

A SURVEY ON THE RACIAL TYPES OF ANATOLIAN SKELETAL REMAINS

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SUMMARY

All Anatolian skeletons whose racial types had been determined were considered from a synthesis viewpoint. This synthesis posed a question; Do the mutations which cause the head shape to change, take place in certain circumstances more rapidly in one sex than in the other? It also suggests that Cappieri's theory that the Hittites are autochthonous seems plausible and offers a probable dolichocephalic Caucasoid origin for the Turks.

INTRODUCTION

Although quite a few skeletal remains were found in Anatolia the number of those whose racial type were determined is rather scanty, mainly because of the bad condition that many of them were in when unearthed (like those of Evdi Tepesi, Maşat Höyük, Hanay Tepe, Sardis etc) and partly because of the tendency of some investigators (such as Kansu and Atasayan, 1939; Kansu, 1935, 1939, 1943) at the beginning of these studies, to determine the racial types according to the mean values for each settlement instead of making racial classifications for each skeleton. Furthermore, the studies in which the racial classifications were made form separate works, each including the skeletons of a certain settlement (which were even more scarce). For this reason, we thought it would be useful to consider all the Anatolian skeletons whose racial types had been determined, from the point of view of synthesis, which could then be used as a reference paper for researchers interested in the genetical past of the Turkish people.

We considered the skeletons in three main periods for ease of reference.

FROM PREHISTORIC TIMES TO NEOLITHIC

The very few skeletal remains of this period come from the following sites:

Karain: Two teeth and some fragmentary bones dated to Mousterian were found in this cave which lies in the vicinity of Antalya. They were considered to be of *Homo Sapiens Neanderthalensis* (Şenyürek, 1949 a Kökten, 1955, 1967; Bostancı, 1974).

Kanal: This is a cave in Kanal, Antalya. Of the two teeth found here, the canine (dated to Levalloiso-Mousterian) was classified as *Homo Sapiens Neanderthalensis* and the molar tooth (dated to Lower Aurignacien) in a group which included only the modern fossils (*Homo Sapiens Sapiens*), though called "Anatomic Level II Sapiensti" by Bostancı (1971, 1974)-

İncili Mağara: This cave lies in Çevlik which is 300 meters from Kanal Cave in Hatay. The skeletal remains found here were classified in the same group as the molar of Kanal by Bostancı (1973, 1974, 1975) who called both "*Homo Sapiensti Çevlikiyensis*". Based on the stratigraphy of this cave, he considered the Çevlik man to have lived 50.000 years ago, which would be very interesting, if the dating was confirmed by Carbon¹⁴ method or using a more accurate method, as the earliest-known *Homo Sapiens Sapiens*.

Beldibi: Two femurs dated to Upper Paleolithic and some skull fragments dated to Upper Paleolithic and Mesolithic were found in this rock shelter situated in the Beldibi village of Antalya. Bostancı (1974) states that it was impossible to determine the head shapes, since the fragments were too small, but considers the femurs to have more primitive form than that of *Homo Sapiens Sapiens*.

Belbaşı: This rock shelter is 9 kilometers from Beldibi and 25 kilometers from Antalya. The skeletal remains found here were considered by Bostancı to belong to a people whom he called "*Homo Sapiensti Belbaşıyensis*" and described as a primitive example of the Upper Paleolithic people, though he classified in *Homo Sapiens Sapiens* what he calls "Anatomic Level II Sapiensti" (Bostancı, 1974, 1975).

FROM NEOLITHIC TO PHYRIGIAN PERIOD

We have considered in this division of our survey the settlements which were occupied in a period beginning with the Neolithic populations and ending with the first users of writing in Anatolia:

Hacılar: This is the earliest-known agricultural settlement in Anatolia. It is located 25 km west of Burdur. The skulls of the Eurafrian and Proto-Mediterranean types of the Mediterranean race were found here at a level dated to approximately the first half of the seventh millennium and the skeletons of the same types, though in limited numbers, came from a level dated ca. 5400-5050/5000 B.C. (Mellaart, 1975).

Çatal Höyük: This, the largest known Neolithic site in the Near-East, is located 11 km north of Çumra in Konya. 81 percent of the 268 skel-

etons found here belong to a period between ca 6200 and 5830 B.C. 59 percent of these skeletal remains represent the Eurafrican type and 17 percent of them are of the Proto-Mediterranean type, while 24 percent represent that of the Alpine (Mellaart, 1975; Angel, 1971).

Şeyh Höyük: This is a settlement on the south part of the Alexandretta Gulf. The skeletal remains found here are dated to approximately the first half of the fourth millennium. Some complete skeletons (2 ♂ and 3 ♀) have been attributed to the Eurafrican Type (Şenyürek and Tunakan, 1951; Şenyürek, 1955; Cappieri, 1970).

Tilkitepe: This settlement lies on the eastern bank of Lake Van. Five skeletons of the Chalcolithic and four skeletons of the Copper Age found here were classified according to their head indexes, one (♂) as dolichocranic, three (2♂ and 1♀) subdolichocranic and one (♀) hyperdolichocranic among the former group; and among the latter, two (♂) as dolichocranic, one (♀) as subdolichocranic and one (♂) as mesocranic. The dolichocranic skulls were attributed to the Eurafrican type, while those that had indexes close to the mesocrane were found to have differences presenting an Alpine effect. This effect was observed to be even stronger in the mesocranic and subbrachyranic skulls (Kansu, 1952).

Alişar Höyük: This settlement is situated south-east of Boğazköy in Yozgat. Only the skeletal remains found at the first four of the seven cultural levels of this site are of interest to this part of our study. Two male skeletons of the Late Neolithic (ca. 3500 B.C.), seven male and three female skeletons of Period I (Copper Age - ca. 2400 B.C.) were classified as Proto-Mediterranean. In Periods II and III [Early Bronze Age (ca. 2200 B.C.) and Late or Recent Bronze Age, so called Hittite Period (ca. 1600 B.C.)], there appeared mesocranic skulls, which were called Alpinoid by Krogman (1933) although a great number of the older type survived (Cappieri, 1970).

