

**SHOVEL-SHAPED ENDSCRAPERS
SHOVEL TECHNIQUE IN BELBAŞIYEN
HAS BEEN DISCOVERED ON THE MEDITERRANIAN
COAST OF ANATOLIA**

Professor Dr. Enver BOSTANCI

The Chairman of Palaeoanthropology The Faculty of the Language,
History and the Geography in the University of Ankara

Abstract

The Shovel-Shaped Endscrapers with and without platform have been found in Belbaşıyen Culture are very characteristic and they have been made on flakes, cores and block of flints. These tools are technically and morphologically and metrically very similar to each other. The Shovel-Shaped Endscrapers have been used for the scratching, scraping, carving, engraving purposes, because all these tools have burins on them and all of them very well prepared.

Shovel-Shaped Endscrapers

Belbaşı is old pass, height about 300 hundred meters from the present Mediterranean sea level and 25 km. far from Antalya and 9 km. far from Beldibi village and near to Beldibi cave, there I have discovered Mesolithic Beldibiyeu and Upper Palaeolithic Kemeriyen cultures on the coast of west side of Antalya bay.¹ The Belbaşı rock shelter in forestic area and there are small valleys towards the sea and the localite is on the highest flat terrace and behind of the rock shelter and the mountains are steep and suitable for hunting. The Belbaşı rock shelter has a good view looking over Antalya bay. The Belbaşıyen cul-

¹- Beldibiyeu is a one culture with I-IV Levels in the stratigraphy and Beldibiyeu I Oldest Neolithic of Anatolia and lower down II, III, VI, Levels they are Mesolithic with geometric microliths. See Bostancı, 1959 PP. 129-178; Bostancı 1968, PP. 55-147.

Kemeriyen is an important Upper Palaeolithic culture with microlithic tools has been done from the pebbles and had been collected from the coast which is thirty meters near Beldibi rock shelter deposits. See Bostancı, 1959. OP. 129-178.

ture has been published in detail in the *Antropoloji, Belleten, Turkish Archeology and Dil ve Tarih-Coğrafya Faculty Magazines*.²

The Belbaşı Rock Shelter has been discovered by me in 1959 and excavations were made in 1960 in September. The Belbaşı Rock Shelter has been formed in the Cretaceous limestone and today has been used by a farmer to keep his animals and their grass.

Belbaşı has been occupied only with the old Neolithic period but the settlement was in a very short time and late Roman period villagers have been used only one side of the shelter, keeping their wealth in a big jug and it has buried in the earth and there wasn't any other evidence for the Proto-Historical and Historical periods has been found during the excavations.³

The Belbaşıyen culture had been excavated into three big parts and there are altogether 12 levels without any interruption in the stratigraphy, in the level I, I have found Beldibiyan, Sauterrean, Natufian influences and Belbaşıyen II has changed and there are more Upper Palaeolithic type of tools and Belbaşıyen III have Nebekien, Beldibiyan and Sauterrean type of tools. I have compared all of these tools with the related cultures in France, England, Germany and Switzerland.⁴

In this article I will have describe some new type of shovel-shaped endscrapers and their techniques which is they are shovel and shovel-

2- Bostancı, 1959. PP. 129-168

Bostancı, 1962. PP. 233-292

Bostancı, 1964. PP. 21-31

Bostancı, 1968. PP. 55-147

Bostancı, 1967. PP. 51-59

Bostancı, 1969. PP. 1-48

3- The Neolithic of Belbaşı has been represented only with a few pottery pieces which is belong Neolithic of Beldibi. Belbaşı has no any Neolithic Level to compare with Beldibiyan I.

4- Bostancı, 1962. PP. 234, 238, 2689.

5- The Saureterrian culture tools has been examined in France, Natufian tools in Cambridge and in Bern, Nebekien tools has been examined in Köln and I have compared with Belbaşıyen Industry. The techniques of these cultures are very similar when should be compare in detail but they have techniques for their own which is different than the others and that is why excavators has been given new names to these cultures see Garrad, 1932. PP. 257-269; Coulonges, 1935. PP 1-55; Rint, 1950. PP. 1-154; Bostancı, 1962. 233-292.

shaped Endscrapers. They are technically different than the scrapers it is known in the other Mesolithic and Upper Palaeolithic cultures. The scrapers are endscrapers type on the blades, flakes, on cores and on the thick pieces of flints. The tools are in shovel in technique and I have called them "Shovel-Shaped Endscrapers". I think this is characteristic of the Belbaşıyen Culture and it is possible to classified them into three category:

1- A) Shovel-Shaped Endscrapers. These tools has been prepare on flat, thick flakes and they are very well done, very similar to Shovel. Pictures I, II and plate 1, no. 1, 4.

B) Shovel-Shaped Endscrapers on thick of block of flints. Plate 1, no. 7 and plate II no. 10 13.

2- Convex Shovel-Shaped Endscrapers on block of flints and on cores has been prepared with Shovel-Shaped technigque. This form has been found in three different type of tools.

A) On a core. Core has flint retauch on the surface and concave edge and interial side has been cut of convexly. This tool has been used more for secraching work. Plate III no. 19-21.

B) On a block of flint. One side concave and one side convex. The Retauch is only one side to make its edge sharp. Plate III no. 22-24. Plate IV no. 31-32.

