

The State of the Stone Terminologies, Continuities and Contexts in Near Eastern Lithics

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and Osamu Maeda**

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The typological analysis of the Aşıklı arrowheads and problems

Semra Yıldırım Balcı

Abstract

The Pre-Pottery Neolithic site of Aşıklı Höyük is located in Central Anatolia in west Cappadocia, not far from the obsidian sources. Because of its location, Aşıklı has a rich chipped stone industry almost exclusively of obsidian. The obsidian technology consists of mainly blades produced by direct percussion. The arrowheads of Aşıklı were made on regular, central blades. These arrowheads are widespread through the Pre-Pottery Neolithic Period but show typological changes during that period. These changes, related to changes in technology and economy, play the role of *fossiles directeurs*. In this paper, the typological study of arrowheads from Aşıklı and the problems confronted during the study will be discussed.

Introduction

Aşıklı Höyük, situated in Central Anatolia in west Cappadocia (Province Aksaray) (Fig.1), is one of the well known Pre-Pottery Neolithic site of the region, dated to the 8th millennium cal. BC (9,966–9,400 cal. BP) (Esin 1998, 103). The site now covers 3.5–4.0ha but the western and northern parts of the mound were cut by the river Melendiz, so originally the site was bigger. Excavations have been carried out since 1989. At the time of writing three levels, 1–3 from top to bottom, have been exposed. Level 2, with its first five building phases, is the only level extensively excavated (Fig. 2) (Esin 2000, 21).¹

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¹ Excavations were carried out under the direction of Prof. Ufuk Esin.

Aşıklı presents a well-preserved *kerpiç* architecture and various finds enable us to reconstruct the Pre-Pottery Neolithic way of life (Esin *et al.* 1991, 134, 135). The intra-site settlement pattern shows three significant areas: the dwelling area² in north, the area of the special functioning buildings in south-west and the area in north-east with buildings enclosed by a surrounding wall. The economy of Aşıklı Höyük was based mainly on hunting and gathering although agriculture was also practised (Esin and Harmankaya 1999, 118–127).

The chipped stone industry of Aşıklı Höyük is entirely of obsidian with the exception of a few flint pieces.³ The arrowheads of Aşıklı were made on regular, central blades.

² Rectangular or trapezoidal houses were built up one against the next, separated at intervals by narrow courtyards (Esin *et al.* 1991, Esin and Harmankaya 1999, 118).

³ Mostly small flakes as well as an arrowhead.

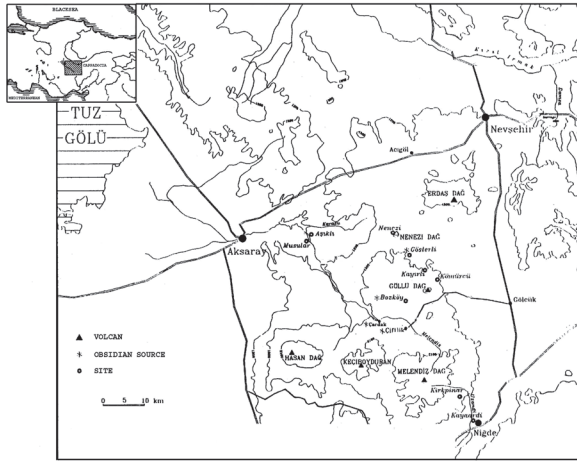


Fig. 1: Sites and obsidian sources mentioned in the text.

The typological analyses of the different types of arrowheads (the so-far analysed material of the excavation seasons of 1989–1998), their possible functions and interpretations will be discussed in this paper.⁴

Obsidian sources in the Cappadocian region and obsidian industry of Aşıklı

The western Cappadocian region, in which Aşıklı Höyük is located, is a volcanic area. The topography was shaped by the volcanic activities which began during upper Neogene and continued in the Quaternary when rich obsidian sources were formed (Yalçınlar 1964, 43–44). During the investigations in the region, the important obsidian sources⁵ and workshops⁶ that had been used by the prehistoric people were identified (Balkan-Atlı *et al.* 1997; Balkan-Atlı *et al.* 1999).

Located close to the sources, obsidian was used abundantly at Aşıklı Höyük. The finds indicated that obsidian arrived at the site in form of blocks or tablets where the whole process of knapping took place (Abbés *et al.* 1999, 126). Chemical analyses on the Aşıklı Höyük obsidian shows that Kayırlı and Nenezi sources were used for the raw material procurement (Gratuze *et al.* 1994).

The obsidian technology of Aşıklı Höyük is mainly blades, produced by direct percussion from bi-polar blade cores. The industry yielded a large number of blades of different morphologies.

