# RESEARCHES IN SOUTH-EAST ANATOLIA THE CHELLEAN AND ACHEULEAN INDUSTRY OF DÜLÜK AND KARTAL

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In the summer season of 1954, in the course of palaeoanthropological and prehistoric researches in South-East Anatolia undertaken under the auspices of the Faculty of Letters, Ankara University, flint handaxes belonging to Middle Pleistocene man were discovered on the terraces and new settlement areas containing middle and upper palaeolithic cultures were established in the natural caves. Material cultural evidence in the stratigraphy of fossil man in South-East Anatolia was discovered for the first time in Hatay near to Samandağ behind the village of Mağracık in natural caves on the coast overlooking the sea and fossil animal remains together with artifacts were sent to the Palaeoanthropology Institute in Ankara.[1] Researches undertaken in the region of Antakya, Samandağ, Harbiye, Altınözü and Amik Lake have shown that this area was inhabited by lower, middle and upper palaeolithic man.[2] Excavation and researches have confirmed that the district is rich in lower palaeolithic, Acheulean and Levalloiso-Mousterian middle palaeolithic cultures, although we have as yet no evidence to show the physical characteristics of fossil man in this area.[3] I believe that the remains of fossil man will be found in the natural caves in the district which have not so far been excavated.

[1] I would here like to thank the Dean of the Faculty of Letters and the Professors Council for providing the necessary funds to finance these researches in the South-East of Anatolia. For findings in the Hatay area see Şenyürek, M. and Bostancı, E. 1958, pp. 147, 148, 149; 157, 158. Şenyürek, M. and Bostancı, E. 1958. pp. 184, 185.

Bostancı, 1962, pp. 250, 267.

[2] For excavations undertaken in the Samandağ caves see Şenyürek, M. and Bostancı, E. 1958. pp. 171-210. Şenyürek, M. and Bostancı, E. 1958. pp. 147-169.

[3] Şenyürek, 1959. pp. 9-44; Şenyürek, 1958. pp. 57-70; Şenyürek, 1961. pp. 149-175; Şenyürek, M. and Bostancı, E. 1961. pp. 307-311.

The second research area was in the region of Gaziantep. Up to 1954 the material obtained in this district consisted only of surface findings, in which lower palaeolithic predominated. The age and stratigraphical position of this culture in Turkey has not, however, yet been established. In order to do so, it would be necessary to obtain fossil evidence. To this end two soundings were made in what seemed promising sites in caves on the Sakcagözü road and at Dülük, but the expected results were not obtained. In researches made on the terraces, however, in the Dülük and Kartal districts, various types of lower palaeolithic tools were found and most of these were collected near Dülük, which is close to Gaziantep. This article is devoted to an examination of these new findings from Dülük and Kartal.

Several investigators have visited the Gaziantep district and have collected various types of palaeolithic tools representing different periods. Most of these tools belonging to the lower palaeolithic were found on the surface, and this would seem to suggest that in the Gaziantep district prehistoric man lived mainly in open stations.

Dr. Muine Atasayan in 1958 records finding Clactonian type tools 12 km. to the north of Gaziantep.[4] Dr. Kemal Erguvanlı in the course of geological researches in 1945 between Narlı and Antep collected hand-axes belonging to the lower palaeolithic period.[5] He describes hand-axes of Chellean and Chellean-Acheulean coup-depoing type. He also mentions some tools belonging to flake culture and points out that hand-axes belonging to the lower palaeolithic show similarities with those found in Africa, Palestine and India.[6]

In the summer season of 1946 I visited in the company of Prof. Dr. Kılıç Kökten the villages of Dülük and Metmenge near Gaziantep.[7] In both these places we collected lower palaeolithic type

[4] Atasayan, 1939. pp. 314-315.

[5] Erguvanlı, 1946. pp. 375-379. Kemal Erguvanlı found hand-axes belonging to the lower Palaeolithic period in the vineyards close to Metmenge village. Basing himself on the Nummulit and Assilina fossils, he attributes the age of the limestone in this area as Middle Eocene. Some other tools were found in the fields beside the Sam-Incesu road 2 km. to the south-east of the village of Incesu, which is 17 km. north-west of Gaziantep. Further tools were collected on the surface in vineyards 2 km. north-east of the village of Sam.

[6] Erguvanlı, 1946. p. 378.

[7] Kökten, 1947. pp. 234, 235.

tools.[8] Kökten records that the large flakes found in considerable quantities in the Dülük area are not typical tools of the Clactonian industry, as Muine Atasayan suggested, but should be considered as part of the lower palaeolithic hand-axe culture. He mentions that characteristic Clactonian type tools were not met with there.[9]

In the Gaziantep district the number of palaeolithic tools belonging to various periods collected on the surface is continuously increasing, and although publications on the subject have also increased, the age of the material has still not been completely solved. Excavations to be undertaken in the caves and rock shelters and in the gravels on the terraces in this district of South-East Anatolia will probably clarify this problem.

Dr. Refakat Çiner reports finding in the course of prehistoric researches made in the Gaziantep district 286 tools belonging to various periods and gives some information about them.[10] She mentions having found in the summer season of 1950 material which she considers belongs to Chellean, Acheulean, Micoquian, Clactonian, Levalloisian, Levalloiso-Mousterian, Aurignacian and Mesolithic periods.[11] She adds that these tools show a similarity from the typological point of view with others found in Anatolia and at the same time may be compared with specimens from North Africa, Syria and Palestine.[12]

[8] A full account of the hand-axes which I found in the Dülük and Metmenge area in the company of Professor Kökten has not yet been published, as the material has been in the possession of Prof. Kökten ever since. However, a hand-axe found by a village teacher has been illustrated by Kökten, who attributes it to the Chellean period. Kökten, 1947. p. 235, 236, Plate 5. Kökten, 1961. p. 51.

[9] Kökten, 1947. p. 235; Kökten, 1961. p. 51.

[10] Çiner, 1958. pp. 125-128.

[11] Çiner, 1958. p. 126, 127. 128. Dr. Refakat Çiner visited the following villages in the province of Gaziantep: Topraklık, Kayaönü, Değirmiçem, Öğüzeli, Beylerbeyi, Dülük, Zıramba, Akçahüyük, Yenice, Haral, Harnı, Karaburun and Tilbaşar and established new sites. It is to be hoped that she will find an opportunity in the future to illustrate some of these findings. She was a student at the time and used this valuable material as the subject of her graduation thesis. Since then the material has been in the laboratory of Ord. Prof. Şevket Aziz Kansu.

[12] Çiner, 1958. p. 128.

## HAND-AXES FOUND ON DÜLÜK AND KARTAL TERRACES

The village of Dülük has become an important one on account of the lower palaeolithic tools found, and visitors there can always discover new specimens. Every year many new tools are coming to the surface in the ploughed fields. A large proportion of the tools found in the area have rolled from the terraces to the fields or have been carried by water.

Kartal is a new lower palaeolithic station to be established in the Gaziantep district. It is about 90 km. from the town. The area is rather hilly and on the terraces and slopes to the valleys there are large quantities of flint. It is possible to collect at the bottom of the valleys and on the slopes examples of flake culture and typical hand-axes which have been brought down from the terraces. The age of these tools can be determined only by their typology. A fossil specimen characterising the quarternary period has not been found. The type of flint is the same at both Dülük and Kartal. Basically palaeolithic tools collected from other nearby districts have been made from this flint. Their colour and structure are in no way different and they are distributed over a wide area. Only one hand-axe mentioned by Erguvanlı was of basalt.[13]

In 1954 I again made researches in the same places which I visited in 1946 and on this second occasion found more typical hand-axes. These included 24 coup-de-poing hand-axes belonging to the lower palaeolithic period. No doubt they have come from the gravels on the terraces which have from time to time been ploughed up to form fields. The earth contains iron oxide and for this reason is of a brick-red colour. The flints found here in large quantities have therefore become coated with this colour. When they are broken the interior can be seen to be yellowish, grey or dull white.

[13] Erguvanlı, 1947. p. 376. He mentions that this hand-axe, which measures 172 X 92 X 58 mm., is made from basalt and attributes it to the Chellean-Acheulean industry, most probably to the Chellean. This tool must be compared from the typological point of view with Acheulean specimens, particularly with regard to the working of the base on both sides by striking off flakes. I am of the opinion that the technique places the hand-axe among lower Acheulean specimens.

The largest handaxe of biface coup-de-poing type is 280 mm. long (Plate I, Fig. 1, 2; Plate XIV, Fig. 1; Plate XV. Fig. 2). This is the biggest of the specimens found up to now. Maximum width is 115 mm. and maximum thickness 55 mm. The index has been calculated as 41.42. The tip is long and thin while the base is broad and thick. The tip is equally suitable for digging up the roots of plants or for holding in the hand as a weapon. This hand-axe is not so wide and thick when compared with the length. It has been sharpened towards the tip by striking off large flakes on both faces but the centre and butt end have been worked very little. A part of the hand-axe has been left in its natural state. The upper face of the axe towards the centre is slightly protuberant and this extends towards the tip as a ridge or keel. The flakes struck from the right side of the upper face are deeper, and the flake scars extend towards the centre and base of the axe. This is also one of the characteristics of Chellean hand-axes.[14] The direction of the small secondary flake scars is at right-angles to the edge of the axe. There is a concavity on the right side near to the tip. The butt end has not been worked and is of a more or less oval shape. Large flakes have been struck off on the right side at the base and centre, but towards the tip the flake scars are smaller. The axe is flatter towards the tip and in the centre there is a slight protuberance, which is on the unworked part. At the base the edges are thick and blunted, but towards the tip they are on the contrary quite sharp. These characteristics indicate that the wearing away at the base has not been caused by water but by being held in the hand at the tip.

The lower surface of the axe is flatter than the upper surface. The flake scars are not so deep but are wide and large. The unworked and more worn away area is greater on the upper surface than on the lower. At the tip the flakes have been struck off in the direction of the butt end. In this way, prehistoric man, by sharpening the tip, created at the same time a useful weapon and a digging tool. On one side the

[14] In Chellean coup-de-poing hand-axes the direction of the flake scars is usually from the tip towards the base or the centre. This technique helps to sharpen the tip of the axe and can clearly been seen in tools belonging to the Chellean period illustrated by Leakey. (Leakey, 1953. pp. 70, 71, Fig. 6, 7). This characteristic is less obvious in the Acheulean specimens described above. Pre-Chellean and Chellean tools are now included in the Abbevillian group. In these tools the flake scars extend from the tip towards the base. (Oakley, 1952. p. 42, Fig. a, b, c.)

edge is convex. On both edges of the axe the zigzags continue up to the tip, but there are more on the inner edge. Pre-Chellean and Chellean prehistoric man mainly made their hand-axes by striking off large flakes from the tip.[15]

This typical hand-axe which was found on the terraces behind the village of Dülük resembles in a general way an elongated pear shape (Plate XIV, Fig, 1; Plate XV, Fig. 2). The shape of this hand-axe is different from and larger than those specimens which have determined the age of the Chellean period in Turkey[16].

The hand-axes illustrated by Erguvanlı and Kökten are oval at the base,[17] whereas the Chellean hand-axe shown in Plate I is roughly pointed. This characteristic can be observed in the Chellean hand-axe found on the Pleistocene terrace in the Gökırmak valley[18]. The same characteristic can be seen in a Chellean hand-axe found by Leuchs at Ludumlu, which has been drawn by Ord. Prof. Dr. S. Aziz Kansu[19]. The edges of the specimens from Ludumlu, Gök-

[15] Oakley, 1952. p. 42, Fig.

[16] Erguvanlı, 1947. p. 376, Fig. I. The hand-axe No. 1 illustrated by Erguvanlı mainly resembles lower Acheulean specimens. The hand-axe found by a village teacher in 1946 in the Dülük area is attributed by Kökten to the Chellean period, although in this axe the Acheulean technique predominates and it is closer to Acheulean specimens found in Europe. I am of the opinion that with these characteristics this hand-axe would be more correctly placed in the lower Acheulean group. For examples of Acheulean coup-de-poing hand-axes see Kelley, 1956. Fig. 13; Oakley, 1952. Plate I, p. 44, Fig. 18 a; Leakey, 1953. p. 75, Fig. 8; Burkitt, 1955. p. 41. Fig. 2.

[17] Erguvanlı, 1947. Plate XLII, No. 1. The hand-axe which has been dated by Erguvanlı as Chellean is worked at the butt end by striking off flakes. The workmanship on the base is very similar to Acheulean specimens, although Erguvanlı mentioned that this axe should be included in the Chellean-Acheulean culture. (Erguvanlı, 1947. p. 376).

[18] Bostancı, 1952. p. 139, Table I, Fig. 1, 1 a, 1 b. When this hand-axe which was found in the Gökırmak valley was examined, it was obvious that although smaller its characteristics showed similarities in some respects to the Chellean hand-axe described in this article. In the Gökırmak valley hand-axe large flake scars extend to the base of the tool. The centre part has been left unworked on one side. The tip has been made in a similar way by striking off long flakes.

[19] Kansu, 1947. p. 227, 228. Plate I, Fig. A. When the Chellean hand-axe found at Ludumlu and illustrated by Ord. Prof. Şevket Aziz Kansu is examined, it can be seen that the outer edge is convex and the inner edge concave, as in this hand-axe which probably belongs to the upper Chellean period. This characteristic

ırmak and Dülük show both concave and convex forms and the bases are worked by striking off large flakes.

Although this hand-axe which I found at Dülük shows several similarities with the other specimens mentioned above, it has some characteristics of its own as regards size and workmanship and is the only example of its kind found in Turkey up to now.

In Plate II, Fig. 1, 2, 3, is shown a hand axe of biface coup-de-poing type. This lower palaeolithic hand-axe is different from the type described above and may be compared with lower Acheulean specimens. In fact it is obvious that in the Dülük district Acheulean culture prevailed over a long period. This typical example, which is almond-shaped, is worked from both surfaces, and it has been shaped by striking off large flakes on the upper one. Secondary flaking has given the edges a more regular appearance. The base is thicker and on the upper surface towards the tip it becomes flatter. The upper surface is not worn away very much and a light brown coloured patina can be observed. Part of the butt end has not been worked at all. Maximum length is 160 mm., maximum width is 116 mm. and maximum depth at the base is 55 mm. and at the tip 15 mm. The hand-axe is thick and short compared with its length. The length-width index is 72.51 and the width-depth index is 54.44.

When the lower surface is examined, it can be seen that on the left side large flakes have been struck off, while on the right side the flake scars are shorter and smaller. The lower surface is more worn away than the upper, and part of it remains unworked. The tip has been worn away and blunted as a result of use. When the hand-axe is examined in profile it can be observed that the zig-zags are more pronounced on the right side as compared with the left, while the latter is much straighter. The left side is more blunted than the right. This coup-de-poing hand-axe which I have described shows that the Dülük Acheulean culture has its own individual characteristics, and after a careful examination one can see that it differs from other Acheulean specimens. Although the Dülük hand-axe industry resembles

can also be observed in the hand-axe found in the Gökırmak valley, but the convexity on the outer edge of this hand-axe is, as in the Ludumlu and Dülük Chellean specimens, greater. See Bostancı, 1952. Table I, Fig. 1 and 1 a; Kansu, 1947, p. 228, Fig. 1, Plate A and Table I.

specimens from Europe, Africa, Syria and Palestine from the point of view of shape and technique, it is obvious that the axes show some differences in their method of use.

The hand-axe illustrated in Plate III, Fig. 1, 2, 3, Plate XXI, Fig. 11, is of biface coup-de-poing type. It is of pear shape and its maximum length is 124 mm., maximum width is 84 mm. and maximum thickness near to the base is 55 mm. Thickness at the very bottom is 45 mm. and at the tip 15 mm. As can be understood from these measurements, the hand-axe becomes much thinner at the tip (Plate III, Fig. 3).

The upper surface of the axe has been worked by striking off flakes from both sides and in the centre a ridge (keel) has been formed. The line of the ridge extends towards the base as far as the unworked protuberant part. A ridge extends also in the centre of the lower surface but this is flatter. The most typical characteristic of this axe is a cone-shaped protuberance in the centre near to the base on the upper surface (Plate III, Fig. 3). On the right side small zig-zags extend from the base to the tip, while the left side is straighter. At the butt end a flat unworked platform has been left. This axe has some differences from the other examples found, although it is considered that it belongs to the Acheulean period. Generally the hand-axe is close to a triangular shape, which as is known is a characteristic of the Upper Acheulean period.[20]

A triangular type hand-axe was found on the same terraces. If we now describe this tool, it will help us to have a more definite idea about the period of this type of hand-axe.

It is illustrated in Plate IV, Fig. 1, 2, 3, from above, from the side and from below. It is a small hand-axe of coup-de-poing type belonging to the upper Acheulean period of Micoquian tradition. This type of axe is mainly found in the upper Acheulean period. Together with this axe were collected disc-type and coup-de-poing specimens all from the same terrace, as will be explained below.

[20] There is a close similarity between the shape of the hand-axes of the Acheulean period at Dülük and those Acheulean hand-axes of Mousterian tradition called by Müller-Beck "triangulaires". In addition to the triangular types met with, there are transitional types approaching triangular shape. For the hand-axe illustrated by Müller-Beck see 1958, p. 164, 165, Plate 12, Fig. 4.

