Hege Agathe Bakke-Alisøy:
STONE TOOLS FROM THE SANCTUARY

The 1990–94 excavation in the sanctuary of Athena Alea at Tegea has provided a modest assemblage of stone tools, mainly chipped, but also some ground. Most of this material was found in secondary contexts, but as far as possible the stone tools from this assemblage will be discussed in relation to their contexts.

This presentation and discussion is based on an examination of the stone tools and on the stratigraphical publication by Chiara Tarditi,[1] together with contextual information from the preliminary report.[2]

The stone tool assemblage

The entire assemblage consists of 73 artefacts: 20 from the excavation in the temple and 53 from the northern sector. They are catalogued with the prefix **St** and **StN** respectively. The vast majority are chipped stone tools, only eight are ground. Each object was given a preliminary number (Tex no.) during the excavation; these are listed in the catalogue. The numbers used here are those of the attached catalogue.

Chipped stone tools

A high percentage of the assemblage consists of blades or flakes with traces of usage, some can be classified as scrapers. Artefacts classified as tools represent 85% of the entire assemblage of chipped stone objects. All artefacts made for a specific purpose or with traces of use are defined here as tools. Sieving was conducted as part of the excavation, but small stone fragments were not collected. This is reflected in the assemblage by the lack of debitage, which should be kept in mind when the question of local production versus the importation of ready-made blades and flakes is discussed.

Blades are often distinguished from bladelets or micro-blades. Blades are defined by Hartenberg and Runnels as bladelets/micro-blades when they are less than 1.15 cm wide.[3] In the assemblage discussed here all blades are less than 1.15 cm wide and are thus classified as bladelets.

Many of the obsidian bladelets are retouched (**StN 8**) or show use-wear (**St 11–12; StN 3, 4, 6, 10, 12, 20**). There are also two flakes of obsidian (**StN 26, 29**), one of them (**StN 26)** with traces of usage.

There are more types of chipped stone tools made of chert than those of obsidian. There are 25 bladelets, and ten (**St 9–10; StN 9, 13, 15–17, 19, 21, 22**) have traces of usage. They are made of different types of chert, but two are of high-quality black chert (**St 9; StN 13**), and one is of honey-coloured chert (**St 10**). Use-wear was also found on 11 of the 30 identified flakes (**St 16, 19; StN 24, 25, 27, 28, 31, 35, 37, 39, 42**).

The assemblage of chipped stone tools includes three scrapers. One is of high-quality, honey-coloured chert (**StN 44**), while the other two are made of medium-quality chert, red (**StN 43**) and green-greyish (**St 21**). Of other tool types there is one *perçoire* (**StN 45**), made of a yellow chert of medium quality.

Only one core (**StN 46**) has been found in the assemblage of chipped stone tools. This is a locally obtained chert, multi-coloured and of medium quality. There are also other finds that indicate tool manufacturing on the site: one crested bladelet (**St 10**) of high-quality, honey-coloured chert, as well as debris of the same type of chert along with other locally obtained types.

Although the evidence is limited, the presence of a core and a crested bladelet implies that chipped stone tools were locally produced, most likely in the vicinity of the sanctuary. This also implies that honey-coloured chert was imported as a raw material and not in the form of ready-made tools. The chipped stone tools were then manufactured locally.

There are no clearly diagnostic artefacts in the assemblage, but the chipped stone tools are most likely dated to the historical period, based on the limited number of cores (only one) and crested bladelets (two)

[1] See her contribution, section **iv**.

[2] Ch. Tarditi in Østby *et al*., *Report*, 107–17. One object, the grindstone **StN 2,** was not available for examination; the information on this piece is based on personal communication and information from M.E. Voyatzis.

[3] B. Hartenberger and C. Runnels, "The organization of flaked stone production at Bronze Age Lerna," *Hesperia* 70, 2001, 267.

along with a high number of artefacts showing use-wear and retouching.[4]

Ground stone tools

The assemblage of ground stone tools consists only of handstones. The 'handstone' category includes various tools, which can be used as upper grindstones, hammerstones, polishers, and pestles. Many have use-wear from abrasion as well as impact and have thus been multifunctional.[5] According to the results from the Argolid survey the handstones can cover the entire time span from the Late Neolithic until the end of Classical antiquity.[6]

Four artefacts have signs of abrasive as well as impact use-wear (**St 2–4; StN 1**) while the remaining four only have evidence of abrasive use (**St 5–7; StN 2**). Two of these have most likely been used as polishers (**St 5–6**). The abrasive use-wear is seen as very fine striations. Both artefacts are broken, but had probably a rectangular or an oval outline shape. One or two objects (**St 3**, possibly also **St 5**) have some traces of a red mineral pigment.

The multifunctional aspect of these handstones can be clearly noted especially on one artefact (**St 2**), which most likely was used both as a pestle and for abrasion. It has an oblong outline shape and a rectangular section. Abrasive use-wear can be seen on the sides of the artefact while there is impact wear on the butt ends. Another case of combined usage can be noted on a tool used as an abrader as well as a hammerstone (**St 4**). This handstone has a rounded outline shape and an oval cross-section. Impact wear is visible on one surface, while traces of abrasive use-wear are scattered all over the artefact.

