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TECHNO-TYPOLOGICAL AND USE-WEAR INSIGHTS ON THE CHIPPED STONE ITEMS DISCOVERED IN THE GLINA TELL (IN 1969)

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Keywords: Copper Age, Bronze Age, blade technology, typology, use-wear analysis

Abstract: In the collections of the Institute of Archaeology in Iași are stored various artefacts originating from the 1969 excavations from the Glina – La Nuci tell. Among other items, the collection contains 85 chipped stone artefacts that were uncovered in the Copper Age (Gumelnița culture) and Bronze Age (Glina culture) layers from the site. The artefacts were investigated from a techno-typological perspective. The analysis revealed that the lithic industries of the Gumelnița communities were oriented towards obtaining medium and macro- wide blades, detached by punch and pressure techniques. The use-wear analysis of the artefacts discovered in the dwellings of the Gumelnița culture showed that the blank edges of the blades were used in cutting activities of various materials. Instead, the retouched edges of the blades were used for scraping, or retouching was simply done to suppress the cutting edge and not hurt the user's hands. During the Glina culture was noticed a decline in the blade producing techniques and the appearance of typical implements as the bifacial worked flint plates, similar to curved knives.

Cuvinte cheie: Epoca Cuprului, Epoca Bronzului, tehnologia de producere a lamelor, tipologie, traseologie

Rezumat: În colecția Institutului de Arheologie din Iași se păstrează diferite artefacte ce provin din săpăturile din anul 1969 din tell-ul Glina – La Nuci. Printre altele, colecția conține 85 de piese de piatră cioplită descoperite în sit, în nivelurile aparținând Epocii Cuprului (cultura Gumelnița) și Epocii Bronzului (Cultura Glina). Artefactele au fost investigate din punct de vedere tehnologic. Analiza a relevat că industriile litice aparținând comunităților culturii Gumelnița aveau drept scop obținerea de lame cu lățimi medii și mari, folosind ca tehnică de detașare percucia indirectă și presiunea. Analiza traseologică a artefactelor descoperite în locuințele culturii Gumelnița a arătat că laturile neretușate ale lamelor erau folosite în activități de tăiere a diverselor materiale. În schimb, laturile retușate ale lamelor erau utilizate pentru răzuire sau pur și simplu retușele erau realizate pentru a suprima partea tăioasă și a nu răni mâinile utilizatorului. În ceea ce privește artefactele litice caracteristice culturii Glina, se poate observa o decădere a tehnicilor de producere a lamelor dar totodată și apariția unor unelte specifice precum piesele lucrate bifacial pe plăcuțe de silex, asemănătoare cuțitelor curbe.

THE SITE FROM GLINA – LA NUCI

The excavations carried out on the *tell* Glina – La Nuci represent significant milestones in the field of prehistoric archaeology in Romania, for two reasons. First, this is the eponymous site of the Early Bronze Age Glina III-Schneckenberg culture (Nestor 1928). Secondly, on the basis of the stratigraphy from the site, I. Nestor ascertained the chronologic succession of the Boian and Gumelnița cultures (Nestor 1928).

Located in the Romanian Plain, on a narrow extension of the high terrace from the edge of the meadow of Dâmbovița River, between the present-day villages of Glina and Bălăceanca (Comșa 1996, p. 193) (Fig. 1), the site was discovered by R. Vulpe (Nestor 1933, p. 227) and was extensively investigated in the 20th century, in three stages. The first stratigraphic surveys of the site were led by I. Nestor, in 1926 and 1927, when were excavated (through three trenches: A–C) various locations of the *tell* (Nestor 1933, p. 227–229, Fig. 2). Nestor delimited the three main archaeological layers of the *tell*: the oldest level belonged to the Boian culture¹ (Nestor 1933, p. 227–229), overlapped by a more extensive deposition of layers belonging to phase

A of the Copper Age Gumelnița culture (Nestor 1933, p. 227–229), while the newest deposition is that from the beginning of the Bronze Age (level III of the site) (Nestor 1933, p. 227–229). Based on the archaeological materials from this latter level, the Glina culture was defined (Petrescu-Dîmbovița 1996).

The second phase of archaeological research took place in the fifth decade of the 20th century, with M. Petrescu-Dîmbovița conducting the investigations at the site in 1943, 1945–1948 (Petrescu-Dîmbovița, Comșa 1969). Information regarding the fieldwork and findings from this phase is scarce. Only one report on the investigations from 1943 was published (Petrescu-Dîmbovița 1944). The report states that a 20 x 15 m trench was investigated, on the west side of the *tell* (near trench B of Nestor: Fig. 2). Several huts from the Bronze Age layer, five dwellings from the Gumelnița 2 layer², four dwellings from the Gumelnița I layer, four dwellings and four children's skeletons in the Boian A (Vidra) layer were uncovered (Petrescu-Dîmbovița 1944). Additionally, several Medieval Age inhumations were uncovered during the same

¹ Which later proved to be from the Vidra phase. Also, several materials from the Spanțov phase were recovered although the presence of a proper archaeological layer was not noted (Comșa 1996).

² The layers named in the nomenclature of the site as Gumelnița 1 and Gumelnița 2, are, in fact the Gumelnița A1 and A2 phases (Ștefan 2015–2016). Each of this layer had two sub-layers. Thus, in the nomenclature of the site the Gumelnița layers are: Gumelnița 1a, Gumelnița 1b, Gumelnița 2a and Gumelnița 2b.



Figure 1. Glină – La Nuci. The location of the site in the Romanian Plain (map support: Google Earth).

excavations (Petrescu-Dîmbovița 1944). For the 1945–1948 excavations we found no report or written record on the field work, only one illegible paper³ on the 1945 excavation and several drawings of the discovered ceramics.

The final stage of the investigations on the site occurred in 1969 and 1970. In 1969, prompted by the National Museum of History of Romania⁴, excavations were resumed at Glină, led by M. Petrescu-Dîmbovița and E. Comșa. The two archaeologists did not publish any report or article on the materials or on the features investigated in this stage of research. The documentation from this stage is archived in two institutions: at the “Vasile Pârvan” Institute of Archaeology in Bucharest (the written records from 1969 and 1970 and two reports for the same years) and at the Institute of Archaeology in Iași (hereafter referred as IAI) (the drawings of the stratigraphic profiles of the 1969 excavation and the drawings of the features related to the Glină and Gumelnița layers). From the data in the documentation available at the two institutions we know that a rectangular area of 28 x 14 m was investigated, around trench A of Ion Nestor (Fig. 2). In 1969, several features from the Glină layer and five dwellings from Gumelnița 2 layer (one from layer IIa and four from

layer IIb) were uncovered (Petrescu-Dîmbovița, Comșa 1969) (Fig. 3–6). According to the Report from that year (Petrescu-Dîmbovița, Comșa 1969), the archaeological material was divided between two institutions: the artefacts from the Boian and Gumelnița 1 layers went to the “Vasile Pârvan” Institute of Archaeology in Bucharest, while those from layers Glină and Gumelnița 2 went to the “A.D. Xenopol” Institute of History and Archaeology in Iași⁵.

The 1970 excavations focused on uncovering several dwellings from the Boian–Vidra and Gumelnița 1b layers from the same area of the site excavated in 1969 (Ștefan 2015–2016, p. 137–145) and on investigating the ditch surrounding the Boian settlement (Comșa 1996). Mention must be made of the fact that a techno-typological analysis of the flint spearheads found in 1969–1970 in the Gumelnița layer was published by V. Chirica (Chirica 1972–1973), but none of the artefacts debated in that article were found in the collection of IAI.

MATERIALS AND METHODS

Within the archaeological collection of IAI are preserved 85 chipped stone (flint) artefacts along with fragments from polished stone tools and Bronze Age

³ The paper, preserved in the collection of the Institute of Archaeology, is illegible because the ink faded, due to the passage of time.

⁴ The M. Petrescu-Dîmbovița archive housed at Institute of Archaeology in Iași contains an official document detailing Petrescu-Dîmbovița’s response to the proposal of the Museum regarding the recommencement of excavations, including the stipulated conditions for such a resumption.

⁵ Institute that later split into the Institute of History and the Institute of Archaeology.

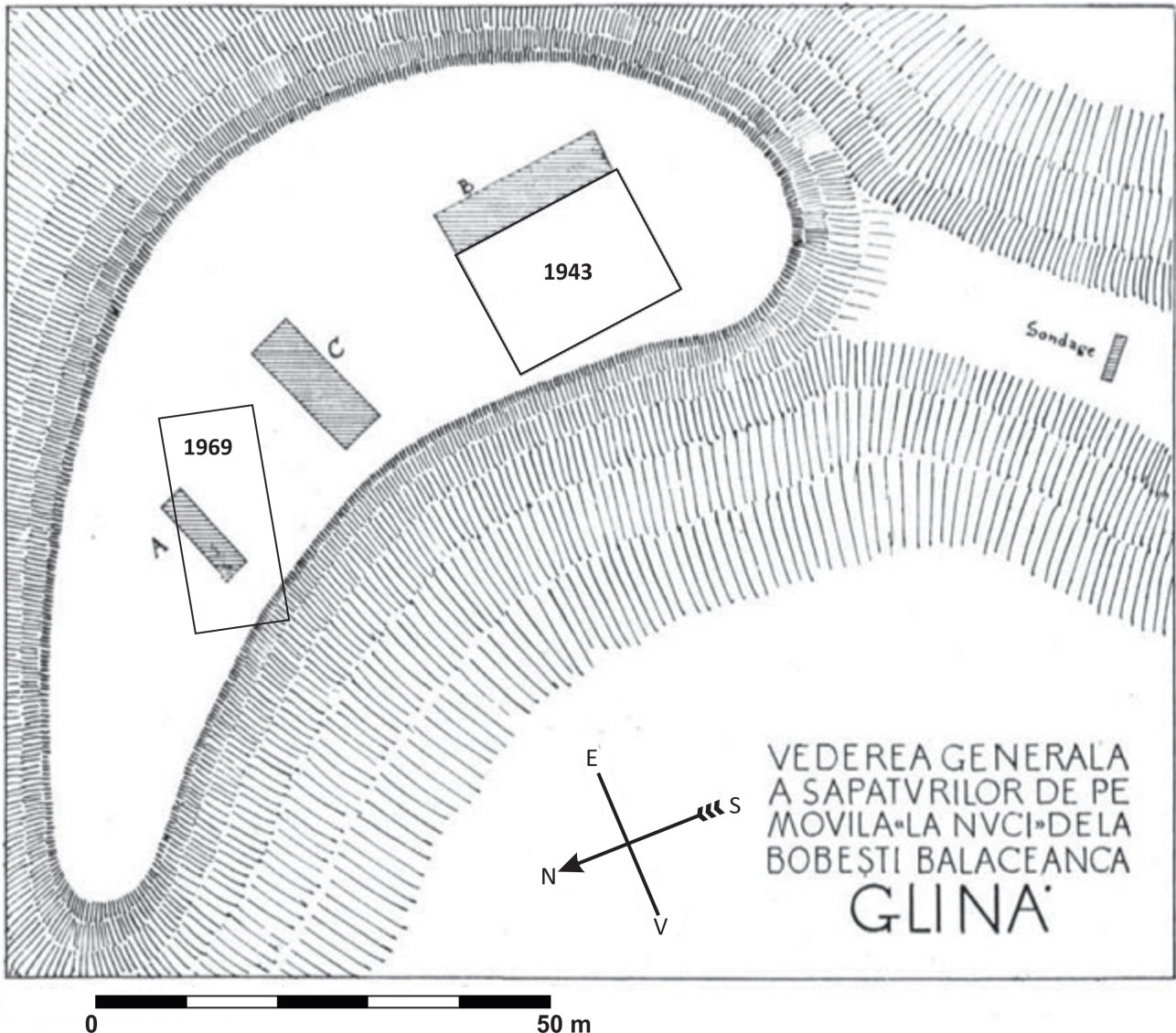


Figure 2. Glina – La Nuci. Plan of the excavations: trenches A–C excavated by I. Nestor, with the probable placement of 1943 and 1969 excavations (modified from Nestor 1933, Fig. 2).

ceramic fragments that were unearthed during the 1969 excavations at Glina – *La Nuci tell*. We attributed the flint specimens to specific archaeological layers based on the black ink inscriptions made on the ventral surface of the pieces. Most of the time the marking of the pieces indicated the square, layer, and feature in which they were discovered. When the marking indicated only the square and the depth at which the artefacts were found, we referenced the depths inscribed on the flint items within the drawings of the stratigraphic profile. However, there is a discrepancy between the marking of the artefacts and the excavation plans and report, particularly concerning artefacts from Dwelling L3/1969. The marking from several artefacts from dwelling L3/1969 indicates that the house belongs to level Gumelnița 1b layer, while the excavation report and drawings of the feature made on site indicate that it belonged to the Gumelnița 2 layer.

None of the artefacts in the IAI collection has markings that would indicate their affiliation to the Boian layer. Thus, according to the marking, the archaeological items that we present in this paper were recovered from the Gumelnița 1a, Gumelnița 1b, Gumelnița 2 and Glina level. However, for some materials we could not establish the archaeological layer to which they belonged, being marked as *passim* (three blades and a core tablet). Additionally, we could not determine the specific Gumelnița sub-layer to which Pit 5 belonged, where a cortical flake was found.

