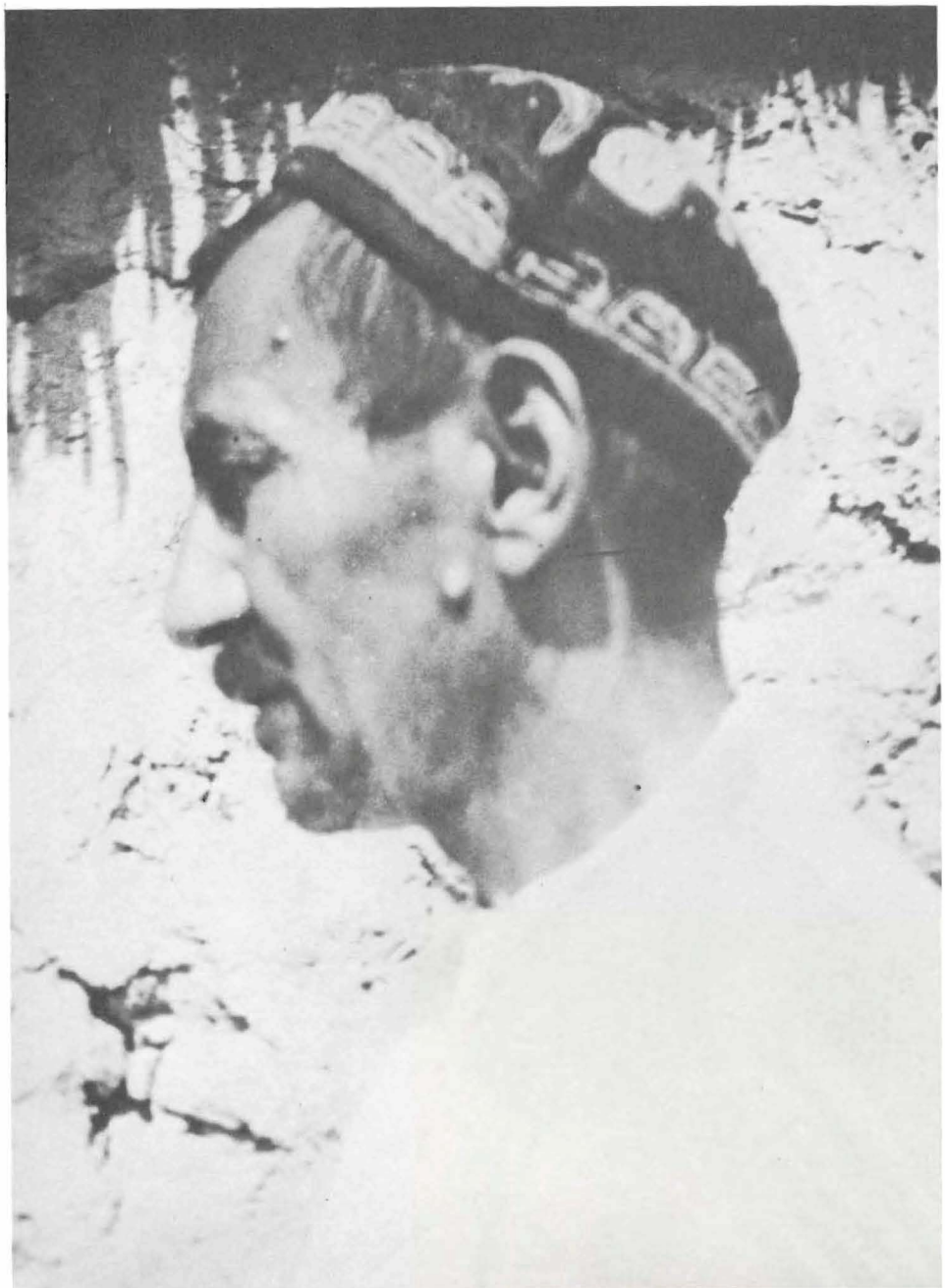

Figure 43: Europeoid type of Central Asiatic Interfluvial Region. "Kurama" Uzbek from Angren Valley.