Raw material

In terms of raw material 24.3% of the chipped stone tools are made of obsidian and 75.7% are of chert. Along with obsidian, good-quality black chert[7] and honey-coloured chert are also present in the assemblage. The assemblage discussed here is very small and thus makes a comparison with other studies difficult.

The vicinity of the sanctuary has not been surveyed with the purpose of identifying possible local sources for stone material. It is likely, however, that chert of various qualities could have been collected somewhere near Tegea. The obsidian in the assemblage is grey to black in colour, occasionally banded and translucent. Similarities with obsidian found in other areas suggest that it comes from the Cycladic island of Melos.[8] The source of the high-quality, honey-coloured chert is unknown. Some argue that it may be as far away as Bulgaria and Romania, but substantial finds from Bronze Age levels at Tsoungiza in the Nemea valley suggest that a local source existed there.[9]

No general conclusion about the raw material used for ground stone tools at Tegea can be offered on the basis of the assemblage discussed here. It is however, likely that the pattern resembles what is observed elsewhere in Arcadia,[10] where the raw material used for handstones and grinders (the upper stone of a grindstone) was usually found as pebbles collected near the settlement.[11] In the assemblage from the sanctuary both metamorphic and sedimentary rocks were found.

Contexts

Stone tools have been found in all the excavated areas, in the northern sector as well as inside the temple. Many of the archaeological contexts that have yielded stone tools have been interpreted as secondary fillings of various kinds, but there are also some surfaces and levels related to the various stages of the sanctuary that contained stone tools. The problem here is thus to distinguish between primary and secondary contexts. Stone tools have been found in contexts dated to the Geometric and the Archaic periods. Layers from the Geometric period were uncovered inside the temple, while various surfaces dated to the Archaic period and later were revealed in the northern area.[12]

The Geometric period

Six ground stone tools and 14 of chipped stone were found in connection with the two Geometric cult buildings inside the temple. The various stone tools may reflect the building activity or some activity connected with the finished buildings. Of the chipped stone tools seven have traces of usage: three bladelets (**St 8, 9, 11**), one crested bladelet (**St 10**) and three flakes (**St 13, 14, 20**). The crested bladelet also indicates a local production of chipped stone tools.[13] The one hammer stone (**St 4**) found in this context also points to a production of chipped stone tools. It has one surface with severe impact wear, and its rounded shape suggests that it was used for knapping.[14]

The indications of stone tool production do not

[4] Kardulias and Runnels 1995, 97–103.

[5] For a discussion of definition and range of use for this category, see Alisøy 2001, 2002 and 2003.

[6] Kardulias and Runnels 1995, 110.

[7] The term 'chert' is here applied for all siliceous rocks. The definition of flint versus chert varies from one publication to another. Compared to flint chert is considered to have a coarser internal structure and to contain more impurities. The distinction between flint and chert is thus subjective, and is not made here. See Kardulias 1992, 434.

[8] C. Renfrew, J.R. Cann and J.E. Dixon, "Obsidian in the Aegean," *BSA* 60, 1965, 225–47; Kardulias and Runnels 1995; Carter 2003.

[9] Kardulias 1992, 433.

[10] Carter 2003.

[11] Kardulias and Runnels 1995; Alisøy 2001, 2002, 2003.

[12] See the discussions in section **iv** (Tarditi) for the northern sector, and in *Tegea* I, section **ii** (Nordquist) for the temple sector.

[13] Kardulias 1992, 421.

[14] Alisøy 2001, 97.

contradict the interpretation of the two apsidal buildings as cultic structures. A similar activity at the site is demonstrated by the metallurgical workshop that was found in front of the buildings.[15]

The Archaic and Classical periods

The excavation in the northern sector revealed an open courtyard that was used from the Archaic period until the end of antiquity.[16] The excavation in this area yielded 53 stone artefacts, of which 26 come from secure contexts.[17] Most of these contexts are various floors dated to the Classical and Archaic period. The stone tools related to these floors show some variety in terms of the tool type and the material used. Several of the bladelets and flakes have traces of use-wear. In addition the assemblage includes one scraper (**StN 43**), one *perçoire* (**StN 45**), a core (**StN 46**) and an upper grindstone/grinder (**StN 2**).

The overall impression of this material is one of fragmented, heavily used tools. Considering the context in which they were found this is natural. The tools found associated with these various floors were discarded or lost precisely because they were broken or worn out. The wide range of raw materials indicates that the supplies came from local sources as well as from importation. The presence of one core along with some debris (**StN 52–53)** points to the production of stone tools at the site. This, along with the variety of tool types, suggests that there was a production with a certain volume. Whether the tools found associated with the Archaic floors were used for building activity is uncertain. The number of contexts where tools were found, and the fact that they were scattered around this open courtyard and found in various contexts, indicates that they were connected with activities conducted in the sanctuary.[18]

Conclusion

The stone tool assemblage discussed here is rather limited and thus the information that can be obtained from this material is restricted. However, the types of tools and the raw materials, along with the contexts in which they were found, indicate that these tools are to be dated in the historical period. At least two chronological contexts can be distinguished: the Geometric and the Archaic periods. There are no typological differences in the stone tools from these periods.