This hand axe is 109 mm. in length, 75 mm. in width and 35 mm. thick. The tip is pointed, and the base has been sharpened by striking off flakes from both surfaces. The upper surface is convex in the centre. The line of the ridge continues to the top of this convexity and extends as far as the base in zig-zag form (Plate IV, Fig. 1). The edges are worked by striking off small flakes. The lower section is partly flat (Plate IV, Fig. 3) and a concavity can be seen in the centre. The right edge is slightly zig-zagged but the left edge is straight. This triangular type of hand-axe is very similar to European specimens.[21] (Plate XVII, Fig. 5, 6).

Ord. Prof. Dr. Şenyürek found in the course of researches made in the Antakya district a triangular shaped coup-de-poing hand-axe.[22] This tool resembles the type found at Dülük, but in the latter the tip of the axe is flatter and more pointed. The shape of the hand-axes found at Dülük indicates that in this district there is a development from lower to middle palaeolithic and this provides evidence of a continuation of those cultures.

Two examples of this kind are illustrated in Plate V, Fig. 1, 2, 3, Plate VI, Fig. 1, 2. One is of cordiform type and and the other of discoid biface coup-de-poing type.[23] In Plate V, Fig. 1, 2, 3, is shown the cordiform hand-axe and in Plate VI, Fig. 1, 2 the most typical spe-

[21] For triangular shape hand-axes see Osborn, 1923. p. 178. Fig. 88, No. 70. The hand-axe illustrated by Prof. Osborn is of triangular shape and of coup-de-poing type and belongs to the upper Acheulean period. It is possible to compare this triangular shaped hand-axe with the coup-de-poing hand-axe found at Dülük. The axe illustrated by Prof. Osborn is straight at the butt end, whereas the specimen at Dülük is slightly slanting, but the triangular shape is more irregular. It may also be compared with the triangular Acheulean hand-axe illustrated by Müller-Beck. He calls this type "triangulaires". (Müller-Beck, 1958. p. 264, 265. Fig. 4.)

[22] The hand-axe examined by Şenyürek among the Acheulean specimens is smaller. Maximum length is 94.5 mm., maximum width 67.5 mm., and maximum thickness 37 mm. As in the Dülük type, the butt end is worked and in the same way the upper face is more protuberant than the lower. (Şenyürek, 1961. p. 151, 165, Plate II).

[23] For cordiform and discoid types see Müller-Beck, 1958. p. 166, 167. Plate 13, Fig. 7; p. 168, Plate 14, Fig. 10. The cordiform hand-axe found at Dülük resembles an ovate or ovaloid type. Discoid specimens are very typical and specimens found in Europe belong to the upper Acheulean period. Osborn, 1923. p. 178, Plate 88, Fig. 71, 72.

cimen of disc-shaped Acheulean axes. The axe shown in Plate V, Fig. 1 has a maximum length of 115 mm., maximum width of 75 mm. and maximum thickness of 28.5 mm. The convexity of both upper and lower surfaces is slight, that is, it may be classified among the flat types. (Plate V. Fig. 1, 2, 3, Plate XVI Fig. 3, 4.) The flake scars on the upper surface are not deep. The edges are worked by small secondary flaking. Care was taken when striking off thin flakes to apply the "wood technique" or "Cylinder-hammer technique". The base, as in the other edges, has been worked by striking off very thin and small flakes, and it is as sharp as the tip but oval. The greatest convexity is close to the base on both surfaces.

On the lower surface the flake scars are larger and deeper than on the upper surface but this does not influence the shape of the axe. Secondary small flakes have been struck off from the edges. On both surfaces there is no ridge where the flake scars join and a continuous central line (keel) is not formed. On the right side of the axe larger flakes have been struck off. The lower surface is more convex than the upper.

When the hand-axe is examined in profile it can be seen that the zig-zags are not very pronounced and both edges are more or less straight. On one side the profile shows a very slight "S" shape. This hand-axe which is a typical specimen of the Acheulean period may be compared with axes belonging to the upper Acheulean coming from the Ed level of the Et-Tabun cave in Palestine. Both from the point of view of shape and technique they are very similar to each other.[24] The Dülük Acheulean hand-axe is thinner and better made than the Acheulean specimens from the Hatay area.[25] Ordinarius Prof. Dr.

[24] Garrod, 1937. p. 88, Plate XLVI. A large proportion of the 1233 hand-axes found by Professor Garrod in the F level of the Et-Tabun cave are pear-shaped and some are of ovoid type. There is a close similarity between the hand-axes whose butt end is of ovoid shape and those from Dülük. Garrod mentions that these hand-axes belong to the upper Acheulean period and points out that they are very similar to Acheulean specimens from Western Europe. Garrod, 1937. p. 78, 88. The tools shown in Plate XLXI, No. 1 and 4 described above are very similar to the Dülük Acheulean hand-axe. For schematic illustrations of hand-axes from the Et-Tabun cave see Müller-Beck, 1954. p. 189, Plate 7; p. 190, Plate 8.

[25] For Hatay Acheulean specimens see Şenyürek and Bostancı, 1958. pp. 204-207. Plate XII, XIII, XIV. Şenyürek, 1961. p. 177, Plate II; p. 178, Plate

Şenyürek after comparing the Hatay upper Acheulean industry with other Near East cultures supports the opinions of Dr. Leakey and Dr. Howell in attributing the age of the Altınözü and Avratlar valley cultures to the Riss-Würm interglacial (last pluvial) period. [26]

Stekelis, in the course of excavations undertaken in the Jisr Banat Yaqub locality in the Jordan valley south of the Hula Lake, found Acheulean hand-axes together with Pleistocene fauna. [27] He records that the hand-axes belong to the lower Acheulean and are made by the "block-on-block" technique. [28]

Researches undertaken in the Near East have been successful in providing positive evidence to determine the age of lower palaeolithic cultures. In this respect the material discovered in our country and particularly on the terraces in south-east Anatolia will by comparison enable us typologically to determine their age. In my opinion the hand-axes found on the Dülük terraces are from this point of view valuable evidence.

The Dülük upper Acheulean industry has been manufactured by prehistoric man in the Riss-Würm interglacial period. I am firmly of the opinion that one day we shall come across specimens of this industry in the stratigraphy, as have been found on the terraces in southern Anatolia.

In the same locality, a fine disc-type Acheulean coup-de-poing hand-axe, a rarely found specimen, was discovered. This hand-axe is illustrated in Plate VI, Fig. 1, 2, Plate XVIII, Fig, 7, 8.) The maxi-

III; p. 179, Plate IV; p. 180, Plate V; p. 181, Plate VI; p. 182, Plate VII; p. 183, Plate VIII; p. 185, Plate X; p. 196, Plate XXI, Fig. I.

[26] Şenyürek, 1961. pp. 159, 174. Leakey and Howell attribute the Palestine Acheulean industries to the Riss-Würm inter-glacial period. Leakey, 1953. pp. 81-92. Howell, 1959. p. 16, Plate 10. Although Zeuner places the upper Acheulean industry of Europe in the Riss-Würm inter-glacial period, he attributes the Palestine upper Acheulean industry to the end of the last part of the Riss ice age, and this is a different view from that held by the other two scientists. Zeuner, 1959. pp. 286, 287, Fig. 80.

[27] Stekelis, 1960,. pp. 61, 90.

[28] Stekelis, 1960. pp. 64, 66, 68. Stekelis found Acheulean hand-axes together with Pleistocene fossils, e. g. Elephas sp., Rhinocerus sp., Melanopsis, Vivipara, Elephas trogontherii Pohlig, etc. The hand-axes found with these fossils showed a close similarity from the typological point of view to those from Dülük. There is also no great difference with regard to size.

mum length of this axe, which is covered with a light red patina, is 88 mm., the maximum width is 82.5 mm. As can be understood from the small difference between these two measurements, it is almost disc-shaped. The axe, which is 42 mm. thick, closely resembles European upper Acheulean specimens. The length-width index is 92.69.

When this axe is examined from above it can be seen that flake scars extend towards the centre, which is comparatively close to the ovoid-shaped base. The edges of this disc-biface axe have been shaped by striking off small secondary flakes, and the scars are small and shallow. This technique can be seen in tools belonging to the Acheulean period coming from the F level of the Et-Tabun cave [29]. There is a close similarity between the disc biface hand-axe found at Dülük and a disc-shaped biface tool dated by Professor Garrod as upper Acheulean. Specimens of disc-type biface axes of the upper Acheulean period have been described and illustrated by Professor Osborn and the Dülük and European specimens are the same as regards technique and form [30].

As can be understood from the profile in Plate VI, Fig. 2, the zig-zags are not so sharp and the edge on one side is comparatively flat while on the other is slightly "S" shaped. When the axe is examined from below it can be observed that it has been used as a core, that is, a large middle palaeolithic type flake has been struck off on the lower surface beside the other flakes. The axe after having been made in the upper Acheulean period was left and then used again to obtain a flake by people using possibly the Levalloiso-Mousterian technique. The difference in the patina of the flake scars on the axe axe shows that the triangular flake scar is much younger. A specimen of a hand axe snowing later use as a core has been found in a field in the Altınözü district of Hatay [31]. There is no difference in tne patina of the flake scars on this hand axe and for this reason it can be assumed that the axe has been used as a core in the same period [32]. Another specimen of a hand-axe which has been used as a core has been found

[29] Garrod, 1937. Plate XLVI, Fig. 5.

[30] Osborn, 1923. p. 173. Fig. 85, No. 44, 45. p. 178, Fig. 88, No. 71 and 72.

[31] Şenyürek, M. and Bostancı, E. 1961. pp. 308, 309, 311.

[32] Şenyürek, M. and Bostancı, E. 1961. pp. 308, 309.

by Zeuner at Wadi Shu'eib in Jordan [33] and a further example of a biface Acheulean hand-axe being used as a nucleus was found in France at Cagny-la-Garenne [34].

The Dülük specimen is different from the others in that it is a biface disc type axe. The bulb of percussion of the flake is on the longer side of the axe which has been sharpened from both directions and the tool has possibly been used later on as a chopper. The edges on both sides of the bulb of percussion are thinner. For this reason the disc-shaped biface has an oval base and a more blunted tip as can be seen in the upper Acheulean specimens in profile. The base is thicker and more blunted than the tip (Plate VI, Fig. 2).

Another hand-axe showing Acheulean technique and form is illustrated in Plate VII, Fig. 1 and 2. The patina of this biface coup-de-poing hand-axe which is made from flint is light brown in colour and lighter on the upper face. The axe has not been broken anywhere at a later date and has not been much worn away on either face. This hand-axe resembles the type named cordiform mentioned by Burkitt and Müller-Beck [35]. We know that man in Acheulean times manufactured hand-axes mainly of this type. The maximum length of this hand-axe is 134 mm. and maximum width is 97 mm. The thickest part which is 46 mm. is close to the base. According to the relevant measurements, the length-width index is 72.46.

The hand-axe has been manufactured from a single large flake. It can be seen that a part of the bulb of percussion and the striking platform remain on the left side. Close to the base a small area has been left unworked. In addition to the large flakes struck off the sides towards the tip, small secondary flaking gives a more elongated shape to the axe and makes the edges sharper. In the centre a ridge can be observed. Whereas on the lower surface deeper flake scars appear, on the upper face thin and smaller flakes have been struck off in order to obtain a flat surface. On the upper surface close to the butt end there is an unworked protuberance, but this does not affect the shape

[33] Zeuner, 1957. p. 23.

[34] Breuil, H. and Kelley, H. 1956. No. 3-4, Plate 5, I.

[35] Müller-Beck, 1958. pp. 166, 167, Plate 13, Fig. 7. Burkitt, 1955. pp. 118. Burkitt names heart-shaped Acheulean coup-de-poing hand-axes "cordiform". They show a marked similarity in shape to Mousterian points.

of the axe. This unworked portion extends towards the right edge. The butt end is refined from both sides and retains its oval shape. The lower surface is more convex than the upper. If the axe is examined in profile, it can be seen that the zig-zags are less pronounced on the right side, which shows a slight "S" shape. On the other side the zig-zags are deeper and more curved.

The hand-axe illustrated in Plate VII, Fig. 3 and 4 from above and in profile is of coup-de-poing type. It is manufactured from a large flake. The striking platform of the main large flake, which has shaped the hand-axe, is at the butt end on the left side and forms an obtuse angle with the surface. The patina is of a light-brown colour, while on the unworked places it is covered with a red earthy colour. Because the tip has been broken the axe has a partly oval or disc-shaped form. The base has been worked by striking off flakes from both surfaces and shows an oval shape. This biface hand-axe is 114 mm. long, 91 mm. wide and 42 mm. thick. The outer edge is convex, while the inner edge is concave as part of it is broken near to the tip. The axe is not very protuberant on either surface. On the upper the greatest convexity is near to the butt end, while on the lower it is nearer to the tip. This characteristic on the lower surface is caused by the retention of a portion of the flake scar unworked near to the butt end. Because the edges have been completely worn away, a flat and thick surface has been left and it is not possible to identify the form of the profile (Plate VII, Fig. 4). From this description it can be seen that this axe is of Acheulean technique. When it was first made it was probably almond-shaped, but with use together with the wearing away and breaking, it has become disc-shaped. It is clear from my findings that most of the large flakes discovered at Dülük show Acheulean technique and characteristics. Clactonian and Acheulean flakes show obvious differences in the striking platform [36]. From these it is possible to classify the flakes found and to identify their period.

[36] Kelley, in an article entitled "Acheulean flake tools" mentions the use by Acheulean man of the Clactonian technique. (Kelley, 1937. p. 16) For this reason the striking platform and bulb of percussion in Acheulean and Clactonian flakes are very similar to each other, although the bulb of percussion in Acheulean flakes is generally smaller than in Clactonian flakes, as well as being less obvious and thinner. On the other hand the angle of the striking platform varies very much in Acheulean flakes and is usually more acute than in Clactonian flakes. (Kelley,

In Plate VIII, Fig. 1 and 2 and Platé XX, Fig. 10 is illustrated a typical Acheulean coup-de-poing hand-axe from above and in profile. This axe which is of a different and finer workmanship than the others examined, is of a sub-triangular shape, only the butt end is not oval as in typical Acheulean specimens, but is slightly pointed. The butt end is not regularly worked because part of it has been left in its natural state (Plate VIII, Fig. 1 and 2). The other sides being worked regularly from both surfaces as in Micoquian specimens are of a pointed triangular type. This biface hand-axe resembles specimens found in England at Elveden of Upper Brecklandian Acheul, which in the same way has the base slightly pointed and some places left unworked [37]. In addition there are strong similarities from the point of view of shape and technique in the types found at Dülük to Acheulean tools found in England at Hoxne. [38] In particular this axe may be compared with upper Acheulean specimens on account of the straight line on both sides towards the tip. When it is examined from above it can be seen that towards the base large flakes have been struck off, while at the tip the flake scars are smaller. On the upper surface in particular secondary flaking can be seen on the left side and the "step flaking" method has been used. This characteristic cannot be observed on the lower surface. As has been explained above the edges do not show a zig-zag shape but have been made thin by sharpening. The flake scars are larger and deeper on the lower surface and the tip has been refined and sharpened from both faces. The length of this coup-de-poing type hand-axe is 153 mm., the width is 98 mm. and thickness 46 mm. The thickest part is near to the butt end. The lower surface is of a golden yellow colour and the upper surface is a darker shade of the same colour.

1937. p. 16). It is known that in the Clactonian industries striking platforms having no facets make a 120° angle with the flake surface. (Burkitt, 1955. p. 117).

[37] Paterson, T. T. and Fagg, B. E. B. 1940. p. 11, Fig. 7, c, d.

[38] West, R. G. and McBurney, C. M. B. 1954. p. 144, Fig. 6. No. 32, 34. The similarities between the hand-axes found at Dülük and at Hoxne (England) are solely from the typological point of view and this does not prove that the two cultures are of the same age. There can be differences of age but it is surprising to find close similarities in the hand-axes of Acheulean technique found in Europe, Africa and the Middle East as well as in other centres. In order to determine the differences in age, it is necessary in particular to find the fauna.

The hand-axe illustrated in Plate VIII, Fig. 3 and 4 is a typical biface hand-axe, although smaller than the others. It can be compared with the coup-de-poing Acheulean specimens drawn from above. It is 107 mm. long, 70 mm. wide and 38 mm. thick and is of pyriform shape. All edges including the base are trimmed from both faces.[39] The flake scars on the lower surface are larger and deeper than those on the upper. There is a very small amount of secondary flaking. On both edges there are zig-zags and one edge is slightly "S" shaped. On the upper surface and at the butt end a small portion has been left in its natural state. One edge is more convex than the other and the upper face is more protuberant, with the highest point more or less in the centre, while on the lower face the highest point is closer to the tip. The tip and butt end of the axe are thin and sharp-edged. This hand-axe resembles very much an Acheulean axe found at Farthingworth Green, in England.[40] It is probable that it belongs to the Upper Acheulean. There are similarities between the Dülük hand-axes and the Upper Acheulean industry of Altınözü and Avratlar Deresi (Hatay).[41] For this reason it is natural to look for a connection between the Hatay and Gaziantep Acheulean industries, but the cultures in the Dülük area are older than those of Hatay. It is possible to establish in this district the oldest periods of the stone age. This very typical hand-axe culture is the finest evidence to confirm this opinion.