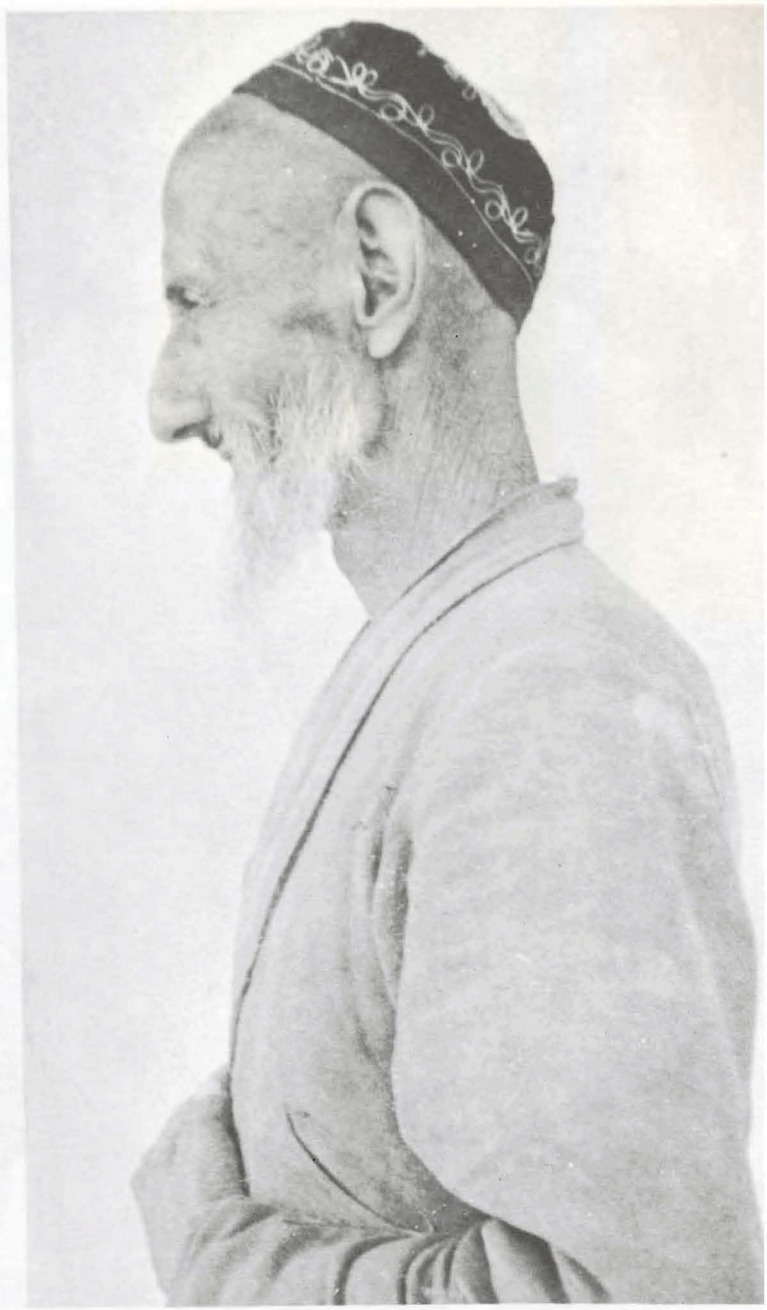

Figure 45: Europeoid type of Central Asiatic Interfluvial Region. Tadzhik from Angren Valley. Photograph by K. Nadzhimov, July, 1954.

Figure 47: South Siberian Mongoloid type. Uzbek woman from Tashkent.

