

## FINDS OTHER THAN POTTERY

In this chapter we will discuss the remaining finds from the Early Neolithic I strata at Sesklo. Although the total number of artefacts, other than sherds, is rather small, making it impossible to establish a typology or to use them for comparative purposes, we want to include them for completeness sake. Hence we will give a kind of catalogue, arranged according to the type of objects. These will include the material from stratum D. As mentioned in chapter II, this does not contain any pottery, but the faunal remains indicate that the mode of subsistence was agricultural. This brings into focus the problem of the existence or non-existence of a Pre-Pottery Neolithic. It is one of the subjects to be discussed at the end of this chapter. This will be followed by a few short notes on the chronology of the Early Neolithic.

IV. 1. *CHIPPED STONE*

We will restrict our observations to the chipped stone material from section C, for the sole reason that this is the best sample<sup>1</sup>. In total it consists of 184 fragments of obsidian or flint. Nearly half of the fragments (86) consists of generally extremely small debitage chips. Most of the latter have been recovered from stratum D; therefore one could conclude that this is an archaic artefact. The greatest care should, however, be exercised because many chips from higher strata will have been lost since the soil was not sieved. This would be the case especially with stratum A which has an extremely hard soil, in which microlithic fragments might easily be overlooked.

The rest consists entirely of blades. Of these not a single one has been deliberately retouched. Only a faint nibbling of the edges could be an indication of use. In the few cases where silica gloss can be seen

on one of the edges do we know for certain that the blades have been used. The fact that the vast majority of the blades consists of fragments indicates that they were used until they were completely worn and needed renewal. This may be due to the fact that the raw material for manufacture was not available close to the settlement.

Among the material excavated there were many quartz flakes. Generally they are not thought to have served as implements, since the material is far too brittle to allow prolonged and heavy use. For this reason they were not recovered with particular care during the excavation. Quartz is, however, readily available at Sesklo, whereas both obsidian and flint have to be imported. Therefore we think it may certainly have been used, e.g. in cutting cereals and wild plants and also for other purposes not requiring an implement of particularly great strength<sup>2</sup>.

The complete absence of cores and core fragments, be they of flint or obsidian, is remarkable. A few possible rejuvenation flakes have been recovered and one or two small fragments which would resemble a core but for the fact that the scars are far too narrow for this to be convincing. Although there are numerous extremely small chips and several rather irregular debitage lumps, we assume that the implements were manufactured at an entirely different site, e.g. at a kind of distribution centre or even at source. Despite the fact that chips are essentially connected with tool manufacture, the products of such activity are not known.

IV. 1.1. *Obsidian* (fig. 12 no 1-3; 6)

Around 73% of the chipped stone artefacts have been made of obsidian – 133 pieces. The material has been analysed by Prof. Colin Renfrew (Renfrew, Cann and Dixon 1965, p. 225). He discovered

that the provenience had to be the island of Melos, situated some 320 km. southeast of Sesklo in the Aegean sea.

Among the fragments were two complete blades and 58 blade fragments. The rest (73 fragments) consisted of debitage material, largely small chips of a width less than 5 mm. From stratum D, only 4 blade fragments, but 24 debitage chips were recovered; from stratum C, 24 blade fragments and 23 chips; from stratum B, 23 blade fragments and 21 chips and from stratum A, 8 blade fragments and 5 chips.

Among the blade fragments we could discern three groups:

- a. Width around 7 mm. Length varying between 7 and 14 mm, mostly around 10 mm. One complete blade, 7 mm wide, 10.6 mm long.
- b. Width between 9 and 13 mm. Length varying between 12 and 27 mm, most often 20 mm. One complete blade 10 mm wide, 38.8 mm long.
- c. Width over 15 mm. Length 16 - 17 mm.

Some blade fragments show a bulb of applied force, indicating that they have been knapped using a percussion or pressure technique. Judging from the simplicity of shape it was the former.

#### IV. 1.2. *Chert implements* (fig. 12 no 4-5; 7-9)

The total chipped chert consists of 51 fragments. The colours range from whitish to dark red-brown, the latter being the most common. The material is of granular fine quality and shows generally a rather dull lustre. It is not locally found. It has not yet been subjected to analysis in order to trace its origin. However, the chert artefacts at all Early Neolithic sites in the plain of Larisa and its immediate surroundings seem to have been manufactured of the same material. Texture and lustre are of a similar quality and the colour range is in all cases identical. Possibly the material for all these implements originated from chert boulders in the piedmont fans of the lower Pleistocene Pinios terrace (Schneider 1968, p. 38).

The bulbs of percussion indicate that the blades have been knapped from the core using a percussion or pressure technique. In a few cases traces of cortex are visible on the blade.

