

# NOVENSIA 36



Ośrodek Badań nad Antykiem  
Europy Południowo-Wschodniej

Projekt okładki / Cover design  
Anna Adamczyk & Janusz Reclaw  
Opracowanie graficzne / Graphic design  
Anna Adamczyk

Redaktor naczelny / Chief editor  
Piotr Dyczek

Komitet redakcyjny / Editorial board  
Evgeniâ Genčeva  
Rebecca Jones  
Florian Matei-Popescu  
Oliva Menozzi  
Ewdoksja Papuci-Władyka  
Luan Përzhita  
Joaquín Ruiz de Arbulo Bayona  
Andreas Thiel

Sekretarz redakcji / Editorial secretary  
Bartosz Wojciechowski

© Copyright by Authors, 2025

Niniejszy numer zawiera artykuły w wersji pierwotnej / Volume contains original articles.  
Publication under the Creative Commons Attribution 4.0 PL (CC BY4.0 PL) license  
(full text available at: <http://creativecommons.org/licenses/by/4.0/pl/legalcode>).

Numer finansowany z programu „Inicjatywa Doskonałości — Uczelnia Badawcza”  
Uniwersytetu Warszawskiego oraz programu „Rozwój Czasopism Naukowych”  
Ministerstwa Nauki i Szkolnictwa Wyższego.

Ośrodek Badań nad Antykiem Europy  
Południowo-Wschodniej  
00–927 Warszawa  
ul. Krakowskie Przedmieście 32  
[novae@uw.edu.pl](mailto:novae@uw.edu.pl)

ISSN 0860-5777  
e-ISSN 2720-2941

Wydawnictwa Uniwersytetu Warszawskiego  
02–678 Warszawa, ul. Smyczkowa 5/7  
[www.wuw.pl](http://www.wuw.pl); e-mail [wuw@uw.edu.pl](mailto:wuw@uw.edu.pl)  
Dział Handlowy: tel. (48 22) 55-31-333  
e-mail: [dz.handlowy@uw.edu.pl](mailto:dz.handlowy@uw.edu.pl)

Korekta techniczna: Agnieszka Tomas, Andrzej Maciałowicz  
Korekta językowa: Stephanie Aulsebrook

Druk i oprawa: POZKAL

## CONTENTS

MARTIN LEMKE	
The roman jewellery from Novae, Section IV: preliminary statistics .....	7
AGNIESZKA TOMAS, EMIL JĘCZMIENOWSKI	
Novae, Sector XIII ( <i>retentura</i> ), 2021–2024. A possible location of the <i>praetorium</i> and the <i>via decumana</i> .....	29
AGNIESZKA TOMAS	
A new dedication to Jupiter and Juno by veterans and Roman citizens found in Novae .....	47
MARCIN MATERA, MAŁGORZATA DASZKIEWICZ, MERAB KHALVASHI, LASHA ASLANISHVILI	
Byzantine kiln for amphora production at Gonio-Apsaros (Georgia) .....	61
INGA GŁUSZEK, JACEK MICHNIEWICZ, ROBERT ANCKIEWICZ	
The local production of fineware tableware ceramics in Histria (Dobrogea, Romania) in the perspective of archaeometric research. The preliminary study .....	79
RENATA CIOLEK	
Minting errors in ancient Rome: double die strikes in the light of coin finds from Sector XII at Novae (Bulgaria) .....	107
EMIL MALEWICZ	
Rome, Ravenna, or Sicily? Considerations on the mint attribution of MIBE 229 <i>dekanumia</i> .....	119
VADZIM BELÂVEC, INGA GŁUSZEK	
The discovery of terra sigillata vessel fragments in Belarus .....	133
ANDRZEJ MACIAŁOWICZ	
A find of a bronze Almgren 65 brooch from northern Poland as evidence of the earliest influx of Roman imports .....	153
ANDRZEJ SZELA	
Between Crimea and Scandinavia. a unique migration period burial complex from the site at Brudnice, Żuromin county, Masovian Voivodeship .....	171
KRZYSZTOF NARLOCH, PIOTR ZAKRZEWSKI	
The significance of Novae in Chiva's campaign (250–251 CE) .....	197
Publication ethics and malpractice statement .....	227
Guidelines for authors .....	229

Martin Lemke

## THE ROMAN JEWELLERY FROM NOVAE, SECTOR IV: PRELIMINARY STATISTICS

**Abstract:** This contribution summarises finds of jewellery (excluding *fibulae*, but including combs) discovered in the almost 50 years of fieldwork in the Roman layers of Sector IV at Novae, most commonly known as the *valetudinarium*. Early medieval jewellery discovered in the cemetery of Sector IV has been excluded, since the author published it earlier, separately.

**Keywords:** Novae, *legio I Italica*, Roman jewellery, rings, bracelets, combs, glass beads, *lunulae*

### Introduction

Between 1966 and 2010, a considerable but then again not all too large quantity of 138 pieces of diverse jewellery was found in fieldwork Sector IV at Novae,<sup>1</sup> that is: the Flavian baths (*thermae*),<sup>2</sup> the subsequent Trajanic military hospital (*valetudinarium*),<sup>3</sup> and the Late Antique civil building complex.<sup>4</sup> Given the nature of these buildings, finds of jewellery from those phases of Sector IV are usually out of context, unlike those from the early medieval graveyard, which was also investigated. The latter however are not discussed here,<sup>5</sup> neither are fibulae.

The present contribution by no means constitutes a complete catalogue of finds. Its purpose instead is twofold: to serve as a basis for a comprehensive publication in the future, and also to establish the statistics of this find category for a military-cum-civilian site as comparative material for investigations at other Roman limes fortifications. In the context of the latter, the present contribution hints at the question of the presence of women in the operational period of the military fort in the first and second centuries, i.e. before civilians started settling *intra muros* after the third century.

### Chronology

Most of the finds represent forms which were in use over several centuries and hence are not useful chronological indicators by themselves. In some cases the state of preservation makes a clear

<sup>1</sup> For an overview and further reading on Sector IV see: DYCZEK 2008; 2021. I express my gratitude to Piotr Dyczek for his permission to publish the present text.

<sup>2</sup> DYCZEK 2009; LEMKE 2011.

<sup>3</sup> DYCZEK 1997; DYCZEK 2004.

<sup>4</sup> One of the buildings is usually referred to as the courtyard house, cf. DYCZEK 2005; LEMKE 2015.

<sup>5</sup> LEMKE 2005; LEMKE 2006. The sole exception is, for typological reasons, the *lunula* no. 64/01w.

identification impossible. Either way, the dating of the given archaeological strata often remains the only possibility to establish the chronology of the given piece of jewellery. For the sake of clarity, the finds in the tables below have been appointed to one of the three basic chronological phases<sup>6</sup> by their stratigraphic context, thus establishing their approximate time of production and usage. This was not a difficult task regarding the Flavian bath and the *valetudinarium*, but in several cases objects from Late Antique layers appear to date to earlier periods and simply constitute intrusive finds. This has been marked below.

### State of Research

The “Roman” jewellery from Sector IV (first–sixth century) has been researched a number of times, but there are no publications dealing exclusively and holistically with the topic. The most encompassing contributions are two unpublished MA papers by Reneta Kiračina,<sup>7</sup> covering the years 1961–1984 for all fieldwork sectors, and Anna Mróz for Sector IV in 1985–2002.<sup>8</sup> The latter author published a selection from her thesis on glass bracelets and beads.<sup>9</sup> Recently, a BA paper by Anna Jakubowska on jewellery from Novae included several finds from Sector IV, predating the division of the archaeological team from the University of Warsaw into two separate expeditions in the 1990s.<sup>10</sup> Furthermore, some metal jewellery has been published by Włodzimierz Gacuta as part of his contributions on finds made of this material for various timespans.<sup>11</sup> Pavlina Vladkova in turn prepared a contribution on objects made of bone,<sup>12</sup> while Evgenia Genčeva summarised finds of metal;<sup>13</sup> both include jewellery. The first discussion on the presence of such finds on the premises of a legionary fort was published by Agnieszka Tomas<sup>14</sup>. Moreover, there is a number of contributions on jewellery from other fieldwork sections, which need to be taken into account when looking at the presence of this find category across the site in general.<sup>15</sup> A general caveat regarding finds registered as jewellery in the documentation is that, particularly in the case of small, damaged bronze objects, the interpretation may simply be wrong and the ornament of wire in question in fact served a different purpose.

