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

A handwritten signature in blue ink that reads "Egon Dörner".

New Bone Hairpins Discovered on the Territory of *Colonia Aurelia Apulensis*¹

Ioan Oprea

Abstract: The present paper examines a sample of previously unpublished bone hairpins discovered in the end of 2014 in the north-western part of the former Roman city of *Colonia Aurelia Apulensis*, on the spot called “The Water Treatment Station”. Such artifacts were discovered on the site in Apulum only in civil housing areas and in cemeteries, and they represent approx. 30% of all bone and antler objects discovered there over time. Archaeological researches performed over the last two decades have doubled the number of such artifacts, so that currently the items discovered on the site of Apulum represent most of the bone hairpins from the province of Dacia. Hairpins were part of the everyday lives of ancient women, being objects of practical utility and aesthetic value at the same time, and they provide valuable information on the bone-processing industry, that era’s fashion, and the factors of Romanization.

Keywords: Apulum, pieces of jewelry, hairpins, *acus crinalia*, bone-processing industry.

The present paper analyzes a number of 38 new bone hairpins, dated to the Roman period, discovered in the north-western area of the former city of *Colonia Aurelia Apulensis*. The archaeological researches that have led to their discovery were performed during the months of September-October 2014 on the spot called “The Water Treatment Station” in the neighborhood of Partoș, Alba Iulia, an area that currently overlaps the former Roman city. The presence of such artifacts has been signaled, in great numbers, over the entire site of Apulum, where the most numerous hairpins from Dacia have been found. The items have analogies in the majority of sites in the province and are generally dated to the second-third centuries A.D.

Generally, bone hairpins represent the largest group of artifacts in the category of jewelry and dress accessories. Varying in size and shape, decorated with simple geometric figures or, sometimes, with more complicated, anthropomorphic and zoomorphic depictions, hairpins were part of the everyday life of Roman women from all social categories and were mentioned under various names like *acus crinalis*, *spina crinalis*, *crinale*, or *comatoria*. In some cases they may have had other functionalities, being used to extract unguents from bottles or to catch cloths, but these are individual cases and cannot be interpreted like generalities. D. Ciugudean states in her monograph work on bone and antler artifacts from Apulum, their exclusive role in hairstyling².

Until nowadays, the Apulum site has revealed the largest collection of bone hairpins from the province of Dacia. In 1997, the lot included 148 items³, all founded in the area of the two cities and their corresponding necropolises. The majority of the items were discovered in the same contexts with pins made of metal, glass, or stone, a fact that proves the fact that their functionality was more important than the materials they were made of. The especially prosperous economical situation of Apulum during the second and third century A.D. supports this way of valuing artifacts from the Roman ancient world. Certainly, the situation did not apply to wealthy Roman women, for whom such luxury artifacts were necessary for stressing their social status etc.

Between 1997 and 2015, archaeological researches performed in Apulum have revealed an equally large number of hairpins and an even larger number of artifacts than all those included in D. Ciugudean’s monograph work published in 1997.

As an equal number of hairpins were discovered during just 18 years as during the entire twentieth century, one is prompted to reflect on what the production and use of these items in Apulum meant during the second-third century A.D.

¹ English translation: Ana M. Gruia.

² Ciugudean 1997, 17.

³ All the hairpins discovered in Apulum, from A. Csényi’s first excavations of 1997, are included in Ciugudean 1997.

A good while of time, bone or antler artifacts from Dacia and Apulum were not in the attention of researchers due their cheap fabrication material. Only in the last three decades this types of objects were treated as real artifacts. The first typology of hairpins from Dacia was realized in 1991⁴ and it envisaged the artifacts discovered in Porolissum. The research from Porolissum has been recently completed by L. Váss' work⁵. The typologies included in the two studies have mainly used as classification criterion the proportion between the head and body of the pin, while for the other types and subtypes they have envisaged the development of head ornaments, from simple to elaborate.



Fig. 1. Typology of hairpins from Porolissum (taken from Váss 2013, 69).

In chronological order, the 1991 work was followed by the monograph work dedicated to bone and antler artifacts discovered in Apulum, published in 1997⁶, for which the author used the typologies developed by Gudea, Bajusz (1991) and J. C. Béal⁷.