Among the chert implements were four complete blades, 34 blade fragments, of which five had silica sheen on the edge(s), and 13 debitage chips. From stratum D, 4 blade fragments and 6 debitage chips were recovered; from stratum C, 5 blade fragments and 3 chips; from stratum B, 15 blade fragments and 3 chips and from stratum A, 14 blade fragments and 1 chip.

As with the obsidian the blade fragments could be divided into three groups:

- a. Width around 7 mm. Length ranging between 8 and 11 mm. Two complete blades, one 20.5 mm. and one 22 mm. long.
- b. Width between 9 and 13 mm. Length ranging between 15 and 20 mm. in one case 32.3 mm. Two complete blades, one 44.1 and one 23.6 mm. long.
- c. Width over 15 mm. Length ranging from 23 to 32 mm.

The sickle blades have not been prepared by deliberate retouch (fig. 12 no 7-9). The edges show zones of chipping as a result of use – especially the edge with silica gloss. As to the size, sickle blade fragments are slightly longer than the other fragments: there is one of width 9 mm. and length 15 mm.; three of widths between 9 and 12 mm. and lengths of respectively 22.9, 30.7 and 33.9 mm.; one of width 16 mm. and length 30.4 mm.

Throughout the Early Neolithic period, chipped stone use is restricted to blades; at least this is the case in Thessaly. We suppose that the harvesting of cereals, the cutting of wild plants, the preparing of meat and other food and the processing and preparing of skins were the main tasks chipped stone was used for. They may have served another purpose too: although wooden and bone implements may have been the more important components of the Early Neolithic tool-kit, they had to be manufactured using chipped stone. In view of the bone analysis (Appendix II) it is hardly surprising that hunting tools are virtually absent.

#### IV. 2. *MISCELLANEOUS STONE ARTEFACTS*

The stone artefacts from section C are not very numerous as is normal in Early Neolithic I as-

semblages in Greece<sup>3</sup>. A main division into (a) 13 polished implements and (b) 32 grinding and pounding tools can be made, to which another (c) 3 doubtful stone artefacts may be added. Microscopic analysis has not been done and generally we do not have very clear indications of use. Stratum B yielded the largest quantity of objects, respectively 8, 19 and 1; from stratum C 5, 12 and 1 respectively were retrieved. The rest are from stratum D, since stratum A was completely devoid of these objects.

Most polished implements are made of "greenstone", which may be serpentine or green jasper, probably of East Thessalian provenience, if not from the direct neighbourhood of Sesklo. Some are made of a local schist. The bolas have been made of white marble of unknown provenience. Coarse grinding slabs are made of porous rock from the volcano at Mikro-Thive. Fine grinding slabs are of local schist. Hand-stones and pestles are of local cobbles, a grey stone or greenstone. The other artefacts are of local cobbles and of porous volcanic rock from Mikro-Thive.

Most of these objects were used throughout the Neolithic, or at least during the Early and Middle Neolithic periods, at all sites in Greece. The exception is the coarse flat celt or hoe, which seems to be restricted to Early Neolithic I. For the bolas and the objects of unknown use we have no indication of temporal or geographical distribution.

#### IV. 2.1. *Polished stone tools*

- a. The heavy rounded "axe" (fig. 13 no 1) Sample: 3  
Heavy pounding implement with rather blunt edge. 7 - 10 cm long. Reasonably well polished surface.
- b. Flat celt or "hoe" (fig. 13 nos. 2-3) Sample: 3  
Flat chopping tool, oval or rectangular in shape. Edge chipped but not very sharp. 6 - 10 cm long.
- c. Chisel (fig. 13 no 4) Sample: 2  
Narrow, slender cutting implement. Symmetrical section. Sharp straight edge with two working platforms. Highly polished surface. 5 - 7 cm long; 0.7 - 1.5 cm wide.
- d. Adze (fig. 13 no 5-7) Sample: 2  
Asymmetrical convex chopping implement. Sharp edge. One with a second sharp edge along the longitudinal side, where it had been cut from the parent stone. Highly polished surface. 6 - 8 cm long; 3.5 - 6 cm wide.
- e. Small axe (fig. 13 no 6) Sample: 1  
Almost rectangular, slightly convex chopping implement. Symmetrical profile. Very shallow working platform. Sharp edge. Highly polished surface. 6 cm. long; 3.5 cm. wide.
- f. Bolas (fig. 13 no 8-9) Sample: 2  
Almost completely globular projectile. Slightly tapered, perfectly smooth drill hole through centre. Both well polished. Discovered close together, seemingly as a set. 5.75 cm high. Maximum diameter 5.8 - 6.2 cm.

