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THE LEAFPOINTS OF MUSELIEVO

Svoboda Sirakova*

The Muselievo site is situated on the right bank of the river Osam in North Bulgaria. In this place, not far from its outlet to the Danube river (the mouth of river Osam is found some ten kilometers north of the Muselievo village), the valley of Osam has developed an asymetry, similar to those of the other Danubian tributaries on the territory of Bulgaria.

The steep right banks, often covered with torrents (slope sediments), and the gentle left slopes with expressed terraces (Minkov, 1968). In the layers of such a torrent, formed of big limestone blocks covered with loess sediments, palaeolithic finds are recognized. We could presume that the mechanism of formation of the torrent has been as follows: in the mastrichtian limestones, forming the rock crown of the height "Nanin kamak" (above the site), big cracks have appeared as a result of which enormous limestone blocks have separated and started sliding. These have been stemmed on one of the oldest terraces of the Osam river, situated on 100 meters bellow the rock crown. In this place the mastrichtian limestones have undergone intensive processes of evaporation as a result of which big quantities of flint concretions have separated from the limestone mass. We believe that the initial place of exploiation of the flint raw material was exactly here, i.e. 30 to 35 m. above the nowaday's level of the torrent. Later, probably at the end of the Pleniglacial A as a result of the erosion, the artefacts together with the sediments have been slid to the place where we find them today (Sirakova, Ivanova, 1988).

The stratigraphic investigations of the site which are mainly based on the results of the studies undertaken by P. Haesaerts (1978, 1979) determined that the main sedimentological components of the site from the bottom upwards are the following:
– limestone blocks and rubles
– fossil soil
– aeolian sediments (pl. I, by P. Haesaerts, unpublished results of the investigations of 1988).

In the geochronological interpretation of the stratigraphic sequence, a comparison with the palaeoclimatic sequence of the North Greece region has been used (Wijmstra, 1969). The first important palaeoclimatic check–point is marked from the upper part of the layer FX. Although it is much disturbed by erosion processes, it has been determined that it corresponds to some washed brown soils from nearby. The stage of development of these soils assumed their synchronization with the climatic periods Pangaion, Drama and Elevtheropolos, identified at Tenaghi

* Institute of Archaeology – Bulgarian Academy of Sciences, Sofia.

Philippon (N. Greece) by Wijmstra and assigned to the Interglacial Riss–Würm and the Interstadials Brörup and Oderadde.

The second palaeoclimatic check–point is connected with the series of fossil soils (FB1, FB2) preserved in situ in a profile near the site which equivalent is the layer FB in the main site and a parallelisation with the climatic oscillations Kalabaki and Krinides at Tenaghi Philippon is possible. The radiocarbon data received for Tenaghi Philippon place these oscillations in the period about the 45 th millenium B.P. Thus, the leafpoint's layers (F.A.1 and F.A.2) could be related in total to the period of the Early Würm or more precisely to the end of its second half. In other words the Muselievo complex with leafpoints could be dated aproximately to the 45th–50th millenium B.P.

The Muselievo complex of leafpoints numbering to over 500 full and around the same feature of fragments is the richest one in Europe for the time being.

In the technical and typological study of the collection of leafpoints a specially elaborated questionary was used, which consists of two parts: the one groups together all technical features and the other - the morphometrical. The morphometrical study of the assemblage based on the criteria – ratio between the biggest length and the biggest width oh the object; localisation of the biggest width; symetry of the side edges – showed that the most oftently met leafpoints are the lanceolate ones (pl. II, III) and the ones with a form of a willow leaf which have a ratio length to width 3 : 1 (pl. IV). Rarely one can find leafpoints on the form of a laurel leaf (pl. V), almond like (pl. VI1, 4), cordiform (pl. VI 2), triangular (pl. V 13), oval etc. In the technological process of producing leafpoints some stages could be pointed out. I shall not deal with this problem in details. I would only like to point out that may be the most important thing in the process of production of leafpoints is the using of the diagonal–alternational technique, levelling the surface with a very fine flat retouch, which leads to optimal proportions between length and width for the flint raw material.

The Middle Palaeolithic character of the leafpoints of Muselievo is determined by the context of the complex. The structure of the assemblage can becharacterized in the following way:

1. A relatively small number of core where the Levallois type predominates (pl.VII);
2. A big quantity of small pieces and flakes of the bifacial production of the points;
3. Lack of typological variety in tools – Levallois flakes (pl. VIII 1, 2, 4, 6), levallois points (pl. VIII 3, 5), side scrapers (pl. IX 1–3), burins (pl. IX 4), denticulates (pl. IX 5).

The largest in number is the group of the sidescrapers, which is characterized by the following:
– formation of the side edges with a semiabrupt retouch,
– a part of the surface is carefully formed and equilized with a flat superficial retouch;
– using of a retouch on the ventral part of the tools;
– and in many cases, adapted the unsuccessful or unfinished leaf forms into different types of sidescrapers.
4. At the same time, an unproportional big quantity of tools of only one type – leafpoints.

Undoubtfully, these are features characteristics for the so called workshops specialized in the production of a certain type of tool (Haesaerts, Ivanova, Sirakova 1988). This interpretation is supported by the lack of any traces of fireplaces or remains of hunting as well as bone remains of killed animals. Thus we can assume that the palaeolithic workshop was functioning with some breaks in the frame of a geological climatic period. Probably the term of each functioning session was very short – some days. In this way we could explain the lack of typological variety, the lack of traces of fireplaces etc. The technical and typological study of the complex shows the existance of a low Levallois technical and typological coefficients, as well as an average or higher coefficient of sidescrapers, which is a sufficient support for us to refer the Muselievo complex to the group of the Mousterian cultures (Kozlowski 1975).

Apart from Muselievo on the territory of Bulgaria there are some other sites with leafpoints i.e. Samuilitsa II (pl. X 1–6, pl. XI 1, 3), Devetaki cave (pl. XI 2), open–air sites of the Rhodopes (pl. XII 1–4). The most interesting ones are the lesfpoints of the Samuilitsa II cave. It is situated in the canyon of the Iskar river and lies at 120 km South West of the Muselievo site. The leafpoints' complex can be found in the middle series of the sediments, which are characterized with Levallois techniques for flakes and blades (Sirakov 1983). The typological structure of these complexes is defined by the unretouched Levallois forms, sidescrapers produced mostly of Levallois blanks etc. The technical and typological study of the Samuilitsa collection of leafpoints determine a full similarity with the one from Muselievo. We believe we have sufficient basis to connect them into an autonomous cultural unit – the Muselievo–Samuilitsa culture.

Until now, apart from Muselievo and Samuilitsa complexes, on the territory of Bulgaria there were nearly no other analogues. As a result of the recent studies that have taken place, the area of this culture significantly broadens. In the first place, the high mountain Middle Palaeolithic sites in the Rhodopes – South Bulgaria draw special attention. No more do we speak of single finds, but of series of leafpoints. They also are in the context of the Mousterian complexes with Levallois techniques. Although produced of raw materials of lower quality (opal–chalcedony, quartz) no doubt the leafpoints of the Rhodopes are result of an identical or a close to the Muselievo technological tradition.