C) On a flake. This flake is parallel sided and thick. In this tool retauch has been done on the posterior side and convex retauch can be seen. Plate IV no. 29-30.

3- Simple parallel side Shovel-Shaped Enscrapers. They do not look important tools but the technic is shovel type and the purposes is the scrachaing and scraping. Plate IV no. 34-36.

This Group has been drawn in the plate one, no. 1,2,3; no. 4,5,6,; Plate II no. 16, 17, 18. They are Shovel-Shaped Endscrapers and their techniques are not known and I have called them Shovel as can be seen pisture I and II., and plate I no. 1, 3.

The Shovel-Shaped Endscrapers technique have shown that they were made purposely for the aim and artist of Belbaşı had been scraped anything was hard. This tool is 34 mm.. long, 26 mm. wide, 9 m.m.

thick and the cutting edge is 23 mm. and the narrow part to the cutting edge is 21 mm.

The Shovel-Shaped Endscraper in the picture I and plate I, no. 1 has been shown from the above surface. Upper surface of the tool is flat and the retouch area on the front is steep and on the both side corners has been cut of with a inclination towards backwards of the body of the tool and the cutting edge has become larger with this method. The retouch on the upper surface has been prepared very well and the cutting edge is on the straight line. This morphology of the tool has made like a Shovel on the front and it has been used as a Shovel-Shaped Endscraper. The lower surface of the tool had been cut of truncatedly to make a platform. This surface has made sharpe to the edge of the lower and upper surface and this technique forms a Shovel for the tool. That is why I have called this technique, Shovel-Shaped Endscrapers technique.

The Shovel-Shaped Endscraper has three burins, two on the front and the side of the tool, the other one is on the posterior part of the tool. This tool is unique never been seen in the Mesolithic cultures. This technique has been used only by the Belbaşı people and it present in all levels. This technique has been not discovered in Beldibi Mesolithic and also not found in Beldibi Upper Palaeolithic Kemerien levels and I have not seen in Canal cave Lower and Middle Aurignacian Cultures in Çevlik near to old Antioch and this technique has been not mentioned up to now in the Upper Palaeolithic Cultures in the Middle East and Anatolia up to now. *

Plate I no. 7,8,9 have drawn from the upper and lower surface. This tool is belong to the Belbaşıyen culture. It is a Shovel-Shaped Endscraper has been made on a long block of brown color flint. The tool have retouch in all sides and the front has been prepared as a Shovel-Shaped Endscraper. The Shovel technique has been applied and similar like the others has describe above.

6- I have examined Garrod's material had been excavated in Taban, Skhul, Natuf and Zarzi caves. It has been not seen similar technique for the endscrapers. Rust has been published Jabrud Caves material in detail and has been not mentioned Shovel-Shaped tools. I have seen Shanidar Cave material in Bağdat had been excavated by Solecki and has been not found similar tools in the Mesolithic and Upper Palaeolithic Baradostien cultures. (Garrod, 1937 PP. 1-124; Rust, 1950 PP. 1-154, Solecki, 389-425; Bostancı, 1952 PP. 252-294; Bostancı, 1968, PP. 91-147.)

The cutting edge of the tool is a straight line and has been prepared a triangle surface with fine steep retouch. The under surface of the tool has been cut on the front to make a platform and it makes a long angle with the body of the tool. See plate I no 9.

This tool has also Shovel technique like the others has been explained above. This Shovel-Shaped Endschraper has one angle burin on the right and it has been used (Table I no. 7,8,9.) The measurements of the tool as fallows: The length of the tool is 39 mm. and the width 18 mm., and the thicknesses is 13 mm.

Plate II no. 10. the tool has been prepared to a thick block of flint, on the upper surface of the tool there is a steep retouch and the retouch surface is in trapozoit shape. The cutting edge of the tool is straight and lower surface of the Shovel-Shaped Endschraper. There is a platform inclined towards the cutting edge. As can be seen this is a Shovel technique I have explained above. On the left side of the Shovel-Shaped Endschraper there is a very well done angle burining and on the right side it has a flat burin has been used. The measurements of this tool is as fallows: The length of the tool is 44 mm. and the with 26 mm. and the thicknesses 17 mm. and the cutting edge width of the tool is 23 mm. and narrowest part on the front is 22 mm. This Shovel-Shaped tool is belong to the level 9 of the Belbaşı stratygraphy. This tool is so typical for a Shovel tool that is why I have called Shovel-Shaped Endschraper because the under surface tranccatedly cut platform is not large as good as the plate I and fig no. 3,6,9,

Another example for Shovel technique

Shovel technique as older as Belbaşıyen culture as far as I know in the Middle East. Belbaşıyen older than Aziliyen of Europea and the Nebekiyen is the nearest sculture in typology with only both ends pointed long thin lunates and backblades has been dicovered in the Belbaşıyen Culture in the lower level 12.

Plate II. no 13, 14, 15. has been drawn from upper surface and lower surface of the Shovel-Shaped Endschraper and Shovel techique has been applied. It is a thick block of flint 33 mm. long 19 mm. thick and 19 mm. in heigt. Lower face of the tool raphly is flat accept the Sohvel technique work on the front of the Shovel-Shaped Endschraper. The

cutting edge of the tool is 19 mm. and narrowest part of the Shovel-Shaped Endscraper on the front 15 mm. and it is like modern shovel as can be seen in plate I no. 1,4. The main type of Shovel-Shaped Endscrapers have always cutting edge straight and larger than the body of the tool. If we have examined from the upper surface, Shovel-Shaped Endscraper has a triangle retouch area on the front and retouch area has been prepared slightly concave and on the cutting edge has fine retouch. On the lower surface there is a platform with a large angle to the main surface and this is a main characteristic to call this tool Shovel-Shaped Endscraper and it is possible to say Shovel technique has been applied.