All chipped stone artefacts from the collection at IAI were analysed for the technological and morphological attributes. The blanks with further modifications (retouches) were classified in types and sub-types in the typological lists for each layer. The items found inside the dwellings were subjected to use-wear analysis.

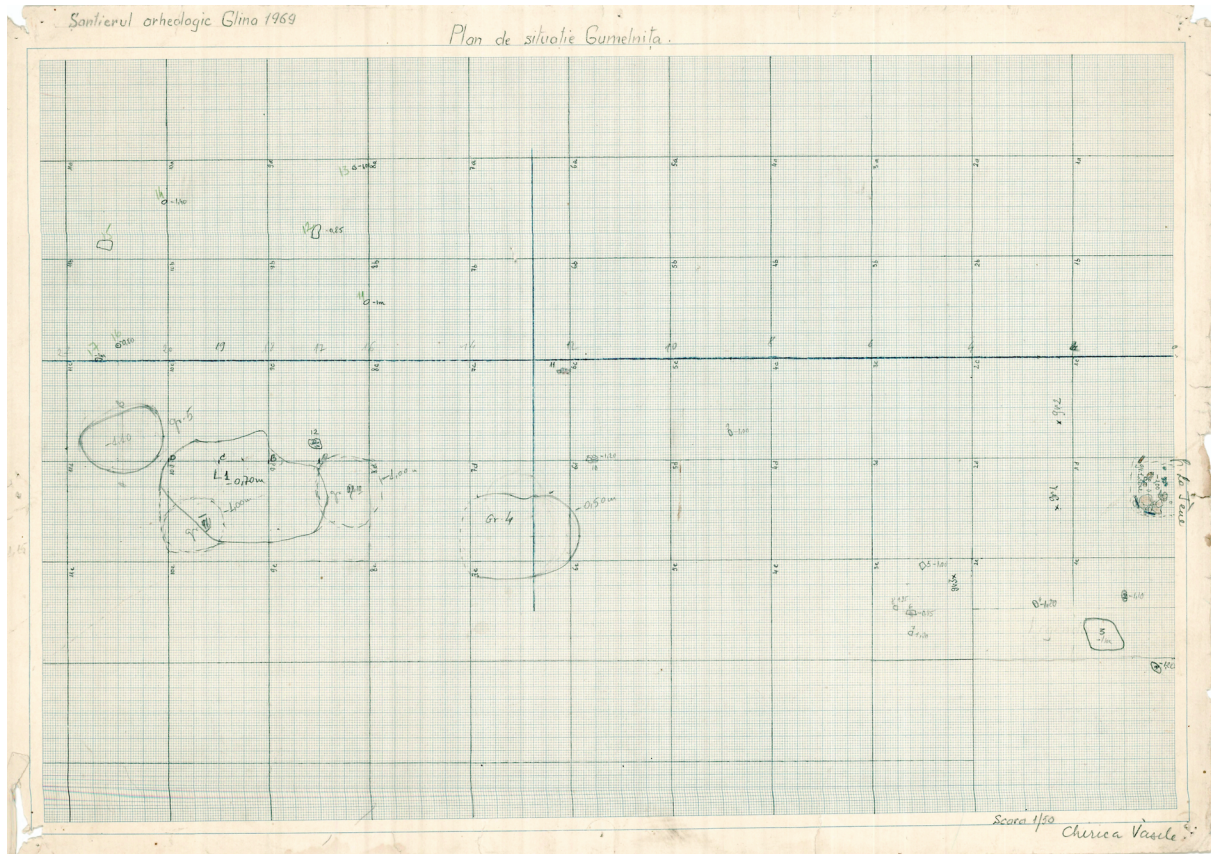


Figure 3. Glina – La Nuci 1969. The planimetric distribution of the features from the Gumelnița layer. The drawing made on site is kept in the IAI archive.

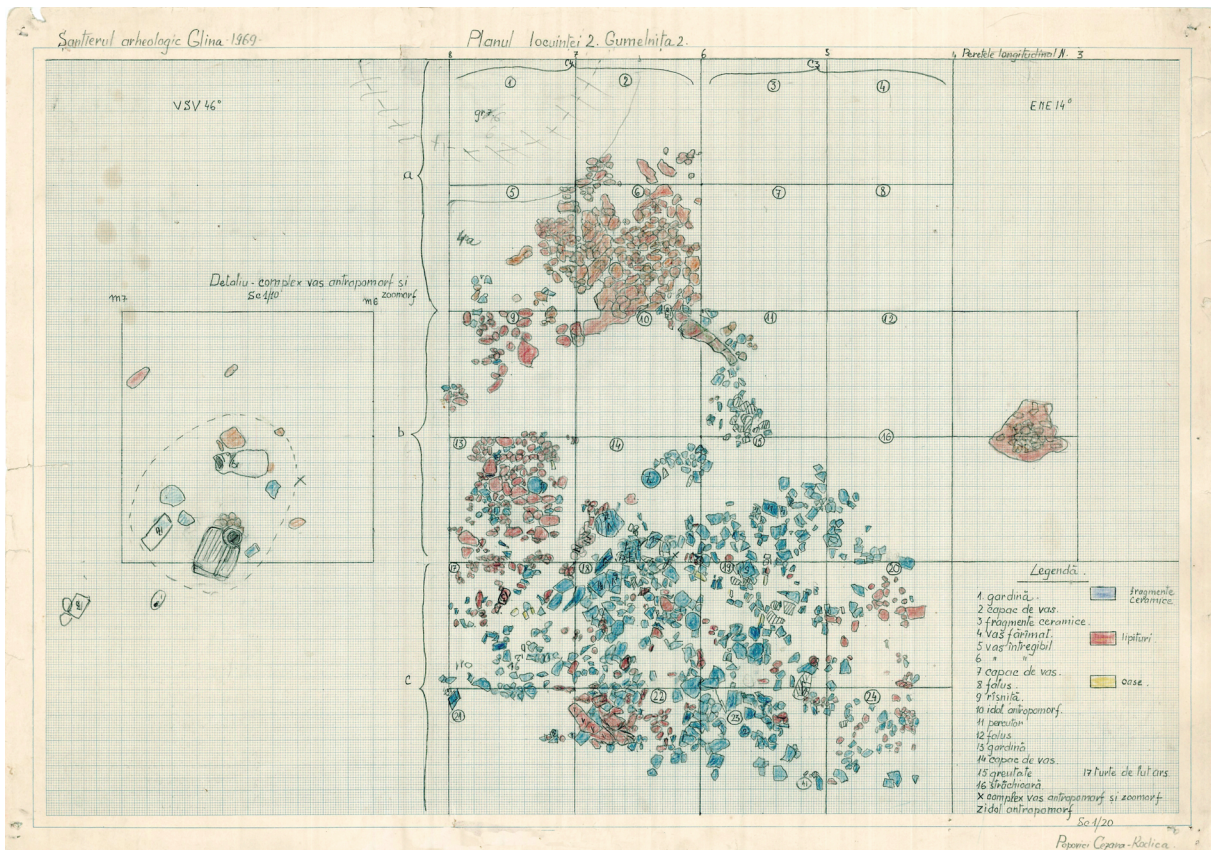


Figure 4. Glina – La Nuci 1969. Planimetric drawing of dwelling L2, Gumelnița 2 layer. The drawing made on site is kept in the IAI archive.

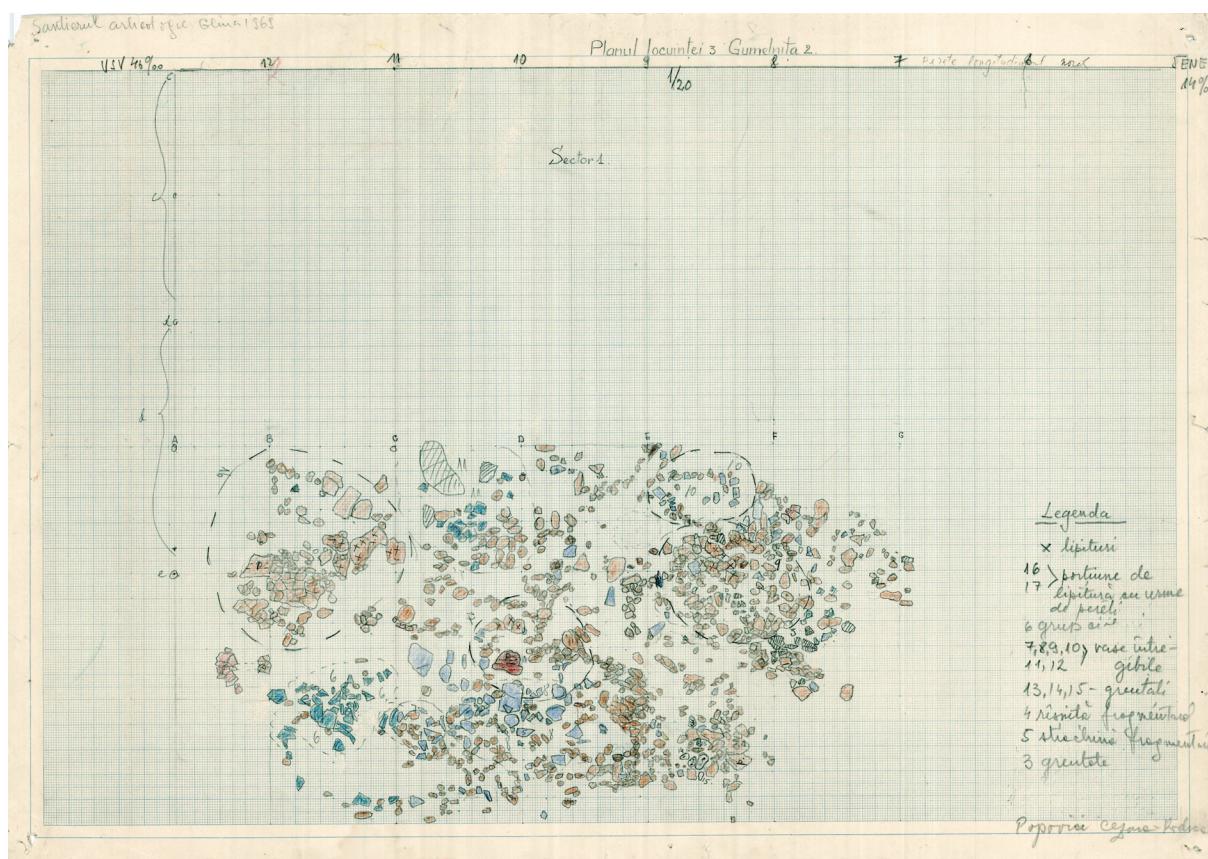


Figure 5. Glină – La Nuci 1969. Planimetric drawing of dwelling L3, Gumelnița 2 layer. The drawing made on site is kept in the IAI archive

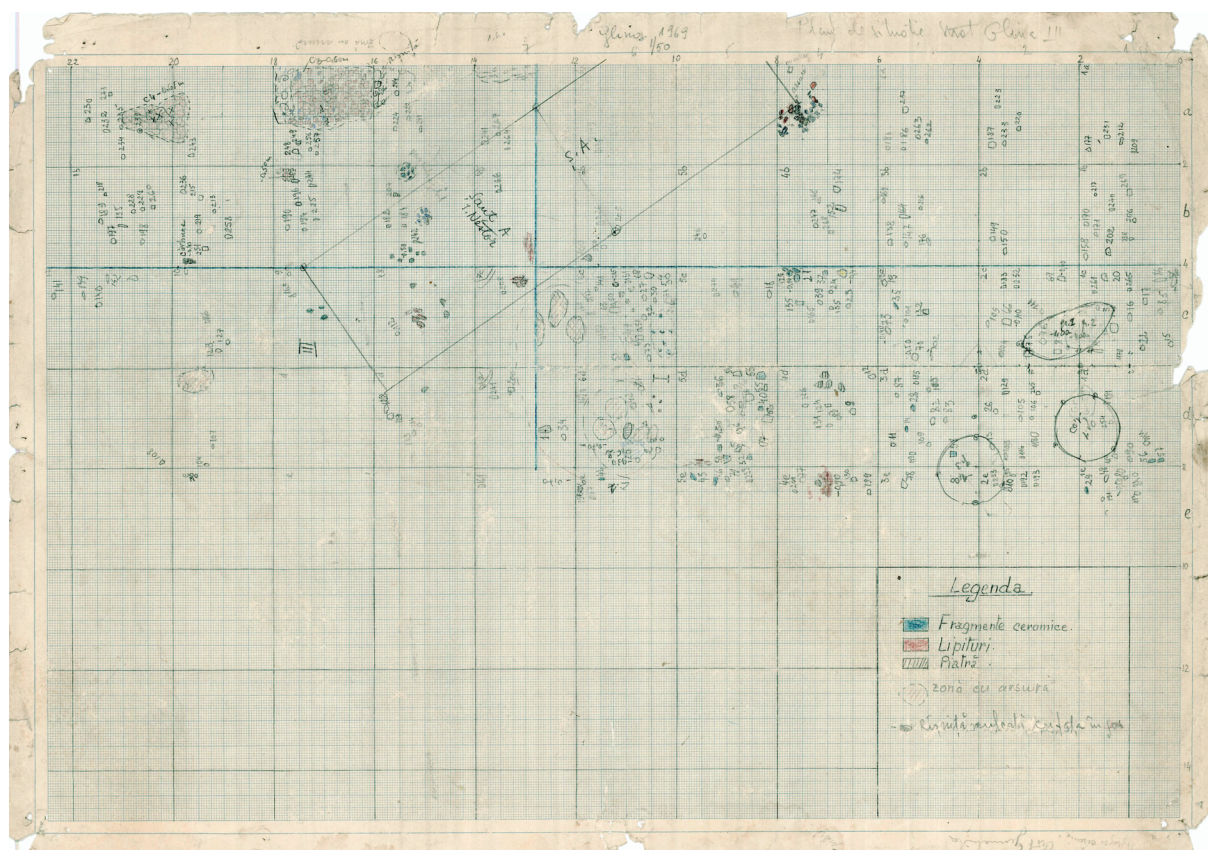


Figure 6. Glină – La Nuci 1969. The planimetric distribution of the Glină III finds. The drawing made on site is kept in the IAI archive.

