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This volume is dedicated to the memory of Egon Dörner (1925–1993)

A handwritten signature in blue ink, reading "Egon Dörner".





# Items Discovered during the 1983 Campaign in the Workshop no. 3 from the Fortification of Cladova (Comm. of Paulis, Arad County)<sup>1</sup>

Silviu Oța, Liana Oța, Gheorghe Niculescu

**Abstract:** The fortification of Cladova, located east of the mouth where creek Cladova flows into River Mureș, stands on top of a hill (Pl. 1). Research there started during the 1970s, coordinated by Vasile Boroneanț. The fortification was built upon an older, Dacian one, made of wood and earth. Inside the medieval structure archaeologists have discovered several medieval workshops, a hall-type stone church (with a semicircular altar and a narthex) and two overlapping necropolises (Pl. 2). Inside the fortification, workshop no. 3 was located approximately 10 m north of the church (discovered in the southern half of the fortification). It was irregular in shape, with the short sides measuring 3.90 and 4.10 m and the long size measuring 5.30 and 5.40 m respectively. The workshop was dug into the soil (- 1.2 m) and partially into the rock (-0.65 m) as compared to the present-day ground level. The complex was dated through pottery, one silver ring (Pl. 5/7), and one coin issued during the reign of Bernhard II of Carinthia (1202–1254). The metal-made inventory of the dwelling/workshop is extremely diverse and one must differentiate among entire items, used by the master while the workshop was in use, and items gathered and stored there in order to be reprocessed, as primary material (Pl. 3–10). It is rather difficult to say which were end products for personal use and which were objects made on demand, to be sold, or for the benefit of those living inside the fortification. One can also add jewelry items and dress accessories, some typically worn by women (Pl. 5/8, 9, 12).

Among the items found inside the complex, the spindle whorl, beads, hair ring, and the awl suggest it was a dwelling-workshop used not only the master, but also by a girl or a woman.

Taking all these elements into consideration, one can state that the complex under discussion served a double purpose, as both dwelling and workshop. The metal material discovered inside it suggests the fact that iron was mainly processed there, beside copper and bronze. The items recovered from this complex, though it remains unclear if only used by those inside the fortification, were presumably recovered from the area of Cladova and were part of artifacts used in that area during the first half of the 13<sup>th</sup> century. Other several items are earlier, as, for example, the fragment of a knife with guard (Pl. 4/7).

Though it is obvious that at least some of the masters from the fortifications recovered or purchase broken or old, discarded objects, we believe it is interesting to note that after the workshop was abandoned no one returned to gather the metal left behind there. The fortification, we can assume, remained uninhabited for a while and those who returned only did so after a relatively long period. The inhabitants of the workshop most probably never returned, out of various reasons that one can at most guess and that were due to the Tatar invasion of 1240–1241.

**Keywords:** workshop, fortification, weapons, utensils, jewelry.

The fortification of Cladova is located on top of a hill east of the place where Cladova Creek flows into River Mureș. Vasile Boroneanț has coordinated research there starting with the 1970s. The building uses an older Dacian fortification made of wood and earth<sup>2</sup>. One part of the medieval fortification was destroyed by the stone quarry located to its south-east and west<sup>3</sup>. Medieval wall fragments have also been identified on the western side of the site (Pl. 2). Several medieval workshops, one hall-church made of stone (with a semicircular altar and a narthex), and two superposed necropolises were discovered inside the fortification<sup>4</sup>. The inventory of the tombs from the older

<sup>1</sup> English translation: Ana M. Gruia. The Romanian variant of this article is currently under print in *Revista Arheologică*, Chișinău.

<sup>2</sup> Boroneanț *et al.* 1995, 23; Boroneanț *et al.* 1997, 12.

<sup>3</sup> We thank Mr. Florin Mărginean for his kind granting of access to photographs of the fortification in Cladova.

<sup>4</sup> Boroneanț, Hurezan 1987a, 67–74.

necropolis included hair rings with S- shaped end<sup>5</sup>, a ring with simple loop<sup>6</sup>, glass beads<sup>7</sup>, one snail shell collar, rings made of twisted wires<sup>8</sup>, coins minted during the reign of kings Koloman (1095–1116) and Béla II (1131–1141)<sup>9</sup>, and one glass loop of Byzantine origin<sup>10</sup>. The cemetery was partially destroyed by the 13<sup>th</sup>–14<sup>th</sup> centuries habitation. The second necropolis, dated to the 13<sup>th</sup>–14<sup>th</sup> centuries was partially overlapping the first, but also extended further north<sup>11</sup>. Until now, the largest part of the discoveries has remained unpublished, as they were just mentioned in excavation reports or various studies<sup>12</sup>.

In 1996 a lot of items found during archaeological researches performed at Cladova (commune of Păuliș, Arad County) entered temporarily, for research, into the patrimony of the National History Museum of Romania<sup>13</sup>, and we thus believe that even the partial publication of the results of the excavation is necessary<sup>14</sup>. In the present article we will attempt to analyze a lot of items discovered in the dwelling workshop no. 3, researched in 1983<sup>15</sup>. It was briefly published in 1987 in *Ziridava XV–XVI*. Though the exact number of the objects recovered from the spot remains unknown and due to the fact that few medieval workshops have been researched in the western part of Romania, we believe it is important to analyze one segment from the life of this fortification during the 13<sup>th</sup> century. Such workshops from the 11<sup>th</sup>–13<sup>th</sup> centuries, discovered in earthen fortifications, are very little known and researched on the territory of Romania. Others have remained unpublished<sup>16</sup>.

Inside the fortification, the workshop was located ca. 10 m north of the church (that was discovered in the southern half of the fortification). It is irregular in shape, with the short sides measuring 3.90 and 4.10 m and the long sides measuring 5.30 and 5.40 m. The workshop had a pit dug into the soil (–1.20 m) and partially into the rock (–0.65 m), sunken from the current ground level. According to the article published by Vasile Boroneanț in 1987, about 150 kg of raw iron, i.e. ore blooms and slag were found. An ore smelting kiln was mentioned inside the dwelling/workshop; it had a boat-shaped base and was circular in shape (D = 1.20 m), surrounded by stone slabs, located in the south-eastern corner. An inner hearth was also discovered, ca. 1 m away from the kiln, and having also a pit with polished walls, connected to the kiln<sup>17</sup>. The entrance to the dwelling/workshop was probably on the north-western part.

The complex has been dated on the basis of pottery<sup>18</sup>, one silver finger ring<sup>19</sup>, and one coin issued during the reign of Bernhard II of Carinthia (1202–1254)<sup>20</sup>. Taking these elements into consideration, the other metal items can be attributed, in general, to the same period. Envisaging also analogies for

<sup>5</sup> Boroneanț, Hurehan 1987a, 69, Pl. 2/1, 4, 9.

<sup>6</sup> Boroneanț, Hurezan 1987a, 69, Pl. 2/3.

<sup>7</sup> Boroneanț, Hurezan 1987a, 68, Pl. 1.

<sup>8</sup> Boroneanț, Hurezan 1987a, 71, Pl. 3/6.

<sup>9</sup> Boroneanț, Hurezan 1987a, 70, Pl. 3/1–5.

<sup>10</sup> Boroneanț, Hurezan 1987a, 69, Pl. 2/5; Oța 2010, 415; Oța 2012, 7.

<sup>11</sup> Boroneanț, Hurezan 1987b, 75. The tombs were found to the south, north, and east of the church, as well as inside it. Archaeologists have also identified re-inhumations on the southern side of the monument, double burials (woman and child). Some of the individuals have obviously died violent deaths; there is a case of an arrow heads thrust into one individual's mouth.

<sup>12</sup> Hurezan 1996, 103–108; Rusu 2003, 86, 88, 95, Pl. IV/h-o; Oța 2005, 401–402, 412, Fig. 8; Oța 2012, 124, 125, 126; Oța 2014, *Accesorii vestimentare descoperite în cetăți din Banat*; Oța 2015, *Weapons found in Cladova Fortress (Arad County)*, currently under print.

<sup>13</sup> I thank Mr. Vasile Boroneanț for providing materials for publication.

<sup>14</sup> Researches performed by Vasile Boroneanț and Pascu Gh. Hurezan. On site documentation was minimal, as we found notes on the wrapping paper of the items. There were also several paragraphs on this discovery published in *Ziridava* 15–16/1987, 76, 77, Pl. 1, 78, 79, Pl. 3, 80, Pl. 4, 81, Pl. 5/2, 2a and 2b, 82. We also have a few notes on one part of the graves researched in 1997 on the southern and eastern sides of the church. These graves will be the focus of a subsequent article.

<sup>15</sup> One must mention, from the very beginning, the fact that we might have not received for publication the entire lot. Vasile Boroneanț mentioned several pots, iron lumps and slag, nails and arrowheads, among which only some are to be found in the lot of artifacts offered to the National History Museum of Romania.

<sup>16</sup> These are finds from Cladova itself, namely five workshops that were also mentioned in the specialized literature.

<sup>17</sup> Boroneanț, Hurezan 1987b, 78.

<sup>18</sup> Boroneanț, Hurezan 1987b, 79, Pl. 3, 80, Pl. 4.

<sup>19</sup> Boroneanț, Hurezan 1987b, 81, Pl. 5/2, 82–83, 84; Iliescu 1987, 85–87.

<sup>20</sup> Iliescu 1987, 85, 86, Fig. 2, 87.

some of the item fragments, like the reinforcement plates from knife scabbards, one can say that the dating of a large part of the artifacts is certain enough<sup>21</sup>.

Their dating partially raises many question marks, since many of them have been recovered and brought there to be reused, i.e. the master's intention was to use them in making new objects. The surprising thing about this workshop is the fact that it contains a concentration of item fragments made of various materials, namely iron, bronze, copper, and probably silver and pottery as well. One can add the fact that prehistoric objects might have also been used during the workshop's period of activity. Some such items have been recovered from the inventory of the dwelling/workshop (Pl. 11/5)<sup>22</sup>.

The inventory of metal-made objects from the dwelling under discussion, extremely diverse, must be structured according to entire items, that the master could have used currently during his activity, i.e. tools, and items gathered there and stored to be reused, as primary materials. It is nevertheless rather difficult to establish which were finished items, intended for personal use, and which were made on order, to be sold, or for those who resided inside the fortification. One can also add elements of dress and jewelry, some typically female (Pl. 5/8, 9, 12)<sup>23</sup>.

There are also other artifacts, made of various materials. The pottery group includes jar-shaped pots, varying in size, some with potters' marks on the bottom. They were used around the middle of the thirteenth century. From the same spot archaeologists have recovered two glazed pottery fragments, fired in an oxidizing atmosphere (Pl. 11/8–10). One can also add one pottery fragment in the making that the potter intended to turn into a spindle whorl (Pl. 11/3).

**The lot of items used in everyday activities other than those typical to a metal processing workshop** is rather consistent. It includes common pottery jars and glass vessels, dress accessories and jewelry items, food remains, one knife, one pottery fragment in the making, being turned into a spindle whorl, one normal and one long awl, and various utensils. There are also several fragments of glazed pottery.

The jewelry and accessory items consisted of several beads, one hair ring, and one silver finger ring.

The beads are small in size, made of colored glass (Pl. 5/8), though some are larger (Pl. 5/9).

The finger ring bears an inscription and is decorated with a double cross; it is an Arpadian object that can be dated to the thirteenth century (Pl. 5/7)<sup>24</sup>. The interpretation of its inscription in the sense that it belonged to Pousa, voivode of Transylvania, is, in our opinion, a bit forced<sup>25</sup>.

A single buckle has been entirely preserved (Pl. 5/1). Unfortunately, one cannot decide if it was produced on the spot, to be sold, or if it belonged to the master or to one of the members of his family.

<sup>21</sup> Iambor 2005, 380, Pl. LI/3–4. See Rusu 2003.

<sup>22</sup> Several pottery fragments, not illustrated in the article, can also be added to the polisher.

<sup>23</sup> Items drawings by Georgiana Ducman, Simona Mateescu, and Silviu Oța (MNIR).

<sup>24</sup> See Lovag 1989.

<sup>25</sup> Iliescu 1987, 85–87. Presentation delivered at the National History Museum of Romania by Silviu and Liana Oța in 1997. We will only mention here a few of the question marks that the seal finger ring recovered from the dwelling / workshop raises. The discovery of such a silver ring, with an inscription read, at the time, as “DUS POUSA” has led to the interpretation, that we deem excessive, that the residence was that of Pousa, voivode of Transylvania. This is very less likely, for two extremely simple reasons. The first is that, at that time, the settlement of Cladova did not belong to the voivodeship and from a geographic and administrative perspective, it was part of the county of Arad. The second is that the authors were unable to explain, presuming that their demonstration is correct, the presence of a voivodal ring in an obscure dwelling / workshop outside the borders of the voivodeship. The long list of unclarities could continue with another question, namely how come a high ranking official of the Kingdom of Hungary placed an order for a seal ring with the workshop of a “not too accomplished” an engraver?

O. Iliescu was delegated the task of attempting to decipher the inscription. In an honest fashion, he allowed the reader to interpret the inscription any way one wanted, but this also allowed the authors of the excavation not to give up their hypothesis that at least of the residences of the voivode was there; Pousa is attested during the first half of the 13<sup>th</sup> century. It is rather either the ring of some local nobleman who placed an order with a local master from Cladova or a coarse attempt to falsify the ring of a high-ranking dignitary. At that time, the double cross was one of the decorative elements of lay clerks. One must, nevertheless, not forget the fact that similar items are frequent among Arpadian finds from the Hungarian Kingdom. The attempt to connect them to the Orthodox world is another issue discussed by the authors of the excavation. It is true that this type of cross features on the Byzantine crown of the kings of Hungary, but is very difficult to jump from this fact to accepting the explanations provided for the first half of the 13<sup>th</sup> century (i.e. until the 1240s).

Two copper appliqués were part of objects that can be identified with great difficulty (Pl. 10/3, 5). Only the rectangular item might have been part of a belt (Pl. 10/5). It is hard to say if they were discarded items or objects in the making. They seem to have been detached from belts.

The glass-made glass fragments come from two different items. One is from the foot of a glass (Pl. 11/1) and the other from the bowl and rim of a similar item (Pl. 11/2).

The burnt clay polisher was found, among the materials from inside the fortification, in the older, prehistoric levels, perhaps by a person who worked there. It is difficult to say if the item was used again during the Middle Ages.

There is one polished stone, circular in section (Pl. 11/7), that due to its shape might have been used as stopper for some sort of vessel.

The small and long awls (Pl. 6/4, Pl. 6/6)<sup>26</sup> prove that the people who used the complex in question were engaged in other activities as well, besides metallurgy; they seem to have also performed maintenance operations for leather shoes or clothes.

The arrow heads probably belonged to the master, though one must not exclude the possibility that they were produced for those defending the fortification. According to the models followed, it is rather clear that the two items were used for an arrow (Pl. 3/2) and a crossbow bolt (Pl. 3/3).

The toy axe (?) is a rare item (Pl. 6/2). It cannot be established if it was made for the market or for some child in that household.

The use of an iron object (Pl. 6/1), probably part of a larger and articulated item, remains uncertain.