The overall impression of the assemblage of chipped stone tools is of a wide range of raw material and tools that may be situated within a wide time span. The presence of a core and two crested bladelets indicates local production. New tools were made, but old tools (probably from the Bronze Age, found on the site) were also reused and modified. The tools were manufactured and used in the areas of the Geometric buildings and elsewhere in the Archaic sanctuary.

Catalogue

Artifacts from the temple sector

The item **St 1** (a stone loomweight) has been catalogued by M.E. Voyatzis (*Tegea* I, section **vii**, 522).

Handstones

St 2 ***Handstone (abrader/pestle)***
Possibly sandstone, has layers with different colours. Three surfaces have use marks: one small with both impact and abrasive wear and two larger with abrasive use-wear. Oblong outline shape and square, rounded shape in cross-section. Completely preserved. Dimensions: L 8.5–9.5, W 3.1–4.0, Th 3.1–3.6 cm; weight 230 g.
Inv. no. 4382 (Tex no. 897; no F. no.).

St 3 ***Handstone (possibly used as an upper grindstone)***
Sedimentary rock (sandstone/schist), reddish brown. Two used surfaces with a combination of impact wear and abrasive use-wear. There are also some traces of red mineral pigment. Oblong to triangular outline shape in outline, oval cross-section. Completely preserved. Dimensions: L 12.2–13.7, W 4.8–7.4, Th 5.0–5.9 cm; weight 820 g.
Inv. no. 4412 (Tex no. 898). Location, F. no.: B1T/15-2 (Building 2).

St 4 ***Handstone (abrader/hammerstone)***
Sedimentary rock. One surface with impact wear. Also some scattered traces of abrasive use-wear. Rounded outline shape, oval cross-section. Completely preserved. Dimensions: L 4.3–5.1, W 3.8–4.6, Th 3.2–3.9 cm; weight 110 g.
Inv. no. 4413. Location, F. no.: B1Sb/5 (Building 1).

St 5 ***Handstone (abrader)***
Sedimentary rock, reddish-brown. Two surfaces with abrasive use-wear, very fine striations. Some possible traces of mineral pigment. One surface has a very "fatty" character, from polishing. Oval shape in outline and cross-section, but very thin in section. Broken. Dimensions: L 2.9–4.6, W 3.7–3.8, Th 0.9–1.5 cm; weight 40 g.
Inv. no. 4383 (Tex no. 899). Location: D1/48 (Building 1).

St 6 ***Handstone (abrader)***
Sandstone, dark grey to black. Two used surfaces with fine abrasive use-wear. Oblong outline shape, rectangular to oval cross-section. Slightly broken at one end. Dimensions: L 7.7–8.4, W 2.1–2.8, Th 1.6–1.7 cm; weight 80 g.
Inv. no. 4384 (Tex no. 900). Location: D1/48 (Building 1).

St 7 ***Handstone (abrader/polisher, perhaps sling bullet)***
White limestone. Rounded shape, elliptic outline shape and oval cross-section. Traces of very fine abrasive use-wear, especially

[15] See the discussion in *Tegea* I, section **ii** (Nordquist), 157–78.

[16] Alisøy 2001, 17.

[17] **StN 2, 7, 10–12, 14, 17, 18, 24, 25, 28, 29, 32–34, 36–40, 43, 45–47, 49, 52, 53**.

[18] Tarditi in section **iv**, 70 note 25 mentions the possibility of a kind of market area related to the sanctuary, similar to the festivals known in modern Greece. Some postholes found associated to one floor are interpreted as a temporary structure or some kind of fence.

on one surface. Dimensions: L 5.1, W 2.3–4.1, Th 2.3–2.9 cm; weight 90 g.

Inv. no. 4385 (Tex no. 901). Location: C1c/9 (debris above Building 1).

Bladelets

St 8 ***Bladelet*** *Pl. 1*
Obsidian, greenish black. Broken at both ends. Dimensions: L 1.3, W 0.9–1.0, Th 0.1–0.3 cm.

Inv. no. 3799 (Tex no. 335). Location: D1/5 (disturbed).

St 9 ***Bladelet***
Flint, black. Use marks on both edges, larger fractures on one side. Broken at both ends. Dimensions: L 1.1–1.5, W 0.7–0.9, Th 0.3 cm.

Inv. no. 3821 (Tex no. 357). Location, F. no.: D1/4 (disturbed).

St 10 ***Crested blade (bladelet)*** *Pl. 1*
Flint, yellow (honey-coloured). Traces of use-wear, fractures along one edge. Glossy surface. Dimensions: L 2.1–2.5, W 0.4–0.9, Th 0.3–0.5 cm.

Inv. no. 4101 (Tex no. 643). Location, F. no.: C1d/5-1 (debris above Building 1).