Kumtepe: This is a settlement located 5 km northeast of Troy in Çanakkale. Of the four skeletons found here, the oldest (dated ca. 3200 B.C.) and one of those which belongs to ca. 2800 B.C. represent Eurafrican type; the racial type of the other one, of ca. 2800 B.C., is uncertain though its cephalic index was determined as mesocrane. The skeleton which belongs to ca. 2500 B.C., however, is of a hypsicranic Alpine. Kansu (1937 a) considered all four skeletons females, but Angel and Şenyürek (1949 b) considered the Alpine skull male (Cappieri, 1969; Cappieri, 1970).

Hisarlık: This is the locality where the remains of Troy were found. The racial type of the skeletons of Hisarlık follows: The skeleton [♂?] of Late Neolithic (ca. 3200 B.C.) belongs to a child and was classified as

1 ? shows that there is uncertainty about the sex.

Mediterranean. Of the five skeletons of the Copper Age (ca. 2600 B.C.); one (♂) was attributed to the Iranian type, one (♀) to Proto-Mediterranean and one (♀) to Alpine and two (♀) of them were considered primarily Alpine, although carrying some Dinaric characteristics. The last two were classified in a separate group of what Angel called "Eastern Alpine". The three skeletons (2♂ and 1♀) of the third stratum of the Early Bronze Age (dated ca. 2300 B.C.) were attributed to the Iranian type while the single skeleton (♂) of the fourth stratum of the same Age (dated ca. 2200 B.C.) and two (1♀ and 1♂?) of those of the fifth and sixth strata of the Recent Bronze Age (dated ca. 2050 and 1900 B.C. respectively) were classified as Alpine. As to the other skeleton of the sixth stratum, it was considered to be Proto-Nordic (Angel, 1951; Cappieri, 1969; Cappieri, 1970).

Büyük Güllücek: The single skeleton found in this settlement, which is located at about 15 km northeast of Alaca Höyük in Çorum, was classified as Eurafrikan Type and dated to Chalcolithic by Şenyürek (1950) but Cappieri (1970) considers it to be of the Copper Age (ca. 3200 B.C.).

Polatlı Höyük: Since the skeletons found in this settlement located in Polatlı were in bad condition, their racial type could not be determined, except that of a male skeleton (dated to 1300 B.C., i. e. the Hittite Period) which was classified in the Eurafrikan type. Another male skull, which was dated to the third millennium, was classified only according to its index as dolichocranic (Şenyürek, 1951 c; Cappieri, 1970).

Alaca Höyük: This settlement is located 160 km east of Ankara, in the city of Corum.

Of the skeletons found here, one of the two (♂) of Chalcolithic Age was considered Eurafrikan and the other mainly Eurafrikan, though having some Alpine characteristics, by Kansu and Tunakan (1946). However, Şenyürek (1951 a) attributed the latter to Mediterranean.

Of the Copper Age skeletons (ca. 2400 B.C.), two (1♂ and 1♀) with brachyranic skulls were described as precursors of Alpine by Kansu, another one (♂) also was classified as Alpine, one (♂) as Eurafrikan and two (♀) as Mediterranean. The racial type of the other skeletons, having brachyranic (1♂) and mesocranic (1♂ and 1♀) skulls, of this age could not be determined (Kansu, 1937 b; Şenyürek, 1941, 1951 b; Kansu and Tunakan, 1945, 1946; Tunakan, 1965; Cappieri, 1970).

As to the skeletons of the Bronze Age, two (♂) of them were considered to be Eurafrikan and one (♀) Mediterranean (Kansu and Tunakan, 1946; Tunakan, 1965).

Evdi Tepesi: The skeletal remains found in this locality in Van (dated to the third and second millennium) were in such a bad condition when they were unearthed that they could not be classified racially (Çiner, 1963).

Maşat Höyük: This settlement is situated near the Maşat village of the Zile town of Tokat. The skeletons found here could not be classified racially, since they were in very bad condition when unearthed, but a skull (♂), which was determined to be dolichocranic, (dated to the Copper Age) probably represents Mediterranean or Eurafrian (Şenyürek, 1946).

Babaköy: This is a locality on the right of the river Simav, near Sındırgı. A single skeleton of the Copper Age (ca. 2600 B.C.) found in this site was attributed to the Proto-Nordic Type (Angel, 1951; Cappieri, 1970)-

Yümüktepe: Of the skeletons found in Yümüktepe in Mersin and dated to ca.2400 B.C. one (♀) was attributed to the Mediterranean and the other two (1 ♀ and 1 ♂) to Eurafrian (Şenyürek, 1954 a, 1954 b; Cappieri, 1970).

Kusura: 13 of the skeletons of Kusura, which is situated in the Sandıklı town of Afyonkarahisar, were studied. Only the head indexes of five of them could be determined. One (♀) of the skulls of the Copper Age (ca. 2400 B.C.) was brachyranic and the other two (1 ♀ and 1 ♂) dolicho-
ranic, while one of the male skulls of Late Bronze Age or Hittite Period (ca. 1800 B.C.) was brachyranic and the other mesocranic (Kansu and Atasayan, 1939; Cappieri, 1970).

Ahlatlıbel: This site is located 14 km southeast of Ankara. 18 skeletons of Copper Age (ca. 2400 B.C.) were found here, but were not classified racially. The head indexes of five (♂) were determined as follows: one as brachyranic, two mesocranic and the other two dolicho-
ranic (Kansu, 1939; Cappieri, 1970).

Hanaytepe: This settlement lies in the proximity of Hisarlık. Some of the 14 skulls found here (dated to ca. 2300 B.C.) allowed only a few measurements (Cappieri, 1970). One (♀) of them was classified as Medi-
tterranean and the other (♂) as a rugged branch of what Angel calls "Basic White" of Mediterraneans (Angel, 1951).

Ilıca: This small village is located approximately 15 km northwest of Ayaş in Ankara. The two skeletons found here were dated to the Early Bronze Age. One of them (♂) was considered a mixture type, carrying partly Eurafrian and partly Alpine characteristics, and the other one (♀) classified as Mediterranean (Çiner, 1969).

Aslantepe: The remains of two skeletons of the Early Bronze Age found in Aslantepe near Malatya were so few and fragmentary that they did not allow any racial attribution (Tunakan, 1971).

