

## THE SKELETONS FROM ŞEYH HÖYÜK

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The skeletons from Şeyh Höyük, excavated in the spring of 1948 by Messrs. Ahmet Dönmez, Baki Öğün and Sinclair Hood, field assistants of Sir C. L. Woolley, were brought to us for study. According to the written information given to us by the excavators these human remains were found in a heap at the bottom of an ordinary but rather deep garbage pit dug by peoples of layer 9 in layers 10-12. The excavators are of the opinion that these skeletons had not been interred after a natural death, but had been thrown in after being killed. They cite as a corroborating evidence the incidence that the sherds of pots broken during usage had been also thrown in this pit. Again, according to the information given to us by the excavators, building layer 9 of Şeyh Höyük, corresponding to layers 8-9 of *Tall Arpachiyah*, is contemporary with the *Tell Halaf* culture of northern Mesopotamia and Syria. This layer of the Chalcolithic period corresponds approximately to the first half of the 4<sup>th</sup> millenium B.C.

The material in our possession includes five crania belonging to adult individuals, of which two are male and three female, and the long bones of six persons, of which one is younger than 20 years of age<sup>1</sup>, and some other, but mostly broken, skeletal parts. The crania have been numbered from 1 to 5. The long bones have been classified according to size and marked with letters, since, as they were found in a heap at the bottom of the pit, it could not be determined with certainty as to which crania they belonged to.

<sup>1</sup> Although the epiphyses of all the long bones are closed, in some long bones, which very probably belong to the same individual, the epiphyses are patent. This skeleton has been marked "F". But as these bones are badly broken, the lengths of these could not be measured.

## THE CRANIA

Two crania are dolichocranic and three are hyperdolichocranic, according to Garson's classification<sup>2</sup>. It is noteworthy that the cranial indices of skulls believed to be those of females are lower than those of the males. We shall refer to this question later on. In the height-length index, two are chamaecranic and two orthocranic, while in the height-breadth index one skull is metriocranic and three are akrocranic. In the auricular height-length index one specimen is chamaecranic and four orthocranic, but one of these (No. 2) is on the borderline of hypsicephaly. In the auricular height-breadth index one skull is in the tapeinocranic and four in the akrocranic category. In the total facial index, skull No. 1 is mesoprosopic and the others are leptoprosopic. With the exception of one skull, in all the Şeyh Höyük skulls the faces are relatively long and narrow. In the upper facial index two specimens are mesen and three are lepten. According to Broca's classification two of the skulls are chamaeconchic, one slightly mesoconchic and one hypsiconchic. Here we would like to point out that the skull with a hypsiconchic orbital index is specimen No. 1, in whose facial measurements there may be some error. The nasal index is mesorrhine in two and weakly chamaerrhine in the other two specimens, but the indices of these latter specimens (51.06, 51.04) are near the borderline of the mesorrhine category. In the external palatal index one specimen is dolichuranisch and four skulls are brachyuranisch.

If the height-thickness index of the lower jaws is compared with figures quoted by Martin<sup>3</sup>, it will be seen that most of these are near the highest of the averages for modern man.

The form of all the skulls is ovoid, and especially in the crania of the females it is a long-ovoid (Figs. 1, 3, 5, 7, 9). The glabella and the brow ridges are strong in Skull No. 1, moderate in Skull No. 2 and relatively weak in the others. In all the skulls the forehead is strongly receding; this condition is especially true for the crania of the females. Although it is still pronounced, the least slope is found in Skull No. 1. The forehead of skull No. 2 is also strongly receding, but it is not so receding as in the other crania.

<sup>2</sup> Martin, R., *Lehrbuch der Anthropologie*, Vol. 2, 1928, p. 648.

<sup>3</sup> Martin, R., *Lehrbuch der Anthropologie*, Vol. 2, 1928, p. 979.