St 11 ***Bladelet*** *Pl. 1*
Obsidian, black. Some small fractures possibly from usage. Broken at one end. Dimensions: L 2.2, W 0.6–0.8, Th 0.2–0.3 cm.

Inv. no. 4208a (Tex no. 751a). Location: C1d/7 – /8 (Building 1).

St 12 ***Bladelet*** *Pl. 1*
Obsidian, black. Two ridges, traces of usage on one edge, fractures. Fragmented, broken at both ends. Dimensions: L 1.1, W 0.7, Th 0.2 cm.

Inv. no. 4208b (Tex no. 751b). Location: C1d/7 – /8 (Building 1).

Flakes

St 13 ***Scraper (flake)*** *Pl. 1*
Flint, dark grey to black. Fractures along one side indicate usage as a scraper, but no retouching. Dimensions: L 2.0, W 0.8–1.7, Th 0.5 cm.

Inv. no. 3905 (Tex no. 442). Location, F. no.: D1/16-2 (debris above Building 1).

St 14 ***Flake*** *Pl. 1*
Flint, black. Dimensions: L 3.1, W 0.2–1.0, Th 0.4–0.6 cm.

Inv. no. 3692 (Tex no. 221). Location, F. no.: C1c/6-6 (debris above Building 1).

St 15 ***Flake***
Flint, yellow (honey-coloured). No traces of usage, waste. Dimensions: L 0.6–1.6, W 0.3–2.0, Th 0.2–0.4 cm.

Inv. no. 4414. Location: E1S/12 (pronaos, disturbed).

St 16 ***Flake***
Flint, red with one greenish grey stripe. No traces of usage, waste. Dimensions: L 1.1–1.7, W 0.2–0.8, Th 0.1–0.2 cm.

Inv. no. 4415. Location: C1d/14 (Building 1).

St 17 ***Flake***
Flint, orange/yellow. Some tiny fractures, probably from natural causes. Dimensions: L 0.1–0.7, W 0.6–0.9, Th 0.1 cm.

Inv. no. 4416. Location: E1S/111 (bothros, Level B-1).

St 18 ***Flake***
Flint, yellow (honey-coloured). No traces of usage, waste. Dimensions: L 0.2–0.9, W 0.2–1.2, Th 0.1–0.3 cm.

Inv. no. 4417. Location, F. no.: D1/72-25 (Building 1).

St 19 ***Flake*** *Pl. 1*
Obsidian, black. No traces of usage, waste. Dimensions: L 0.3–1.3, W 0.3–1.7, Th 0.1–0.8 cm.

Inv. no. 4418. Location: C1a/4 (debris above Building 1).

St 20 ***Flake***
Flint, yellow (honey-coloured). Two edges with fractures caused by usage. Dimensions: L 1.2–1.6, W 0.8–1.7, Th 0.1–0.3 cm.

Inv. no. 4386a (Tex no. 902a). Location: C1b/2 (cella, top).

St 21 ***Flake***
Flint, yellow (honey-coloured). No traces of usage. Dimensions: L 1.0–1.3 , W 0.7–1.7, Th 0.1–0.2 cm.

Inv. no. 4386b (Tex no. 902b). Location: C1b/2 (cella, top).

Artefacts from the northern sector

Handstones

StN 1 ***Grindstone (upper stone)***
Sedimentary rock. Grey colour with red inclusions. Oblong outline shape, oval cross-section. Three used surfaces: two larger used for grinding and one with impact wear on the butt end. Fatty surface. Broken, probably in half. Dimensions: L 9.2–11.9, W 7.8–11.2, Th 3.3–6.3 cm.

Inv. no. 3949 (Tex no. 487). Location: E6/20 (first walking surface, Archaic).

StN 2 ***Grindstone (upper stone)*** *Pl. 1*
Sandstone, brownish grey with black specks. Abrasive use-wear. Shape and number of used surfaces unknown**.** Dimensions: L 12, W 7.5 cm.

Inv. no. 3658 (Tex no. 187). Location: D7/28 (second walking surface, Archaic).

Bladelets

StN 3 ***Bladelet***
Flint, black. Broken in two pieces. Dimensions: L 2.2, W 0.4–0.9, Th 0.4 cm.

Inv. no. 3746 (Tex no. 280). Location: D7/13a (destruction of the temple, Late Antique).

StN 4 ***Crested bladelet*** *Pl. 1*
Flint, black. No traces of retouch. Slightly rounded edges possibly from usage. Dimensions: L 1.9, W 0.6–1.0, Th 0.4 cm.

Inv. no. 3747 (Tex no. 281). Location: C9-C10/10 (layer with marble chips, Late Classical/mixed).

StN 5 ***Bladelet*** *Pl. 1*
Flint, dark grey to black. Some traces of usage on both edges, not retouched. Broken. Dimensions: L 1.5, W 0.9–1.2, Th 0.3 cm.

Inv. no. 3925 (Tex no. 462). Location: C9-C10/11 (Archaic).