### Classification

The presentation of finds in the catalogue below will follow the find categories used by the excavators, as follows:

- 1) Bracelets
- 2) Rings
- 3) Pearls/beads
- 4) Pendants/amulets
- 5) Earrings
- 6) Chains/earrings with chains
- 7) Hairpins
- 8) Combs

<sup>6</sup> For a closer look at the 14 specific phases distinguished in Sector IV cf. DYCZEK 2011.

<sup>7</sup> KIRAČINA 1983.

<sup>8</sup> MRÓZ 2003.

<sup>9</sup> MRÓZ 2005.

<sup>10</sup> JAKUBOWSKA 2024.

<sup>11</sup> GACUTA 1978; GACUTA 1987; GACUTA 1993.

<sup>12</sup> DYCZEK 1995; VLADKOVA 1999; 2005.

<sup>13</sup> GENČEVA 1998; GENČEVA 2000.

<sup>14</sup> TOMAS 2011.

<sup>15</sup> KIRAČINA 1983; KIRAČINA 1991.

Within each category the items are sorted by year and number. As a principal comparative source the present paper relies heavily on the contribution by Emilie Riha,<sup>16</sup> which concerns the same categories (except for the combs), from a comparable if not identical context, albeit for a far higher number of finds, making it an excellent source of analogies.

## Tables of Finds

The inventory numbers in the tables for each category refer to the small find register prepared each year during excavation. The quality of the finds is diverse and so is the quality of the available documentation. Hence the description, while striving for a common pattern, includes more details on some finds and fewer for others. This does not reflect the opinion of the author, but the state of documentation and should be seen as an incentive to prepare a uniform catalogue in the future. The chronology, as stated above, is based whenever possible upon the dating of a particular form, but when this is not available, the overall dating of the layer was taken into account, within the restrictions mentioned above.

### 1. Bracelets (Table 1)

A total of 31 bracelets have been found in Sector IV, which makes them the second largest group of finds.

Bracelets made from non-valuable materials (bronze, glass, bone) were often thrown away when damaged. Bronze bracelets could be made from a round rod bent to shape, from sheet bronze or wire, but they could also be cast.<sup>17</sup> Glass bracelets are usually made of “black”-looking glass, which in fact is dark green, but coloured so densely it appears black. The original colour can be seen on splinters, though. The glass can be shiny but is usually matte on the surface.

At Novae, 77% of the bracelets are made of glass and 16% of bronze (of the remaining two specimens, one is made of bone, the other of iron). The variety of forms is proof of the popularity of this sort of trinket, which was probably produced as cheap jewellery and mass wares for mass wear by the poorer population during the principate. The value of the material is an interesting question, since glass vessels are usually perceived as expensive luxury items, while the bracelets, produced through a simple technique using recycled glass, could not have been very expensive and should be perceived on par with the bronze jewellery.

The production technique in the Roman world in general shows a number of variants, stemming partly from Celtic roots.<sup>18</sup>

The glass bracelets were bent either from a glass ribbon or rod, each possibly twisted before bending. Often they are open and in the case of closed bracelets the seam is frequently quite visible. Glass bracelets could be ribbed lengthwise for decoration or adorned with lateral notches. Good examples for this category (including the usual state of preservation) are finds 194/01w (bronze) and 54/02w (glass) [Fig. 1].

<sup>16</sup> RIHA 1990.

<sup>17</sup> RIHA 1990, p. 52.

<sup>18</sup> RIHA 1990, p. 53.



Fig. 1. Bracelets, inv. nos. 194/01 (bronze, left) and 54/02 (glass, right). Photo J. Reclaw

Table 1. Bracelets from Sector IV

No.	Inventory Number	Type	Description, as per find inventory and information on context and publication, if applicable (measurements in cm)	Material	Dating (centuries)
1	22/65w	Bracelet	Dark glass, fragment of a ribbon bracelet adorned on the outside with diagonally twisted carvings. Diameter 0.9; length 6.5. Published: MAJEWSKI <i>et alii</i> 1967, p. 155, fig. 27.	Glass	4 <sup>th</sup> –7 <sup>th</sup>
2	52/65w	Bracelet	Fragment of a glass bracelet. Length 5.0; thickness 0.5 × 0.7.	Glass	3 <sup>rd</sup> –4 <sup>th</sup>
3	26/66w	Bracelet	Fragment of a ribbon bracelet made of glass paste, with a rounded surface bearing a concave meandering ornament in the middle. The bracelet is dark while the ornament was added with white glass paste, partially molten into the surface. Length 2.1; thickness 0.4; width 1.0.	Glass	4 <sup>th</sup>
4	16/67w	Bracelet	Fragment of a glass bracelet, semicircular in section. Length 6.2; width 0.6; height 0.5.	Glass	3 <sup>rd</sup> –4 <sup>th</sup>
5	63/71w	Bracelet	Bracelet with a smooth but corroded surface, made of a circular iron rod. Diameter 6. Published: MAJEWSKI <i>et alii</i> 1974, p. 132, table II, 8.	Iron	5 <sup>th</sup> –6 <sup>th</sup>
6	60/75w	Bracelet	Fragment of a glass bracelet.	Glass	3 <sup>rd</sup> –4 <sup>th</sup>
7	304/77w	Bracelet	Fragment of a grey and yellow glass bracelet. Length 2.8; width 0.7; thickness 0.6.	Glass	3 <sup>rd</sup> –4 <sup>th</sup>
8	44/79w	Bracelet	Fragments of a bone bracelet, circular in section.	Bone	3 <sup>rd</sup> –4 <sup>th</sup>
9	169/79w	Bracelet	Fragment of a glass bracelet with a spiral-twisted surface. Drawn from a single piece of glass. Diameter 0.4; length 1.8.	Glass	4 <sup>th</sup> –7 <sup>th</sup>

10	35/93w	Bracelet	Light glass, triangular section.	Glass	6 <sup>th</sup>
11	214/93w	Bracelet	From the courtyard house. Diameter 5.6.	Glass	4 <sup>th</sup>
12	87/95w	Bracelet	From a channel or pit above room 45 of the <i>valetudinarium</i> . Very dark glass, semicircular in section.	Glass	3 <sup>rd</sup> –4 <sup>th</sup>
13	99/95w	Bracelet	Room 7 of the <i>valetudinarium</i> . Semicircular in section. Thickness 0.5.	Glass	first half 4 <sup>th</sup>
14	254/96w	Bracelet	Open bracelet, one end shaped as a snakehead, the other broadened.	Bronze	3 <sup>rd</sup>
15	82/97w	Bracelet	Closed bracelet with a smooth surface and a rectangular section. Diameter 5.1; inner diameter 4.7; width 0.4.	Bronze	4 <sup>th</sup>
16	131/97w	Bracelet	Thickness 0.7.	Glass	3 <sup>rd</sup>
17	75/98w	Bracelet	Black/dark green glass. Thickness 0.8–0.55, length 3.5.	Glass	3 <sup>rd</sup> /4 <sup>th</sup>
18	162/98w	Bracelet	Blue colour. Rubble layer of the <i>valetudinarium</i> . Semicircular in section. Length 5.6; diameter 1.1–0.6.	Glass	3 <sup>rd</sup>
19	126/99w	Bracelet	Dark blue glass, semicircular in section. Length 3.7; diameter 0.5.	Glass	6 <sup>th</sup>
20	226/00w	Bracelet	Semicircular in section. Outer diameter 6.0; thickness 1.1.	Glass	3 <sup>rd</sup> /4 <sup>th</sup>
21	343/00w	Bracelet	Diagonally twisted. Length 5.0; thickness 0.3.	Bronze	3 <sup>rd</sup> /4 <sup>th</sup>
22	319/00w	Bracelet	Room 9 of the <i>valetudinarium</i> . Blue glass; semicircular in section. Length 6.3; thickness 4.0.	Glass	3 <sup>rd</sup>
23	73/01w	Bracelet	Open bracelet, smooth surface, circular in section. Length 6.0; width 0.5.	Bronze	4 <sup>th</sup>
24	173/01w	Bracelet	Dark blue glass, semicircular in section. Diameter 0.6; length 4.5.	Glass	6 <sup>th</sup>
25	199/01w	Bracelet	Dark blue glass, semicircular in section. Diameter 0.4; length 3.5.	Glass	6 <sup>th</sup>
26	47/02w	Bracelet	Fragment in the shape of an open circle, uneven surface, rectangular in section.	Bronze	6 <sup>th</sup>
27	54/02w	Bracelet	Dark blue glass, ovoid in section. Width 0.6.	Glass	3 <sup>rd</sup>
28	202/03w	Bracelet	Length 6.8; thickness 0.6.	Glass	2 <sup>nd</sup>
29	233/03w	Bracelet	Measurements 2.6 × 1.1 × 0.4.	Glass	3 <sup>rd</sup> /4 <sup>th</sup>
30	22/04w	Bracelet	Black opaque glass. Length 4.0; thickness 0.8.	Glass	3 <sup>rd</sup>
31	55/05w	Bracelet	Milky, colourless glass. Length 4.2; thickness 0.6.	Glass	2 <sup>nd</sup>