D. Elefterescu published another typology in 2008⁸ in an ample study performed on the lot of Roman bone artifacts from Durostorum. The author divided the hairpins in three categories: A – pins with undecorated head, B – pins with simply decorated head, and C – pins with richly decorated head⁹. The subtypes were created on the basis of the same criteria suggested in the works of 1991 and 1997.

As for the typology of the hairpins from Apulum, the numerous artifacts discovered there over the last two decades have led to the partial modification of the typology suggested by the monograph of 1997. Thus, by analyzing more than 110 bone hairpins (among which the items in the present article as well) discovered during the archaeological researches performed between 1997 and 2015, I have suggested a revised typology for the site of Apulum. It was mainly based on the typology from the 1997 monograph for two reasons: 1. the artifacts I analyzed were a continuation and completion of data on bone artifacts from the site of Apulum; 2. Some of the bones have analogies or share similar shapes with those already analyzed in that work, a fact that can indicate/prove their local production or other aspects etc.

The changes I have made are meant to simplify the research of hairpins and were inspired by the models suggested by D. Elefterescu and L. Váss. Thus, the categories of items were structured

⁴ Gudea, Bajusz 1991.

⁵ Váss 2013.

⁶ Ciugudean 1997.

⁷ Béal 1983.

⁸ Elefterescu 2008.

⁹ Elefterescu 2008, 223.

according to the decoration degree of the head, from simple to composite. The structure was not influenced by economical or cultural factors and it implies no chronological value¹⁰. By suggesting this model of structuring and analysis we wish to render permanent a single typology for the hairpins from Apulum that I aim to complete in the future with new items and types according to the artifacts that will be discovered subsequently.

Our typology suggests the classification of the hairpins into four main types, with the corresponding subtypes thus:

A. Pins with undecorated head

- A.1. Pins with flat head
- A.2. Pins with rounded head
- A.3. Pins with conical head

B. Pins with simply decorated head

- B.1. Pins with spherical head
- B.2. Pins with lozenge-shaped head and two collars
- B.3. Pins with pyramidal head and one or two collars
- B.4. Pins with incised head ending in a button
- B.5. Pins with disk-shaped head

C. Pins with richly decorated head

- C.1. Pins with cone-shaped head delimited by the body with mouldings
- C.2. Pins with cone-shaped head, pointy and decorated with incisions
- C.3. Pins with baluster-shaped head
- C.4. Pins with pyramidal head delimited with mouldings
- C.5. Pins with ring-shaped head delimited by the body with one moulding
- C.6. Pins with ring-shaped head delimited with a baluster

D. Pins of special stylistic value

- D.1. Pins with anthropomorphic motifs
- D.2. Pins with decoration covered in precious metal foil

The majority of items from Apulum can be included in the first three main types, while the fourth main type was created in order to stress the artifacts of special stylistic and material value, as for example the pins decorated with anthropomorphic motifs or those covered in precious metal foil¹¹.

Repertory of items discovered on the spot called “The Water Treatment Station”, Partoș neighborhood, Alba Iulia

The following description files was used in describing the artifacts: name; 1. place of discovery (STEP- the water treatment station); 2. inventory number; 3. dimensions; 4. description of the item; techniques employed in its making; 5. dating; 6. bibliography.

Type. A. Pins with undecorated head

A.1. Pins with flat head.

1. Hairpin; 1. STEP – civilian habitation, 2014; 2. no inv. no.; 3. L = 9.2 cm; 4. affected by the acidity of the soil, unevenly processed; cutting, carving, smoothing; 5. first half of the third century A.D.; 6. previously unpublished (Pl. I, 1).

2. Hairpin; 1. STEP – civilian habitation, 2014; 2. no inv. no.; 3. L = 8.4 cm; 4. the tip is slightly rounded, the body narrows slightly towards the tip; cutting, carving, smoothing; 5. first half of the third century A.D.; 6. previously unpublished (Pl. I, 2).

3. Hairpin; 1. STEP – civilian habitation, 2014; 2. no inv. no.; 3. L = 4.2 cm; 4. fragment, the head is split, the body strongly corroded; carving, turning; 5. first half of the third century A.D.; 6. previously unpublished (Pl. I, 3).

¹⁰ The lack of classification criteria based on geographic, economic, or chronological factors has also been mentioned in Elefterescu 2008, 224.