StN 6 ***Bladelet*** *Pl. 1*
Obsidian, black. Various fractures most likely from usage. Broken at one end. Dimensions: L 1.9–2.0, W 1.0–1.2, Th 0.2–0.3 cm.
Inv. no. 3935 (Tex no. 473). Location: C9-C10/19 (Archaic).

StN 7 ***Bladelet***
Flint, yellow (honey-coloured). No traces of usage. Very fragmented. Dimensions: L 0.5, W 0.7–1.0, Th 0.1 cm.
Inv. no. 4027 (Tex no. 565). Location: D7/58 (second walking surface, Archaic).

StN 8 ***Bladelet*** *Pl. 1*
Obsidian, dark grey, striped structure. The shape, inclined at one end, could indicate a long usage; butt slightly pointed, probably caused by usage. Smaller fractures on both sides. Dimensions: L 3.1, W 0.4–1.3, Th 0.1–0.3 cm.
Inv. no. 4275 (Tex no. 819). Location: C6/01c (modern village).

StN 9 ***Bladelet*** *Pl. 1*
Flint, brown-red. Traces of usage on one edge, glossy surface in the fractures. Slightly broken. Dimensions: L 1.7–1.8, W 1.5–1.8, Th 0.4 cm.
Inv. no. 3649 (Tex no. 178). Location: C7/44 (destruction of the temple, Late Antique).

StN 10 ***Bladelet***
Obsidian, dark grey to black. Some small fractures from usage. Broken iat one end. Dimensions: L 0.9–1.0, W 0.6–0.7, Th 0.1–0.2 cm.
Inv. no. 4388 (Tex no. 904). Location: E7/31 (second layer with bronze objects, mixed).

StN 11 ***Bladelet***
Obsidian, black. Some very small fractures from usage. Very fragmented. Dimensions: L 0.4–0.6, W 0.5–0.6, Th 0.1–0.2 cm.
Inv. no. 4389 (Tex no. 905). Location: D7/16 (first walking surface, Archaic).

StN 12 ***Bladelet***
Obsidian, black. Some tiny fractures. Broken at both ends. Dimensions: L 1.0, W 1.0, Th 0.2 cm.
Inv. no. 4390 (Tex no. 906). Location: D7/64 (third walking surface, Archaic).

StN 13 ***Bladelet***
Flint, black. Fractures from usage. Broken at both ends. Dimensions: L 1.2–1.4, W 0.6–0.8, Th 0.2 cm .
Inv. no. 4391 (Tex no. 907). Location: C9-C10/27 (Archaic).

StN 14 ***Bladelet***
Obsidian, black. No use-wear visible. Very broken. Dimensions: L 0.5–1.1, W 0.6–1.0, Th 0.1–0.2 cm.
Inv. no. 4350 (Tex no. 177). Location: D7/28 (second walking surface, Archaic).

StN 15 ***Bladelet***
Flint, dark grey to black. Some fractures probably caused by usage. Dimensions: L 1.5–2.2, W 0.9–1.4, Th 0.2–0.3 cm.
Inv. no. 4392 (Tex no. 908). Location: C7/60 (the Byzantine pit).

StN 16 ***Bladelet***
Flint, dark grey to black. Some tiny fractures, use wear. Broken (top preserved/proximal). Dimensions: L 1.3–1.5, W 0.3–0.9, Th 0.2–0.3 cm.
Inv. no. 4393 (Tex no. 909). Location: D7/58 (second walking surface, Archaic).

StN 17 ***Bladelet***
Flint, dark grey to black. Use-wear on both edges. Slightly broken at one end (proximal preserved). Dimensions: L 2.0–2.1, W 1.0–1.3, Th 0.1–0.4 cm .
Inv. no. 4394 (Tex no. 910). Location: D7/16 (first walking surface, Archaic).

StN 18 ***Bladelet***
Flint, dark grey to black. No use-wear visible. Slightly broken at one end (proximal preserved). Dimensions: L 1.4, W 0.4–0.6, Th 0.1–0.2 cm.
Inv. no. 4395 (Tex no. 911). Location: D7/29 (second walking surface, Archaic).

StN 19 ***Bladelet***
Flint, dark grey to black. Some traces of usage. Broken at one end (proximal preserved). Dimensions: L 1.5–1.6, W 0.7–0.8, Th 0.2 cm.
Inv. no. 4396 (Tex no. 912). Location: C9-C10/11 (Archaic).

StN 20 ***Bladelet***
Obsidian, greenish-grey. One edge with use wear, fractures. Broken. Dimensions: L 0.9, W 0.5–0.8, Th 0.2–0.3 cm.
Inv. no. 4397 (Tex no. 913). Location: C9-C10/11 (Archaic).

StN 21 ***Bladelet***
Flint, dark grey to black. Use-wear, fractures along the edge. Water-rolled after usage. Broken, proximal preserved. Dimensions: L 0.8–1.2, W 1.2–1.3, Th 0.2–0.5 cm.
Inv. no. 4398 (Tex no. 914). Location: C9-C10/11 (Archaic).