## 2. Rings (Table 2)

A total of 19 finger rings were found in Sector IV. Obviously, this form of trinket is far older than Roman culture itself. However, despite its simplicity, there are certain variations, rooted in the Hellenistic and the Republican cultures, especially those with a protruding small plate. During the second century, the tendency to flatten and enlarge this plate became stronger and the separation from the band more distinct. The separation was further stressed throughout the third century, although the plate became smaller again.<sup>19</sup> Fine examples from Novae Sector IV are the finds 250/01w [Fig. 2, left] and 59/03w [Fig. 2, right].



Fig. 2. Rings, inv. nos. 250/01w (left) and 59/03w (right). Photo J. Reclaw

Emilie Riha remarks how, in the fourth century, the band and plate were entirely separately produced and then attached to one another. There are also other forms of adornment: etched and stamped motifs, as well as inscriptions, and in some cases decorative key motifs occur. Apart from these, bands of various profiles were in use throughout the principate, and have often been identified as engagement rings.<sup>20</sup>

Table 2. Rings from Sector IV

No.	Inventory Number	Type	Description, as per find inventory and information on context and publication, if applicable (measurements in cm)	Material	Dating (centuries)
1	14/71w	Band	Copper ribbon band. Flat on the inside and convex on the outside. Diameter 2.5; thickness 0.6.	Copper	3 <sup>rd</sup> –4 <sup>th</sup>
2	277/79w	Ring	Bronze, made of a solid band, circular in diameter. The circle is not closed, the ends are broadened. Diameter 2.0.	Bronze	4 <sup>th</sup>

<sup>19</sup> RIHA 1990, p. 26.

<sup>20</sup> RIHA 1990, p. 27; cf. HENKEL 1913.

3	284/79w	Ring	Bronze ring with a flat band and a rectangular gem.	Bronze	3 <sup>rd</sup> –4 <sup>th</sup>
4	1/85w	Ring	First phase of the civilian settlement. Crafted in a two part mould; a small gem in a setting. Outer diameter 2.29; inner diameter 1.64; thickness 0.6.	Bronze	3 <sup>rd</sup> –4 <sup>th</sup>
5	228/87w	Band	Room 15b of the <i>valetudinarium</i> . Smooth closed band of round wire. Diameter 2.5; thickness 0.3.	Bronze	3 <sup>rd</sup>
6	46/89w	Band	Below the floor level of the <i>valetudinarium</i> . Band, semicircular in section. Diameter 1.24; thickness 0.31. Published: PRESS <i>et alii</i> 1992, p. 125.	Bronze	1 <sup>st</sup> –2 <sup>nd</sup>
7	217/93w	Ring	Level of the <i>valetudinarium</i> . Length 2.1; width 2.7.	Bronze	1 <sup>st</sup> –2 <sup>nd</sup>
8	152/95w	Band	Rubble layer in room 45 of the <i>valetudinarium</i> .	Bronze	first half 3 <sup>rd</sup>
9	32/98w	Band	Band made of open bronze sheet. The ends overlap, one is broadened. Outer diameter 1.81; inner diameter 1.35; thickness 0.4.	Bronze	4 <sup>th</sup>
10	53/98w	Ring	Rubble layer of the civilian phase. A convex cobalt glass gemstone wrapped in gold foil. Outer diameter 2.0; thickness of the setting 0.1 × 0.2–0.3. Published: DYCZEK 2001, p. 98.	Bronze	early 4 <sup>th</sup>
11	136/98w	Band	Ribbon band, open, the ends overlap. The surface is adorned with elongated carvings. Outer diameter 2.2; width 0.7; thickness 0.8.	Bronze	4 <sup>th</sup>
12	141/98w	Band	Made of wound wire. Diameter 2.0, thickness 0.15–0.35.	Bronze	2 <sup>nd</sup> –3 <sup>rd</sup>
13	149/98w	Band	Outer diameter 2.1; section 0.28–0.09.	Bronze	3 <sup>rd</sup>
14	92/00w	Ring	Ring with a flat shield, which has been hammered out of the band. The band is semicircular in section. Inner diameter 2.15; outer diameter 2.4; thickness 0.15.	Bronze	4 <sup>th</sup>
15	250/01w	Ring	Ring with a round, solid etting attached to a thick wire. Diameter 2.0; height 2.3.	Bronze	4 <sup>th</sup>
16	4/02w	Ring	Ring with a small elongated and smooth setting hammered out of the band.	Bronze	4 <sup>th</sup>
17	31/03w	Ring	Diameter 2.4; thickness 0.3.	Bronze	3 <sup>rd</sup> –4 <sup>th</sup>
18	59/03w	Ring	Diameter 1.8; thickness 0.1.	Bronze	3 <sup>rd</sup> –4 <sup>th</sup>
19	51/07w	Ring	Slightly damaged, secondarily attached ornament. Diameter 2.1; thickness 0.15; width of the ornament 0.4.	Bronze	2 <sup>nd</sup>

### 3. Pearls/Beads (Table 3)

Pearls and beads constitute the third largest group of jewellery-related finds in sector IV, with 26 specimens. The most common type in this category is the glass bead made of *Kieselkeramik*. Good examples are the finds 95/01w and 58/02w [Fig. 3].

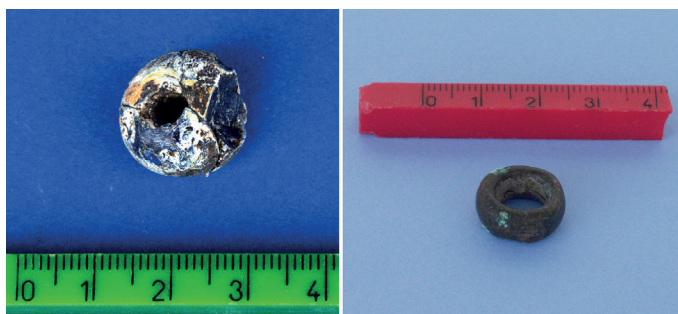


Fig. 3. Glass beads, inv. nos. 95/01w (left) and 58/02w (right). Photo J. Reclaw

Cobalt blue pearls were not worn as sets, but single pieces were included in a necklace of common beads as an amulet because of their “magic” blue colour.<sup>21</sup> The blue pearls were imported into the provinces since the early principate; they were most common towards the end of the first and early second century, and their number continually decreased into the third century. They are not found as part of necklaces in Late Roman burials, however. Their long continuity makes chronological classification based on their development very difficult, although the category in general can be broken down into more than a dozen different types.<sup>22</sup> The production process, on the other hand, was not very difficult at all, even though it required a certain dexterity, as the pearls were made in a single operation out of a heated glass rod.<sup>23</sup>

Egyptian faience is a easily formable mass consisting of crushed quartz, glass powder, and an organic binding agent which is heated to a temperature of 600–800 °C. The colour of the core is usually light blue/grey, grey/brown or grey/white. The pearls could be coated with a blue/green, cyan or light green colour, a colour dubbed Egyptian blue.<sup>24</sup>

Melon pearls are quite uniform in their appearance; slightly flattened spheres, broader than they are high, with dimensions varying roughly between 1 and 2 cm. The vertical grooves are a characteristic adornment, as seen on find 1/07w [Fig. 4].



Fig. 4. Melon pearl, inv. no. 1/07w. Photo J. Reclaw

<sup>21</sup> RIHA 1990, p. 80.

<sup>22</sup> RIHA 1990, pp. 77–94; cf. GUIDO 1978.