Acemhöyük: This is a settlement situated in the Aksaray town of Niğde. A female skeleton found here and dated to ca. 2000-1750 B.C. was

considered to be close to the Mediterranean race, but to have some Euraf-
rican characteristics as well (Çiner, 1965 b).

Karaoğlan: A skeleton (♂) of the Hittite Period (Late Bronze - ca. 2000 B.C.) was found in this settlement, located in Karaoğlan village., 25-27 km south of Ankara, and was attributed to the Alpine race (Kansu and Tunakan, 1948).

Kültepe: The skeletons (4 ♂ and 6 ♀) found in the third and the second strata of Kültepe, which is located near Kayseri and where an Assyrian trade colony emerged at the beginning of 2000 B.C., has been dated to the beginnings of the second millennium (the Late Bronze Age). The tablets found in the same strata prove that most of these skeletons belong to Asurian merchants. Two main types, Euraf-
rican and Alpine, were mentioned as existing by Şenyürek (1952). He stated that the skeletons which belong to the Assyrian merchants are of the Euraf-
rican type and those of the Alpine type most probably belong to the Hittites, and that, the mesocranic skulls might represent a hybridization between both.

Bozhöyük: The two skeletons found in Bozhöyük, which is situated near the river Sakarya, in Bilecik, have been dated to ca. 1500 B.C. They were attributed to the Armenoid type by Krogman (1937), but Angel (1951) believes that they represent a transitional type between the hypsibrachy-
cranic Eastern Alpines and the fully developed big-faced Armenoids.

Müşgebi: This settlement, where the skeletons of Mycenaean, who lived here in the second half of the second millennium were found, is located 9 km northeast of Bodrum. Three of these skeletons, which allowed measurements, were attributed to the Alpo-Dinaric type (Çiner, 1964).

Karahöyük: Of the skeletons found in this locality, situated 10 km northeast of Elbistan in Maraş, one (♀) was dated approximately to the first half of the first millennium and the other (♂) to just after 1200 B.C. (Şenyürek, 1949 c), that is, they belong to a period in which Gurgum Kingdom, one of the Late Hittite states, dominated in Maraş (Kınal, 1962). The former was considered to carry the features close to those of the Mediterranean race, and the other to be Alpine (Şenyürek, 1949 c).

Altıntepe: Two Urartian skeletons were found in Altıntepe, which lies 20 km east of Erzincan. One (♀) of them was classified as Mediterranean and the other (♂) as Euraf-
rican (Çiner, 1965 a).

Dirmil: This is a village now called Gökçebel, 20 km north of Bodrum. Of the Mycenaean skeletons found here and dated to 950-900 B.C., one (♂) was attributed to the Alpo-Dinaric type, but the other could not be classified racially for it was in bad condition (Tunakan, 1964).

The Achaeans were considered by historians as Indo-Germans who had come to Greece from central Europe towards the beginnings of the

second millennium. Nevertheless, some archeological evidence seems to indicate that they came from the south instead of the north. For this reason, Mansel (1971) considers the Achaeans not to be pure Indo-Germans, but to be the result of the mixture between the Anatolian and the European peoples. In fact, Hadon, who considers their origin to be Danubian [who were known to be of the Basic Mediterranean type and to have given birth to the "Nordic race" as a result of their mixture with the later invaders from the Caspian region (Cole, 1968)] mentions an influence of the Alpine culture on them (Krogman, 1937)- The Mycenaean skeletons found in Müsgebi and in Dirmil, though scanty, seem to show that this was not only a cultural influence but also an indication of the hybridization between the Achaeans and the brachycephalic Anatolians who had gone to Greece long before. Indeed, according to Childe, the brachycranic skull found in Greece (dated to 3400-3100 B.C.) resembles that of an Anatolian more (Krogman, 1937).

As to the Hittite problem, there is some controversy on this subject. In 1930, they were mentioned by Kansu to have mixed racial factors. Although some authors considered them to be Armenoid, based only upon the carvings on the Hittite monuments, this suggestion was later rejected, since none of the Hittite skeletons were of this type (Krogman, 1937). Şenyürek (1941), who studied the Hittite skulls of Alişar, Kusura and Aslantepe and those of Hisarlık III that were of the same period, mentioned that most of the Anatolian population of Chalcolithic and the Copper Age were dolichocephalic and mesocephalic (brachycephalics: 16 percent) and no change in the Anatolian racial constitution was observed during these periods, while in the Bronze Age, the percentage of the brachycephalics suddenly rose (to 42 percent), and he suggested that the Hittites must have been invaders of the Alpine type who came to Anatolia in 2000 B.C. This opinion found support among some anthropologists (Tunakan, 1965). Archaeologists, historians and Hittitologists of today, too, generally agree on this, though there exist controversial opinions on the place from which the Hittites came (Araz, 1974; Kınal, 1962).

However, Cappieri (1970), who made some further studies on the Anatolian skeletal remains of the Late Neolithic and Chalcolithic, has written that the theory that the Hittite Civilization is the product of a population extraneous to the genetical Type of the Anatolian Proto-Mediterraneans, involves the hypothesis of a very large mass migration of a compact group of tribes from the distant regions up the Central Plateau, through difficult and tortuous routes, and based upon his results on the biometrical comparisons he had made between the Hittite skeletons (16 skulls from Osmankayası dated to 1700-1400 B.C. and 13 skulls from Alişar dated to 1600) and those of four of the other Anatolian settlements (Hisarlık, Kusura, Kumtepe and Polatlı), some very far from the Central Plateau, he suggested that the

high level of somatic homogeneity (92.8 percent of the mean differences were insignificant) shows, even in the second millennium B.C. lack of any genetic intrusion in the Anatolian type. Mentioning also that the brachycephalic skulls of this period had been encountered in the Troy region of Anatolia at an earlier date than in the Hittite region and even before their existence in the Near-East, he suggested that these indicate an evolutive process of brachycephalization rather than immigration.