¹¹ See the two hairpins decorated with anthropomorphic motifs in Bounegru *et al.* 2011, 54, no. 24–25 and the pin decorated with gold leaf on p. 62, no. 57.

4. Hairpin; 1. STEP – civilian habitation, 2014; 2. no inv. no.; 3. L = 9.6 cm; 4. one splinter in the lower part and the traces of carving, highly visible, have been but gently smoothed; 5. first half of the third century A.D.; 6. previously unpublished (Pl. I, 4).

5. Hairpin; 1. STEP – civilian habitation, 2014; 2. no inv. no.; 3. L = 7.8 cm; 4. fragment; no tip, with visible carving traces, slightly smoothed and polished; 5. first half of the third century A.D.; 6. previously unpublished (Pl. I, 5).

6. Hairpin; 1. STEP – civilian habitation, 2014; 2. no inv. no.; 3. L = 4.6 cm; 4. fragment; blackened, with smoothed traces of carving; 5. first half of the third century A.D.; 6. previously unpublished (Pl. I, 6).

7. Hairpin; 1. STEP – civilian habitation, 2014; 2. no inv. no.; 3. L = 8.3 cm; 4. body thickness varies slightly and shows traces of corrosion, the flat head is slightly narrower than the item's middle part, the tip is rounded; carving and smoothing; 5. first half of the third century A.D.; 6. previously unpublished (Pl. I, 7).

A.2. Pins with rounded head.

8. Hairpin; 1. STEP – civilian habitation, 2014; 2. no inv. no.; 3. L = 5.3 cm; 4. fragment, with color spots, strongly corroded; carving, smoothing, polishing; 5. first half of the third century A.D.; 6. previously unpublished (Pl. I, 8).

9. Hairpin; 1. STEP – civilian habitation, 2014; 2. no inv. no.; 3. L = 9.2 cm.; 4. body thickness varies slightly, the tip was probably re-sharpened; carving, smoothing, polishing; 5. first half of the third century A.D.; 6. previously unpublished (Pl. I, 9).

10. Hairpin; 1. STEP – civilian habitation, 2014; 2. no inv. no.; 3. L = 6.7 cm; 4. fragment, the broken tip has been rounded, the body thickness is almost even; carving, smoothing, polishing; 5. first half of the third century A.D.; 6. previously unpublished (Pl. I, 10).

11. Hairpin; 1. STEP – civilian habitation, 2014; 2. no inv. no.; 3. L = 6.6 cm; 4. fragment, the lower part has been burnt; carving, smoothing, polishing; 5. first half of the third century A.D.; 6. previously unpublished (Pl. I, 11).

A.3. Pins with conical head.

12. Hairpin; 1. STEP – civilian habitation, 2014; 2. no inv. no.; 3. L = 6.7 cm; 4. fragment, traces of firing in the breakage area; carving, turning; 5. first half of the third century A.D.; 6. previously unpublished (Pl. I, 12).

13. Hairpin; 1. STEP – civilian habitation, 2014; 2. no inv. no.; 3. L = 11.5 cm; 4. the body narrows evenly, forming a very sharp tip; carving, turning, polishing; 5. first half of the third century A.D.; 6. previously unpublished (Pl. I, 13).

14. Hairpin; 1. STEP – civilian habitation, 2014; 2. no inv. no.; 3. L = 8.9 cm; 4. fragmentary item, without a tip; carving, turning, smoothing; 5. first half of the third century A.D.; 6. previously unpublished (Pl. I, 14).

15. Hairpin; 1. STEP – civilian habitation, 2014; 2. no inv. no.; 3. L = 6.9 cm; 4. fragmentary item without a tip, the lower part of the item is thickened; carving, smoothing, polishing; 5. first half of the third century A.D.; 6. previously unpublished (Pl. I, 15).

16. Hairpin; 1. STEP – civilian habitation, 2014; 2. no inv. no.; 3. L = 7.5 cm; 4. fragmentary item without a tip; carving, smoothing, polishing; 5. first half of the third century A.D.; 6. previously unpublished (Pl. I, 16).

17. Hairpin; 1. STEP – civilian habitation, 2014; 2. no inv. no.; 3. L = 11.7 cm; 4. broken and restored body, unevenly processed; 5. first half of the third century A.D.; 6. previously unpublished (Pl. I, 17).