The retouched obsidian artefacts are quite rich in numbers and types. Among the tools, many scrapers, together with pointed blades, perforators, arrowheads, burins, retouched blades and flakes are observed (Balkan-Atlı 1994, 210).



Fig. 2: Aşıklı Höyük, plan of Level 2 (Esin 1998).

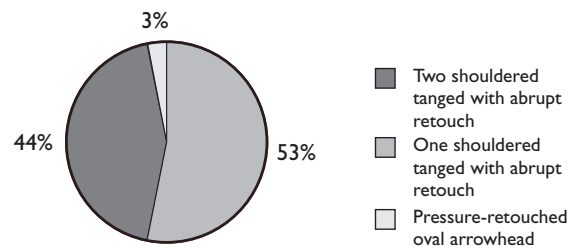


Fig. 3: Classification of the Aşıklı arrowheads.

Aşıklı arrowheads

Arrowheads are executed mainly on central blades. They constitute 0.8% of the retouched pieces.⁷ This rarity may indicate other techniques of hunting such as traps and drive hunting. The total number of projectiles is 135 and only 44 of them are complete. All of the projectiles of Aşıklı are on central blades except for two examples.

The Aşıklı arrowheads can be classified in three groups: one-shouldered and tanged with abrupt retouch, two-shouldered and tanged with abrupt retouch and thirdly pressure-retouched oval arrowheads (Fig. 3). The third group, is only found as surface finds.

The second group, two-shouldered and tanged arrowheads with abrupt retouch, is the dominant type comprising 53% (Fig. 3). Their dimensions vary between 34–112mm (lengths are c.70mm; width 15mm; thickness 5mm). The tangs are formed usually by abrupt retouch and rarely with flat retouch. Arrowheads with tangs formed by flat retouch are broken. In some examples, shoulders are not pronounced and the tangs look like the natural continuation of the body. The body is formed by sometimes abrupt, sometimes

⁴ This subject has been studied in detail as a MA thesis by the author (for more information, see Yıldırım 1999).

⁵ Göllüdağ sources (Kayırlı, Kayırlı village, Sırça Deresi, Bozköy, Kömürcü, Gösterli) and Nenezi source (Balkan-Atlı *et al.* 1999, 135–137).

⁶ The Bitlikeler and Ekinlik workshops are close to Aşıklı (Neolithic period), the İlbiz workshop is to the east of Bozköy (Neolithic period), the Kaletepe workshop is at Kömürcü (Palaeolithic and Neolithic period) (Balkan-Atlı *et al.* 1999, 136,137).

⁷ A fragmented tanged point made from flint is the only testimony of the presence of this material.

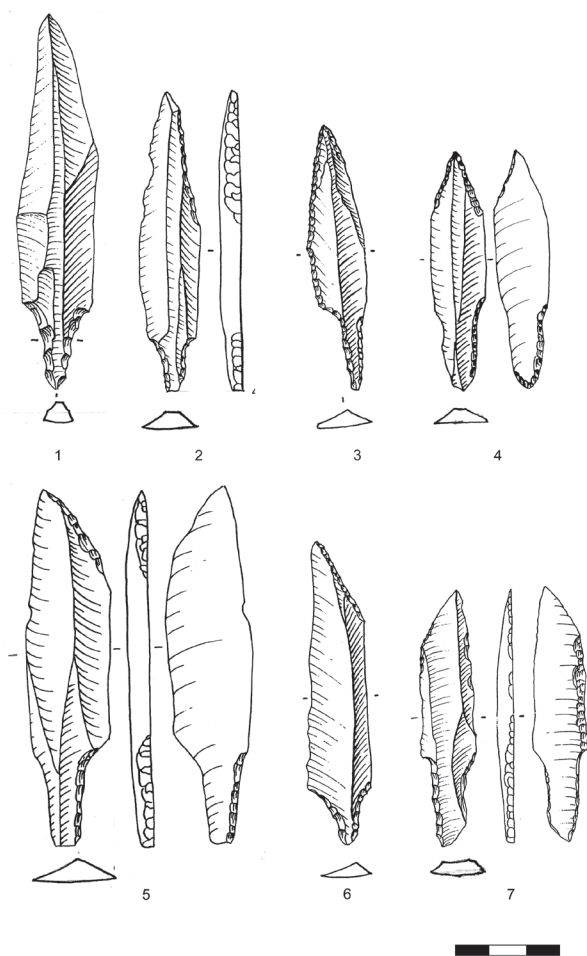


Fig. 4: Aşıklı two-shouldered tanged arrowheads with abrupt retouch (drawn by N. Balkan-Atlı, inked by G. Deraprahamian).