RAW MATERIALS OF THE ARTEFACTS FROM THE IAI COLLECTION

The raw material identification was conducted only through macroscopic analysis, focusing on characteristics such as colour, inclusions, and granulation.

The artefacts from the Gumelnița layers were made from a very good quality flint, of colour shades between yellow and brown, sometimes with reddish/amber bands, of fine to very fine grain size. Macroscopically, the best analogy for these types of raw materials can be found in the flints from the Lower Cretaceous (Aptian) deposits south of the Danube, in present-day north-eastern Bulgaria, from the Ludogorie Plateau deposits, of Kriva Reka and Ravno types (Gurova, Nachev 2008; Andreeva *et alii* 2014).

The artefacts discovered in the Glina level were made from the same type of flint, but other types of raw materials are also attested: the *Balkan flint*, yellow-coloured flint, white-spotted (Gurova 2012), from which a *krummesser* was made, but also a chert/flint of brown colour with grey shades and medium granulation.

ARTEFACTS FROM THE GUMELNIȚA 1a LAYER

From this layer, only 11 artefacts are stored in the IAI collection (Fig. 7): a cortical flake and ten blades. Six blades have a trapezoidal cross-section, three a triangular and one cross-section is mixt (triangular at one end and trapezoidal at the other end of the blade). Only one blade is intact. The other blades are median fragments ($n = 4$), distal extremities ($n = 3$) or proximal extremities ($n = 2$).

As for the regularity of the edges, the blades can be divided in:

1) Irregular blades ($n = 2$). One is a specimen from the initial stages of core reduction, thick, with a curved profile: it has a demi-crest created towards the distal end while cortex is still visible on the half from the proximal end (Fig. 7/1);

2) Regular blades produced through the punch technique ($n = 6$: Fig. 7/2, 5–9). They are macro-wide blades (21–27 mm, $n = 4$), less medium-wide (19 mm, $n = 2$). This category, although small numbered is heterogonous in terms of thickness of the specimens (4–10 mm); the profile curvature is more standardised, being usually non-existent. The only intact blade from this category is 80 mm in length (Fig. 7/2), being thus a medium-long specimen. The three proximal ends of blades have plain butts, of oval or winged shapes, with a 80°–90° angle of the platform;

3) The two fragments from very regular blades, with a straight profile (width = 21–22 mm, thickness = 3–5 mm), have a length of less than 50 mm (Fig. 7/3–4). One was probably produced through the punch technique (Fig. 7/4) since it does not have the lightness typical for the pressure produced blades, as is the case of the other blade (Fig. 7/3).

Unlike the other two Gumelnița layers, layer 1a is represented in the collection curated at IAI only by a few

types of retouched artefacts (Table 1). The type with most specimens is that of **retouched blades** (Fig. 7/4, 7–8). The retouches were made in direct, ordinary, marginal, continuous manner on the edges of the blades, or, as is attested in one case, on the distal end (Fig. 7/7). The **endscrapers** were created on long blades; their front is high and was made through retouches that converge to the dorsal ridges (Fig. 7/1–2). A **notched** item was retouched on the proximal broken end of a blade (Fig. 7/6) while a burin blow was applied to the median part of a blade with retouches on its edge (Fig. 7/3).

TYPES OF TOOLS	NUMBER	%
Retouched blades	4	50%
Endscrapers	2	25%
Burins	1	13%
Notched pieces	1	13%
TOTAL	8	100%

Table 1. Glina – La Nuci. Layer Gumelnița 1a. Tool types.

ARTEFACTS FROM THE GUMELNIȚA 1b LAYER

In the collection at IAI there are 20 artefacts coming from the Gumelnița 1b layer (Fig. 8): 18 blades and two shatters (Table 2). The blades were produced in all stages of debitage: primary decortication of the core (Fig. 8/1), during the shaping the debitage surface (Fig. 8/13), but mainly in *plein débitage* stage (Table 2). Thus, most blades have a trapezoidal cross-section ($n = 9$); triangular ($n = 5$), pentagonal ($n = 1$), lenticular ($n = 1$) and mixt cross-sections ($n = 2$) are also attested. As in the other Gumelnița layers from the site, the blades are highly fragmented; only two are intact. The median segments have the best representation ($n = 9$), while the blades that had their proximal end removed are second in number ($n = 5$).

TECHNOLOGICAL CATEGORIES	Number	%
Cortical blades	2	10%
<i>Sous-crête</i> blades	2	10%
<i>Plein débitage</i> blades	14	70%
Debris/shatters	2	10%
TOTAL	20	100%

Table 2. Glina – La Nuci. Gumelnița 1b layer. Technological categories of the flint artefacts.

Only three blades have their proximal end intact: their butts are either plain, of an oval shape ($n = 2$), either faceted of trapezoidal shape ($n = 1$). The angle of the platform is, in all cases, around 80°–90°. Dorsal reduction is present in one case, while lips developed in two instances.

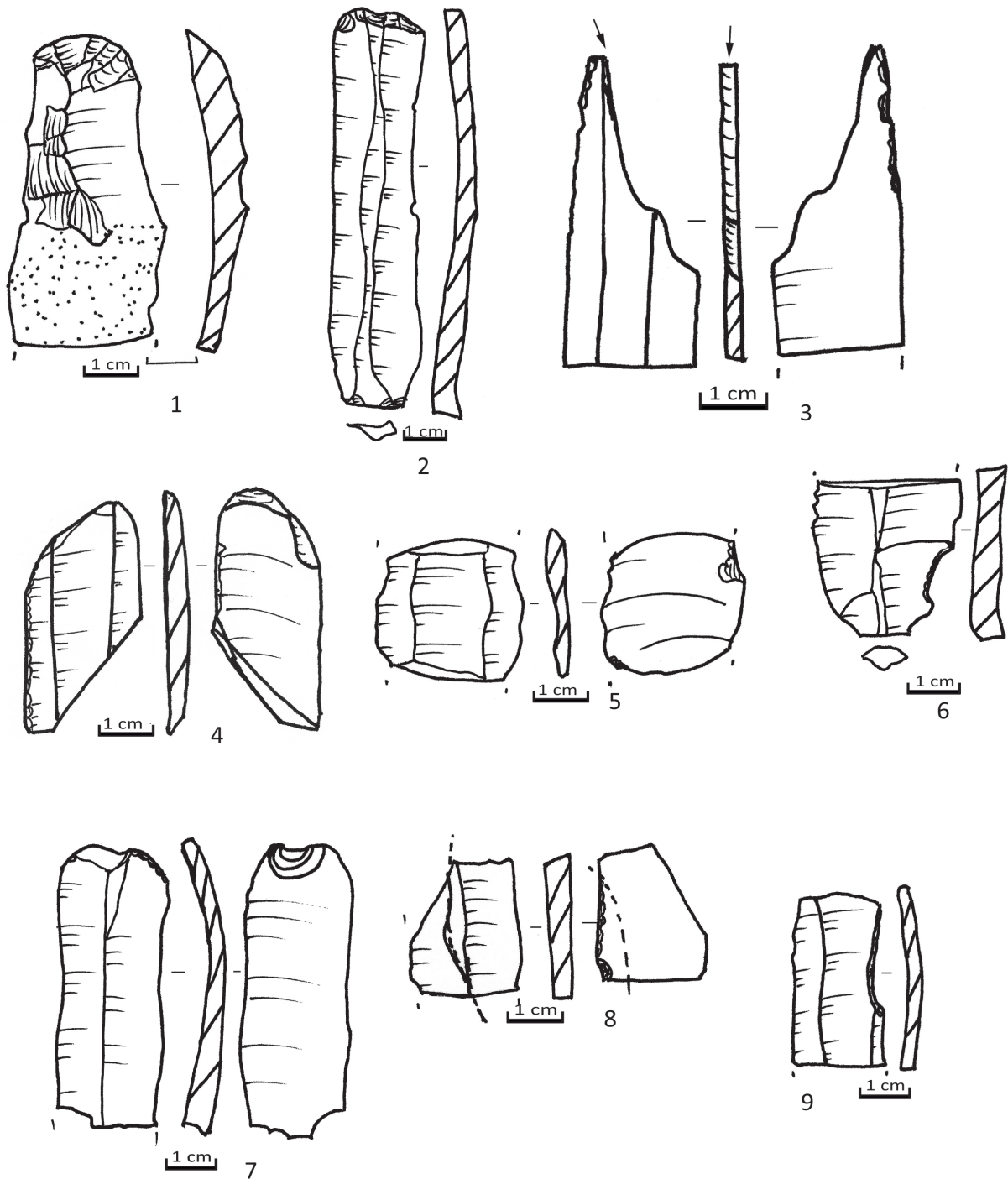


Figure 7. Glina – La Nuci. Artefacts discovered in the Gumelnița 1a layer, during the 1969 excavations: 1–2. Endscrapers; 3. Burin on retouched blade; 4, 7–8. Retouched blades; 5, 9. Blank blades; 6. Notched item. The scale below each artefact: 1 cm.

Three distinct types of blades can be differentiated based on the regularity of their edges:

A) Irregular blades ($n = 4$; 22%), macro-wide (22–26 mm width) with a curved profile (Fig. 8/4, 7, 9). One of them is intact: it is medium-long (61 mm) and its butt is wide (91 mm²), faceted (Fig. 8/7);

B) Regular blades ($n = 10$; 56%: Fig. 8/1, 5, 10–13), medium wide (19–20 mm; $n = 4$) and macro-wide

(21–25 mm; $n = 6$) with a straight or curved profile. The two items that retain their proximal end have a plain butt, lipped, oval/semi-oval in shape and small (30–36 mm²); dorsal reduction was applied before the removal of one blade. The regular blades have a standardised thickness (5–7 mm). They are all fragmented and the fragments never surpass 61 mm in length. Most probably, they were produced through the punch technique;

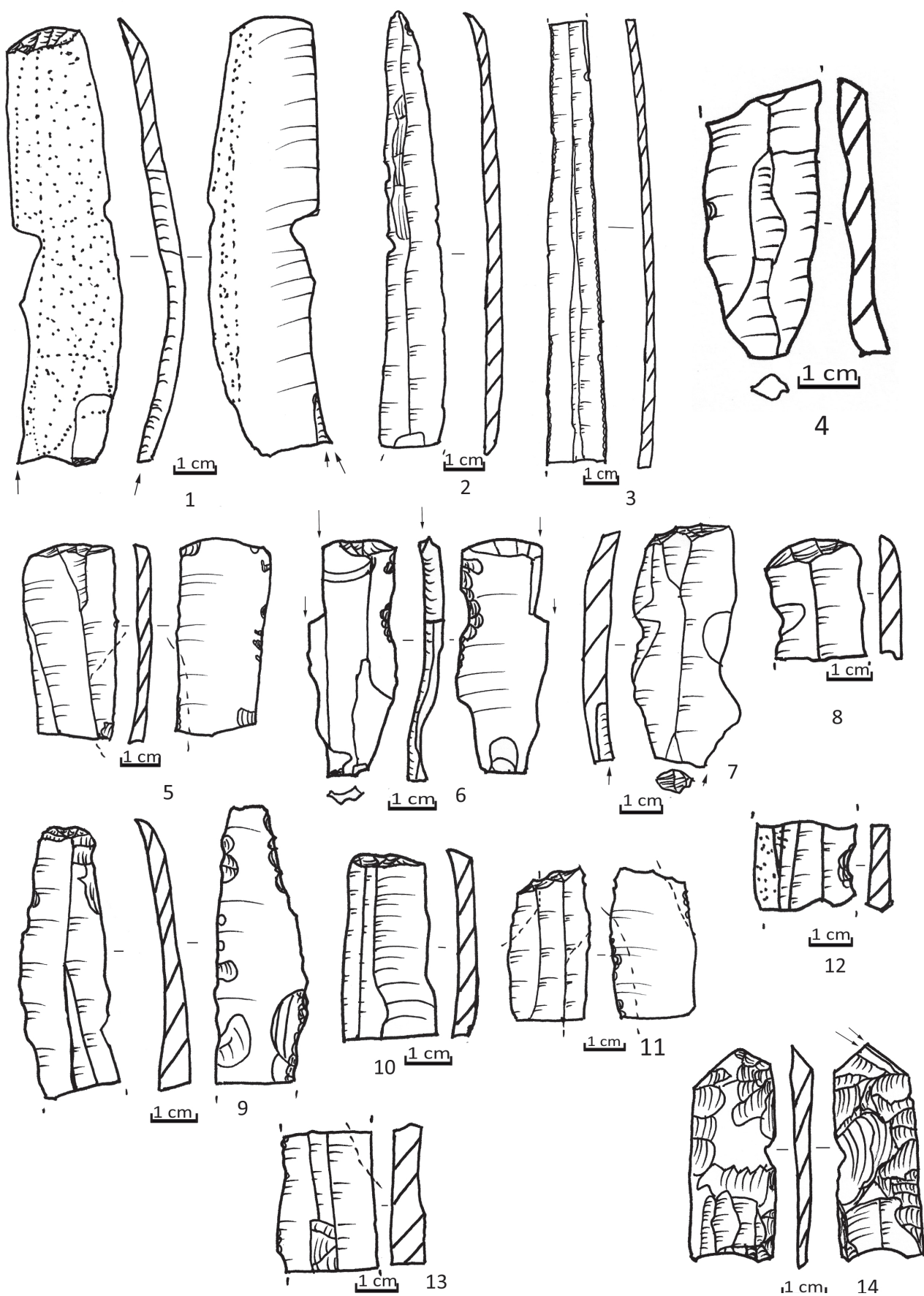


Figure 8. Glina – La Nuci. Artefacts discovered in the Gumelnița 1b layer, during the 1969 excavations: 1, 6–7. Combined tools; 2, 4, 13. Blank blades; 3. Retouched blade; 5, 11. Retouched truncations; 8–10. Endscrapers; 12. Notched blade; 14. Arrowhead. The scale below each artefact: 1 cm.

