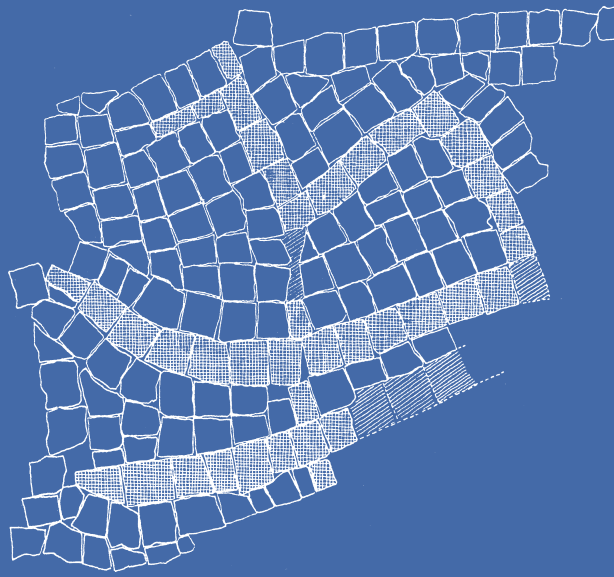




Chronologie und vergleichende Chronologien zum Ausgang der Römischen Republik und zur Frühen Kaiserzeit

Heimo Dolenz und Karl Strobel (Hrsg.)

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**Tagungsband des internationalen Kolloquiums anlässlich 70 Jahre
Archäologische Ausgrabungen auf dem Magdalensberg**

Zugleich Festgabe für Eleni Schindler Kaudelka

**herausgegeben von
Heimo Dolenz und Karl Strobel**

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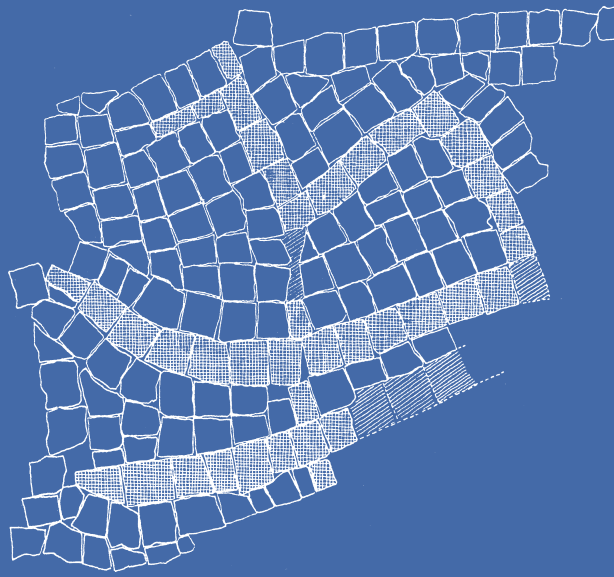
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Chronologie und vergleichende Chronologien zum Ausgang der Römischen Republik und zur Frühen Kaiserzeit

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Caligati in the eastern hinterland of Aquileia up to the Early Augustan period

– JANKA ISTENIČ –

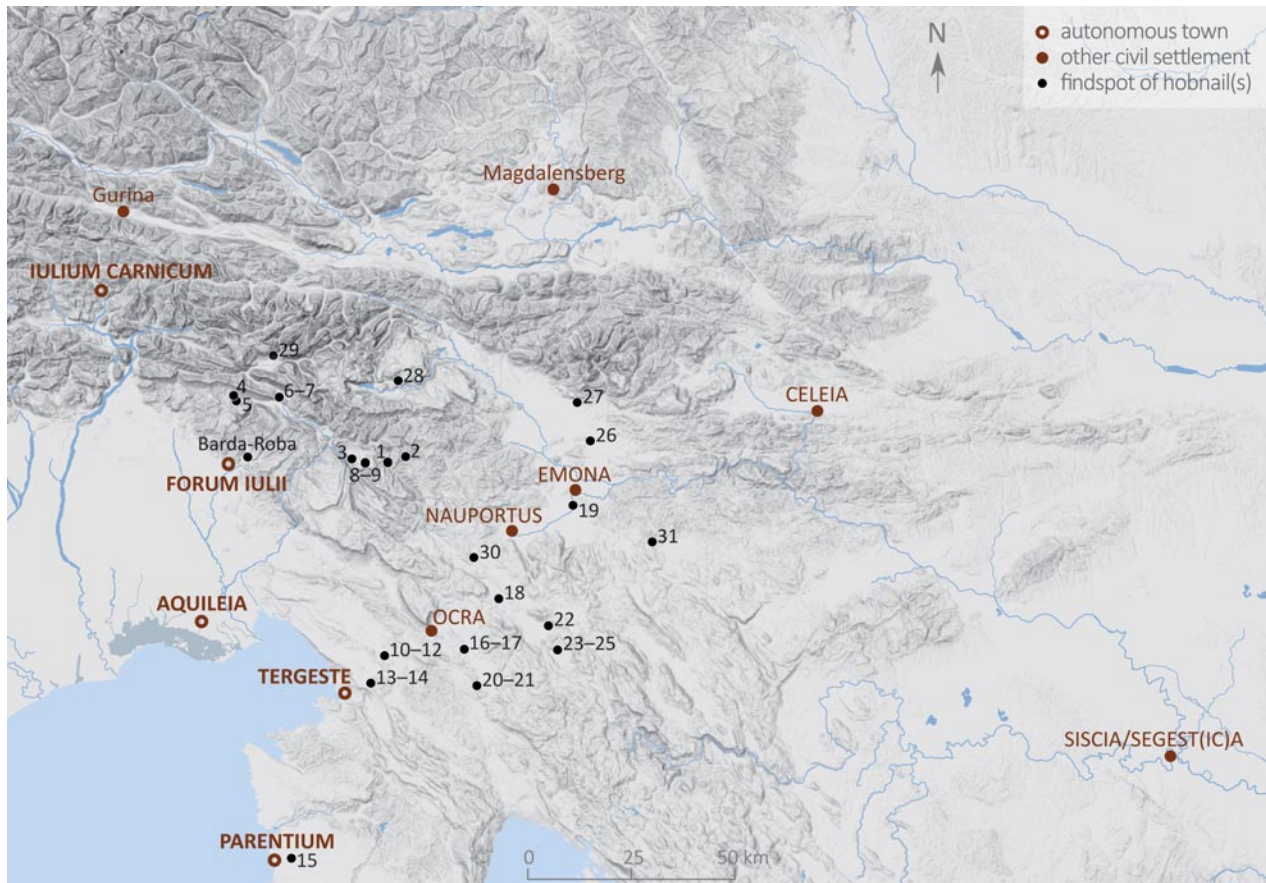


Fig. 1: The area between Aquileia and Siscia in the time of Octavian's Illyrian Wars with marked findspots of Type Alésia A-D hobnails. Site numbers refer to List 1.