In the picture II has been seen lower surface of the Shovel-Shaped Endscraper. The truncated cut platform of the tool is very clear and can be seen the sharp cutting edge. As can be seen in the picture II. There are three main surface of the tool and it makes four with the truncated cut tin edge surface and the left side of the tool makes a burin with upper surface facet. See also in plate I and no. 3.

Plate I and no. 4, 5,6, has been drawn from three sides and it is endscraper on the one side which there is no truncated cut platform, but the tool has a inclination towards the front. The other end of the tool is a Shovel-Shaped Endscraper with truncated cut platform. It can be seen in plate I no. 4 and no. 6. On this thick flake striking platform has been used as a truncated cut platform and retouch is only one the upper surface of the tool. On the right side of the tool there is a deep facet on the upper surface and it makes a perfect angle burin with striking platform of the flake. There is another burin on the other corner of the flake and possible has been used for carving. Burins and Shovel-Shaped Endscrapers on the same side has been not found in the Upper Palaeolithic Cultures in Anatolia. The measurements of these tools are: The length of the tool 39 mm., the width 26 mm., thickness 14 mm., and cutting edge 24 mm. and narrowest part of the front of the tool is 21 mm.

Plate II no. 16, 17, 18 It is a broken flake and all round has retouch from the above surface. On the lower surface there is a platform 25° to the main surface of the flake. From the upper surface it looks like a simple Endscraper but technically this tool is Shovel-Shaped Endscraper one side and the another side have retouch and can be use

as a side scraper as well. Plate II no. 16. The tool can be seen from upper surface and no. 18 is from the lower surface, the platform with Shovel technique on this tool there is one flat burin on the side.

Another flake Shovel-Shaped tool I have found in the collection has been drawn and all its measurements have been given in plate A. On this thick flake has a straking platform 40° to the main surface and the upper surface has been retouch for a scraper. This tool technically is a Shovel-Shaped Endschraper and on the other end of the flake has been prepare a back-de-flute burin. This tool morphologically looks like Shovel-Shaped Endschraper, but it is not a typical one like the number 1, I have been drawn in plate I.

Convex-Concave Shovel-Shaped Endschrapers

The convex-concave Shovel-Shape Endschrapers have been prepare on cores and block of flints. Plate III and no. 19, 22, and plate IV no. 31 are the example for the concave-convex Shovel-Shaped Endschrapers. The measurement of these tools have been shown in plate A. Their convex faces have retouch (no. 22, 31) and on the other surface instead of making platforms, they have done fluting retouch or taking of small flakes to make the cutting edge sharp.

Only plate III no. 19 has flutin tretauch on the convex face and concave face is without retouch and cutting edge is sharp.

Plate III no 22, 23, 24 is a convex concave Shovel-Shape tool and the cutting edge is sharp. The surface of the tool has retouch and under surface has prepared by small flakes with a concave edge. This tool, also is a Shovel-Shaped Endschraper and has been used for carving and cleaning of their sticks and cutting meet of bones.

Plate IV no. 28, 29, 30. The tool is a thick flat flake with a balb on the one side. The balb side of the flake has been made Shovel-Shaped Endschraper with a slightly concave retouch surface and this flake is a parallel sided and upper surface of the tool has three surface but they are flat and the left side has a broken surface and end of this there are angle burins on the both corners.

7- The Table 101, has been drawn by Rust shows Nebekiyen tools vary similar to Belbasiyen, for example two ends pointed lunates and pointed back blades are present. Rust, 1950, Table 101 and 104: Belbasiyen culture have tang points with burins on the point and on the tang. Disk burins, Shovel and Shovel-Shape Endschrapers and a micro-new burin for Belbas and core Steep Scrappers and Nose Scrappers and normal burins on coes.

The cutting edge of the tool is straight line and retouch on the bulb side of the flake has made a concave surface and it looks like a Shovel. It has been used for Scratching their stiks, bones etc. It is different than normal Endscrapers end this one has no platform like the others and it is possible to call "Scratching tool" and I think it is a different type of Shovel-Shape Endscraper without platform under surface. It is obvious that to use this tool it is necessary to hold balber surface and hold with thumb to scrape a bone or a stick or to carve a stone. This tool has been discovered in the level 12 of the deposite of Belbaşı rock shelter. In this level there was Nebekiyen type long half moon lunets and their both points sharply pointed.

I think they have done these tools to catch and to kill surtaine type of animals in the forestic area of Belbaşı.