The spindle whorl, made of a single clay lump, most probably belonged to a girl or a woman (Pl. 5/11). Similarly, one clay lump in the making was on the way of becoming a spindle whorl (Pl. 11/3).

The silver coin is, besides the finger ring with inscription, the best element in the dating of the dwelling / workshop (Pl. 5/10).

The fish bones are indicators of the diet of those who inhabited the dwelling / workshop at a certain time (Pl. 12/1–6).

### Items from the dwelling

A single item, an iron cramp (Pl. 8/8), can be said to have been used for the window of the dwelling. Such objects have numerous analogies among medieval sites from the present-day territory of Romania<sup>27</sup>.

A nail was probably also from the structure of the dwelling or a furniture item inside it (Pl. 8/4).

There are very few **items that could have been used for activities typical to a metal processing workshop**. One should rather mention the few such items that have not been recovered after the destruction of the workshop.

The “decorated” cattle bone (Pl. 12/7) is most probably among the artifacts that can be dated to the 13<sup>th</sup> century. The triangular incisions, relatively irregularly placed (not forming a definite decoration), placed in rows, seem to be rather the result of punches made with an instrument with a triangular tip that probably perforated some sheet of metal and then hit this bone, possibly used as an anvil<sup>28</sup>. One can also note, on the sides, the fact that the bone had not been processed and finished as a hilt, so it was a simple tool. The incisions on the bone, according to their size and shape, seem to have been made with three different instruments: a larger, triangular one, one ending in an acute triangle and the third of an irregular rectangular shape. One can also note that each line of incisions was performed with the same tool and that differences in size can be the result of different intensity of the blows.

The flint was used for daily activities related to fire starting (Pl. 11/6).

The fragments of iron and melted iron (Pl. 7/9, Pl. 8/2, 5–7) prove the fact that ore extracted from mines in Valea Cladovei was also processed inside the fortification<sup>29</sup>. Besides fragments from items

<sup>26</sup> As analogies see the later items from Baia (Neamțu *et al.* 1984, 143, Fig. 50/1–3) and Enisala (Dragomir 1972–1973, 35, Fig. 9/12).

<sup>27</sup> Neamțu *et al.* 1980, 56, 176, Fig. 24/3–4, 177, Fig. 25/4–6.

<sup>28</sup> Beldiman *et al.* 2014, 229, 230, 237, Fig. 13, 238, Fig. 16, 239, Fig. 18, 240, Fig. 20, 21, 22, 241, Fig. 23, 24, 25.

<sup>29</sup> Field surveys performed by Vasile Boroneanț, Gh. Pascu Hurezan, Peter Hügel, and Silviu Oța (Boroneanț 1999, 119).



made of various materials that have been gathered there, this lump of metal attests to the fact that iron produced inside the fortification was also used in the process of production. Taking into consideration the fact that there was another iron lump in the making (Pl. 4/9), one can state, in all certainty, that mineral ore was exploited during the thirteenth century in the area.

The use of iron rods is hard to establish, especially since they have not been restored. They could be utensils, but also broken items from other artifacts, taken there for metal recovery (Pl. 6/7–10).

### Item fragments gathered for re-processing

Folded copper and bronze plates, with or without rivets, those in the making (Pl. 9/1–7, Pl. 10/1, 2, 4, 6–10), the shafting tube from a spear head (Pl. 3/1), the fragment from an iron item ending in a hook (possibly from a bit; Pl. 6/6), the lock fragment (Pl. 6/3), iron plates of various shapes and sizes (Pl. 7/1–2, 5–8, 10), some with perforations (Pl. 7/3–4), iron fragments from various artifacts (Pl. 8/9–10), and fragments from knife handle reinforcements (Pl. 8/11–17) are but some of the objects gathered in the dwelling/workshop to be re-reprocessed.

It is very interesting to note that a significant lot of knife fragments (i.e. 9 fragments), most with the blade or tang broken, have been discovered in Cladova. One can easily note that all these destroyed items show signs of wear and that only one was entirely preserved (Pl. 3/5). Taking also into consideration the fact that there is a number of reinforcement elements from the sheaths of battle knives and two iron lumps in the making (Pl. 4/4, 9), one could say that this was a place where knives were made. The material employed was obtained either from reprocessed iron or from raw iron obtained in another workshop. Weapons taken out of use, due to their degree of destruction, were very probably also brought there to the same end, i.e. for the metal to be reused. Two knife handle ends (Pl. 4/5–6), made of bone, were perhaps detached from items brought there to be repaired or reprocessed. The fragments from a knife with guard (Pl. 4/7) are from another item brought there for reprocessing. Such artifacts have good analogies among the objects discovered in the necropolises from Alba Iulia-Stația de salvare<sup>30</sup>, Băneasa-Străulești<sup>31</sup>, and in the settlement from Bucov<sup>32</sup>. On three spots, the items were dated to the tenth century. All knives, without exception, have tangs, common to the Middle Ages, and lack master marks.

Most buckles, with a single exception, have been broken (Pl. 5/2–4). All discovered items are different in shape and use. Unfortunately, it is unclear if the circular item (Pl. 5/4) was used as a hanging loop or is pinless buckle. The fact they are broken indicates that they were among the objects brought in for reuse.

In the case of some copper appliquéés (Pl. 5/6) or appliquéés made of metal alloy (Pl. 5/5) it is hard to decide the type of support they were attached to, but at least some must have been attached to some sort of leather support. One also faces difficulties in deciding if the items were meant to be reprocessed or were used by the residing master and, in time, came off the organic materials that once supported them.

It is possible that some of the copper plates are fragments from various jars (Pl. 9/1, 2, 6, 7). The use of others remains uncertain – either part of belts (Pl. 9/4–5) or items recovered to be reprocessed (Pl. 10/2, 4, 6–9)<sup>33</sup>. It is nevertheless certain that several fragments were cut from two of the copper plates for the making or completion of other items (Pl. 9/3, Pl. 10/1).

On the basis of the iron items in the making (Pl. 8/1 and possibly Pl. 8/2, 3, 7), one can rather difficulty guess what final products were intended.

An item similar to a washer, made of lead (Pl. 5/13), was also found there. For now, we do not know how it was used.

The bone appliquéés from the end of knife hilts could have been either part of broken or of currently used items. It is difficult to include them in one or the other category in question.

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Another hypothesis is that the ore might have come from the area of Rădnuța, on the territory of Lipovei, where exploitations from the 11<sup>th</sup>–12<sup>th</sup> century have been identified (Boroneanț 1999, 118).

<sup>30</sup> Blăjan 2006, 29, 117, Fig. 26.

<sup>31</sup> Constantiniu *et al.* 1965, 103, Fig. 23.

<sup>32</sup> Comșa 1978, 115, 117, Fig. 92/4, 12.

<sup>33</sup> See the discoveries from Baia (Neamțu *et al.* 1984, 112, 113, Fig. 41/6–7, 11, 12, 14).

## Conclusions

Among the artifacts discovered on this site, the spindle whorl, beads, hair ring, and awl suggest that it was a workshop/dwelling, very probably used not only by the master craftsman, but also by a woman. The sufficiently large lot of items mainly attributed to women supports such a supposition. The presence of common pottery wares in a dwelling/workshop is another argument for this.

Taking all these elements into consideration, we can state that the complex fulfilled a double role, that of dwelling, but also workshop. The metal material discovered inside suggests that iron was mainly processed there, but also copper and bronze. The tools employed must have been especially those typical to a smithy (tongs, hammers, chisels etc.) Two of the bronze plates from the dwelling/workshop show clear traces of cutting (Pl. 9/3, Pl. 10/1).

Though one cannot say if the items gathered in this context were only used by those who resided inside the fortification, it may be suspected at least that they were recovered from the area of Cladova and were mainly part of artifacts used in the region during the first half of the 13<sup>th</sup> century. Several other examples are earlier, such as the fragment of a knife with guard (Pl. 4/7).

At the current level of data on existing research, due to the fact that the artifacts were found at various depths and one does not know their position in the complex (they were very probably mixed, in no particular order), we have divided them according to depth groups, i.e. seven such groups (–0.30 m, –0.55 m, –0.60 m, –0.70 m, –1.00 m and –1.05–1.20 m; see table 1)<sup>34</sup>. The obtained results have led to several conclusions regarding the workshop. First, we can say that the workshop must have contained some designs or uneven levels, that have not been noted during research, or that have not been mentioned in the brief excavation reports.

The iron lumps in the course of being processed are clear evidence of the fact that knives were produced there. The fact that there is one item in the making, out of raw iron, and one in the course of reprocessing, proves that the master there employed both resources, namely recovered and primary ones.

Very probably, those who used the dwelling/workshop abandoned it in a hurry and did not have the time to recover and remove all the collected materials. Also, the pottery jars inside suffered the same fate.

The absence of blacksmith and other tools can lead to the conclusion that they were recovered either by the master or by those who destroyed the building. The fact that they have not been found (except for a few small utensils) can be an argument supporting the idea that they were among the most valuable objects from the inventory and were possibly immediately recovered.

The discovery of a single silver seal ring, with an inscription, raises other questions as well, namely was it an object made on demand in the workshop or did it belong to one of the inhabitants? In both cases, though valuable, the item was never recovered. This is a further argument that people abandoned the workshop in a hurry.

Though it is obvious that at least some of the masters inside the fortification used to recover destroyed or old, discarded items, it is interesting that after the workshop under analysis was destroyed, nobody returned to recover the metal left behind. The fortification remained, uninhabited for a while and those who returned did so after a rather lengthy period. Those who lived in the workshop never returned, for various reasons that can be at best suspected.

The abandonment of fortification, in association with the dating elements (inscription ring, coin) might be an argument for its destruction or for the fact that its inhabitants were removed or executed, most probably during the Tatar-Mongol invasion of 1240–1241.

<sup>34</sup> The attempt to group the items according to the depth of discovery is hindered by the fact that a large part of them were kept in packages with no other mention than the origin inside the workshop. Still, a number of 38 artifacts could be analyzed from this perspective.

## Items catalogue

### *Weapons*

1. Socketing spear tube (L = 142 mm, D base = 11 mm; l = 20.4 mm) made of iron (Pl. 3/1). S. VII/1983, squares 35–36, case A, –1.00 m.
2. Arrowhead (L = 81.5 mm, l = 11.5 mm) made of iron (Pl. 3/2). S. VII/1983, square 36, –0.55 m.
3. Crossbow bolt (L = 78.3 mm, l = 12.3 mm) made of iron (Pl. 3/3). S. VII/1983, squares 34–36, –0.70 m.

### *Knives*

1. Iron knife fragment (L = 107 mm, l = 17 mm, thickness = 5.3 mm), bent (Pl. 3/4). S. VII/1983, case A, square 36, –0.30 m, dwelling/workshop.
2. Iron knife (L = 125 mm, l = 17.7 mm, thickness = 3.5 mm) with tang (Pl. 3/5). S. VII/1983, square 36, case A, –0.30 m, dwelling/workshop.
3. Iron knife (L = 170 mm, l = 19.5 mm, thickness = 5.5 mm), with tang, oblique and the tip of the blade broken (Pl. 3/6). S. VII/1983, squares 35–36, case A, –1.00 m, dwelling/workshop.
4. Iron knife blade (L = 84 mm, l = 13.5 mm, thickness = 3.4 mm), with tang, partially preserved (Pl. 4/1). S. VII/1983, dwelling/workshop.
5. Iron knife blade (L = 54 mm, l = 7.4 mm, thickness = 3.3 mm), with tang, partially preserved (Pl. 4/2). The tip is broken. S. VII/1983, dwelling/workshop.
6. Knife blade fragment (L = 51 mm, l = 12.2 mm, thickness = 4 mm) made of iron (Pl. 4/3). S. VII/1983, squares 34–36, –1.05–1.20 m, dwelling/workshop.
7. Knife fragment during reprocessing (L = 64, l = 18.6 mm, thickness = 2.4 mm). The tip of the blade is broken and the entire blade is folded once towards the handle (Pl. 4/4). At the opposite end it is bent at an angle of 90°. The tang is rectangular in section. S. VII/1983, dwelling/workshop.
8. Iron knife fragment (L = 113 mm, l = 14 mm, thickness = 4.2 mm, guard = 24.7 × 10.5 mm), with guard (Pl. 4/7). The tip and the tang are broken. The blade shows traces of wearing. S. VII/1983, square 36, –0.30 m, dwelling/workshop.
9. Iron knife (L = 105.4 mm, l = 19.6 mm, thickness = 5 mm), with the tang rectangular in section (Pl. 4/8). The tip is missing and part of the blade is turned to one side. S. VII/1983, square 36, case A. –0.30 m, dwelling/workshop.
10. Iron piece under processing (L = 142 mm, l = 34 mm, thickness = 13.7 mm) with traces of hammering and twisting. It was probably being turned into a knife (Pl. 4/9). S. VII/1983, dwelling/workshop.

### *Bone appliqués from the end of knife handles*

1. Bone appliqué (L = 28.1 mm, l = 14.1 mm, thickness = 6.00 mm, L nails = 24.1 mm) with two nails (Pl. 4/5). S. VII/1983, dwelling/workshop.
2. Bone appliqué (L = 26.7 mm, l = 15.00 mm, thickness = 4.8 mm, L nails = 28.5 mm) with two nails (Pl. 4/6). The first plate is followed by a second, of equal size, also made of bone (thickness = 1.7 mm). S. VII/1983, dwelling/workshop.

### *Fragments from sheath reinforcement*

1. Fragment of rod from sheath reinforcement (L = 53 mm, thickness = 3 × 2 mm) for a knife (Pl. 8/11). It is deformed and rectangular in section. S. VII/1983, dwelling/workshop.
2. Fragment of rod from sheath reinforcement (L = 110.3 mm, thickness = 3.5 mm) for a knife (Pl. 8/12). S. VII/1983, dwelling/workshop.
3. Fragment of rod from sheath reinforcement (L = 98.00 mm, l maximum = 11.7 mm, rod thickness = 4.1 × 2.6 mm) for a knife (Pl. 8/13). The fragment is bent. S. VII/1983, dwelling/workshop.
4. Fragment of rod from sheath reinforcement (L = 86 mm, l = 4 mm, thickness = 2.5 mm) for a knife (Pl. 8/14). S. VII/1983, square 36, –0.55 m, dwelling/workshop.
5. Fragment of rod from sheath reinforcement (L = 66.7 mm, l = 7.4 mm, thickness = 2.6 mm) for a knife (Pl. 8/15). S. VII/1983, square 36, –0.55 m, dwelling/workshop.
6. Fragment of rod from sheath reinforcement (L = 53.6 mm, l = 10.7 mm, thickness = 2 mm) for a knife with hanging loop (Pl. 8/16). S. VII/1983, square 36, –0.55 m, dwelling/workshop.
7. Knife sheath reinforcement (L = 59 mm, l = 15.4 mm), from the tip (Pl. 8/17). S. VII/1983, dwelling/workshop.

### *Jewelry items*

1. Bead (D = 3.6 mm, H = 2.00 mm) made of glass paste (Pl. 5/8). S. VII/1983, dwelling/workshop.
2. Glass paste bead. S. VII/1983, dwelling/workshop.
3. Glass paste bead. S. VII/1983, dwelling/workshop.

4. Clay bead, painted red (D = 19.6 mm, h = 12.5 mm). Displays one groove in the center (Pl. 5/9). S. VII/1983, dwelling/workshop.