<sup>23</sup> For details see: STERN 1990, p. 93; HÖPKEN 2003.

<sup>24</sup> RIHA 1990, pp. 80–83.

Table 3. Pearls and beads from Sector IV

No.	Inventory Number	Type	Description, as per find inventory and information on context and publication, if applicable (measurements in cm)	Material	Dating (century/ies)
1	212/93w	Glass bead	Rubble layer of Flavian bath. Large round melon glass bead, with a big hole. Max. diameter 1.35.	Glass	end of 1 <sup>st</sup>
2	235/93w	Two glass beads	Surface finds. Flat and spheric shapes. Diameter 2.3 and 1.55.	Glass	3 <sup>rd</sup> –4 <sup>th</sup>
3	46/94w	Glass bead	Found along with an onion-head fibula from the fourth cent. Segmented glass bead from 5 pieces. Diameter 0.6.	Glass	4 <sup>th</sup>
4	244/96w	Glass bead	Melon glass bead with a big round hole.	Glass	2 <sup>nd</sup> –3 <sup>rd</sup>
5	264/96w	Glass bead	Melon glass bead found in room 69, beneath the level of the <i>valetudinarium</i> .	Glass	2 <sup>nd</sup> –3 <sup>rd</sup>
6	268/96w	Glass bead	Polysided glass bead.	Glass	3 <sup>rd</sup> –4 <sup>th</sup>
7	286/96w	Glass bead	Elongated glass bead, roller shape.	Glass	3 <sup>rd</sup>
8	352/96w	Glass bead	Glass bead of black glass, melon shape.	Glass	3 <sup>rd</sup> –4 <sup>th</sup>
9	29/99w	Glass bead	Rubble layer of the <i>valetudinarium</i> . Melon glass bead, damaged. Thickness 1.1; diameter 1.5. Published: DYCZEK 2001, p. 99.	Glass	3 <sup>rd</sup>
10	82/99w	Glass bead	Roller-shaped glass bead, adorned with sideways carvings. Diameter of the opening 0.5.	Glass	2 <sup>nd</sup> –3 <sup>rd</sup>
11	282/00w	Bead (?)	Outer diameter 1.9; inner diameter 0.6; thickness 0.8.	Bone	2 <sup>nd</sup> –3 <sup>rd</sup>
12	371/00w	Glass bead	Rubble layer of the <i>valetudinarium</i> . Melon shape; yellow tint. Outer diameter 1.5; inner diameter 0.5.	Glass	3 <sup>rd</sup>
13	95/01w	Glass bead	Spheric glass bead of dark blue glass. Thickness 1.4; diameter 1.8.	Glass	4 <sup>th</sup>
14	204/01w	Glass bead	Glass bead, roller shape. Width 2.1; diameter 0.6.	Glass	6 <sup>th</sup>
15	16/03w	Glass bead	Height 1.2; diameter 1.6.	Glass	4 <sup>th</sup>
16	82/03w	Glass bead	Diameter 0.6.	Glass	3 <sup>rd</sup>
17	84/03w	Ceramic bead	Diameter 1.4; thickness 0.5.	Clay	3 <sup>rd</sup> –4 <sup>th</sup>
18	88/05w	Pearl	Diameter 0.7.	Bronze	2 <sup>nd</sup>
19	74/08w	Glass bead	Cyan tint. Height 1.0; diameter 1.3.	Glass	1 <sup>st</sup>

20	47/09w	Melon glass bead	Found atop the <i>opus spicatum</i> of the Flavian <i>thermae</i> . Measurements $1.4 \times 1.2$ .	Glass	1 <sup>st</sup>
21	95/09w	Melon glass bead	Glass bead. Opaque. The lengthwise striations have been ground. Circular opening with a diameter of 0.05. Measurements $1.0 \times 1.1 \times 0.3$ .	Glass	1 <sup>st</sup>
22	106/09w	Melon glass bead	Glass bead, striated. Opaque. Colour: cyan. The lengthwise striations have been ground. Measurements $1.1 \times 1.4$ .	Glass	1 <sup>st</sup>
23	119/09w	Two melon glass beads	Two striated glass beads. The lengthwise striations have been ground. Measurements $1.4 \times 1.4$ and $1.1 \times 0.3$ .	Glass	2 <sup>nd</sup>
24	17/10w	Glass bead	Blue, with traces of yellow, rosette-shaped ribbing. Measurements $1.5 \times 0.6$ .	Glass	2 <sup>nd</sup>
25	72/10w	Glass bead	Colour: cyan. Vertical striations. Measurements $1.3 \times 1.0 \times 0.3$ .	Glass	1 <sup>st</sup>
26	102/10w	Glass bead	Colour: green-yellow. Vertical striations. Measurements $1.9 \times 1.2 \times 0.6$ .	Glass	1 <sup>st</sup>

#### 4. Pendants/Amulets (Table 4)

A moderate number, fourteen finds, classified as pendants or amulets were found in Sector IV. In addition to certain aesthetic attributes, amulets were meant to magically protect the wearer from evil. This includes amulets in the shape of *phalloi*, *lunulae*, and the Hercules club, but also blue glass beads.<sup>25</sup> In this context, it has to be considered that both *lunulae* as well as glass beads were also used for adorning horse gear,<sup>26</sup> which usually—but not always—is visible from the size of the “jewellery”, as for find 49/05w [Fig. 5].



Fig. 5. Horse pendant with *lunula*, inv. no. 49/05. Photo J. Reclaw

<sup>25</sup> RIHA 1990, p. 73.

<sup>26</sup> BISHOP 1988, *passim*; VAN DER VEEN 2020.

The magic of the *lunula* was based on the connection between woman and moon.<sup>27</sup> They symbolize fertility and are the equivalent to *phallos* for men. However, in Roman times the original intention was slightly modified, leaving the *lunula* as an apotropaic amulet meant to shield the owner from harm.<sup>28</sup> *Lunula*-shaped pendants can be observed from the first century, but it is hardly possible to establish a precise chronology for these finds, because they did not evolve in a way that could allow the establishing of a typology<sup>29</sup> and could also have been in use for extended periods of time. A point in case is the Roman *lunula* discovered in an early medieval burial in Sector IV (64/01w) [Fig. 6, left]. Another example is find 286/01w [Fig. 6, right].



Fig. 6. *Lunulae*, inv. nos. 64/01 (left) and 286/01 (right). Photo J. Reclaw

Table 4. Pendants/amulets from Sector IV

No.	Inventory Number	Type	Description, as per find inventory and information on context and publication, if applicable (measurements in cm)	Material	Dating (centuries)
1	203/87w	Pendant	Floor level of the <i>valetudinarium</i> . Solid flat, round pendant with a thick loop Diameter 2.0; height 2.7; thickness 0.2. Published: PRESS <i>et alii</i> 1991, p. 139.	Bronze	2 <sup>nd</sup> –3 <sup>rd</sup>
2	88/89w	Pendant	Level of the Flavian bath. Heart-shaped pendant, elongated, with a loop attached with a pin. Length 5.64; width 3.95; thickness 0.1.	Bronze	late 1 <sup>st</sup>
3	249/96w	Pendant	Flat, oval pendant. Published: DYCZEK 1998, p. 48.	Sardony	late 3 <sup>rd</sup>
4	140/98w	Pendant	Heart-shaped pendant, a loop has been made by bending the upper part of the object. Width 3.1; height 3.7; opening diameter 0.65.	Bronze	2 <sup>nd</sup> –3 <sup>rd</sup>
5	64/01w	<i>Lunula</i>	Found in a medieval grave, but of earlier manufacture. The surface has been decorated, solid loop, the sides end in small circles that touch.	Bronze	2 <sup>nd</sup> –3 <sup>rd</sup> ?

<sup>27</sup> RIHA 1990, p. 73; cf. MIHAILESCU-BÎRLIBA 2017.

<sup>28</sup> MIHAILESCU-BÎRLIBA 2017.

<sup>29</sup> RIHA 1990, p. 73. Still, attempts at such typologies have been made, cf. SIMNISKYTE 2002; MIHAILESCU-BÎRLIBA 2017.