#### IV. 2. 2. *Grinding and pounding tools*

- a. Grinding slab, coarse Sample: 8  
Oval slabs of volcanic rock which have been ground until the upper surface showed a concave appearance. One case has an additional depression in the centre of the upper surface. About twice as long as they are wide - length around 35 cm.
- b. Grinding slab, fine Sample: 1  
Rounded slab of schist. Lower surface rough, convex. Upper surface very smooth, strongly concave appearance. Length 11.8 cm, width 4.1 - 6.3 cm, height 1.2 - 1.7 cm.
- c. Hand-stones Sample: 21  
Oval or round, disc-shaped (14) and oblong, plano-convex (7) cobbles. The lower surface displays a very smooth, worn appearance and may even show a slight concavity. Smooth side may have polishing lustre. Diameter of round examples 6 - 10 cm. Length of oblong examples 8 - 15 cm.
- d. Pestle (fig. 13 no 10) Sample: 3 fragments  
Cone with a tapered end which shows signs of use for pounding and grinding. May also have served as hammer-stone. Surface polished smooth, but has no lustre. Length around 7 - 10 cm. Maximum diameter fragments 4.5 cm.

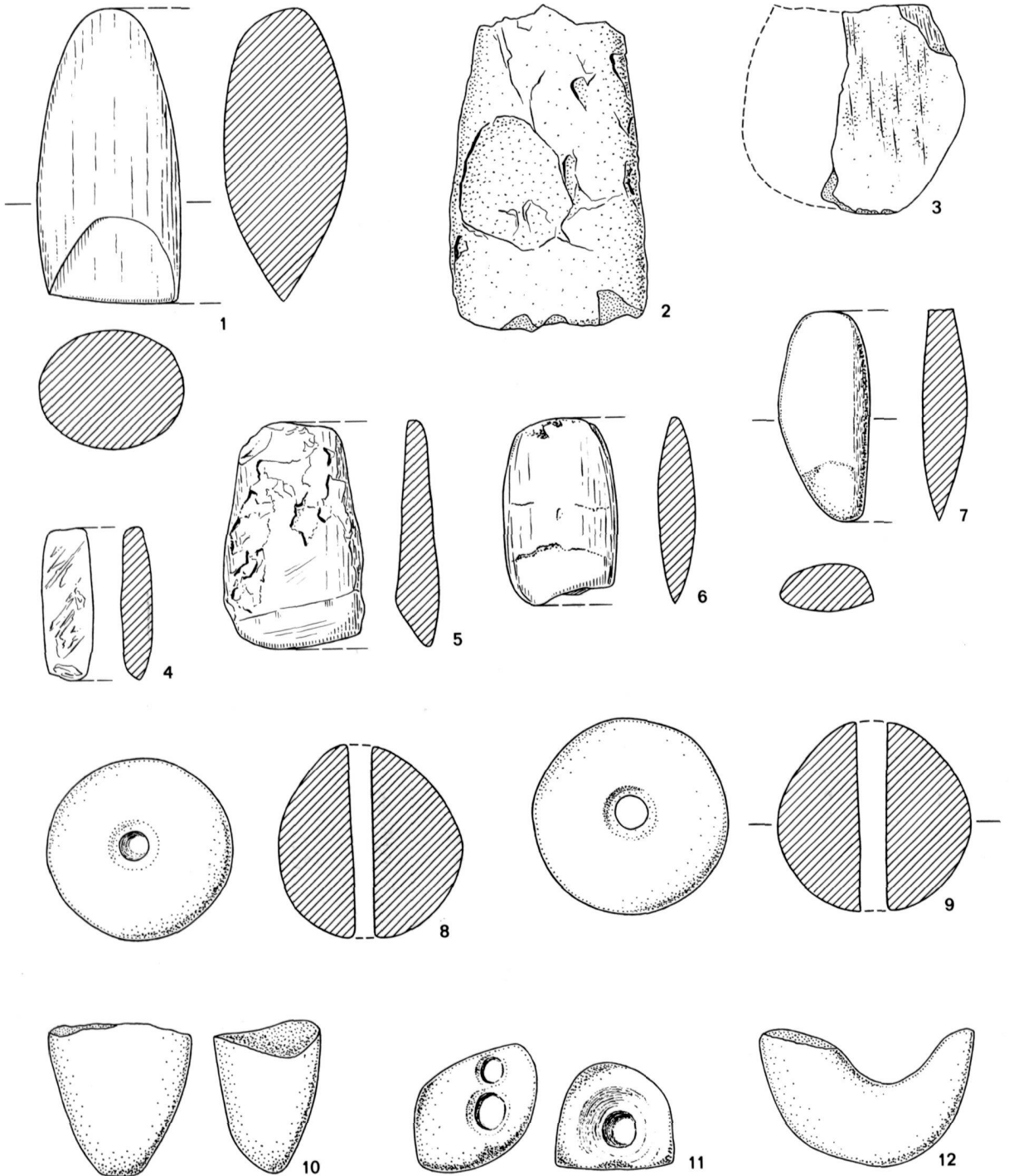


Fig. 13 Ground stone tools.