In these skulls the frontal and parietal bosses vary from small to medium. Although the mastoid processes are usually small, in Skull No. 2 they are considerably strong. In contrast to the lack of Wormian bones on the coronal and sagittal sutures in all the skulls, there are one or two Wormian bones on the lambdoid suture. In skulls No. 3 and 4 the metopic suture is completely patent. The most characteristic aspect of the crania is seen especially in the profile of the female crania. We have already stated that in the crania of the females the forehead is low and receding. When these crania are viewed in *norma lateralis*, it is seen that the crania rise behind the frontal region as far as the posterior part of the parietal bones and then descend at first downward and then obliquely forward (Figs. 6, 8, 10). The crania are elongated upward and backward. The occipital bone, which is very narrow, slopes strongly downward and forward. It is evident that these skulls have been subjected to artificial deformation. The deformation met with here approaches the so-called Aymara type, which is encountered especially amongst the American Indians. As far as we are aware, these are the first deformed specimens found amongst the Chalcolithic and Copper Age inhabitants of Anatolia. Although the forehead of skull No. 2 is also strongly receding, the profile of this skull is not so characteristic as those of the female crania. The presence of Aymara-type deformation in the female skulls is noteworthy. The smaller cranial indices of the females than those of the males, may also be a result of deformation.

Of all the skulls, only in No. 5, in *norma verticalis*, slight plagiocephaly is observed.

The profile of the nasal bones is convex in skull No. 2, straight in No. 5 and concavo-convex in Nos. 3 and 4. The lower edge of the pyriform aperture is considerably sharp in skulls No. 3 and 5, and is weakly sharp in Nos. 1 and 2. Although this part of Skull No. 4 approaches the infantile form of Martin, the external edge of this sill is quite sharp.

The chin projection is strong in No. 1, moderate in Nos. 2, 3 and 4, and weak in No. 5. In skulls No. 1, 3 and 4, the mental foramen is single on both sides. Although in skull No. 2, the mentale foramen is represented by a large aperture, under the first lower molar and in proximity to the lower margin of the mandible

there is a second smaller foramen. Furthermore, in processus alveolaris of this mandible small vascular orifices are observed. A small swelling on the inside of mandible No. 1 represents an incipient torus mandibularis.

#### THE LONG BONES

The maximum lengths of the measurable long bones are shown in Table 3. In only one of the humeri we have studied, a small perforation is observed in the *Olecranon fossa*. All of the ten femurs available are platymeric or hyperpletymetric. The platymeria indices of these vary between 64.70 and 79.62. In all the femurs the torsion of the head is strong. In the femurs of three individuals incipient third trochanter has been observed. In the others there is no trochanter tertius. The pilaster formation ranges from slight to strong. While in two individuals the collum femoris is of normal length, it is greatly shortened in the other specimens. In most of the tibiae the retroversion is very slight. Only in one individual is the retroversion pronounced. In the lower extremity of most of the intact tibiae a very slight squatting facet is seen. Index cnemicus varies from 56.75 to 74.07. Most of the available tibiae are eurycnemic, two mesocnemic and two, believed to belong to the same individual, are platycnemic.

The statures we have calculated from the lengths of the long bones, by using Pearson's method<sup>4</sup>, are listed in Table 5. The statures calculated from the bones A and B, which we have attributed to males, are in the middle stature category. Only one of these is tallish. The statures calculated from the bones C, D and E, which we have considered to be those of females, vary between short and medium. Thus the stature of the males varies from medium to tallish, and those of the females range from short to medium.

#### THE SUMMARY

The skulls from Şeyh Höyük are of the Eurafrian racial type. Furthermore, these skulls, especially those of the females, show the deformation of Aymara type. So far as we are aware, these are the first artificially deformed crania encountered in the Chalcolithic Age of Anatolia.

<sup>4</sup> For Pearson's formulae see: Martin, R., *Lehrbuch der Anthropologie*, Vol. 2, 1928, pp. 1070-1071.