1. Introduction

The starting point for the Roman territorial and economic conquest of the easternmost areas of Gallia Cisalpina and Illyricum was the *colonia* Aquileia, founded in 181 BC. Even before the end of the 2nd century BC, the Roman military force gained control over Razdrto/Ocra,¹ the key pass on the easiest route from the north-eastern Apennine Peninsula to the Danube

Basin and the Balkans. From Razdrto, the main route continued to the Postojna Basin, Vrhnika and the Ljubljana Gate (**Fig. 1**).

Research in the last two decades has shed new light on the important role that the Roman army played in this region at the end of the Republican and in the Augustan period.² The paper focuses on one of the most numerous

1 Horvat & Bavdek 2009, 93–96. Cf. the contribution of Karl Strobel in this volume.
2 Bernardini et al. 2015; Gaspari 2010; Gaspari 2014; Gaspari et al. 2014; Horvat 2002; Horvat 2009; Istenič 2005a; Istenič 2009; Istenič, Laharnar, Horvat 2015;

Istenič 2019; Laharnar 2009; Laharnar 2011; Laharnar 2013a; Laharnar 2013b; Laharnar 2016; Laharnar & Lozić 2016; Laharnar & Lozić 2019; Mason 2006; Mason 2008; Šašel Kos 2011; Šašel Kos 2015; Šašel Kos 2018.



Fig. 2: Some of the hobnails from Grad near Reka that the NMS acquired after 2005. Photograph by Tomaž Lauko, NMS.

and widespread militaria from the period, i.e. hobnails.

2. The hobnails from the battlefield sites in the Tolmin-Cerkno area

In the hinterland of the River Soča (Isonzo), the hard-to-reach and naturally well protected hilly area around Tolmin and Cerkno holds three sites that yielded numerous Roman military finds: Grad near Reka,³ Gradišče in Cerkno and Vrh gradu near Pečine. Most of the finds consist of artillery missiles and hobnails. All

three sites have narrow and long summit plateaus that appear unsuitable for habitation; two of them were additionally fortified with a rampart in places of easier access.⁴

All three sites yielded the same types of militaria that indicate Roman military attacks, probably during the same campaign. Their parallels from dated contexts suggest the assemblages are post-Caesarean and earlier than the Middle Augustan period. Numismatic evidence and Appian (*///yr.* 16,47), who men-

3 Grad near Reka and its immediate vicinity revealed finds related to a Roman attack (Istenič 2005a, 77–79, Fig. 2). For the sake of brevity and simplicity, the site

is referred to as Grad near Reka in this paper.
4 Istenič 2005a; Istenič 2015.

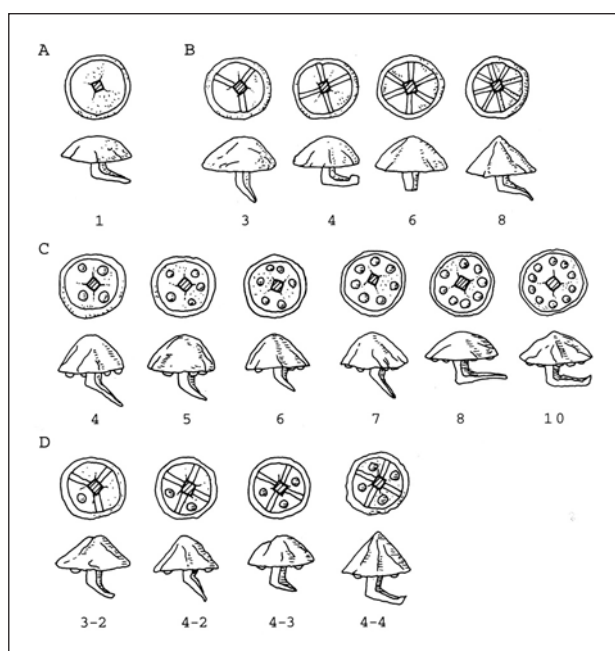


Fig. 3: Hobnail types from Alésia. Scale 1 : 2. From Brouquier-Reddé & Deyber 2001, Pl. 93: 138 D 4-4.

tions the Carni among the tribes defeated during Octavian's Illyrian Wars,⁵ indicate that the sites were attacked at the beginning of Octavian's Illyrian Wars (35–33 BC). Such a dating fits well in the broader historical context as it was vital for the Romans to pacify their flank, i.e. the hinterland of the Soča Valley including the Tolmin-Cerkno area, before campaigning further to the southeast.⁶

The three sites were probably not settlements; they might have been cult places of the pre-Roman population living in as yet unknown settlements in the vicinity. They were well protected against attackers and may have been of great importance for the identity of the pre-Roman population and perhaps became (central and possibly last) points of their defence.⁷

More than 110 hobnails were found at Grad near Reka and its immediate surroundings (**Fig. 2**),⁸ ten are known from Gradišče in Cerkno⁹ and thirteen from Vrh gradu near Pečine.¹⁰ Following the typology of hobnails from Alésia (**Fig. 3**; cf. below), more than 80 % of the hobnails from the three battlefield sites are of the D type;¹¹ hobnails of the B and C types also appear, but in small numbers, while Type A is represented with just one example (**Fig. 4**).

3. Late Republican/Early Augustan hobnails: production manner, types and size

The production manner

Roman (hob)nails were probably forged in a manner very similar to that shown in videos available on the internet.¹² The pattern on the underside of the head is a negative of the base with a hole in the middle, into which the (hob)nail was inserted while the head was forged.

Of the patterns on the underside, a raised cross (matching Type B of the Alésia typology) seems to be (one of) the simplest. Examples of nails with such a pattern were forged about thirty years ago at Kropa in Slovenia (**Fig. 5**).

The types

Hobnails from the three battlefield sites find close parallels in hobnails from Alésia. The c. 1200 hobnails from Alésia were grouped in Types A, B, C and D based on the pattern on the underside (**Fig. 3**; with variants of each type). Most are of Type D, followed in quantity by Types A, B and C (**Fig. 6**).¹³ If not stated otherwise, the hobnail typology in the paper refers to the Alesia typology shown in Fig. 3.

5 The Carni occupied areas in the northern Adriatic, including the Tolmin-Cerkno area, in the east perhaps extending as far as the present-day Kranj (Istanič 2005a; Guštin 2011).

6 Istanič 2005a; Istanič 2015.

7 Istanič 2015.

8 The National Museum of Slovenia (hereafter abbreviated as NMS) recorded more than a hundred after the Istanič 2005a publication.

9 Istanič 2015, Pl. 2: 5–14.

10 Istanič 2015, Pl. 5: 9–21.

11 Several hobnails cannot reliably be sorted into Types A–D as they have not been cleaned/conserved and their pattern on the underside is not (clearly) visible.

12 <https://www.youtube.com/watch?v=ZBfkmPt-WYw>; <https://www.youtube.com/watch?v=wmcDjLnOeR8>. Last accessed 20.5.2019.