18. Hairpin; 1. STEP – civilian habitation, 2014; 2. no inv. no.; 3. L = 5.3 cm 4. fragmentary item, burnt in the area of the head, lacking a tip; carving, turning, polishing; 5. first half of the third century A.D.; 6. previously unpublished (Pl. I, 18).

19. Hairpin; 1. STEP – civilian habitation, 2014; 2. no inv. no.; 3. L = 4.8 cm; 4. fragment, no tip, slightly corroded; carving, turning, polishing; 5. first half of the third century A.D.; 6. previously unpublished (Pl. I, 19).

20. Hairpin; 1. STEP – civilian habitation, 2014; 2. no inv. no.; 3. L = 8.6 cm 4. the tip was broken and re-sharpened; carving, turning, polishing; 5. first half of the third century A.D.; 6. previously unpublished (Pl. I, 20).

21. Hairpin; 1. STEP – civilian habitation, 2014; 2. no inv. no.; 3. L = 3.1 cm; 4. fragment; carving, turning, polishing; 5. first half of the third century A.D.; 6. previously unpublished (Pl. II, 21).

22. Hairpin; 1. STEP, 2014; 2. no inv. no.; 3. L = 10 cm; 4. body thickness varies, the body is in some places slightly crooked, the tip is blunt; carving, smoothing, polishing; 5. first half of the third century A.D.; 6. previously unpublished (Pl. II, 22).

23. Hairpin; 1. STEP, 2014; 2. no inv. no.; 3. L = 7.1 cm; 4. fragment, the body is corroded; carving, smoothing; 5. first half of the third century A.D.; 6. previously unpublished (Pl. II, 23).

Type. B. Pins with simply decorated head

B.2. Pins with spherical head.

24. Hairpin; 1. STEP – civilian habitation, 2014; 2. no inv. no.; 3. L = 4.9 cm; 4. spindle-shaped body and spherical head; carving, turning, polishing; 5. first half of the third century A.D.; 6. previously unpublished (Pl. II, 24).

25. Hairpin; 1. STEP – civilian habitation, 2014; 2. no inv. no.; 3. L = 9.3 cm; 4. fragment, spindle-shaped body, broken; 5. first half of the third century A.D.; 6. previously unpublished (Pl. II, 25).

26. Hairpin; 1. STEP – civilian habitation, 2014; 2. no inv. no.; 3. L = 5.4 cm; 4. fragment, spindle-shaped body, broken in the lower part; carving, turning, polishing; 5. first half of the third century A.D.; 6. previously unpublished (Pl. II, 26).

27. Hairpin; 1. STEP – civilian habitation, 2014; 2. no inv. no.; 3. L = 5.1 cm; 4. fragment, spindle-shaped body, broken in the lower part, strongly corroded; carving, turning, polishing; 5. first half of the third century A.D.; 6. previously unpublished (Pl. II, 27).

28. Hairpin; 1. STEP, 2014; 2. no inv. no.; 3. L = 8.6 cm; 4. fragment, the body is thickened in the upper part, the head is slightly conical in the upper part; carving, turning, polishing; 5. first half of the third century A.D.; 6. previously unpublished (Pl. II, 28).

29. Hairpin; 1. STEP, 2014; 2. no inv. no.; 3. L = 7.2 cm; 4. fragment, the body is spindle-shaped, broken in the lower part, spherical head; visible traces of carving; 5. first half of the third century A.D.; 6. previously unpublished (Pl. II, 29).

30. Hairpin; 1. STEP – civilian habitation, 2014; 2. no inv. no.; 3. L = 7.1 cm; 4. fragment, the spherical head is roughly processed, one can note very flattened decoration under the head; visible traces of carving, polishing; 5. first half of the third century A.D.; 6. previously unpublished (Pl. II, 30).

31. Hairpin; 1. STEP – civilian habitation, 2014; 2. no inv. no.; 3. L = 8.7 cm; 4. fragment, the body is uneven, the tip is broken in the lower part and rounded, polished; carving; 5. first half of the third century A.D.; 6. previously unpublished (Pl. II, 31).

32. Hairpin; 1. STEP – civilian habitation, 2014; 2. no inv. no.; 3. L = 10.6 cm.; 4. fragment, the body is thickened in the upper part, the tip is broken and slightly worn, the head is oval; 5. first half of the third century A.D.; 6. previously unpublished (Pl. II, 32).