Plate IV no. 31, 32, 33. This tool has been done on a block of flint and two ends has been prepared as a concave Shovel-Shaped Endscraper. The technique is the same as it has been examined in table III, no 22. It is abvious that they have been used for the same purposes. In this tool, the cutting edges are sharp in the both ends and there is a angle burin on the left side. In this tool, one, side concave-convex and the other side surface is straight. The cutting edge is sharp and straight and retouch only on the under surface. There are retouches lower and upper surfaces of the sides and this is not like the number I (Plarte I) Shovel-Shaped in form but according work has been done it is a scratching tool and for one side only possible to say concave-convex Shovel-Shaped Endscraper. I think this is a second type of Shovel-Shaped Endscraper without platform on the lower surface and without shovel form as can be seen on the plate I no I. In this case there are three Shovel techniques in Belbaşıyen culture. This technique is important and belong to Belbaşıyen culture becouse I have not seen in the other cultures in Anatolia.⁸ There are Upper Palaeolithic and

8- Bostancı, 1952, PP. 137-143;
 Bostancı, 1959, PP. 129-178
 Bostancı, PP. 87-162
 Bostancı, 1962, PP. 235-292
 Bostancı, 1964, PP. 21-31
 Bostancı, 1967, PP. 51-60
 Bostancı, 1968 a PP. 57-147
 Bostancı, 1968b PP. 19-53
 Bostancı, 1969a PP. 83-99

Mesolithic Cultures like Natufian, Nebekiyen, Falitian, Beldibiyen, Kemeriye, Baradostiyen, Atlitin, Lower and Middle Aurignacian, Emiraniye but none of the excavators have been mentioned about the Shovel technique on the Endscrapers in the Middle East. This technique first time has been discovered in Belbaşı rock shelter. There are some other techniques like Disc burins and tang points have been published in detail. (Bostancı 1975 sa. 69-79)

Plate IV no 34, 35, 36. It is a different scratching or scraping tool has been found in level 2 of Belbaşı Culture deposits. The flake tool is interesting like the others has been describe above. The tool is parrallel side and only in one side Shovel technique is present. On the righth side of the tool there is one Angle burin. There are two surface of the tool and lower surface has retouch with a inclination to the main surface. This technique makes a simple Shovel-Shaped and I have called Paralell Sided Simple Shovel-Shaped Endscraper. On the upper surface of the tool there is no retouch and the cutting edge is very sharp

As can be seen that this technique is continuing down to other levels in the Belbaşı deposits and that is why I have called Belbaşıyen. This is not of course only the resason why it is called Belbaşıyen. There are some other techniques stratigraphicly older and some of them have not discovered in the other stone age cultures. Tools are Upper Palaeolithic type and Mesolithic elements are Microburins, Lunates,

-
- Bostancı, 1969b PP. 45-82
 Bostancı, 1969c PP. 1-48
 Coolonges, 1935, PP. 1-55
 Rust, 1950, PP. 1-154
 Beezillon, 1968, PP. 232-245
 Tixier, 1963, PP. 1-209
 Garrod, 1937, PP. 1-240
 Solecki, R.S. 1955a, PP. 389-425
 Solecki, R.S. 1955b, BP. 14-38
 9- Garrod, 1930, PP. 9-43
 Garrod, 1932, PP. 257-269
 Garrod, 1937, PP. 4-55
 Garrod, 1938, PP. 1-26
 Garrod, 1951, PP. 121-190
 Garrod, 1953, PP. 13-38
 Garrod, 1954, PP. 155-192
 Garrod, 1955, PP. 141-162
 Garrod, 1957, PP. 211-227

Triangles, Sauterrean and Nebekiyen elements have made this culture different than the others we know in the Middle East and Anatolia.¹⁰

Plate III and no. 25, 26, 27. It is a Endscraper has been made on a flake. The cutting edge is straight and 22 mm. but upper surface of the Endscraper is concave and there is a steep retouch in triangle form. The narrowest part on the front is 20 mm. The other measurements are given on the plate A. It is possible to call this tool Concave Simple Shovel-Shaped Endscraper.

Shovel Technique On Bone In Belbaşiyen culture.

The upper layer A₁ has yielded one broken bone, one side silatly flat and the inside long and narrow. This bone 80 mm. long, 18mm in width and 11mm. in thickness on the left side and thicknesses of the bone tool is 3,5 mm. This bone has been made like a Shovel on front to use digging plant routs and clining meat of the bones and of their frouts.

The bone has a inclaine surface on the front and it is abvious purposely has been cut becouse of its surface has polished and it is 44 mm. in withd and the cutting edge is 15 mm. in length. This flat bone has a sharp surface with a surface incline towards the cutting edge. This technique has been used on the flint making simple Shovel-Shaped Endscrapping tool. The other end of the bone is broken and uneven and the side edge has been left raph. It is interesting to note that Shovel technique has been applied in Belbaşiyen Culture and it was possible to fine in every level Shovel-Shape Endscrapers and their variations has been described in this article. This is only the bone tool has been found in Belbaşı rock shelter accept needles and has been not discovered in Beldibi Mesolithic or Upper Palaeolithic Kemeriye and I have not found in the upper Palaeolithic levels of Canal cave and have not mentioned by the other excavators in the Middle East.