13 Cf. Brouquier-Reddé & Deyber 2001, 304.

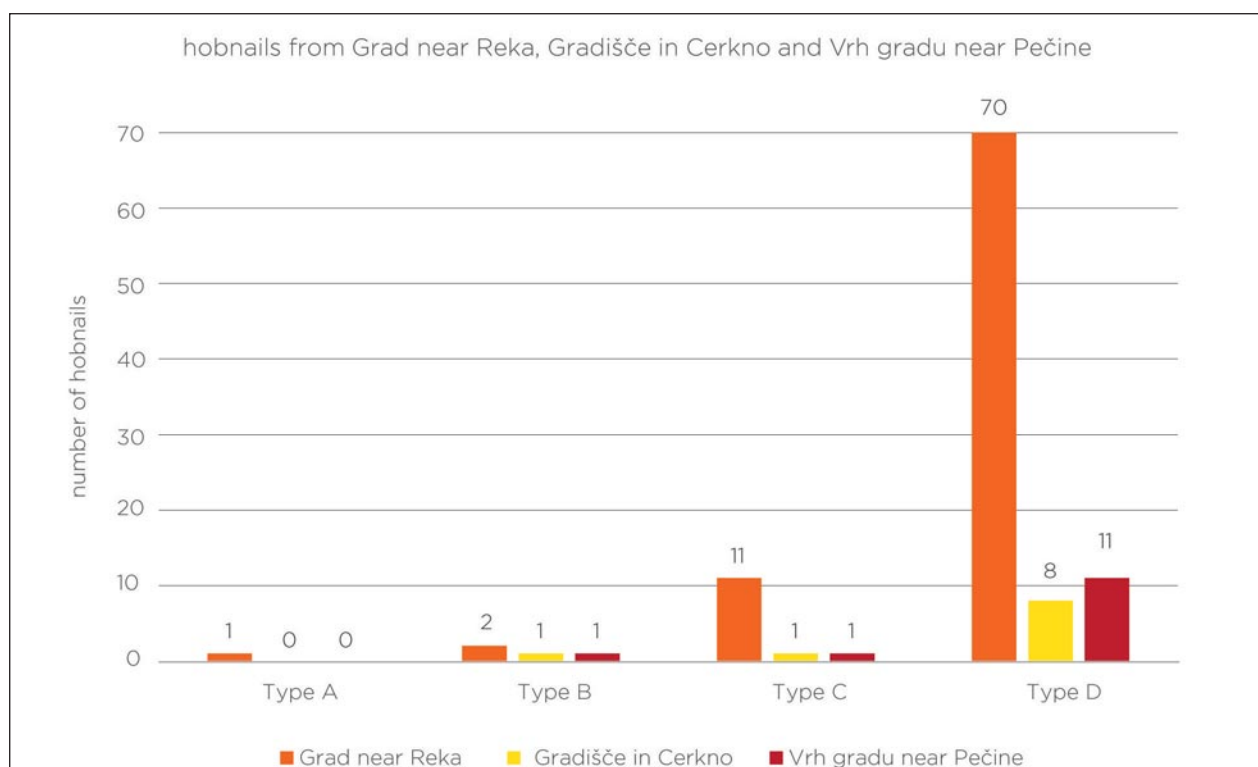


Fig. 4: Number of Type A-D hobnails from Grad near Reka, Gradišče in Cerkno and Vrh gradu near Pečine.



Fig. 5: Nails forged in Kropa (Slovenia) in the 1980s. Photograph by Tomaž Lauko, the NMS.

In addition to Alésia, hobnails of the A-D types appear at numerous other sites related to Caesar's campaigns in Gaul.¹⁴

In Spain, 681 hobnails of the D type were found at Andagoste, the site of a military conflict between the Romans and the indigenous population that took place between 44 and 30 BC.¹⁵

About 800 hobnails from the Roman fortress at Petrisberg in Trier (Germany), built in the winter of 31/33 BC and only occupied for a short period, are of the A-D types.¹⁶

Hobnails of the A-D types come from several sites in Spain, linked to military encounters during the Cantabrian Wars (29-19 BC).¹⁷

14 Poux 2008, 376-381, Figs. 53, 54; Hornung 2012, 217, Fig. 7; Hornung 2015, 116, 117; Hornung 2018, 120-122.

15 Only two hobnails are depicted in publications (Ocharan Larrondo & Unzueta Portilla 2006, 475, 476, 480, 482, 484, Fig. 121: 11-12; Ocharan Larrondo & Unzueta Portilla 2002, Fig. 2: 11, 12). The site yielded Type D hobnails with a flat lateral reinforcement

unknown from other sites (Ocharan Larrondo & Unzueta Portilla 2006, 484, Fig. 121: 12).

16 Löhner 2018, 148, 151, Fig. 14: 1 (diameters roughly between 10 and 20 mm); Löhner, pers. comm.

17 Fernández Vega et al. 2012, 240-246, Fig. 15; Peralta Labrador, Hierro Gárate, Gutiérrez Cuenca 2011, 163, Fig. 17; Rodríguez Morales et al. 2012, 160, Fig. 8.

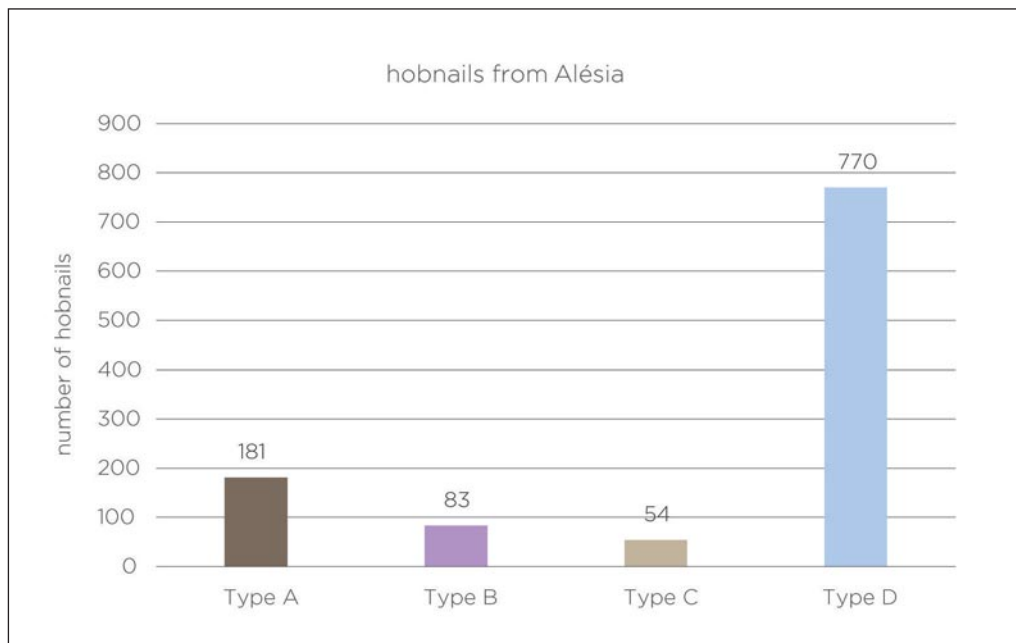


Fig. 6: Number of Type A-D hobnails from Alésia. Source: Brouquier-Reddé & Deyber 2001, 304.