6	112/01w	Amulet	Donar/Hercules club amulet adorned with concentric circles and carved lines.	Bone	3 <sup>rd</sup> –4 <sup>th</sup>
7	286/01w	<i>Lunula</i>	Bronze sheet, the ends do not touch.	Bronze	4 <sup>th</sup>
8	57/02w	Pendant	Heart-shaped pendant, elongated, with a loop.	Bronze	3 <sup>rd</sup>
9	49/05w	Pendant	Length 6.8; width 4.4; thickness 0.15.	Bronze	4 <sup>th</sup>
10	22/07w	Pendant	Pendant made of thin sheet, two ornamental circles are visible on the surface. Severely damaged. Diameter 2.8; thickness 0.05.	Bronze	1 <sup>st</sup> –2 <sup>nd</sup>
11	73/08w	Pendant	Length 2.4; thickness 0.2.	Bronze	1 <sup>st</sup>
12	142/08w	Pendant	Length 4.7; width 4.1; thickness 0.3.	Bronze	1 <sup>st</sup>
13	21/09w	Pendant /locket	Bronze pendant, maybe a locket or small bell. Traces of a locking mechanism are visible. Measurements 2.8 × 1.2; loop diameter 0.4.	Bronze	2 <sup>nd</sup> ?
14	36/10w	Pendant	Part of an unfolding medallion. Measurements 1.8 × 0.1.	Bronze	1 <sup>st</sup> –2 <sup>nd</sup>

### 5. Earrings (Table 5)

Earrings made of gold or silver were among the most popular types of jewellery in the principate. However they are only a small proportion (two specimens) of the jewellery from Sector IV, except for the medieval graves, where bronze earrings constitute the largest group, described elsewhere.<sup>30</sup> E. Riha suspects the danger of contracting an infection when piercing the ear with an earring made of a less inert material than gold or silver could have been one reason why earrings made of bronze were not as popular, while delicate pieces made of gold or silver were expensive and also less resistant to damage.<sup>31</sup> Still, there are examples from the Roman layers of Sector IV, such as finds 266/00w and 51/07w [Fig. 7].



Fig. 7. Earrings, inv. nos. 266/00w (left) and 51/07w (right). Photo J. Reclaw

<sup>30</sup> LEMKE 2006.

<sup>31</sup> RIHA 1990, p. 70. For the gold and silver 'high-end' jewellery in Moesia Inferior see: HIGGINS 1961; RUSEVA-SLOKOSKA 1991.

Table 5. Earrings from Sector IV

No.	Inventory Number	Type	Description, as per find inventory and information on context and publication, if applicable (measurements in cm)	Material	Dating (centuries)
1	31/85w	Earring	Discovered below the entrance to the <i>valetudinarium</i> . Composite earring. Metal part: length 4.3; width 2.0; thickness 0.14; glass gem: length 1.0; diameter 0.5; thickness 0.4. Published: PRESS <i>et alii</i> 1989, p. 154, fig. 14.	Bronze	4 <sup>th</sup> –6 <sup>th</sup>
2	266/00w	Earring	Band-type earring. Diameter 2.7; thickness 0.1.	Bronze	3 <sup>rd</sup> –4 <sup>th</sup>
3	51/07w	Earring	Bronze band, part of composite earring with hanger. Diameter 2.1; thickness 0.15.	Bronze	2 <sup>nd</sup>

### 6. Chains/Earrings with Chains (Table 6)

Four small chains were found during fieldwork, all of which were probably pieces of personal jewellery. The best preserved example is 84/05w [Fig. 8]. Chains made of bronze wire, sometimes with attached pearls, were meant to imitate fine chains of gold wire, popular in the second and third centuries. An interesting variation are chains which are part of a composite ornament, such as find 6/64w [Fig. 9, left], not found in Sector IV but rather in the northwestern corner of the fortress, Sector III,<sup>32</sup> or 31/85 [Fig. 9, right], interpreted as an earring. The fine chain fragment 298/01w might have been part of a similar piece, as with the above-mentioned earring 51/07w [Fig. 7, right]. Golden versions of this type of earring are known from Serdica and Ratiaria.<sup>33</sup>



Fig. 8. Small chain, inv. no. 84/05w.  
Photo J. Reclaw



Fig. 9. Composite earrings, inv. nos. 6/64w (not from Sector IV, photo J. Reclaw) and 31/85w (photo T. Biniewski)

<sup>32</sup> GACUTA 1987, p. 164, no. 342.

<sup>33</sup> RUSEVA-SLOKOSKA 1991, p. 105, nos. 4 and 5.

Table 6. Chains/earrings with chains from Sector IV

No.	Inventory Number	Type	Description, as per find inventory and information on context and publication, if applicable (measurements in cm)	Material	Dating (centuries)
1	3/87w	Chain	Room 14 of the <i>valetudinarium</i> . Four fragments of a chain plaited from four wires. Length 12.10; thickness 0.9.	Bronze	early 3 <sup>rd</sup>
2	150/96w	Chain	Room 9 of the <i>valetudinarium</i> . Fragment of a plaited chain.	Bronze	2 <sup>nd</sup> /3 <sup>rd</sup>
3	298/01w	Chain	Three small fragments of a chain, possibly from a fastening.	Bronze	6 <sup>th</sup>
4	84/05w	Chain	Three links. Length 3.7; width 2.0; thickness 0.2.	Bronze	2 <sup>nd</sup>

## 7. Hairpins (Table 7)

Surprisingly or not, hairpins are the single largest group of jewellery-related finds from Sector IV. E. Riha distinguishes between 27 categories including variant forms for the hairpins from Augst, where hairpins also constitute the largest group of jewellery (48%) based on a total of several hundred specimens. In our case, hairpins are also the largest group, albeit comprising only 25% within the defined categories (which slightly differ from those at Augst). The most complete typology has been prepared by Erwin Ruprechtsberger.<sup>34</sup>

The double function of hairpins as a utility item and jewellery is an old one, the hairpin being an elongated shaft with one pointed end and a head defined by ornamental carvings, holding the hair knot in place, with numerous variations on this basic scheme. The shape of the bone hairpins is comparable to similar objects made of bronze.<sup>35</sup> The development of the *acus crinalis* was obviously closely linked to the changing fashion of women's hairstyle, which had been quite simple in the Republic and became more sophisticated in the principate.<sup>36</sup>

The hairpins were mostly made of bone or horn, and certainly could be produced locally. More than any other form of jewellery, however, hairpins raise the question of to what extent women were present in the legionary fortress. Examples from Sector IV include 99/00w, 218/00w, 292/00w and 51/03w [Fig. 10].

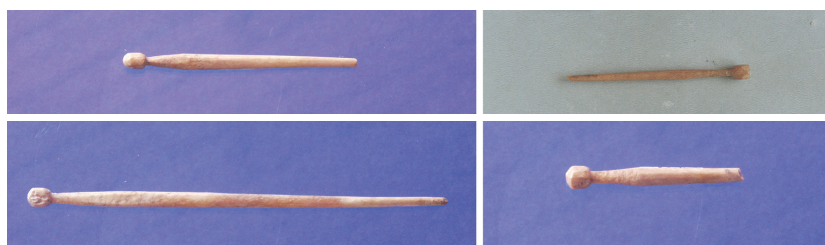


Fig. 10. Bone hairpins, inv. nos. 99/00w (top left), 218/00w (top right), 292/00w (bottom left), and 51/03w (bottom right). Photo J. Reclaw

<sup>34</sup> RUPRECHTSBERGER 1979.

<sup>35</sup> DIMITROVA-MILČEVA 2006, pp. 96–98.

<sup>36</sup> RIHA 1990, p. 95.

The bronze hairpins were also rather cheap and practically formed, although for a more sophisticated hairstyle requiring several hairpins it seems logical to assume that the lighter bone pins were preferred, while on the other hand bronze specimens could be more elaborately decorated like find 57/08w [Fig. 11].