TABLE 1

## THE SKULLS

|                           | No. 1<br>(♂) | No. 2<br>(♂) | No. 3<br>(♂<br>+) | No. 4<br>(♂<br>+) | No. 5<br>(♂<br>+) |
|---------------------------|--------------|--------------|-------------------|-------------------|-------------------|
| <b>MEASUREMENTS :</b>     |              |              |                   |                   |                   |
| Length                    | 195.0        | 186.0        | 182.0             | 189.0?            | 196.0             |
| Breadth                   | 143.0        | 134.0        | 124.0             | 123.0?            | 133.0             |
| Height (Ba-b)             | 132.0        | 139.0        | 131.0             | 139.0             | —                 |
| Height (Po-b)             | 112.0        | 117.0        | 110.0             | 115.0             | 114.5             |
| Min. Frontal diameter     | 97.0         | 96.0         | 84.0              | 86.0              | 96.5              |
| Circumference             | 534.0        | 510.0        | 488.0             | 502.0             | 523.0             |
| Nasion-gnathion           | 118.0?       | 120.0?       | 110.5             | 110.0             | 113.0             |
| Nasion-prosthion          | 73.0??       | 71.5         | 64.0              | 67.0              | 72.0              |
| Bizygomatic width         | 133.0??      | 130.0?       | 118.0             | 118.0             | 122.0?            |
| Orbit: width              | 41.2         | 39.0         | 40.5              | —                 | 43.0              |
| Orbit: height             | 39.0         | 32.7         | 33.5              | —                 | 35.0              |
| Nose: length              | 54.0?        | 57.0         | 47.0              | 48.0              | 54.0              |
| Nose: width               | 27.0?        | 27.0         | 24.0              | 24.5              | 27.5              |
| Maxilloalveolar: width    | 67.0         | 68.0         | 59.0?             | 59.0              | 61.0?             |
| Maxilloalveolar: length   | 53.0?        | 56.0         | 48.0              | 50.0              | 60.0              |
| <b>INDICES :</b>          |              |              |                   |                   |                   |
| Cranial (cranial index)   | 73.33        | 72.04        | 68.13             | 65.07?            | 67.85             |
| Height-length             | 67.69        | 74.73        | 71.97             | 73.54?            | —                 |
| Height-width              | 92.30        | 103.73       | 105.64            | 113.00            | —                 |
| Auricular height-length   | 57.43        | 62.90        | 60.43             | 60.84             | 58.41             |
| Auricular height-width    | 78.32        | 87.31        | 88.70             | 93.49             | 86.08             |
| Transverse frontoparietal | 67.83        | 71.64        | 67.74             | 69.91             | 72.55             |
| Total facial              | 88.72?       | 92.30?       | 93.64             | 93.22             | 92.62?            |
| Upper facial              | 54.88?       | 55.00        | 54.23             | 56.77             | 59.01?            |
| Orbital                   | 94.66??      | 83.84        | 82.71             | —                 | 81.39             |
| Nasal                     | 50.00?       | 47.36        | 51.06             | 51.04             | 50.92             |
| Maxilloalveolar           | 126.41?      | 121.42       | 122.89            | 118.00            | 101.66?           |

TABLE 2  
THE MANDIBLES

|  | No. 1<br>(♂) | No. 2<br>(♂) | No. 3<br>(♀) | No. 4<br>(♀) | No. 5<br>(♀) |
|--|--------------|--------------|--------------|--------------|--------------|
| MEASUREMENTS :   |              |              |              |              |              |
| Length (condylo-symph-<br>yseal)                       | 100.00       | —            | 98.0         | 98.0         | —            |
| Bicondylar width                                       | 117.00       | —            | —            | 117.0        | —            |
| Bigonial width   | 96.5         | —            | 94.5         | 92.0         | —            |
| Ascending ramus height<br>(gonion-condyle)             | 61.00        | 70.00        | 52.00        | 52.00        | 55.00        |
| Ascending ramus: Min.<br>width                         | 33.5         | 37.00        | 30.50        | 32.50        | 34.50        |
| Corpus height (At the regi-<br>on of foramen mentale)  | 30.00        | 35.00        | 28.50        | 27.50        | 35.00        |
| Corpus thickness (At the<br>region of foramen mentale) | 13.00        | 14.00        | 12.20        | 11.70        | 15.00        |
| Symphysis length                                       | 32.5         | —            | 30.00        | 29.00        | 34.50        |
| Mean angle mandible                                    | 117°         | 116°         | 120°         | 124°         | —            |
| INDICES :  |              |              |              |              |              |
| Length-width   | 85.47        | —            | —            | 83.76        | —            |
| Breadth  | 82.47        | —            | —            | 78.62        | —            |
| Height-thickness                                       | 43.33        | 40.00        | 42.80        | 42.54        | 42.85        |
| Ascending ramus  | 54.91        | 52.85        | 58.65        | 62.50        | 62.72        |