Hobnails with a pattern unknown at other sites, composed of three raised semicircles and three dots between them, have recently been discovered at Lampourdier alongside coins and other finds from the end of the 2nd century BC; the hobnails were named Type F (**Fig. 7**). Lampourdier was presumably the site of a Roman camp used in 105 BC, during the battle against the Cimbri and Teutones at Arausio/Orange (southern France). Preliminary publications report a high number of recovered hobnails. It seems that none with a relief pattern on the underside fall in the B-D types.¹⁸ From a typological point of view, there seems to be a development from the Type F to the Type D pattern.

Regarding the beginning of the D type hob-

nails, we should mention the Barda-Roba site overlooking the Natisone Valley (north-east of Cividale/Forum Iulii in north-eastern Italy),¹⁹ where numerous Type D hobnails came to light as surface finds.²⁰ Other militaria from the site include lead slingshot²¹ with parallels at the hillfort on Grad near Šmihel²¹ that may be related to a Roman military conquest in the 2nd century BC.²³ At Barda-Roba, three Roman coins from the 2nd and three from the 1st century BC were also found; the latest coin is a *denarius* minted in 79 BC.²⁴ In contrast, finds from the Caesarean–Early Augustan period are scarce.²⁵ The slingshot and the hobnails might therefore be related to the same Roman military involvement at the site, dated soon after 79 BC, and to the Roman conquest of Aquileia’s north-eastern hinterland.

18 Deyber & Zaaraoui & Buffat 2018.

19 Tagliaferi 1986a, 121–126, 129, 132, Figs. 21, 22, Pls. 26, 27; Tagliaferi 1986b, 148–150.

20 Tagliaferi 1986a, 125; Tagliaferi 1986b, 148–150. Eleven iron hobnails are mentioned from the site, but are not published with a drawing, photograph or detailed description (Tagliaferi 1986a, 125; Tagliaferi 1986b, 149). The photographs kindly sent to me by Fabio Pagano, director of the Museo Archeologico Nazionale di Cividale del Friuli, show that six hobnails are of the D and B types, while the other five cannot

be classified.

21 Tagliaferi 1986a, 125, 132, Pl. 27.

22 Laharnar 2011, 351.

23 Istenič 2019, Fn. 35.

24 Tagliaferi 1986a, 124, 125.

25 Vitri (2007, 160, 161) mentions fragments of a segmental cuirass (*lorica segmentata*) and sporadic traces of human presence at the site until the Late Roman period. For a Middle La Tène sword in its scabbard and other Celtic warrior equipment, see: Righi 2004.

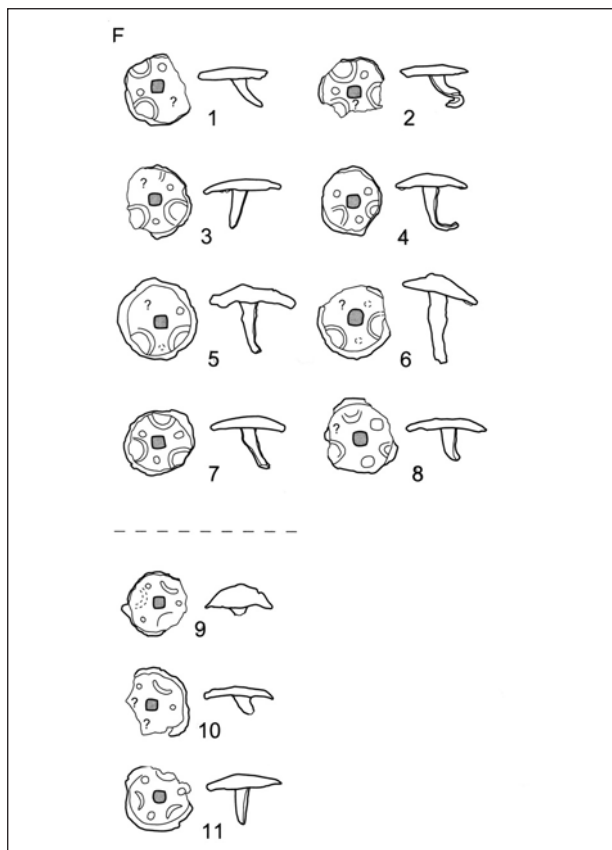


Fig. 7: Hobnails of Type F from Lampourdier. Scale

1 : 2. Source: Deyber et al. 2018, 36, Fig. 15.

The earliest hobnails related to Roman soldiers were collected during metal-detector surveys at the presumed site of the battle that the Romans and Carthaginians fought in 208 BC at Baecula, southern Spain. Regarding their size and form, they were divided into Groups A, B, C and D that are not at all related to the types from Alésia. The (hob)nails of Groups C and D are small (head diameters 6 to 10 and around 6 mm, respectively), while the 120 hobnails of the A and B groups are similar in size (head

diam. 10 to 18 mm) and form to those from Alésia, but only three of them have a relief pattern on the underside (Types C and D according to the Alésia classification).²⁶ It does not seem likely that the three hobnails can be reliably related to the battle and dated to 208 BC. The coins from the site clearly show that not all finds from the site must be connected to the battle, as eight of the 64 coins were minted after 208 BC.²⁷ The relation to the 208 BC battle is particularly questionable for objects of types that appear in small numbers, which is the case of the three hobnails with relief decoration on the underside.

The numerous published finds from the fortress at Dangstetten, dated from about 15 to 9/8 BC,²⁸ include hobnails of the A and C types, but not of Types B and D.²⁹ The same applies to the hobnails from the Middle/Late Augustan sites such as Haltern,³⁰ Kalkriese³¹ and Lahnau-Waldgirmes.³²

As follows from above, the earliest reliable evidence for hobnails with a raised relief pattern on the underside (Type F) comes from Lampourdier, probably the site of a Roman army camp from 105 BC. The hobnails of the A, B, C and D types were no doubt in use from Caesar's Gallic Wars to Octavian's Cantabrian Wars. The evidence from Barda Roba suggests they (more precisely Types D and B) may already have been in use roughly from the 70s BC onwards. In the Middle and Late Augustan period, the hobnails of the A and C types – the raised dots of Type C are at this time always at the perimeter, smaller and more numerous compared to earlier hobnails of the type – were still

26 Quesada Sanz et al. 2015, 377–388, Fig. 35.

27 One coin is dated to 195/179 BC and seven to 150/80 BC (García-Bellido et al. 2015, 402, 418–421, Cat. Nos. 58–64).

28 Fingerlin 1986, 10; Fingerlin 1998, 9; Roth-Rubi 2002; Roth-Rubi 2006, 103; Ehlig 2010.

29 Fingerlin 1986, *Fundstelle* 2/1, 31/7, 54/14, 104/5, 142/7, 158/4, 182/13, 242/7, 268/33, 291/4, 309/9, 318/26, 355/3, 361/2, 421/2, 529/12, 525/3, 594/13; Fingerlin 1998, *Fundort* 630/, 928/2, 955/9, 956/8, 982/4, 989/3, 1096/4, 1100/3, 1110/7, 1117/11, 1128/5, 1144/8,

1220/28, 1327/12, 1350/16.