The technical and typological study of the Balkan Middle Palaeolithic assemblages with leafpoints excluded the possibility for analogies between Muselievo–Samuilitsa and Ripiceni–Izvor and Kokkinopilos.

As it is known there are many authors who accept the view that the leafpoints couldn'be the cultural indicator, because they have appeared at different periods and in different contexts and are the result of convergence (Allsworth–Jones, 1986). On principle we can agree with this view but in this particular case the assemblages with leafpoints in Bulgaria, I think are cultural markers. Because: 1. There is a strong similarity of well developed specific technological tradition; 2. Great similarity in the context of Muselievo, Samuilitsa and the Rhodopes; 3. In Muselievo we have rich collection of hundreds identical leafpoints, no doubt are the result of rarely expressive standartization of production.

After the period to which we refered the Muselievo–Samuilitsa culture (about 45–40 th millenium B.P.), on the territory of the Eastern part of Balkan, the assemblages with leafpoints disappeared. Undoubtly, there was a connection between the disappearance of one so strongly developed technological tradition and the destiny of their artisants.

It is interesting to mention that some elements of the context of the leafpoints in Samuilitsa probably continue to exist some more time. Probably, if we take on account the earliest date of appearance of Aurignacian in Bacho Kiro – 43 000 B.P. and about 45 000 B.P. in Temnata Dupka, the coexistence between the two traditions continued more than we believe till now.

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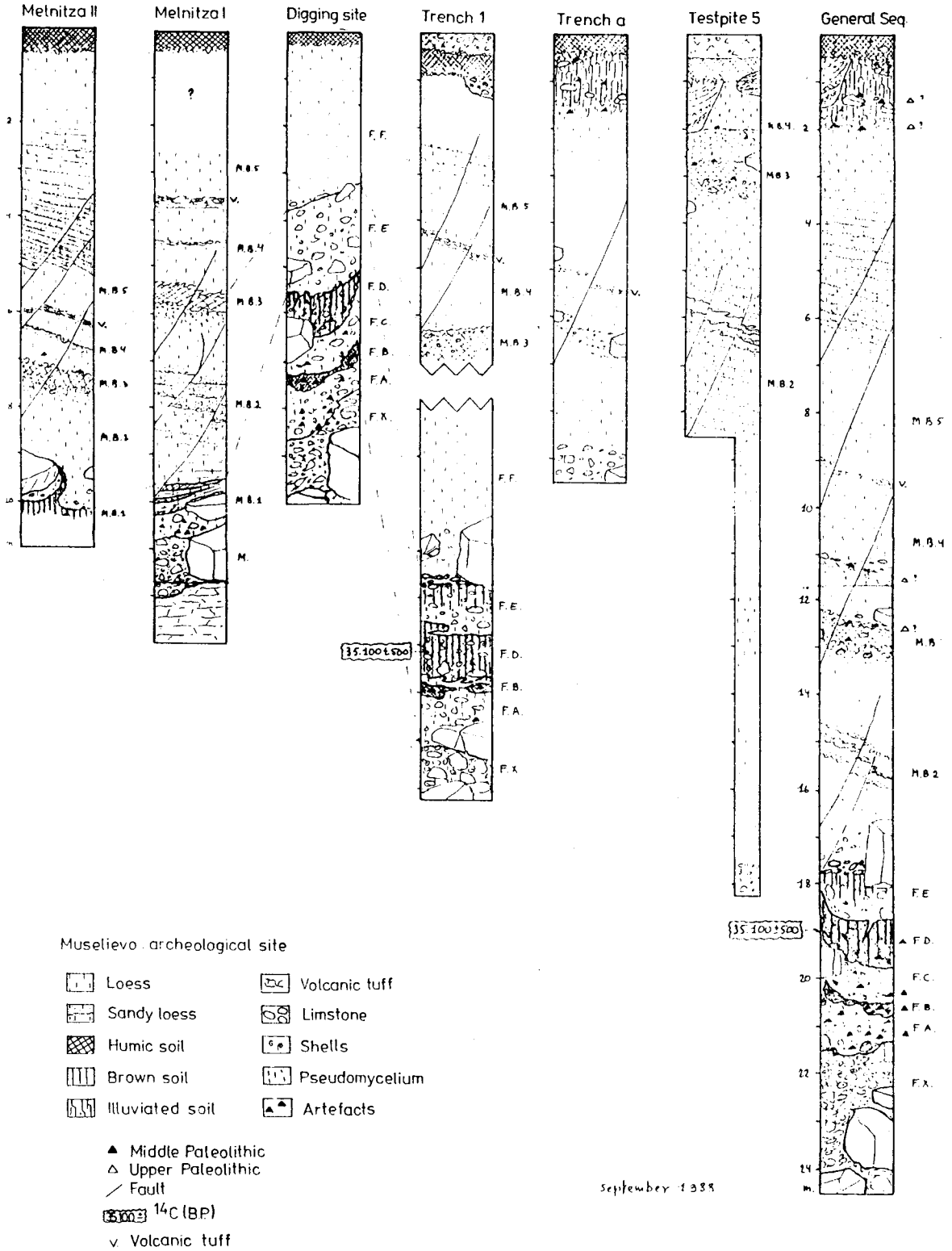

Plate I. Stratigraphical sequences of the excavating area in Muselievo site – by Paul Haesaerts in 1988, unpublished results of the investigations of this site