IV. 2.3. *Other stone artefacts*

- a. Pivot-stone Sample: 1  
A roughly quadrangular, flat stone disc with a neatly outlined depression in the centre of the upper surface. Size 28 x 28 cm.
- b. Perforated stone object of unknown use (fig. 13 no 11) Sample: 1  
Cobble with quadrangular flat lower surface. Two hourglass perforations from the convex upper surface to the flat bottom, one small, one large. Flat side very smooth and abraded. Size 4.8 x 3.2 x 3.1 cm.
- c. Stone "digging-stick" (fig. 13 no 12) Sample: 1  
Horn-shaped fragment of volcanic rock. Lower end flattened and abraded -through pounding? Resembles present Indonesian ulek, a kind of pestle. Diameter 1.1 - 2.9 cm, length 7 cm.

IV. 3. *BONE IMPLEMENTS*

Out of 57 fragmentary or complete specimens of worked bone artefacts, only 24 permitted identification to implement type, revealing the repertory of shapes to be very simple with no characteristic items<sup>4</sup>. It consisted of awls, spatulas, adzes/chisels and implements considered to be pottery burnishers. With the identification of the tool types some problems arose, since awls and burnishers have a similar shape, except for the basal part, which is sharp in the case of the former and rounded in the case of the latter. This makes it impossible to identify a fragment without a base. Microscopic analysis has not been carried out.

From stratum C and B equal amounts of these objects were recovered - 21 in each; from stratum D, 8 fragments and from stratum A, 6 fragments. We discovered that in several levels some sort of concentration could be discerned whereas other levels did not contain any of these objects all - e.g. the bone implements of stratum B were all found in trench 1 level 7/8 and trench 2 level 2/3.

All implements are present at all Greek sites throughout the entire Neolithic sequence, except for the adze/chisel which is found only during the Early Neolithic.

*Description*

- a. Awls (fig. 14 no 3; 5-6) Sample: 6  
Long awls made out of the radius (proximal end) or tibia (distal end) of sheep/goat or pig. Between 14 and 16 cm long (fig. 14 no 3). The fine awl is made of the tibia (distal end) of hare. Medium-sized piercing tool. Length between 6 and 7.5 cm. (fig. 14 no 5). The short awl is made of the ulna (proximal end) of sheep/goat. Rather short and broad at the top - a sharp piercing tool. Length between 5 and 6.5 cm. (fig. 14 no 6), rare.
- b. Spatulas (fig. 14 no 2) Sample: 6  
Made of very thin, long slivers of rib, the larger of cattle, the smaller ones possibly of pig. The ends are rounded, the sides can be rather sharp, but are not necessarily so. Have generally a highly glossy polish. No complete specimen available. From Early Neolithic III levels a complete one some 20 cm. long. Maximum thickness 0.4 cm.; width of the larger examples 1.8 cm. of the smaller ones around 1.3 cm. Purpose unknown. Semenov (1973 p. 178) mentions them as being used to prepare animal skins. Evans (1964 p. 236) says they were used to scrape flour from grinding stones and Smoor (1976 p. 189) thinks they served as spoons.
- c. "Adze or chisel" (fig. 14 no 4) Sample: 3  
Implement made of the rib of sheep/goat or pig. The entire thickness of the rib has been used. The top end is cut off in a rather haphazard way; the basal end has been finished in a wedge-shape, creating a chisel. Length around 9 cm. Width varies between 0.8 and 0.95 cm. Maximum thickness ca 0.8 cm., minimum 0.15 cm. Purpose unknown.
- d. Burnisher (fig. 14 no 1) Sample: 9  
Made of the radius or tibia of sheep/goat or pig. Very similar to the long awl, but with a well rounded basal end. Ranging between 14 and 16 cm in length. Exact use unknown. Identified as chisel (Evans 1964 p. 236) or spatula (Hole, Flannery and Neely 1969 p. 216; Smoor 1976 p. 191). Potters think they are ideal implements for burnishing purposes (Vitelli 1977 pers. comm.; Nikolorakis 1979, pers. comm.).