5. Silver ring (D loop = 20–21.5 mm, thickness = 1.00 mm, D chatton = 13 mm, Weight = 2.66 gr., not cleaned) with inscription and double cross (Pl. 5/7). S. VII/1983, dwelling/workshop.

6. Hair loop, made of copper wire, faceted, with traces of hammering (D = 18.6 mm, thickness = 2 mm). The ends are separated (Pl. 5/12). It was made of bronze. S. VII/1983, square 36, –0.60 m, dwelling/workshop.

Chemical composition<sup>35</sup>:

Ti	Mn	Fe	Ni	Cu	Zn	Au	Pb	As	Bi	Zr	Ag	Sn	Sb
-	0.06	1.10	0.001	98.52	-	-	0.32	-	0.001	-	0.001	-	-

#### Coin

1. Silver coin issued during the rule of Bernhard II Carinthia (1202–1254). S. VII/1983, dwelling/workshop.<sup>36</sup>

#### Iron-made dress accessories

1. Iron buckle (Pl. 5/1), with tongue. It is flat in section. The side where the tongue is fixed is straight and the opposite one is curved. The other two sides are oblique (L = 45.9 mm, l = 45 mm, thickness = 4.5–5.2 mm). The tongue is rectangular in section (L = 47 mm; l = 6.8 mm). S. VII/1983, squares 34–36, –0.70 m, dwelling/workshop.

2. Iron buckle, partially preserved (Pl. 5/2). One side is missing the opposite side is slightly curved. The long sides are parallel (L = 28.2 mm; l = 27.8 mm; thickness = 4.3 mm) and each show, on the inner side, two protuberances. S. VII/1983, squares 34–36, –0.70 m, dwelling/workshop.

3. Iron buckle, lozenge-shaped, partially preserved (Pl. 5/3). The item is flat (L = 63.9 mm; l = 56.7; thickness = 3.5 mm). S. VII/1983, squares 35–36, case A, –1.00 m, dwelling/workshop.

4. Iron buckle (D = 34.9 mm; bar thickness = 6.7 mm) circular in shape or hanging loop -? (Pl. 5/4). S. VII/1983, dwelling/workshop.

#### Dress accessories made of bronze and copper

1. Fragment from a copper appliqué, probably rectangular in shape (Pl. 5/6). Two perforations on the corners have been preserved. The item was bent and broken (L = 29.4 mm, l = 13.4 mm, thickness = 0.5 mm). S. VII/1983, squares 34–36, dwelling/workshop.

Chemical composition:

Ti	Mn	Fe	Ni	Cu	Zn	Au	Pb	As	Bi	Zr	Ag	Sn	Sb
0.14	0.04	1.34	0.001	98.03	-	0.07	0.001	0.001	0.001	-	0.001	-	0.38

2. Oval appliqué, strongly oxidized (Pl. 5/5), made through casting. In the center it has a circular perforation flanked by triangles (L = 48.3 mm, l = 26.7 mm, thickness = 5 mm). The item is made of an alloy containing copper, lead, and stannum S. VII/1983, square 35, –0.60 m, dwelling/workshop.

Chemical composition:

Ti	Mn	Fe	Ni	Cu	Zn	Au	Pb	As	Bi	Zr	Ag	Sn	Sb
0.21	0.07	4.17	0.001	44.77	0.62	-	46.19	-	-	0.04	0.001	3.33	0.60

3. Bronze appliqué, with rounded corners (L = 34.4 mm, l = 35 mm), two plate-made rivets in the corners (Pl. 10/3). One end has been cut and bent. The opposite end displays another bronze plate attached to the rivet. The latter plate comes from another object and one can see traces of a perforation, different than the one made by attaching the rivet. Shows traces of secondary firing. S. VII/1983, squares 34–36, –1.05–1.20 m, dwelling/workshop.

Chemical composition:

Ti	Mn	Fe	Ni	Cu	Zn	Au	Pb	As	Bi	Zr	Ag	Sn	Sb
0.07	0.04	1.01	0.001	97.24	-	-	0.01	0.04	0.001	-	0.84	-	0.75

<sup>35</sup> Dr. Gheorghe Niculescu performed the chemical analysis of the items (Physical-Chemical and Biological Investigations Department, Compartment for Nuclear Radiation Investigations). The analyses have been performed with a portable X-ray fluorescence spectrometer, type InnovX Systems Alpha Series, with W anticathode tube, SiPIN diode, cooling system through Peltier effect. Working parameters: tension 40 kV, intensity 35 microA, acquisition time 120 s.

<sup>36</sup> Iliescu 1987, 85, 86, Fig. 2.



4. Copper appliqué, with rounded corners and eight rivets on the margins (Pl. 10/5). The rivets are made of copper and perforate the appliqué (L = 51.4 mm, l = 50.5 mm, thickness = 1 mm). Two of the corners are broken. The other higher concentrations of metal are most probably due to the association of copper with other minerals, during extraction, in the mining process. From the perspective of chemical composition, the item is very similar to the previous one, and might have been made from the same metal. S. VII/1983, squares 34–36, –1.05 m–1.20 m, dwelling/workshop.

Chemical composition:

Ti	Mn	Fe	Ni	Cu	Zn	Au	Pb	As	Bi	Zr	Ag	Sn	Sb
0.13	0.04	0.94	0.001	97.10	-	-	0.001	0.001	0.001	-	1.10	-	0.70

#### Clay domestic items

1. Spindle whorls (Pl. 5/11) made from a pottery fragment (D = 24.6 mm, h = 7.7 mm). S. VII/1983, dwelling/workshop.
2. Pottery fragment (pot wall) polished, disk-shaped (Pl. 11/3), but without a central perforation (D = 42.3 mm × 39.6 mm, thickness = 6 mm). Oxidizing firing. Made on the fast potter's wheel. It displays a longitudinal incision on the outside and is polished. S. VII/1983, dwelling/workshop.
3. Clay polisher (L = 45.5 mm, D = 30.1 mm), oxidizing firing (Pl. 11/5). S. VII/1983, dwelling/workshop.

#### Stone domestic items

1. Flint (Pl. 11/6). Pieces are missing from it (L = 45 mm, l = 42 mm, h = 31 mm). S. VII, squares 34–36, dwelling/workshop.
2. Fragment from a stone item (Pl. 11/7), circular in section. It is thicker at one end and thinner at the other (L = 30.2 mm, D maxim = 15.1 mm, D minim = 12.00 mm). S. VII/1983, dwelling/workshop.

#### Iron domestic items

1. Iron awl (Pl. 6/4) circular in section (L = 111.2 mm). Towards the end it is rectangular, pointy, and bent at a 90° angle. S. VII/1983, squares 34–36, –0.70 m, dwelling/workshop.
2. Iron awl, made of iron (L = 135 mm, Maximum thickness = 5.00 × 5.6 mm), forged (Pl. 6/5). The item is bent towards the tip. S. VII/1983, dwelling/workshop.

#### Iron utensils

1. Iron item (L = 95, l = 9.3 mm, thickness = 4.4 mm), rectangular in section, wider towards the tip (Pl. 6/7). It is slightly bent. S. VII/1983, square 36, –0.55, dwelling/workshop.
2. Iron item (L = 81 mm, l = 9 mm, thickness = 3.8 mm) rectangular in section (Pl. 6/8). It is pointy and slightly bent at one end. S. VII/1983, squares 34–36, dwelling/workshop.
3. Iron item (L = 57 mm, thickness = 6.7 × 5.1 mm), rectangular in section, slightly curved (Pl. 6/9). The tip is flat. S. VII/1983, square 34, –0.70 m, dwelling/workshop.
4. Utensil handle (L = 55.00 mm, l = 9.5 mm, thickness = 2.6 mm), possibly a knife (?). It shows traces of wooden fiber (Pl. 6/10). S. VII/1983, dwelling/workshop.

#### Fragments from iron items

1. Item fragment (L = 69.6 mm, l = 17.5 mm, thickness = 2.00 mm, H hooks = 14.6 mm and 12.00 mm), made of articulated iron (Pl. 6/1). The item is flattened, widened towards the ends. There is one hook or loop at each end. S. VII/1983, dwelling/workshop.
2. Fragment from an iron lock (L = 44 mm, D disk = 23 mm), from which a bar, a tang, and a tang fragment have been preserved (Pl. 6/3). S. VII/1983, dwelling/workshop.
3. Fragment from hinges (L = 52.6 mm, l = 15.5 mm, thickness = 5.5 mm) made of iron, partially broken and bent (Pl. 8/8). S. VII/1983, squares 34–36, dwelling/workshop.
4. Piece of iron (L = 50.1 mm, thickness = 12.5 mm × 8.1 mm), bent, with one loop at an end (Pl. 8/3). S. VII/1983, squares 34–36, –0.70 m, dwelling/workshop.

#### Nail

1. Iron nail (L = 52.7 mm, head = 10.5 mm × 17.6 mm), rectangular in section (Pl. 8/4). The head is prolonged. S. VII/1983, squares 34–36, –0.70 m, dwelling/workshop.

#### Horse tack items

1. Bit fragment, mouthpiece (L = 48.4 mm, thickness bar = 9 × 3.4 mm, D hook = 15.6 mm) partially preserved (Pl. 6/6). S. VII/1983, squares 35–36, case A, –1.00 m.

*Iron plates of uncertain use*

1. Iron plate (Pl. 7/1), bent (L = 75.6 mm, l = 9.00 mm, thickness = 2.2 mm). S. VII/1983, square 34, -0.70 m, dwelling/workshop.
2. Iron plate (Pl. 7/2), bent (L = 41.7 mm, l maximum = 10.3 mm, thickness = 3.8 mm). S. VII/1983, dwelling/workshop.
3. Iron plate (Pl. 7/3), bent and perforated (L = 40 mm, l = 25.2 mm, thickness = 2.00 mm). dwelling/workshop, 1983.
4. Iron plate (Pl. 7/4), perforated in two points (L = 47.2 mm, l = 19.5 mm, thickness = 2.2 mm). dwelling/workshop, 1983.
5. Iron plate (L = 52.1 mm, l = 16.6 mm, thickness = 3.5 mm), bent (Pl. 7/5). dwelling/workshop, 1983.
6. Iron plate (Pl. 7/6), bent (L = 81 mm, l = 9 mm, thickness = 4 mm). S. VII/1983, squares 34–36, dwelling/workshop.
7. Iron plate (Pl. 7/7), deformed, with broken bits at both ends (L = 52.5 mm, l = 11.4 mm, thickness = 2.1 mm). dwelling/workshop, 1983.
8. Iron plate (L = 60.3 mm, l = 19.00 mm, thickness = 1.4 mm), bent and with traces of breaking at the ends (Pl. 7/8). S. VII/1983, dwelling/workshop.
9. Iron plate (L = 90.3 mm, l = 26.7 mm, thickness = 2.5 mm) rectangular, with one hook end (Pl. 7/10). S. VII/1983, squares 35–36, case A, -1.00 m, dwelling/workshop.

*Raw iron pieces*

1. Raw iron piece (L = 84 mm, l = 20 mm, thickness = 16 mm; Pl. 7/9). S. VII/1983, square 34, -0.70 m, dwelling/workshop.

*Iron pieces of uncertain use*

1. Iron item fragment (L = 45.5 mm, l = 16.6 mm, thickness = 4.7 mm). It is wider and thinned in the upper part (Pl. 8/9) and thicker and wider in the lower part. Another, rectangular piece of iron seems fixed towards the upper part. Two parallel lamellas seem to be placed towards the base. The item resembles an iron pincers. S. VII/1983, dwelling/workshop.
2. Perforated iron piece (L = 29.9 mm, l = 24.7 mm, thickness = 5.3 mm). It has been perforated from the inside out (Pl. 8/10). S. VII/1983, dwelling/workshop.

*Iron pieces in the course of being processed*

1. Iron piece (L = 85 mm, thickness = 4 mm) in the course of being processed (Pl. 8/1). S. VII/1983, squares 35–36, case A, -1.00 m, dwelling/workshop.
2. Iron piece (L = 34.4 mm, l = 24 mm, thickness = 5.2 mm), broken off a larger piece (Pl. 8/2). It has five parallel and proximal tangs and one farther apart. S. VII/1983, squares 34–36, -1.05–1.20 m, dwelling/workshop.
3. Iron piece (L = 45.00 mm, l = 21.00 mm; Pl. 8/5). S. VII/1983, square 34, -0.70 m, dwelling/workshop.
4. Iron piece (L = 42.00 mm, l = 16.00 mm; Pl. 8/6). S. VII/1983, square 34, -0.70 m, dwelling/workshop.
5. Iron piece (L = 37.6 mm, l = 17.5 mm, thickness = 10.3 mm), rounded at one end (Pl. 8/7). S. VII/1983, squares 35–36, case A, -1.00 m, dwelling/workshop.

*Toys*

1. Small axe (Pl. 6/2) made of iron. The edge is wide and the head is prolonged (L = 59.7 mm, l = 24.7 mm, l in the area of the eye = 12 mm). S. VII/1983, squares 34–36, -1.05–1.20 m, dwelling/workshop.

*Fragments from copper jars*

1. Fragment from a copper plate, with a plate rivet on it. The decoration consists of parallel, incised lines, some with short interruptions (Pl. 9/1). The item is broken and bent (L = 40.00 mm, l = 49.3 mm, thickness = 0.6 mm). It shows traces of secondary firing. S. VII/1983, dwelling/workshop.

Chemical composition:

Ti	Mn	Fe	Ni	Cu	Zn	Au	Pb	As	Bi	Zr	Ag	Sn	Sb
0.17	0.12	1.60	0.001	94.38	0.11	-	2.01	0.001	0.001	-	0.001	1.62	-

2. Copper plate with traces of secondary firing and one rivet perforation (Pl. 9/2). The perforation is later and was made with a punch (L = 31.4 mm, l = 25.1 mm, thickness = 0.5 mm). S. VII/1983, square 36, case A, -0.30 m, dwelling/workshop.

Chemical composition:

Ti	Mn	Fe	Ni	Cu	Zn	Au	Pb	As	Bi	Zr	Ag	Sn	Sb
0.10	0.04	1.47	0.001	97.68	0.17	-	0.08	0.04	0.001	-	0.001	-	0.42

3. Fragment from a jar made of copper plate (Pl. 9/7), folded and with rivets (L = 132 mm, l = 87.4 mm, thickness = 0.4 mm). S. VII/1983, square 36, dwelling/workshop.

Chemical composition:

Ti	Mn	Fe	Ni	Cu	Zn	Au	Pb	As	Bi	Zr	Ag	Sn	Sb
0.20	0.10	2.09	0.001	96.40	-	-	1.19	0.001	0.001	0.02	0.001	-	0.001

*Pieces of copper and bronze plates*

1. Copper plate, bent and broken (L = 52.2 mm, l = 31.6 mm, thickness = 0.4 mm), with traces of cutting (Pl. 9/3). S. VII/1983, squares 34–36, –0.30 m, dwelling/workshop.