StN 22 ***Bladelet***
Flint, white. Use-wear, fractures on both edges. Dimensions: L 1.4, W 0.5–0.7, Th 0.1–0.2 cm.
Inv. no. 4400 (Tex no. 916). Location: C9-C10/19 (Archaic).

Flakes

StN 23 ***Flake*** *Pl. 1*
Flint, honey-coloured. No clear traces of usage, Dimensions: L 1.6, W 0.4–1.6, Th 0.2–0.3 cm.
Inv. no. 3815 (Tex no. 351). Location: D9-D10/02 (Late Archaic).

StN 24 ***Flake***
Flint, brownish red. Traces of usage on one edge, some fractures. Dimensions: L 1.6–1.8, W 0.6–1.3, Th 0.4 cm.
Inv. no. 3832 (Tex no. 368). Location: E7/20 (second layer with bronze objects, mixed).

StN 25 ***Flake*** *Pl. 1*
Flint, brownish-red. Traces of usage on one edge, small fractures. Broken. Dimensions: L 2.0–2.2, W 0.8–1.2, Th 0.3–0.5 cm.
Inv. no. 3833 (Tex no. 369). Location: D7/14 (first layer with bronze objects, Late Classical/mixed).

StN 26 ***Flake*** *Pl. 1*
Obsidian, greenish-grey. Use-wear, small fractures, water-worn after usage. Dimensions: L 1.9–2.0, W 0.5–1.3, Th 0.3 cm.
Inv. no. 3879 (Tex no. 415). Location: C9-C10/11 (Archaic).

StN 27 ***Flake***
Flint, honey-coloured. Fractures along one edge indicating usage, no retouching. Dimensions: L 1.4–2.6, W 0.3–1.6, Th 0.1–0.6 cm.
Inv. no. 3880 (Tex no. 416). Location: C9-C10/11 (Archaic).

StN 28 ***Flake*** *Pl. 1*
Flint, yellow-brown. Some fractures on one edge can be related to usage. Fractures with an even and "glossy" character. Broken. Dimensions: L 0.9–2.0, W 0.3–1.2, Th 0.1–0.2 cm.
Inv. no. 4050 (Tex no. 590). Location: D7/58 (second walking surface, Archaic).

StN 29 ***Flake***
Obsidian, black with grey stripes. No traces of usage. Dimensions: L 1.5–2.2, W 0.6–1.1, Th 0.2 cm.
Inv. no. 4096 (Tex no. 638). Location: D7/64 (third walking surface, Archaic).

StN 30 ***Flake***
Flint, yellow (honey-coloured). No traces of usage. Dimensions: L 0.2–0.7, W 0.3–1.2, Th 0.1 cm.
Inv. no. 4359. Location: C9-C10/11 (Archaic).

StN 31 ***Flake***
Flint, yellow/orange. Some possible traces of usage. Dimensions: L 1.5–1.9, W 0.6–1.2, Th 0.1–0.2 cm.
Inv. no. 4360. Location, F. no.: C7/113-13 (first walking surface, Archaic).

StN 32 ***Flake***
Flint, yellow (honey-coloured). Very small, no traces of usage. Dimensions: L 0.6, W 0.25–0.45, Th 0.1 cm.
Inv. no. 4361. Location: D7/16 (first walking surface, Archaic).

StN 33 ***Flake***
Flint, reddish. No traces of usage. Dimensions: L 1.2, W 0.7, Th 0.2 cm.
Inv. no. 4362. Location: D7/16 (first walking surface, Archaic).

StN 34 ***Flake***
Obsidian, grey. No traces of usage. Dimensions: L 1.2–1.6, W 0.5–0.6, Th 0.1 cm.
Inv. no. 4363. Location: C9-C10/11 (Archaic).

StN 35 ***Flake***
Flint, black-grey to white. Some of the breakage possibly related to usage. Very broken. Dimensions: L 1.1–2.0, W 0.7–0.9, Th 0.1–0.9 cm.
Inv. no. 4401 (Tex no. 917). Location: D7/14 (first layer with bronze objects, Late Classical/mixed).

StN 36 ***Flake***
Flint, orange-brown. No traces of usage. Broken. Dimensions: L 1.6–2.0, W 0.8–1.1, Th 0.2–0.4 cm.
Inv. no. 4402 (Tex no. 918). Location: D7/16 (first walking surface, Archaic).

StN 37 ***Flake (blade-like)***
Flint, red. Tiny fractures related to usage. Broken. Dimensions: L 0.4–1.0, W 0.4–0.6, Th 0.1–0.2 cm.
Inv. no. 4403 (Tex no. 919). Location: D7/16 (first walking surface, Archaic).

StN 38 ***Flake***
Flint, white. No traces of usage. Dimensions: L 0.7–1.3, W 1.1–1.4, Th 0.1–0.5 cm.
Inv. no. 4367. Location: D7/50 (first walking surface, Archaic).