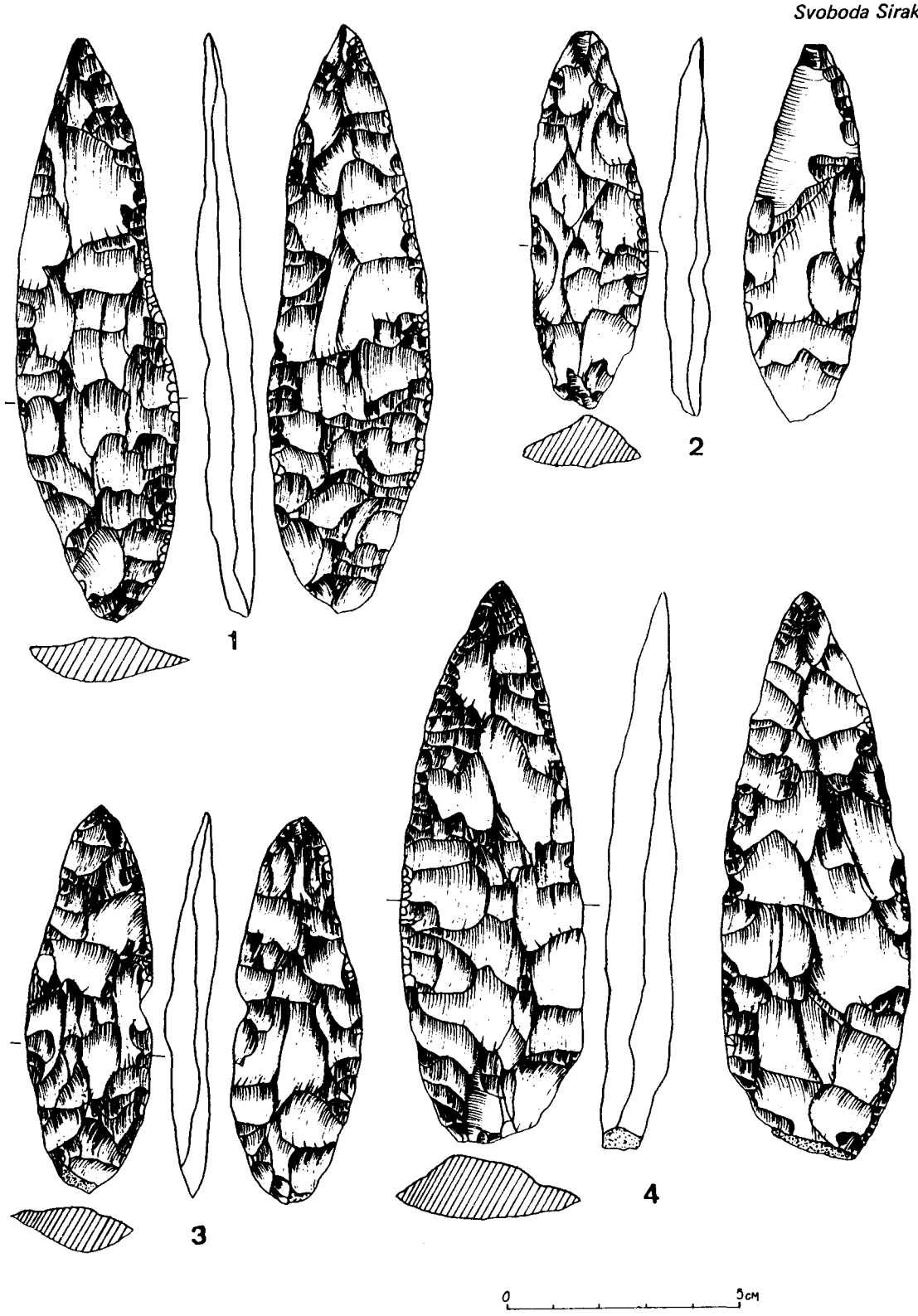

Plate II. Lanceolated leafpoints of Muselievo

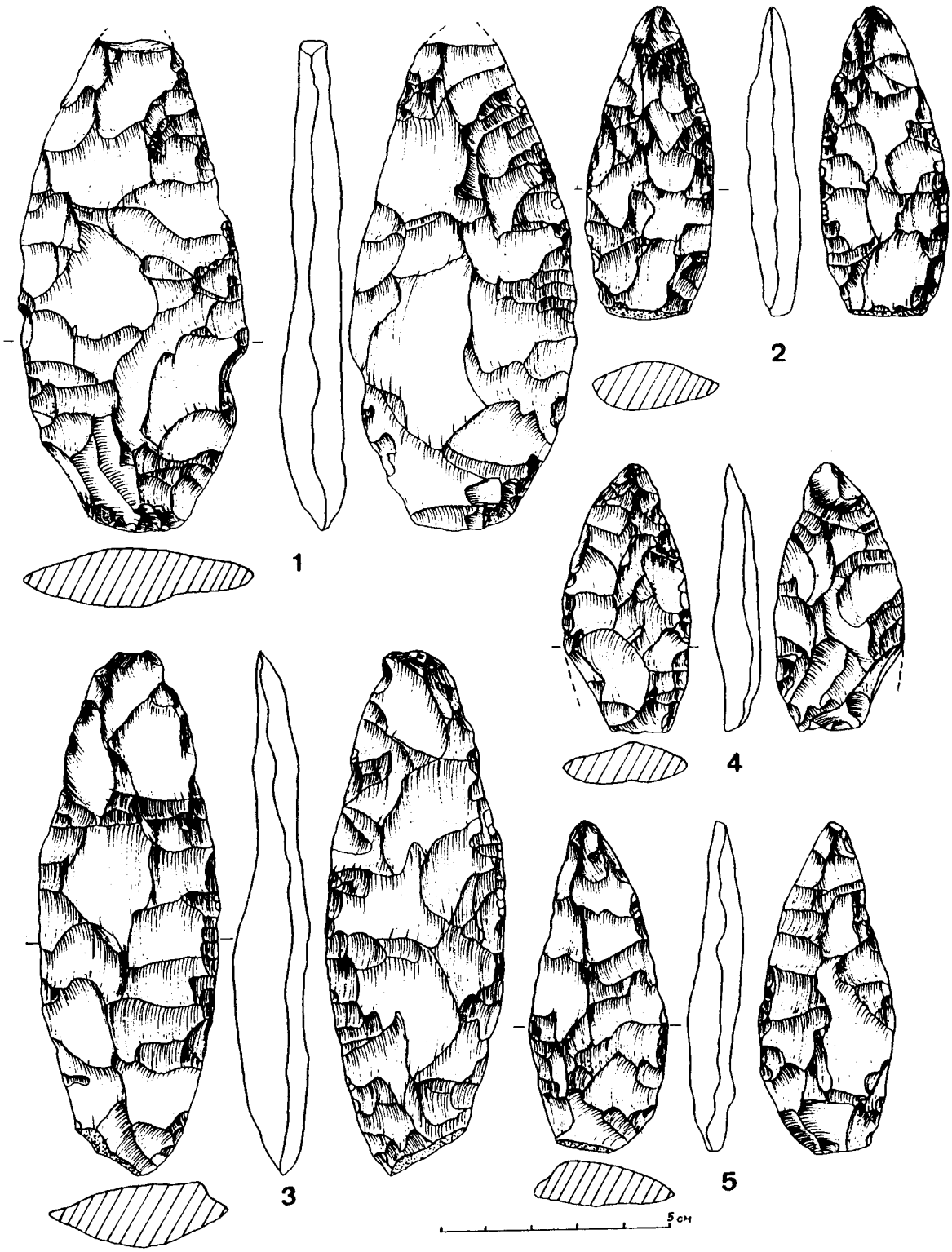

Plate III. Lanceolated leafpoints of Muselievo