Indeed, as we have seen, 20 percent of the Çatalhöyük population were of the Alpine type. Although this percentage decreases, when Hacılar, too, is taken into account, it is interesting as showing the existence of the Alpine type in Anatolia in the Neolithic as well. The investigations on the origin of the Alpine type indicate that the earliest representatives of this type were encountered in a Neolithic settlement in Israel. Although there is some controversy on the original type, it is generally admitted that the Alpine type appeared as a result of the evolution of a dolichocephalic race (Ferembach, 1966, 1967). Therefore, the Anatolian brachycephalics, too, can be considered autochthon (see Ferembach, 1972).

As a conclusion, we can state that Cappieri's thesis seems reasonable, in other words, the cultural accumulations which developed gradually might have caused such a high civilization to appear in the Hittite region.

FROM THE PHYRIGIAN PERIOD UP TO TODAY

The Phrygian Period

The Phrygian skeletons of Anatolia were found in *Alişar* (4-3), in *Yazılıkaya* (Midas) (1 ♀) located in Eskişehir and in *Karaoğlan Höyüğü* (1 ♂ and 1 ♀) situated in Ankara. Apart from one of the Alişar skeletons, which was classified as Nordic, they all carry features closer to those of the Mediterranean race and the other skulls of Alişar and those of Karaoğlan present an even greater resemblance to the Anatolian skulls of the Copper age, and that of Yazılıkaya is of a typical Mediterranean (Krogman, 1937; Kansu and Tunakan, 1947, 1948).

Buschan had stated that the Phrygians must be classified in the North Europeans (Nordic) and this opinion found support among some anthropologists (Gunther, 1927; Krogman, 1937; Kansu and Tunakan, 1947). Indeed, Kansu and Tunakan (1947) were suspicious about the skeleton of Yazılıkaya when they were classifying it as Mediterranean. However, though small, the series of Phrygian skeletons found in Anatolia seems to suggest, as had been stated by Strabo before (Kansu and Tunakan, 1947), that the Phrygian State had been governed by a Nordic group who had founded it, but the aboriginal folk were of the older Anatolian type.

Unfortunately, the skeletal remains of the Lydians found in Sardis, situated near the Salihli town of Manisa, were in a bad condition and could not be classified racially (Bostancı, 1969).

Perso-Hellenistic Period

Two male skulls of this period were found in *Alişar*. Of these, one was determined to be mesocranic and the other dolichocranic (Krogman, 1937; Field, 1956). However, their racial types were not mentioned.

There are some other skeletons which might be of Hellenistic, but which will be mentioned later, as they were found in a strata of the Roman Period in Troy.

Roman and Byzantine Period

The skeletons of this period come from Sardis, Truva (Troy) and Alişar.

Sardis: Of the Roman skulls found in Sardis three (1 ♀ and 2 ♂) were considered Mediterranean, and two (♂) Alpine, while only the head indexes of Byzantine skulls of the same place were determined, two (♀) as dolichocrane, four (♀) as mesocrane and three (♂) brachyocrane (Bostancı, 1969).

Truva: The skeletons found in the ninth strata of Truva have been dated to the Roman and Late Roman Periods (350 B.C. - 400 A.D.) (Angel, 1951; Arık, 1953). However, some are expected to represent Hellenistic, since they came from a period which began in 350 B.C.

Of the skeletons of the Roman Period, two (♀) were classified as Mediterranean, one (♂) as Dinaric-Mediterranean and three (♂) as Eastern Alpine (with Dinaric tendency) (Angel, 1951). If the fact that the older Greek skeletons found in Bodrum were of the Alpo-Dinaric type is considered, one would think that at least some of the last three might belong to the ancient Greeks.

The skeletons (2 ♂) of Late Roman Period were determined to be Armenoid (Angel, 1951).

Çemberlitaş: The skeletal remains of the Romans (dated 14-37) found in Çemberlitaş in İstanbul were not classified racially, but all (2 ♀ and 3 ♂) were mesocranic and the head indexes of the males were found to be higher than those of the females (Çiner, 1975).

Alişar: Of the skeletons of the Roman-Byzantine period found in Alişar, four (1 ♂, 3 ♀) were dolichocranic, three (2 ♂ and 1 ♀) mesocranic and two (♂) brachyocranic, but their racial type were not determined (Krogman, 1933, 1937).

Küçükçekmece: The brachycephalic (index: 83.92) skeleton of the Byzantine Period found in the Yarımburgaz cave of Küçükçekmece in İstanbul is of the Alpine type (Çiner, 1974).

Silifke: The very round-headed adolescent skeleton (index: 90.96) found in the Silifke town of Mersin (dated to 460-470) also is of the Alpine type (Çiner, 1965 c).

Beyazıt: Of the four skeletons found in Beyazıt in İstanbul (dated to the Byzantine Period), one (♂) is brachycranic and the others (2 ♂ and 1 ♀) mesocranic (Kansu, 1956).

Kocamustafa Paşa: The mesocephalic Byzantine skeletons (1 ♀ and 1 ♂) of Kocamustafa Paşa in İstanbul (dated to the sixth millennium) were found to be close with some of their characteristics, to the Nordic, and with some others, to the Alpine races (Çiner, 1971).

Dixon (1923) has written that the Roman skulls found in Italy and dated between the second century B.C. and the second century A.D. had undergone a complete change: that the male skulls which were considered to be predominantly dolichocephalic in the sixth century B.C. now show a large majority of brachycephalic elements while the females retain a notable Caspian element, which four or five centuries before had been so characteristic of the males, and that the completeness of the transformation is shown still more clearly by the Pompeian crania of the first century.

This change, which we believe to be the result of a brachycephalization process, such as we mentioned in the Hittite Period, can be followed on the Roman-Byzantine skulls found in Anatolia. What is more, it can be seen that it took place more rapidly in the males than in the females. Here this question occurs to one: Do the mutations which cause the head shape to change, take place in certain circumstances more rapidly in one sex than in the other? In order to answer such a question, more skeletons need to be found and also researches on this subject need to be done on living people.

SELÇUK AND OTTOMAN PERIOD

The skeletons of this period and the sites in which they were found follows:

Alişar: The four skulls of Alişar dated to Turk Period (Selçuk-Ottoman) are all brachycranic. Krogman (1937) suggested that the average Turk type of Alişar is completely different, in all of the measurements taken, from the older people of Alişar and it can be identified with the Armenoid type, but not with Turkomans, though he did not give the racial classification of each skull separately.