TABLE 3  
THE MAXIMUM LENGTHS OF LONG BONES

|         | A<br>(♂) | B<br>(♂) | C<br>(♀) | D<br>(♀) | E<br>(♀) |
|---------|----------|----------|----------|----------|----------|
| Humerus |          |          |          |          |          |
| Right   | 330.00   | —        | 278.00   | —        | 301.00   |
| Left    | 325.00   | —        | 277.00   | 310.00   | —        |
| Ulna    |          |          |          |          |          |
| Right   | 287.00   | —        | 220.50   | 254.00   | —        |
| Left    | 285.00   | —        | 219.00   | 250.00   | —        |
| Radius  |          |          |          |          |          |
| Right   | —        | —        | 199.00   | —        | —        |
| Left    | —        | —        | 200.00   | —        | —        |
| Femur   |          |          |          |          |          |
| Right   | 457.00   | 428.00   | 378.00   | 406.00   | 391.00   |
| Left    | 459.00   | 427.00   | 379.00   | 406.00   | 392.00   |
| Tibia   |          |          |          |          |          |
| Right   | 392.00   | 355.00   | —        | —        | —        |
| Left    | 392.00   | 357.00   | 314.00   | 323.00   | —        |

TABLE 4  
INDICES OF FEMUR AND TIBIA

|  | A<br>(♂)       | B<br>(♂)       | C<br>(♀<br>+)  | D<br>(♀<br>+)  | E<br>(♀<br>+)  | F<br>(♀<br>+)  |
|--|----------------|----------------|----------------|----------------|----------------|----------------|
| Femur :<br>Platymeria Right<br>index Left  | 67.53<br>67.50 | 64.70<br>72.05 | 76.66<br>77.96 | 70.00<br>72.41 | 70.27<br>75.67 | 79.62<br>73.67 |
| Tibia :<br>Platycnemia Right<br>index Left | 73.68<br>70.00 | 58.33<br>56.75 | 70.58<br>68.75 | 71.42<br>66.66 | 70.90<br>74.07 | —<br>71.87     |

TABLE 5  
THE STATURE

|                                | A<br>(♂)         | B<br>(♂)         | C<br>(♀<br>+)    | D<br>(♀<br>+)    | E<br>(♀<br>+)    |
|--------------------------------|------------------|------------------|------------------|------------------|------------------|
| Humerus Right<br>Left          | 166.14<br>164.69 | —<br>—           | 148.03<br>147.76 | —<br>156.84      | 145.37<br>—      |
| Radius Right<br>Left           | —<br>—           | —<br>—           | 147.74<br>148.08 | —<br>—           | —<br>—           |
| Femur Right<br>Left            | 167.22<br>167.59 | 161.77<br>161.58 | 146.36<br>146.55 | 151.81<br>151.81 | 148.89<br>149.08 |
| Tibia Right<br>Left            | 172.80<br>172.80 | 163.01<br>163.48 | —<br>148.62      | —<br>150.74      | —<br>—           |
| Femur + Tibia * Right<br>Left  | 169.67<br>169.90 | 162.02<br>162.13 | —<br>147.18      | —<br>151.23      | —<br>—           |
| Femur + Tibia * Right<br>Left  | 169.53<br>169.77 | 161.99<br>162.09 | —<br>147.22      | —<br>151.24      | —<br>—           |
| Humerus + Radius Right<br>Left | —<br>—           | —<br>—           | 147.56<br>147.56 | —<br>—           | —<br>—           |