10- Bostanci, 1959, PP. 129-178
 Bostanci, 1962, PP. 233-292
 Bostanci, 1968, PP.55-147
 Brezillon, 1963, PP. 232-245
 Coubriges, 1935, PP. 1-55
 Garrod, 1932, PP. 257-269
 Rust, 1950, PP. 1-154
 Tixier, 1963, PP. 1-209
 Ralozat, 1955, PP. 1-522

The measurements of the shovel-shaped Indraperis from Bethayns Culture

Table A

Levels of the De-potes	Tools Numbers on the Tables	Depth of reach on Surface	Curving Edge Width	Narrowest width on the front	The Tools Length	The Tools Width	The Tools Height	Number of Burins	The Degree of the Platform and reach Surface
A ₁	1	10	23	21	34	26	9	Aug 8	PS 30°
A ₁	37	9	20	19	36	23	11	Bf. 1	PS 40°
A ₁	31	11	15	16	39	18	13	Bf. 1 ³	PS 35°
A ₂	34	6	20	20	40	23.5	9.5	Aug 1	PS 30°
A ₂	22	11	15.5	18	39	18	13.5	—	PS 25°
A ₂	4	9	24	21	39	26	14	Aug 1	P 40°
A ₂	16	8.5	17	23	32	25	9	Ft. 1	PS 25°
A ₂	—	—	—	—	—	—	—	—	—
A ₂	25	14	22	20	28	27	13	—	—
A ₂	19	15	38	33	38	34	17	—	PS 60°
A ₂	7	12	15.1	16	39	18	13.1	Aug 1	PS 40°
A ₂	13	16	19	16	37	19	17	—	PS 20°
A ₂	—	—	—	—	—	—	—	—	—
A ₂	10	17	20	21	44	26	17	Aug 1	PS 10°
A ₂	—	—	—	—	—	—	—	—	—
A ₂	—	—	—	—	—	—	—	—	—
A ₂	28	13	26.5	26	39	29	11.5	Aug 2	PS 75°

Summary and Conclusion

Belbaşı is a Rockshelter Near to Antalya on the Mediterranean coast of Anatolia. The excavation has been done in 1960 and the Culture have Natufian, Soluterian, Nebekiyen influences and some interesting tools there are has been not found in the other Mesolithic and upper Paleolithic cultures.

Belbaşı Rockshelter is in the forestic area on the mountains about 300 hundred meters high from the present sea level of the Mediterranean. In this culture Geometric tools, various type of microburins and Tanged points with burins on the tip as on the stemmed and Disc burins on the disk cores and Shovel-Shaped Endscrapers have divided in three groups. The type of the Belbaşı tools have been described in this article and has been drawn on the plates I, IV and picture 1, 2 belong to Belbaşı Culture. The tools have been found in Belbaşı Culture are very characteristic and have made on flakes cores and block of flints. These tools are technically and morphologically and metrically very similar to each other. Shovel-Shaped Endscrapers have been used for the scratching, scraping, engraving purposes because all these tools have burins on them and all of them very well done.

Belbaşı people have left very artistic objects and they have shown their ideas and also what they could do and how they were hunting with their tools. In the area there are many other caves I have excavated and most of them they were summer season residences and only Belbaşı rockshelter was properly occupied and they have left all their tools in the earth. Belbaşı fossil man remains are good evidence that they were primitive hunters.

The tools which I have examined in this article technically has been divided into three category.

- 1- Shovel-Shaped Endscrapers with platform.
- 2- Shovel-Shaped Endscrapers without platform.
- 3- Simple Parallel Sided Shovel-Shaped Endscrapers. (Type de Saint-Sourd)

1- Shovel-Shaped Endscrapers with platform has been divided into three groups.

a- Straight working edge with platform on the lower surface. Plate I, Number 1.

b- Concave working edge with platform on the lower surface. Plate II, Number 13.

c- Convex working edge with platform on the lower surface. Plate V, Number 37.

2- Shovel-Shaped Endsrapers without platform on the lower surface.

a- Concave-convex Shovel-Shaped Endsrapers with retouch on the lower surface. Plate III, Numbers 22, 24.

b- Convex-Concave Shovel-Shaped Endsrapers on a core with retouch on the convex surface. Plate III, Numbers 19, 21.

c- Concave Shovel-Shaped Endscraper on the balber side. Retouch is on the balber side and it has been prepared on a flake. Plate IV, Numbers 28, 30.

d- Simple Straight edge Shovel-Shaped Endscraper on a thick flake. The Retouch has been prepared on the lower surface. Plate IV, Numbers 34, 36.

3- Simple with concave surface Shovel-Shaped Endscraper without platform. Has been prepared on a flake. (Type de Saint Sourd.) Plate III, Numbers 25, 27.

The Shovel-Shaped tools and their variations has been prepare on the flakes, cores and block of flints. Techniqualy and morphologicaly and even metricaly they are very similar to each other. (See Table A) The tradition of technique has been aplied by the Belbaşıyen pelople on bones as well and this is unknow case has not been found in Anatolia and in the Middle East upper Paleolithic Cultures.

Bibliography

Balout, L. 1955, *Préhistoire de L'Afrique du Nord*. PP. 1-522

Bostancı, E. 1952. *Gökırmak Vadisinde Prehistoar Araştırmaları, Yeni Paleolitik Buluntular*. Ankara Üniversitesi Dil ve Tarih-Coğrafya Fakültesi Dergisi Cilt X., sayı 1-2., pp. 137-143, levha I-VII.