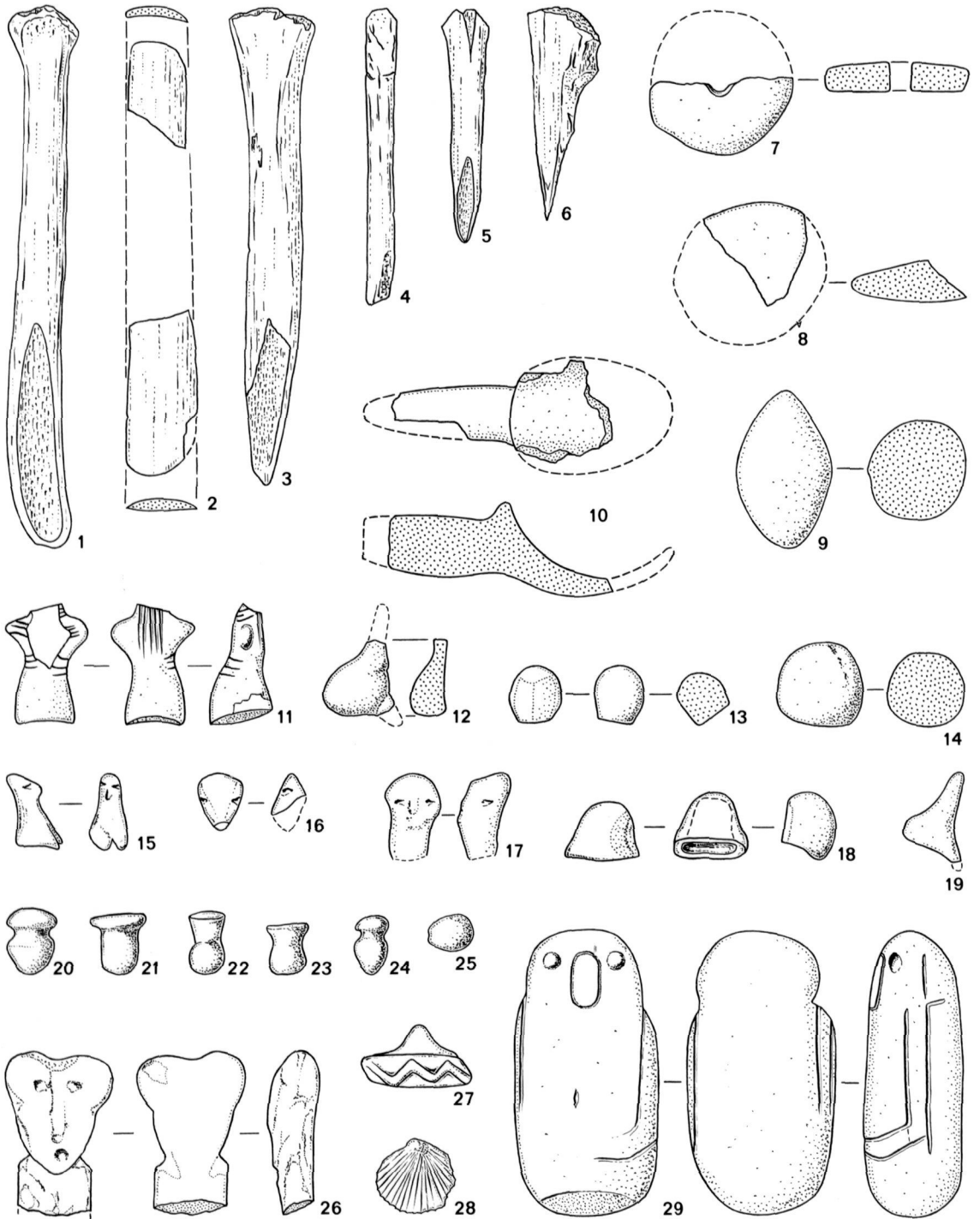


Fig. 14 Bone tools; figurines; ornaments; ceramic objects.

- e. Bone haft                      Sample: 1 (from Akropolis)  
A long bone with a deep incision along the whole length of the bone (Theocharis 1967 p. 121, plate XX C). Served to haft obsidian and flint blades or blade fragments for use as a sickle or reaping knife.

#### IV. 4. FIGURINES

Figurines are rather scarce in Early Neolithic I. A division into (a) 17, possible 20, ceramic figurines and (b) 2 stone figurines can be made. We will confine ourselves to a mere description<sup>6</sup> and we will not indulge in any theories on possible functions (Hourmouziades 1973) nor will we divide them into any physiological classes (Gimbutas 1974b).

From stratum C, 8 figurines, were retrieved among which were two stone ones; from stratum B, 7; from stratum D, 1 and from stratum A, 3 figurines (or figurine fragments).

The ceramic figurines have been made of a micaceous, medium or fine paste. The surface colour is dark non-oxidised or dark uncertain buffish/red-dish. The core is in most cases non-oxidised. The surface is well smoothed. It is remarkable that the coffee-bean eyes, often considered characteristic of Neolithic Greek figurines are still completely absent. They make their first appearance during Early Neolithic III and come to full development during the Middle Neolithic period.

##### IV. 4.1. Ceramic figurines

- a. Small sitting figurine (fig. 14 no 15) Sample: 3  
Small highly schematised anthropomorphic figurine of female sex. Conically shaped head and body with protruding nose. Eyes indicated by slits. Legs rendered by two frontal protruding butts. Height ranging between 1.9 and 3.2 cm; width of base between 0.9 and 1.5 cm.
- b. Highly schematised sitting figurine<sup>7</sup> (fig. 14 no 12)                      Sample: 2  
Steatopygous buttock with vertical protruding butt indicating trunk and neck, frontal protruding butt indicating legs. Height ranging between 3

and 4 cm.; width between 2 and 3 cm.