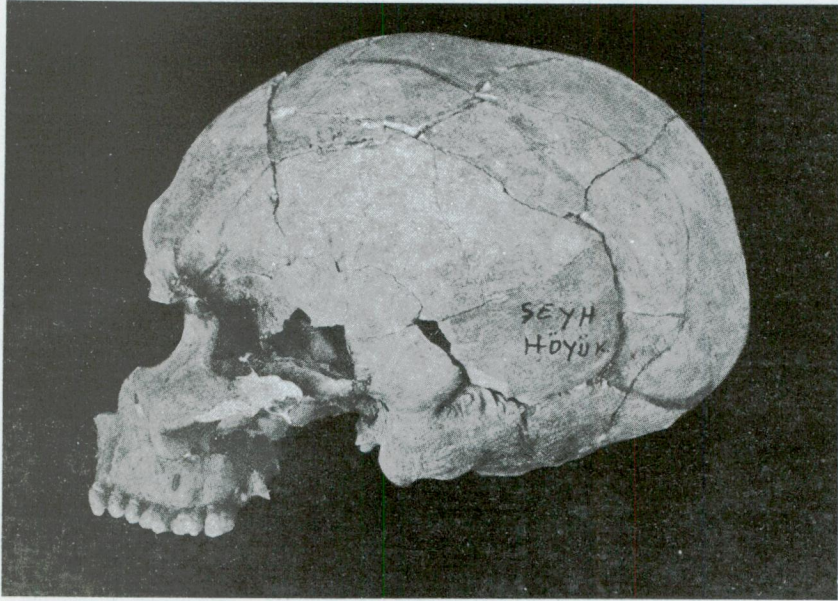
\* According to two different formulae of Pearson.