The hand-axe illustrated in Plate IX, Fig. 1 and 2, is made from a thick flake. Fig. 1 shows the axe from above, Fig. 2 from below and Fig. 3 from the side (Plate IX, Fig. 1, 2, 3). In the first two figures the parts marked by dots and by broken lines show the unworked areas.

[39] There is a close similarity between the upper Acheulean hand-axe of pyriform shape found by Professor Dr. Şenyürek at Altındere (Hatay) and the specimen from Dülük. The length of the one found by Prof. Şenyürek is 105.5 mm., width is 67 mm. and maximum thickness 48 mm. (Şenyürek, 1961, pp. 122, 166. Plate V, p. 180).

[40] Treacher, M. S., Arkell, W. J. and Oakley, K. P. 1948. p. 144, Fig. 13.

[41] Şenyürek, M. and Bostancı, E. 1958. pp. 204, 205, Plate XII, XIII. Although the difference in patina of the hand-axes found in the Avratlar valley and Altınözü is not very great, differences can be observed between them and the axes found at Dülük. In the latter the struck-off flakes are larger, that is, the "block-on-block" technique is usually employed.

The butt end has not been worked at all. If the hand-axe which has been shaped by striking off large flakes is examined from above, it can be seen that the base part is broad and regular becoming more pointed towards the tip. There is very little secondary flaking, mostly on the lower surface. The flake scars are extensive but not deep. Towards the butt end a triangular section has been left in its natural state.

If the axe is examined from below, it can be observed that a large portion of it at the butt end, which is the main flake scar, has been left unworked, while the other half of this surface has been shaped by striking off large and small flakes (Plate IX, Fig: 2). One flake scar is rather deep while the others are shallower. On the edges a few very small secondary flakes have been struck off. The lower surface of this hand-axe, which is of a different shape from the other specimens, has an older patina than the upper surface. Generally the colour is light golden brown on the upper surface while the lower is of a darker shade. The maximum length is 124 mm., width 98 mm. and thickness 49 mm. If the axe is examined in profile it can be seen that on one side the zig-zags are slight while the other forms a "Z" shape (Plate IX, Fig. 3). The latter side is blunted towards the butt end while the other edges are sharp. From the profile it can be seen that the hand-axe shows a triangular form (Plate IX, Fig. 3). This hand-axe belongs to the Acheulean period and similar types have not been found before in Turkey.

A small biface hand-axe belonging to the upper Acheulean (Micoquian) period was found in the Kartal district about 90 km. from Gaziantep (Plate X, Fig 1, 2, 3). Very small flakes have been chipped off from both faces. On the upper surface a ridge or keel extends as far as the base while the lower surface is comparatively flatter. On both faces the most protuberant part is on the edge at the butt end, which is not worked at all and has been left in its natural state. When the axe is examined from the profile, the edges show zig-zags as can be seen in Acheulean hand-axes, but these are slightly blunted. The maximum length of this small hand-axe is 69 mm., maximum width is 59 mm. and maximum thickness is 48 mm. From the profile it has a triangular shape, as was observed in the Acheulean specimen described above, but when it is examined from above and

below it appears to have a rather more pear-shape. (Plate X, Fig. 1, 2, 3). An example resembling this small hand-axe emerged from the Eb level of the Et-Tabun cave in Palestine, which Professor Garrod has attributed to the upper Acheulean (Micoquian) period.[42] It is possible at the same time to compare this small hand-axe with upper Acheulean specimens found by Professor Şenyürek in the Hatay district, especially Altındere (Hatay) and in Plate XIV and XVI are illustrated specimens showing similar forms to the biface hand-axe found at Kartal.[43] There is a close relationship between the Kartal hand-axe and the upper Acheulean cultures of Hatay.

The hand-axe illustrated in Plate XI, Fig. 1 and 2 is of Acheulean technique and manufactured from a core. As will be seen from the drawings from above and from the side, this hand-axe is of coup-de-poing type. It is broad at the base and more pointed towards the tip, and although it is somewhat ovoid in shape it rather resembles a pear-shape. The patina, which is of light brown colour, is of the same age on both surfaces, and there are some portions of a red earthy colour. Generally it has been shaped by striking off large flakes from both sides. The butt end has been given an oval shape by secondary flaking on the upper surface, on the right side of which a very large flake has been struck off. The bulb of percussion is very obvious and the surface of the scar is deeper than the others (Plate XI, Fig. 1). The maximum length is 125 mm., maximum width 93 mm. and maximum thickness 51 mm. The convexity is greater on the upper surface where the highest point is near to the centre, while on the lower surface it is nearer to the base. On the upper surface a portion has been left in its natural state. When the axe is examined from the profile it can be seen that the zig-zags on the left side are closer, while generally the edge is slightly "S" shaped. The edges are not very

[42] Garrod, 1937. Plate XLII, Fig. 13, 15. Professor Garrod discovered more than a thousand hand-axes in the Et-Tabun cave but only very few have been illustrated. The similarity of technique is noticeable. No. 13 and 15 upper Acheulean (Micoquian) biface hand-axes have the butt end left unworked in the same way as the Kartal specimen. They have a triangular shape.

[43] Şenyürek, 1961. Plate XIV, XVI. The small biface hand-axes found by Professor Şenyürek have the butt end worked from both sides, which is not the case in the Kartal specimen.

much worn away and are rather sharp. Generally the left edge of the axe is convex while the right side towards the point is concave.

From the characteristics I have mentioned, this hand-axe may be compared with Acheulean specimens from Europe and Palestine.[44] There are among the biface specimens of Acheulean hand-axes found at Hoxne in England similar examples with broad base and short tip.[45] It is impossible to deny that from the morphological and typological point of view the Dülük Acheulean hand-axes show close similarities to those from Europe and the Middle East.

The biface hand-axe illustrated in Plate XI, Fig. 3 and 4 is drawn from above and in profile. This hand-axe, which is made from a core, belongs to the Acheulean period and is of coup-de-poing type. As can be seen from the illustration, it resembles very closely the type named by Müller-Beck "cordiforme allonges".[46] The maximum length is 127 mm., maximum width 82 mm. and maximum thickness 64 mm. Some parts of the axe are covered with a red earthy patina while others are of a rather more golden yellow colour. On both surfaces a ridge or keel has been formed in the centre. It can be observed that on the upper surface the left side and on the lower surface the right have been more worn away. This has not affected the shape of the hand-axe, but on the right side the zig-zags have been completely blunted. The edges extend in a straight line from the base as far as the tip. On the upper surface the flake scars are larger, and there is no secondary flaking, while on the lower surface there is secondary flaking. The axe is more convex on the lower surface and the greatest protuberance is near to the butt end on both faces. When it is examined from above, it can be seen that the base is oval and the left edge is convex, while the right edge is slightly concave. If we compare the hand-axes found at Dülük illustrated in Plate XI, Fig. 3 and 4, with specimens of upper Acheulean hand-axes found by Professor Dr. Şenyürek at Altındere, Hatay, illustrated in Plate VIII, it can

[44] For Acheulean hand-axes see Arkell, W. J. 1945. p. 22, Fig. 2. Garrod, 1937. Plate XLXI, Fig. 3; Paterson, T. T. and Fagg, B. E. B. 1940. p. 10. Fig. 6 c, d, b; West, R. G. and McBurney, C. M. B. 1954. p. 142. Fig. 5. No. 18, 21, 23. Müller-Beck, 1954. p. 189. Fig. 7, No. A 9, A 10, A 11.

[45] West, R. G. and McBurney, C. M. B. 1954. p. 138, Fig. 3. No. 1, 2, 3. p. 140, Fig. 4, No. 7; p. 142, Fig. 5, No. 18, 21, 23.

[46] Müller-Beck, H. 1958. p. 166, 167. Fig. 13, No. 8.

be seen that there are similarities between the two from the point of view of shape.[47] The Altındere specimens are, however, smaller.

A hand-axe made from a large flake and probably belonging to the Chellean period is illustrated in Plate XII, Fig. 1 and 2. This hand-axe is roughly made but as it exhibits Acheulean characteristics and was found together with other typical Acheulean specimens, it has been included with the Dülük examples of this period. The axe has been used both as a side-scraper and as a digging tool and for this reason the point is blunted and the edges have lost their sharpness. At the base of the axe at one side a portion has been left unworked while on the other side is found the striking splatform of the main flake. On the upper surface on one side long flakes have been struck off and close to the left edge a ridge or keel has been formed. This characteristic shows that it could have been conveniently held in the hand as a side-scraper. The tip of the axe is flat and broad and probably it was also used as a cleaver. In its present state the tip is blunted and this also is a sign of use. If the axe is examined from below, it can be seen that as in the other specimens there is a ridge in the centre. From the base and from both edges large flakes have been struck off, but there is very little secondary flaking. Generally the axe is almond-shaped and the patina is golden yellow. The maximum length of the axe is 143 mm., maximum width 96 mm. and maximum thickness 56 mm. It is similar in size to the hand-axes described up to now but on one side the morphological structure is completely different. As it is an original specimen, I consider it useful to show it beside the others. If it is examined in profile (Plate XII, Fig. 2), it can be seen that as in the Acheulean specimens one side has an "S" shape, while the other is partly straight. On the right side there are slight zig-zags. The convexity is less on the upper surface than on the lower where the greatest protuberance is in the centre, whereas on the upper surface it is close to the right side.

Among the Acheulean hand-axes to be examined another small coup-de-poing tool is illustrated in Plate XII, Fig. 3 and 4, from above and in profile. This small hand-axe is of the type called "cordiformes allonges". Maximum length is 113 mm., maximum width is 72 mm. and maximum thickness 53 mm. On the upper surface the patina is

[47] Şenyürek, M. 1958. pp. 61, 68. Plate VIII.

light brown colur, and on the lower surface it approaches a camel-hair colour. If it is examined from above, it can be observed that the striking off of the flakes form a ridge or keel in the centre. There is very little secondary flaking. It can be seen that the edges and the ridge in the centre are worn away, especially at the base where it is partly broken. The convexity is much greater on the upper surface than on the lower. If we examine the axe from below, it can be seen that the flake scars are not so deep and as a result a flat surface is formed. The butt end is thick and flat. In profile it resembles a pear-shape, and while the edges are slightly zig-zagged, generally they are more or less straight. The tip is flat and thin. This hand-axe was found on the terraces behind the village of Dülük, as were the others.

If we examine the illustrations No. 1 and 2 in Plate XIII, Fig. 1 and 2, it can be seen that this hand-axe of ovaloid form is of coup-de-poing type and is made from a core. Maximum length is 142 mm., maximum width 107 mm. and maximum thickness 59 mm. When looked at from above it can be observed that the flake scars extend towards the centre and that they are rather large. The right edge is more convex and the left side near to the tip is concave caused by the striking off of a large flake. All the edges of the axe have been sharpened from both sides by the flakes struck off. The base is oval, while the tip is thin and at the same time broad. On the upper surface the highest protuberance is in the centre, while on the lower it is near to the base and the convexity is greater on this surface. It can be noted that on both faces the flake scars are not very deep. When the axe is examined in profile it can be seen that one edge is partly straight while the other is "S" shaped. The same blunting effect has occurred on the edges as on some parts of the upper and lower surfaces. This hand-axe is of Acheulean technique and is therefore included among the Dülük Acheulean tools.

In Plate XIII, Fig. 3 and 4 is illustrated a small almond-shaped biface hand-axe. It was probably made in the upper Acheulean period. The measurements of this coup-de-poing hand-axe are maximum length 110 mm., maximum width 76.5 mm. and maximum thickness 53 mm. The patina on one side is earthy red and on the other it approaches a camel-hair colour. On the upper surface large and long flake scars extend towards the centre, forming the greatest

protuberance. On the lower surface there is secondary flaking in addition to the large flakes struck off. At the butt end a portion has been left unworked. The tip is sharp and the base is more or less oval. The flake scars on both surfaces are not very deep. On one edge the zig-zags are not very pronounced and on the other form a slight "S" shape. This hand-axe was found together with the others on the terraces behind the village of Dülük.

## SUMMARY AND CONCLUSION

The one Chellean hand-axe together with 17 Acheulean hand-axes examined in this article were found in the course of researches in South-East Anatolia undertaken in the summer season of 1954 under the auspices of the Faculty of Letters, University of Ankara. The tools which I collected in particular from the Dülük and Kartal terraces in the province of Gaziantep consisted of typical specimens belonging to the Chellean and Acheulean period. It is clear that a large proportion of these hand-axes are made from flint cores and that some are made from large flakes. The interior of the flint from which the axes are made is of yellowish, grey and buff colour and the patina on the hand-axes is generally of an earthy red, brown or light brown, golden yellow and camel-hair colour. As well as almond and pear-shaped hand-axes, there are ovoid, triangular and disc-shaped tools. All these hand-axes are of the type called "coup-de-poing" by the French. As they can be compared with Chellean and Acheulean specimens found in France and England, so there can be seen close similarities to those from Syria and Palestine. At Dülük a flake culture is present which has developed together with the lower Palaeolithic hand-axes mentioned above. These cultures have probably evolved in open areas in the Riss-Würm inter-glacial period. In Turkey up to now no lower Palaeolithic industry has been discovered showing the stratigraphical position. On account of this I considered it useful to compare the Dülük hand-axes with the lower Palaeolithic tools found in the stratigraphy in Palestine. From this comparison it seems very probable that the Dülük Acheulean industry is older than that from the Et-Tabun cave in Palestine. I hope that future researches will throw further light on this question. From the surface findings it is obvious that lower Palaeolithic culture in South-East Anatolia is very rich and spread over a wide area.

COUP-DE-POING HAND-AXES BELONGING TO THE LOWER PALAEOLITHIC PERIOD: THEIR LENGTH, WIDTH AND THICKNESS MEASUREMENTS AND LENGTH-WIDTH, LENGTH-THICKNESS AND WIDTH-THICKNESS INDICES

| | Max. Length mm. | Max. Width mm. | Max. Thick. mm. | Width x 100 / Length | Thick. x 100 / Length | Thick. x 100 / Width | Type |
|---|---|---|---|---|---|---|---|
| 1 | 280 | 115 | 55 | 41.42 | 19.64 | 47.82 | Chellean |
| 2 | 160 | 116 | 55 | 72.51 | 34.37 | 54.44 | Lower Acheulean |
| 3 | 124 | 84 | 55 | 67.74 | 44.35 | 65.47 | Upper Acheulean |
| 4 | 109 | 75 | 35 | 68.80 | 32.11 | 46.66 | Upper Acheulean |
| 5 | 115 | 75 | 28.5 | 65.21 | 24.78 | 38.00 | Upper Acheulean |
| 6 | 88 | 82.5 | 42 | 92.69 | 47.72 | 50.90 | Upper Acheulean |
| 7 | 134 | 97 | 46 | 72.46 | 34.32 | 47.42 | Acheulean |
| 8 | 114 | 91 | 42 | 79.82 | 36.84 | 46.15 | Acheulean |
| 9 | 153 | 98 | 46 | 64.05 | 26.79 | 46.93 | Upper Acheulean |
| 10 | 107 | 70 | 38 | 65.32 | 35.51 | 54.28 | Upper Acheulean |
| 11 | 124 | 98 | 49 | 79.03 | 39.51 | 49.99 | Acheulean |
| 12 | 69 | 59 | 48 | 85.50 | 69.56 | 81.35 | Upper Acheulean |
| 13 | 125 | 93 | 51 | 74.40 | 40.80 | 54.83 | Acheulean |
| 14 | 127 | 82 | 64 | 64.56 | 50.39 | 78.04 | Acheulean |
| 15 | 143 | 96 | 56 | 67.13 | 39.16 | 58.33 | Acheulean |
| 16 | 113 | 72 | 53 | 63.51 | 46.90 | 73.61 | Acheulean |
| 17 | 142 | 107 | 59 | 75.42 | 41.54 | 54.20 | Acheulean |
| 18 | 110 | 76.5 | 53 | 69.54 | 48.18 | 69.28 | Acheulean |

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## LEVHALARIN İZAHI

Levha I — Chellean coup-de-poing el baltası. Şekil 1 üstten, Şekil 2 profilden. Uzunluk 280 mm., Genişlik 115 mm., Kalınlık 55 mm. Uzunluk-Genişlik endisi 41.42; Uzunluk-Kalınlık endisi 19.64; Genişlik-Kalınlık endisi 47.82. Armut biçiminde olup paten kırmızı toprak rengindedir. Renk alt yüzde daha açıktır.

Levha II — Alt Acheulean coup-de-poing el baltası: Şekil 1 üstten, Şekil 2 profilden ve Şekil 3 alt yüzden çizilmiştir. Badem şeklindedir. Üst yüz açık kahve renginde, alt yüz toprak kırmızı rengindedir. Uzunluk 160 mm., Genişlik 116 mm., Kalınlık 55 mm. dir. Uzunluk-Genişlik endisi 72.51; Genişlik-Kalınlık endisi 54.44; Uzunluk-Kalınlık endisi 34.37 dir.