- c. Standing figurine (fig. 14 no 11)                      Sample: 5  
Schematised anthropomorphic figurine, probably of female sex. Some have a vertical incision in the base, at the front; hence they may have been represented without legs. In all cases the head is broken off. Arms indicated by horizontal, sideways protruding butts. Waist rendered. Bottom generally slightly concave. One figurine has incisions on back and front, indicating hair, clothing and hands. Height ranging between 2.3 and 3.8 cm.; width of arms 2.4 - 2.7 cm. Diameter of waist 0.9 - 1.4 cm.; diameter of bottom 1.8 - 2.1 cm.

This type occurs throughout the entire Early Neolithic and can be found at most Greek mainland sites.

- d. "Naturalistic" figurine head (fig. 14 no 17)                      Sample: 2

Head broken from figurine of unknown type. Triangular or rounded face on a cylindrical-shaped neck. Plastic rendered nose. Eyes indicated by deep slits, mouth by round incision. Front strongly receding. Height around 3 cm; width ranges between 1.5 and 2 cm. Type occurs throughout the entire Early Neolithic at most Greek mainland sites.

- e. Figurine head of schematised type (fig. 14 no 16)                      Sample: 3

In one case face consisting of nose only, with eyes indicated by incisions at the side. Height 1.8 cm. Otherwise cylindrical shape with incisions to indicate hair or headdress at the slightly-rounded top. Face cut away. Belonging to figurine of unknown type. Height 2 cm.

- f. Twin figures                      Sample: 2

Schematic figurines, very similar to type b. They seem to have been cut lengthwise in half before the surface was given its finish, hence they have one completely flat side. The idea of halving figurines continues throughout the Early and Middle Neolithic, although they remain scarce. Height between 3 and 4 cm.; width between 1.5 and 2 cm.

- g. Doubtful twin figurines (fig. 14 no 13; 18)                      Sample: 2

Both knob-shaped. One cut in half with convex,

hollowed-out bottom (fig. 14 no 18)). From the other, two pieces have been cut, creating two flat sides at an angle of 90°. The bottom is flattened (fig. 14 no 13). Size (1): height 1.82 cm., width 1.54 - 2.34 cm., thickness 1.09 - 1.68 cm. Size (2) height 1.79 cm., width 1.39 - 1.66 cm., thickness 1.42 - 1.61 cm. We wonder whether these small geometric objects are figurines at all; possibly they form part of an early recording/counting system, such as that described by Dr. Schmandt-Besserat (1977b fig. 1; 1978 p. 38 - 48).

#### IV. 4.2. *Stone figurines*

On the whole stone figurines are a rare item in the Early Neolithic Greek assemblage of a mainland site. During the later Neolithic periods, serpentine and marble would be used more often (Tsountas 1908 p. 287 - 303, plate 37). On Crete stone was a more commonly used material during the Early Neolithic.

- a. Schematised complete figurine (fig. 14 no 29)  
Carved from a large, marble-like cobble, resembling a loaf-shaped hand-stone. Originally of whitish colour, now turned brown. Surface smooth, not polished. The separation of head and body is marked by rather deep notches. The nose seems to stand out in relief, since the contours are cut away rather deeply. The eyes are rendered by two rather shallow depressions. The arms - the right alongside the body, the left bent so that the forearm rests on the belly - are given shape by two deep parallel incisions. On the belly, a little above the hand/forearm is a small vertical slit, possibly indicating navel or vulva. Legs are not rendered. It is 8.4 cm. high, has a width of 2.9 - 4.4 cm., and a thickness of between 2 and 2.9 cm. Recovered from the lowest pottery bearing level of Early Neolithic I. No parallels in Greece. Shows similarity to a limestone figurine from Mureybit, dated to 7400 BC (Mellaart 1975 p. 47 fig 16).
- b. Figurine head (fig. 14 no 26)  
Carved in white marble. Triangular-shaped head

on a thin neck or body; end broken. On the whole, rather flat. Back slightly concave, giving the impression that the head is slightly tilted backwards. Long and straight. Slightly protruding sculpted nose. Eyes and mouth indicated by round depressions. The ears are rendered by notches. On top of the head, in the centre, a hole has been drilled, giving the face a heart-like shape. The purpose of the hole is unknown. On the neck/shoulder is a small slit, which may be accidental. Height 4.92 cm., width between 1.74 and 3.30 cm.; thickness between 1.12 and 1.38 cm. Recovered from the lowest level of pottery bearing Early Neolithic I. No parallels in Early and Middle Neolithic Greece. Resembles marble figurines found at Late Neolithic Dimini (Tsountas 1908 Plate 37 no 7).