30 Harnecker 1997, 87, Pl. 69: 754, 755. Dating: Aßkamp 2009, 176, 177.

31 Harnecker & Franzius 2008, 12, Cat. Nos. 172–190, Pls. 12: 172, 13: 173–190; Harnecker & Tolksdorf-Lienemann 2004, 59, 63, 64, 79, 81, 83, Pls. 4: 1110, 1690, 5: 2401, 3150, 6: 77, 85, 7: 834, 9: 162, 2047, 1089, 1105, 1119, 10: 2551. Dating: Moosbauer & Wilbers-Rost 2009, 61, 62.

32 Becker, Rasbach 2015, 181, 182, Fig. 162. One of the uncleaned hobnails might be of Type D. Dating: Becker 2015, 70–72.

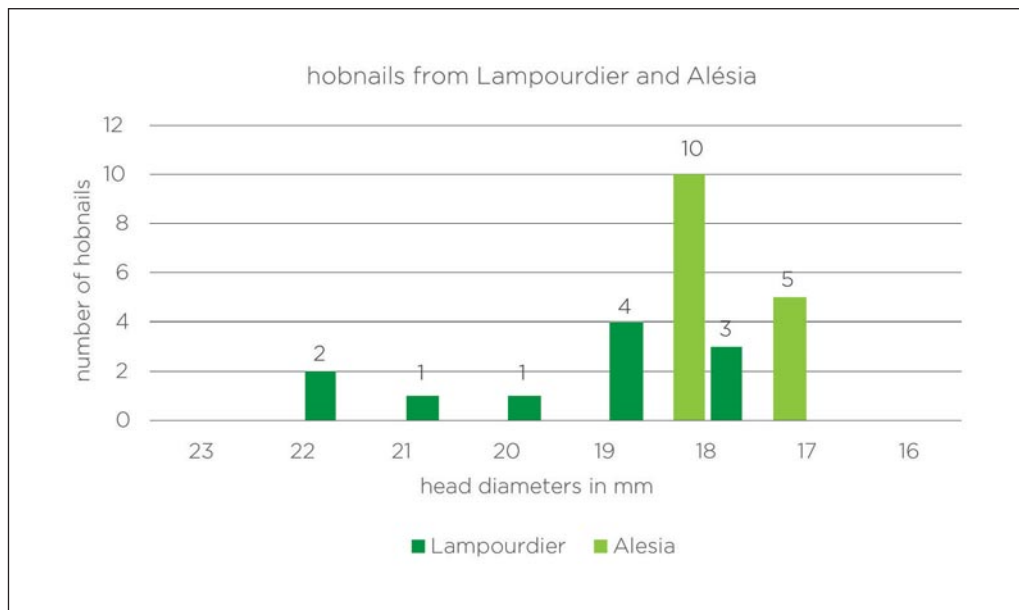


Fig. 8: Head diameters of the hobnails from Lampourdier and Alésia. Sources: Deyber et al. 2018, 36, Fig. 15 (drawings in the scale of 1 : 2) and Brouquier-Reddé & Deyber 2001, Pl. 93: 138 (drawings in the scale of 1 : 2).

in use (see below), while the B and D types disappeared.

The size

Hobnails are very important in dating the Late Republican and Augustan sites. It therefore seems appropriate to take a closer look at whether the size of hobnail heads is chronologically diagnostic.

Matthieu Poux deemed head diameter as the essential criterion for distinguishing early (i.e. Caesarian) hobnails from later ones (i.e. Augustan), with head diameters above 13 mm characterising the early group.³³ His opinion was widely accepted³⁴ or only slightly revised by considering a somewhat larger head diameter as the limit between the larger/earlier and smaller/later hobnails.³⁵

The published 668 hobnails from Lampourdier constitute two groups of head diameters: 73 %

measure between 13 and 25 mm, 27% between 6 and 12 mm. The publication presents eleven hobnails in drawing, all of them of the F type with head diameters ranging between 18 and 22 mm (**Fig. 8**).³⁶ So it might be inferred that the hobnails of the F type fall in the group of larger hobnails from Lampourdier.³⁷

Finds from Alésia include 594 reported hobnails. Their publication does not include a catalogue and only fifteen are presented in drawing.³⁸ Measurements taken from the drawings show very uniform head diameters between 17 and 18 mm (**Fig. 8**), but this does not coincide with the information on the diameters given in the text, which is 10 to 38 mm.³⁹ Neither the information in the drawings nor that in the text correspond to the values given for Alésia in the diagram published first in 2008⁴⁰ and again in several later papers.⁴¹

33 Poux 2008, 380, 381, Fig. 56.

34 Hornung 2012, Figs. 7, 8; Hornung 2018, 121, 122, Figs. 6, 7.

35 Martin Kilcher 2011, 35, 54, 55, Fig. 24.

36 Deyber et al. 2018, 36, Fig. 15.

37 The authors suggest that the group of hobnails with a large diameter might not be hobnails, but nails from shields; in my opinion, this is highly improbable. I do

question, however, whether the nails of the smaller group are hobnails.

38 Brouquier-Reddé & Deyber 2001, 303–305, Pl. 93: 138.

39 Brouquier-Reddé & Deyber 2001, 304, Pl. 93: 138.

40 Poux 2008, 380, Fig. 56.

41 Martin Kilcher 2011, 38, Fig. 9a; Hornung 2015, 114, Fig. 9.

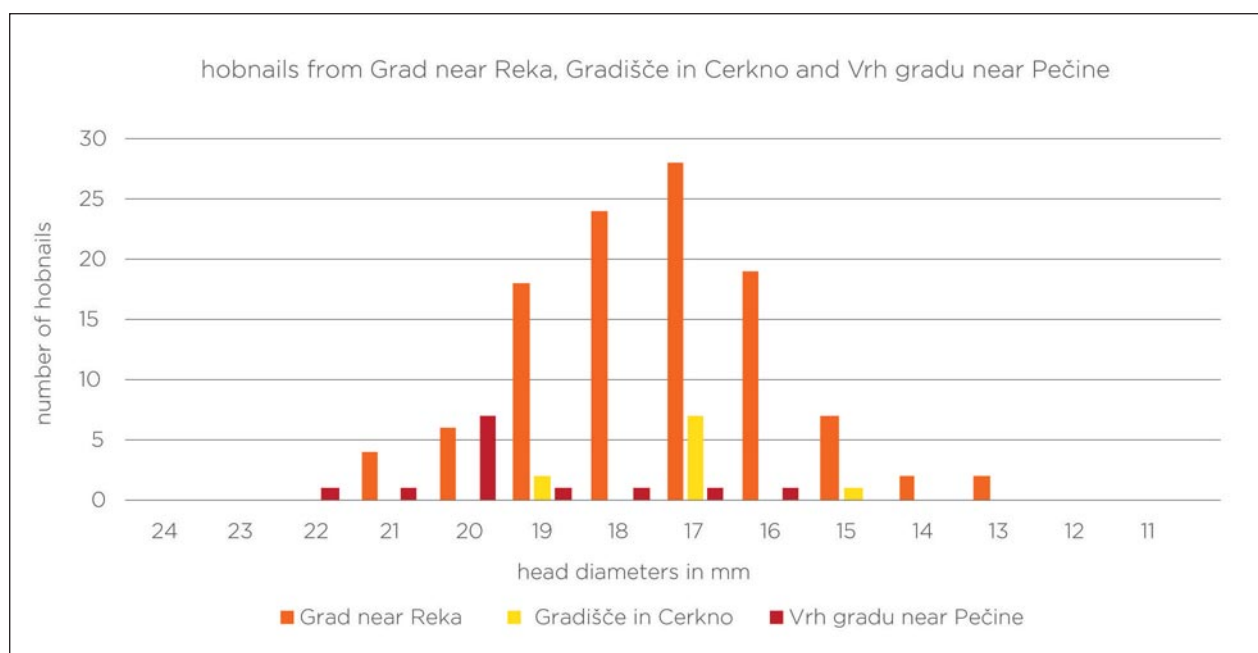


Fig. 9: Head diameters of the hobnails from Grad near Reka, Gradišče in Cerknio and Vrh gradu near Pečine as measured on the items kept in the NMS and the Tolmin Museum.