StN 39 ***Flake***
Flint, yellow (honey-coloured). Some tiny fractures from usage. Dimensions: L 0.4–0.6, W 0.7–0.9, Th 0.1 cm.
Inv. no. 4368. Location: D7/64 (third walking surface, Archaic).

StN 40 ***Flake***
Flint, red. No traces of usage. Dimensions: L 0.6–1.2, W 0.8–1.2, Th 0.1 cm.
Inv. no. 4369. Location: D7/65 (fourth walking surface, Archaic).

StN 41 ***Flake***
Flint, yellow (honey-coloured). No traces of usage. Dimensions: L 1.9–2.2, W 0.8–1.7, Th 0.1–0.4 cm.
Inv. no. 4370. Location: C7/80 (first layer with bronze objects, Late Classical/mixed).

StN 42 ***Flake (bladelike)***
Flint, black. Some tiny fractures from usage. Broken. Dimensions: L 0.5–1.0, W 0.3–0.7, Th 0.1–0.4 cm.
Inv. no. 4371. Location: D7/32 (lens in the second walking surface, Archaic).

Other types

StN 43 ***Scraper (flake)*** *Pl. 1*
Flint, red. Retouched and traces of usage along a curved edge. Dimensions: L 1.8–2.0, W 0.4–0.8, Th 0.1–0.3 cm.
Inv. no. 4145 (Tex no. 687). Location: D7/64 (third walking surface, Archaic).

StN 44 ***Scraper***
Flint, yellow (honey-coloured). Small fractures from usage along a rounded edge. Dimensions: L 0.3–0.9, W 1.2–2.6, Th 0.1–0.6 cm.
Inv. no. 4387 (Tex no. 903). Location: D7/14 (first layer with bronze objects, Late Classical/mixed).

StN 45 ***Perçoire***
Flint, yellow. Small fractures on the pointed end indicating use as a *perçoire*. Dimensions: L 1.9–2.2, W 0.1–0.3, Th 0.1–0.4 cm.
Inv. no. 3881 (Tex no. 417). Location: E7/31 (second layer with bronze objects, Late Classical/mixed).

StN 46 ***Core***
Flint, polychrome. Used bipolar. Dimensions: L 0.9–1.2, W 1.5–2.2, Th 0.2–1.1 cm.
Inv. no. 4399 (Tex no. 915). Location: D7/29 (second walking surface, Archaic).

Chips

StN 47 ***Chip***
Flint, grey-brown. No traces of usage. Dimensions: L 0.4–0.6, W 0.4–0.8, Th 0.1–0.2 cm.
Inv. no. 4374. Location: D7/50 (first walking surface, Archaic).

StN 48 ***Chip***
Flint, red. No traces of usage. Dimensions: L 0.6–0.9, W 0.5–0.8, Th 0.1–0.2 cm.
Inv. no. 4375. Location: D6/16 (Geometric).

StN 49 ***Chip***
Flint, white-yellow. Cortex surface. No traces of usage. Dimensions: L 0.6–1.0, W 0.9–1.4, Th 0.1–0.2 cm.
Inv. no. 4376. Location: D7/64 (third walking surface, Archaic).

StN 50 ***Chip***
Flint, red. No traces of usage. Dimensions: L 0.7–0.8, W 0.9, Th 0.2 cm.
Inv. no. 4377. Location: D7/66 (7th-century debris layer).

StN 51 ***Chip***
Flint, yellow-brown. No traces of usage. Dimensions: L 0.7–1.1, W 0.5–1.0, Th 0.2 cm.
Inv. no. 4370b. Location: C7/80 (first layer with bronze objects, Late Classical/mixed).

Debris

StN 52 ***Debris***
Flint, green with yellow stripes. Possibly natural. Dimensions: L 1.9–2.4, W 2.1–2.8, Th 0.1–1.3 cm.
Inv. no. 4378 (Tex no. 177). Location: D7/28 (second walking surface, Archaic).

StN 53 ***Debris***
Flint, white-yellow. No traces of usage. Dimensions: L 0.4–0.6, W 0.8–1.2, Th 0.1–0.2 cm.
Inv. no. 4379. Location: E7/46 (second walking surface, Archaic).

Literature:

Alisøy 2001 = H.A. Alisøy, *Consumption in time and space. Ground stone tools in Central Macedonia in Late Neolithic and Early Bronze Age* (MA thesis, University of Bergen 2001). Unpublished.

Alisøy 2002 = H.A. Alisøy, "Ground stone tools from Mesimeriani," in D.V. Grammenos and S. Kotsos (eds), *Ανασκαφή στον προϊστορικό οικισμό Μεσιμεριανή Τούμπα, Τριλόφου, Ν. Θεσσαλονίκης* (Δημοσιεύματα του Αρχαιολογικού Ινστιτούτου Βόρειας Ελλάδος 1), Thessaloniki 2002, 277–314.

Alisøy 2003 = H.A. Alisøy, "Consumption of ground stone tools at Stavroupoli," in D.V. Grammenos and S. Kotsos (eds), *Ανασκαφή στον προϊστορικό οικισμό Σταυροπόλι Ν. Θεσσαλονίκης* (Δημοσιεύματα του Αρχαιολογικού Ινστιτούτου Βόρειας Ελλάδος 2), Thessaloniki 2003, 561–608.