Yediler: The skeletal remains (3 ♀ and 7 ♂) of the Yediler grave of Ankara dated to the Selçuks were classified as Alpine (Kansu, 1943).

Üsküdar: 375 Ottoman skulls were unearthed from the Karacaahmet grave of Üsküdar in İstanbul. Of them, 10.93 percent were determined to be subdolichocranic, 12.53 percent to be mesocranic, 27.46 percent subbrachycranial, 14.93 percent brachycranial, 26.13 percent hyperbrachycranial and 8 percent ultrabrachycranial. Calculating means for each feature of 375 skulls and basing on the means of certain features, Kansu (1935) classified them as Alpine and declared that they could not possibly be Armenoid, though, again, the racial classification of each individual skull is lacking.

In our opinion, these studies on the Selçuk-Ottoman skeletons are not, unfortunately, adequate to make a racial conclusion.

Today's Turkish population are classified by Vallois (1975) as "Anatolian race" what he considered to be close to the Dinaric race, although confused with Alpine from time to time. He states that the Armenoid type seen in eastern Anatolia is a local type. Günther (1927) classifies them in the "Asia Minor race" which he considers to be a branch of the Dinaric race and which he mentions is encountered in Spain and Italy as well. According to Dixon (1923), however, the major element seen among the Turks is Alpin, the dolichocephalic people are generally of Caspian type and the light hair and eyes of the central Anatolian can be considered to be the result of the influence of the invaders such as Phrygians, Cimmerians and Scythians whom he described as Caspian. He also mentions that the Armenoid head type encountered among Turks suggests the practice of artificial deformation, which was also asserted by Cole (1968). Based on the anthropometric measurements made on 59728 Turkish people, İnan (1947) writes that two racial types are encountered. Among them; the major type being Alpin and the other Dinaric. Nevertheless, in this comprehensive work, the racial type of each person measured is not determined, instead, after the means of the measurements and the percentages of the characteristics were estimated, the racial types to which the majority of the means of the measurements, such as those made on head, face and stature, and the majority of certain characteristics, such as the eye or hair colour belong, were determined. Some errors are inevitable in this kind of determination, because one cannot know in this way, whether a certain person carries a feature as a main feature together with most of the characteristics of a race, or as a secondary feature which appeared as a result of mixture. Indeed, we have seen from the same book (İnan, 1947) that 22.35 percent of the females and 24.37 of the males are dolichocephalic, and the eye colour of 23.78 percent of the females and 29.16 percent of the males are light. If she had classify each person racially, we could have seen that there were also the

Mediterranean and Nordic types, though not many. We can state this merely from our observations in Turkey.

As to the origin of the Turks,, the place in which they first appeared on the history scene corresponds to the northwest boundary of China, according to the written documents. Yet, our knowledge on their prehistoric and protohistoric periods is very limited and indirect. Based on linguistic and archaeological surveys, Kurat (1972) suggests that their motherland must be seeked, not in Mongolia, but between the Altai and Ural mountains, that is, in today's Kazakhstan. Dixon (1923) has written that of a large series of crania from Late Bronze Age sites in the Minussinsk region of the upper Yereisei, a majority have dolichocephalic factors, in the main, of Mediterranean-Caspian type. Cole (1968), who considers the Turkic race to be a result of the mixture between Mongoloids and Caucasoids and to include three branches; an eastern branch in East Turkestan, a central branch consisting of the Kirghiz who live on the mountains of Tienchan and on the Pamirs and also of Tatars who live along the Volga, and on the Caucasus, and a western branch comprising the Turcomans of Iran and Russian Turkestan and Aderbaidjani whom he calls Turcized Iranian, states that skeletons from the Minussinsk district which is now the home of nomadic Kirghiz and Kalmuck tribes are of Nordic type. We would like to note here that Nordic type is now considered as a result of the mixture between Danubians, who were classified as Mediterranean, and the Caspian people. Cole (1968) also quotes Coon's suggestion that the Turcomans descended from the early Caucasoids who migrated northwards into Mongolia. If we turn again to the written documents, in Residud-din, the peoples who form the Turkic world were mentioned separately from those who form the Mongoloid world and those of the Turkic world were given as Oğuz, Karluk, Uygur, Kıpçak and Kanlı, and the Islamic geographers of the tenth century mentioned the Turkic peoples with the same names, except that they called "Kıpçaks and Kafilis" Kimek and that they included the Kirghiz as Turkic peoples (Sümer, 1970).

If we take these into account together, it seems plausible that the Turks originated from a Caucasoid race and the reason why some Turkic peoples carry some Mongoloid traits is that mixtures took place between them. We believe, however, that it is impossible to assert that this Caucasoid race is Alpin, if the brachycephalization process which is known to have taken place in various sites of the world and the fact that the skeletons of the Bronze Age in Minussinsk district are of the Nordic type are considered along with the light colour element encountered in central Anatolia. Furthermore, it is not altogether unreasonable to consider the Proto-Turkic type to be Caspian.

BIBLIOGRAPHY

Angel, J.L.; *Troy. The Human Remains.* Suppl. Monogr. I, Princeton Univ. Press, Univ. of Cincinn, New Jersey, Meriden, Connecticut, 1951.