The fortress of Hermeskeil (southeast of Trier, Germany) has yielded 77 hobnails (mostly Type D and several of the A and C types) presumably dating from the time of Caesar's Gallic Wars. Their publication lacks drawings or individual descriptions, but the text does mention head diameters that range from 14 to 26 mm and group around 18 mm.⁴²

Among the 110 hobnails from Grad near Reka included in the statistics,⁴³ those with the head diameter between 15 and 21 mm are by far the most numerous, with only a few others that measure 13 or 14 mm (**Fig. 9**). Head diameters of the

hobnails from Gradišče in Cerknio⁴⁴ and Vrh gradu near Pečine⁴⁵ are roughly consistent with those from Grad near Reka (**Fig. 9**).

Hobnails of the chronologically significant B and D types from a Roman road in Valais (Switzerland) have head diameters ranging from 10 to 17 mm,⁴⁶ the ones from the roads in the hinterland of Tergeste (Trieste, Italy) from 11 to 20 mm⁴⁷ and the three from a Roman road in Spain from 8.5 to 11 mm.⁴⁸

The head diameters of hobnails from Dangstetten (none of them of the B or D type) can only roughly be deduced from the published evidence. They

42 Hornung 2012; Hornung 2015, 113; Hornung 2018. It seems that the given diameters do not refer to the actual head diameters, but to their reconstruction (cf. Hornung 2012, 217, 221, Fn. 58, with reference). The reconstructions assume that the heads were originally perfectly symmetrical and the shaft exactly in the centre; based on the observation of the hobnails from Slovenia, this assumption seems erroneous.

43 Several hobnails from the site came to the NMS after the Istenič 2005a paper had been published.

44 Istenič 2015, Pl. 2: 5-14.

45 Istenič 2015, Pl. 5: 9-18.

46 Volken 2011, 356-358, 360, 362, 377, 382, Cat. Nos. FM06-3472, FM06-3425, PF06-557, FM06-3180, FM06-3171, GSBP-195, GSBP-072, PF05-387, PF05-

209, PF06-534, FM06-4490.

47 Bernardini et al. 2018, Figs. S4-S8, Nos. 90, 96, 158, 201, 202.

48 Rodríguez Morales et al. 2012, 152, 154, Nos. 002, 009.

49 Fingerlin 1986, *Fundstelle* 2/1, 31/7, 54/14, 104/5, 142/7, 158/4, 182/13, 242/7, 268/733, 291/4, 309/9, 318/26, 355/3, 361/2, 421/2, 520/12, 525/12, 525/3. No information on the hobnail head size in Fingerlin 1998, where hobnails were found in *Fundstelle* 630/7, 928/3, 955/9, 956/8, 963/9, 982/4, 989/3, 1096/4, 1098/8, 1100/3, 1110/7, 1117/11, 1128/5, 1144/8, 1220/28, 1327/12, 1350/16.

50 Fingerlin 1986, 55, 72, 127, 153, 191, *Fundstelle* 142/7 (max. diam. 15 mm), 182/13 (diam. 13-18 mm), 291/4 (diam. 15 mm), 355/3 (diam. 16 mm), 421/2 (diam. 15

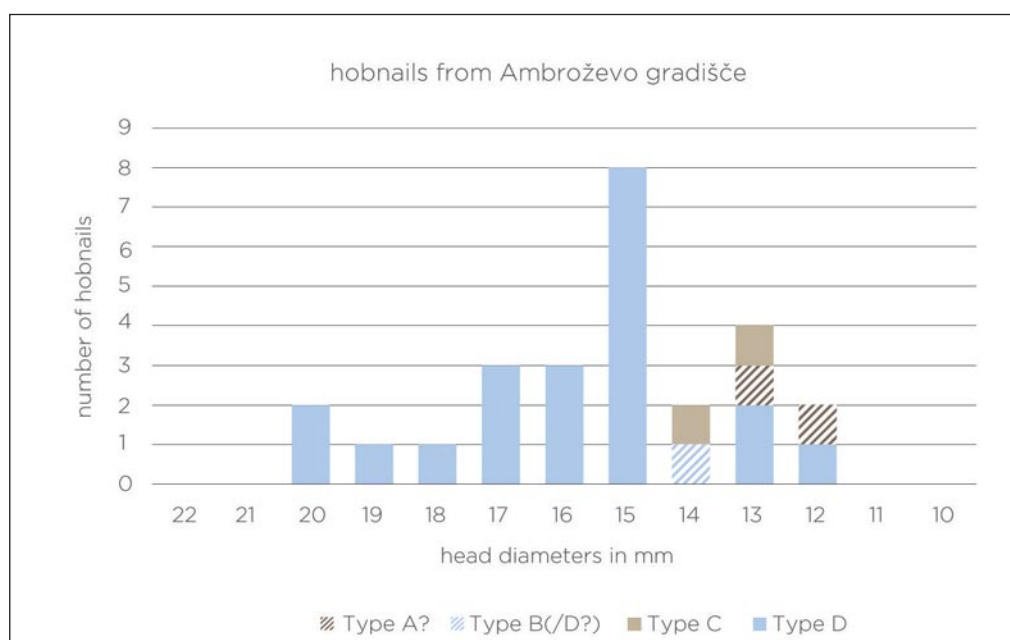


Fig. 10: Head diameters of the hobnails from Ambroževo gradišče near Slavina as measured on the items kept in the NMS.

seem to range mostly between 9 and 14 mm,⁴⁹ though some with head diameters of 15, 16, 17 and even 18 mm are also mentioned.⁵⁰ Hobnails from Haltern, Kalkriese and Waldgirmes have smaller heads, their diameters measure from 8 to 10⁵¹ or 12 mm.⁵²

Given the above, we can conclude that Late Republican/Early Augustan hobnails have on average a larger head diameter than later ones.

Hobnails with large heads (above 12 mm in diameter) seem to be exclusive of the Late Republican and Early/Middle Augustan period and do not appear later. Smaller hobnails are characteristic of later sites, but there are a few of the B and D types, presumably limited to the Late Republican/Early Augustan period, with head diameters below 13 mm.⁵³

In order to get a full picture of hobnail head diameter ranges and frequency, as well as to confirm or reject the statements above, we

would need a diagram showing hobnail head diameters or a catalogue giving measures of the hobnails from Alésia and other sites reliably dated to the time of the Gallic Wars.