Levha III — Üst Acheulean coup-de-poing el baltası: Şekil 1 alttan, Şekil 2 üstten ve Şekil 3 profilden görülmektedir. Armut biçimindedir. Paten toprak kırmızı rengine kaçar, alt yüz daha açık renktedir. Uzunluk 124 mm., Genişlik 84 mm., Kalınlık 55 mm. Uzunluk-Genişlik endisi 67.74; Uzunluk-Kalınlık endisi 44.35; Genişlik-Kalınlık endisi 65.47 dir.

Levha IV — Üst Acheulean coup-de-poing el baltası: Şekil 1 üstten, Şekil 2 profilden ve Şekil 3 alttan gösterilmiştir. Üçgen şeklindedir. Toprak kırmızısı rengindedir. Uzunluk 109 mm., Genişlik 75 mm., Kalınlık 35 mm. dir. Uzunluk-Genişlik endisi 68.80; Uzunluk-Kalınlık endisi 32.11; Genişlik-Kalınlık endisi 46.66dır.

Levha V — Üst Acheulean coup-de-poing el baltası: Şekil 1 üstten, Şekil 2 alttan ve Şekil 3 profilden çizilmiştir. Uzunluk 115 mm., Genişlik 75 mm., Kalınlık 28.5 mm. dir. Uzunluk-Genişlik endisi 65.21; Uzunluk-Kalınlık endisi 24.78; Genişlik-Kalınlık endisi

38.00 dir. Badem biçiminde olan bu balta toprak kırmızısı renginde bir paten gösterir. Üst yüz daha açık bir renktedir.

Levha VI — Üst Acheulean coup-de-poing el baltası: Şekil 1 üstten, Şekil 2 profilden görülmektedir. Disk tip bir örnek. Açık kırmızı veya toprak kırmızısı renginde bir paten gösterir. Uzunluk 88 mm., Genişlik 82.5 mm., Kalınlık 42 mm. dir. Uzunluk-Genişlik endisi 92.69; Uzunluk-Kalınlık endisi 47.72; Genişlik-Kalınlık endisi 50.90 dir.

Levha VII — Acheulean coup-de-poing el baltası: Şekil 1 üstten; Şekil 2 profilden gösterilmiştir. Açık kahve renginde ve cordiform tiptedir. Uzunluk 134 mm., Genişlik 97 mm., Kalınlık 46 mm. dir. Uzunluk-Genişlik endisi 72.46; Uzunluk-Kalınlık endisi 34.32; Genişlik-Kalınlık endisi 47.31.

Levha VII — Acheulean coup-de-poing el baltası: Şekil 3 ve 4. Büyük bir yongadan yapılmıştır. Ucu kırık olduğundan disk şekline yaklaşır. Paten açık kahve rengindedir. Uzunluk 114 mm., Genişlik 91 mm., Kalınlık 42 mm. dir. Uzunluk-Genişlik endisi 79.82; Uzunluk-Kalınlık endisi 36.84; Genişlik-Kalınlık endisi 46.15. dir.

Levha VIII — Üst Acheulean coup-de-poing el baltası: Şekil 1 üstten, Şekil 2 profilden. Gayri muntazam olan bir üçgen şeklindedir. Üst yüz toprak kırmızı, alt yüz deve tüyü rengindedir. Uzunluk 153 mm., Genişlik 98 mm., Kalınlık 46 mm. dir. Uzunluk-Genişlik endisi 64.05; Uzunluk-Kalınlık endisi 26.79; Genişlik-Kalınlık endisi 46.93 dir.

Levha VIII — Üst Acheulean coup-de-poing el baltası: Şekil 3 üstten, Şekil 4 profilden çizilmiştir. Şekli pek muntazam olmayan pyriform biçimindedir. Paten açık kahve rengindedir. Uzunluk 107 mm., Genişlik 70 mm., Kalınlık 38 mm. dir. Uzunluk-Genişlik endisi 65.32; Uzunluk-Kalınlık endisi 35.51; Genişlik-Kalınlık endisi 54.28 dir.

Levha IX — Acheulean el baltası tam bifas değildir: Şekil 1 üstten, Şekil 2 alttan ve Şekil 3 profilden çizilmiştir. Büyük bir yongadan yapılmış olan el baltası açık kahve renginde bir paten gösterir ve bazı kısımları altın sarısı rengindedir. Uzunluk 124 mm., Genişlik 98 mm., Kalınlık 49 mm. dir. Uzunluk-Genişlik endisi 79.03; Uzunluk-Kalınlık endisi 39.51; Genişlik-Kalınlık endisi 49.99 dir.

Levha X — Üst Acheulean (Micoquian) el baltası Kartal'da bulunmuştur. Şekil 1 üstten; Şekil 2 alttan ve Şekil 3 profilden çizilmiştir. Dip kısmı düzdür. Üstten badem şekline benzer. Üst yüz deve tüyü renginde, alt yüz açık kahve rengindedir. Uzunluk 69 mm., Genişlik 59 mm., Kalınlık 48 mm. dir. Uzunluk-Genişlik endisi 85.50; Uzunluk-Kalınlık endisi 69.56; Genişlik-Kalınlık endisi 81.35 dir.

Levha XI — Acheulean coup-de-poing el baltası: Şekil 1 üstten, Şekil 2 profilden. Armut şekline benzer. Paten açık kahve rengindedir. Uzunluk 125 mm., Genişlik 93 mm. Kalınlık 51 mm. dir. Uzunluk-Genişlik endisi 74.40; Uzunluk-Kalınlık endisi 40.80; Genişlik-Kalınlık endisi 54.83 dur.

Levha XI — Acheulan Coup-de-poing el baltası: Şekil 3 üstten Şekil 4 yandan: Çekirdekten yapılmış olup "Cordiforme öllonges tiptedir. Bazı kısımları toprak kırmızısı renginde bazı yerleri altın sarısı rengindedir. Uzunluk 127 mm., Genişlik 82 mm., kalınlık 64 mm., dir. Uzunluk-Genişlik endisi 64. 56.; Uzunluk-Kalınlık endisi 50. 39; Genişlik-Kalınlık endisi 78. 04. dür.

Levha XII — Acheulean coup-de-poing el baltası: Şekil 1 üstten, Şekil 2 profilden çizilmiştir. Altın sarısı renginde bir paten gösterir. Uç kısmı biraz kırıktır. Uzunluk 143 mm., Genişlik 96 mm., Kalınlık 56 mm. dir. Uzunluk-Genişlik endisi 67.13; Uzunluk-Kalınlık endisi 39.16; Genişlik-Kalınlık endisi 58.33 dur.

Levha XII — Acheulean coup-de-poing el baltası: Şekil 3 üstten, Şekil 4 profilden çizilmiştir. Üst kısmında paten açık kahve renginde ve alt kısmında deve tüyü rengindedir. "Cordiforme allonges" tiptedir. Uzunluk 113 mm., Genişlik 72 mm., Kalınlık 53 mm. dir. Uzunluk-Genişlik endisi 63.71; Uzunluk-Kalınlık endisi 46.90; Genişlik-Kalınlık endisi 73.61 dir.

Levha XIII — Acheulean coup-de-poing el baltası: Şekil 1 üstten; Şekil 2 profilden çizilmiştir. Ovaloid biçimindedir ve çekirdekten yapılmıştır. Üst yüz açık kahve renginde ve alt yüz toprak kırmızısına kaçar. Uzunluk 142 mm., Genişlik 107 mm., Kalınlık 59 mm. dir. Uzunluk-Genişlik endisi 75.42; Uzunluk-Kalınlık endisi 41.54; Genişlik-Kalınlık endisi 54.20 dir.

Levha XIII — Acheulean coup-de-poing el baltası: Şekil 3 üstten; Şekil 4 profilden çizilmiştir. Badem biçimindedir. Üst yüz deve tüyü ve alt yüz toprak kırmızısı rengindedir. Uzunluk 110 mm., Genişlik 76.5 mm., Kalınlık 53 mm. dir. Uzunluk-Genişlik endisi 69.54; Uzunluk-Kalınlık endisi 48.18; Genişlik-Kalınlık endisi 69.28 dir.

Levha XIV — Şekil 1 Chellean el baltasının üstten görünüşü. Levha I, Şekil 1 de aynisi çizilmiştir.

Levha XV — Şekil 2 Ayni Chellean el baltasının alttan görünüşü.

Levha XVI — Şekil 3 Acheulean el baltasının üstten görünüşü; Şekil 4 alttan. Profilden görünüşü için Levha V'e bak.

Levha XVII — Şekil 5 Üst Acheulean el baltasının üstten görünüşü; Şekil 6 alttan. Profilden görünüşü için Levha IV'e bak.

Levha XVIII — Şekil 7 Acheulean el baltasının üstten görünüşü; Şekil 8 alttan. Profilden görünüşü için Levha VI'a bak.

Levha XIX — Şekil 9 Acheulean el baltasının üstten görünüşü; Profilden görünüşü için Levha VII, Şekil 2'ye bak.

Levha XX — Şekil 10 Üst Acheulean el baltasının üstten görünüşü; Profilden görünüşü için Levha VIII, Şekil 2'ye bak.

Levha XXI — Şekil 11 Üst Acheulean el baltasının üstten görünüşü; Profilden görünüşü için Levha III, Şekil 3'e bak.

## EXPLANATION OF THE PLATES

Plate I — Chellean coup-de-poing hand-axe: Fig. 1 from above, Fig. 2 from the side. Length 280 mm., width 115 mm., thickness 55 mm. Length-Width index 41.42; Length-Thickness index 19.64; Width-Thickness index 47.82. Pear-shaped and covered with a red earthy patina. The colour is lighter on the lower face.

Plate II — Lower Acheulean coup-de-poing hand-axe: Fig. 1 from above, Fig. 2 from the side and Fig. 3 from below. Almond-shaped; upper face light-brown colour, lower face red earthy colour. Length, 160 mm., width 116 mm., thickness 55 mm. Length-Width index 72.51; Width-Thickness index 54.44; Length-Thickness index 34.37.

Plate III — Upper Acheulean coup-de-poing hand-axe: Fig. 1 from below, Fig. 2 from above and Fig. 3 from the side. Pear-shaped; the patina is earthy red colour, lighter on the lower surface. Length 124 mm., width 84 mm., thickness 55 mm. Length-Width index 67.74; Length-Thickness index 44.35; Width-Thickness index 65.47.

Plate IV — Upper Acheulean coup-de-poing hand-axe: Fig. 1 from above, Fig. 2 from the side and Fig. 3 from below. Triangular shaped; earthy red colour. Length 109 mm., width 75 mm., thickness 35 mm. Length-Width index 68.80; Length-Thickness index 32.11; Width-Thickness index 46.66.

Plate V — Upper Acheulean coup-de-poing hand-axe: Fig. 1 from above, Fig. 2 from below and Fig. 3 from the side. Length 115 mm., width 75 mm., thickness 28.5 mm. Length-Width index 65.21; Length-Thickness index 24.78; Width-Thickness index 38.00. Almond-shaped and covered with an earthy red patina, which is lighter on the upper surface.

Plate VI — Upper Acheulean coup-de-poing hand-axe: Fig. 1 from above, Fig. 2 from the side. Disc-type, with light red or earthy red-coloured patina. Length 88 mm., Width 82.5 mm., thickness 42 mm. Length-Width index 92.69; Length-Thickness index 47.72; Width-Thickness index 50.90.

Plate VII — Acheulean coup-de-poing hand-axe: Fig. 1 from above, Fig. 2 from the side. Cordiform type with light brown coloured patina. Length 134 mm., width 97 mm., thickness 46 mm. Length-

Width index 72.46; Length-Thickness index 34.32; Width-Thickness index 47.31.

Plate VII — Acheulean coup-de-poing hand-axe: Fig. 3 and 4. Made from a large flake; the breaking of the tip gives a discoid shape. The patina is light brown colour. Length 114 mm., width 91 mm., thickness 42 mm. Length-Width index 79.82; Length-Thickness index 36.84; Width-Thickness index 46.15.

Plate VIII — Upper Acheulean coup-de-poing hand-axe: Fig. 1 from above, Fig. 2 from the side. Sub-triangular shape; upper surface has a earthy red coloured patina, lower surface camel-hair colour. Length 153 mm., width 98 mm., thickness 46 mm. Length-Width index 64.05; Length-Thickness index 26.79; Width-Thickness index 46.93.

Plate VIII — Upper Acheulean coup-de-poing hand-axe: Fig. 3 from above, Fig. 4 from the side. Pyriform shape with light brown coloured patina. Length 107 mm., width 70 mm., thickness 38 mm. Length-Width index 65.32; Length-Thickness index 35.51; Width-Thickness index 54.28.

Plate IX — Acheulean hand-axe, not completely biface: Fig. 1 from above, Fig. 2 from below and Fig. 3 from the side. Made from a large flake, with light-brown coloured patina, in some parts golden-yellow. Length 124 mm., width 98 mm., thickness 49 mm. Length-Width index 79.03; Length-Thickness index 39.51; Width-Thickness index 49.99.

Plate X — Upper Acheulean (Micoquian) hand-axe: from Kartal: Fig. 1 from above; Fig. 2 from below and Fig. 3 from the side. The base is flat; from above appears almond-shaped. Upper surface is camel-hair colour, lower surface light brown colour. Length 69 mm., width 59 mm., thickness 48 mm. Length-Width index 85.50; Length-Thickness index 69.56; Width-Thickness index 81.35.

Plate XI — Acheulean coup-de-poing hand-axe: Fig. 1 from above, Fig. 2 from the side. Pear-shaped; with light brown coloured patina. Length 125 mm., width 93 mm., thickness 51 mm. Length-Width index 74.40; Length-Thickness index 40.80; Width-Thickness index 54.83.

Plate XI — Acheulean coup-de-poing hand-axe: Fig. 3 from above, Fig. 4 from the side. Made from a core and of "cordiforme allonges" type. Some parts are earthy red colour, others golden yellow colour. Length 127 mm., width 82 mm., thickness 64 mm. Length-Width index 64.56; Length-Thickness index 50.39; Width-Thickness index 78.04.

Plate XII — Acheulean coup-de-poing hand-axe: Fig. 1 from above, Fig. 2 from the side. Golden-yellow coloured patina; the tip is partly

broken. Length 143 mm., width 96 mm., thickness 56 mm. Length-Width index 67.13; Length-Thickness index 39.16; Width-Thickness index 58.33.

Plate XII — Acheulean coup-de-poing hand-axe: Fig. 3 from above, Fig. 4 from the side. Upper surface has light brown coloured patina, lower camel-hair colour patina. "Cordiforme allonges" type. Length 113 mm., width 72 mm., thickness 53 mm. Length-Width index 63.71; Length-Thickness index 46.90; Width-Thickness index 73.61.

Plate XIII — Acheulean coup-de-poing hand-axe: Fig. 1 from above, Fig. 2 from the side. Ovaloid shape and made from a core. Upper surface light brown colour, lower surface earthy red colour. Length 142 mm., width 107 mm., thickness 59 mm. Length-Width index 75.42; Length-Thickness index 41.54; Width-Thickness index 54.20.

Plate XIII — Acheulean coup-de-poing hand-axe: Fig. 3 from above; Fig. 4 from the side. Almond-shaped; upper surface camel-hair colour; lower surface earthy-red colour. Length 110 mm., width 76.5 mm., thickness 53 mm. Length-Width index 69.54; Length-Thickness index 48.18, Width-Thickness index 69.28.

Plate XIV — Fig. 1 Photograph of Chellean hand-axe from above. The same axe is drawn in Plate I, Fig. 1.

Plate XV — Fig. 2 Photograph of same Chellean hand-axe from below.

Plate XVI — Fig. 3 Photograph of Acheulean hand-axe from above; Fig. 4 from below. For drawing of profile see Plate V.

Plate XVII — Fig. 5 Photograph of upper Acheulean hand-axe from above; Fig. 6 from below. For drawing of profile see Plate IV.