Chemical composition:

Ti	Mn	Fe	Ni	Cu	Zn	Au	Pb	As	Bi	Zr	Ag	Sn	Sb
0.06	0.02	0.54	0.09	98.16	-	-	0.91	0.12	0.10	-	0.001	-	0.001

2. Copper plate (L = 25.2 mm, l = 17 mm, thickness = 0.9 mm), broken off a larger item (Pl. 9/4), S. VII/1983, dwelling/workshop.

Chemical composition:

Ti	Mn	Fe	Ni	Cu	Zn	Au	Pb	As	Bi	Zr	Ag	Sn	Sb
0.23	0.08	1.61	0.001	96.17	-	-	1.90	0.001	0.001	0.01	0.001	-	-

3. Copper plate, bent and broken (L = 28.1 mm, l = 24.6 mm, thickness = 1.00 mm), from another, larger item (Pl. 9/6). S. VII/1983, dwelling/workshop.

Chemical composition:

Ti	Mn	Fe	Ni	Cu	Zn	Au	Pb	As	Bi	Zr	Ag	Sn	Sb
0.10	0.03	1.00	0.06	98.11	-	-	0.60	-	0.001	0.03	0.001	-	-

4. Copper plate, with traces of secondary firing on one side and deformed (Pl. 10/1). It has two traces of scratching (L = 78.2 mm, l = 30.6 mm, thickness = 0.5 mm). The plate fragment was bent along these traces (left-right) until it broke. The proof resides in the breakage from the tip of the angle, following the mechanical deformation of the plate. S. VII/1983, dwelling/workshop.

Chemical composition:

Ti	Mn	Fe	Ni	Cu	Zn	Au	Pb	As	Bi	Zr	Ag	Sn	Sb
-	-	0.61	0.08	98.25	-	-	0.84	0.09	0.12	-	0.001	-	0.001

5. Copper plate fragment, broken off a larger item (Pl. 10/2). It has strong traces of oxidation. (L = 37.5 mm, l = 25.2 mm, thickness = 1.00 mm). S. VII/1983, dwelling/workshop.

Chemical composition:

Ti	Mn	Fe	Ni	Cu	Zn	Au	Pb	As	Bi	Zr	Ag	Sn	Sb
-	0.03	0.66	0.03	99.01	-	-	0.27	-	0.001	-	0.001	-	-

6. Copper plate fragment (L = 48 mm, l = 26.6 mm, thickness = 0.9 mm), broken from a larger item (Pl. 10/4). S. VII/1983, square 34, –0.70 m, dwelling/workshop.

Chemical composition:

Ti	Mn	Fe	Ni	Cu	Zn	Au	Pb	As	Bi	Zr	Ag	Sn	Sb
0.11	0.03	0.91	0.03	98.71	-	-	0.18	0.04	0.001	-	0.001	-	-

7. Copper plate fragment, bent and broken (Pl. 10/6). Has traces of secondary firing (L = 29.5 mm, 14.1 mm, thickness = 0.5 mm). S. VII/1983, squares 34–36, dwelling/workshop.

Chemical composition:

Ti	Mn	Fe	Ni	Cu	Zn	Au	Pb	As	Bi	Zr	Ag	Sn	Sb
-	-	0.37	0.001	97.80	-	-	1.67	0.001	0.001	-	0.001	-	0.15

8. Bronze plate fragment (L = 30 mm, l = 20.1 mm, thickness = 1.5 mm), bent (Pl. 10/7). S. VII/1983, squares 34–36, dwelling/workshop.

Chemical composition:

Ti	Mn	Fe	Ni	Cu	Zn	Au	Pb	As	Bi	Zr	Ag	Sn	Sb
0.34	0.55	2.60	0.001	81.62	2.90	-	4.32	0.001	0.001	0.04	0.001	7.35	0.28

9. Copper plate fragment (L = 23 mm, l = 14.00 mm, thickness = 0.7–0.8 mm), bent in shape of a tube, triangular in section (Pl. 10/8). S. VII/1983, squares 34–36, dwelling/workshop.

Chemical composition:

Ti	Mn	Fe	Ni	Cu	Zn	Au	Pb	As	Bi	Zr	Ag	Sn	Sb
-	0.02	0.73	0.06	98.92	-	-	0.27	-	0.001	-	0.001	-	-

10. Copper plate fragment (L = 20 mm, l = 17.3 mm, thickness = 0.3 mm), broken from a larger plate (Pl. 10/9). S. VII/1983, squares 34–36, –1.05–1.20 m, dwelling/workshop.

Chemical composition:

Ti	Mn	Fe	Ni	Cu	Zn	Au	Pb	As	Bi	Zr	Ag	Sn	Sb
-	0.03	1.16	0.001	98.23	-	0.06	0.43	0.10	0.001	-	0.001	-	0.001

11. Bronze plate fragment (L = 31.6 mm, l = 21.5 mm, thickness = 0.7 mm), broken from a larger item and with a circular perforation in the center (Pl. 9/5). S. VII/1983, dwelling/workshop.

Chemical composition:

Ti	Mn	Fe	Ni	Cu	Zn	Au	Pb	As	Bi	Zr	Ag	Sn	Sb
0.15	-	1.02	0.07	78.44	6.48	0.22	4.74	0.59	0.42	-	0.001	7.38	0.48

12. Piece of an item, broken, once part of another, larger object (Pl. 10/10). Made through casting. On the outside, at one end, it displays parallel traces of scratching (L = 22.3 mm, l = 16.4 mm, thickness = 1.6 mm). The high concentration of Sb indicates the possible much later origin of the item that might have reached the discovery context by the excavation of a pit.<sup>37</sup> S. VII/1983, square 34, –0.60, dwelling/workshop.

Chemical composition:

Ti	Mn	Fe	Ni	Cu	Zn	Au	Pb	As	Bi	Zr	Ag	Sn	Sb
-	-	0.38	0.67	44.63	-	0.24	18.01	0.81	0.001	-	0.86	8.41	25.99

#### *Items of uncertain use*

1. Washer (D = 19.3 mm, thickness = 2.7 mm) made of lead (Pl. 5/13). S. VII/1983, squares 34–36, dwelling/workshop.

Chemical composition:

Ti	Mn	Fe	Ni	Cu	Zn	Au	Pb	As	Bi	Zr	Ag	Sn	Sb
-	-	0.55	0.001	0.001	-	-	99.45	-	-	-	-	0.001	-

#### *Pottery fragments*

1. Fragment of glazed pottery, from the lip area (Pl. 11/8). Semi-oxidizing firing. Glazed both inside and outside (L = 24.6 mm, l = 17.3 mm, thickness = 7 mm). S. VII/1983, squares 34–36, dwelling/workshop.

2. Fragment of glazed pottery (Pl. 11/9–10). Oxidizing firing. Glazed outside and a few drops inside (L = 38.1 mm; l = 26.4 mm; thickness = 8.1 mm). S. VII/1983, squares 34–36, dwelling/workshop.

<sup>37</sup> One glass fragment that can be dated most probably to the modern period or even the contemporary era has also been found inside the workshop, mixed with other medieval or prehistoric items. The presence of fragments from late artifacts supports one's suspicion that late items have been mixed in the area of the dwelling workshop at some point, likely through the excavation of a pit.

3. Pot rim (Pl. 11/4), brown in color, with traces of secondary firing on both inside and outside (L = 45 mm, l = 38 mm, thickness = 8 mm). It was decorated with alveoli, of which just one has been preserved. The fabric contains mica as tamper material. S. VII/1983, -0.80 m, dwelling/workshop.

#### *Fish bones*

1. Pharyngeal molar from a fish probably a chub (Pl. 12/3). S. VII/1983, squares 34–36, -0.70 m, dwelling/workshop.
2. Dorsal fin from a fish (Pl. 12/4). S. VII/1983, squares 34–36, -0.70 m, dwelling/workshop.
3. Dorsal fin from a fish (Pl. 12/5). S. VII/1983, squares 34–36, -0.70 m, dwelling/workshop.
4. Fish vertebra (Pl. 12/1). S. VII/, squares 34–36, dwelling/workshop.
5. Fish vertebra (Pl. 12/2). S. VII/1983, squares 34–36, dwelling/workshop.
6. Fish vertebra (Pl. 12/6). S. VII/1983, squares 34–36, dwelling/workshop.

#### *Bone items*

1. Bone-made anvil, with two traces from cuts (Pl. 12/7). On its surface one can see triangular incisions, placed relatively out of order (not forming a particular decoration), in rows. S. VII/1983, square 36, -0.30 m.

#### *Glass items*

1. Fragment from the base of a glass-made glass (Pl. 11/1). The edge is preserved, bent inwardly (L = 40 mm; l = 26.4 mm). S. VII/1983, squares 34–36, -0.70 m, dwelling/workshop.
2. Fragment from a glass-made glass (Pl. 11/2), rim and part of the body (L = 38 mm; l = 33 mm, variable thickness = 1.5mm–3.00 mm). S. VII/1983, squares 35–36, case A, -1.00 m, dwelling/workshop.

Table 1. List of items according to the depth they were discovered.

No.	Catalogue No.	Illustration	Item	Depth
1	Knives, 8	Pl. 4/7	Knife with guard	0.30 m
2	Knives, 1	Pl. 3/4	Entire knife	0.30 m
3	Knives, 2	Pl. 3/5	Knife blade fragment	0.30 m
4	Knives, 9	Pl. 4/8	Knife blade fragment, bent	0.30 m
5	Copper vessel fragments, 2	Pl. 9/2	Copper plate	0.30 m
6	Pieces of copper and bronze plates, 1	Pl. 9/3	Copper plate	0.30 m
7	Sheath reinforcement fragments, 4	Pl. 8/14	Sheath reinforcement fragment	0.55 m
8	Sheath reinforcement fragments, 5	Pl. 8/15	Sheath hanging loop	0.55 m
9	Sheath reinforcement fragments, 6	Pl. 8/16	Sheath reinforcement fragment	0.55 m
10	Weapons, 2	Pl. 3/2	Arrowhead	0.55 m
11	Jewelry items, 6	Pl. 5/12	Hair loop	0.60 m
12	Bronze and copper dress accessories, 2	Pl. 5/5	Applique	0.60 m
13	Pieces of copper and bronze plates, 12	Pl. 10/10	Item fragment	0.60 m
14	Weapons, 3	Pl. 3/3	Arrowhead	0.70 m
15	Pieces of copper and bronze plates, 6	10/4	Copper plate	0.70 m
16	Iron dress accessories, 1	Pl. 5/1	Buckle	0.70 m
17	Iron dress accessories, 2	Pl. 5/2	Small buckle, broken	0.70 m
18	Iron utensils, 3	Pl. 6/9	Piece of iron	0.70 m
19	Fragment from iron items, 4	Pl. 8/3	Piece of iron	0.70 m
20	Iron plates of uncertain use, 1	Pl. 7/1	Small iron late	0.70 m
21	Nail, 1	Pl. 8/4	Nail	-0.70 m
22	Pieces of iron in the making, 3	Pl. 8/5	Piece of iron	-0.70 m
23	Pieces of iron in the making, 4	Pl. 8/6	Piece of iron	-0.70 m
24	Domestic items made of iron, 1	Pl. 6/4	Awl	-0.70 m
25	Glass items, 1	Pl. 11/1	Glass foot fragment	-0.70 m
26	Dress accessories made of iron, 3	Pl. 5/3	Lozenge-shaped buckle	1.00 m
27	Iron pieces in the making, 1	Pl. 8/1	Iron in the making	1.00 m
28	Glass items, 2	Pl. 11/2	Glass fragment	1.00 m
29	Iron pieces in the making, 5	Pl. 8/7	Piece of iron	1.00 m
30	Weapons, 1	Pl. 3/1	Socketing tube from a lance	1.00 m
31	Horse tack elements, 1	Pl. 6/6	Bit fragment	1.00 m
32	Knives, 3	Pl. 3/6	Knife	1.00 m



No.	Catalogue No.	Illustration	Item	Depth
33	Bronze and copper dress accessories, 3	Pl. 10/3	Bent bronze appliqué with rivets	1.05–1.20 m
34	Pieces of copper and bronze plates, 10	Pl. 10/9	Fragment from a copper plate	1.05–1.20 m
35	Pieces of iron in the making, 2	Pl. 8/2	Iron fragment	1.05–1.20 m
36	Bronze and copper dress accessories, 4	Pl. 10/5	Bronze appliqué with rivets	1.05–1.20 m
37	Toys, 1	Pl. 6/2	Axe, toy	1.05–1.20 m
38	Knives, 6	Pl. 4/3	Knife	1.05–1.20 m

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**BIBLIOGRAPHY**

- Bejan 2006 A. Bejan, *Metalurgia din Banat în sec. IV–XII*. In: Contribuții la istoria Banatului în mileniul I d. Hr. și începutul Feudalismului, 131–145. Timișoara 2006.
- Beldiman *et al.* 2014 C. Beldiman, V. Rusu-Bolindeț, D. M. Sztancs, Al. Bădescu, *Bone Artefacts from Histria*. Materiale X, 221–241.
- Blăjan 2006 M. Blăjan, 26. Cuțit. In: H. Ciugudean, K. Z. Pinter, G. T. Rustoiu (Eds.), *Habitat-Religie-Etnicitate: Descoperiri arheologice din secolele IX–XI în Transilvania. Catalog de expoziție/Habitar-Religion-Ethnicity: 9<sup>th</sup>–11<sup>th</sup> Century Archaeological Finds in Transilvania. Exhibition Catalogue*. Alba Iulia 2006.
- Boroneanț 1999 V. Boroneanț, *Arheologia peșterilor și minelor din România*. București 1999.
- Boroneanț, Hurezan 1987a V. Boroneanț, Gh. P. Hurezan, *Cimitirul din secolele XI–XII de la Cladova, jud. Arad. Ziridava XV–XVI*, 67–74.
- Boroneanț, Hurezan 1987b V. Boroneanț, Gh. P. Hurezan, *Cetatea de la Cladova – reședința voievodului Transilvaniei – Pousa. Ziridava XV–XVI*, 75–84.
- Boroneanț *et al.* 1995 V. Boroneanț, P. G. Hurezan, P. Hügel, 31. Cladova, județul Arad (campaniile 1993–1994). CCA, Campania 1994 XXIX, 23.
- Boroneanț *et al.* 1997 V. Boroneanț, P. G. Hurezan, P. Hügel, 25. Cladova, Jud. Arad. CCA, Campania 1996, XXXI, 12.
- Comșa 1978 M. Comșa, *Cultura materială veche românească (Așezările din secolele VIII–X de la Bucov-Ploiești)*. București 1978.
- Constantiniu *et al.* 1965 M. Constantiniu, P. I. Panait, I. Cristache-Panait, *Șantierul arheologic Băneasa-Străulești*. CAB II, 1965, 75–237.
- Dragomir 1972–1973 I. T. Dragomir, *Cetatea medievală de la Enisala. Unelte, arme și obiecte de podoabă. Danubius VI–VII*, 20–47 and Fig. 1–20.
- Hurezan 1996 Gh. P. Hurezan, *Un nou inel sigilar descoperit la Cladova (jud. Arad). Ziridava XIX–XX*, 103–108.
- Iambor 2005 P. Iambor, *Așezări fortificate din Transilvania (sec. IX–XIII)*. Cluj-Napoca 2005.
- Iliescu 1987 O. Iliescu, *Inelul de argint de la Cladova. Notă preliminară. Ziridava XV–XVI*, 85–87.
- Lovag 1989 Z. Lovag, *Árpád-kori pecsétgyűrűk*. FoliaArch XXXI, 221–238.
- Neamțu *et al.* 1980 E. Neamțu, V. Neamțu, S. Cheptea, *Orașul medieval Baia în secolele XIV–XVII*. Iași 1980.
- Neamțu *et al.* 1984 E. Neamțu, V. Neamțu, S. Cheptea, *Orașul medieval Baia în secolele XIV–XVII*. Iași 1984.
- Oța 2005 S. Oța, *The graves and the subsoil resources in the Carpathian Basin (10th century A. D.)*. Mousaios 10, 395–412.