C) Very regular blades ($n = 4$, 22%), of a straight profile⁶ are medium-wide (16–19.5 mm; $n = 2$; Fig. 8/2–3) and macro-wide (22–26 mm; $n = 2$). Their thickness is between 4.5–7 mm. All the items from this category are fragmented; albeit they lack the proximal end, two blades have a length of over 100 mm (114 mm: Fig. 8/2 and 141 mm: Fig. 8/3). These very regular blades were produced through the pressure technique.

In the category of retouched artefacts, the **endscraper** has the most specimens ($n = 3$: Fig. 8/8–10) (Table 3). They were made on broken blades, with lengths ranging between 29 and 61 mm, but standardized thickness (6–7 mm). Depending on the morphology of the blank, the front of the endscraper is either wide ($n = 2$) or narrow ($n = 1$).

The combination of **burin blow** and **endscraper** front was applied on two blanks from this layer: a long cortical blade (Fig. 8/1) and a short blade (Fig. 8/7). The endscraper was always created on the distal end, of a good convexity, while the burin blow was applied on the opposed end. Another burin-endscraper has also a notch on its right edge (Fig. 8/6) while its front is splintered.

TYPES OF TOOLS	SUB-TYPE	NUMBER	%
Endscrapers		3	19%
Burins	Dihedral	1	6%
	Multiple	1	6%
Retouched blades		2	13%
Denticulated artefacts		2	13%
Notched pieces		1	6%
Retouched truncations		2	13%
Bifacial arrowheads		1	6%
Combined tools	Burin + endscraper	2	13%
	Burin + endscraper + notch	1	6%
TOTAL		16	100%

Table 3. Glina – La Nuci. Gumelnița 1b layer. Tool types.

Only two sub-types of **burins** were recorded in this layer: a dihedral and a multiple burin. Both are made on medium-long fragments of blades, of similar metric dimensions (width = 19–20 mm; thickness = 6–7 mm).

The **retouched blades** have marginal, semi-abrupt, continuous retouches. In one instance the retouches are disposed on both edges, on their entire length, as is the case of the longest blade discovered in 1969 excavations (length = 141 mm: Fig. 8/3). In the other cases, the retouches were applied only on half of the length of the right edge.

⁶ The distal curvature of the profile, which is a sign of pressure being used as technique of detachment (Pelegriin 2012) is visible on two artefacts.

The two **denticulated blades** have a small portion of one of the lateral edges serrated, in one case with fine retouches, while in the other the retouches are invasive.

The **notched piece** from this layer was created on a median fragment from a cortical blade (Fig. 8/12), while the **retouched truncations** were made on *plein débitage* blades (Fig. 8/5, 11). Of the retouched truncations, one has an oblique truncation (Fig. 8/11), while the other is perpendicular to the axis of the blade (Fig. 8/5).

The **bifacial arrowhead** from this layer was unfinished when the piece was discarded (Fig. 8/14). It was worked on a blade (length = 48 mm, width = 21 mm, thickness = 6 mm) through plate, invasive, bifacial retouches that entirely covered one face of the blank and partially the other surface. Its base is slightly concave, forming two small barbs. Its tip was not finished; for its thinning two burin blows were applied. The notch from one edge is post-depositional. Its overall shape is triangular with straight edges.

ARTEFACTS FROM THE GUMELNIȚA 2 LAYER

The most consistent batch of chipped stone artefacts ($n = 38$) is that from the Gumelnița 2 layer. The specimens belong to the following technological categories (Table 4): cortical flakes, flakes without cortex, *sous-crête* blades and *plein débitage* blades.

TECHNOLOGICAL CATEGORY	Number	%
Cortical flakes	1	3%
Flakes without cortex	4	1%
<i>Sous-crête</i> blades	1	3%
<i>Plein débitage</i> blades	29	76%
Shatters/debris	3	8%
TOTAL	38	100%

Table 4. Glina – La Nuci. Gumelnița 2 layer. Technological categories of the flint artefacts.

The blades from this layer are fragmented (Fig. 9/1–6, 8–9), except two items that were left intact (Fig. 9/7). Among the fragmented pieces, the median segments are the most numerous, totalling 19 instances; three blades had only their proximal end removed, while two other artefacts are missing the distal end. Three proximal ends and one distal end complete the picture of the high fragmentation of the blades. Only seven blades retain their proximal end, all of which display dorsal reduction and typically possess a plain butt ($n = 5$), with faceted butts being less common ($n = 2$). The bulb of the blades is either diffuse or inexistent. The detachment angle for all blades falls into the range of 80°–90°. Most of the blades ($n = 28$) have trapezoidal cross-section. They all were produced from unidirectional cores.

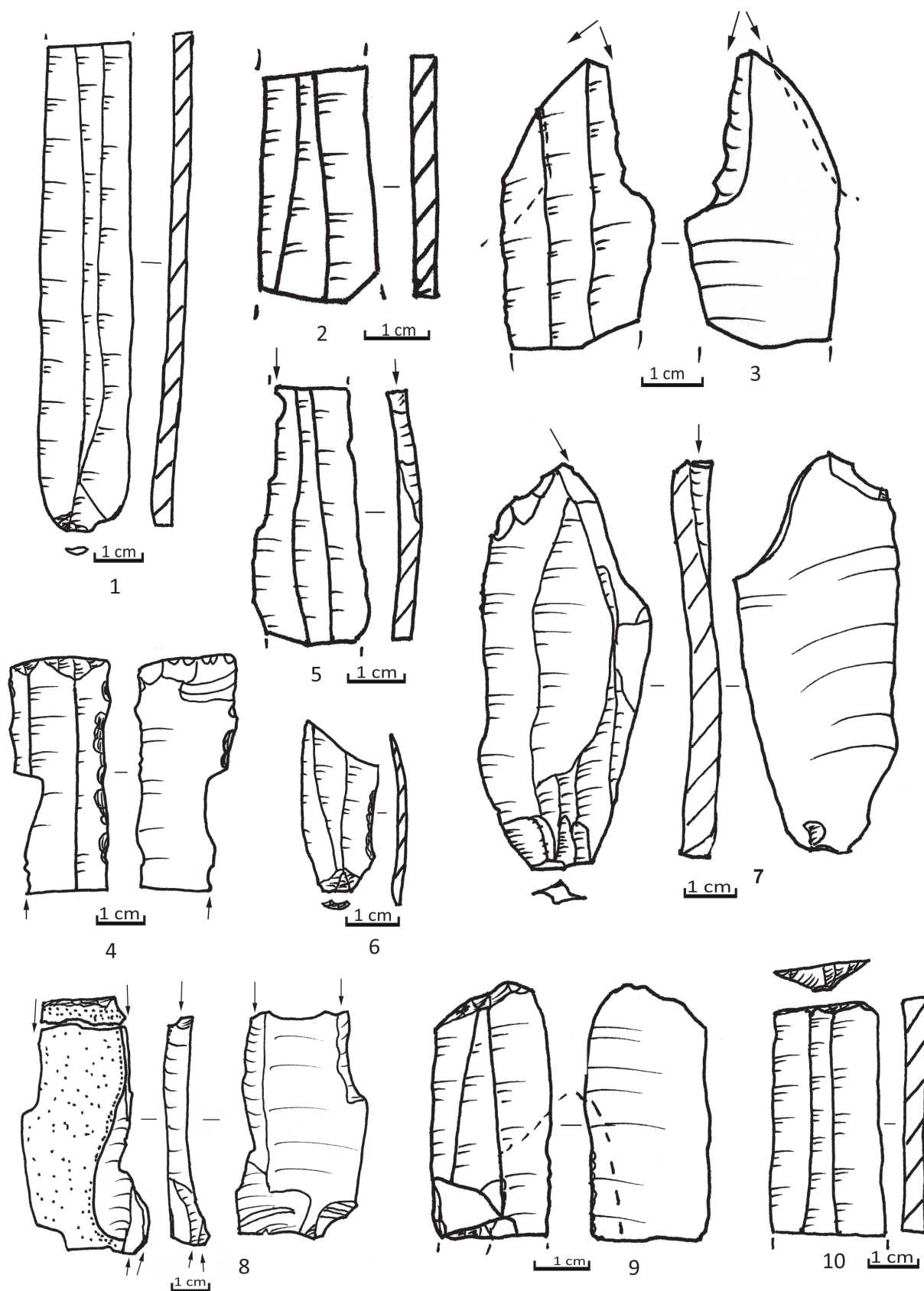


Figure 9. Glina – La Nuci. Artefacts discovered in the Gumelnița 2 layer, during the 1969 excavations: 1–2. Blank blades; 3, 5, 7–8. Burins; 4. Combined tool (burin-endscraper); 6. Notched item; 9–10. Retouched truncations. The scale below each artefact: 1 cm

Regarding the regularity of the edges, three distinct types of blades can be identified:

A) Irregular blades ($n = 2$; 6.66%: Fig. 9/7). In this category are found medium-long (maximum 78 mm long), thick (9–10 mm) and very wide (30–31 mm) specimens. Their profiles are either twisted or curved. The only specimen that has a proximal end intact has a plain butt, with a 90° angle and dorsal reduction visible;

B) Regular blades ($n = 17$; 57%: Fig. 9/2, 3, 5, 9; 10/1, 7, 10, 13–15, 17). In this category can be found both medium-wide ($n = 10$, width of 17–20 mm) and macro-wide blades ($n = 7$, width of 21–26 mm). The thickness of the regular blades is usually between 4.5 and 7.5 mm and they have a straight or curved profiles. No specimen is intact; most fragments are less than 50 mm long but four longer fragments, up to 71 mm, were registered. The five items that retain their proximal end have faceted ($n = 2$) or plain butts ($n = 3$). The angle of the platforms ranges from 75° to 90°, with dorsal reduction at all specimens. Only one has a more pronounced bulb. Probably, the regular blades were produced through the punch technique;

C) Very regular blades ($n = 11$, 37%) can be divided, depending on their width in: medium – wide blades (16–19 mm, $n = 7$) and macro-wide blades (23–26 mm, $n = 4$). Their thickness is standardised, between 3 and 6 mm, with only one artefact of 9 mm thick. Of the very regular blades, eight specimens were produced through the

pressure technique (Fig. 9/1, 4, 10; 10/8–9). For blades with a width less than 22 mm (five specimens), it is probable that pressure was applied using a long crutch while in a standing position (mode 4 by Pelegrin 2012). Blades wider than 22 mm were likely detached with the aid of a lever (mode 5 in Pelegrin 2012). No item was found intact; most fragments are less than 50 mm long but one blade that misses the distal end has a length of 104 mm (Fig. 9/1). This blade, produced through pressure (mode 4 from Pelegrin 2012), is the only blade from this category that keeps its proximal end, exhibiting a small plain butt (of 8 mm² platform area and of a semi-oval shape) in association with a diffuse bulb with a bulbar scar.

Tool types from this layer are typical for the Gumelnița culture (Table 5). The best representativeness is of the **burins** ($n = 13$), usually made on blades ($n = 10$). Burins are diverse in terms of sub-types: simple burins (Fig. 9/5, 7), multiple burinations of the same support (Fig. 9/8; 10/5, 12), dihedral burins (Fig. 9/3; 10/13), multiple burins on retouched truncations (Fig. 10/14). Also, the burins were combined with other retouches on the same support (Fig. 10/4) (Table 5).