33. Hairpin; 1. STEP – civilian habitation, 2014; 2. no inv. no.; 3. L = 8.3 cm; 4. the body is thickened in the upper part, the spherical head is slightly conical, the tip has been re-sharpened; carving, turning, polishing; 5. first half of the third century A.D.; 6. previously unpublished (Pl. II, 33).

Type. C. Pins with richly decorated head

C.1. Pins with cone-shaped head delimited by the body with mouldings.

34. Hairpin; 1. STEP – civilian habitation, 2014; 2. no inv. no.; 3. L = 11.4 cm; 4. the body is crooked in the lower part, the head is separated from the body with two mouldings, different in thickness; 5. first half of the third century A.D.; 6. previously unpublished (Pl. II, 34).

C.2. Pins with cone-shaped head, pointy and decorated with incisions.

35. Hairpin; 1. STEP – civilian habitation, 2014; 2. no inv. no.; 3. L = 14.5 cm.; 4. the pine cone is decorated with incisions and is separated from the body with two mouldings, different in thickness, the tip is slightly worn; carving, turning, polishing; 5. first half of the third century A.D.; 6. previously unpublished (Pl. II, 35).

C.3. Pins with baluster-shaped head.

36. Hairpin; 1. STEP – civilian habitation, 2014; 2. no inv. no.; 3. L = 4.0 cm; 4. fragment, the body is broken in the lower part and shows traces of carving; carving, turning, polishing; 5. first half of the third century A.D.; 6. previously unpublished (Pl. II, 36).

C.5. Pins with ring-shaped head delimited by the body with one moulding.

37. Hairpin; 1. STEP – civilian habitation, 2014; 2. no inv. no.; 3. L = 12.1 cm; 4. fragment, the body is crooked in the lower part, the ring-shaped head is delimited from the body by a flattened moulding; carving, drilling, polishing; 5. first half of the third century A.D.; 6. previously unpublished (Pl. II, 37).

C.6. Pins with ring-shaped head delimited with a baluster.

38. Hairpin; 1. STEP – civilian habitation, 2014; 2. no inv. no.; 3. L = 13.2 cm; 4. fragment, broken ring-shaped head, the body is thickened in the upper part and thinner only towards the tip, the fabric is spongy; carving, drilling, smoothing, polishing; 5. first half of the third century A.D.; 6. previously unpublished (Pl. II, 38).

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BIBLIOGRAPHY

- | | |
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| Béal 1983 | J. C. Béal, <i>Catalogue des objets de tabletterie du Musée de la civilisation gallo-romaine de Lyon</i> (Collection du Centre d'études romaines et galloromaines de l'Université Jean-Moulin, Lyon III). Lyon 1983. |
| Bounegru et al. 2011 | G. Bounegru, R. Ciobanu, R. Oța, D. Anghel, <i>Lux, util și estetic la Apulum. Podoabe și accesorii vestimentare</i> . Alba Iulia 2011. |
| Ciugudean 1997 | D. Ciugudean, <i>Obiectele din os, corn și fildeș de la Apulum</i> . Alba Iulia 1997. |
| Elefterescu 2008 | D. Elefterescu, <i>Obiectele din os de la Durostorum</i> . I. <i>Pontica</i> 41, 2008, 219–297. |
| Gudea, Bajusz 1991 | N. Gudea, I. Bajusz, <i>Ace de păr din os de la Porolissum. Câteva observații în legătură cu ace din os pentru prins părul din Dacia Romană</i> . <i>AMP</i> XIV–XV, 1991, 81–126. |
| Váass 2013 | L. Váass, <i>Artefactele din os și corn de la Porolissum. Contribuții la cunoașterea industriei osului din Dacia romană</i> . Doctoral dissertation (manuscript) defended at the “Babeș-Bolyai” University, History and Philosophy Faculty, consulted at the university library. |