- Oța 2006 S. Oța, *The relations between the settlements and the necropolises of the Banat territory in the 11th–14th centuries*. In: ATS V, 1, Special number (Bibliotheca Septemcastrensis XVII), The Society of the Living the Community of the Dead (from Neolithic to the Christian Era), Proceedings of the 7th International Colloquium of Funerary Archaeology. Sibiu 2006, 239–247.
- Oța 2010 S. Oța, *Piese de orfevrărie de tradiție bizantină în spațiul nord-dunărean (secolul al XI-lea-începutul secolului al XIII-lea)*. In: A. Măgureanu, E. Gáll (Eds.), *Între Stepă și Imperiu. Studii în onoarea lui Radu Harhoiu*. București 2010, 403–433.
- Oța 2012 S. Oța, *Tombs with Jewels in the Byzantine Tradition Discovered on the Present –Day Territory of Romania, North of the Danube (End of the 11<sup>th</sup> Century-the 14<sup>th</sup> Century)*. ZSA 26/1, 123–142.
- Rusu 2003 A. A. Rusu, *Despre cuțitele de luptă din Transilvania medevală*. In Avram Andea (Ed.): *Studii de istorie medievală și premodernă. Omagiu profesorului Nicolae Edroiu, membru corespondent al Academiei Române*. Cluj-Napoca 2003, 75–96.
- Spinei 1982 V. Spinei, *Moldova în secolele XI–XIV*. Bucharest 1982.
- Stoicovici 1983 E. Stoicovici, *Unele caracteristici ale zgurilor din atelierele metalurgice daco-romane și prefeudale*. Banatica 7, 239–247.
- Teodor 1996 D. Gh. Teodor, *Meșteșugurile la nordul Dunării de Jos în secolele IV–XI*. Iași 1996.
- Țeicu 1996 D. Țeicu, *Atelierul metalurgic din secolul al XII-lea de la Gornea*. In: *Arheologia Satului Medieval din Banat*. Reșița 1996, 83–93.
- Țeicu 1998 D. Țeicu, *Banatul Montan în Evul Mediu*. Timișoara 1998.
- Țeicu, Lazarovici 1996 D. Țeicu, Gh. Lazarovici, *Gornea. Din arheologia unui sat medieval din Clisura Dunării*. Reșița 1996.
- Uzum 1983 I. Uzum, *Locuirile medievale de la Gornea-Zomonite (com Sichevița, jud. Caraș-Severin)*. Banatica 7, 249–295.

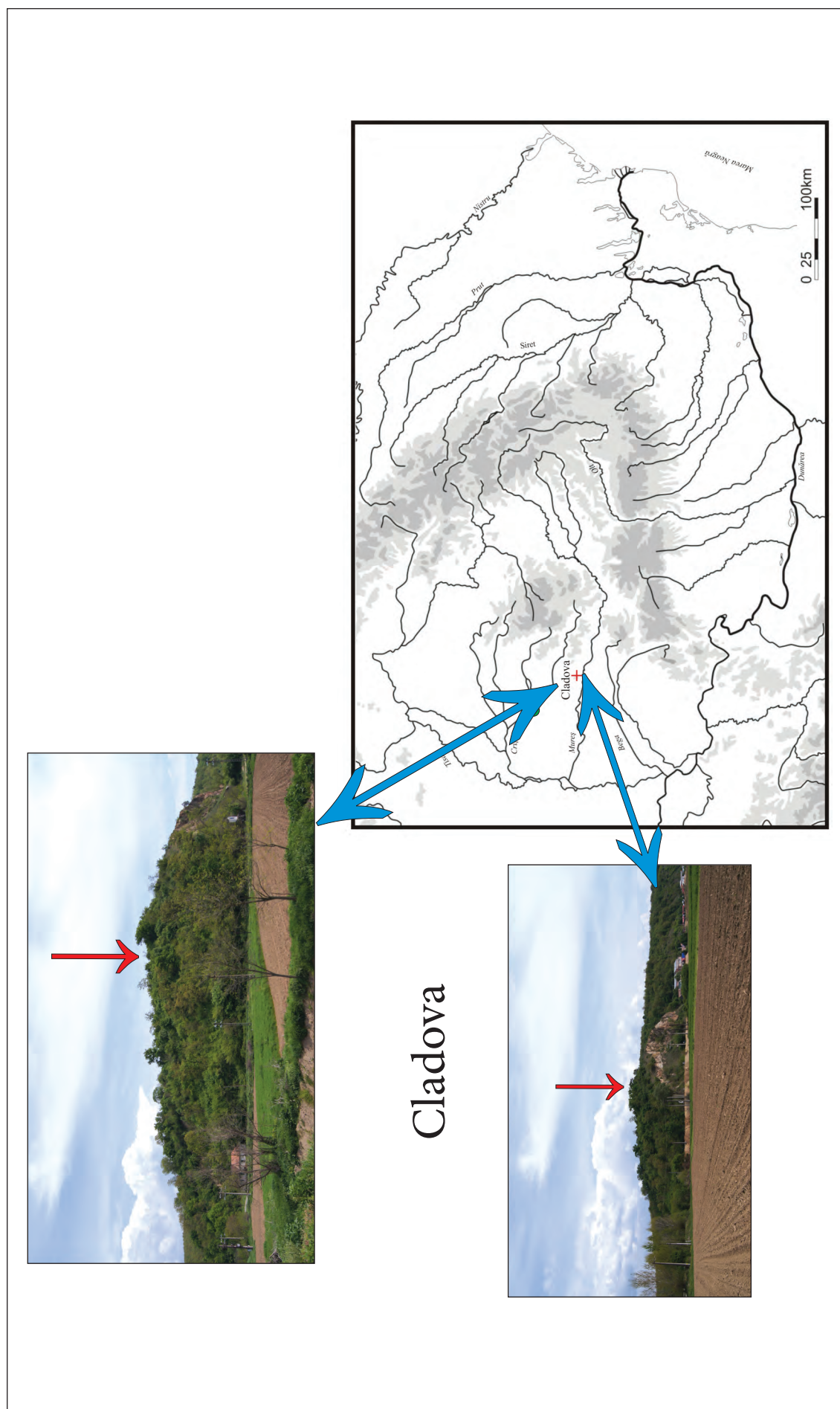


Plate1. Cladova on the map of Romania and images depicting the fortification.



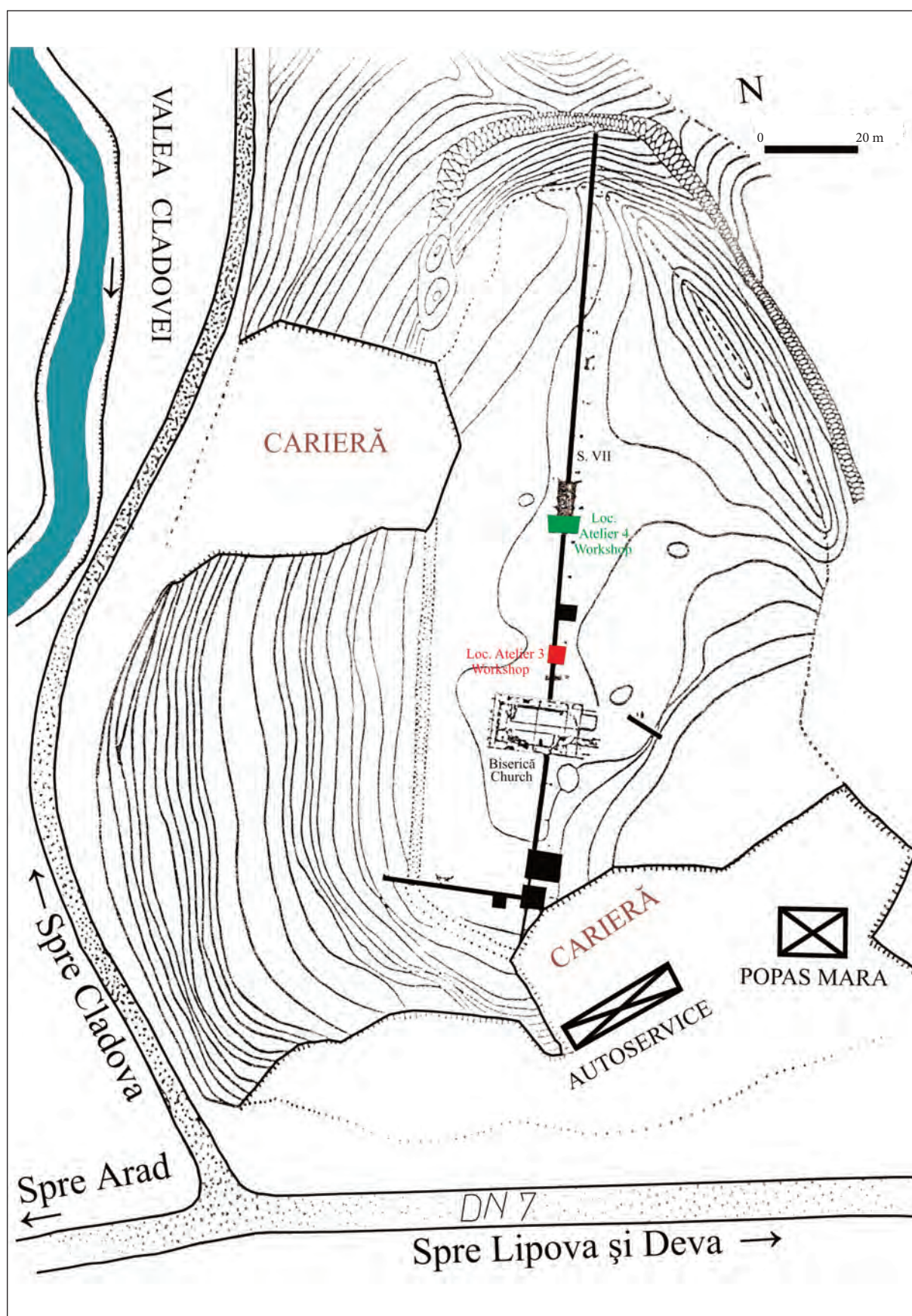


Plate 2. Ground plan of the fortification in Cladova and the localization of the dwelling/workshop no. 3.

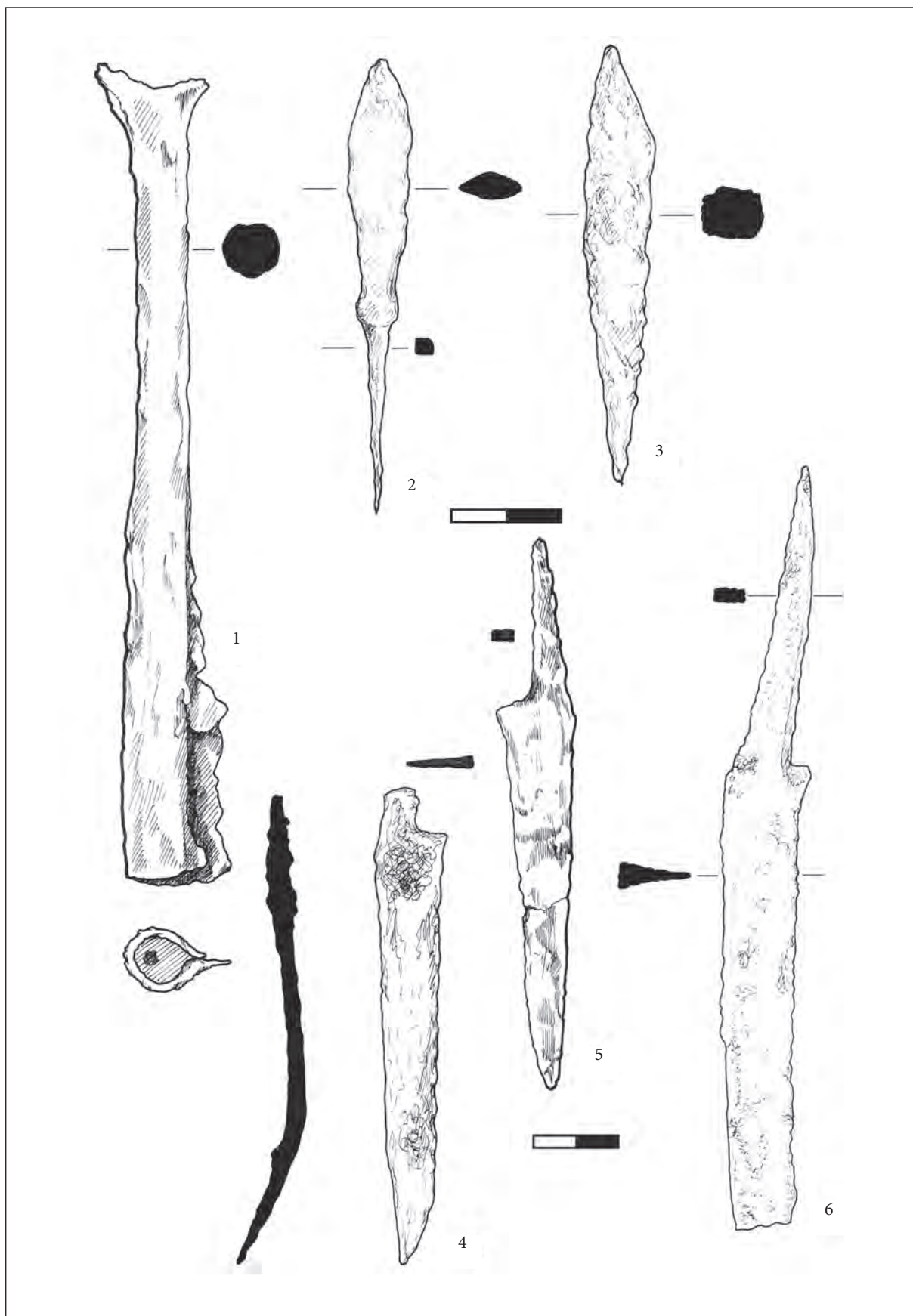


Plate 3. 1. Spear socketing tube; 2. Arrowhead; 3. Crossbow bolt; 4. Knife blade; 5. Knife; 6. Knife fragment.