- Angel, J.L.;** 1971 Early Neolithic Skeletons from Çatal Höyük: Demography and Pathology. *Anatolian Studies*, 21: 77-98.
- Araz, N., der.;** *Baslangıktan Bugüne Dünya Tarihi. I. C, Başlangıktan XVII. yüzyıla.* Hakkı Devrim-Kaynak Kitaplar Basım, Yayın ve Ticaret A.Ş., İstanbul, 1974.
- Ank, R.O.;** Truva Kılavuzu. M.E.B., Eski Eserler ve Müzeler Yayınlarından, Seri I, Sayı 14, M.E. Basımevi, 1953.
- Bostancı, E.;** *Sardis Kazılarında Çıkan Kafatasların İncelenmesi ve Eski Anadolu Halkları ile Olan Miinasebetleri. Study of the Skulls from the Excavation at Sardis and the Relation with the Ancient Anatolians.* A.U. D.T.C.F. Yayınlarından, No. 185, A.Ü. Basımevi, Ankara, 1969.
- Bostancı, E.;** 1971. Kanal Mağarasında Levalloiso-Mousterien Seviyede Keşfedilen Bir Üst Süt Canine ile Alt Aurignacien Seviyede Bulunan Bir Mandubulae Molar Hakkında İnceleme. *Antropoloji*, 1: 21-43.
- Bostancı, E.;** 1973. Homo Sapiens Çevlikiyensis in the Canal and Big Caves of Çevlik Near Samandağ of the Province of Antakya on the Mediterranean Coast of Anatolia. *Antropoloji*, 1: 29-56.
- Bostancı, E.;** "Anadolu'da İnsan Kronolojisi ve Genus Homo İçin Yeni Bir Sınıflandırma." 539-591, A.Ü. D.T.C.F., *Cumhuriyetin 50. Yıldönümü-nü Anma Kitabı.* Yayın No. 239, A.Ü. Basımevi, 1974.
- Bostancı, E.;** 1975. Quaternary Fossil Beaches in Çevlik and Mağaracık and Relation with the Paleolithic Man Who had been Lived in the Canal and İncili Caves on the Mediterranean Coast of Anatolia. *Antropoloji*, 1: 41-68.
- Cappieri, M.;** *The Mediterranean Race in Asia Before the Iron Age.* Edit, by H. Field. Occasional Paper No. 8, Field Research Projects, Florida, 1969.
- Cappieri, M.;** 1970. The Anatolians of the Late Neolithic and Chalcolithic Age. *Belleten*, 34: 509-555.
- Cole, S.;** *Races of Man.* 2nd Ed., British Museum (Natural History), Butler and Tanner Ltd., Frome and London, Trustees of the British Museum (Natural History), London, 1968.
- Çiner, R.;** 1963. Evdi Tepesi ve Civarından Çıkarılan İskelet Kalıntılarının Tetkiki. *Antropoloji*, 1: 78-98.
- Çiner, R.;** 1964. Bodrum-Müskebi Kazısı İskelet Kalıntılarının Tetkiki. *Antropoloji*, 1: 56-79.
- Çiner, R.;** 1965 a. Altın-tepe (Urartu) iskeletlerine Ait Kalıntıların Tetkiki. *Belleten*, 24: 225-244.
- Çiner, R.;** 1965 b. Acemhöyük İskeleti. *A. Ü. D. T.C.F. Dergisi*, 23: 1-24.

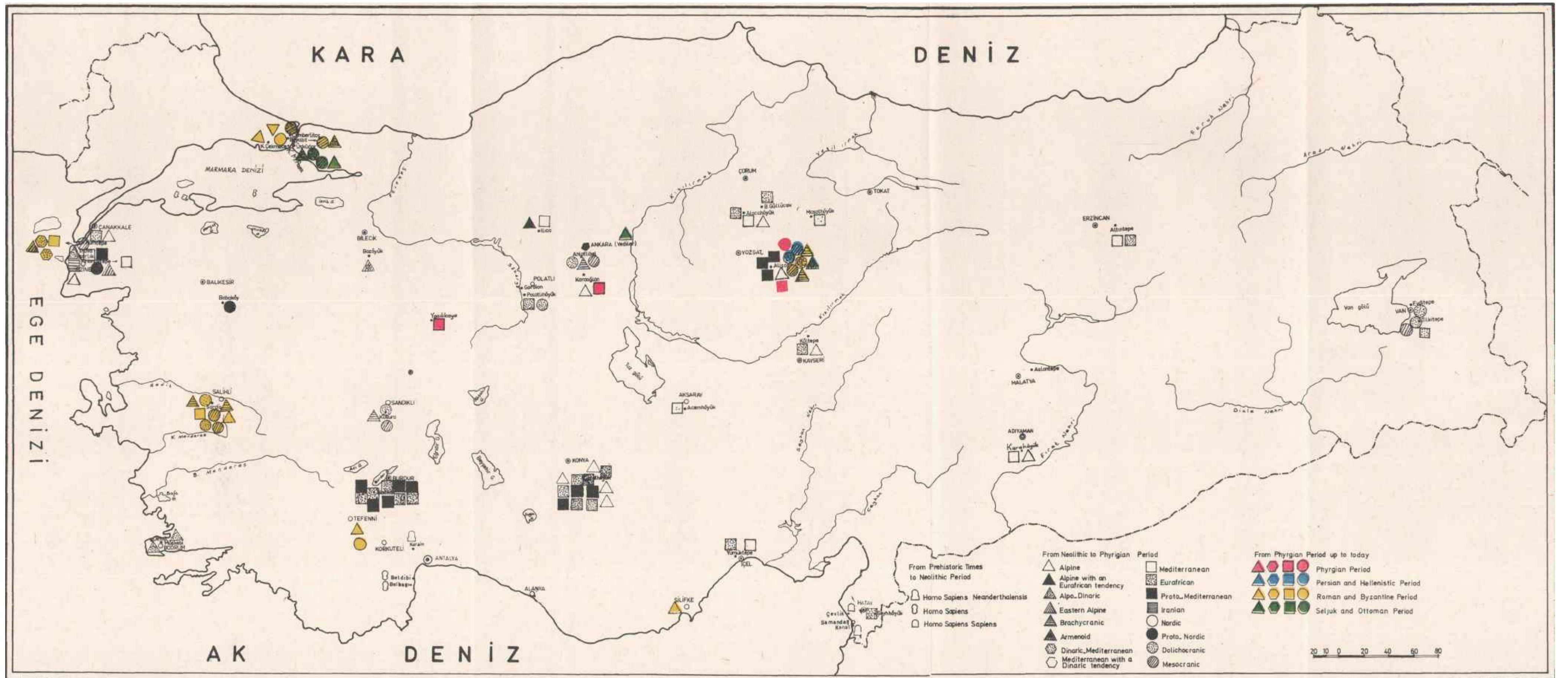
- Çiner, R.;** 1965 c. Ayateklâ Kilisesinden Çıkarılan İskeletlerin Tetkiki. *A.Ü. D.T.C.F. Dergisi*, **22**: 251-271.
- Çiner, R.;** 1969. Ilıca-Ayaş İskelet Kalıntılarının Tetkiki. *Antropoloji*, **1**: 195-237.
- Çiner, R.;** 1971. İstanbul (Kocamustafapaşa) da Çıkan İskelet Kalıntılarının Tetkiki. *Antropoloji*, **1**: 171-201.
- Çiner, R.;** "Yarımburgaz (Küçükçekmece-İstanbul) Mağarasında Çıkan İskelet Kalıntılarının Tetkiki." 475-500., A.Ü. D.T.C.F., *Cumhuriyetin* 50. *Yıldönümünü Anma Kitabı*. Yayın No. 239; A.Ü. Basımevi, 1974.
- Çiner, R.;** 1975. İstanbul (Çemberlitaş) da Darüşşafaka Sitesi Temel Kazılarında Çıkarılan İmparator Tiberius Zamanına (M.S. 14-37) Ait Kalıntıların Tetkiki. *Antropoloji*, **1**: 107-163.
- Dixon, R.B.;** *The Racial History of Man*. Charles Scribner's Sons, New York, London, 1923.
- Ferembach, D.;** 1966. Formation et evolution de la Brachycephalic au Proche-Orient. *Homo*, **17**: 160-172.
- Ferembach, D.;** *L'Origine de la Race Alpin*. Extrait de *Scientia*, **102**, 1967.
- Ferembach, D.;** "Les Hommes du Gisement Neolithique de Çatal Höyük." 13-21 T.T.K. *VII. Türk Tarih Kongresi, Ankara, 25/29 Eylül 1970. Kongreye Sunulan Tebliğler*. T.T.K. Yayınlarından, IX. Seri, 5a, 7, T.T.K. Basımevi, Ankara, 1972.
- Field, H.;** *Ancient and Modern Man in Southwestern Asia*. University of Miami Press. Coral Gables, Florida, 1956.
- Günther, H.F.K.;** *The Racial Elements of European History*. 2nd Ed., trans., G.C. Wheeler, Methuen and Co. Ltd., London, 1927.
- İnan, A.;** *Türkiye Halkının Antropolojik Karakterleri ve Türkiye Tarihi. Türk Irkının Vatanı Anadolu*. T.T.K. Yayınlarından, VII. Seri, No. 15, T.T.K. Basımevi, Ankara, 1947.
- Kansu, Ş.A.;** 1930. Hittite'lerin Kraniolojik Tetkikatına Methal. *Türk Antropoloji Mecmuası*, (10): 3-17.
- Kansu, Ş.A.;** 1935. Anadolu Kraniolojisi. *Türk Antropoloji Mecmuası*. (17-18): 65-67.
- Kansu, Ş.A.;** 1937a. Kumtepe Neolitik Kemikleri Üzerinde Antropolojik Tetkik. *Belleten*, **2**: 557-569.
- Kansu, Ş.A.;** 1937b. Alaca-Höyükte Bulunan İskeletlerin Antropolojik Tetkiki. Etude Anthropologique de quelques squelettes trouvés à Alacahöyük. *Belleten*, **1**: 180-209.
- Kansu, Ş.A.;** 1939. Les Ossements D'Ahlatlıbel (Age du Cuivre). *Türk Antropoloji Mecmuası*, (19-22): 22-35.