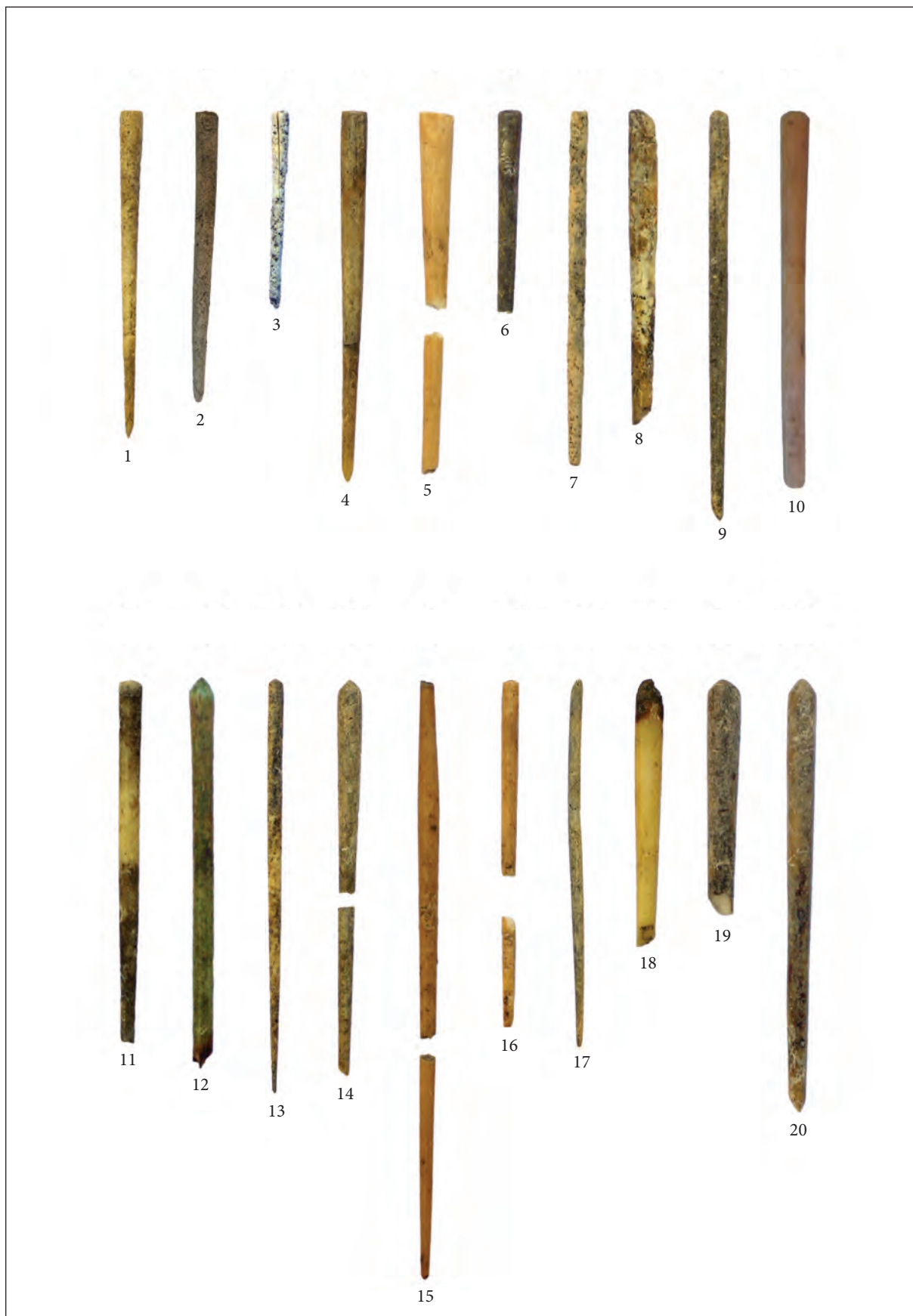


Plate I. Bone Hairpins Discovered on the Territory of Colonia Aurelia Apulensis.



Plate II. Bone Hairpins Discovered on the Territory of *Colonia Aurelia Apulensis*.

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 http://www.cimec.ro/scripts/arh/cronica/cercetariarh.asp).
CCA 1995 [1996]	C. Stoica (red. și coord.), <i>CCA. 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.), <i>CCA. 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.), <i>CCA. 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.), <i>CCA. 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-Târnoveanu (Ed.), <i>CCA. 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 Josa 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	<i>Památky Archeologické. Praha.</i>
<i>Past and Present</i>	<i>Past and Present. Oxford.</i>
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.