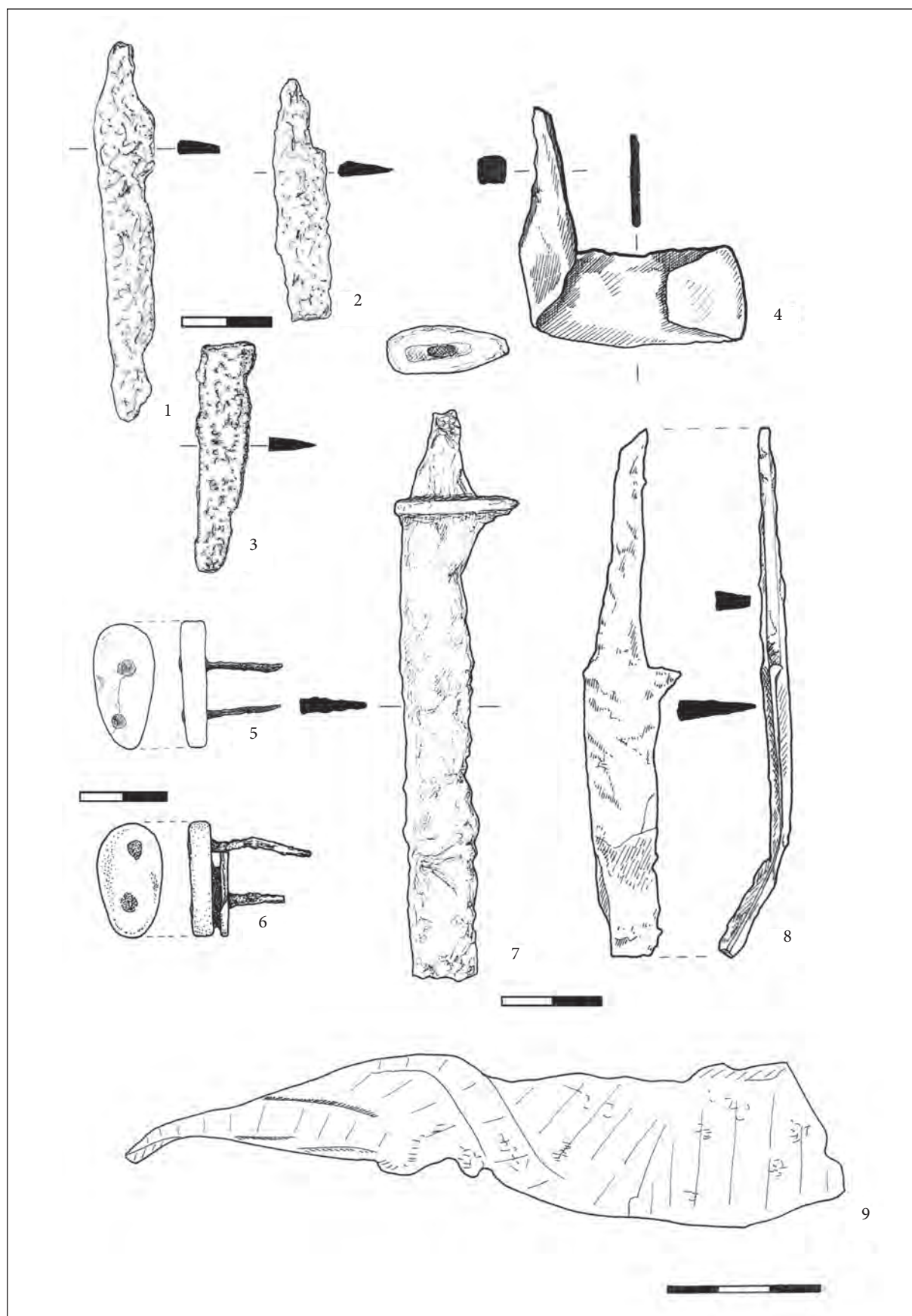


Plate 4. 1. Knife blade; 2. Knife blade fragment; 3. Knife blade fragment; 4. Knife in the making; 5. Bone appliqué from the tip of a knife handle; 6. Bone appliqué from the tip of a knife handle; 7. Fragment from a knife with guard; 8. Knife blade fragment; 9. Piece of iron in the making.

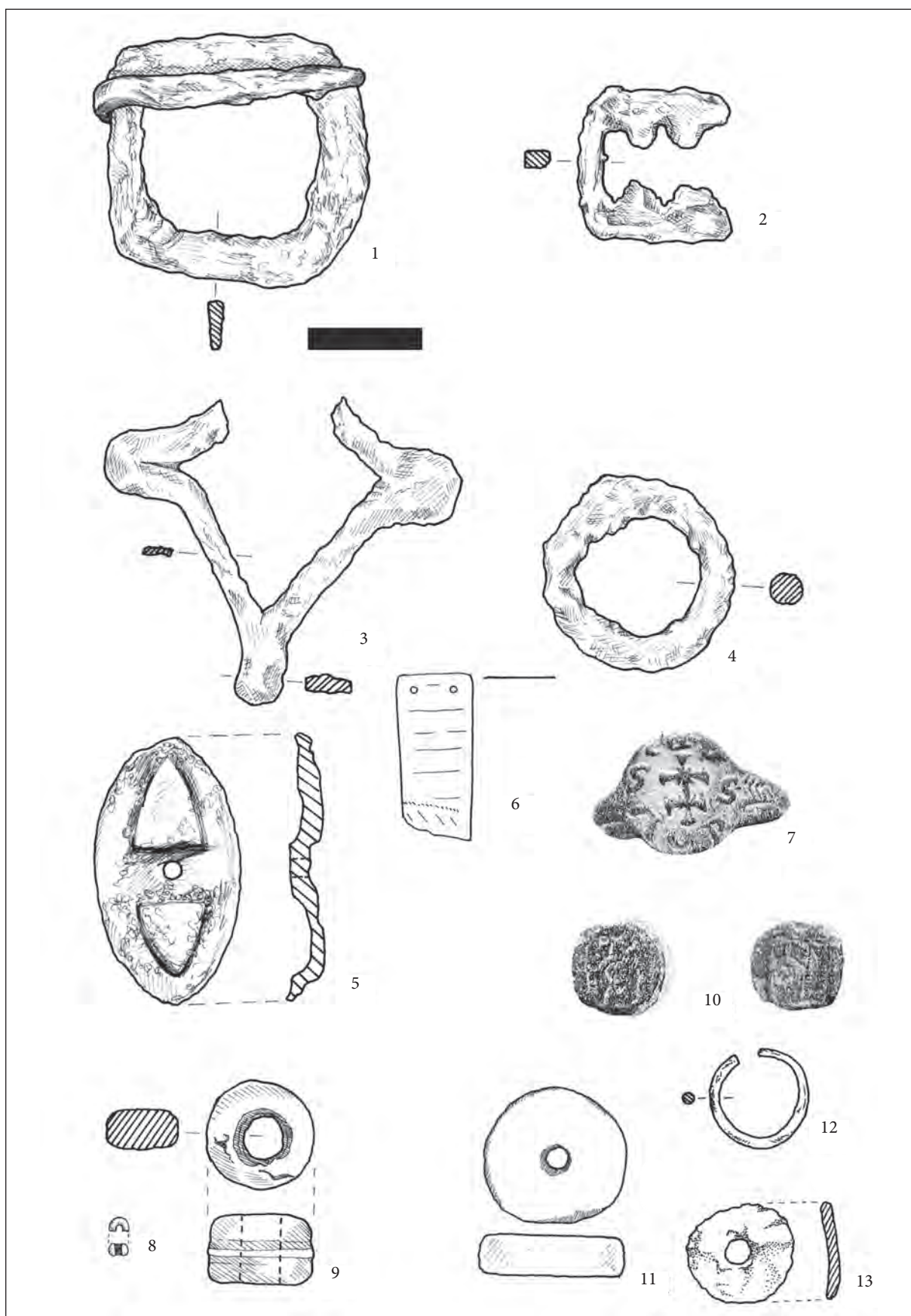


Plate 5. 1–4. Buckles; 5–6. Appliqués; 7. Finger ring; 8–9. Beads; 10. Coin; 11. Spindle weight; 12. Hair loop; 13. Washer (?).

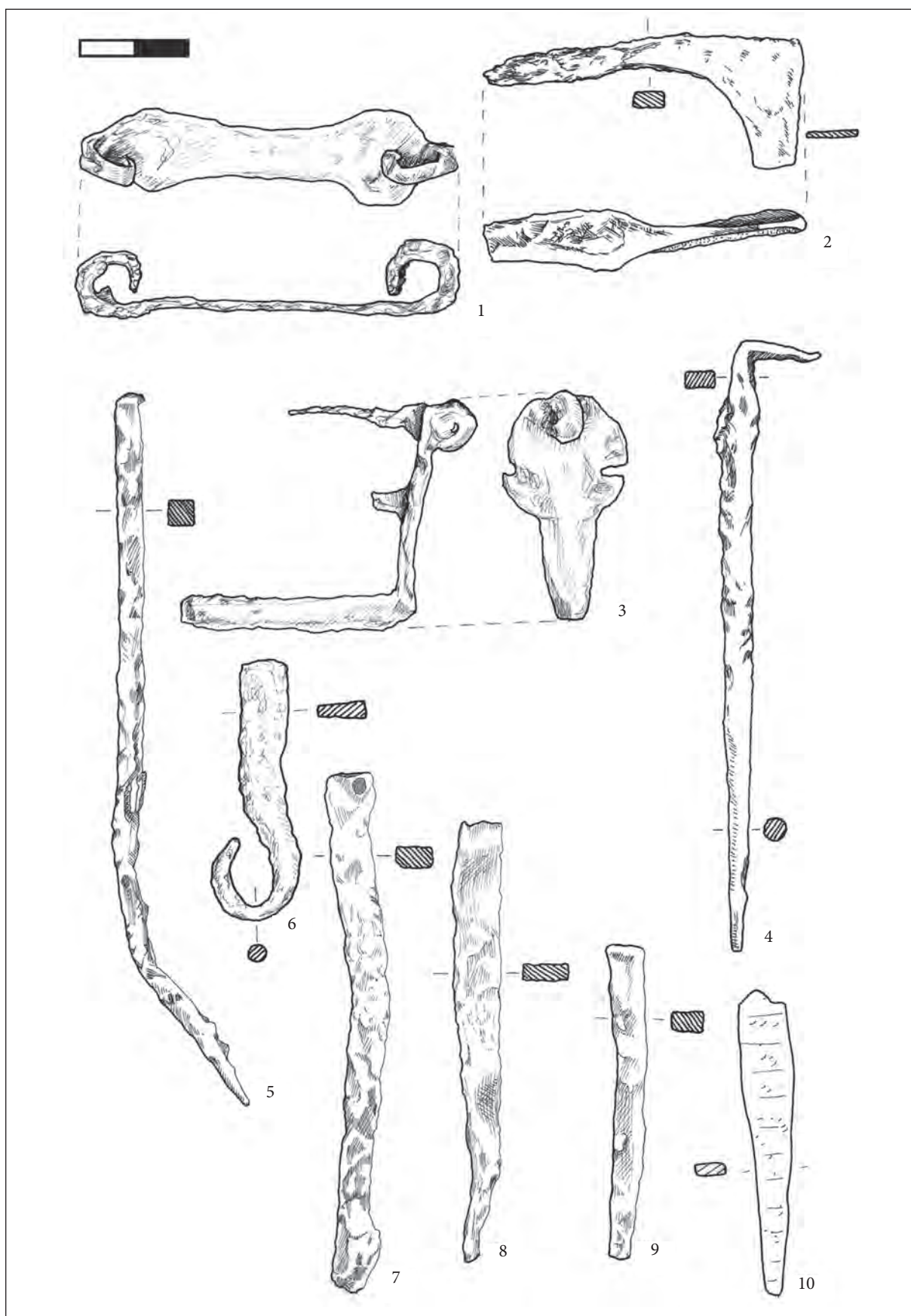


Plate 6. 1. Hinge fragment (?); 2. Toy axe; 3. Lock fragment; 4. Awl (?); 5. Long awl; 6. Fragment from an iron item ending with a hook (bit ?); 7-10. Various utensils used in the workshop.



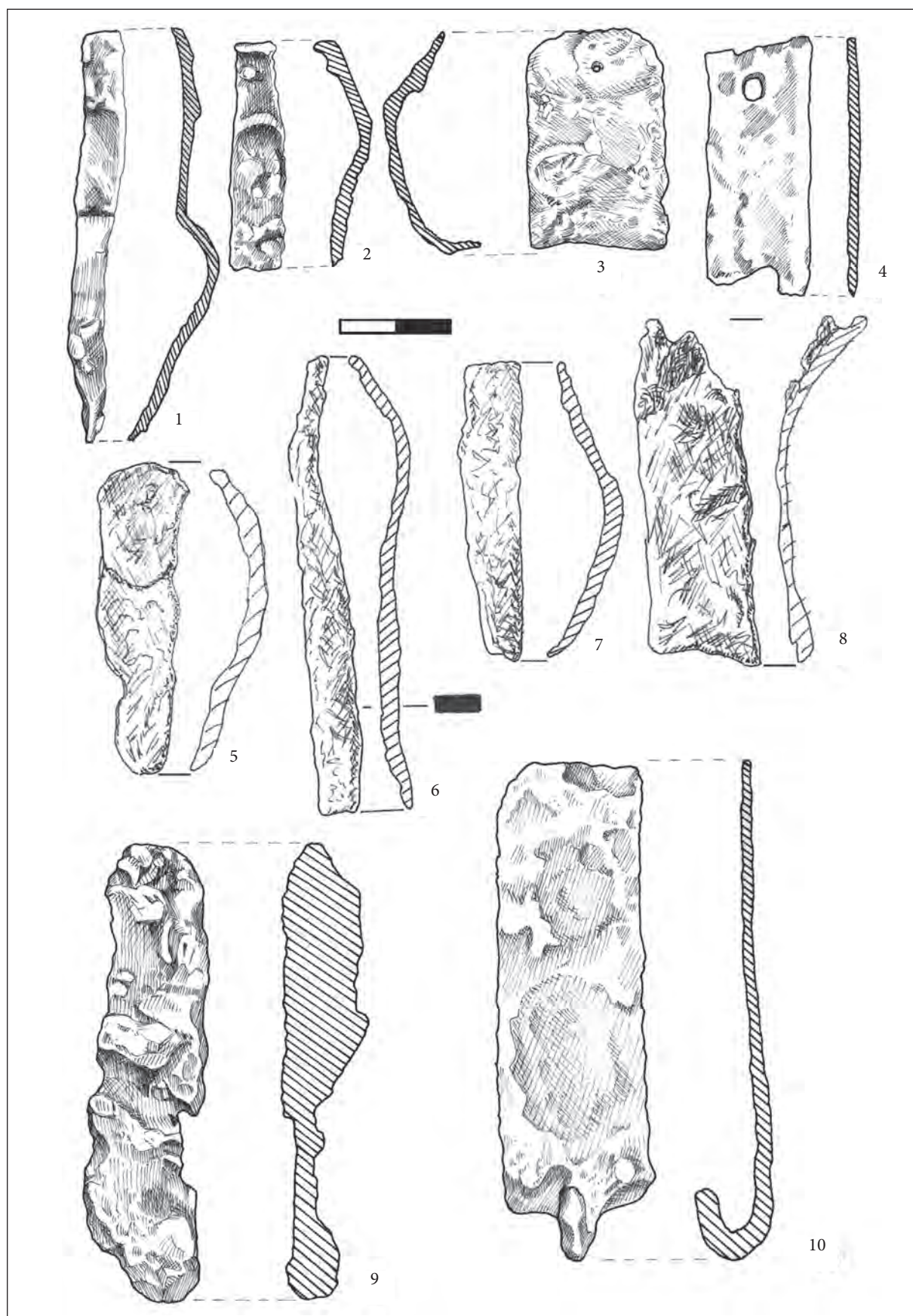


Plate 7. 1–8, 10. Small iron plates of uncertain use; 9. Piece of iron.