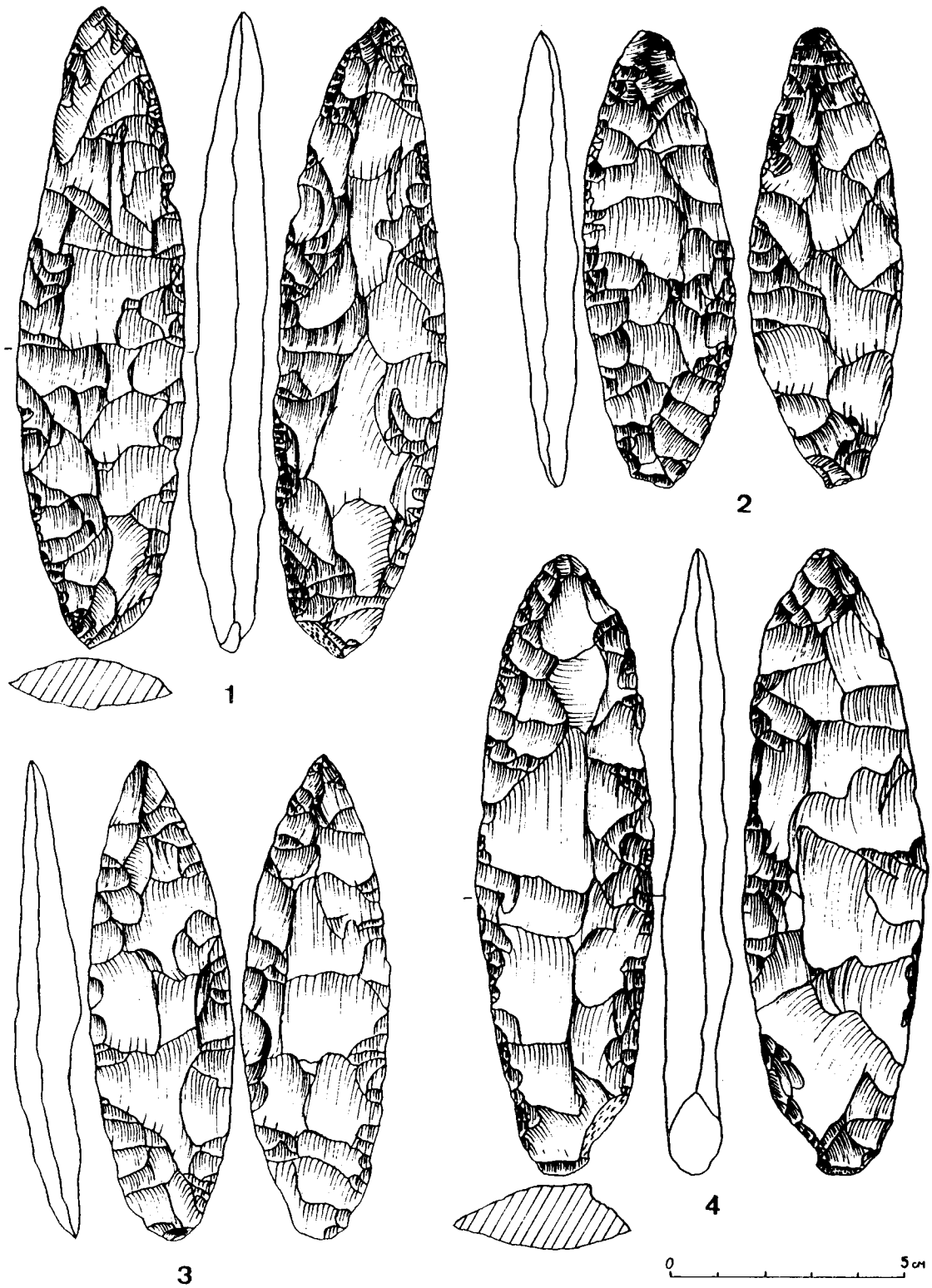

Plate IV. Willow leafpoints of Muselievo

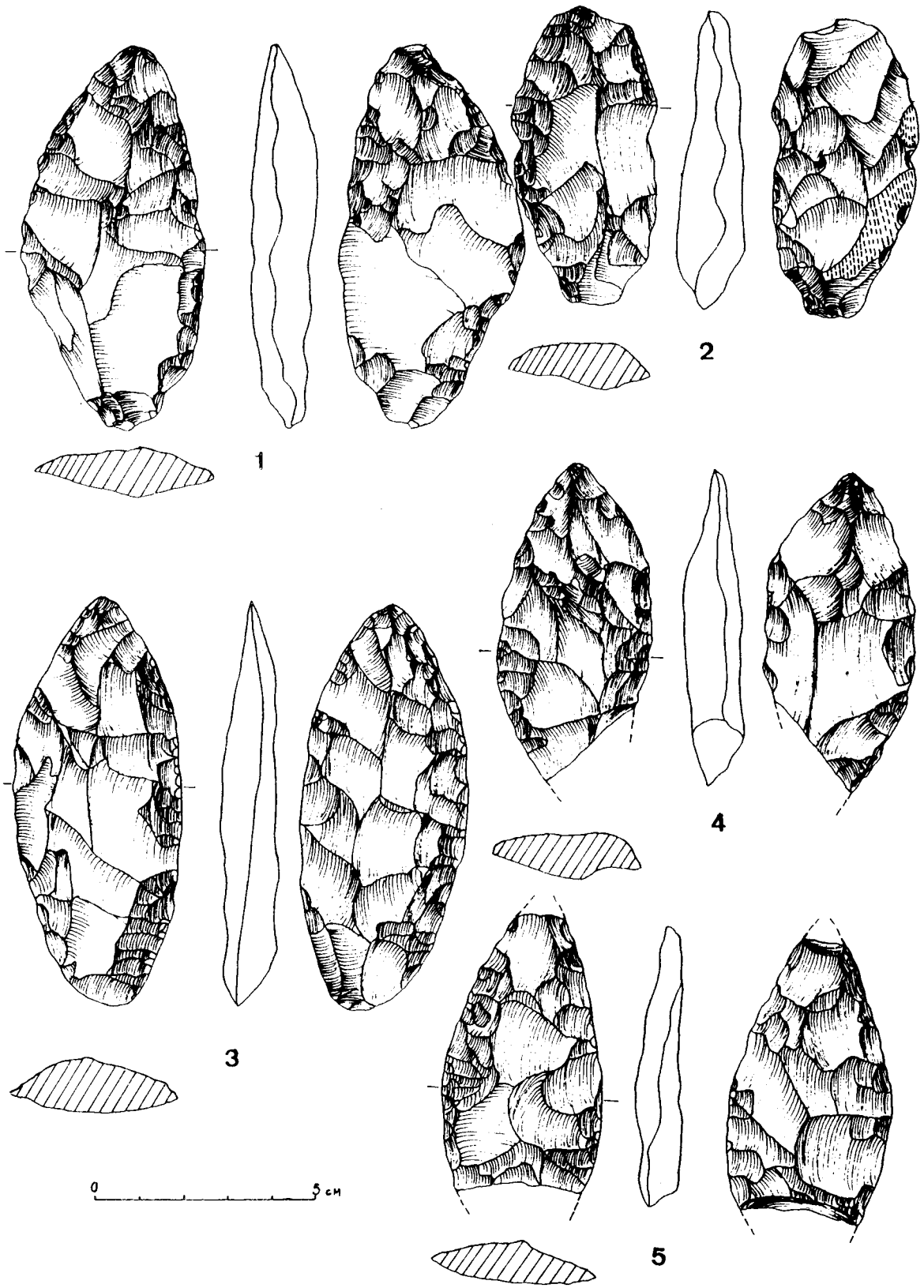

Plate V. Laurel leafpoints of Muselievo