The **endscrapers** ($n = 3$: Fig. 10/1–3) from Gumelnița 2 layer were made on short/broken blades. Their front, which is high and convex in all cases, was produced through retouches that converge to one of the dorsal ridges. One of the endscrapers has two fronts (double endscraper) and an *esquillement* of the front.

TOOL TYPES	Sub-type	Number
BURINS (13)	Simple burin	4
	Multiple burin	4
	Dihedral burin	2
	Multiple b. made on retouched truncation	1
	Combined with other tools	
	Dihedral b. + notched	1
	Simple b. on retouched flake	1
RETOUCHED TRUNCATIONS (2)	Straight truncation	1
	Oblique truncation (sickle insert)	1
ENDSCRAPERS (3)	Short	2
	Double + <i>esquillée</i>	1
RETOUCHED FLAKES		1
COMBINED TOOLS	burin + endscraper	1
	denticulate + notch	1
NOTCHED ITEMS		2
RETOUCHED BLADES		1
DENTICULATED ITEMS		2
TOTAL		26

Table 5. Glina – La Nuci. Gumelnița 2 layer. Typological list.

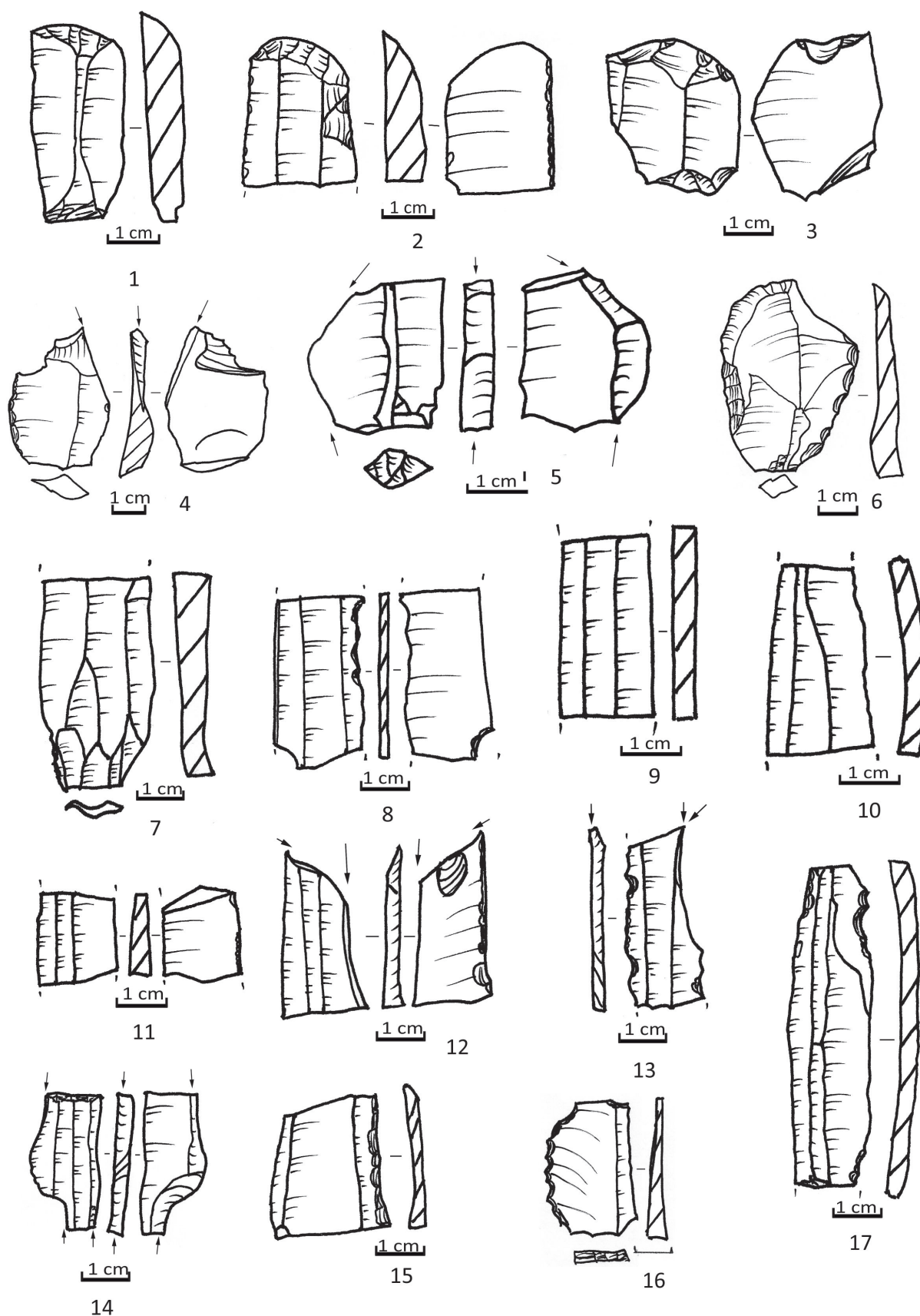


Figure 10. Glina – La Nuci. Artefacts discovered in the Gumelnița 2 layer, during the 1969 excavations: 1–2. Endsrapers; 3. Double endscraper-esquillée; 4. Burin on retouched flake; 5, 12–13. Burins; 6. Retouched flake; 7, 9–11. Blank blades; 8. Combined tool (notched-denticulate); 14. Burin on retouched truncation; 15. Fragment of retouched blade; 16–17. Denticulated items. The scale below each artefact: 1 cm.

The **retouched truncations** (n = 2: Fig. 9/9–10) were obtained by applying steep, high retouches to the truncation of the blades. The truncations have an acute or straight angle to the axis of the blank.

One combined tool found in this layer is a **burin-endscraper** (Fig. 9/4), a type that is common for the Gumelnița assemblages (Mihail 2013; Dobrescu 2017), while the other one is a blade segment with denticulations of the right edge and a notch on the left edge (Fig. 10/8).

The **notched pieces** were created on blades (Fig. 9/6; 10/17). Two **denticulated** pieces were found in this layer; one was made on the left, convex edge of a flake (Fig. 10/16), while the other on the lateral left edge of a proximal fragment of a regular blade (Fig. 10/7). A **retouched blade** (Fig. 10/15) and a **retouched flake** (Fig. 10/6) were also registered in the assemblage.

A last mention must be made about a median fragment of a blade without retouches that has the left edge blunted/rounded from use. Such wear patterns are not singularly in the Gumelnița culture, as similar instances have been documented elsewhere (Dobrescu *et alii* 2023, p. 502, pl. 9/7–9; Mihail *et alii* 2018, p. 242, pl. IV/2b).

INVESTIGATIONS ON THE USEWEAR OF THE CHIPPED STONE ARTEFACTS DISCOVERED IN THE DWELLINGS FROM THE GUMELNIȚA 2 LAYER

In the IAI collection are stored 17 artefacts coming from three dwellings excavated in 1969: L1, L2 and L3, all from the Gumelnița 2 layer. In dwellings L1 and L2 were found three artefacts that have no use-wear on the edges: a blank blade produced through the pressure technique (Fig. 9/1), a burin and a flake.

The 14 artefacts from dwelling L3 can be divided as: blades (n = 13) and debris (n = 1). The blades were left either as blanks (n = 4), or were transformed into: burins (n = 3), retouched blades (n = 1), notched blades (n = 2), denticulated items (n = 1), combined tools (n = 1) and an endscraper – *esquillée* (Table 6). All these artefacts were inspected under a metallographic microscope with the purpose of identifying the activities they were employed in, thus the activities that were taken place within the dwelling. As it can be observed from Table 6, several materials were worked inside this household: in cereal harvesting were employed two items, in cutting vegetal fibres/wood three

Techno-typological category (length, width, thickness in mm)	Interpretation of the wear	Used edges	Plates
Blank blade – median segment (33, 17, 4)	Soft material cutting	Both edges, on the whole length	Fig. 11/1, A–B
Blank blade – median segment (26, 20, 5)	Antler/bone cutting	Both edges, near the distal fracture	Fig. 11/2, C
Blank blade – median segment (35, 19, 6)	Wood cutting	Right edge	Fig. 11/3, D
Blank blade – median segment (20, 18, 6)	Cereal harvesting	Both edges	Fig. 11/4, E–F
Double endscraper - <i>pièce esquillée</i> (34, 30, 10)	1. Dry hide scraping; 2. Cutting a material; 3. Used as intermediary piece	1. endscraper front; 2. both edges; 3. extremities (<i>pièce esquillée</i>)	Fig. 11/5, G
Retouched blade (31, 26, 4.5)	Scraping hide	Retouched edge	Fig. 11/6, H
Denticulate item (46, 24, 9)	1. Friction gloss	1. left edge, near retouches	Fig. 11/7, I
Denticulate–notched item (38, 19, 3)	Cutting vegetal soft fibres	Blank left edge	Fig. 12/1, A–B
Notched item (33, 17, 6)	Cutting vegetal hard fibres	Blank left edge	Fig. 12/2, C
Notched item (71, 18, 5)	1. Cutting hard animal tissue, 2. Hide friction	1. both edges, near the proximal truncation, 2. Distal end	Fig. 12/3, D–F
Dihedral burin (39, 16, 5)	Cereal harvesting/ burin blow used to remove a used edge	Both edges	Fig. 12/5, H–I
Burin on retouched blade (36, 18, 6)	Probably scraping unknown material	Retouched edge	Fig. 12/4, G
Burin on blade (43, 16, 5)	Cutting medium-hard material	Blank edge	No Figure.

Table 6. Glina – La Nuci. Use-wear on artefacts from dwelling L3/1969.

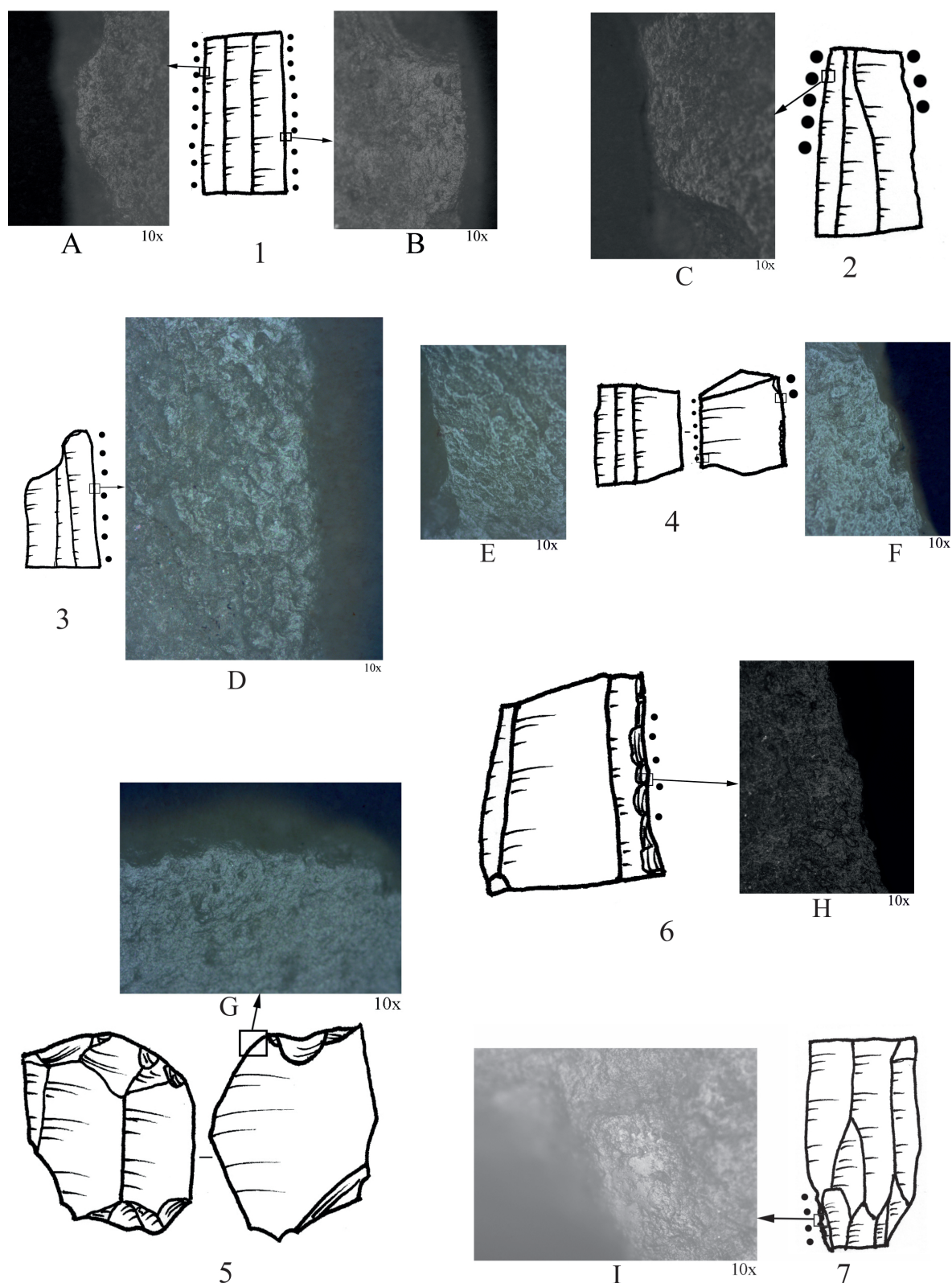


Figure 11. Glină - La Nuci. Artefacts discovered in the Gumelnița dwelling L3 and photographs showing micro-wear: 1-4. Blank blades, 5. Double endscraper-esquillée; 6. Retouched blade; 7. Denticulated item; A-B: photographs showing wear interpreted as result of soft material cutting; C: photograph showing wear interpreted as result of hard animal material cutting; D: photograph showing wear interpreted as result of wood cutting; E-F: photographs showing wear interpreted as result of cereal harvesting; G-H: photographs showing wear interpreted as result of dry hide scraping I: photograph showing hide friction gloss. The pointed line near the artefacts represents the area of the edge with wear.