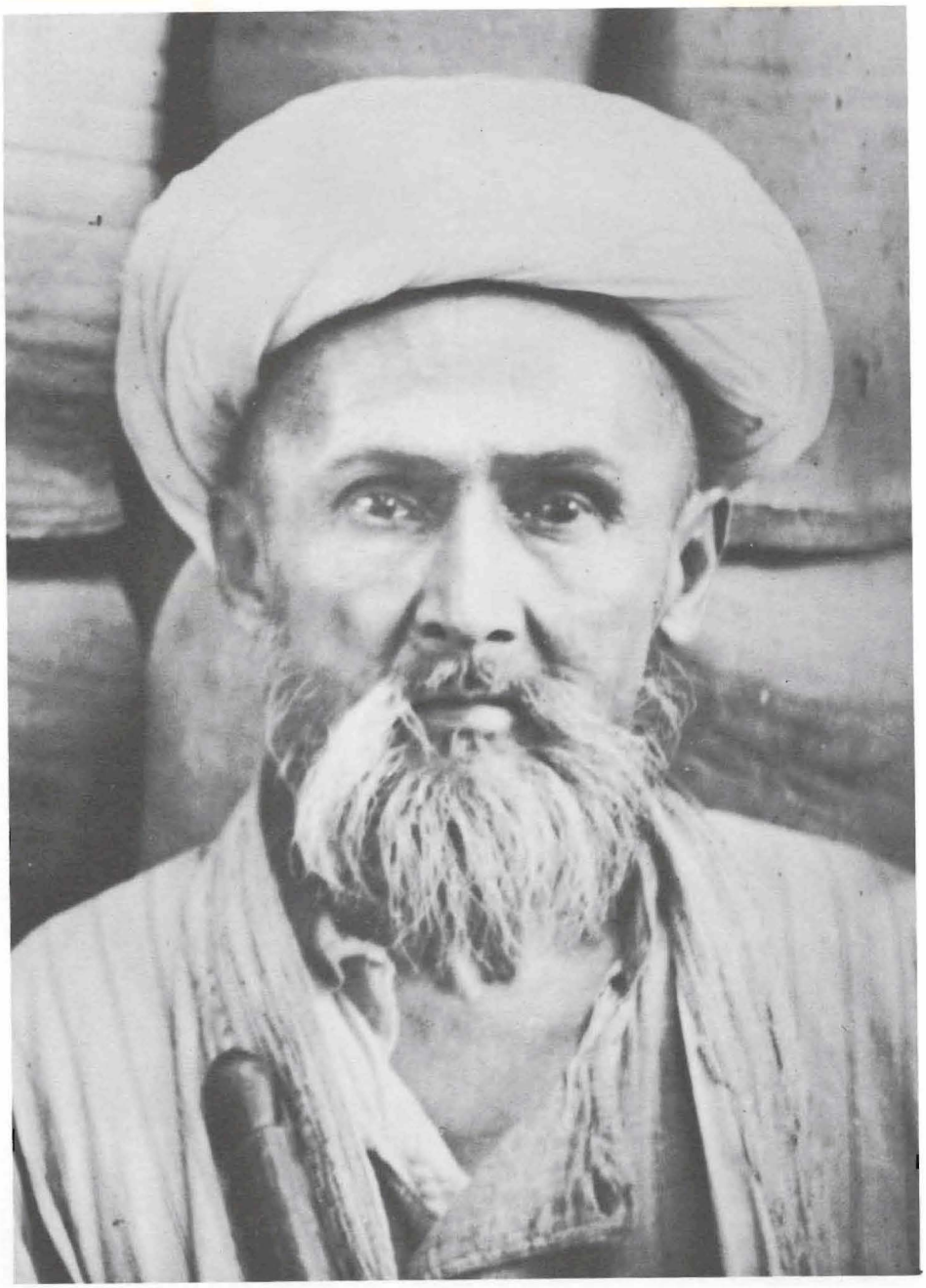

Figure 50: Markedly expressed Europeoid type from Central Asiatic Interfluvial Region. Tadzhik from Bukhara.

Figure 51: Markedly expressed Europeoid type from Central Asiatic Interfluvial Region. Tadzhik from Bukhara.