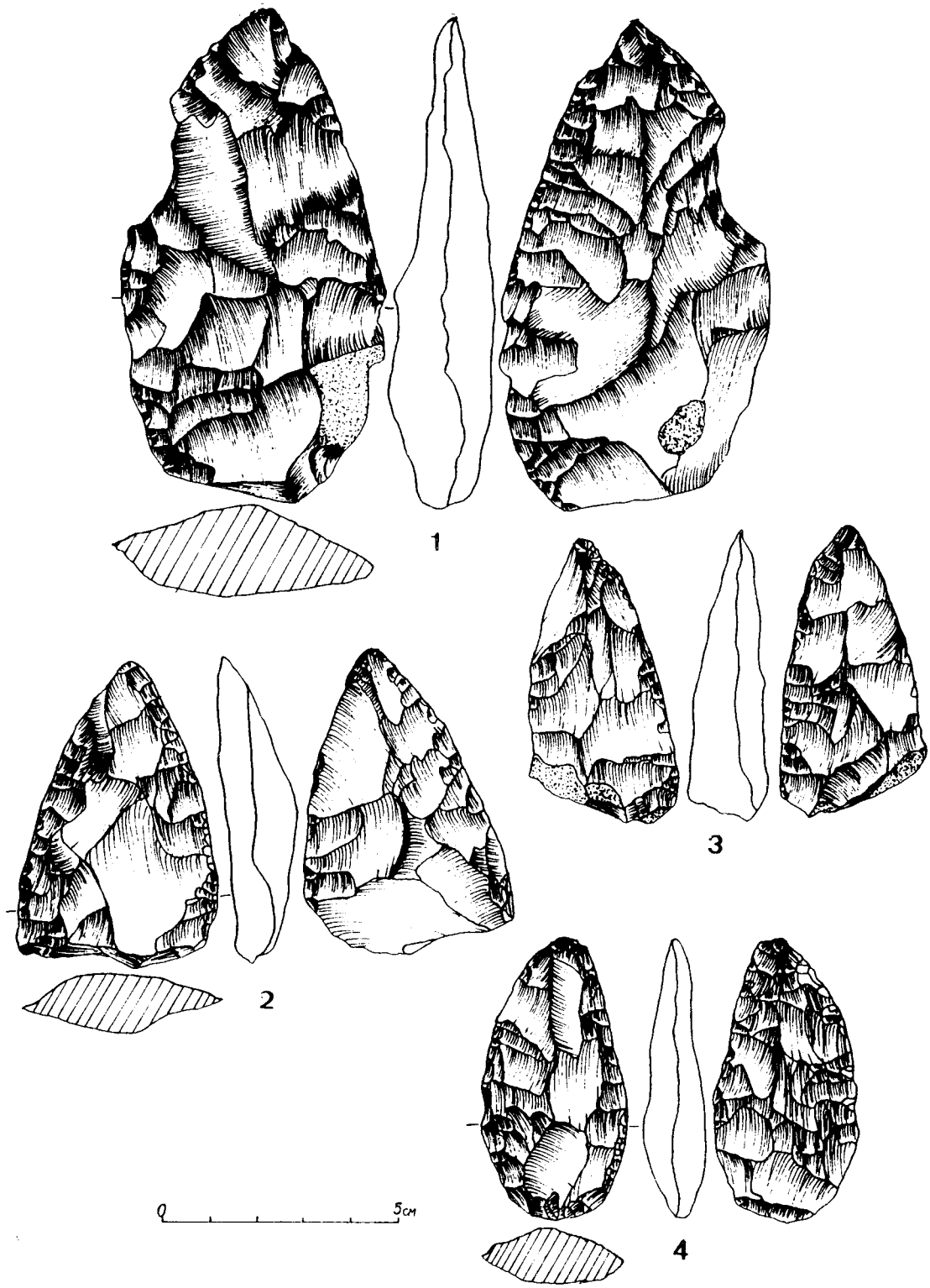

Plate VI. Different kind of leafpoints of Muselievo: 1, 4 – almond-like leafpoints; 2. – heart like leafpoint; 3 – triangular leafpoints