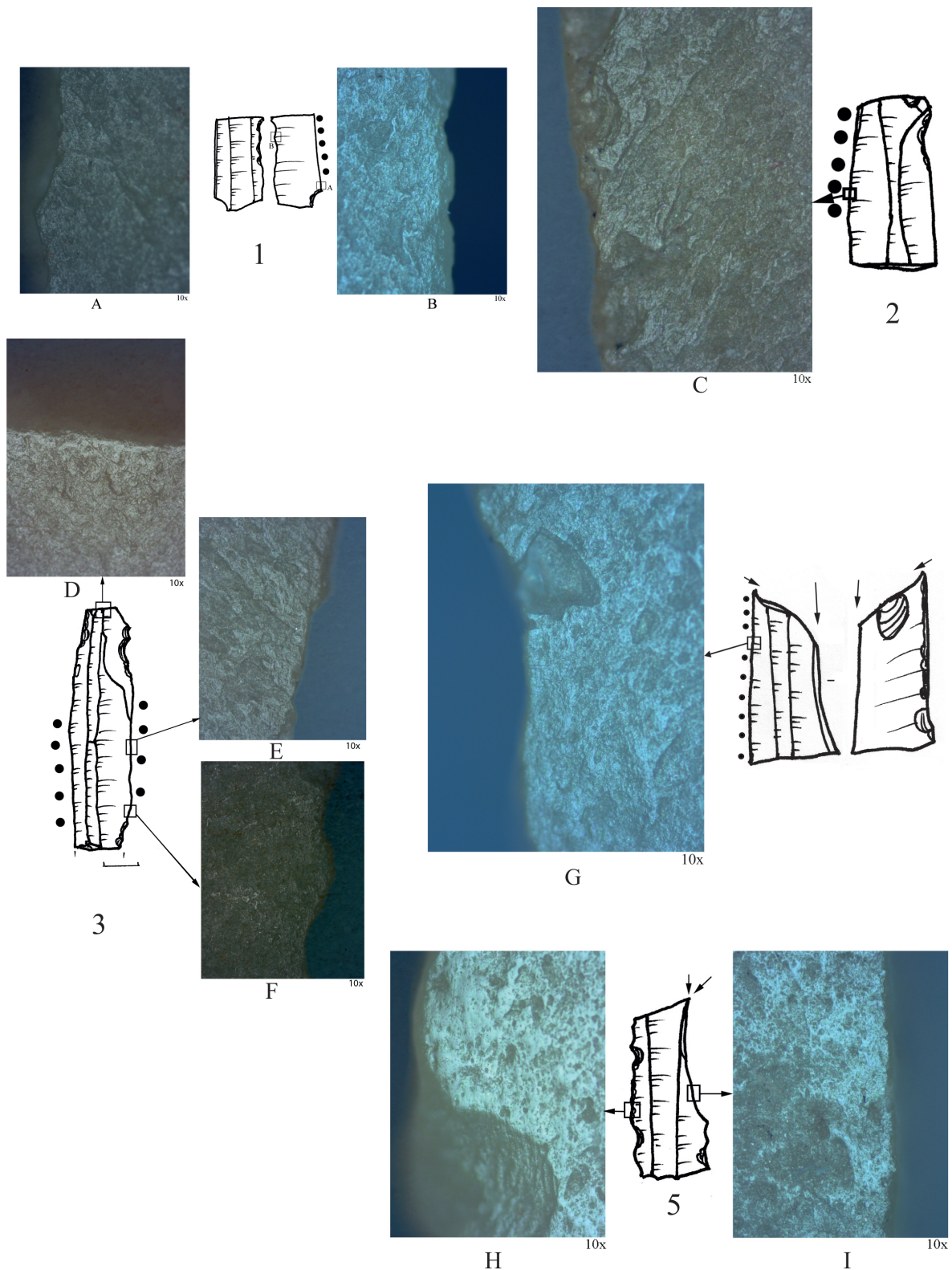


Figure 12. Glina – La Nuci. Artefacts discovered in the Gumelnița dwelling L3 and photographs showing the micro-wear: 1. Denticulate-notched item; 2–3. Notched items; 4. Burin on retouched blade; 5. Dihedral burin; A–B: photographs showing wear interpreted as result of soft vegetal fibres cutting; C: photograph showing wear interpreted as a result from cutting hard vegetal material; D: photograph showing hide friction gloss; E: photograph showing surface of artefact with no wear; F: photograph showing the surface of the artefact affected by friction with other flint tools; G: images showing wear interpreted as result of cereal harvesting. The pointed line near the artefacts represents the area of the edge with wear.

other pieces, in hide working two retouched artefacts. For several artefacts it was hard to discern the materials that they were employed for, but the motion in which they were used was interpreted.

While the blank blades were used in cutting activities (Table 6, Fig. 11/1–4, A–F), the retouched blade was employed in scraping hide (Fig. 11/6, H).

Blank edges of the retouched artefacts were preferred for being employed in cutting activities, probably due to their sharpness.

The burin blow was applied to the blades from this dwelling not to create a dihedral suitable for incising/engraving as it was expected. On the contrary, the burin was not the active part of the tool. In the case of the burin with *sickle gloss*, the burin blow was applied to remove the used edge (Fig. 9/5). The same observation about the non-active role can be made in the case of the notches. None of the two *coches* was the active part of the tool (Fig. 12/2–3): the blank edge of one of the notched items was employed in cutting vegetal materials (Fig. 12/2, C). The blank edges of the other notched item were used for hard animal material cutting (Fig. 12/3, E–F), while the distal end, adjacent to the notch was probably wrapped in hide, in order to protect the hand that used the tool (Fig. 12/3, D). The same observation is true for the notches and denticulations on the combined tool (Fig. 12/1, A–B).

The endscraper shows wear from scraping dry hides on one front (Fig. 11/5, G) and from cutting an unknown material on both edges. The *esquillements* at the extremities removed some of the areas with wear on the fronts. Experimental work showed that such *esquillements* are consequence of using the pieces as intermediary artefacts for splintering hard animal materials or wood (Brun-Ricalens 2006).

Friction from contact with hide wrapping some of the tools during use was observed on two artefacts (Fig. 11/7, I; 12/3, D).

On most of the artefacts were observed, at the microscope, traces left by friction with other flint artefacts (Fig. 12/F); these traces might have been caused by the fact that the artefacts were stored, for many years, together (not in individual bags), in a paper bag that was moved from one place to another. Currently, this insufficient storage challenge was addressed by preserving each specific artefact in an individual plastic bag.

Prior to concluding the discourse regarding the utilization of artefacts, it is pertinent to briefly address the *sickle inserts* from the site. Nine such items coming from all layers (layer 1a – one item: Fig. 7/8, layer 1b – four items: Fig. 8/5, 11, 13, layer 2 – 4 items; Fig. 8/3, 9; 9/11, 13) were included in this category. All but one are median segments of blades; the exception is a blade lacking the proximal end only. The length of the sickle inserts varies between 20 and 52 mm, their width ranges between 16 and 25 mm, and the thickness between 5 and 7 mm. The supports are regular blades (n = 8) or very regular specimens (n = 1). The techno-typological category of the sickle inserts is

characterised by diversity: blank blades (n = 2: Fig. 8/13; 11/4), retouched blades (n = 2), blades with retouched truncations (n = 3 – in two cases the truncation is oblique to the axis of the support: Fig. 8/9; 10/11, while in another the truncation is perpendicular to the axis of the blank: n = 1: Fig. 8/5), dihedral burins (n = 2: Fig. 9/3; 12/5). Of the sickle inserts, seven have a specific sickle gloss macroscopically visible on their edges. Other two pieces exhibit a faint polish, barely observable macroscopically, but under the microscope (a blank median segment and a dihedral burin from dwelling L3) the polish is similar to that resulting from cereal harvesting in an initial stage of tool use. The nine specimens considered as sickle inserts have, in total, 13 active parts, since four items were used with both edges (Fig. 11/4, E–F; 12/5). The gloss is disposed in an oblique manner on all supports, meaning that the insertion was oblique, on the so-called *Karanovo* type sickle (Gurova 2016; Skakun 1993). One of the burins used as sickle inserts was not employed, with the burin, as the active part of the tool (see above). The burin blow was used to remove a worn edge (Fig. 12/5).

ARTEFACTS FROM GLINA III LAYER (BRONZE AGE)

From the Bronze Age layer, 11 artefacts are found in the IAI collection: flakes (two cortical: Fig. 13/7–8 and two without cortex), blades (six *plein débitage* items: Fig. 13/1–6) and debris (one *chute de burin*). Four blades from this layer can be categorized as macro-wide blades (width: 21–25 mm, thickness: 4–6 mm) with a good regularity of the edges and a slightly curved profile (Fig. 13/2–5). They were probably produced through the punch technique. The largest item (that is 83 mm long: Fig. 13/3) is irregular, thicker than others and has a pronounced curvature of the profile, being probably produced with a direct hard hammer blow.

Several types of retouched artefacts were distinguished (Table 7). The **burins** (n = 2) were created on blank blades (Fig. 13/5) and on a truncated blade (Fig. 13/6). The only **endscraper** (Fig. 13/8) found in the Glina layer was made through retouching the distal end of a cortical lamellar flake; its front is flattened and does not have a perfect convexity. The **retouched blade** has modifications of both edges in form of small, marginal, semi-abrupt retouches (Fig. 13/1), alternating the dorsal and ventral surfaces.

TYPES OF TOOLS	Number
Burins	2
Endscrapers	1
Retouched blades	1
Notched pieces	2
Curved knives	1
TOTAL	7

Table 7. Glina – La Nuci. Bronze Age layer. Types of tools.

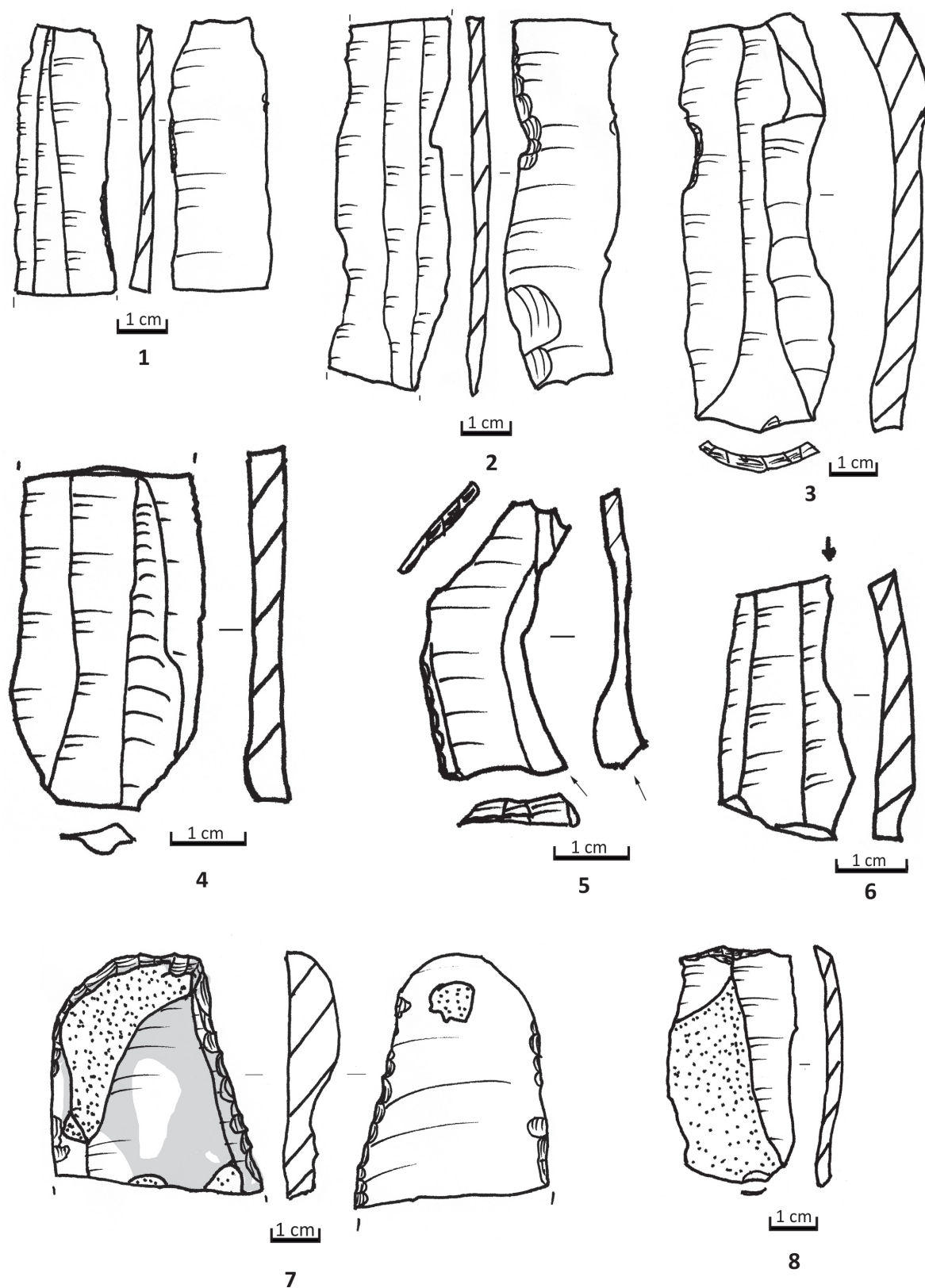


Figure 13. Glina – La Nuci. Artefacts discovered in the Glina III layer, during the 1969 excavations: 1. retouched blade; 2–3. notched items; 4. blank blade; 5–6. burins; 7. curved knife (the grey area graphically depicts the area with white patina); 8. endscraper.