Fig. 11. Bronze hairpin, inv. no. 57/08w. Photo J. Reclaw

Table 7. Hairpins from Sector IV

No.	Inventory Number	Type	Description, as per find inventory and information on context and publication, if applicable (measurements in cm)	Material	Dating (centuries)
1	177/89w	Hairpin	Discovered in a rubble layer of the <i>valetudinarium</i> . Ovoid head. Length 10.0; thickness 0.4; head diameter 0.4.	Bone	3 <sup>rd</sup>
2	75/93w	Hairpin	Hairpin with double conic head. Length 8.7.	Bronze	late 3 <sup>rd</sup> –first half 4 <sup>th</sup>
3	121/93w	Hairpin	Hairpin with pinecone-shaped head.	Bone	4 <sup>th</sup>
4	124/93w	Hairpin	Hairpin with dome-shaped head. Length 10.7; head diameter 0.7.	Bone	second half 4 <sup>th</sup>
5	228/93w	Hairpin	Hairpin with dome-shaped head. Length 5.9; head diameter 0.7.	Bone	3 <sup>rd</sup> –4 <sup>th</sup>
6	68/94w	Hairpin	Hairpin with small round head. Length 6.6; diameter 0.45.	Bone	first half 4 <sup>th</sup>
7	87/94w	Hairpin	Hairpin with polygonal head. Length 6.0; diameter 0.4.	Bone	2 <sup>nd</sup>
8	88/94w	Hairpin	Length 9.0; diameter 0.6.	Bone	2 <sup>nd</sup>
9	153/95w	Hairpin	Hairpin with small round head. Length 9.7; thickness 0.3.	Bone	late 3 <sup>rd</sup>
10	348/96w	Hairpin	Hairpin with large round head.	Bone	4 <sup>th</sup>
11	83/97w	Hairpin	Hairpin with polygonal head.	Bone	2 <sup>nd</sup> –3 <sup>rd</sup>
12	110/99w	Hairpin	Hairpin with large round head. Length 9.2.	Bronze	6 <sup>th</sup>
13	99/00w	Hairpin	Hairpin with ovoid head. Length 5.9; thickness 0.3.	Bone	3 <sup>rd</sup>
14	111/00w	Hairpin	Bronze hairpin, broken in two pieces. Length 4.4 and 2.9.	Bronze	4 <sup>th</sup>
15	218/00w	Hairpin	Polygonal head. Length 9.2; thickness 0.3–0.4,	Bone	4 <sup>th</sup>
16	292/00w	Hairpin	Small round head. Length 10.8.	Bone	3 <sup>rd</sup>
17	392/00w	Hairpin	Small round head. Length 6.7; diameter 0.4.	Bone	3 <sup>rd</sup>
18	162/01w	Hairpin	Large round head. Length 7.3; diameter 0.2–0.7.	Bronze	4 <sup>th</sup>
19	206/01w	Hairpin	Two pieces, probably oval head. Length 7.6; diameter 0.4–0.8.	Bronze	6 <sup>th</sup>

20	246/01w	Hairpin	Head not preserved. Length 7.5; diameter 0.3.	Bronze	6 <sup>th</sup>
21	79/03w	Hairpin	Length 6.9; thickness 0.4.	Bone	2 <sup>nd</sup> –3 <sup>rd</sup>
22	91/03w	Hairpin	Length 1.6; thickness 0.6.	Bone	3 <sup>rd</sup>
23	64/04w	Hairpin	Length 5.0; thickness 0.3.	Bone	mid-2 <sup>nd</sup>
24	65/04w	Hairpin	Length 6.0; thickness 0.4.	Bone	3 <sup>rd</sup> –4 <sup>th</sup>
25	71/05w	Hairpin	Length 9.1; thickness 0.3.	Bone	3 <sup>rd</sup>
26	103/05w	Hairpin	Length 8.7; thickness 0.3.	Bone	3 <sup>rd</sup>
27	33/06w	Hairpin	Length 9.7; width 0.9.	Bone	2 <sup>nd</sup>
28	40/06w	Hairpin	Length 8.6; width 0.7.	Bone	3 <sup>rd</sup>
29	37/07w	Hairpin	Length 7.7; thickness 0.5.	Bone	3 <sup>rd</sup>
30	49/07w	Hairpin	Length 11.5; thickness 0.3.	Bronze	2 <sup>nd</sup>
31	57/08w	Hairpin	Length 8.4; thickness 0.3.	Bronze	2 <sup>nd</sup>
32	101/09w	Hairpin	Measurements 10.0 × 0.5.	Bone	1 <sup>st</sup>
33	127/09w	Hairpin	Length 6.9; width 0.5; thickness 0.35.	Bone	1 <sup>st</sup> –2 <sup>nd</sup>
34	37/10w	Hairpin	Measurements 9.8 × 0.2.	Bronze	2 <sup>nd</sup>
35	68/10w	Hairpin	Openings for attaching further elements, carved ornament in the lower part. Measurements 9.2 × 1.2 × 0.92.	Bone	2 <sup>nd</sup> –3 <sup>rd</sup>

### 8. Combs (Table 8)

Arguably, combs are not jewellery *per se*, even though they can and have been used as accessories in fancy hairstyles, especially specimens with a single row of teeth,<sup>37</sup> so six such objects found in Sector IV are included here (170/00w, 188/00w, 12/03w, 72/03w, 140/08w, 23/09w) [Fig. 12]. Some combs, including those from Sector IV, but also from other findspots at Novae, have been published earlier.<sup>38</sup>

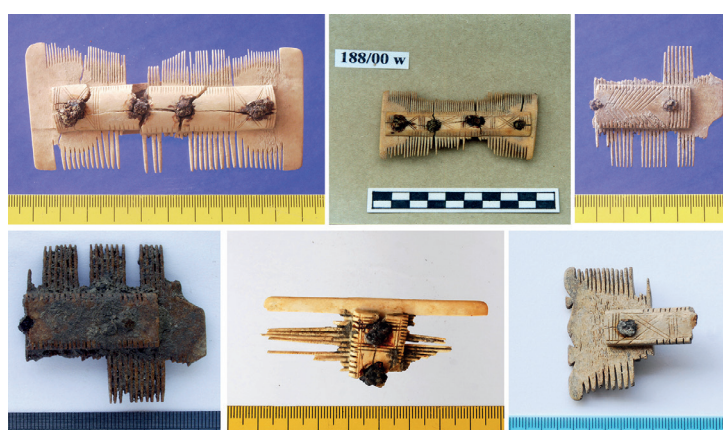


Fig. 12. Combs, inv. nos. 170/00, 188/00, 12/03 (top, left to right), and 72/03, 140/08, 23/09 (bottom, left to right). Photo J. Reclaw

<sup>37</sup> MRÓZ 2003, pp. 74–75.

<sup>38</sup> BRZEZIŃSKI 1992; VLADKOVA 2005.

Table 8. Combs from Sector IV

No.	Inventory Number	Type	Description, as per find inventory (measurements in cm)	Material	Dating (centuries)
1	170/00w	Comb	Length 10.5; height 4.2; thickness 0.9.	Bone	2 <sup>nd</sup> –3 <sup>rd</sup>
2	188/00w	Comb	Length 9.0; height 4.1; thickness 0.8.	Bone	2 <sup>nd</sup> –3 <sup>rd</sup>
3	12/03w	Comb	Length 4.7; height 4.2; thickness 0.7.	Bone	2 <sup>nd</sup>
4	72/03w	Comb	Length 5.0; width 4.5; thickness 0.8.	Bone	late 3 <sup>rd</sup>
5	140/08w	Comb	Length 7.2; height 3.1; thickness 1.0.	Bone	1 <sup>st</sup> –2 <sup>nd</sup>
6	23/09w	Comb	Damaged two-sided comb. Varying width of the teeth on both sides. One iron pin is preserved joining the layers of the comb. Measurements 4.2 × 4.1 × 0.3.	Bone	1 <sup>st</sup>

### Conclusion

A number of glass workshops are attested at Novae, including one in Sector IV itself.<sup>39</sup> We know glass vessels were produced there, but given the rather simple requirements for making either glass bracelets or pearls, we may well assume that in Late Antiquity such inexpensive pieces of jewellery were available at Novae as a ‘home-made’ version.

It is a rather trivial historical tendency that jewellery was worn by women, albeit not exclusively and certainly Roman military men did not shun trinkets. A long-debated topic in *limes* studies is whether women were allowed on the premises of legionary forts. However, even though the majority of not only jewellery, but also ‘feminine-related’ finds indeed came from the Late Antique period, we still have examples quite precisely dated to the operational period of the *castra*, providing fuel to the ongoing discussion, whether women would have had entry to the masculine world of a legionary fortress.<sup>40</sup> Naturally, a Roman soldier’s armour, even in its simplest functional issue, also could have elements of decoration, which, when discovered in a deteriorated state, may be mistaken for jewellery in certain instances.