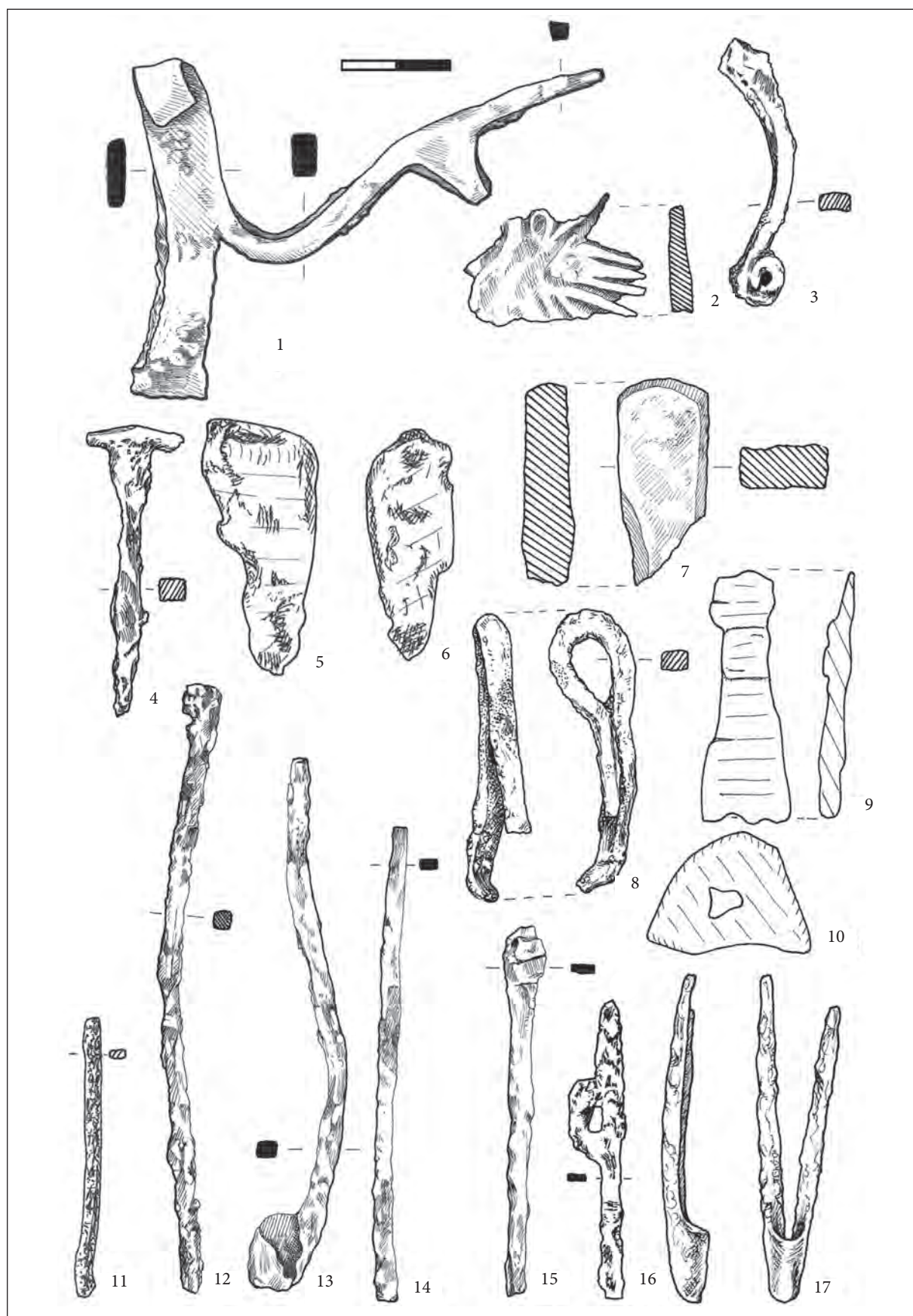


Plate 8. 1. Unfinished iron item; 2, 5–7. Pieces of iron; 8. Hinges; 4. Nail; 3, 9, 10. Fragments of iron objects with unknown use; 11–17. Fragments from sheath reinforcement.



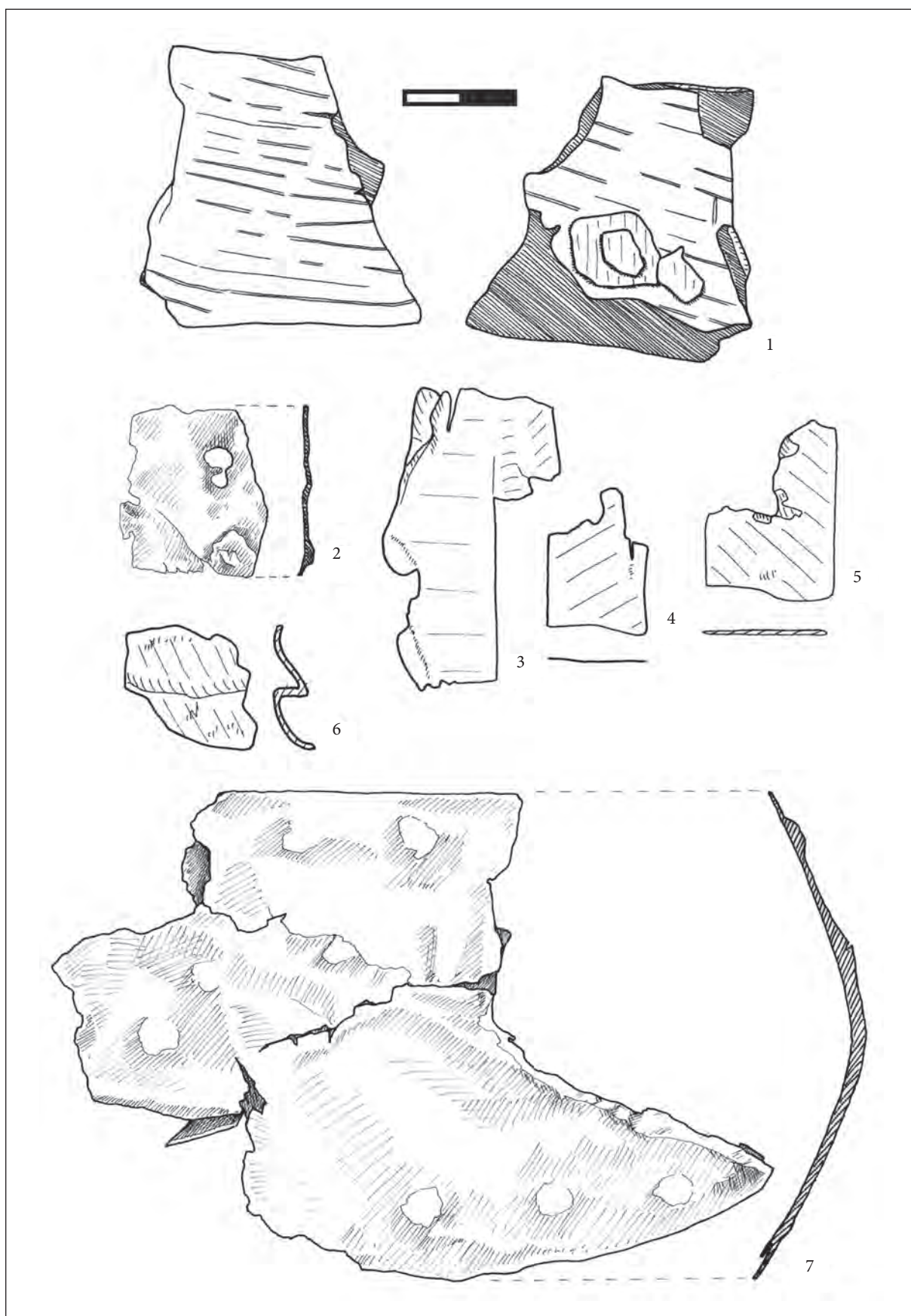


Plate 9. 1-7. Various copper and bronze plates from vessels or item of unknown use.



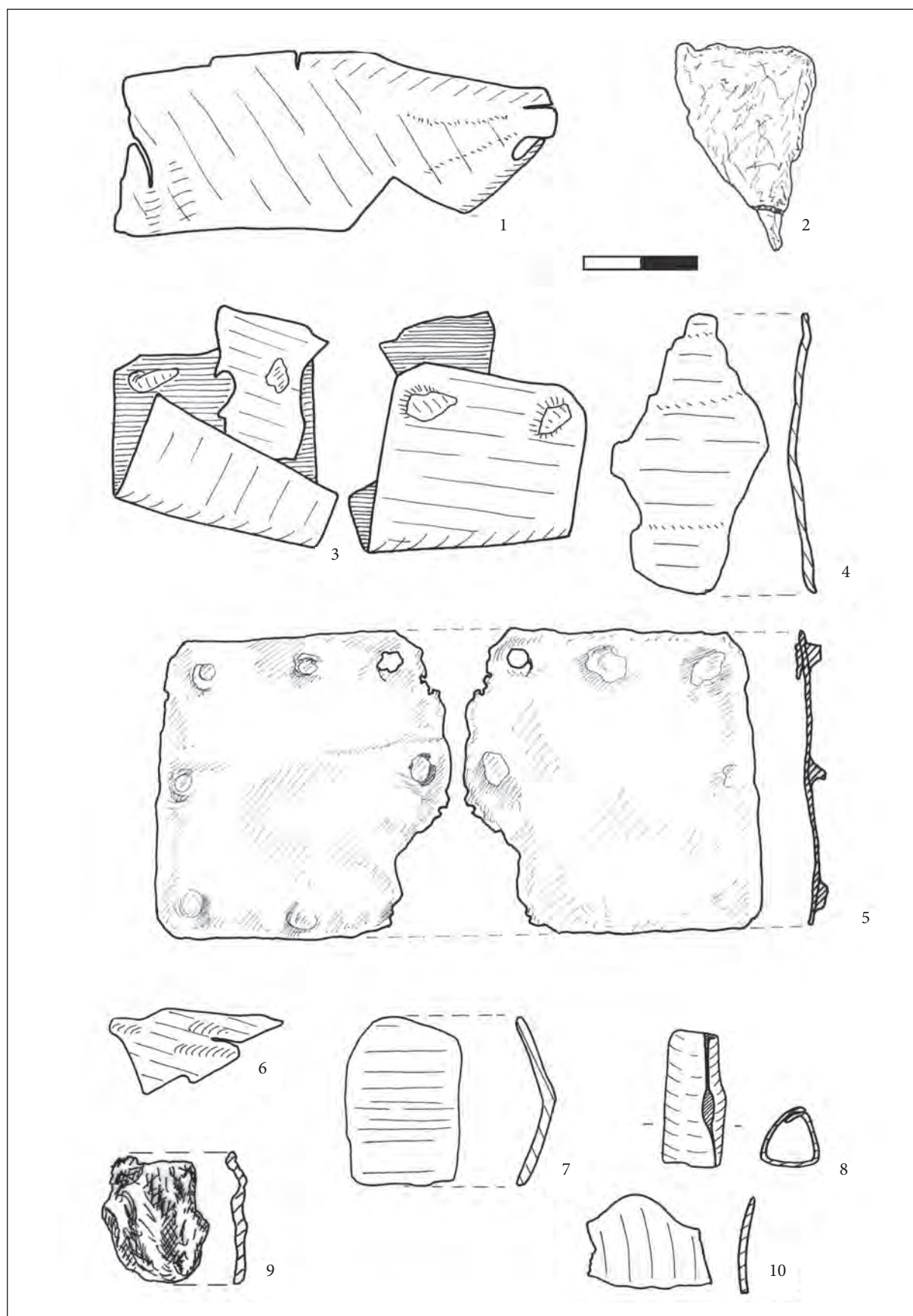


Plate 10. 1, 2, 4, 6–9. Copper and bronze plate pieces; 3, 5. Copper appliques; 10. Fragment from a cast item made of copper, stibium, stanum, and lead.

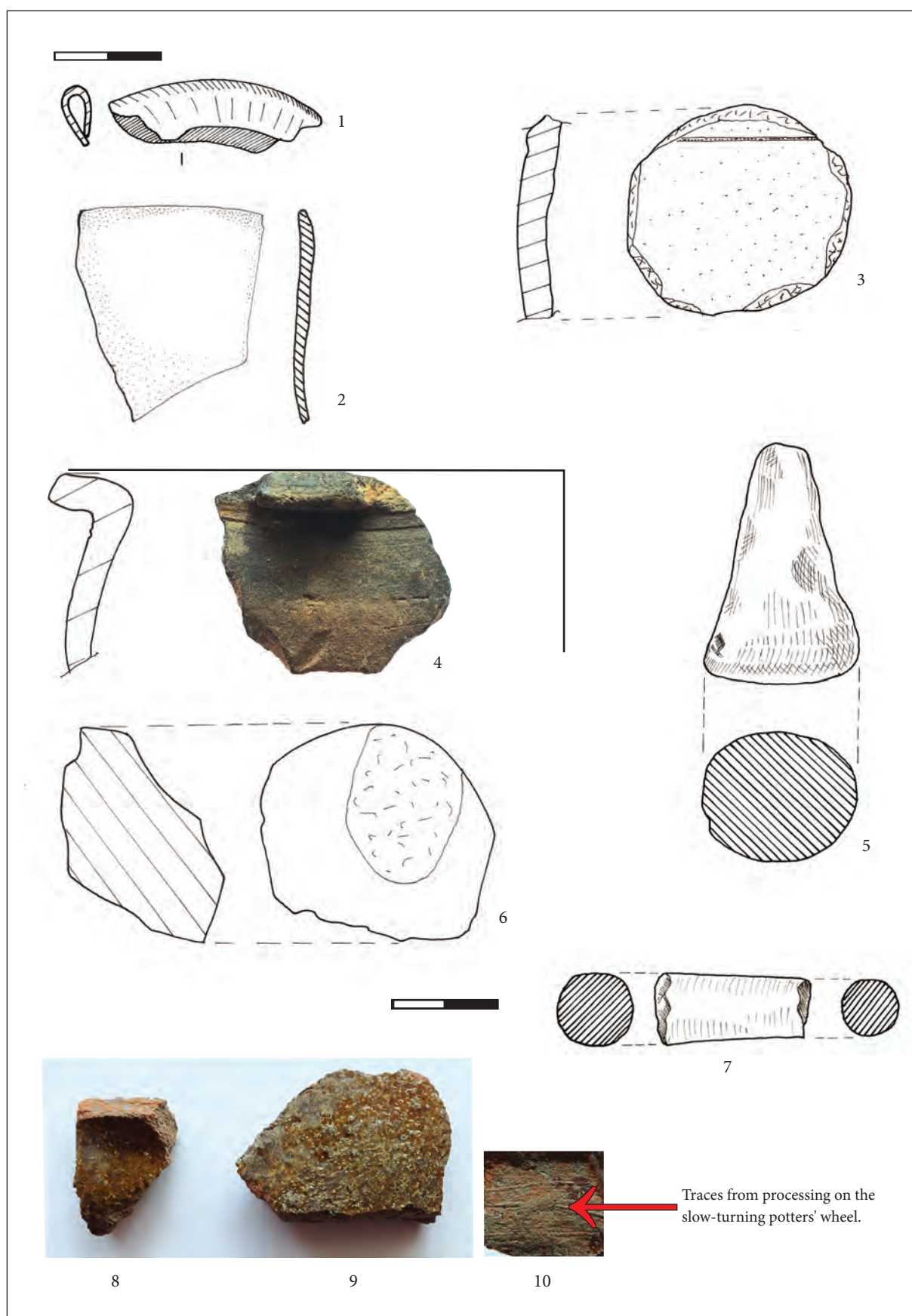


Plate 11. 1. Fragment from the base of a glass-made glass; 2. Fragment from a glass-made glass; 3. Pottery fragment in the making; 4. Pottery fragment; 5. Pottery polisher; 6. Flint; 7. Stone item; 8-10. Enamelled pottery fragments.