The **notched pieces** were fabricated on blades (Fig. 13/2–3); the notches were made in an invasive manner at both specimens. On one blade, the notch was created on the ventral side, while on the other on the dorsal side. Typical for the Bronze Age, the tool worked on flint a plate, similar to the **curved knife** (*krummesser*) (Fig. 13/7) from the IAI collection was bifacial worked with retouches that are not very invasive, slightly serrating the edges. Cortex and white patination are visible on the dorsal face. The length of the items is of 49 mm, width of 42 mm and thickness of 8 mm.

DISCUSSIONS AND CONCLUSIONS

After analysing the lithic assemblage discovered during the 1969 excavations at Glina – *La Nuci* tell that is stored in the Institute of Archaeology in Iași, some concluding remarks can be drawn. Judging by the composition of the collection in terms of technological categories and comparing the assemblage with the field notes it can be assumed that not all the chipped stone artefacts discovered in the Gumelnița layer, in that year were sent to Iași, but a selection was made. We do not know what the basis of this selection was.

It can be observed a shift in the use of raw materials for producing blades and tools between the Copper Age and Bronze Age. The Gumelnița communities from this site were well connected to the networks that circulated the high-quality flint coming from the Ludogorie Plateau. On the other hand, during the Bronze Age, the raw materials are more varied, but not of better quality (when compared with the Ludogorie flints).

The lithic assemblage uncovered in the Gumelnița layers during the 1969 excavations is typical, in terms of

technology and typology, for the cultural medium in which was created. Based on a few pieces uncovered at the site it is impossible to speak about a local production of flint artefacts at Glina. For opening such discussion, all the assemblage found at the site must be analysed. However, several preliminary concluding remarks can be made. No core coming from the 1969 excavations was registered in the collection at the IAI; one core tablet for platform rejuvenation was found during the excavations, but unfortunately it is a *passim* discovery. The Copper Age lithic industry from Glina is, *par excellence*, a blade producing industry. No matter the layer of Gumelnița culture, there is a pattern in the technological categories: *plein débitage* blades constitute most of the products found, thus, most of the blades have trapezoidal cross-section. Blades were produced also in the initial stage of the débitage, as the cortical specimen attests. The elements related to the preparation of the surface of the cores for opening the blade débitage are represented by crested blades (*sous-crête* and *demi-crête*). Regardless of the layer, most of the blades fall in the 17–25 mm width and 4–7 mm thickness (Fig. 14), being thus medium-wide and macro-wide blades of medium-thickness.

In all layers, the Gumelnița blades were fragmented, median segments being the majority in all cases. As for the division of blades, depending on the regularity of their edges, three series were recorded in all layers. The regular blades with straight or curved profiles hold the highest number in all layers. It was observed an increase in the percentage of the very regular blades from the oldest to the newest layer. In the oldest layer (Gumelnița 1a, corresponding to the Gumelnița A1a sub-phase), the very regular blades reach 20% while in the newest layer, Gumelnița 2 (corresponding to the Gumelnița A2 phase), 37%. Some of them were produced with the pressure

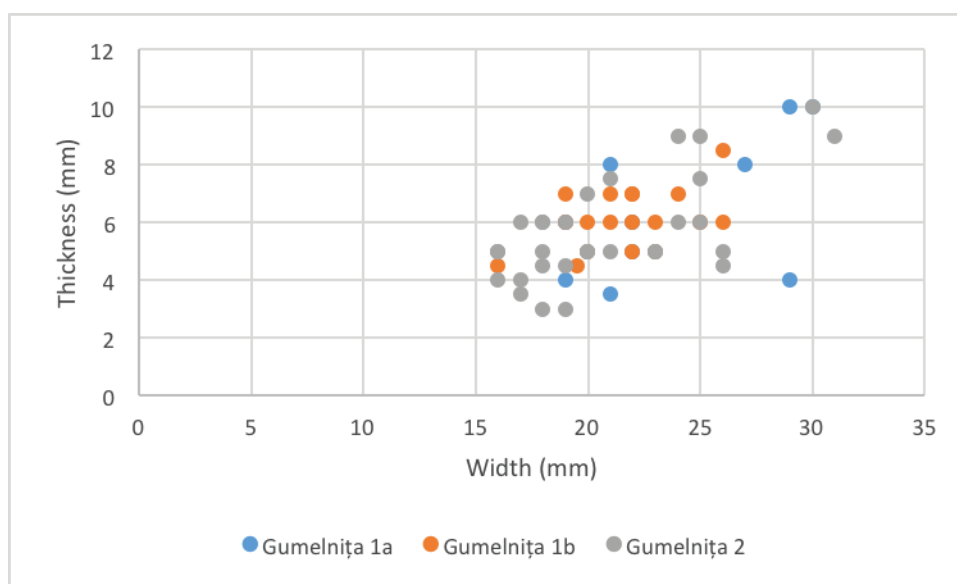


Figure 14. Glina – La Nuci. Dimensions of blades from the Gumelnița layers.

applied with a long crutch or by lever. As for the preparation of the platforms of the cores before blade detachment, the Gumelnița layers show a clear dominance of the plain butts ($n = 10$) over the faceted ones ($n = 3$). The reduction of the cornice was practiced, before knapping, on nine specimens. The angle of knapping is from 80° to 90° in 11 specimens of all edge morphology. The areas of the butts of the blades from this Copper Age occupation ranges from 8 mm^2 to 172 mm^2 . Platforms larger than 45 mm^2 are associated with irregular blades. Platforms of regular blades have an area of 8 to 45 mm^2 .

Thus, from the data presented on the attributes of blades it can be concluded that the punch technique was used for producing both regular and very regular blades, while pressure is attested in producing very regular blades from the Gumelnița 1b and Gumelnița 2 layers. It is unclear if the irregular products were produced by hard hammer percussion or punch, since they have large platform areas and diffuse bulbs.

As for the retouched artefacts, several types are forming the toolkit of the Copper Age occupation: burins (of various sub-types: see Table 3, Table 5, Table 6), endscrapers on blades, retouched truncations, retouched blades, notched items, denticulated specimens, bifacial arrowheads and combined tools (mainly the burin-endscraper combination).

In the archaeological literature, the Gumelnița-Karanovo VI-Kodzadermen lithic technology, from north of the Danube River, is better known than that of the Glina III culture. Recent work on the matter (Carozza *et alii* 2014; Dobrescu 2017; Dobrescu *et alii* 2023; Furestier, Mihail 2011; Furestier *et alii* 2017; Ilie, Niță 2020; Lazăr *et alii* 2020; Mihail, Ștefan 2014; Niță, Frânculeasa 2005; Niță, Ilie 2013; Niță, Ștefan 2011; Popovici *et alii* 2014; Torcică 2011; 2018; Torcică *et alii* 2020) improved Păunescu's earlier observations (Păunescu 1970). All data gathered on the Copper Age flint artefacts in Glina indicate that the assemblage is typical for the Gumelnița culture, with good analogies, in what concerns both the technology and typology in other sites (Carozza *et alii* 2014; Dobrescu 2017; Dobrescu *et alii* 2023; Furestier, Mihail 2011; Mihail *et alii* 2018; Furestier *et alii* 2017; Ilie, Niță 2020; Lazăr *et alii* 2020; Mihail, Ștefan 2014; Niță, Frânculeasa 2005; Niță, Ilie 2013; Niță, Ștefan 2011; Păunescu 1970; Popovici *et alii* 2014; Torcică 2011; 2017; 2018; Torcică *et alii* 2020). Concluding, these analogies are:

- an industry oriented towards producing medium-wide and macro-wide blades;
- co-existence of several techniques for blade producing (hard hammer, punch and pressure);
- predominance of plain butts at blades;
- an 80° – 90° angle of knapping at blades;
- presence of the same tool types attested in most sites: retouched blades, endscrapers, burins, retouched truncations, denticulated and notched pieces, bifacial worked weapons (arrowheads and spearheads)
- high variability of burin sub-types
- preference for blades as supports for endscrapers
- use of blade fragments and retouched truncations as inserts for *Karanovo type* sickles
- use of endscrapers as intermediary pieces for splintering (creating thus splintered pieces).

The technology and typology of the chipped stone assemblages of the **Glina III-Scheneckenberg** culture are known to us only from the analysis of A. Păunescu (Păunescu 1970, p. 69–71, 203–204: Appendix III.1A–1E) who found both similarities and differences between the southern area of this culture (Glina III) and the northern area (Scheneckenberg). It should be noted here that Păunescu described the Glina III chipped stone equipment as consisting, with 50–60% frequency, of medium-sized pieces (3.5–7.5 cm in length), and less from microliths and macroliths (20–25%) (Păunescu 1970, p. 70). Regarding the tools, the types were categorized by Păunescu as: retouched blades and retouched flakes, notched pieces, denticulate items, truncated blades, endscrapers, pieces made on flint plates (some of them similar to the curved knife type - *krummesser*) and small triangular arrowheads (Păunescu 1970, p. 70). His conclusions were based on the analysis of the lithic artefacts from five Glina III settlements (Roșu, București – *Ciurel*, Glina, Popești – *Nucet*, Crivăț) (Păunescu 1970 p. 203–204: Appendix III. 1A–1E). At some of these settlements small cores were also uncovered (Păunescu 1970, p. 203–204: Appendix III. 1A, 1B). In presenting the analysis of the artefacts coming from the excavations in Glina (probably those of I. Nestor and those from the 5th decade of the 20th century), Păunescu stated that in the third layer of the site were uncovered only a few flint items: blank blades, blades with oblique retouches, blades with gloss, denticulate blades (with serrations more or less fine), endscrapers made on blades or flakes with a convex front (Păunescu 1970, p. 203–204, app. III. 1C). He paid special attention to the three tools that were made on flint plates, that he considered to be typical for this culture (Păunescu 1970, p. 203–204, app. III.1C). These tools are 6.5–13 cm long and 2.3–5 mm wide, have cortex on their dorsal face (Păunescu 1970, Fig. 44/11, 12) and their lateral edges, either convex or straight, and were modified by retouches that serrated them. The data gathered on the chipped stone assemblage discovered in 1969 at Glina fits the picture presented by Păunescu, except one aspect. According to Păunescu's observations, the burin does not appear among the types of retouched pieces from the Glina culture. From the five sites that constitute the basis of Păunescu's analysis, Glina is the only site where the Bronze Age layer overlaps a Gumelnița occupation. Thus, in the case of this specific tell that we are dealing with, being a multi-stratified site, it is possible that the two burin-type pieces and the *chute de burin* uncovered in the Bronze Age layer originated in earlier levels, being displaced by bioturbations or human agency.