semi-abrupt retouch. The tips (normally the distal end) are generally sharpened with abrupt retouch on either one or two sides. Some of them have their tips on the proximal end of the blade. The tip is usually symmetrical and in line with the main axis of the blade blank (Fig. 4: 1–4). There are few examples where the tip is asymmetrical, these present the question of their function – whether they were used for hunting or not. There are four of them and all are complete. The functional tips of the two examples (Fig. 4: 5 and 6) have steep retouch on one side. The third has the same kind of retouch on both sides and the fourth has no retouch on the tip but was left unmodified (Fig. 4: 7). These types of arrowheads are also found at Musular⁸ (Kayacan pers. comm.), Yellibelen and Sırçantepe⁹ (Fig. 6) which are settlements very close to Aşıklı Höyük, in the same volcanic area (Balkan-Atlı *et al.* 2001, 33, 37).

The group of one-shouldered points with abrupt retouch, (group one) termed Aşıklı arrowheads, are classified

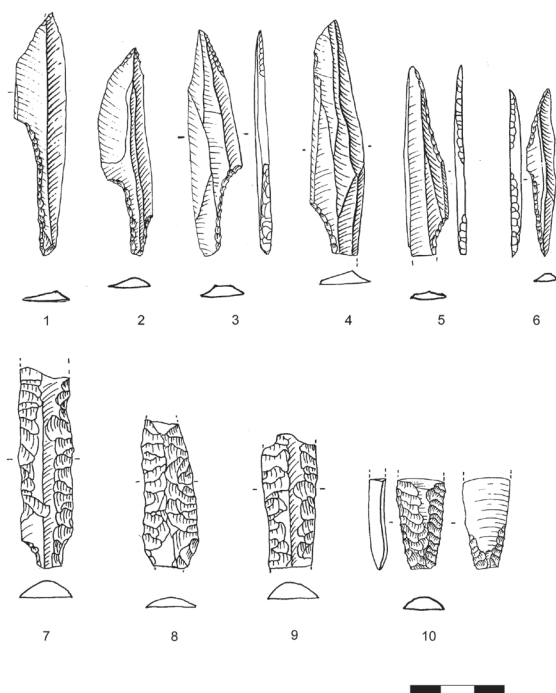


Fig. 5: 1–6: Aşıklı one-shouldered tanged arrowheads with abrupt retouch. 7–10: Aşıklı pressure retouched oval arrowheads (drawn by N. Balkan-Atlı, inked by G. Deraprahamian).

typologically due to their pointed tips and tangs (Fig. 5: 1–6). These arrowheads constitute 44% of the arrowheads (Fig. 3). Their dimensions vary between 37–83mm (lengths are c.60mm, width 12mm, thickness 4mm). Tangs are formed by abrupt retouch on the proximal or distal end and on right or left side of the blank. The body also has abrupt and/or semi-abrupt retouch; the tip, which may be on the distal or proximal end, is sharpened by abrupt retouch on one or two sides (Fig. 5: 1–3). Some of them do not bear retouch, the tip was left unmodified (Fig. 5: 4).

In this group also some of the points display asymmetric tips (Fig. 5: 5 and 6), so we again have problems about their function. Only one of the eleven examples with an asymmetric tip is a complete one (Fig. 5: 6). In general they have retouch on left side; one of them has abrupt retouch; another one has a natural sharp tip. The abrupt retouch sometimes covers half of the body, sometimes it is on the whole body on one side. This type is also found at Acıyer¹⁰ (Fig. 6), in the same region as Aşıklı (Balkan-Atlı *et al.* 2001, 37).

These points have been classified as arrowheads, however their function is not clear; it needs to be confirmed by use-wear analyses. Anderson has observed traces of harvesting on some of the shouldered blades (Anderson 1996) which may imply that the “shouldered arrowheads” had a similar function. Most of the one-shouldered arrowheads in the group were broken just beneath the shoulder but two are

8 Musular is a Neolithic site close to Aşıklı, c.400m away (Özbaşaran 1999, 149).

9 Yellibelen and Sırçantepe are Pre-Pottery Neolithic sites which were found during the surveys in the district of Aksaray (Gülçur 1996, 405).

10 Acıyer, a Pre-Pottery Neolithic site which was found during the survey, is located in district of Aksaray, in the village of Ağzıkarahan (Gülçur 1996, 405).