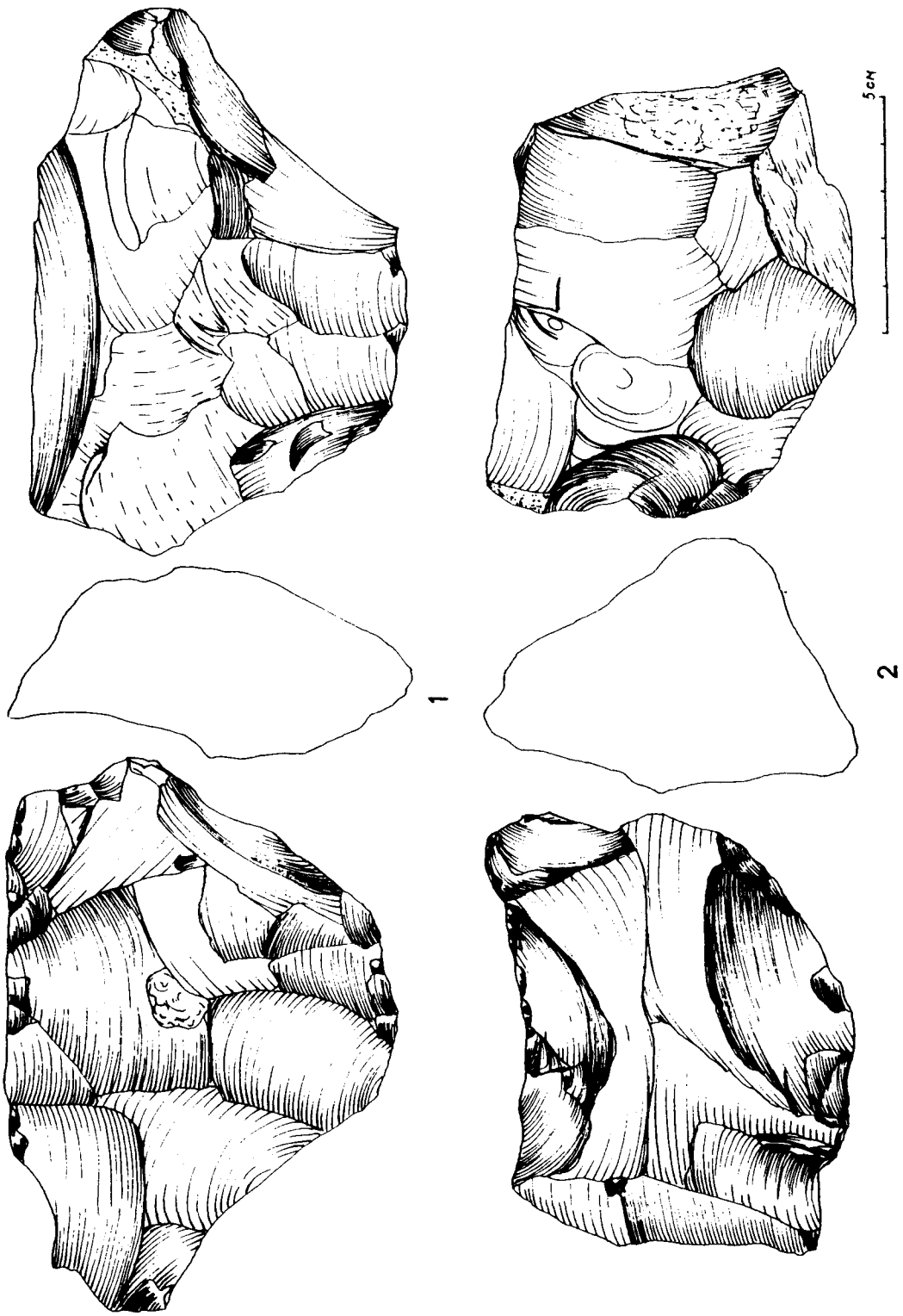

Plate VII. Levallois cores: 1 – Levallois precore; 2 – Levallois core with two platforms

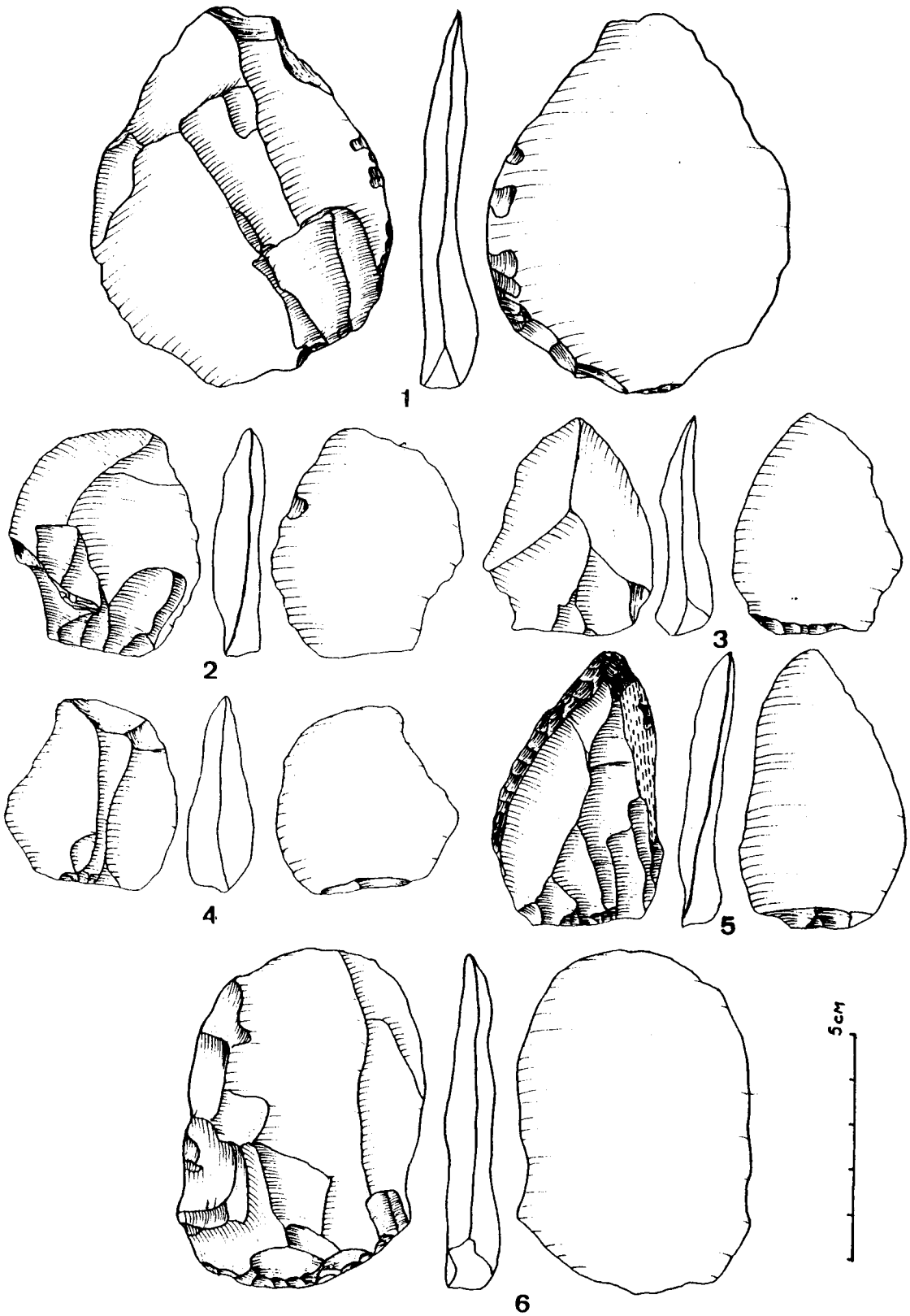

Plate VIII. Levallois tools of Muselievo: 1 – Levallois flake; 2, 4, 6 – atypical Levallois point 3 – unretouched levallois point; 5 – retouched levallois point