Resim (Fig.) 1 — Şeyh Höyük No. 1



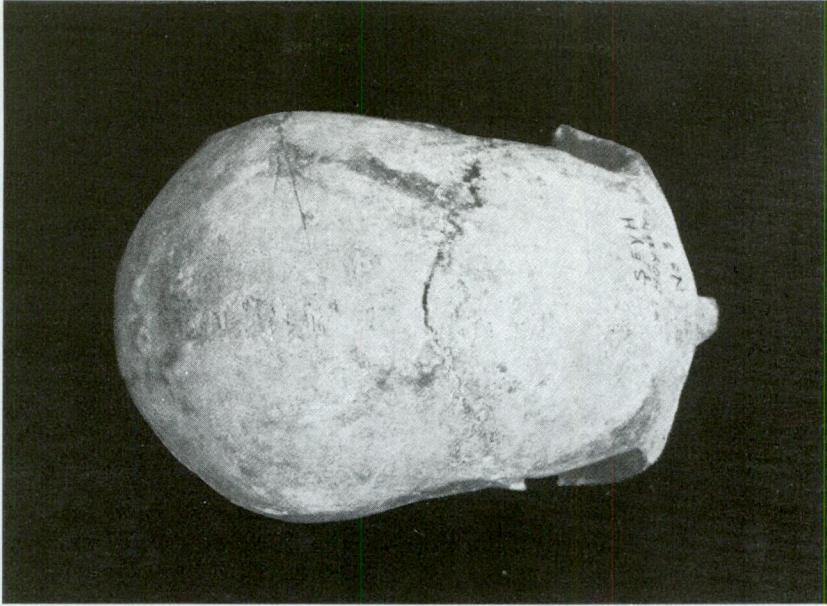
Resim (Fig.) 2 — Şeyh Höyük No. 1



Resim (Fig.) 3 — Şeyh Höyük No. 2



Resim (Fig.) 4 — Şeyh Höyük No. 2



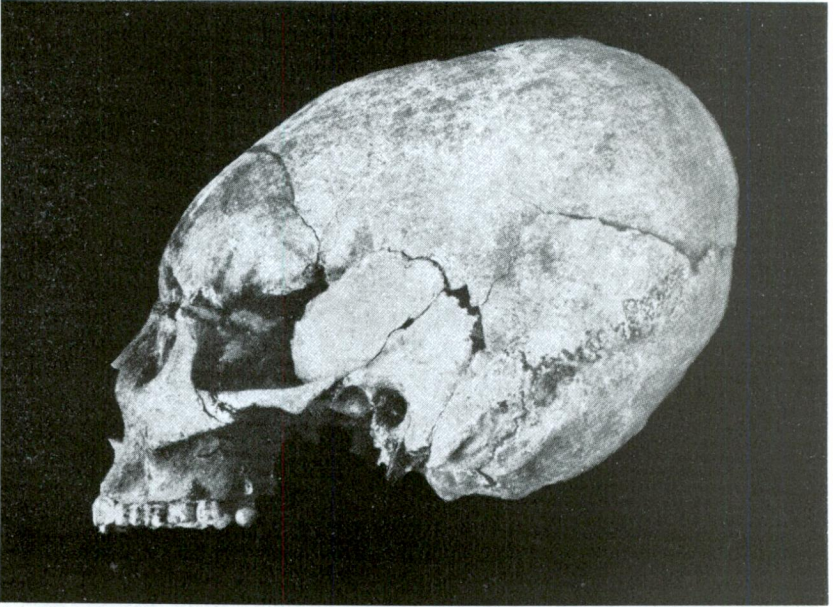
Resim (Fig.) 5 — Şeyh Höyük No. 3



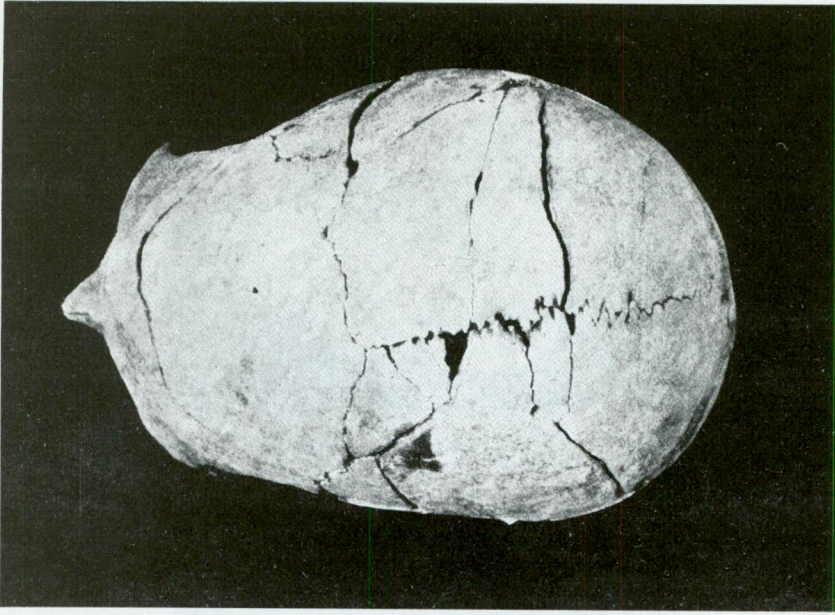
Resim (Fig.) 6 — Şeyh Höyük No. 3



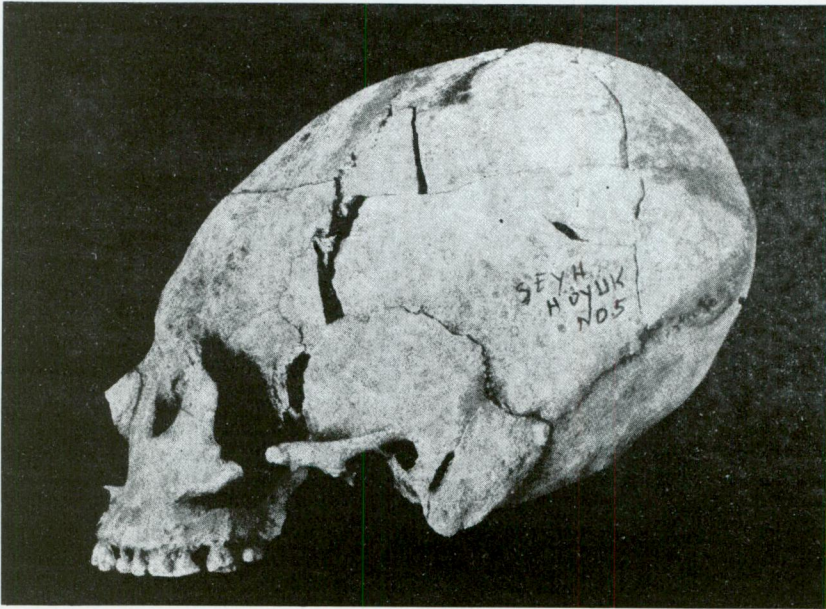
Resim (Fig.) 7 — Şeyh Höyük No. 4