- Bostancı, E.** 1959. *Researches on the Mediterranean Coast of Anatolia, A new Palaeolithic Site at Beldibi near Antalya.* *Anatolia*, vol. IV, pp. 129-178.
- Bostancı, E.** 1961. *Güney-Doğu Anadolu Araştırmaları. Dülük ve Kartal'ın Chelleen ve Acheulleen Endüstrileri.* *Researches in East Anatolia the Chelleen and Acheulleen Industry of Dülük and Kartal.* *Anatolia* vo. IV pp. 87-162.
- Bostancı, E.** 1962. *Belbaşı Kaya Sığınağında Bulunan Üst Paleolitik ve Mezolitik Endüstri.* *Belbaşı Kültürü. A New Upper Palaeolithic and Mesolithic Facies at Belbaşı Rockshelter on the Mediterranean Coast of Anatolia. The Belbaşı Industry.* *Belleten* pp. 233-292.
- Bostancı, E.** 1964. *Beldibi Kazılarında Çıkan Önemli Sanat Eserleri.* *Important Artistic Objects from the Beldibi Excavations.* *Antropoloji* vol I, sayı 2, pp. 21-231.
- Bostancı, E.** 1967. *Beldibi ve Mağaracık'ta Yapılan 1967 Yaz Mevsimi Kazımları ve Yeni Buluntular.* *Türk Arkeoloji Dergisi*, no XVI-1, pp. 51-60.
- Bostancı, E.** 1968 a. *Beldibi, Belbaşı Mezolitik ve Diğer Mezolitik Buluntularla Olan Münasebetleri.* *The Mesolithic of Beldibi and Belbaşı and Relation With the Other Findings in Anatolia.* *Ankara Üniversitesi Dil ve Tarih-Coğrafya Fakültesi Antropoloji Dergisi* vol. 3, no. 3, pp. 55-147.
- Bostancı, E.** 1968 b. *Mağaracık Çevresinde 1966 Yaz Mevsimi Kazıları ve Yeni Buluntular.* *Ankara Üniversitesi Dil ve Tarih - Coğrafya Fakültesi Antropoloji Dergisi* vol. 3, no. 3, pp. 19-53.
- Bostancı, E.** 1969 a. *A Research on the new Middle and Upper Pleistocene Man Cultures in Şenköy Antalya.* *Antropoloji* no, 5, pp. 83-99.
- Bostancı, E.** 1969 b. *A Research on the Proto-Solutrean and Adıyamanlıyan Cultures Surrounding of Adıyaman.* *Antropoloji* 1969-1970 no. 5, pp. 45-82.
- Bostancı, E.** 1969 c. *Belbaşıyan Kültürü ve Bu Kültür Üzerine Yapılan Bir Tenkid.* *Ankara Üniversitesi Dil ve Tarih-Coğrafya Fakültesi Dergisi* vol. I no. 3-4 pp. 1-48.

- Brezillon, M. N.** 1968. *La Dénomination des objets de Pierre Taillée*. IV e Supplement a Gallia Prehistoire. Centre National de la Recherche Scientifique. pp. 232-245.
- Coulonges, F.** 1935. *Les Gisements Préhistoriques de Sauvosterre - La Lemaucelle*. (let-et-Gironne) Archives de L' Institute de Paleontologie Humaine pp. 1-55 plates I-VI.
- Garrod, D.A.E.** 1930. *The Palaeolithic of Southern Kurdistan*- Excavations in the caves of Zarzi And Hazar Med. Bulletin of the American School of Prehistoric Research. pp. 9-43.;
- Garrod, D.A.E.** 1932. *A New Mesolithic Industry: The Natufian of Palestine*. The Journal of the Royal Anthropological Institute of Great Britain and Ireland. L. XII. pp. 257-269.
- Garrod, D.A.E. and Bate, D.M.A.** 1937. *The Stone Age of Mount Carmel*. Excavations of the Wady el Mughara. vol. 1 Oxford at the Clarendon press pp. 4-55.
- Garrod, D.A.E.** 1968. *The Upper Palaeolithic in the light of Recent Discoveries*. Proceedings of the Prehistoric Society for 1938. New Series VI. IV. part 1-2. pp. 1-26.
- Garrod, D.A.E.** 1951. *A Transitional Industry from the base of upper Palaeolithic in Palestine and Syria*. The Journal of the Royal Anthropological Institute of Great Britain and Ireland. vol. LXXXI, pp. 121-130.
- Garrod, D.A.E.** 1953. *The Relations Between Southwest Asia and Europe in the later Palaeolithic Age*. With special reference to the origins of the Upper Palaeolithic blade cultures form. World Hist. 1 pp. 13-38
- Garrod, D.A.E.** 1954. *Excavations at the Mugharet el-Kibara, Mount Carmel 1931*. The Aurignacian Industries. Proceedings of the Prehistoric Society. New series vol. XX pp. 155-192.
- Garrod, D.A.E.** 1955. *The Mugharet el-Ewreh in Lower Galilee: Type station of the Emiran Industry*. The Journal of the Royal Anthropological Institute of Great Britain and Ireland. pp. 141-162.
- Garrod, D.A.E.** 1957. *The Natufian Culture: The Life and Economy of a Mesolithic People in the near east* British Academy. pp. 221-227.

- Rust, A.** 1950. *Die Höhlenfunde von Jabrud. (Syrien)* pp. 1-54. Table 1-110.
- Solecki, R.S.** 1955a. *Shanidar Cave, a Paleolithic site in Northern Iraq.* Ann. Rept. Smithsonian Inst., for 1954. PP. 389-425.
- Solecki, R.S.** 1955 b. *Shanidar Cave, a Paleolithic site in Northern Iraq.* Sumer II. PP. 14-38.
- Tixier, J.** 1963. *Typologie de L'Épipaléolithique de Magreb.* Memories du Centre de Recherches Anthropologiques, Préhistoriques et Ethnographiques. Alger pp. 1-209.