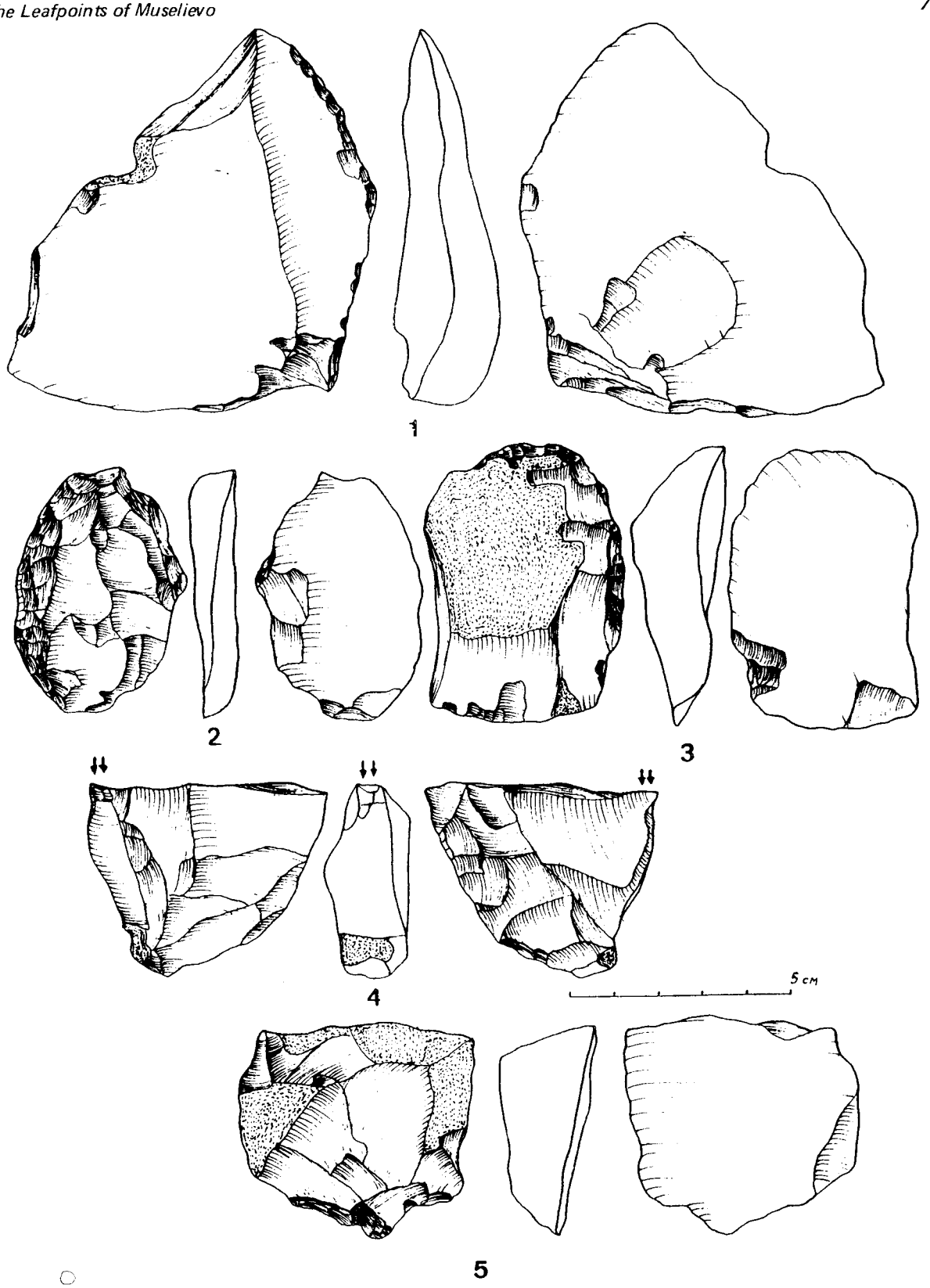

Plate IX. Tools of Muselievo: 1, 2, 3 – side scrapers; 4 – burin; 5 – denticulate