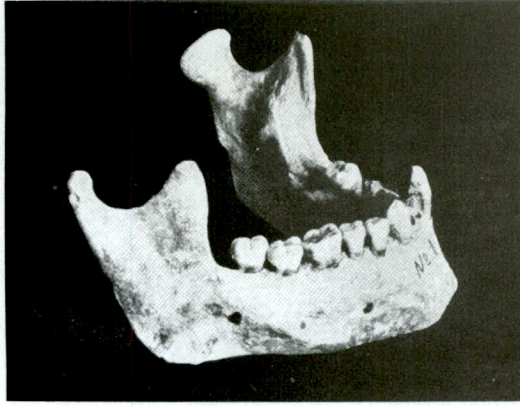
Resim (Fig.) 8 — Şeyh Höyük No. 4



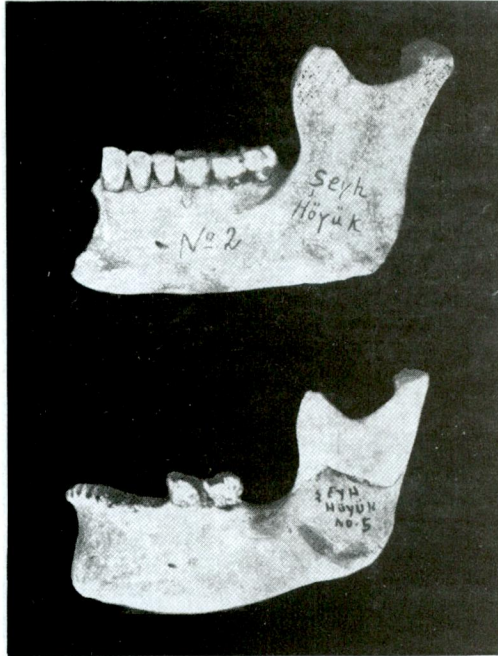
Resim (Fig.) 9 — Şeyh Höyük No. 5



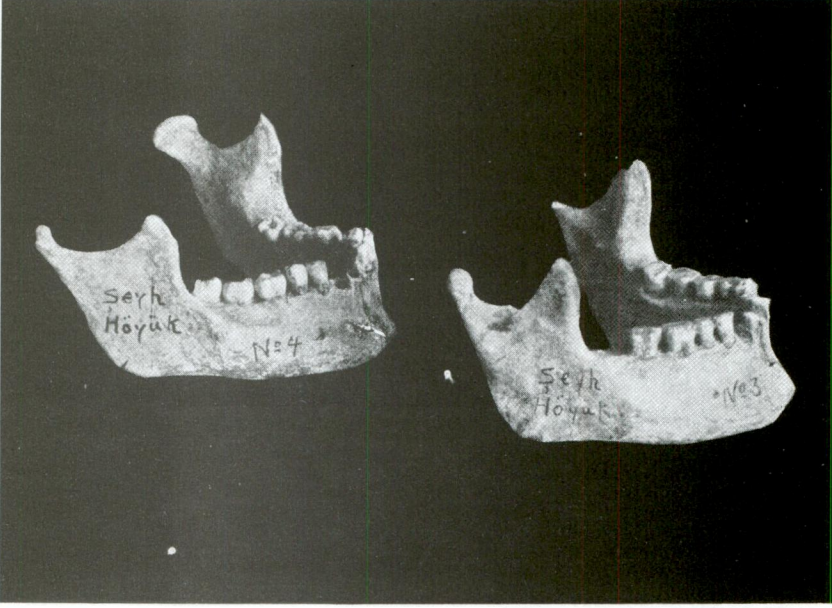
Resim (Fig.) 10 — Şeyh Höyük No. 5



Resim (Fig.) 11 — Şeyh Höyük No. 1



Resim 12 — Şeyh Höyük No. 2 ve No. 5  
Fig. 12 — Şeyh Höyük Nos. 2 and 5



Resim 13 — Şeyh Höyük No. 3 ve No. 4

Fig. 13 — Şeyh Höyük Nos. 3 and 4