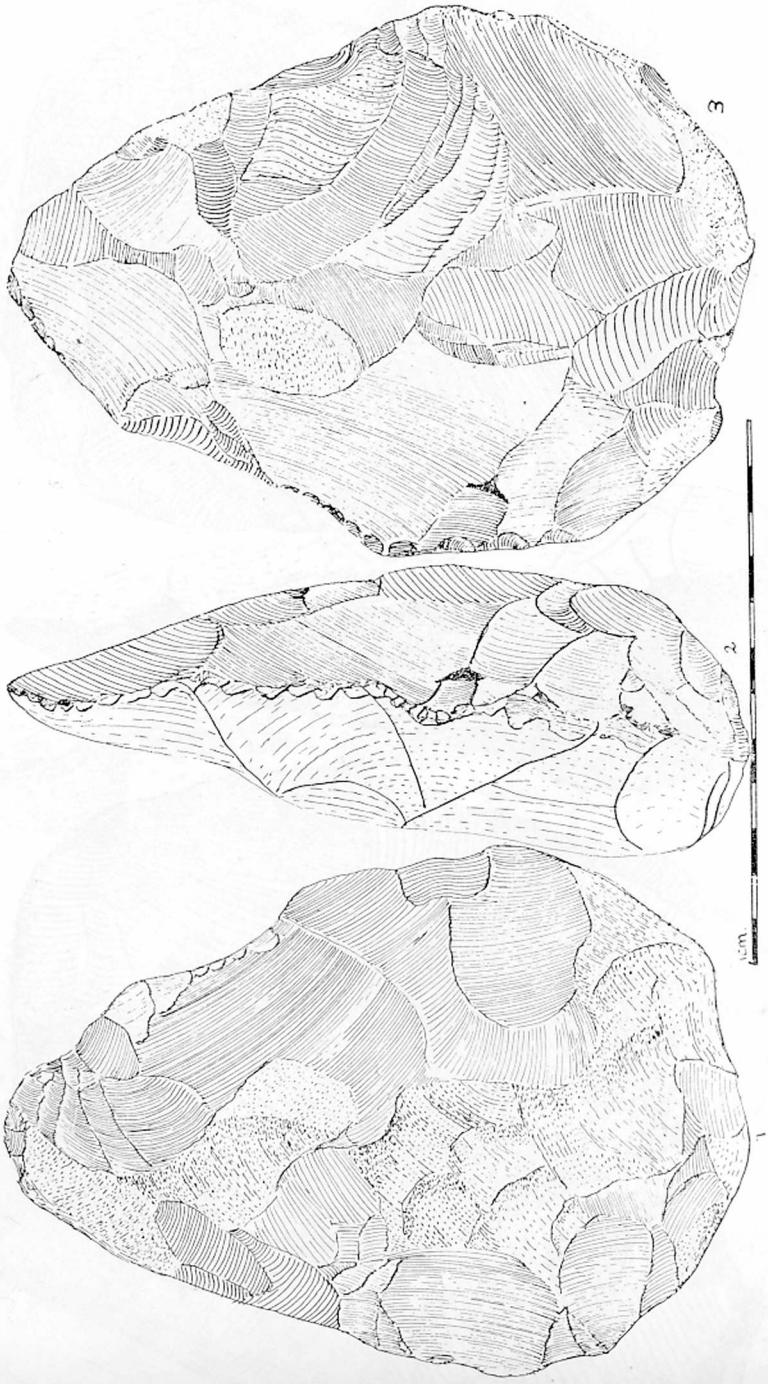
Plate XVIII — Fig. 7 Photograph of Acheulean hand-axe from above; Fig. 8 from below. For drawing of profile see Plate VI.

Plate XIX — Fig. 9 Photograph of Acheulean hand-axe from above; For drawing of profile see Plate VII, Fig. 2.

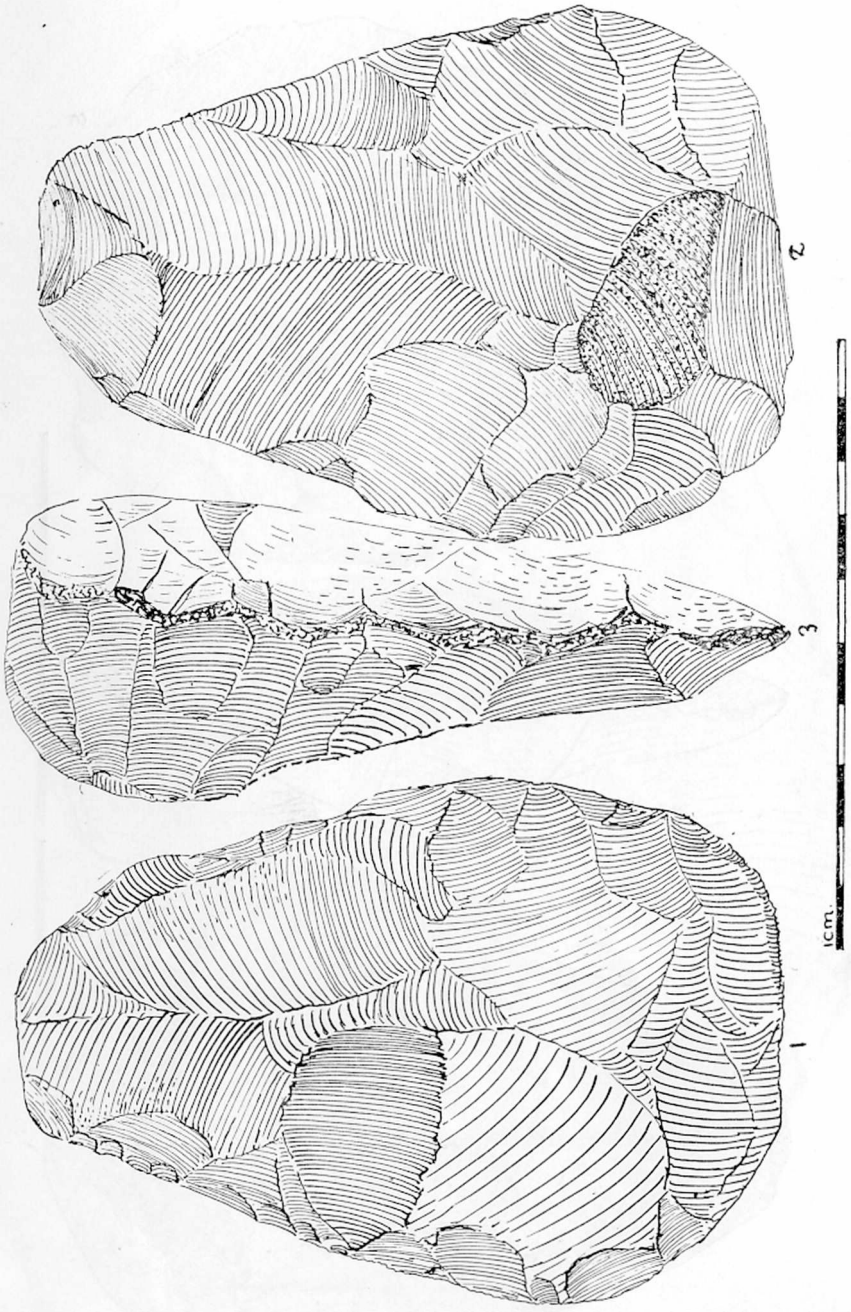
Plate XX — Fig. 10 Photograph of upper Acheulean hand-axe from above; For drawing of profile see Plate VIII, fig. 2.

Plate XXI — Fig. 11 Photograph of Upper Acheulean hand-axe from above; For drawing of profile see Plate III, Fig. 3.