We would also desire a full catalogue of hobnails, including their head diameters, from sites such as Lampourdiere and Alésia to see if there is a tendency towards a reduction of head diameters in the Late Republican period as hinted by the scarce available information (**Fig. 8**).

In my opinion, the most relevant criterion for dating hobnails is the type (i.e. the pattern on the underside); Types B and D seem to be limited to the period between about 80/60 and 20/15 BC. For the A and C types, head diameter can be helpful as large heads fall roughly between 80/60 and 20/15 BC.

4. Findspots of the Late Republican/Early Augustan hobnails in Slovenia

I have shown above that the hobnails of the B

51 Waldgirmes: Becker & Rasbach 2015, 181, 182, Fig. 163.

52 Haltern: Harnecker 1997, 87, Pl. 69: 754, 755; Kalkriese: Harnecker & Franzius 2008, 13, Pls. 12: 172, 13: 173-190; Harnecker & Tolksdorf-Lienemann 2004, 59, 61-64, 79, 81, 83, Pl. 4: 1110, 1690, Pl. 5: 2401, 3150, Pl. 6: 77, 85,

Pl. 7: 834, Pl. 9: 162, 1047, 1089, 1105, 1119, Pl. 10: 2551.

53 Head diameter 12 mm: Volken 2011, 377, Cat. PF05-209, PF 06-534; head diameters 8.5 and 11.3 mm: Rodríguez Morales et al. 2012, 152, 154, Cat. Nos. 002 and 009.

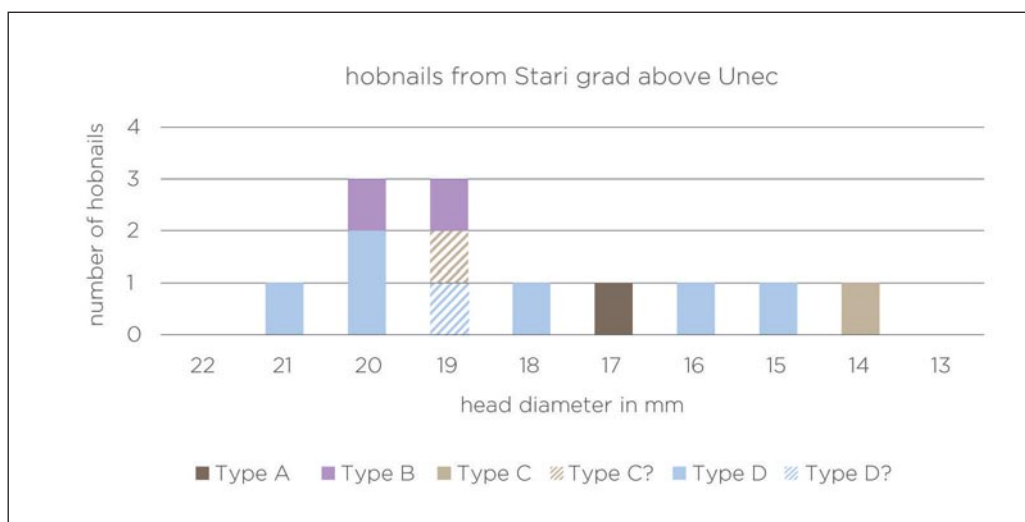


Fig. 11: Head diameters of the hobnails from Stari grad above Unec as measured on the items kept in the NMS.

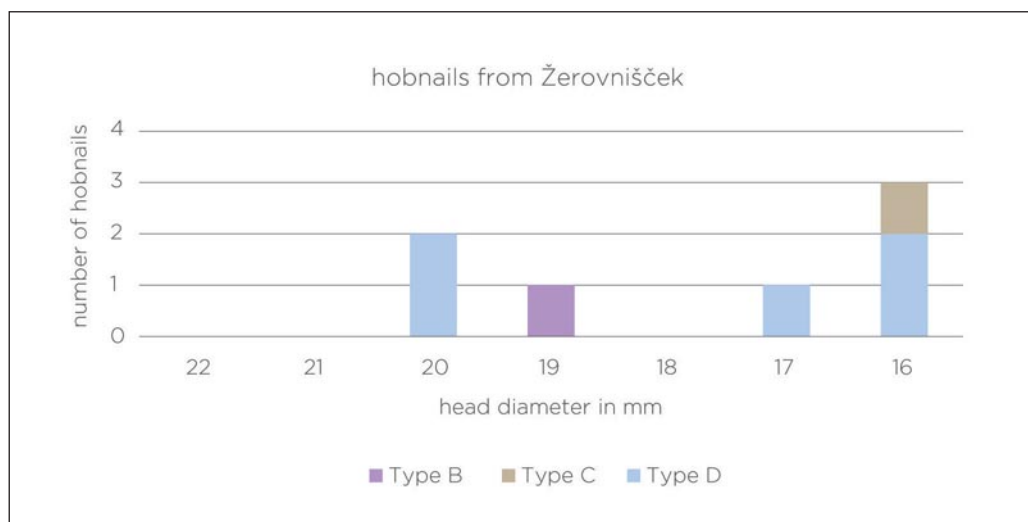


Fig. 12: Head diameters of the hobnails from Žerovnišček as measured on the items kept in the NMS.

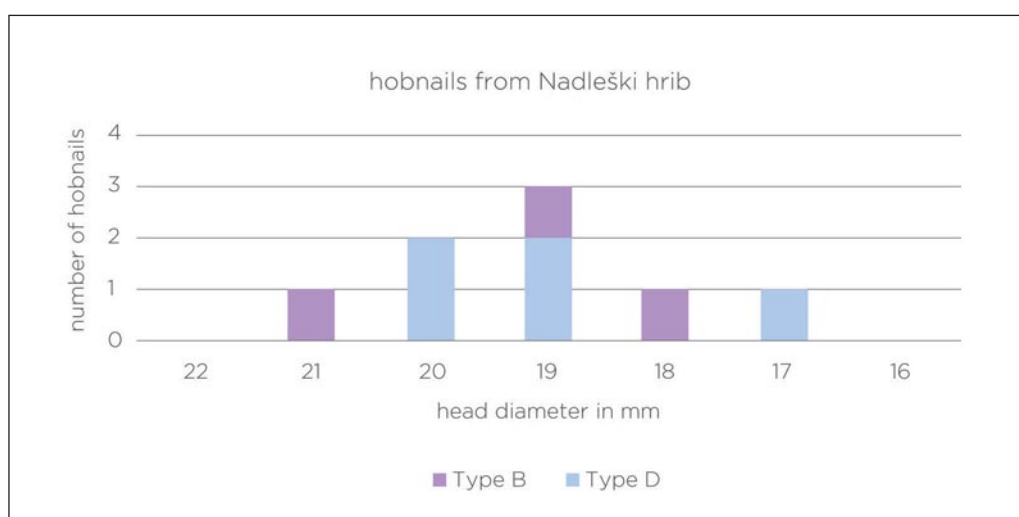


Fig. 13: Head diameters of the hobnails from Nadleški hrib as measured on the items kept in the NMS.