Overall, the amount and diversity of finds of Roman jewellery in Sector IV represent a somewhat median value in terms of both quality and quantity in comparison to other legionary forts. However, Novae was a medium-sized legionary fortress in a medium-sized province, initially of medium importance.<sup>41</sup> Water always finds its level, and so does jewellery in a Roman fortress, as it would appear.

### Bibliography

ALLISON 2006

P. M. ALLISON, “Mapping for gender. Interpreting artefact distribution inside 1<sup>st</sup>- and 2<sup>nd</sup>-century A.D. forts in Roman Germany”, *Archaeological Dialogues* 13(), pp. 1–20.

ALLISON 2007

P. M. ALLISON, “Artifact distribution within the auxiliary fort at Ellingen: evidence for building use and for the presence of women and children”, *Bericht der Römisch-Germanischen Kommission* 87 (2006), pp. 387–452.

<sup>39</sup> DYCZEK 1999; cf. OLCZAK 1988; GENČEVA 1999.

<sup>40</sup> For a discussion on women in Roman military camps, especially Novae see: TOMAS 2011; TOMAS 2015; cf. ALLISON 2006; ALLISON 2007.

<sup>41</sup> On the relative importance of Novae: LEMKE 2018; LEMKE 2024.

- BISHOP 1988 M. C. BISHOP, "Cavalry equipment of the Roman army in the first century A.D.", [in:] *Military Equipment and the Identity of Roman Soldiers. Proceedings of the Fourth Roman Military Equipment Conference (= B.A.R. International Series 394)*, ed. J. C. COULSTON, Oxford, pp. 67–195
- BRZEZIŃSKI 1992 W. BRZEZIŃSKI, "Grzebień z Novae z odcinków II, IV, XI" [Combs from Novae found in Sectors II, IV, XI], *Novensia* 4, pp. 29–45.
- DIMITROVA-MILČEVA 2006 A. DIMITROVA-MILČEVA, *Die Bronzefunde aus Novae, Moesia Inferior*, Warszawa 2006.
- DYCZEK 1995 P. DYCZEK, "Bronze Finds from the Site of the Valetudinarium at Novae (Moesia Inferior)", [in:] *Acta of the 12<sup>th</sup> International Congress on Ancient Bronzes, Nijmegen 1992 (= Nederlandse Archeologische Rapporten 18)*, eds. S. T. A. M. MOLS, A. M. GERHARTL-WITTEVEEN, H. KARS, Nijmegen, pp. 365–372.
- DYCZEK 1997 P. DYCZEK, "The Valetudinarium at Novae – New Components", [in:] *Roman Frontier Studies 1995. Proceedings of the XVI<sup>th</sup> International Congress of Roman Frontier Studies (= Oxbow Monograph 91)*, eds. W. GROENMAN-VAN WAATERINGE, B. L. VAN BEEK, W. J. H. WILLEMS, S. L. WYNIA, Oxford, pp. 199–204.
- DYCZEK 1998 P. DYCZEK, „Novae – Western Sector, 1996. Preliminary Report on the excavations of the Warsaw University Archaeological Expedition”, *Archeologia* XLVIII (1997), pp. 43–49.
- DYCZEK 1999 P. DYCZEK, "A Glass Atelier from Sector IV in Novae", [in:] *Der Limes an der Unteren Donau von Diokletian bis Heraklios. Vorträge der Internationalen Konferenz Svištov, Bulgarien (1.–5. September 1998)*, eds. G. VON BÜLOW, A. DIMITROVA-MILČEVA, Sofia, pp. 99–104.
- DYCZEK 2001 P. DYCZEK, "Novae – Western Sector (Section IV), 1997–1999. Preliminary Report on the excavations of the Center for Archaeological Research – Novae, Warsaw University", *Archeologia* LI (2000), pp. 89–103.
- DYCZEK 2004 P. DYCZEK, "Why is the legionary hospital in Novae unique?", *Ephemeris Dacoromana. Serie nuova* 12(1), pp. 159–170.
- DYCZEK 2005 P. DYCZEK, "The site of the *valetudinarium* in Novae in the third century AD: Remodeling the Architecture", [in:] *Römische Städte und Festungen an der Donau. Akten der regionalen Konferenz, Beograd 16–19. Oktober 2003*, ed. M. MIRKOVIĆ, Beograd, pp. 231–238.
- DYCZEK 2008 P. DYCZEK, "Archaeological Excavations at Novae. A History of Research with special Consideration of Sector IV (Legionary Baths, *valetudinarium*, Late Architecture)", [in:] *Novae: Legionary Fortress and Late Antique Town*, vol. I: *A Companion on the Study of Novae*, eds. T. DERDA, P. DYCZEK, J. KOLENDO, Warsaw, pp. 31–70.
- DYCZEK 2009 P. DYCZEK, "Flavian baths of *legio I Italica* from *Castrum Novae*", [in:] *Limes XX. XX Congreso internacional. De estudios sobre la frontera Romana. XX<sup>th</sup> International Congress of Roman Frontier Studies*, eds. Á. MORILLO, N. HANEL, E. MARTÍN, *Gladius* 13, Madrid, pp. 1477–1485.
- DYCZEK 2011 P. DYCZEK, "Settlement and architectural changes in sector IV", [in:] R. CIOLEK, P. DYCZEK, *Novae: Legionary Fortress and Late Antique Town*, vol. II: *Coins from Sector IV*, Warsaw, pp. 1–44.
- DYCZEK 2021 P. DYCZEK, *Novae. Balkańskie wrota / Нове. Порта към Балканите / Novae. Gate to the Balkans*, Warszawa.
- GACUTA 1978 W. GACUTA, "Wybrane przedmioty metalowe z Novae (Kampania wykopaliskowa 1975)" [Selected metal objects from Novae (1975 excavation campaign)], *Archeologia* XXVIII (1977), pp. 187–193.
- GACUTA 1987 W. GACUTA, "Przedmioty metalowe z Novae – kampanie wykopaliskowe z lat 1960–1969, 1971, 1973, 1975 i 1977" [Metal objects from Novae

- excavation campaigns of 1960–1969, 1971, 1973, 1975, and 1977], *Novaensia* 1, pp. 75–175
- GACUTA 1993 W. GACUTA, “Przedmioty metalowe z Novae. 6 kampanii wykopaliskowych Ekspedycji Archeologicznej w latach 1977–1987” [Metal objects from Novae. Six campaigns of the Archaeological Expedition in 1977–1987], *Novensia* 5, pp. 7–178.
- GENČEVA 1998 E. GENČEVA, “Drobne przedmioty metalowe z odcinka IV w Novae. Sprzączki, aplikacje, kolczyki” [Small metal objects from Sector IV at Novae: Buckles, appliques, earrings], *Novensia* 11, pp. 81–97
- GENČEVA 1999 E. GENČEVA, „La production dans le camp militaire romain Novae pendant la basse Antiquité (à l’instar du scamnum tribunorum)”, [in:] *Der Limes an der Unteren Donau von Diokletian bis Heraklios. Vorträge der Internationalen Konferenz Svištov, Bulgarien (1.–5. September 1998)*, eds. G. VON BÜLOW, A. DIMITROVA-MILČEVA, Sofia, pp. 95–98.
- GENČEVA 2000 E. GENČEVA, “Metalowe części wyposażenia żołnierskiego z Novae” [Military-issue metal fittings found at Novae], *Novensia* 12, pp. 49–98
- GUIDO 1978 M. GUIDO, *The Glass Beads of the Prehistoric and Roman Periods in Britain and Ireland*, London.
- HENKEL 1913 F. HENKEL, *Die römischen Fingerringe der Rheinlande und der benachbarten Gebiete*, Berlin.
- HIGGINS 1961 R. A. HIGGINS, *Greek and Roman Jewellery*, London.
- HÖPKEN 2003 C. HÖPKEN, “Herstellung quarzkeramischer Melonenperlen im römischen Flottenlager Köln Alteburg: Terminologie – Technologie – Befund”, *Römische Keramik. Herstellung und Handel. Kolloquium Xanten, 15.–17.6.2000 (= Xantener Berichte 13)*, eds. B. LIESEN, U. BRANDL, Mainz am Rhein, pp. 353–363.
- JAKUBOWSKA 2024 A. JAKUBOWSKA, *Antyczne ozdoby ciała z Novae (I – VI w.). Znaleźiska z wykopalisk Ekspedycji Wydziału Archeologii UW* [Ancient Body Ornaments from Novae (1<sup>st</sup>–6<sup>th</sup> centuries). Finds from the Excavations of the University of Warsaw Archaeological Expedition], Warszawa (unpublished BA thesis in the Faculty of Archaeology, University of Warsaw).
- KIRAČINA 1983 R. KIRAČINA, *Biżuteria w Novae (Moesia Inferior) na podstawie materiałów z wykopalisk bułgarskich i polskich w latach 1960–1983* [Jewellery in Novae (Moesia Inferior) Based on Materials from Bulgarian and Polish Excavations Conducted in 1960–1983], Warszawa (unpublished MA thesis in the Faculty of Archaeology, University of Warsaw).
- KIRAČINA 1991 R. KIRAČINA, „Biżuteria z dwóch grobów rzymskich” [Jewellery from two Roman graves], *Novensia* 2, pp. 12–142.
- LEMKE 2005 M. LEMKE, “Jewelry for the dead. A few thoughts on finds from the medieval cemetery at Novae, sector IV”, *Novensia* 16, pp. 9–16.
- LEMKE 2006 M. LEMKE, “The earrings from the early medieval cemetery at Novae”, *Novensia* 17, pp. 53–61.
- LEMKE 2011 M. LEMKE, “Fieldwork at Novae (Bulgaria) in 2009 and 2010”, *Światowit VIII (XLIX)/A (2009–2010)*, pp. 191–194.
- LEMKE 2015 M. LEMKE, “The Dwindling Legion. Architectural and Administrative Changes in Novae (Moesia inferior) on the Verge of Late Antiquity”, [in:] *Roman Military Architecture on the Frontiers in Late Antiquity: Armies and their Architecture*, eds. R. COLLINS, M. WEBER, M. SYMONDS, London, pp. 90–97.
- LEMKE 2018 M. LEMKE, “Advocatus diaboli—What if it was not the Eighth Legion that built Novae?”, *Novensia* 29, pp. 73–86.
- LEMKE 2024 M. LEMKE, “From imperial guardians to local patriots. The defenders of Novae (Moesia inferior) in Late Antiquity and their relationship to state, church and neighborhood”, [in:] *Living and Dying on the Roman*