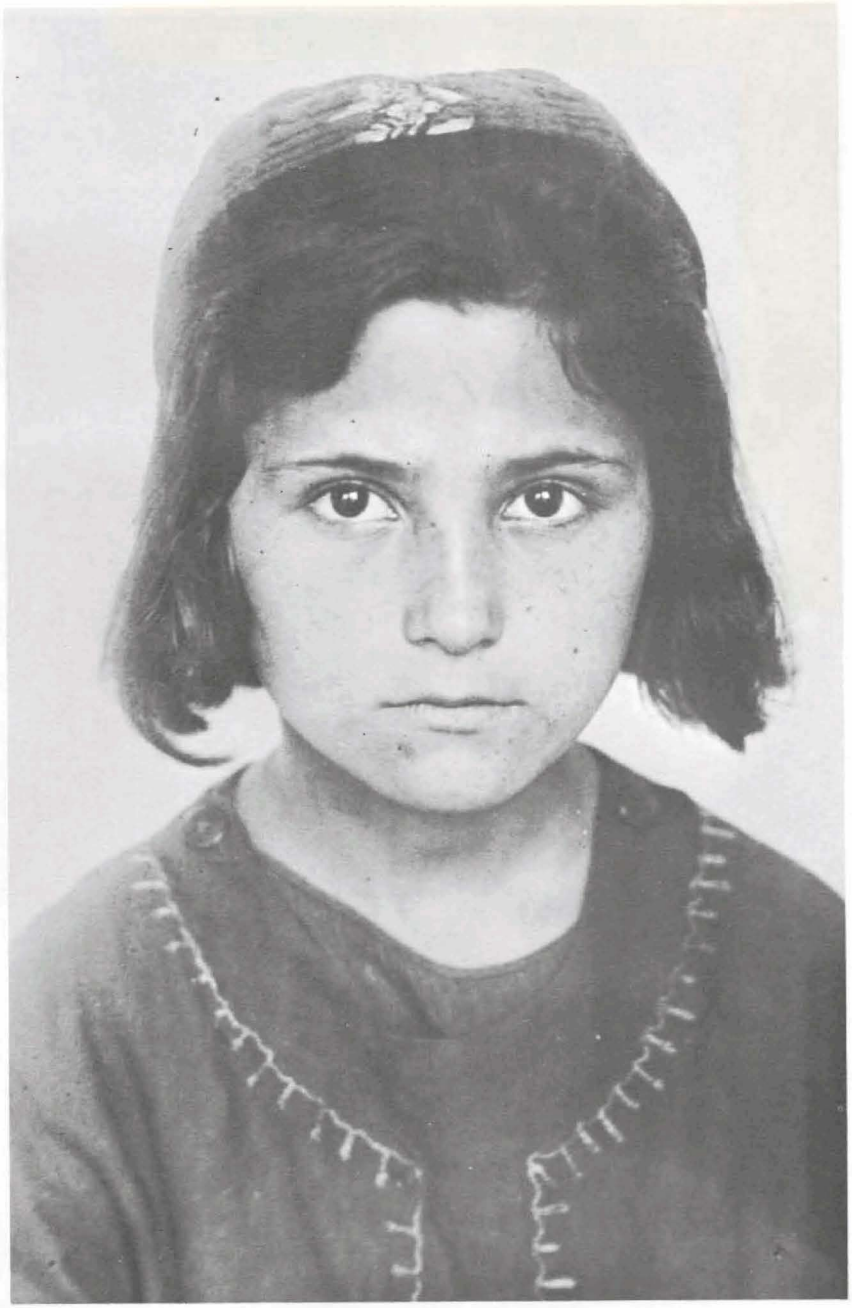

Figure 52: Markedly expressed Europeoid type from Central Asiatic Interfluvial Region. Tadzhik girl from Chust.

Figure 53: Markedly expressed Europeoid type from Central Asiatic Interfluvial Region. Tadzhik girl from Chust.