Explanation of Pictures and Plates

Picture I. Shovel-Shaped Endscraper from above.

Picture II. Shovel-Shaped Endscraper from under surface.

Plate I. Shovel-Shaped Endscraper. No. 1 Top Layer; No. 4 Layer 3; No. 3 Layer A6.

Plate II. Shovel-Shaped Endscraper. No. 10 Layer 9; No. 13 Layer 7; No. 16 Layer 8.

Plate III. Concave Shovel-Shaped Endscraper on a core, No. 19 Layer 6; No. 22 Convex Shovel-Shaped Endscraper has been prepared on a thick block of flint, Layer 2; No. 25 Simple Concave Surface Shovel-Shaped Endscraper without platform has been prepared on a flake.

Plate IV. No. 28 Concave Shovel-Shaped Endscraper on the balber side of a flake and an Angle burin on the side.

No. 31 Concave-Convex Shovel-Shaped Endscraper on a block of flint with a burin on the side. No. 34 is a Simple Parallel Sided Shovel-Shaped Endscraper on a thin flake.

Plate V. Cutting edge convex from upper surface Shovel-Shaped Endscraper with a Bec-de-flute burin on the point. Numbers 37, 38, 39.

Plate V. Shovel-Shaped Scratching bone tool has been drawn in the numbers 40, 41, 42. All of these tools have been drawn in natural size.



Picture 1.



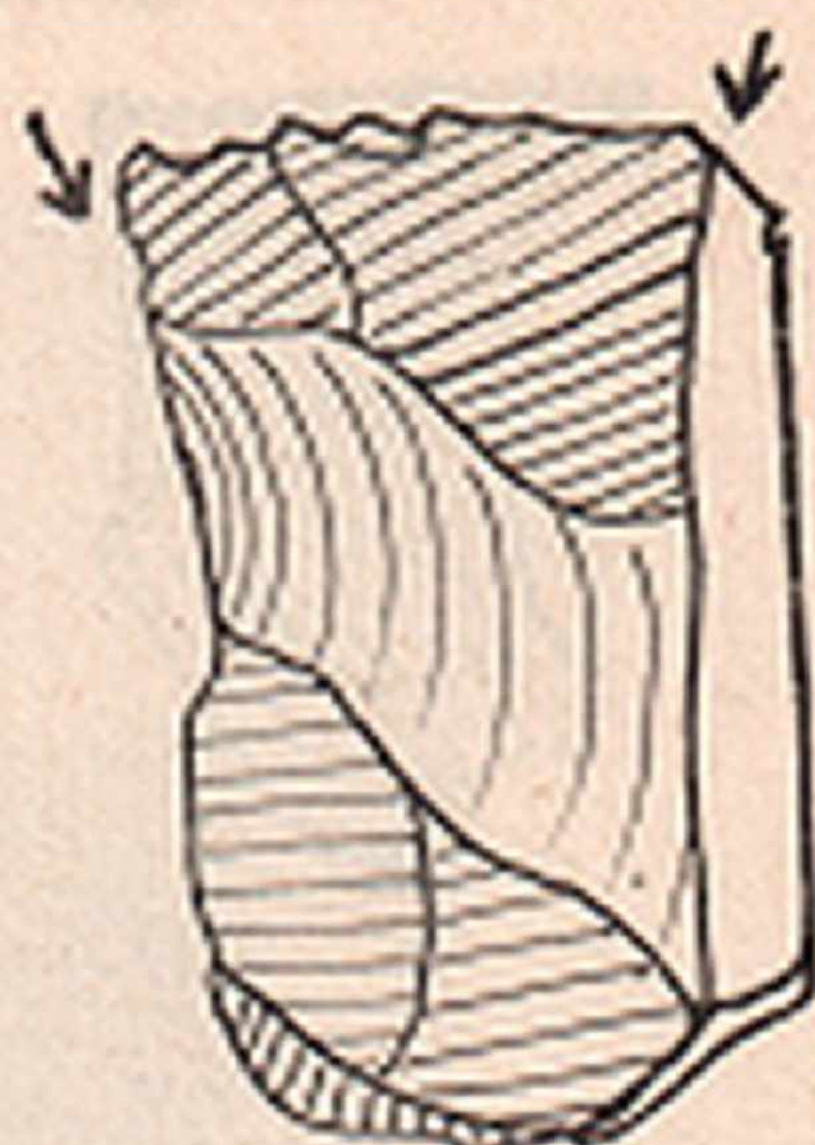
Figure 2.