- Kansu, Ş.A.;** "Selçuk Türkleri Hakkında Antropolojik İlk Bir Tetkik ve Neticeleri." 440-456, T.T.K., *İkinci Türk Tarih Kongresi. İstanbul, 20-25 Eylül 1937., Kongrenin Çalışmaları, Kongreye Sunulan Tebliğler.* T.T.K. Yayınlarından, IX. Seri, No. 2, Kenan Matbaası, İstanbul, 1943.
- Kansu, Ş.A.;** Introduction a l'Anthropologie de la Periode Byzantine. Sonderdruck aus dem Bericht über die 5. Tagung der Deutschen Gesellschaft für Anthropologie in Freiburg i. Br. 5. bis 1956: 61-67.
- Kansu, Ş.A.; ve M. Atasatan;** 1939. Afyonkarahisar Kusura Hafriyatında Meydana Çıkarılan Bakırçağı ve Eti Devirlerine Ait İskeletler Üzerine Tetkikler. Recherches sur les Squelettes de l'Age du Cuivre et de l'Epoque Hittite, Decouverts dans les Fouilles de Kusura aux d'Afyon Karahisar. *Türk Antropoloji Mecmuası*, (19-22): 272-313.
- Kansu, Ş.A. ve M. Ünsal;** "Tilki Tepe (Şamramaltı, Van) Kazısından Çıkarılan İskeletlerin Antropolojisi," 391-397. T.T.K., *IV. Türk Tarih Kongresi, Ankara, 10-14 Kasım 1948. Kongreye Sunulan Tebliğler.* T.T.K. Yayınlarından, IX. Seri, N0.4, T.T.K. Basımevi, Ankara, 1952.
- Kansu, Ş.A. ve S. Tunakan;** 1945. Türk Tarih Kurumu Alaca-Höyük Kazılarında (1936-1944) Bakırçağı Yerleşme Katlarından Çıkarılan İskeletlerin Antropolojik İncelenmesi, *Belleten*, 4: 411-422.
- Kansu, Ş.A. ve S. Tunakan;** 1946. Alaca-Höyük 1943-1945 Kazılarında Çıkarılan Kalkolitik, Bakır ve Tunç Çağlarına Ait Halkın Antropolojisi. *Belleten*, 10: 539-555.
- Kansu, Ş.A. ve S. Tunakan;** 1947. 1937-39 Yıllarında Eskişehir Yazılıkaya'da Yapılan Kazıda Çıkarılmış Olan Frig Çağına Ait Kafanın Antropolojik İncelenmesi. *Belleten*, 11: 181-187.
- Kansu, Ş.A. ve S. Tunakan;** 1948. Karaoğlan Höyüğünden Çıkarılan Eti, Frig ve Klasik Devir İskeletlerin Antropolojik İncelenmesi. *Belleten*, 12: 759-774.
- Kınal, F.;** *Eski Anadolu Tarihi.* T.T.K. Yayınlarından, XIII. Seri, No. 7, T.T.K. Basımevi, Ankara, 1962.
- Kökten, İ.K.;** 1955. Antalya'da Karain Mağarasında Yapılan Prehistorya Araştırmalarına Toplu Bir Bakış. Ein Allgemeiner Überblick Über Die Prâhistorischen Forschungen in Karain-Höhle Bei Antalya. *Belleten*, 19: 271-293.
- Kökten, İ.K.;** *Karain Kılavuzu (Antalya).* Karain. M.E.B. Eski Eserler ve Müzeler Genel Müdürlüğü Yayınlarından, Seri 1, Sayı 24, Ankara, 1967.
- Krogman, W.M.;** "The Cranial Types." 122-138, E.F. Schmidt, *The Alishar Höyük, Seasons of 1928 and 1929, Part II*, OIP, Vol. XX, Re-