REFERENCES

I. Anthropology

1. Alekseev, V.P.--"Paleoantropologiia Iuzhnoi Sibiri (Altae-Saianskoe nagor'e)" [Palaeoanthropology of Southern Siberia (Altai-Sayan Highlands)]. Author's abstract of dissertation. Institut etnografii AN SSSR. Moscow, 1955.
2. _____--"Khakasy, eniseiskie kyrgyzy, kirgizy" [Khakass, Yenissei Kirghiz, Kirghiz]. Trudy Kirgizskoi arkheologo-etnograficheskoi ekspeditsii 1, AN SSSR, Moscow, 1956.
3. Gerasimov, M.M., "Osnovy vosstanovleniia litsa po cherepu" [Fundamentals of the restoration of the face on the cranium]. In: Sovetskaia nauka, Moscow, 1949.
4. Ginzburg, V.V., "Materialy po antropologii gunnov i sakov" [Materials on the Anthropology of Huns and Sacae]. Sovetskaia etnografiia, No. 4, 1946.
5. _____--"Antropologicheskie dannye k etnogenezu khazar" [Anthropological data on the Ethnogenesis of the Khazars]. Sovetskaia etnografiia, No. 2, 1946.
6. _____--"Cherepa iz zoroastriiskogo kladbishcha XIIIv.vo Frinkente" [Crania from the Thirteenth Century Zoroastrian cemetery in Frinkent]. Sbornik Muzeia antropologii i etnografii AN SSSR, X, 1949.
7. _____--"Materialy po paleoantropologii vostochnykh raionov Srednei Azii" [Materials on the Palaeoanthropology of Eastern regions of Central Asia]. Kratkie soobshcheniia Instituta etnografii AN SSSR, XI, 1950.
8. _____ and E.V. Zhirov--"Antropologicheskie materialy iz katakombnogo Kenkol'skogo mogil'nika v doline reki Talas Kirgizskoi SSR" [Anthropological material from the Kenkil' catacomb burials in the Talass River Valley, Kirghiz SSR]. Sbornik Muzeia antropologii i etnografii AN SSSR, XI, 1950.
9. _____--"Pervye antropologicheskie materialy k probleme etnogeneza Baktrii" [First anthropological material on the Ethnogenesis of Bactria]. Materialy i issledovaniia po arkheologii SSSR, t. 15, Moscow-Leningrad, 1950.
10. _____--"Drevnie i sovremennye antropologicheskie tipy Srednei Azii" [Ancient and contemporary anthropological types of Central Asia]. Trudy Instituta etnografii AN SSSR, n.s., t. XVI, 1952.
11. _____, G.F. Debets, M.G. Levin, and N.N. Cheboksarov, "Ocherki po antropologii Kazakhstana" [Papers on the Anthropology of Kazakhstan]. Kratkie soobshcheniia Instituta etnografii AN SSSR, XVI, 1952.
12. _____--"Materialy k antropologii drevnego naseleniia Vostochnogo Kazakhstana" [Materials on the Anthropology of the ancient population of Eastern Kazakhstan]. Kratkie soobshcheniia Instituta etnografii AN SSSR, XVI, 1952.
13. _____--"Antropologicheskie materialy k probleme proiskhozhdeniia naseleniia Khazarskogo kaganata" [Anthropological materials on the origin of the population of the Khazar Khakanate]. Sbornik Muzeia antropologii i etnografii AN SSSR, t. XIII, 1952.
14. _____ and V.IA. Zezenkova--"Cherepa iz mogil'nikov karakhanidskogo vremeni na Krasnorechenskom gorodishche v Chuiskoi doline (Kirgiziia)" [Crania from cemeteries of the Karakhanid period at the Krasnorechensk gorodishche in the Chu River Valley (Kirghizia)]. Kratkie soobshcheniia Instituta etnografii AN SSSR, XVII, 1952.
15. _____--"Materialy k antropologii drevnego naseleniia Iuzhnogo Kazakhstana" [Materials on the Anthropology of the ancient population of Southern Kazakhstan]. Sovetskaia arkheologiia, XXI, 1954.