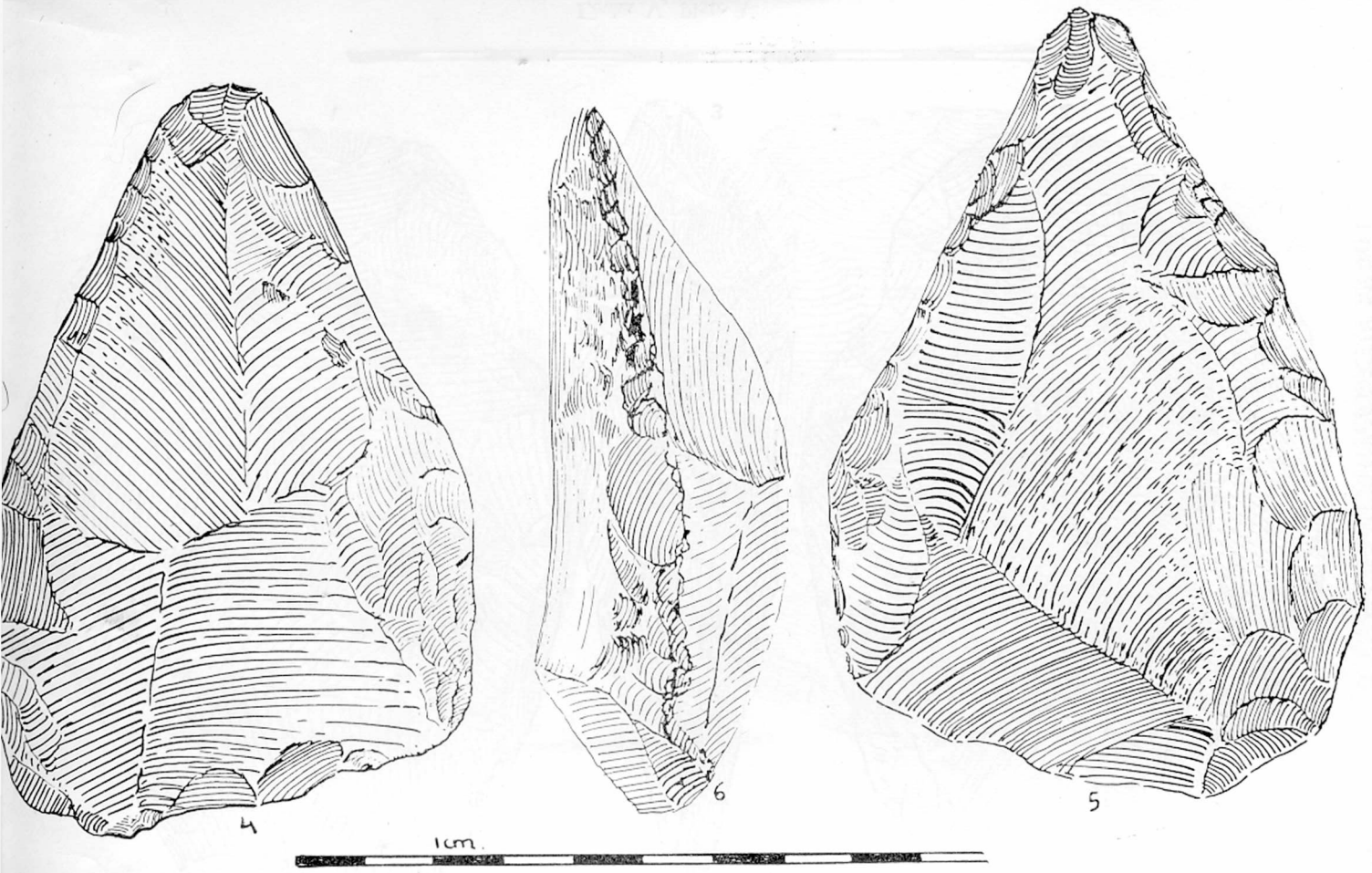

Levha I, Plate I




Levh II, Plate II

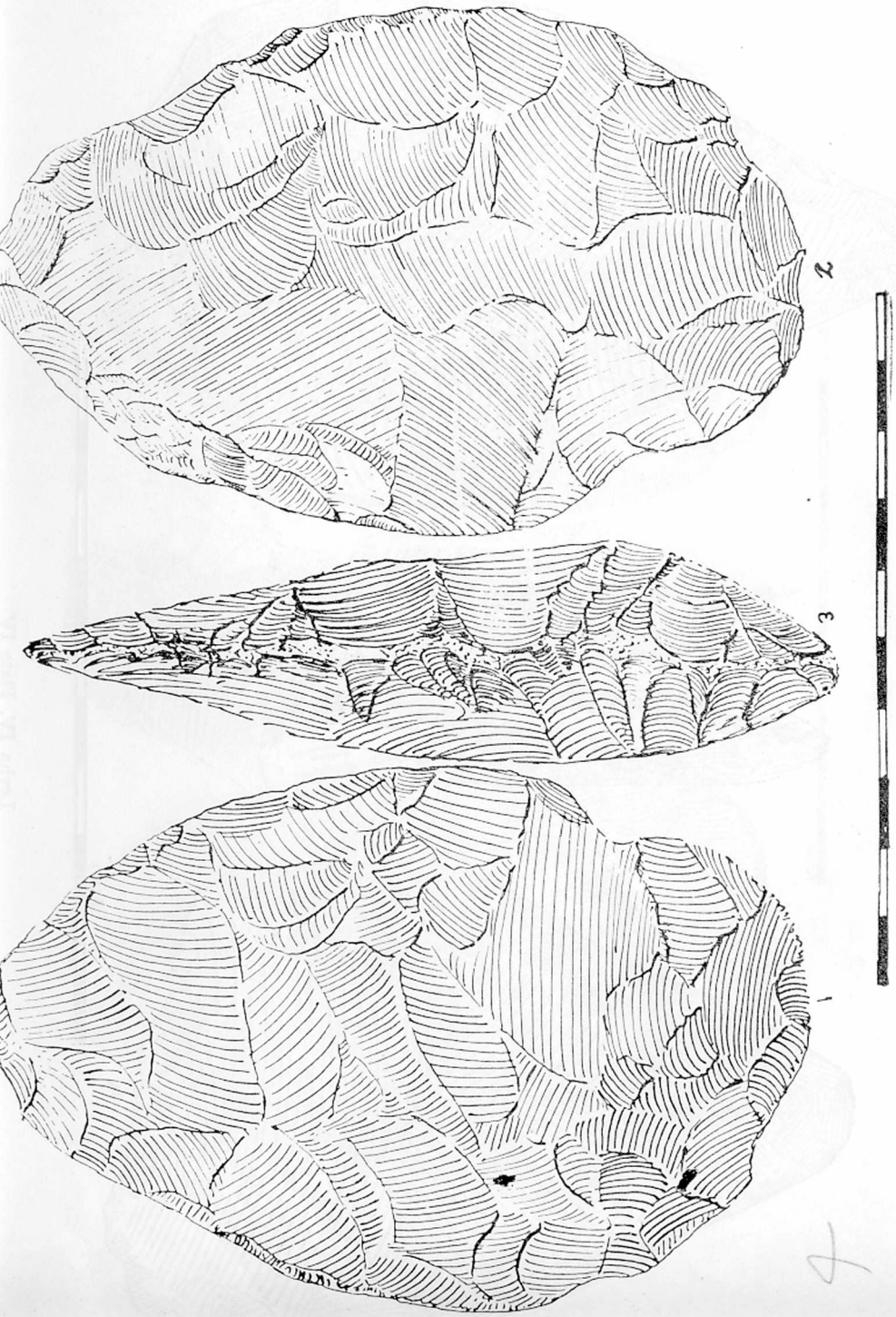



Levha III, Plate III

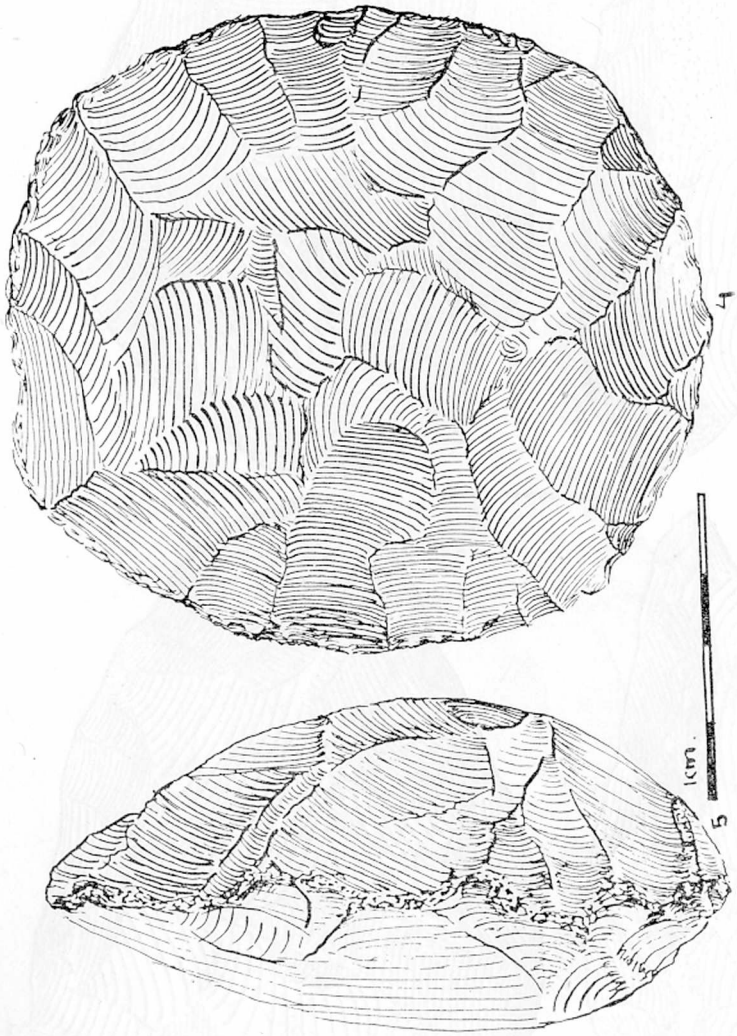



1 2 3

Levha IV, Plate IV




Levha V, Plate V




1

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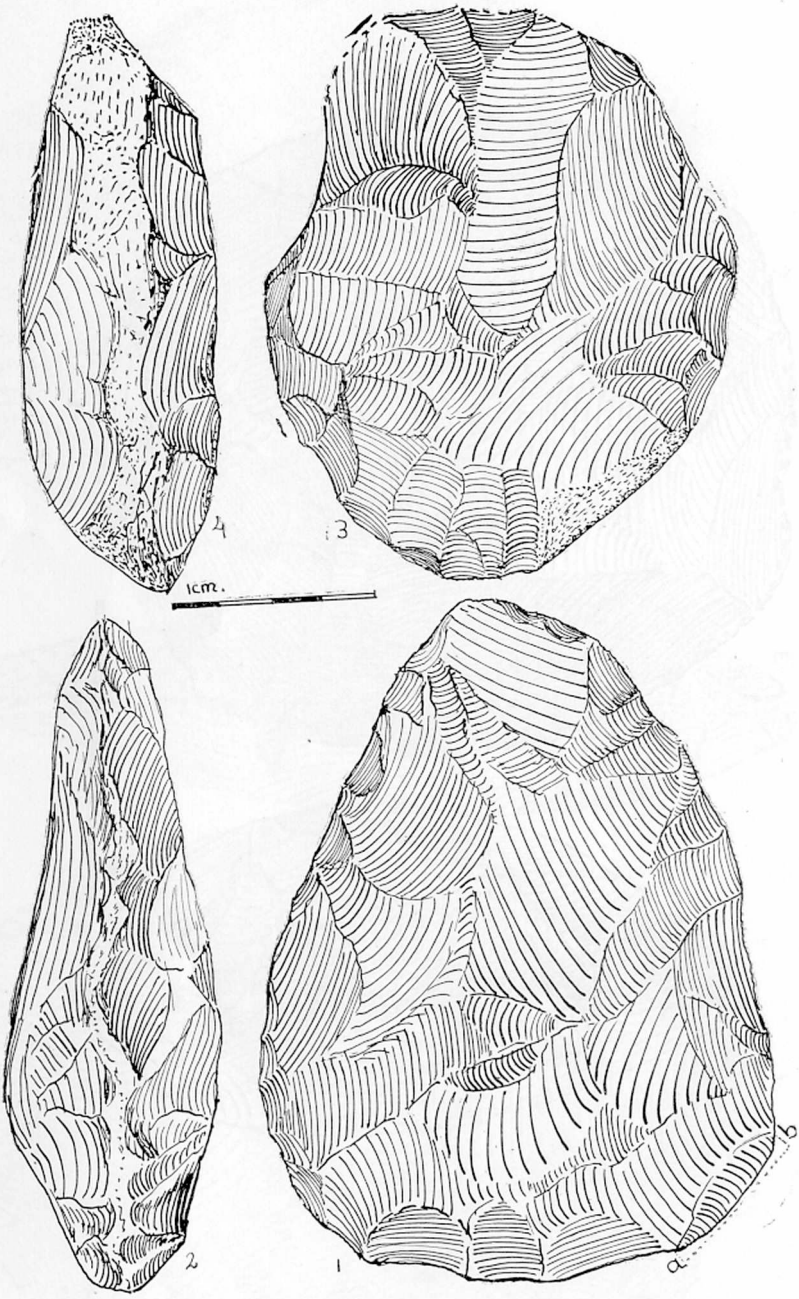
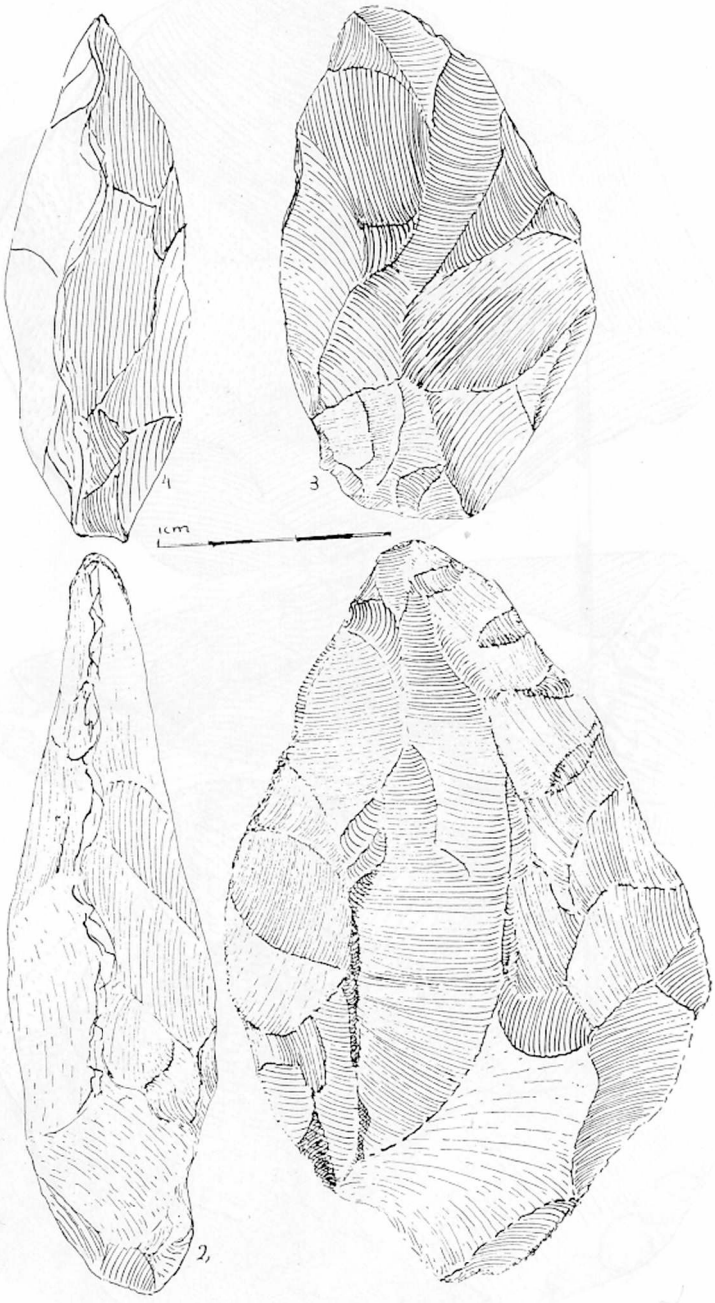
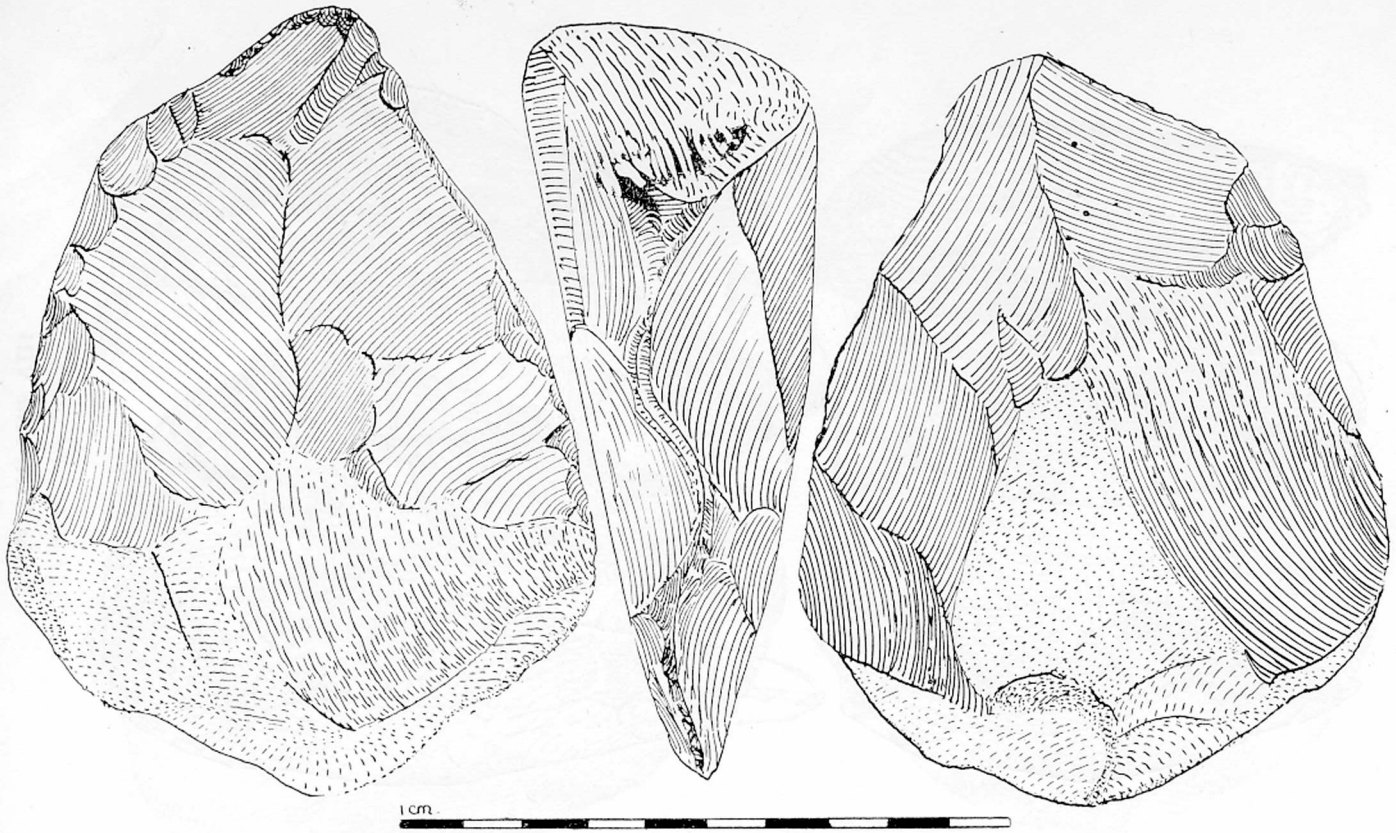
Levha VI, Plate VI