searches in Anatolia-Vol V, The University of Chicago Press, Chicago, Illinois, 1933.

- Krogman. W.M.;** "Cranial Types from Alishar Höyük and Their Relations to Other Racial Types, Ancient and Modern, of Europe and Western Asia." 213-293, H.H. von der Osten, *The Alishar Höyük, Seasons of 1930-1932, Part III*, OIP, Vol. XXX, Researches in Anatolia - The University of Chicago Press, Chicago, Illinois, 1937.
- Kurat. A.N.;** IV-XVIII. *Yüryıllarda Karadeniz Kuzeyindeki Türk Kavimleri ve Devletleri*. A.Ü. D.T.C.F. Yayınları, Sayı: 182, T.T.K. Basımevi, Ankara, 1972.
- Mansel. A.M.** *Ege ve Yunan Tarihi*. 3. Baskı, T.T.K. Yayınlarından, XIII. Seri, No. 8b, T.T.K. Basımevi, Ankara, 1971.
- Mellaart, J.;** *The Neolithic of the Near East*. Jarrold and Sons Ltd., Norwich, Thames and Hudson, London, 1975.
- Sümer, F.;** *Anadolu'da Moğollar*. Selçuklu Araştırmaları Dergisi I-1969'dan ayrı basım. T.T.K. Basımevi, Ankara, 1970.
- Şenyürek, M.S.;** 1941. Anadolu Bakır ve Eti Sekenesinin Kraniyolojik Tetkiki. *Belleten*, 5: 219-229.
- Şenyürek, M.S.;** 1946. Masat Höyük Kazısından Çıkarılan Kafataslarının Tetkiki. Study of the Skulls from Masat Höyük, Excavated under the Auspices of the Turkish Historical Society. *Belleten*, 10: 231-254.
- Şenyürek, M.S.;** 1949a . Türk Tarih Kurumu Adına Yapılan Karain Kazısında Bulunan İki Fosil Dişe Dair Kısa Ön Rapor. A Short Preliminary Report on the Two Fossil Teeth from the Cave of Karain, Excavated under the Auspices of the Turkish Historical Society. *Belleten*, 13: 833-836.
- Şenyürek, M.S.;** 1949 b. Truva Civarında Kumtepe'de Bulunmuş Olan İskeletlere Dair Bir Not. A Note on the Skeletons from Kumtepe in the Vicinity of Troy. *A.Ü. D.T.C.F. Dergisi*, 7: 295-304.
- Şenyürek, M.S.;** 1949c. Türk Tarih Kurumu Adına Yapılan Karahöyük Kazısından Çıkarılan Kafatasların Tetkiki. Study of the Skulls from Karahöyük, Excavated under the Auspices of the Turkish Historical Society. *Belleten*, 13: 1-20.
- Şenyürek, M.S.;** 1950. Büyük Güllücek'te Bulunan Kalkolitik Çağa Ait Bir Muharibin İskeletinin Tetkiki. Study of the Skeleton of a Chalcolithic Age Warrior from Büyük Güllücek. *A.Ü. D.T.C.F. Dergisi*, 8: 269-310.
- Şenyürek, M.S.;** 1951a. A Note on the Human Skeletons in Alaca Höyük Museum. *A.Ü. D.T.C.F. Dergisi*, 9: 43-61.

- Şenyürek, M.S.;** 1951b. Two Cases of Prematüre Suture Closure Among the Ancient Inhabitants of Anatolia. *Belleten*, 15: 247-262.
- Şenyürek, M.S.;** 1951c. A Study of the Human Skulls from Polatlı Höyük. *Anatolian Studies*, 1: 63-71.
- Şenyürek, M.S.;** 1952. A Study of the Human Skeletons from Kültepe, Excavated under the Auspices of the Turkish Historical Society. The Skeletons from the Excavation Season of 1948. *Belleten*, 16: 323-343.
- Şenyürek, M.S.;** 1954a. A Note on the Skulls of Chalcolithic Age from Yümüktepe. *Belleten*, 18: 1-25.
- Şenyürek, M.S.;** 1954b. A Note on the Long Bones of Chalcolithic Age from Yümüktepe. *Belleten*, 18: 519-522.
- Şenyürek, M.S.;** 1955. A Note on the Long Bones of Chalcolithic Age from Şeyh Höyük. *Belleten*, 19: 247-270.
- Şenyürek, M.S. ve S. Tunakan;** 1951. Şeyh Höyük İskeletleri. The Skeletons from Şeyh Höyük. *Belleten*, 15: 431-445.
- Tunakan, S.;** 1964. Bodrum-Dirmil Kazısı İskeletleri. *Belleten*, 28: 361-371.
- Tunakan, S.;** 1965. Türk Tarih Kurumu Adına, 1964 Yazında, Alaca Höyük'te Yapılan Kazıda Çıkarılan İki Eski Bronz Çağı İskeletinin İncelenmesi. *Belleten*, 29: 571-584.
- Tunakan, S.;** 1971. Malatya-Aslantepe İskeletleri. *Antropoloji*, 1: 1-7.
- Vallois, H. V.;** *İnsan Irkları*, Çev. S. Tunakan, A.Ü.D.T.C.F. Yayınlarından, No. 163, A.Ü. Basımevi, Ankara, 1975.



The distribution of the skeletal remains whose racial types or cephalic indexes were determined in A n a t o l i a