15a. Ginzburg, V.V., "Materialy k antropologii drevnego naseleniia Vostochnogo Kazakhstana" [Materials for an Anthropology of Eastern Kazakhstan]. Kratkie soobshcheniia Instituta etnografii AN SSSR, XIV, 1952.
16. _____--"Drevnee naselenie Tsentral'nogo Tian'Shana i Alaia po antropologicheskim dannym" [Ancient population of central Tian-Shan and Alai according to anthropological data]. Trudy Instituta etnografii AN SSSR, XXI, 1954.
17. _____--"Materialy k antropologii drevnego naseleniia Ferganskoi doliny" [Materials for an Anthropology of the ancient population of the Ferghana Valley]. Trudy Kirgizskoi arkheologo-etnograficheskoi ekspeditsii 1, AN SSSR, Moscow, 1956.
18. Debets, G.F.--"Eshche raz o belukuroi rase v Tsentral'noi Azii" [More about the white-skinned race in Central Asia]. Sovetskaia Aziia, Nos. 5-6, 1931.
19. _____--"Paleoantropologiia SSSR" [Palaeoanthropology of the USSR]. Trudy Instituta etnografii AN SSSR, IV, 1949.
20. _____--"Antropologicheskie issledovaniia v Kamchatskoi oblasti" [Anthropological investigations in the Kamchatka Oblast]. Trudy Instituta etnografii AN SSSR, n.s., t. XVII, 1951.
21. _____--"Problema proiskhozhdeniia kirgizskogo naroda v svete antropologicheskikh dannykh" [The problem of the origin of the Kirghiz people in the light of anthropological data]. Trudy Kirgizskoi arkheologicheskoi ekspeditsii 1, AN SSSR, Moscow, 1956.
22. Zhirov, E.V.--"Cherepa iz zoroastriiskikh pogrebenii Srednei Azii" [Crania from Zoroastrian burials in Central Asia]. Sbornik Muzeia antropologii i etnografii AN SSSR, X, 1949.
23. Zalkind, N.G.--"Kraniologicheskie materialy s Territorii drevnego Khorezma" [Craniological materials from the territory of ancient Khorezm]. Arkheologicheskie i etnograficheskie raboty Khorezmskoi ekspeditsii 1945-48, Moscow-Leningrad, 1952.
24. Zezenkova, V.IA.--"K voprosu ob antropologicheskom tipe Turkmen Samarkandskoi i Bukkarskoi oblastei" [A contribution to the problem of the anthropological type of the Turkomans of the Samarkand and Bukhara Oblasts]. Biulleten' AN Uzb. SSR, No. 4, 1945.
25. _____--"Nekotorye dannye o skeletakh iz kurganov vozle stantsii Vrevskaia" [Some data on skeletons from kurgans near Vrevskaia Station]. Trudy Muzeia antropologii Uzbekistana, Fasc. 1, AN Uzb. SSR, Tashkent, 1951.
26. _____--"Materialy k antropologii Uzbekistana i Turkmenii" [Materials on the Anthropology of Uzbekistan and Turkmenia]. In: Oshanin, L.V. and V.IA. Zezenkova, "Antropologicheskii sostav naseleniia Srednei Azii i etnogenez ee narodov v svete dannykh antropologii" [Anthropological composition of the population of Central Asia and Ethnogenesis of its Nations in the light of anthropological data (collected papers)]. Institut istorii AN Uzb. SSR, Tashkent, 1953.
27. Zolotareva, I.M.--"Somatologicheskie issledovaniia v Ferganskoi doline" [Somatological investigations in the Ferghana Valley]. Trudy Kirgizskoi arkheologo-etnograficheskoi ekspeditsii 1, AN SSSR, Moscow, 1956.
28. Miklashevskaia, N.N.--"Antropologicheskii sostav kirgizskogo naroda" [Anthropological composition of the Kirghiz people]. Author's abstract of dissertation, Moskovskii gos. universitet, Biologo-pochvennyi fakultet, Moscow, 1955.
29. _____--"Somatologicheskie issledovaniia v Kirgizii" [Somatological investigations in Kirghizia]. Trudy Kirgizskoi arkheologo-etnograficheskoi ekspeditsii 1, AN SSSR, Moscow, 1956.
30. Oshanin, L.V., "Tysiacheletniaia davnost' dolikhotsefali u turkmen i vozmozhnye puti ee proiskhozhdeniia. Opyt obosnovaniia teorii skifo-sarmatskogo proisk-