Carter 2003 = T. Carter, "The chipped and ground stone," in J. Forsén and B. Forsén (eds), *The Asea Valley survey* (*SkrAth* 4°, 51), Stockholm 2003, 129–57.

Kardoulias 1992 = P.N. Kardoulias, "The ecology of Bronze Age flaked stone tool production in southern Grece. Evidence from Agios Stephanos and the southern Argolid," *AJA* 96, 1992, 421–42.

Kardoulias and Runnels 1995 = P.N. Kardoulias and C. Runnels, "The lithic artefacts: flaked stone and other nonflaked lithics," in C.N. Runnels, D.J. Pullen and S. Langdon (eds), *Artifact and assemblage: The finds from a regional survey of the southern Argolid,* vol. 1: *The prehistoric and Early Iron Age pottery and the lithic artifacts,* Stanford CA 1995, 74–139.

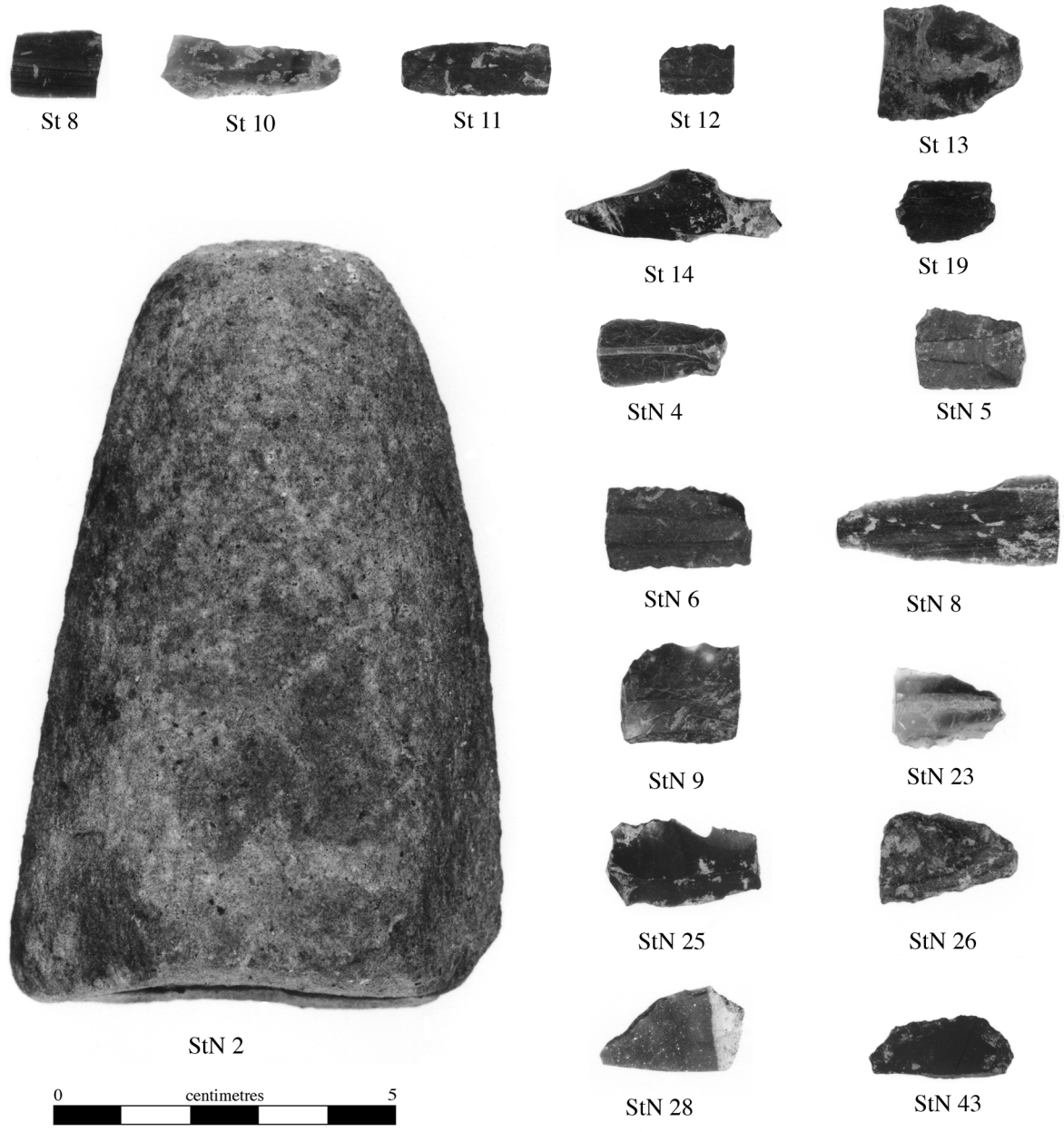

Plate 1. Stone objects from the temple (**St 8–19**) and from the northern sector (**StN 2–43**).