#### IV. 5. *ORNAMENTS*

Only a few objects recovered from the Early Neolithic I strata at Sesklo could be classified in this category, which can be divided into (a) 22 ear studs and (b) 6 beads to which (c) some 10 possible shell ornaments may be added. Both groups a and b can be made of clay or stone. The latter are of steatite, "greenstone", quartz or a fine greyish stone. The clay ones are made of a micaceous fine paste. The surface colour is dark non-oxidised. The surface is often burnished.

The largest number of these objects was recovered from stratum D: 8 ear studs and 4 beads; from stratum C came 8 ear studs and 2 beads; from stratum B, 5 ear studs and from stratum A, 1 ear stud - a surface find at that.

Stone ear studs are found in some form all over Greece during Early Neolithic I and II, including the Pre-Pottery Neolithic. Ceramic ear studs seem to be restricted to Sesklo. Beads are present at all Greek sites during the entire Neolithic.

#### *Description*

- a. Ear studs (fig. 14 nos 20-24)  
A very enigmatic group of objects. Both use and



provenience are hotly debated subjects, which have not yet been resolved. Nor has the name which they should have been decided up on. For the moment ear stud, ear plug, nose plug and several others are in use (a.o. Theocharis, 1974 p. 60).

Two groups can be discerned, both among stone and ceramic ear studs. One has a rounded upper segment and is almost mushroom-shaped (fig. 14 no 20; 24). The other group has a flat, often disc-like upper segment and a bulbous lower part; may become almost nail-shaped (fig. 14 no 21; 23). The steatite ones are slightly different (fig. 14 no 22), consisting of a round ball on which a cylinder has been mounted, crowned by a flat disc. Height varying between 1.2 and 2.9 cm.; width between 1.0 and 2.0 cm.

b. Beads

Probably worn in strings or as ornaments on clothing. Stone beads are small flat discs with a cylindrical hole in the centre. The diameter varies between 0.4 and 0.6 cm., the thickness between 0.15 and 0.2 cm. They are usually made of steatite. Ceramic beads (fig. 14 no 25) are oval with a cylindrical drilled hole through the short axis. Diameter of the long axis varies between 1.4 and 1.6 cm., of the short axis between 1.1 and 1.4 cm.

c. Shell ornaments

There are a few *cardium* shells with a hole near the apex (fig. 14 no 28). They may have been worn in strings (Rodden 1962 p. 285) or as single amulets.

From stratum C comes a *Spondylus* shell with an hourglass perforation, possibly worn as a kind of amulet.

From stratum B there is a possible ring, made of a *Cardium* valve. Unfortunately the object is in a rather fragmentary state.

#### IV. 6. MISCELLANEOUS CERAMIC OBJECTS

From the Early Neolithic I strata, 17 ceramic objects have been recovered, divided into (a) 6 spindle whorls, (b) 2 ceramic discs, (c) 7 sling bullets, (d) 1

spoon and (e) 1 ceramic ball – to which a seal may possibly be added. The latter was discovered in the highest level of stratum A; the excavator considered it to be intrusive (Theocharis 1967 p. 118). Two of the objects were discovered in stratum C, nine in stratum B and seven in stratum A.

All these types of object, except the seal, can be found at all sites in Greece during the Early Neolithic and many also during the Middle Neolithic and later. Seals generally make their appearance at the end of the Early Neolithic.

#### Description

a. Spindle whorl (fig. 14 no 7)

Disc made of a monochrome body sherd, generally with ground edges. Has a central hourglass-shaped perforation. Diameter ranges between 2.5 and 5 cm., thickness between 0.4 and 0.8 cm.; diameter of perforation between 0.5 and 0.85 cm.

b. Ceramic disc (fig. 14 no 8).

Slightly dome-shaped disc made of a monochrome body sherd. Edges are ground. One shows a scar, made in an attempt to drill a hole in the disc. Diameter ranges between 5 and 6 cm. Thickness between 0.5 and 1.1 cm.

c. Sling bullet (fig. 14 no 9)

Egg-shaped, biconical object made of a micaceous medium paste with chaff temper. Light uncertain buffish all through. Smooth surface. Poorly baked, especially in the lower levels. Height ranges between 2.5 and 5 cm. Width between 1.8 and 3 cm.

d. Spoon (Fig. 14 no 10)

Deep spoon made of a micaceous medium paste. Light uncertain buffish surface, non-oxidised core. Smooth surface. Length around 10 cm. Spoon 3.5 cm. wide. Wall thickness 0.35 - 0.60 cm. Diameter of handle 1.5 cm.

e. Ceramic ball (fig. 14 no 14)

Clay ball, slightly oval in section. One side flattened. Made of a micaceous medium paste. Light uncertain buffish colour. Height 2.4 cm.; thickness 1.8 - 2.3 cm., diameter of base 2.3 - 2.4 cm. Purpose unknown. May have been used in a counting/recording system (cf. IV. 4. g).

## f. Seal (fig. 14 no 27)

Oval stamp seal with a short handle. Stamp is a simple zig-zag pattern. Made of a micaceous fine paste. Dark non-oxidised surface colour.