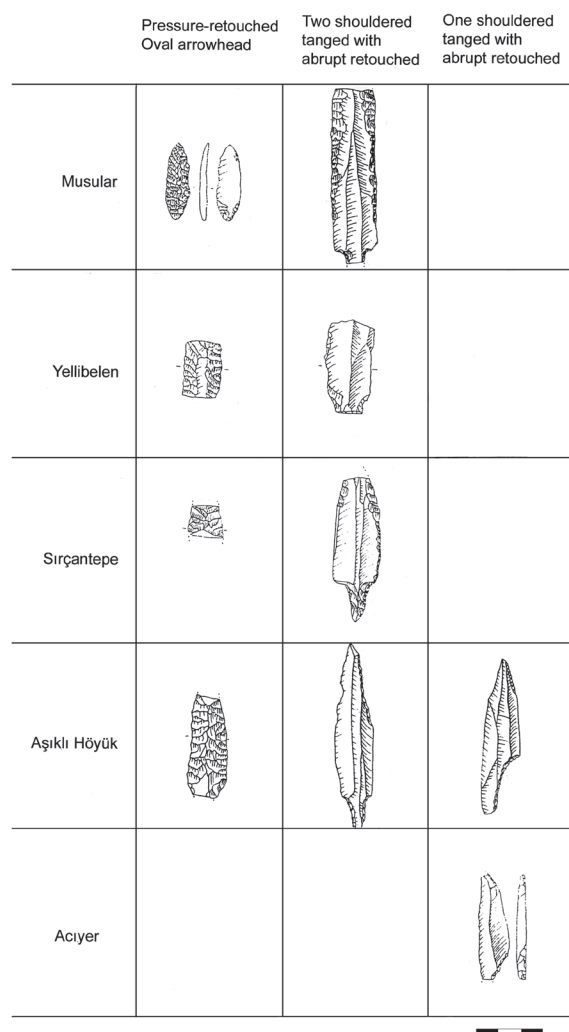


Fig. 6: Arrowheads of Pre-Pottery Neolithic in Central Anatolia from excavation and surveys: Acıyer (Balkan-Atlı 1998, fig. 2: 3), Sırçantepe (Balkan-Atlı 1998, fig. 4: 6), Yellibelen (Balkan-Atlı 1998, fig. 7: 4, 5), Musular (Balkan-Atlı 1998, fig. 5: 6).

broken above the shoulder. Such a difference may imply two different ways of hafting.

Looking at the vertical distribution of the two types of shouldered arrowheads within the settlement, it is possible to conclude that they all are processed with the same tradition from the earliest level till the latest.

The pressure-retouched oval arrowheads (3%) are from the surface and they are all broken (Fig. 5: 7–10). As the upper layers of Aşıklı Höyük were eroded we can conclude that this type was more common in the later phase of the occupation. Two examples show an overall pressure flaking on one face and the rest invasive pressure retouch on most of the body. One of them has a preserved tang. This type of point was found in large quantities at Musular (Kayacan pers. comm.) and a few were observed at Yellibelen and Sırçan Tepe (Fig. 6) (Balkan-Atlı *et al.* 2001, 33, 37).

Conclusion

Among the rich and abundant obsidian finds of Aşıklı Höyük, the arrowheads are represented in very low quantities. As hunting seems to be the main subsistence economy, such a low number raises further questions for example about possible different hunting techniques or the possibility of a different function for the ‘arrowheads’, etc. It is important to note that no impact damage was observed.

The function of these points needs to be defined by use-wear analysis to determine whether they show any traces of shooting, or evidence of other kinds of activities or whether they were simply stored in the village waiting for further use.

In order to explain the very low quantities of points found in the site, we can propose two working hypotheses: firstly that they were used for different kinds of hunting practices or secondly that butchering activities took place outside of the settlement (Buitenhuis pers.comm.).

Typologically, we can distinguish three main groups: two-shouldered tanged with abrupt retouched, one-shouldered tanged with abrupt retouch and pressure-retouched oval arrowheads.

To conclude, I would like to underline the fact that one-shouldered points are thought to have originated from Central Anatolia as we do not have any attested examples outside this region.

The pressure-retouched oval arrowheads are found in the surface levels of Aşıklı which were completely destroyed by intensive ploughing. These can be compared to Musular situated very close to Aşıklı. In Musular pressure-retouched arrowheads are abundant. Musular is dated to latest phases of Aşıklı Höyük (Özbaşaran 1999, 153). This could indicate the presence of pressure-retouched oval arrowheads in Aşıklı’s latest levels. It seems that the two groups of shouldered and tanged with abrupt retouch arrowheads in the region, at the beginning of the period, gave way to pressure-retouched oval arrowheads (Balkan-Atlı *et al.* 2001, 41). In other words, the arrowheads represent a local development and indicate a typological change within time. This preliminary result will be checked and better understood by the further analysis and studies of the obsidian industry as a whole.

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