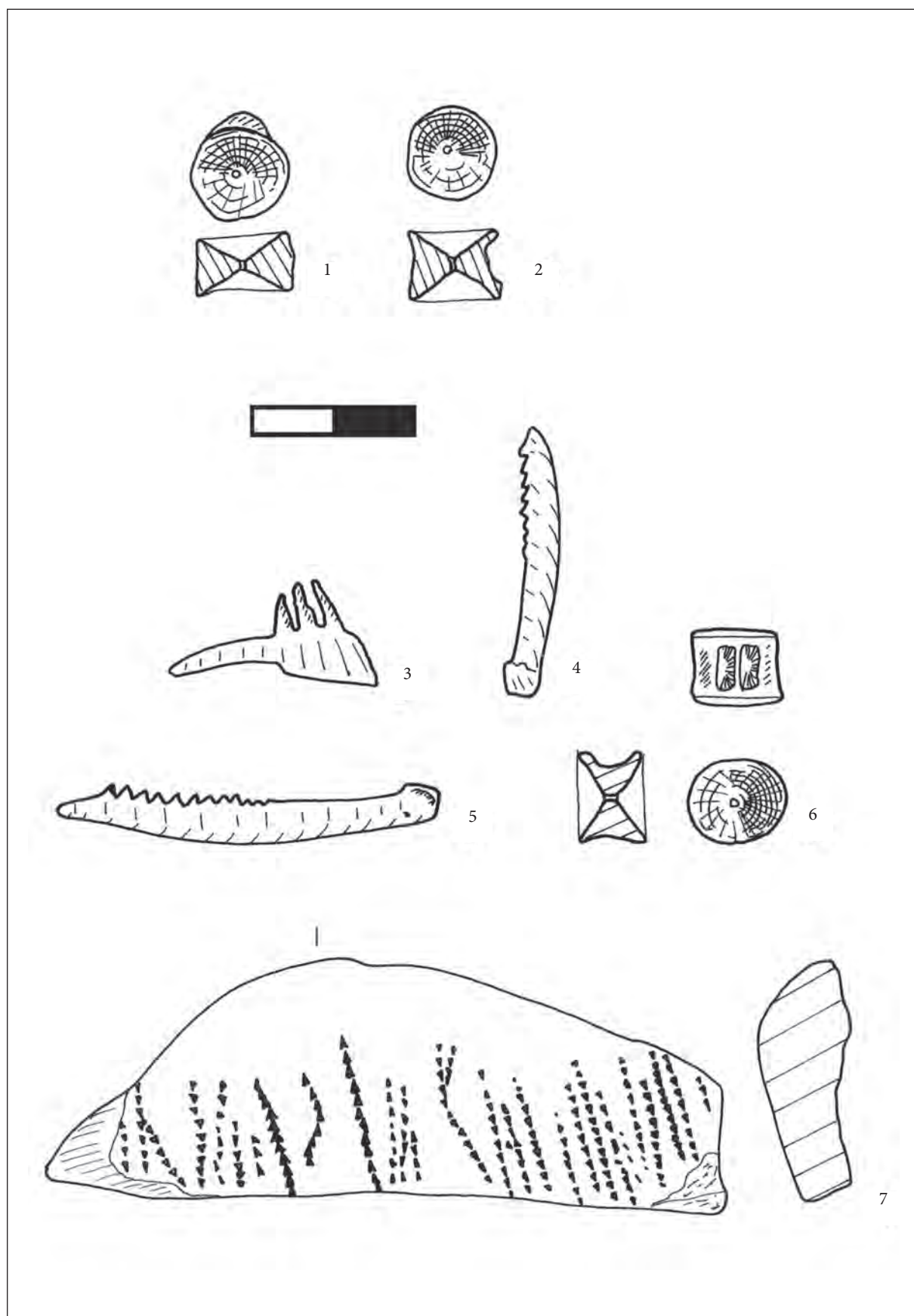


Plate 12. 1-6. Fish bones; 7. Bone anvil.



# Abbreviations

Acta Ant et Arch Suppl	Acta Antiqua et Archaeologica Supplementum. Szeged.
AAC	Acta Archaeologica Carpathica. Krakow.
ACMIT	Anuarul Comisiunii monumentelor istorice. Secția pentru Transilvania. Cluj.
ActaArchHung	ActaArchHung Acta Archaeologica Academiae Scientiarum Hungaricae. Budapest.
AEM	Archäologische Epigraphische Mitteilungen aus Österreich-Ungarn.
AIIA Cluj	Anuarul Institutului de Istorie și Arheologie. Cluj.
AMP	Acta Musei Porolissensis. Zalău.
ATF	Acta Terrae Fogarasiensis. Făgăraș.
ATS	Acta Terrae Septemcastrenses. Sibiu.
Agria	<i>Agria. Annales Musei Agriensis</i> . Az egri Dobó István Vármúzeum évkönyve. Eger.
AnB S.N.	Analele Banatului. Timișoara.
ArchÉrt	Archaeologiai Értesítő. A Magyar Régészeti és Művészettörténeti Társulat tudományos folyóirata. Budapest.
Arh. Pregled	Arheološki Pregled. Arheološko Društvo Jugoslavije. Beograd.
AM	Arheologia Moldovei. Iași.
AMN	Acta Musei Napocensis. Cluj-Napoca.
ArchRozhl	Archeologické Rozhledy. Praga.
ASMB	Arheologia Satului Medieval din Banat. Reșița 1996.
BAM	Brvkenthal Acta Mvsei. Sibiu.
BAR Int. Ser.	British Archaeological Reports. International Series. Oxford.
BCMI	Buletinul Comisiunii Monumentelor Istorice.
BerRGK	Bericht der RömischGermanischen Kommission, Frankfurt a. Main.
BHAB	Bibliotheca Historica et Archaeologica Banatica. Timișoara.
BMB. SH	Biblioteca Muzeului Bistrița. Seria Historica. Bistrița Năsăud.
BMI	Buletinul Monumentelor Istorice, București.
BMN	Bibliotheca Musei Napocensis. Cluj-Napoca.
BMMK	A Békés Megyei Múzeumok Közleményei. Békéscsaba.
BMMN	Buletinul Muzeului Militar Național, București.
BThr	Bibliotheca Thracologica. Institutul Român de Tracologie, București.
CAB	
CAH	Communicationes Archaeologicae Hungariae. Budapest.
Carpica	Carpica. Muzeul Județean de Istorie și Arheologie Bacău. Bacău.
CAMNI	Cercetări Arheologice. Muzeul de Istorie al R. S. România/Muzeul Național de Istorie. București.
CCA	<i>Cronica cercetărilor arheologice (din România)</i> , 1983–1992 <i>sqq.</i> (și în variantă electronică pe <a href="http://www.cimec.ro/scripts/arh/cronica/cercetariarh.asp">http://www.cimec.ro/scripts/arh/cronica/cercetariarh.asp</a> ).
CCA 1995 [1996]	C. Stoica (red. și coord.), CCA. <i>Campania 1995. A XXX-a sesiune națională de rapoarte arheologice, Brăila, 2–5 mai 1996</i> . [București] [1996].
CCA 1996 [1997]	C. Stoica (red. și coord.), CCA. <i>Campania 1996. A XXXI-a sesiune națională de rapoarte arheologice, București, 12–15 iunie 1997</i> . [București] [1997].
CCA 1997 [1998]	C. Stoica (red. și coord.), CCA. <i>Campania 1997. A XXXII-a sesiune națională de rapoarte arheologice, Călărași, 20–24 mai 1998</i> . [București] [1998].
CCA 1998 [1999]	C. Stoica (red. și coord.), CCA. <i>Campania 1998. A XXXIII-a sesiune națională de rapoarte arheologice, Vaslui, 30 iunie–4 iulie 1999</i> . [București] [1999].
CCA 2000 (2001)	M. V. Angelescu, C. Borș, I. Oberländer-Târnoveau (Ed.), CCA. <i>Campania 2000. A XXXV-a sesiune națională de rapoarte arheologice, Suceava, 23–27 mai 2001</i> . București 2001.



CCA 2001 (2002)	M. V. Angelescu, C. Borș, I. Oberländer-Târnoveanu, F. Vasilescu (Ed.), <i>CCA. Campania 2001. A XXXVI-a sesiune națională de rapoarte arheologice, Buziaș, 28 mai–1 iunie 2001</i> . București 2002.
CCA 2003 (2004)	M. V. Angelescu, I. Oberländer-Târnoveanu, F. Vasilescu (Ed.), <i>CCA. Campania 2003. A XXXVIII-a sesiune națională de rapoarte arheologice, Cluj-Napoca, 26–29 mai 2004</i> . București 2004.
CCA 2006 (2007)	M. V. Angelescu, F. Vasilescu (Ed.), <i>CCA. Campania 2006. A XLI-a sesiune națională de rapoarte arheologice, Tulcea, 29 mai – 1 iunie 2006</i> . București 2007.
CCA 2008 (2009)	M. V. Angelescu, I. Oberländer-Târnoveanu, F. Vasilescu, O. Cîrstina, G. Olteanu (Ed.), <i>CCA. Campania 2008. A XLIII-a sesiune națională de rapoarte arheologice, Târgoviște, 27–30 mai 2009 (= Valachica 21–22, 2008–2009)</i> . Târgoviște 2009.
CCA 2013 (2014)	Institutul Național al Patrimoniului (Ed.), <i>CCA. Campania 2013. A XLVIII-a sesiune națională de rapoarte arheologice, Oradea, 5–7 iunie 2014</i> . [București] 2014.
CCA 2014 (2015)	Institutul Național al Patrimoniului (Ed.), <i>CCA 2015. Campania 2014. A XLIX-a sesiune națională de rapoarte arheologice, Pitești, 28–30 mai 2015, Muzeul județean Argeș</i> . [București] 2015.
CRSCRCR	Coins from Roman sites and collections of Roman coins from Romania. Cluj-Napoca.
Dacia N.S.	Dacia. Revue d'archéologie et d'histoire ancienne. Nouvelle serie. București.
Danubius	Danubius – Revista Muzeului de Istorie Galați. Galați.
DDME	A Debreceni Déri Múzeum Évkönyve. Debrecen.
DolgCluj	Dolgozatok az Erdélyi Nemzeti Érem- és Régiségtárából, Klozsvár (Cluj).
DolgSzeg	Dolgozatok. Arbeiten des Archäologischen Instituts der Universität. Szeged.
EphNap	Ephemeris Napocensis. Cluj-Napoca.
FADDP/GMADP	Führer zu archäologischen Denkmälern in Dacia Porolissensis/Ghid al monumentelor arheologice din Dacia Porolissensis.
FolArch	Folia Archaeologica. Budapest.
Forsch. u. Ber. z. Vor- u. Frühgesch. BW	Forschungen und Berichte zur Vor- und Frühgeschichte in Baden-Württemberg.
GPSKV	Gradja za proučavanje spomenika kulture Vojvodine. Novi Sad.
GSAD	Glasnik Srpskog Arheološkog Društva. Beograd.
HOMÉ	A Herman Ottó Múzeum Évkönyve. Miskolc.
JAMÉ	A nyíregyházi Jós András Múzeum Évkönyve. Nyíregyháza.
JahrbuchRGZM	Jahrbuch des RömischGermanischen Zentralmuseums Mainz.
Lohanul	Lohanul. Revistă cultural științifică. Huși.
MCA	Materiale și Cercetări Arheologice. București.
MCA-S.N.	Materiale și Cercetări Arheologice-Serie Nouă. București.
MA	Memoria Antiquitatis. Complexul Muzeal Județean Neamț. Piatra Neamț.
MFMÉ	A Móra Ferenc Múz. Évkönyve. Szeged.
MFMÉ StudArch	A Móra Ferenc Múzeum Évkönyve, Studia Archaeologica. Szeged.
MN	Muzeul Național. București.
Opuscula Hungarica	Opuscula Hungarica. Budapest.
PamArch	Památky Archeologické. Praha.
Past and Present	Past and Present. Oxford.
PIKS/PISC	Die Publikationen des Institutes für klassische Studien/ Publicațiile Institutului de studii clasice. Cluj-Napoca.
PBF	Praehistorische Bronzefunde. Berlin.
PZ	Prähistorische Zeitschrift. Berlin.
Rev. Muz.	Revista Muzeelor, București.
RIR	Revista Istorică Română.
RMM-MIA	Revista Muzeelor și Monumentelor. seria Monumente istorice și de artă. București.
RMMN	Revista Muzeului Militar Național. București.
Ruralia	Ruralia. Památky Archeologické – Supplementum. Praha.
RVM	Rad Vojvodjanskih Muzeja, Novi Sad.
SCIV(A)	Studii și Cercetări de Istorie Veche. București.

SCN	Studii și Cercetări Numismatice. București.
SlovArch	Slovenská Archeológia. Nitra.
SIA	Studii de Istoria Artei. Cluj Napoca.
SIB	Studii de istorie a Banatului. Timișoara.
SKMÉ	A Szántó Kovács János Múzeum Évkönyve, Orosháza.
SMIM	Studii și Materiale de Istorie Medie. București.
SMMA	Szolnok Megyei Múzeumi Adattár. Szolnok.
SMMIM	Studii și Materiale de Muzeografie și Istorie Militară. București.
Starinar	Starinar. Arheološki Institut. Beograd.
StCl	Studii Clasice, București.
StComBrukenthal	<i>Studii și comunicări</i> . Sibiu.
StudArch	Studia Archaeologica. <i>Budapest</i> .
StudCom	Studia Comitatus. <i>Szentendre</i> .
StudUnivCib	Studia Universitatis Cibiniensis. Sibiu.
StudCom – Vrancea	Studii și Comunicări. Muzeul Județean de Istorie și Etnografie Vrancea. Focșani.
StudŽvest	Študijne Zvesti Arheologického Ústavu Slovenskej Akadémie Vied. Nitra.
Symp. Thrac.	Symposia Thracologica. București.
Tempora Obscura	Tempora Obscura. Békéscsaba 2012.
Tibiscus	Tibiscus. Timișoara.
VAH	Varia Archaeologica Hungarica. <i>Budapest</i> .
Ziridava	Ziridava. Arad.
ZSA	Ziridava Studia Archaeologica. Arad.