IV. 7. *THE PROBLEM OF PRE-POTTERY NEOLITHIC*

The stage to which stratum D belongs has been called the Aceramic or Pre-Pottery Neolithic, analogous to the non-pottery bearing Neolithic in the Near East. The term Aceramic is quite unsuitable, since the stratum yielded some ill-fired clay objects. The Pre-Pottery Neolithic has not been generally accepted, the reason being that at some sites in Thessaly it contained a very small quantity of pottery. To anyone who has not actually excavated a similar stratum its existence will remain doubtful, the doubt being augmented by the unfortunate circumstance that at virtually all sites non-pottery bearing levels have been excavated almost only in trial trenches or over relatively small areas. The only exceptions are Kythnos and Knossos.

It has been suggested that the "aceramic" could be functionally aceramic, i.e. that although the area was contemporary with other areas containing pottery, it featured activities not involving the use of pottery (Vitelli 1979, pers. comm.). This suggestion is not supported by the fact that at all sites dates for the Pre-Pottery stratum apparently precede those of the first pottery bearing Neolithic stratum (table 28).

The only way to solve this problem will be to excavate large areas at sites where the presence of Early Neolithic I, and possibly of a non-pottery bearing phase too, is suspected.

The economy is certainly of Neolithic type: the bone sample consists of domesticated animals only (Appendix II). Therefore it has to be included whether it is a separate stratum or whether it is contemporary with the earliest pottery bearing stratum.

IV. 8. *SOME NOTES ON THE CHRONOLOGY OF THE EARLY NEOLITHIC*

In the previous section we mentioned dates. Although still rather weakly founded, the chronology of Greek prehistory is slowly assuming a more defi-

nite shape. This is particularly due to recent excavations at Achilleion and at Franchthi Cave, which have yielded good sequences. From Sesklo only a few good radiocarbon dates are available; some thermoluminescence samples have been taken, the results of which are not yet published<sup>8</sup>.

The dates for the non-pottery bearing stage of the Greek Neolithic (the earliest being  $8130 \pm 100$  BP, the latest  $7755 \pm 97$  BP) seem to be more or less contemporary with those of several Near Eastern sites. For the pottery bearing Early Neolithic I we have as the earliest date  $7740 \pm 140$  and as the latest  $7320 \pm 50$  BP.

In table 28 we have included a list of radiocarbon dates, as far as possible arranged by period. It starts with the Upper Mesolithic and ends with the last phase of the Early Neolithic. For comparative purposes we also give dates for the Pre-Pottery Neolithic of Cyprus and for several sites in Anatolia, but these will be discussed in Chapter VIII.

Regarding the Greek dates, unless otherwise stated they are taken from samples consisting of charcoal from occupation layers, often found in concentrations and more or less mixed with ashy soil. On the one hand it is beyond doubt that samples taken from burnt wooden posts, carbonised grain or bone collagen are more certainly associated with the material they are supposed to date than are the other samples. On the other hand one should not forget that building material for a house especially might be older than the associated archaeological context (Waterbolk 1971, p. 13). We think that for these reasons most dates may reasonably well be compared with one another, although dates provided by charcoal from heavy wooden posts may prove to be too early. Dates provided by carbonised grain should be more accurate than other dates.

From the table it is clear that it is impossible to mark a clear chronological separation between the three phases of the Early Neolithic. They follow each other without a clear break. Generally we can say that the Neolithic sequence in Greece starts at the end of the seventh millennium BC (uncalibrated date), possibly at a stage when the use of ceramic vessels was unknown. The Early Neolithic as a whole lasted through almost the entire sixth millennium BC.

## NOTES

1. A study of micro-wear analysis of the stone artefacts from the Akropolis section of Sesklo has been the subject of an unpublished PhD thesis by Miss Alexandra Christopoulou at the London Institute of Archaeology. She also analysed a few blade fragments from section C, found in close conjunction with butchered bones. They showed a pattern, indicating that these blades had been used for butchering purposes.
2. Until fairly recently, quartz flakes were used in threshing sledges.
3. All polished stone artefacts are being studied and will be published by A. Moundrea. They comprise all the material from the Early and Middle Neolithic.
4. The bone implements from Sesklo are being studied and will be published by Mrs. A. Moundrea.
5. The bone has been analysed by C.A. Schwartz.
6. All figurine material from Sesklo is being studied and will be published by Mrs. F. Egoumenides-Risopoulou.
7. Theocharis assumed that this type had its antecedents in Pre-Neolithic periods. He compared them, as well as the closely related twin figurines of IV. 4. f, to some Palaeolithic figurines and rock carvings, from the Ukraine and Bavaria and from the Dordogne, France, respectively.
8. The samples were taken by Y. Liritzis and H. McKerrell of the University of Edinburgh.