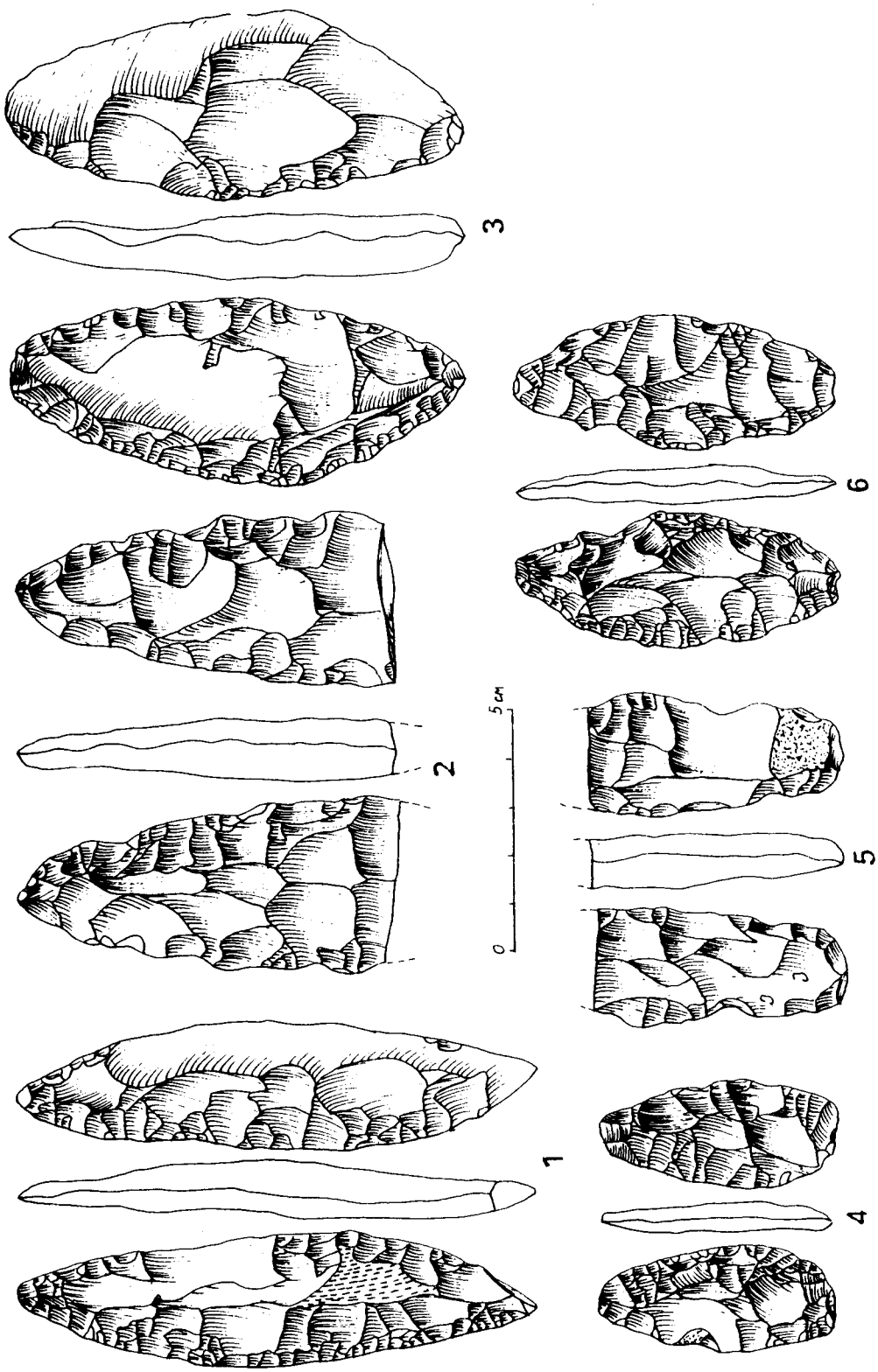

Plate X. Leafpoints of Samuilitsa II

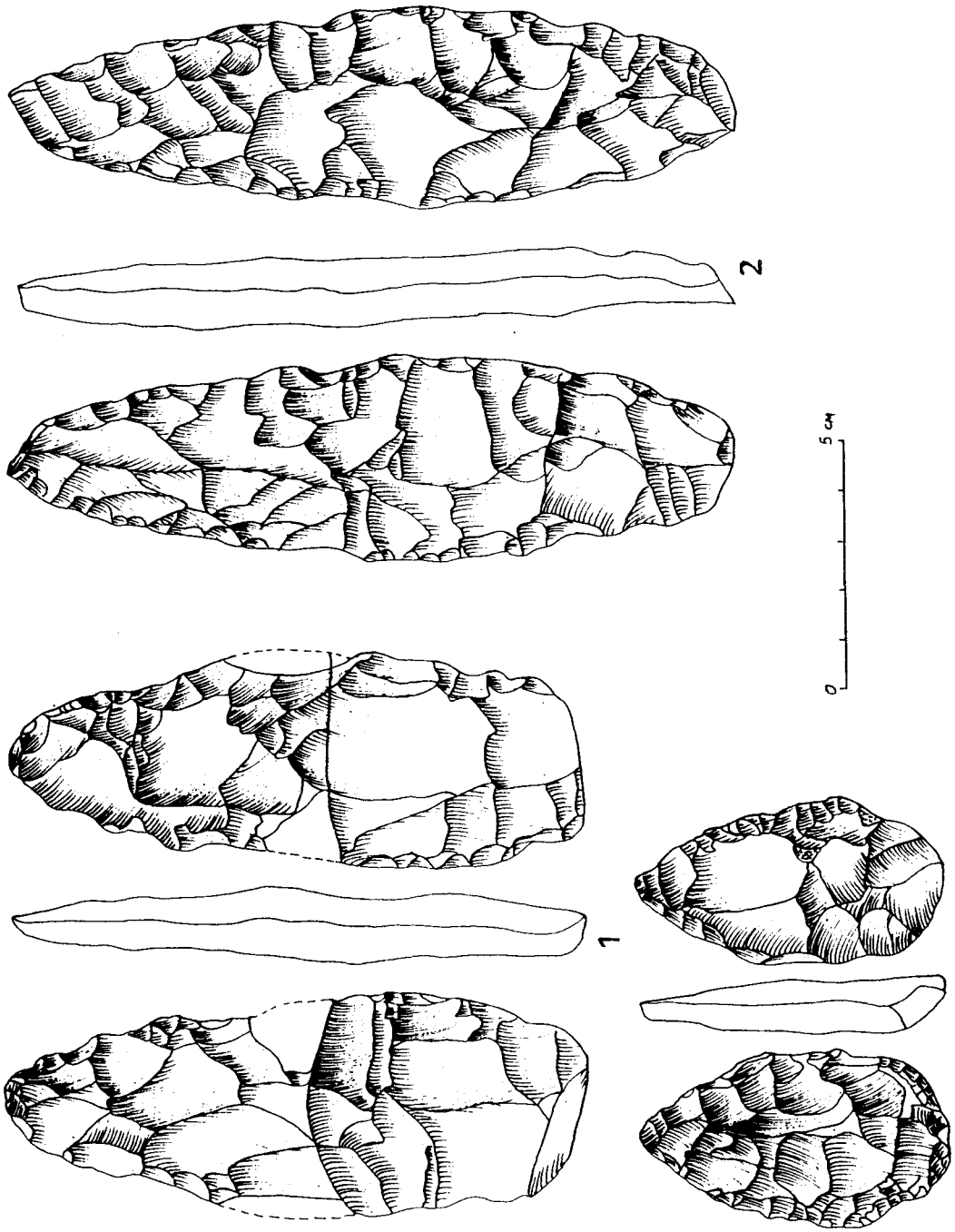

Plate XI. Leafpoints from Bulgaria: 1, 3 – leafpoints of Samuilitsa; 2 – leafpoints of Devetaki, district Lovech

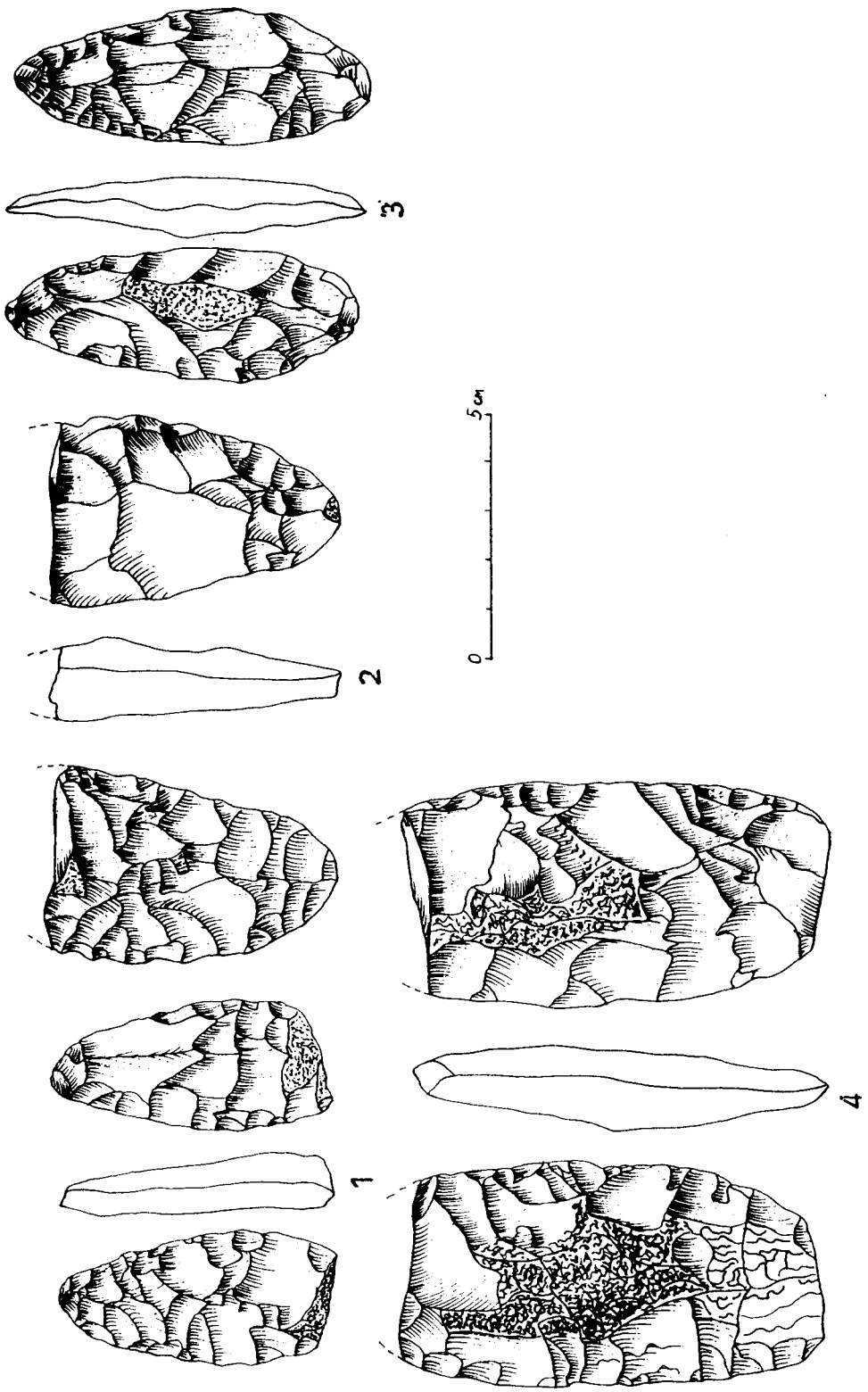

Plate XII. Leafpoints of the Rhodopes