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REFERENCES

- Andreeva et alii 2014 – P. Andreeva, E. Stefanova, M. Gurova, *Chert raw materials and artefacts from NE Bulgaria: A combined petrographic and LA-ICP-MS study*, Journal of Lithic Studies 1(2), 2014, p. 25–45.
- Brun-Ricalens 2006 – F. Le Brun-Ricalens, *Les pièces esquillées : état des connaissances après un siècle de reconnaissance*, Paléo 18, 2006, p. 95–114.
- Carozza et alii 2014 – L. Carozza, C. Micu, S. Ailincăi, F. Mihail, J.-M. Carozza, A. Burens, M. Florea, *Cercetări în așezarea-tell de la Lunca (com. Ceamurlia de Jos, jud. Tulcea)*, in: C.-E. Ștefan, M. Florea, S.-C. Ailincăi, C. Micu (eds.), *Studii privind preistoria sud-estului Europei. Volum dedicat memoriei lui Mihai Șimon*, Brăila, 2014, p. 233–262.
- Chirica 1972–1973 – V. Chirica 1973, *Vârfuri de lance gumelnițene descoperite la Glina*, MemAnt 4–5, 1972–1973, p. 259–264.
- Comșa 1996 – E. Comșa, *Glina. 1.*, in: C. Preda (coord. șt.), *Enciclopedia arheologiei și istoriei vechi a României*, București, vol. II (D–L), 1996, p. 193–194.
- Dobrescu 2017 – R. Dobrescu, *Quelques observations d'ordre technologique et typologique sur les industries lithiques découvertes à Atmageaua Tătarască (Sokol, Bulgarie)*, MCA 13, 2017, p. 227–259.
- Dobrescu et alii 2023 – R. Dobrescu, C. Haită, K. Moldoveanu, *L'industrie lithique de l'habitation L1/1993 du site de Vitănești-Măgurice*, CA 30(2), 2023, p. 491–526.
- Furestier, Mihail 2011 – R. Furestier, F. Mihail, *L'industrie lithique taillée de Taraschina*, in: L. Carozza, C. Bem, C. Micu (eds.), *Société et environnement dans la zone du Bas Danube durant le 5^{ème} millénaire avant notre ère*, Iași, 2011 p. 365–383.
- Furestier et alii 2017 – R. Furestier, F. Mihail, L. Manolakis, S. Philibert, L. Carozza, C. Micu, *Les industries lithiques Énéolithiques de la Dobroudja du Nord*, MCA 13, 2017, p. 213–226.
- Gurova 2012 – M. Gurova, 'Balkan flint' – fiction and/or trajectory to Neolithization: evidence from Bulgaria, BeJA 2(1), 2012, 15–49.
- Gurova 2016 – M. Gurova, *Prehistoric sickles in the collection of the National Museum of Archaeology in Sofia*, in: K. Bacvarov, R. Gleser (eds.), *Southeast Europe and Anatolia in Prehistory. Essays in honour of Vassil Nikolov on his 65th anniversary*, Bonn, 2016, p. 159–165.
- Gurova, Nachev 2008 – M. Gurova, C. Nachev, *Formal Early Neolithic flint toolkits: archaeological and sedimentological aspects*, in: R. I. Kostov, B. Gaydarska, M. Gurova (eds.), *Geoarchaeology and Archaeomineralogy. Proceedings of the International Conference, 29–30 October 2008 Sofia*, Sofia, 2008, p. 29–35.
- Ilie, Niță 2020 – A. Ilie, L. Niță, *Un depozit de silexuri descoperit în așezarea gumelnițeană de la Geangoești, jud. Dâmbovița*, CA 27, 2020, p. 189–201.
- Lazăr et alii 2020 – C. Lazăr, V. Oprea, T. Ignat, B. Manea, O. Frujină, C. Covătaru, A. Darie, A. Bălășescu, V. Radu, G. Vasile, M. Golea, M. Mărgărit, G. Popescu, M. Dimache, D. Pîrvolescu, M. Streinu, B. Șandric, M. Tufaru, A. Iancu, G. Dinu, V. Parnic, C. Căpiță, T. Zavalăș, A. Dima, T. Sava, *Gumelnița: research results of the 2018 and 2019 fieldwork seasons*, RCAN 6, 2020, p. 13–100.
- Mihail 2013 – F. Mihail, *Armele și uneltele culturii Gumelnița*, vol. 1+2, PhD thesis manuscript, Institute of Archaeology, Romanian Academy, Iași branch.
- Mihail, Ștefan 2014 – F. Mihail, C.-E. Ștefan, *Obiecte din piatră și materii dure animale descoperite în tell-ul de la Baia, jud. Tulcea*, in: C.-E. Ștefan, M. Florea, S.-C. Ailincăi, C. Micu (eds.), *Studii privind preistoria sud-estului Europei. Volum dedicat memoriei lui Mihai Șimon*, Brăila, 2014, p. 263–298.
- Mihail et alii 2018 – F. Mihail, M. Iacob, D. Paraschiv, *The Gumelnița lithic material discovered at Slava Rusă (Tulcea County)*, in: C. M. Lazarovici, A. Berzovan (eds.), *Quaestiones Praehistoricae. Studia in honorem Professoris Vasile Chirica*, Brăila, 2018, p. 231–249.
- Nestor 1928 – I. Nestor, *Zur Chronologie der rumänischen Steinkupferzeit*, PZ 19(3–4), 1928, p. 110–143.
- Nestor 1933 – I. Nestor, *Fouilles de Glina*, Dacia 3–4, 1933, p. 226–252.
- Niță, Frânculeasa 2005 – L. Niță, A. Frânculeasa, *Considerații asupra utilajului litic cioplit din așezarea Gumelnița de la Urlați*, Argeșis 14, 2005, p. 41–53.
- Niță, Ilie 2013 – L. Niță, A. Ilie, *The lithic collection from the Chalcolithic tell of Geangoești (Dâmbovița County)*, SP 10, 2013, p. 119–130.
- Niță, Ștefan 2011 – L. Niță, C. E. Ștefan, *Considerații privind materialul litic din așezarea de la Cunești-Măgura Cuneștilor (jud. Călărași)*, SCIVA 62/3–4, 2011, p. 195–207.
- Păunescu 1970 – Al. Păunescu, *Evoluția uneltelor și armelor de piatră cioplită descoperite pe teritoriul României*, București, 1970.
- Pelegriin 2012 – J. Pelegriin, *New Experimental Observations for the Characterization of Pressure Blade Production Techniques*, in: P. M. Desrosiers (ed.), *The Emergence of Pressure Blade Making. From Origin to Modern Experimentation*, Boston, MA, p. 465–500.
- Petrescu-Dîmbovița 1944 – M. Petrescu-Dîmbovița, *Raport asupra săpăturilor de la Glina, jud. Ilfov, 1943*, Raport asupra activității științifice a Muzeului Național de Antichități în anii 1942 și 1943, București, 1944, p. 65–71.
- Petrescu-Dîmbovița 1996 – M. Petrescu-Dîmbovița, *Glina. 2*, in: C. Preda (coord. șt.), *Enciclopedia arheologiei și istoriei vechi a României*, București, vol. II (D–L), 1996, p. 194–195.
- Petrescu-Dîmbovița, Comșa 1969 – M. Petrescu-Dîmbovița, E. Comșa, *Raport privind rezultatele săpăturilor arheologice din anul 1969 de la Glina*, manuscript kept in the archives of the "Vasile Pârvan" Institute of Archaeology, Bucharest.
- Popovici et alii 2014 – D. N. Popovici, C. Cernea, I. Cernău, V. Parnic, M. Dimanche, R. Hovsepian, A. Bălășescu, V. Radu, C. Haită, M. Mărgărit, L. Niță, *Șantierul arheologic Bordoșani – Popina, jud. Ialomița (2012–2014)*, CA 32, 2014, p. 55–118.
- Skakun 1993 – N. N. Skakun, *Agricultural implements in the Neolithic and Eneolithic cultures of Bulgaria*, in: P. C. Anderson, S. Beyres, M. Otte, H. Plisson (eds.), *Traces et fonction: les gestes retrouvés. Actes du colloque international de Liège 8–9–10 décembre 1990*, Liège, 1993, p. 361–368.
- Ștefan 2015–2016 – C. E. Ștefan, *Scurtă notă cu privire cu privire la trei locuințe eneolitice de la Glina – La nuci, Pontica 48–49*, 2015–2016, p. 137–145.
- Torrică 2011 – I. Torrică, *Depozitul de lame din silex descoperite în localitatea Băbăița (jud. Teleorman)*, BMJT 3, 2011, p. 133–42.
- Torrică 2017 – I. Torrică, *Observații preliminare privind utilajul litic cioplit din tell-ul de la Vitănești – Măgurice (jud. Teleorman)*, Musaioș 21, 2017, p. 27–43.
- Torrică 2018 – I. Torrică, *Vârfuri de săgeată și suliță din silex din arealul sud – vestic al culturii Gumelnița*, BMJT 10, 2018, p. 187–205.
- Torrică et alii 2020 – I. Torrică, A. Frânculeasa, T. Hila, *Depozitele de silex din așezarea aparținând culturii Gumelnița de la Urlați (jud. Prahova). Între import și producția locală*, BMJT 12, 2020, p. 19–60.

ABREVIERI / ABRÉVIATIONS / ABBREVIATIONS

ActaMN – Acta Musei Napocensis, Cluj
ActaMP – Acta Musei Porolissensis, Zalău
ActaTS – Acta Terrae Septemcastrensis, Universitatea Lucian Blaga, Sibiu
AÉ – Archaeológiai Értesítő, Budapest
American Antiquity – American Antiquity. Society for American Archaeology, Washington
AnB – Analele Banatului, Muzeul Banatului, Timișoara
l'Anthropologie (Paris) – l'Anthropologie, Paris
Antiquity – Antiquity. A Quarterly Review of Archaeology, University of York
AnUVT – Annales d'Université «Valahia» Târgoviște, Section d'Archéologie et d'Histoire
Apulum – Acta Musei Apulensis. Muzeul Național al Unirii, Alba Iulia
Archaeol Anthropol Sci – Archaeological and Anthropological Sciences
Archaeometry – Archaeometry, Research Laboratory for Archaeology and the History of Art, Oxford University
ArchBulg – Archaeologia Bulgarica, Sofia
Argesis – Argesis. Muzeul Județean Argeș, Pitești
Arheovest – Arheovest – Asociația Arheo Vest, Timișoara
BAHC – Bibliotheca Archaeologica et Historica Corvinensis, Hunedoara
BAI – Bibliotheca Archaeologica Iassensis, Iași
Banatica – Banatica, Muzeul Banatului Montan, Reșița
BARBrSer – British Archaeological Reports. British Series, Oxford
BARIntSer – British Archaeological Reports. International Series, Oxford
BeJA – Bulgarian e-Journal of Archaeology
BerRGK – Bericht der Römisch-Germanischen Kommission des Deutschen Archäologischen Instituts, Frankfurt am Main
BHAUT – Bibliotheca Historica et Archaeologica Universitatis Timisiensis, Timișoara
BMJT – Buletinul Muzeului Județean Teleorman, Alexandria
BSPF – Bulletin de la Société Préhistorique Française, Paris
CA – Cercetări Arheologice, București
CAB – Cercetări arheologice în București
CCA – Cronica Cercetărilor Arheologice din România, București
CCDJ – Cultură și Civilizație la Dunărea de Jos, Călărași
Crisia – Crisia. Muzeul Țării Crișurilor, Oradea
Dacia – Dacia (Nouvelle Série). Revue d'archéologie et d'histoire ancienne. Académie Roumaine. Institut d'archéologie « V. Pârvan », Bucarest
EJA – European Journal of Archaeology
EphemNap – Ephemeris Napocensis. Academia Română, Institutul de Arheologie și Istoria Artei, Cluj-Napoca
Germania – Germania. Anzeiger der Römisch-Germanischen Kommission des Deutschen Archäologischen Instituts, Frankfurt
JAS – Journal of Archaeological Science
JRGZM – Jahrbuch des Römisch-Germanischen Zentralmuseums Mainz, Mainz
MCA – Materiale și Cercetări Arheologice, București
MEFRA – Mélanges de l'École Française de Rome. Antiquité, Rome
MemAnt – Memoria Antiquitatis, Piatra Neamț
MIM – Materiale de Istorie și Muzeografie, București
Mousaios – Mousaios. Buletinul Științific al Muzeului Județean Buzău
Paléo – Paléo. Revue d'Archéologie Préhistorique. Musée National de Préhistoire, Les Eyzies, France
Paléorient – Paléorient: revue interdisciplinaire de préhistoire et de protohistoire du sud-ouest et de l'Asie centrale, Paris
Pallas – Pallas. Revue d'Etudes Antiques, Toulouse
Pontica – Pontica. Studii și materiale de istorie, arheologie și muzeografie. Muzeul de Istorie Națională și Arheologie Constanța
RACF – Revue Archéologique du Centre de la France, Lyon-Tours
Radiocarbon – An International Journal of Cosmogenic Isotope Research, Cambridge
RCAN – Revista de Cercetări Arheologice și Numismatice, Muzeul Municipiului București
REL – Revue des Études Latines, Paris
RevMuz – Revista Muzeelor, București

RN – Revue Numismatique, Paris

RMI – Revista Monumentelor Istorice, București

RMM.MIA – Revista Muzeelor și Monumentelor, seria Monumente Istorice și de Artă, București

Sargetia – Sargetia. Acta Musei Devensis, Buletinul Muzeului județean Hunedoara, Deva

SCIV(A) – Studii și Cercetări de Istorie Veche (și Arheologie), București

SP – Studii de Preistorie, București

SUCSH – Studia Universitatis Cibiniensis. Series Historica, Sibiu

Tibiscum – Muzeul Județean de Etnografie și al Regimentului de Graniță Caransebeș

Th-D – Thraco-Dacica, București

Tyche – Tyche. Beiträge zur Alten Geschichte, Papyrologie und Epigraphik

Tyragetia – Tyragetia. Anuarul Muzeului Național de Istorie a Moldovei, Chișinău

VAH – Varia Archaeologica Hungarica V. Redigit Csanád Bálint. Publicationes Instituti Archaeologici Academiae Scientiarum Hungaricae, Budapest

Ziridava – Ziridava. Studia Archaeologica, Arad