Levha VII, Plate VII

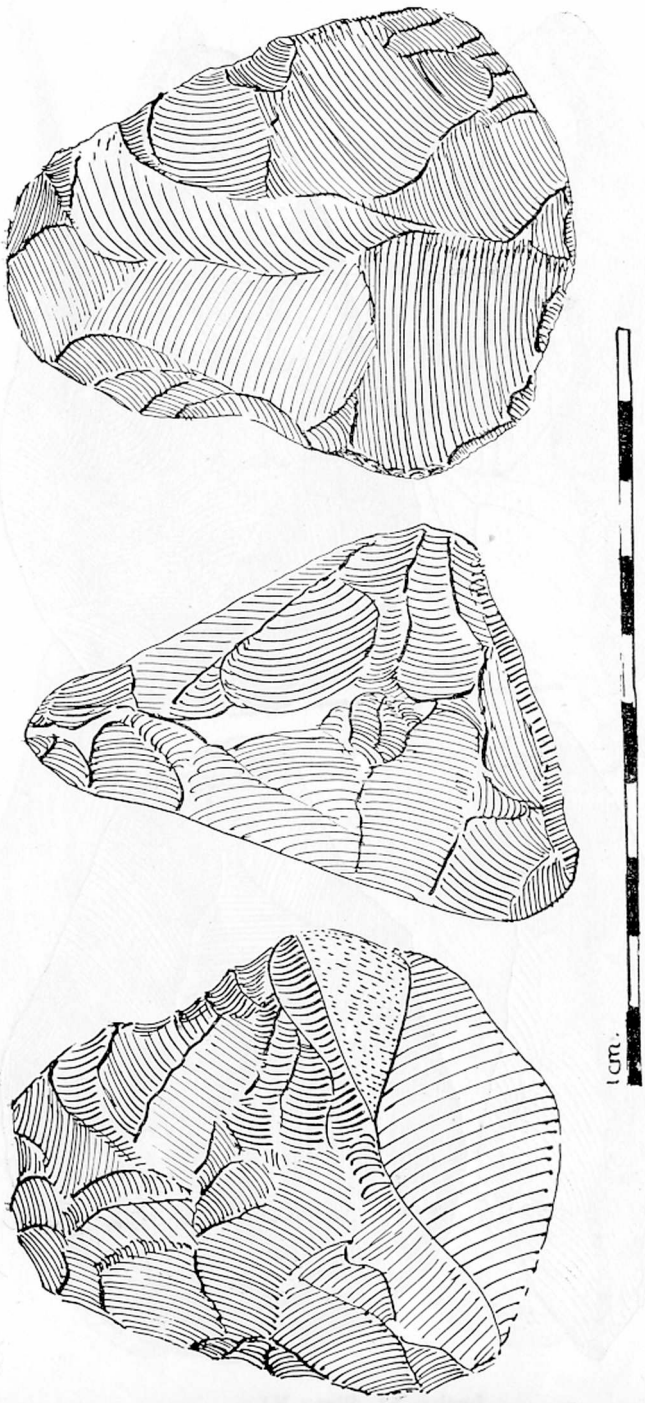



Levha VIII, Plate VIII

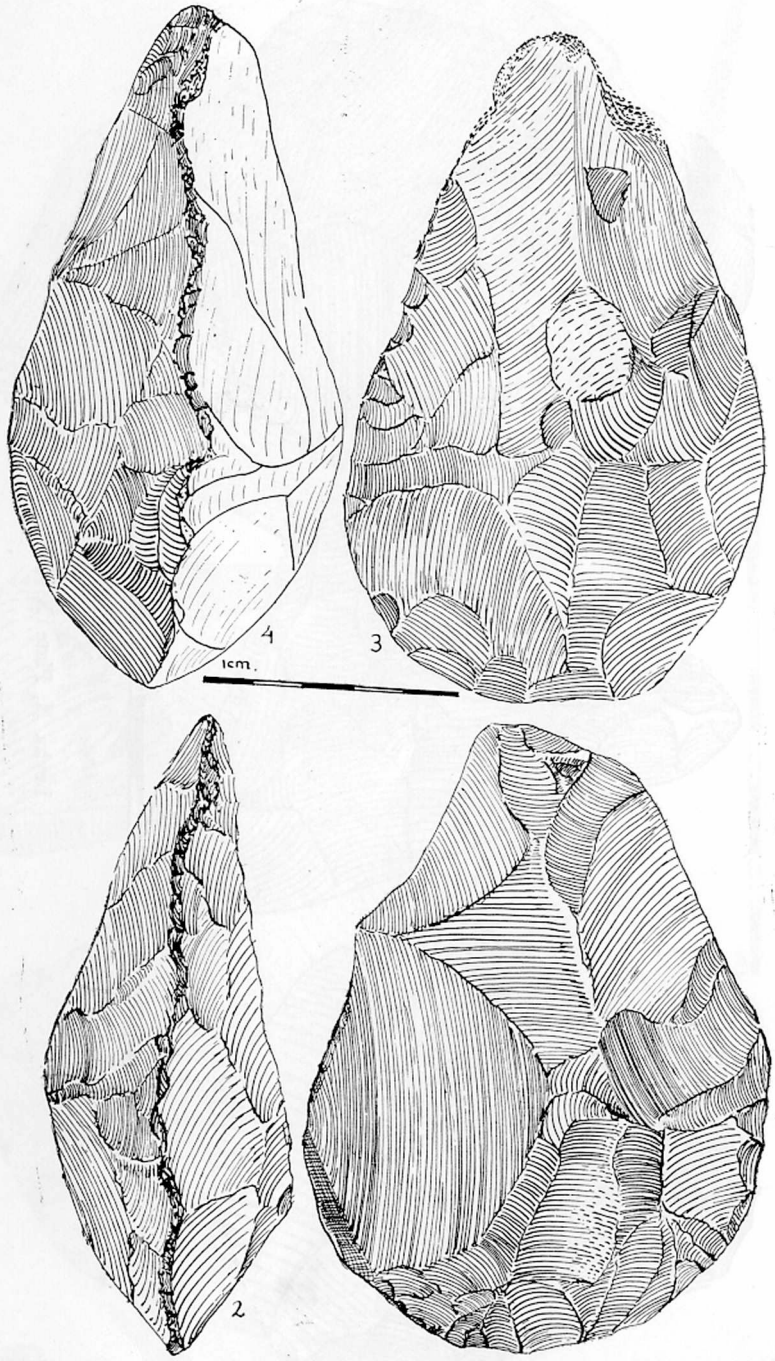



2 3 1

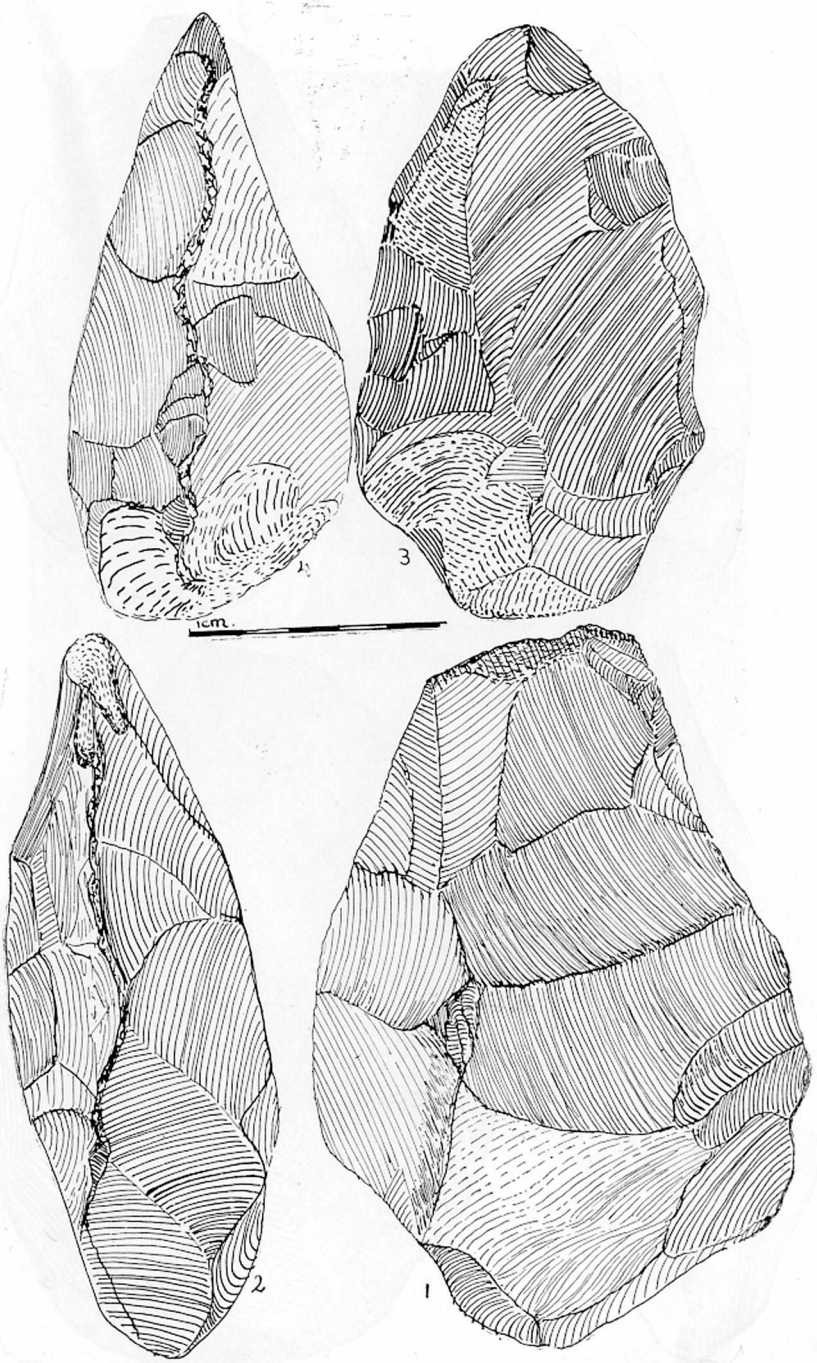
Levha IX, Plate IX



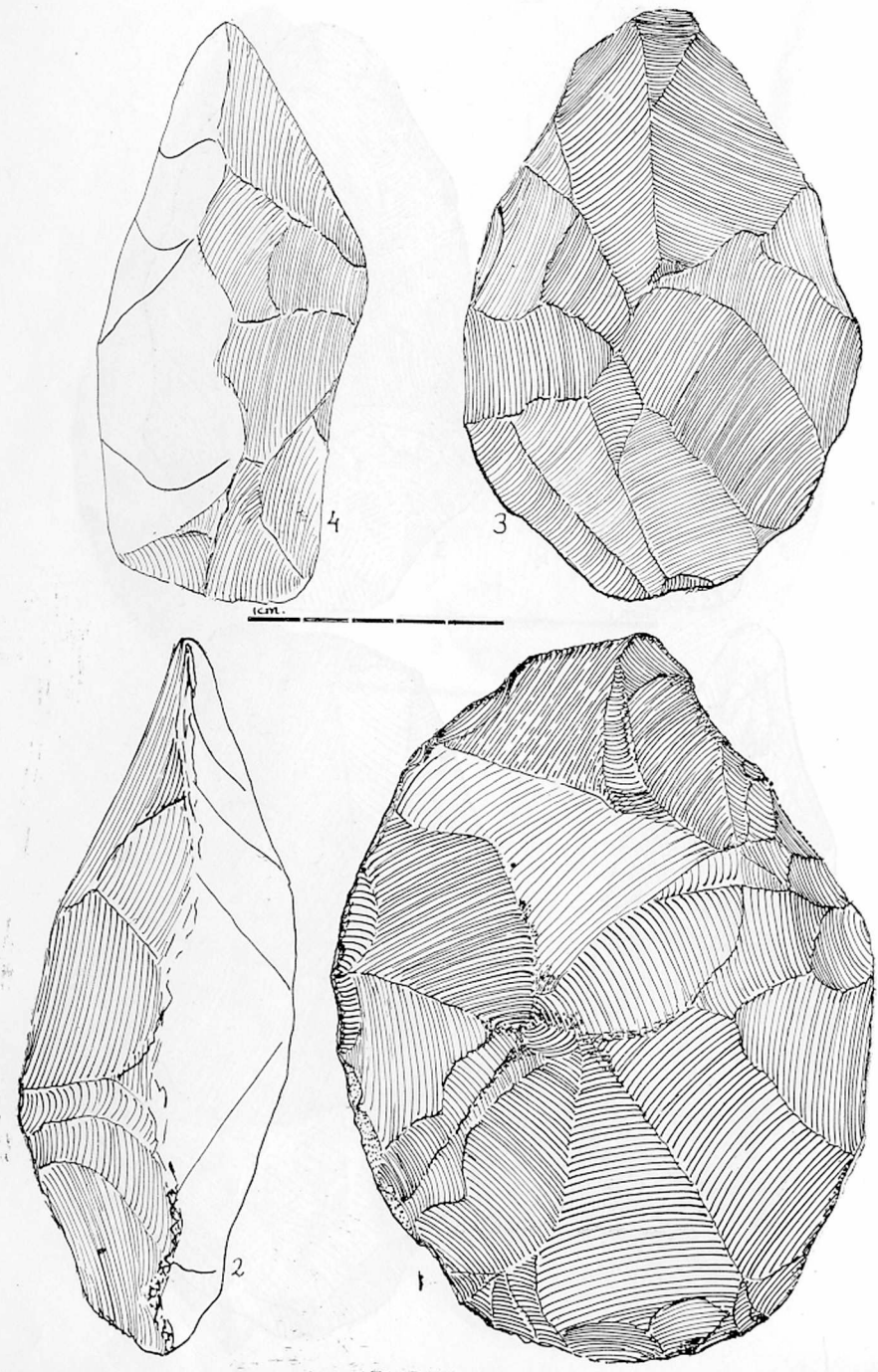

Levha X, Plate X



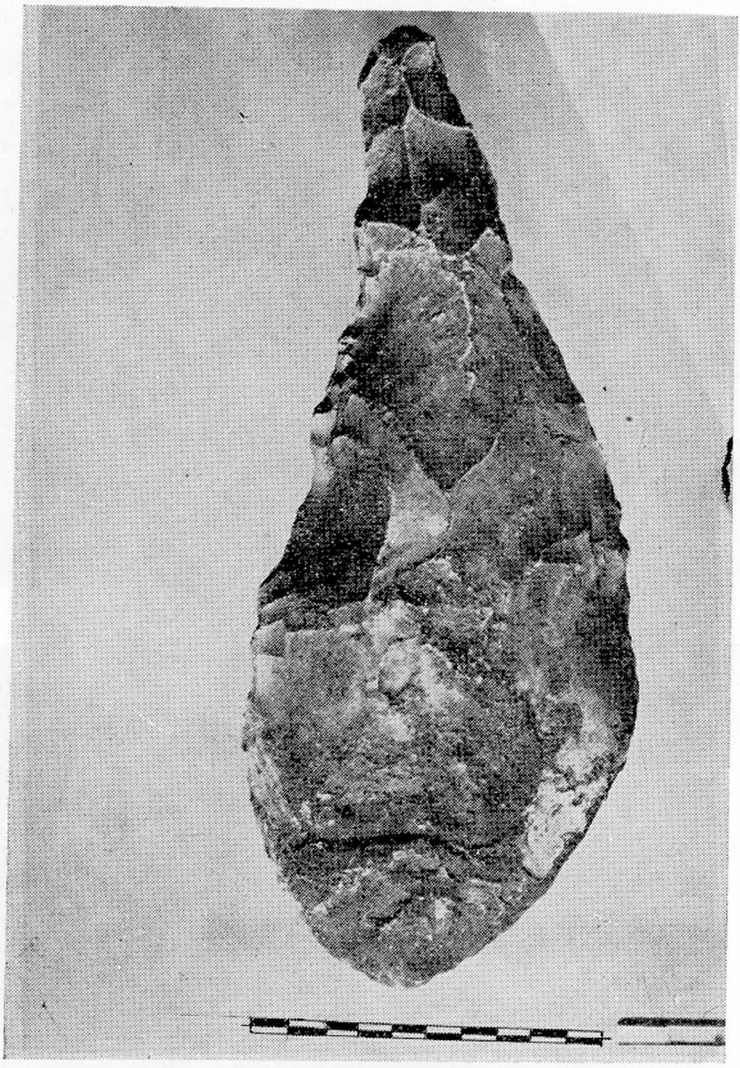

Levha XI, Plate XI




Levha XII, Plate XII

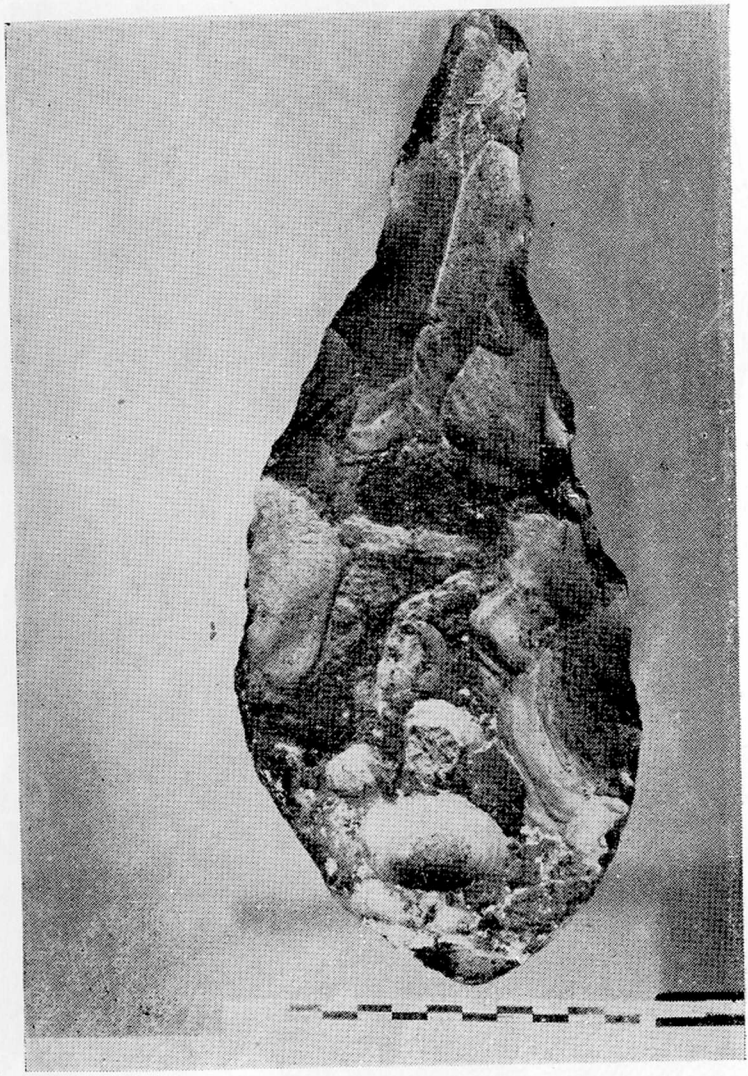



Levha XIII, Plate XIII

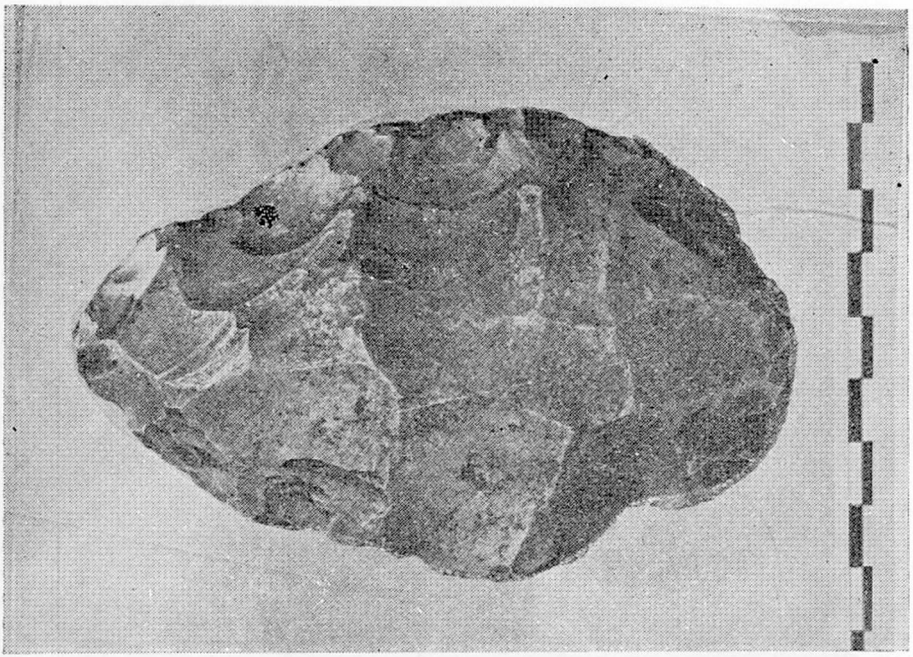




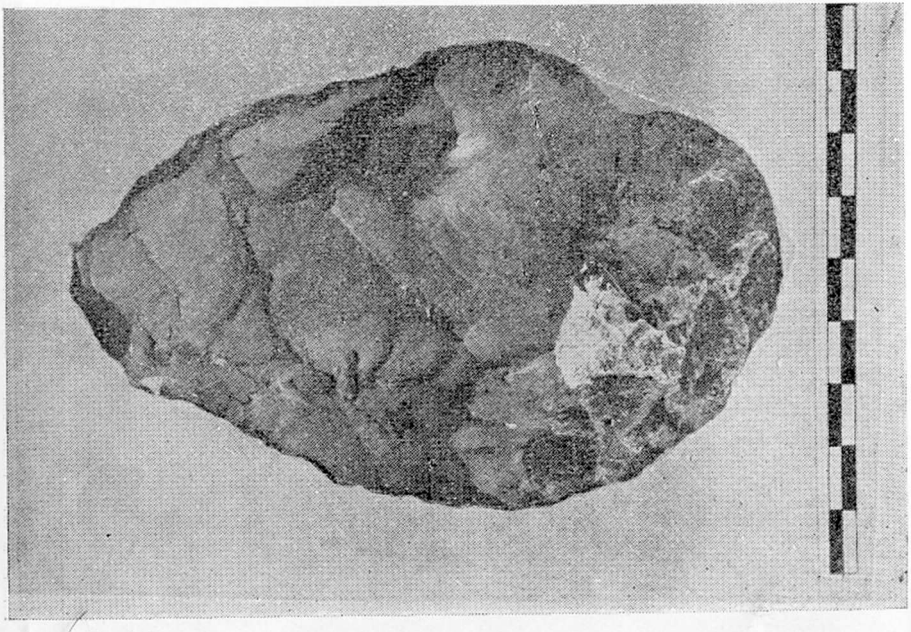
Levha XIV, Plate XIV
Şekil 1, Fig 1



Levha XV, Plate XV
Şekil 2, Fig 2

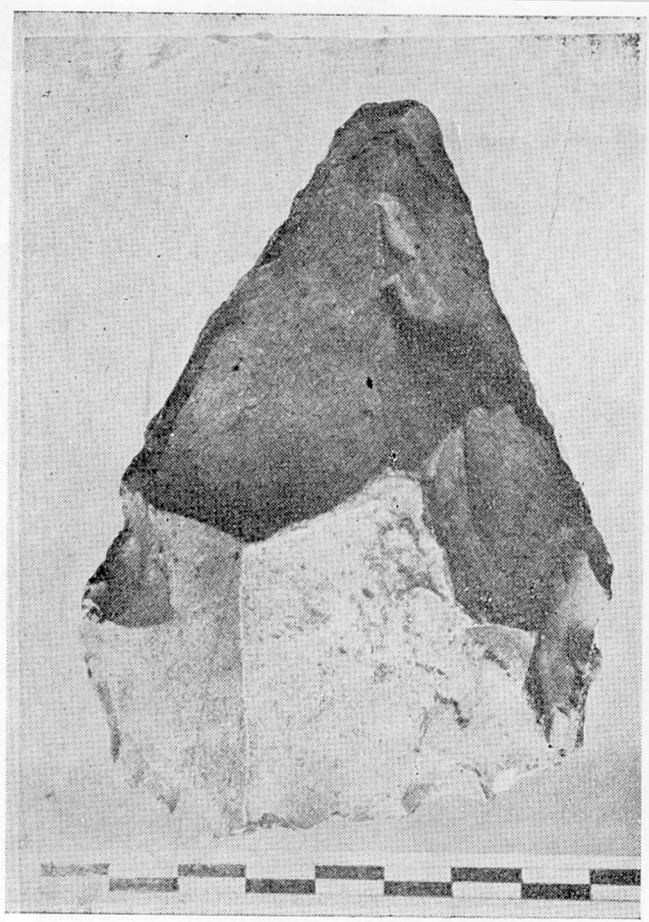


Şekil 4, Fig 4

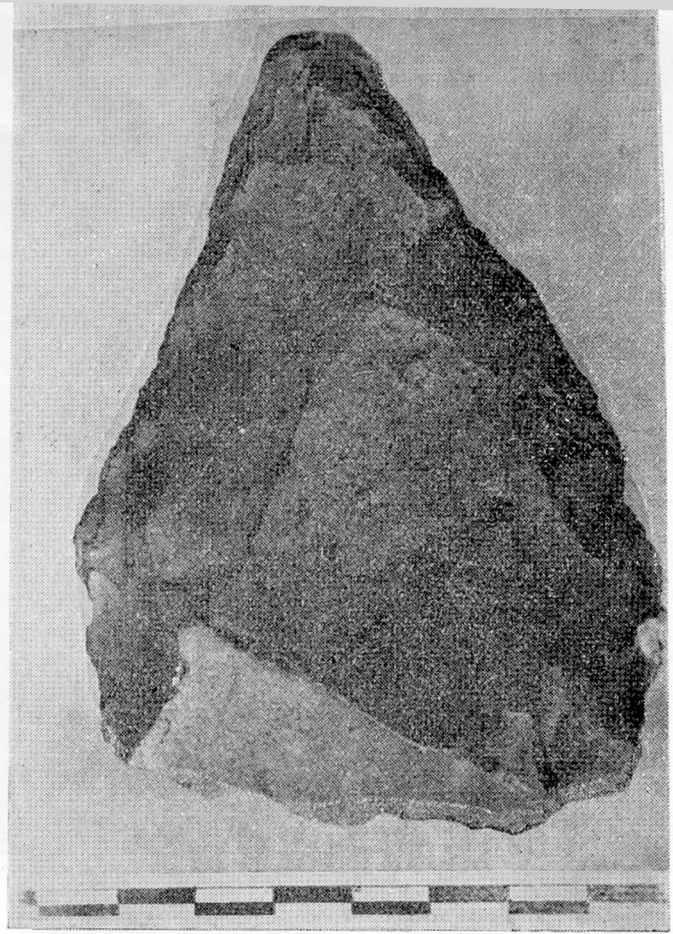


Şekil 3, Fig 3

Levha XVI, Plate XVI

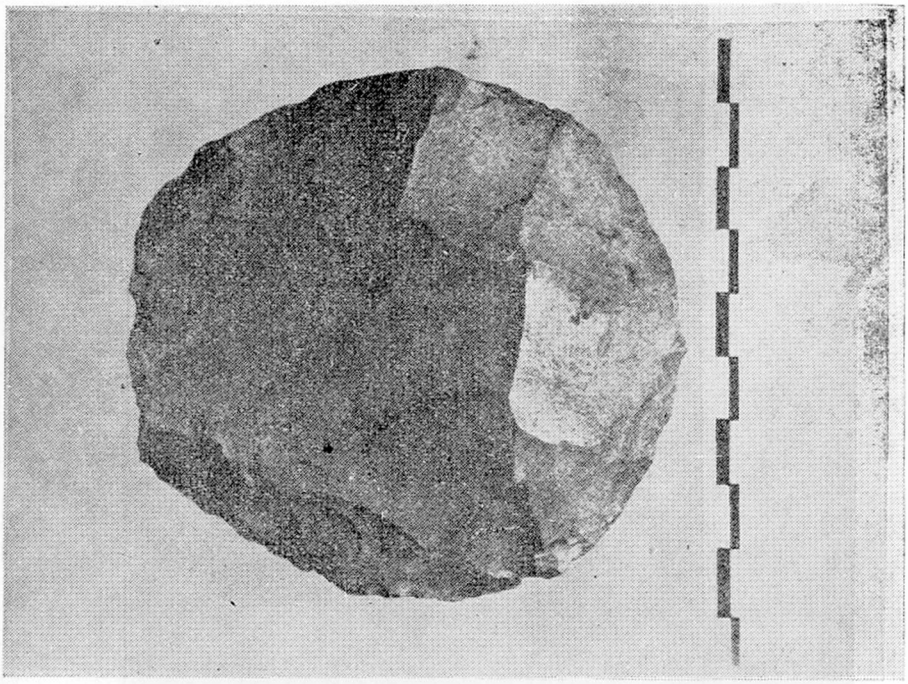


Şekil 5, Fig 5



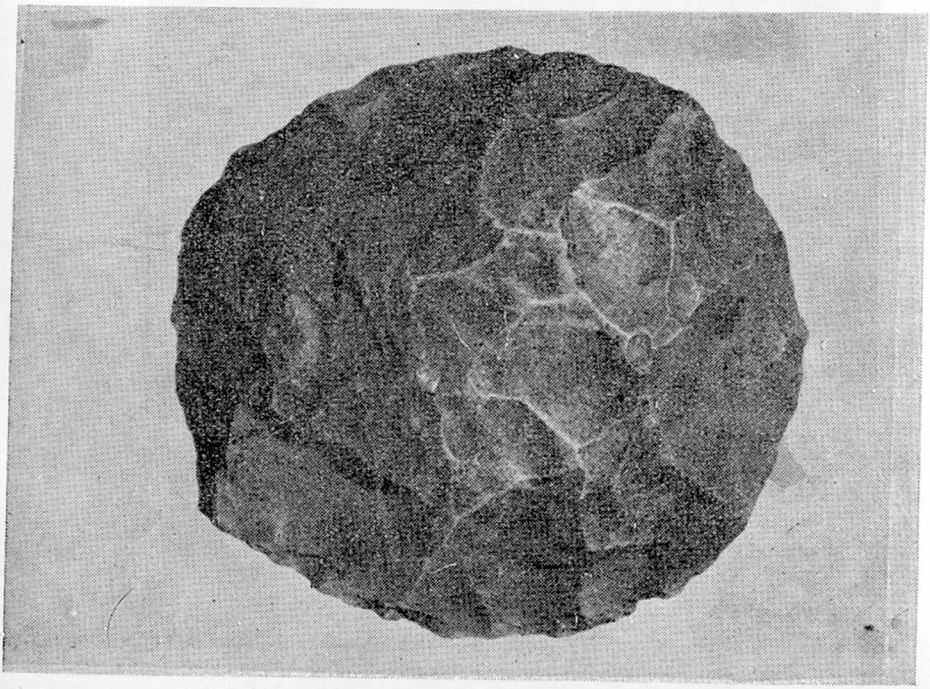
Şekil 6, Fig 6

Levh XVII, Pvate XVII

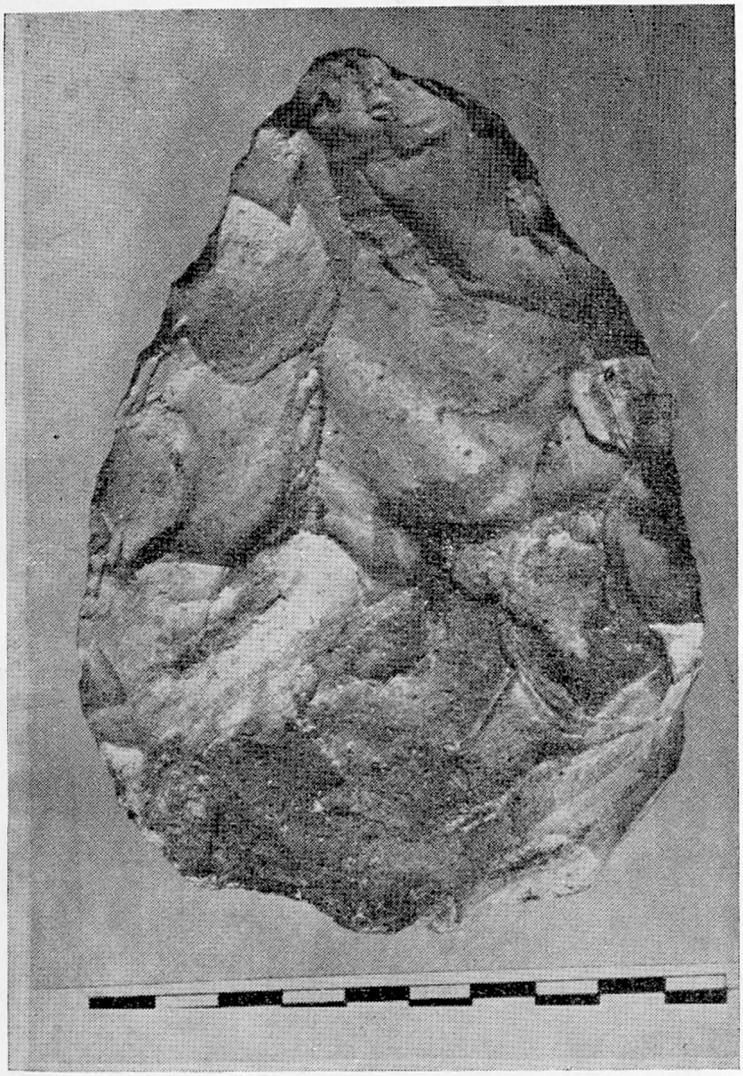


Şekil 8, Fig 8

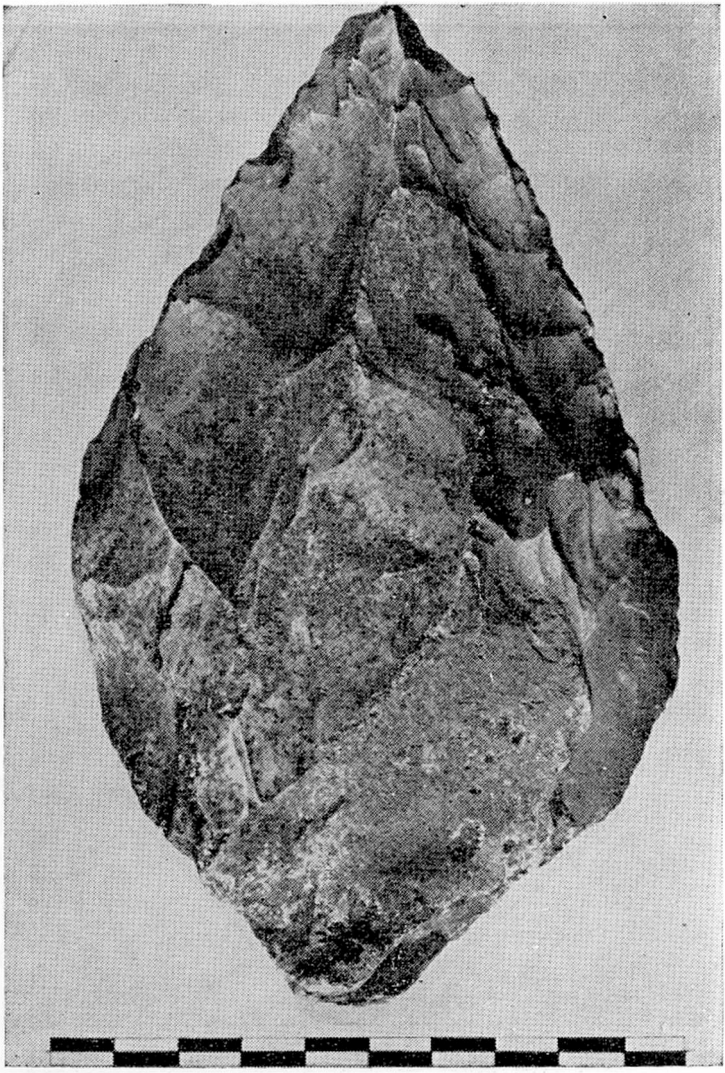
Levha XVIII, Plate XVIII



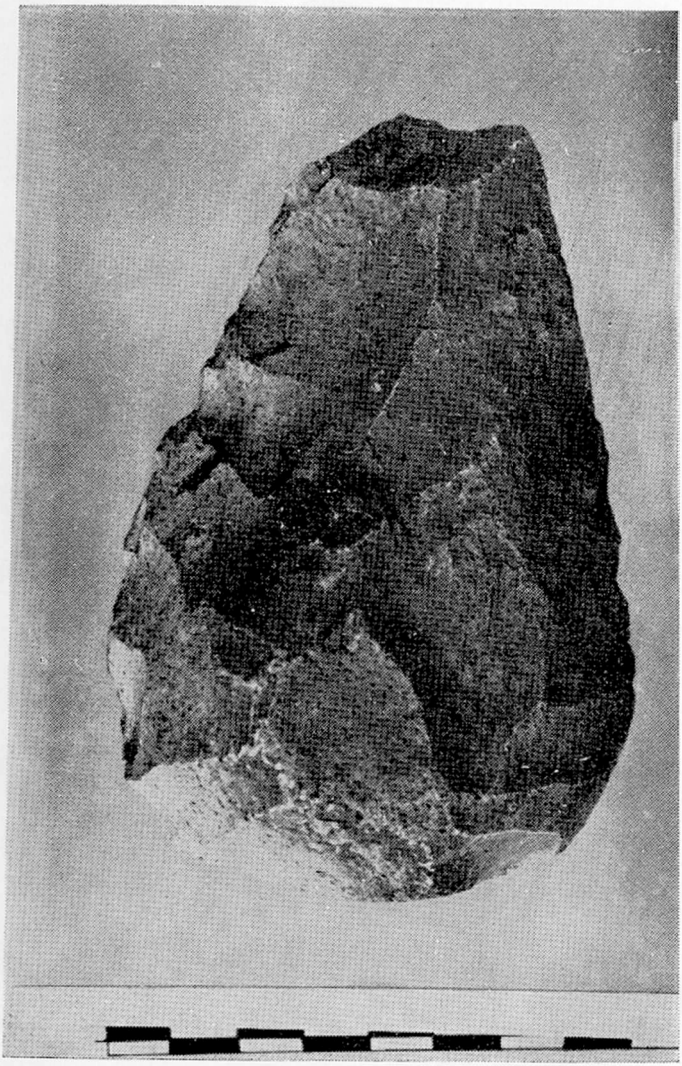
Şekil 7, Fig 7



Levha XIX, Plate XIX
Şekil 9, Fig 9



Levha XX, Plate XX
Şekil 10, Fig 10



Levha XXI, Plate XXI
Şekil 11, Fig 11

# TÜRKİYE ETNOLOJİSİNE AİT BAZI MESELELER

ORHAN ACIPAYAMLI

Konuya girmeden önce bir iki açıklamada bulunmayı faydalı bulmaktayım.

Etnoloji sözü Yunanca olup *etnos* ve *logos* kelimelerinin bir araya gelmesinden doğmuştur. *Etnos* halk, kavim; *logos* söz, bilim anlamlarına gelir [1]. Şu halde *etnoloji* terimi Halk Bilimi veya Kavim Bilimi demektir.