10



11



12



13



14



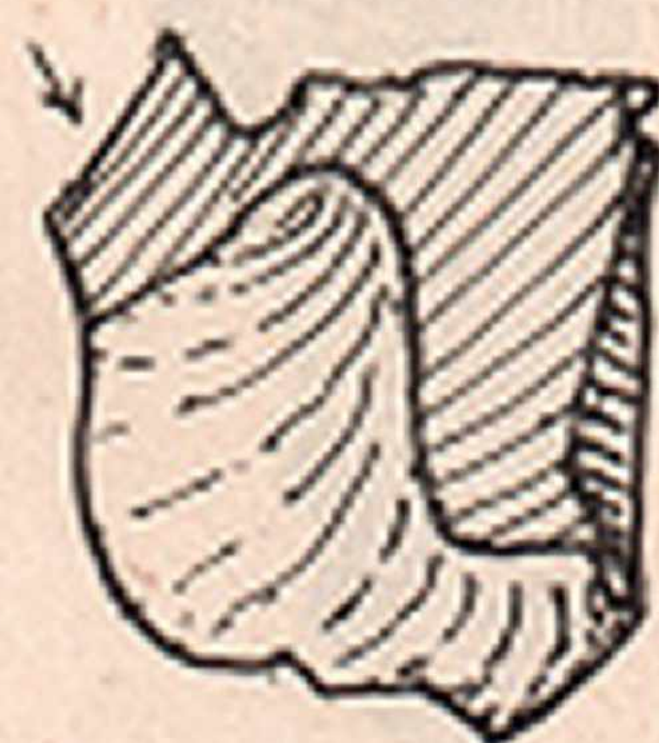
15



16



17



18

1cm.

Plate II



19



20



21



22



23



24



25



26



27

1cm

Plate III



28



29



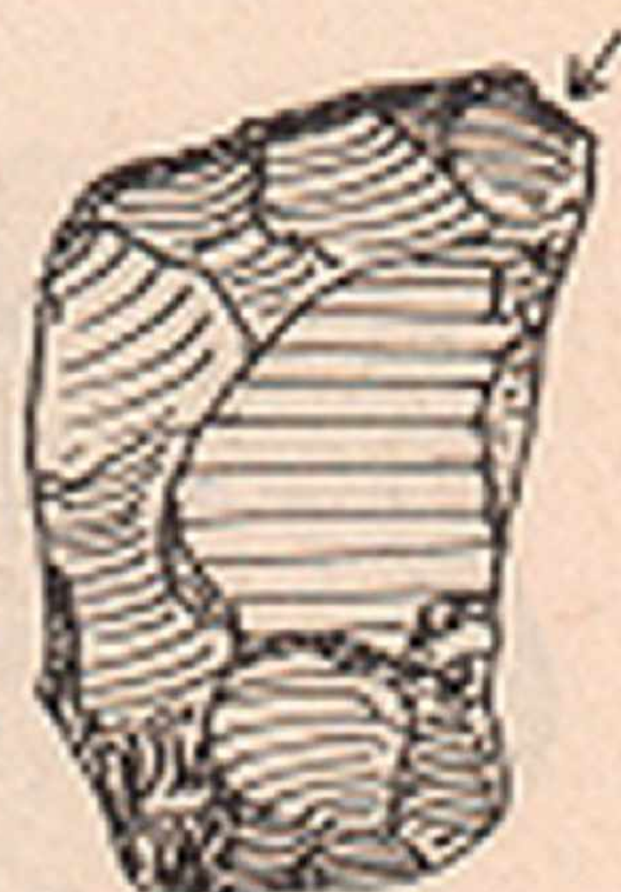
30



31



32



33



34



35



36

1 cm.



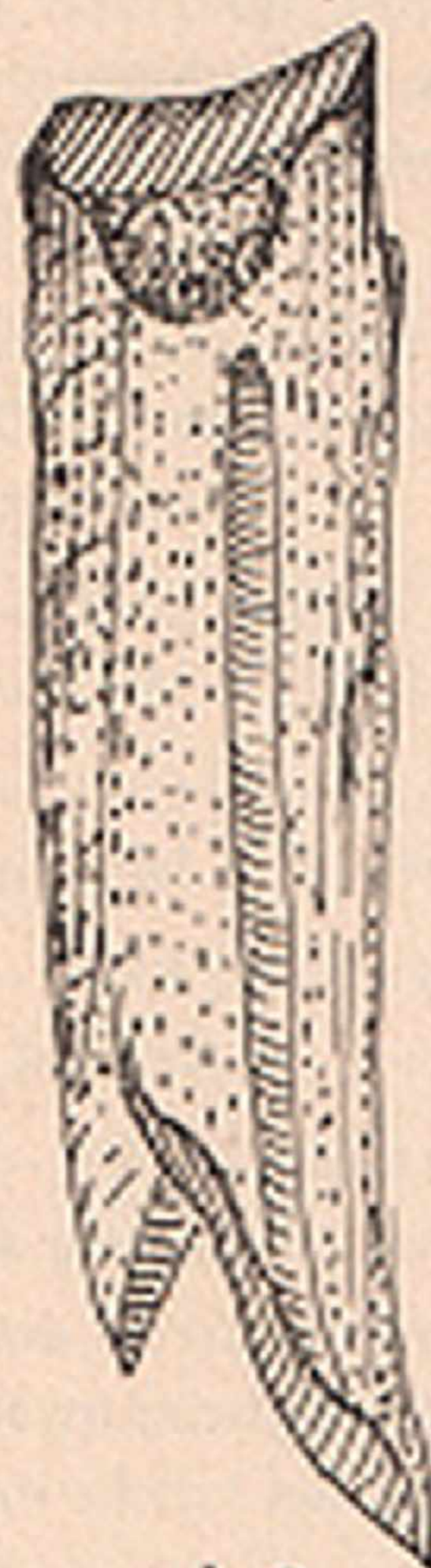
37



38



39



40



41



42

1cm.

Plate V