- Frontier and Beyond. Proceedings of the 25<sup>th</sup> International Congress of Roman Frontier Studies 3 (= Archeologische Berichten Nijmegen 11)*, eds. H. VAN ENCKEVORT *et alii*, Leiden, pp. 241–248.
- MAJEWSKI *et alii* 1967 K. MAJEWSKI, S. PARNICKI-PUDELKO, L. PRESS, S. KOLKÓWNA, J. TRYNKOWSKI, B. ZAKRZOWSKA, J. ZIOMECKI, “Novae – Sektor Zachodni 1965. Sprawozdanie tymczasowe z wykopalisk Ekspedycji Archeologicznej Uniwersytetu Warszawskiego [Novae, Western section 1965. Preliminary report on the excavations of the Archaeological Expedition of the University of Warsaw], *Archeologia* XVII (1966), pp. 143–187.
- MAJEWSKI *et alii* 1974 K. MAJEWSKI, L. PRESS, L. DĄBROWSKI, L. KAJZER, A. NADOLSKI, T. SARNOWSKI, W. SZUBERT, Z. TABASZ, „Novae – Sektor Zachodni 1971. Sprawozdanie tymczasowe z wykopalisk Ekspedycji Archeologicznej Uniwersytetu Warszawskiego” [Novae, Western Sector 1971. Preliminary report on the excavations of the Archaeological Expedition of the University of Warsaw], *Archeologia* XXIV (1973), pp. 101–145.
- MIHAILESCU-BÎRLIBA 2017 V. MIHAILESCU-BÎRLIBA, “Two golden pendants from the 4<sup>th</sup> century”, *Ephemeris Napocensis* 27, pp. 267–278.
- MRÓZ 2003 A. MRÓZ, *Ozdoby z odcinka IV w Novae z lat 1985–2002* [Ornaments from Sector IV in Novae from the Years 1985–2002], Warszawa (unpublished MA thesis in the Faculty of Archaeology, University of Warsaw).
- MRÓZ 2005 A. MRÓZ, “Bransolety i paciorki szklane z odcinka IV w Novae (od I do VI wieku)” [Glass bracelets and beads from Sector IV at Novae (of 1<sup>st</sup> to 6<sup>th</sup> century)], *Novensia* 16, pp. 17–39.
- OLCZAK 1988 J. OLCZAK, *Produkcja szkła we rzymskim i wczesnobizantyjskim Novae* [Glass Production in Roman and Early Byzantine Novae], Toruń.
- PRESS *et alii* 1989 L. PRESS, P. DYCZEK, W. KLINGER, K. LEWARTOWSKI, A. ŁADOMIRSKI, R. MASSALSKI, T. SARNOWSKI, W. SZUBERT, „Novae, Sektor Zachodni 1985. Sprawozdanie tymczasowe z wykopalisk Ekspedycji Archeologicznej Uniwersytetu Warszawskiego [Novae, Western Sector 1985. Preliminary report on the excavations of the Archaeological Expedition of the University of Warsaw], *Archeologia* XXXVIII (1987), pp. 145–175.
- PRESS *et alii* 1991 L. PRESS, P. DYCZEK, W. KLINGER, J. KOLENDO, R. MASSALSKI, T. SARNOWSKI, J. ZIOMECKI, „Novae – Sektor Zachodni, 1987. Sprawozdanie tymczasowe z wykopalisk Ekspedycji Archeologicznej Uniwersytetu Warszawskiego” [Novae, Western Sector 1987. Preliminary report on the excavations of the Archaeological Expedition of the University of Warsaw], *Archeologia* XL (1989), pp. 135–161.
- PRESS *et alii* 1992 L. PRESS, P. DYCZEK, A. ŁADOMIRSKI, R. MASSALSKI, K. PIASECKI, T. SARNOWSKI, „Novae – Western Sector, 1989. Preliminary Report on The Excavations of The Warsaw University Archaeological Expedition”, *Archeologia* XLII (1991), pp. 123–136.
- RIHA 1990 E. RIHA, *Der römische Schmuck aus Augst und Kaiseraugst*, Augst.
- RUPRECHTSBERGER 1979 E. RUPRECHTSBERGER, *Die römischen. Bein- und Bronzenadeln aus den Museen Linz und Enns*, Linz.
- RUSEVA-SŁOKOSKA 1991 L. RUSEVA-SŁOKOSKA, *Roman Jewellery*, Sofia.
- STERN 1990 W. STERN, *Exkurs 4: Untersuchungen an einer Melonenperle*, [in:] E. RIHA, *Der römische Schmuck aus Augst und Kaiseraugst*, Augst, p. 93.
- SIMNISKYTE 2002 A. SIMNISKYTE, “Roman period metal half-moon shaped pendants with knobs in Eastern Baltic region”, *Archeologia Baltica* 5, pp. 95–122.
- TOMAS 2011 A. TOMAS, “Reading gender and social life in military spaces”, *Światowit VIII (XLIX)/A* (2009–2010), pp. 139–150.
- TOMAS 2015 A. TOMAS, “Female family members related to soldiers and officers of the *legio I Italica*. A case study”, [in:] *Colonization and Romanization in*

- Moesia Inferior. Premises of A Contrastive Approach*, ed. L. MIHAILESCU-BÎRLIBA, Kaiserslautern, pp. 93–124.
- VAN DER VEEN 2020 V. VAN DER VEEN, *Roman Military Equipment and Horse Gear from the Hunerberg at Nijmegen. Finds from the Augustan Military Base and Flavio-Trajanic Castra and Canabae Legionis*, Nijmegen.
- VLADKOVA 1999 P. VLADKOVA, “Amulets Made of Bone and Horn from Lower Moesia”, [in:] *Der Limes an der unteren Donau von Diokletian bis Heraklios. Vorträge der Internationalen Konferenz Svištov (1.–5. September 1998)*, eds. G. VON BÜLOW, A. MILČEVA, Sofia, pp. 285–289.
- VLADKOVA 2005 P. VLADKOVA, “Predmeti ot kost i rog ot sektor IV v Nove” [Objects of bone and antler from Sector IV in Novae], *Novensia* 16, pp. 51–104.

Martin Lemke  
Faculty of Archaeology  
University of Warsaw  
m.lemke@uw.edu.pl  
orcid.org/0000-0002-1213-5426