İlk etnoloji çalışmalarında iptidai insan toplulukları nazarı itibara alındı. Zamanla etnoloji faaliyet alanını genişleterek, cemiyet şekli ne olursa olsun halk tabakaları ile ilgilenmeye başladı. Böylece, Bir *Aynu*, bir *Hotanto*, bir *Maori etnolojisinin* yanında bir *Almanya*, bir *Brezilya*, bir *Türkiye etnolojisinden* bahsetmek mümkün olmuştur. *Şu halde, halk kitlesi ile ilgili hususların tetkiki mevzuu bahis olduğu yerde, sözü etnoloji almaktadır.*

Etnoloji alanının genişliğini gören bazı bilginler, bu alandaki çalışmaları kolaylaştırmak amacıyla, ilim âlemine yeni bir takım isimler sürdüler. Bunlardan bazıları, teklif edildikleri kitapların dışına çıkamadı : *An'anevî Etnoğrafya, Sistematik Etnografya, Kültürel Antropoloji* gibi... Bazıları, ancak bir kaç üniversitede tatbikat sahası buldu : *Paleoantropoloji, Paleoetnoloji* gibi... Bu arada bir tanesi Anglo-Sakson memleketlerinde kuvvetli bir şekilde tutundu : *Sosyal Antropoloji* gibi...

Öte yandan, yine halk tabakasına ait verileri incelemek amacıyla ilim piyasasına sürülen *Folklor* ile *Etnografya*, aralarında iş bölümü yaptılar : *Folklor, halk kültürünün manevî belgelerini; etnografya ise aynı soy kültürün maddî belgelerini tesbit ve tanzim vazifesini üzerlerine aldılar* [2]. Etnoloji sahasında çalışan bilginler büyük bir çoklukla bu işbirliğine taraftardırlar. *Bu suretle etnoloji, çalışma alanında doğan bu iki bilim tarafın-*

[1] Paul TOPİNARD, *Eléments d'anthropologie générale.* Paris, 1885, s. 213.

[2] Orhan AYDIN, *Yabancı memleketlerde ve bizde folklor anlayışı.* TFA III, 55, 1954, S. 865-868.