42. Topinard, [Paul]--"Antropologiia. Perevod s franksuzskogo izdaniia 1877 pod redaktsiei I.I. Mechnikova" [Anthropology. A translation of the French edition of 1877, edited by I.I. Mechnikov]. St. Petersburg, 1879.
43. Trofimova, T.A.--"Kraniologicheskii ocherk tatar Zolotoi Ordy" [Craniological Sketch of the Tatars of the Golden Horde]. Antropologicheskii zhurnal, No. 2, 1936.
44. _____--"Etnogenez tatar Povolzh'ia v svete dannykh antropologii" [Ethnogenesis of the Volga Region Tatars in the light of anthropological data]. Trudy Instituta etnografii AN SSSR, VII, 1949.
45. Cheboksarov, N.N.--"Mongoloidnye elementy v naselenii Tsentral'noi Evropy" [Mongoloid elements in the population of Central Europe]. Uchennye zapiski Moskovskogo gos. universiteta, Fasc. 63, Antropologiia, Moscow, 1941.
46. _____--"Kompleksnaia antropologo-etnograficheskaia ekspeditsiia v Kazakhstan" [Joint Anthropological-ethnographical Expedition to Kazakhstan]. Kratkie soobshcheniia Instituta etnografii AN SSSR, VI, 1949.
47. _____--"Osnovnye printsipy antropologicheskikh klassifikatsii" [Basic principles of anthropological classification]. In: "Proiskhozhdenie cheloveka i ranee rasselenie chelovechestva" [Origin of Man and early migrations of Mankind]. Trudy Instituta etnografii AN SSSR, t. XVI, 1951.
48. IArkho, A.I.-- "Antropologicheskii sostav turetskikh narodnostei Srednei Azii (Predvaritel'noe soobshchenie)" [Anthropological composition of Turkish peoples in Central Asia (preliminary report)]. Antropologicheskii zhurnal, No. 3, 1933.
49. _____--"Kirgizy" [Kirghiz]. Sbornik "Za industrializatsiiu Sovetskogo Vostoka" [Toward industrialization of the Soviet East (collected papers)]. Moscow, 1934.
50. _____--"Kratkii obzor antropologicheskogo izucheniia turetskikh narodnostei za 10 let (1924-34)" [Brief survey of anthropological studies of Turkish peoples during 10 Years (1924-34)]. Antropologicheskii zhurnal, No. 1, 1936.
51. _____--"Altae-saianskie tiurki. Antropologicheskii ocherk" [Altai-Sayan Turki. An anthropological outline]. Khakasskii nauchno-issledovatel'skii institut iazyka, literatury i istorii, Khakoblnatsizdat, Abakan, 1947.
52. _____--"Antropologicheskii tip Karakalpakov" [Anthropological type of the Kara-Kalpaks]. Arkheologicheskie i etnograficheskie raboty Khorezmskoi ekspeditsii 1945-48. AN SSSR, Moscow, 1952

II. History and Archaeology

53. Aristov, N.A.--"Zametki ob antropologicheskom sostave tiurkskikh plemen i narodnostei" [Notes on the anthropological composition of Turki Tribes and Peoples]. Zhivaia starina, Otdel etnografii. Russkoe geograficheskoe obshchestvo, Fasc. III-IV, St. Petersburg, 1896.
54. Bartol'd, V.V. [Barthold, W.W.]--"Otchet o poezdke v Sredniuiu Aziiu s nauchnoiu tsel'iu v 1893-94" [Report on a trip to Central Asia for scientific purposes in 1893-94]. Zapiski imperat. Akademii nauk. Ser. VIII, t. I, No. 4, St. Petersburg, 1895.
55. _____--"Ocherk istorii Semirech'ia" [A sketch of the history of Semirechie]. Pamiatnaia knizhka Semirechenskogo statisticheskogo komiteta, II, Otdel'nyi ottisk [separate printing], 1898.
56. _____--"Turkestan v epokhu mongol'skogo nashestviia" [Turkestan during the epoch of Mongol invasion]. Pt. 2. Issledovanie, St. Petersburg, 1900.
57. _____--"Ulugbek i ego vremia" [Ulug Beg and his time]. Zapiski Rossiskoi Akademii nauk, VIII, Seriia po Istoriko-filologicheskomu otdeleniiu, t. XIII, No. 5, Petrograd, 1918.

78. Istoriia Turkmenskoi SSR [History of the Turkmen SSR]. T. 1, Maket [page proof], Akademiia nauk Turkmenskoi SSR, Ashkhabad, 1955.
79. Kary-Niiazov, T.N.--"Astronomicheskaia shkola Ulugbeka" [Astronomical School of Ulug Beg]. AN SSSR, Moscow-Leningrad, 1950.
80. Masal'skii, V.I.--"Turkestanskii krai, Rossiia. Polnoe geograficheskoe opisanie nashego otechestva" [Turkestan Krai, Russia. Complete geographical description of our native land]. T. XXIX, ch. IV, "Istoricheskie sud'by Turkestana" [Historical destinies of Turkestan]. St. Petersburg, 1913.
81. Okladnikov, A.P.--"Issledovanie must'erskoi stoianki i pogrebeniia neandertal'tsa v grote Teshik-Tash" [Investigation of the Mousterian site and interment of a Neanderthaler in the cave of Teshik-Tash]. Teshik-Tash, Paleoliticheskii chelovek [Teshik-Tash, Palaeolithic Man]. Izdanie Moskovskogo gos. universiteta, Moscow, 1949.
82. Snigirev, I.A.--"Drevnii Vostok, Atlas po drevnei istorii Egipta" [Ancient East, Atlas of Ancient History of Egypt]. Sotsial'no-ekonomicheskoe izdatel'stvo, Leningradskoe otdelenie, Leningrad, 1937.
83. Semenov, A.A.--"K voprosu o proiskhozhdenii i sostave uzbekov Sheibanikhana" [A contribution to the problem of the origin and composition of Sheibanikhan Uzbeks]. Trudy Instituta istorii arkheologii i etnografii AN Tadzh. SSR, t. XII, Stalinabad, 1954.
84. Seredonin, S.M.--"Istoricheskaia geografiia" [Historical Geography]. Lektsii chitannye prof. S.M. Seredoninym v imperat. Petrogradskom arkheologicheskom institute [Lectures read by Professor S.M. Seredonin at the Imperial Institute of Archaeology in Petrograd]. Posmertnoe izdanie [Posthumous ed.], Petrograd, 1916.
85. Tolstov, S.P.--"Goroda oguzov" [Cities of the Oguzes]. Sovetskaia etnografiia, No. 3, 1947.
86. _____--"K voprosu o proiskhozhdenii karakalpakskogo naroda" [A contribution to the problem of the origin of the Kara-Kalpak people]. Kratkie soobshcheniia Instituta etnografii AN SSSR, II, 1947.
87. Umniakov, I.I.--"Tokharskaia problema" [Problem of the Tokharians]. Otdel'nyi ottisk [Separate printing], 1939.
88. IAkubovskii, A.YU.--"K voprosu ob etnogeneze uzbekskogo naroda" [A contribution to the problem of the ethnogenesis of the Uzbek Nation]. Yubileinyi komitet Navoi pri SNK Uz. SSR, Uzbekskii Filial AN SSSR, Tashkent, 1941.
89. _____--"Arabskie i persidskie istochniki ob Uigurskom Turfanskom kniazhevstve IX-X. w." [Arabic and Persian sources on the Uigur Turfan Principality of the ninth-tenth centuries]. Gosudarstvennyi ermitazh. Trudy Otdela vostokovedeniia, t. IV, Leningrad, 1947.

III. Ethnography

90. Bobrinskii, A.A.--"Gortsy verkhov'ev Piandzha, Vakhantsy i ishkashimtsy" [Mountaineers of the Upper Piandzh, Vakhans and Ishkashims]. Ocherki byta, Moscow, 1908.
91. Bol'shaia Sovetskaia Entsiklopediia [Great Soviet Encyclopedia], 2nd ed., t. I, Moscow.
92. Zhdanko, T.A.--"Ocherki istoricheskoi etnografii karakalpakov" [Historical sketches of the Ethnography of the Kara-Kalpaks]. Trudy Instituta etnografii AN SSSR, n.s., t. IX, Moscow-Leningrad, 1950.
93. _____--"Karakalpaki Khorezmskogo oazisa" [Kara-Kalpaks of the Khorezm Oasis]. Arkheologicheskie i etnograficheskie raboty Khorezmskoi ekspeditsii 1945-48. Institut etnografii AN SSSR, Moscow, 1952.