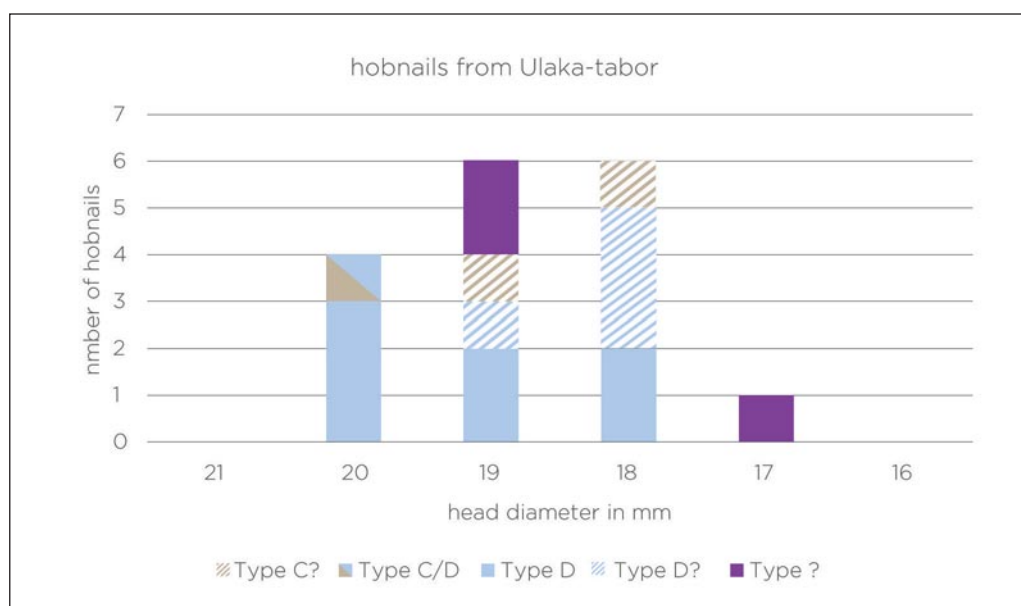


Fig. 14: Head diameters of the hobnails from Ulaka-tabor as measured on the items kept in the NMS.

and D types can be reliably dated between c. 60 (or perhaps 80) and 20/15 BC, and serve as an indicator of the Roman military presence.

In addition to the three battlefield sites in the Tolmin-Cerkno area (Fig 1: 1–3), hobnails of the B and D types and those of the A and C types with head diameter larger than 12 mm were found at several other sites in Slovenia, given in List 1.

List 1⁵⁴

Hobnails of the Alésia A–D types⁵⁵ in Slovenia and the hinterland of Trieste/*Tergeste*. Head diameter is abbreviated as “diam.”.

- 1 Grad near Reka: more than 110 hobnails,⁵⁶ of types and diameters as shown in **Figs. 4 and 9**.
- 2 Gradišče in Cerkno: ten hobnails,⁵⁷ of

types and diameters as shown in **Figs. 4 and 9**.

- 3 Vrh gradu near Pečine: thirteen hobnails,⁵⁸ of types and diameters as shown in **Figs. 4 and 9**.
- 4 Gradec near Sedlo: three hobnails of Type D, diam. 12, 15 and 17 mm;⁵⁹ two hobnails of Type C, diam. 13 and 16 mm.⁶⁰
- 5 Sv. Helena near Podbela: one hobnail of Type A, diam. 15 mm and one of Type D, diam. 18 mm.⁶¹
- 6 Gradič in Kobarid: more than 170 hobnails of Types A–D, Type D prevails, diam. 12–20 mm (mostly 16–18 mm).⁶²
- 7 Tonovcov grad near Kobarid: two hobnails, Type D, diam. 13 and 19 mm.⁶³
- 8 Gradišče in Polje: two hobnails of the D type, diam. 17 and 19 mm.⁶⁴
- 9 Berlotov rob: a hobnail of Type D and one

54 Many of the hobnails included in the list have not been cleaned yet, so their typological attribution may be uncertain (marked with a question mark, ex. Type D?) or may not be possible (marked type?).

55 Of Types A and C, only the hobnails with head diameters measuring at least 13 mm are included.

56 Istenič 2005a, Pl. 5: 1–13; numerous unpublished hobnails kept in the Narodni muzej Slovenije (NMS).

57 Istenič 2015, Pl. 2: 5–14.

58 Istenič 2015, Pl. 5: 9–18.

59 Mlinar et al. 2014, 20, 24, 25, 38, Cat. No. 37; Istenič

2015, 59, Fn. 108. A brooch of the Alésia type, with a close parallel from Dangstetten, was also found at the site (Mlinar et al. 2014, 20, 24, 25, 38, Cat. No. 34).

60 Mlinar et al. 2014, 20, 24, 25, 38, Cat. No. 38.

61 NMS Inv. Nos. R 26913 and R 26914; Istenič 2015, 59, Fn. 108.

62 Unpublished; Jana Horvat, pers. comm.

63 Milavec 2011, 422, Pl. 40: 2, 4.

64 Laharnar 2007, Pl. 1: 3–4.

65 Mlinar et al. 2018, 78, Cat. No. 73; Mlinar, pers. comm.

66 NMS Acc. No. 2018/17-1.



Fig. 15: Hobnail of Type D from Ulaka-tabor; its nearly straight shank suggests it was probably never inserted into the sole of a shoe. Photograph by Nataša Košmerl, the NMS.

- of Type B or D, diam. 17 mm.⁶⁵
- 10 Tabor above Povir: three hobnails of the D type, diam. 16 mm, and one of the C type, diam. 19 mm.⁶⁶
- 11 Strmca above Povir: a hobnail of the D type, diam. 12 mm.⁶⁷
- 12 Tabor or Strmca above Povir: a hobnail of the D type, diam. 17 mm.⁶⁸
- 13 Grocciana piccola (Mala Gročanica, in the hinterland of Trieste, Italy): a hobnail of the D type, diam. 22 mm⁶⁹ and several others of the D type, found during

prospection and the 2019 small scale excavation in the north-east corner of the larger fort.⁷⁰

- 14 Roman roads in the hinterland of *Tergeste*: about 45 hobnails of Type D, diam. 11 to 20 mm); six of Type B, diam. 12–18 mm; several of Types A and C.⁷¹
- 15 Kaštelir near Nova vas: five hobnails of Type D, diam. 12–21 mm; one of Type B, diam. 18 mm; ten of Type A?, diam. 15–21 mm.⁷²
- 16 Baba near Slavina: two hobnails of the D type, diam. 18 mm.⁷³
- 17 Ambrožovo gradišče near Slavina: 26 hobnails, of types and head diameters as shown in **Fig. 10**.⁷⁴
- 18 Stari grad above Unec: twelve hobnails,⁷⁵ of types and head diameters as shown in **Fig. 11**.
- 19 The River Ljubljana at Rakova Jelša: two hobnails, Types D and A, diam. 17 and 18.5 mm.⁷⁶
- 20 Grmada above Zagorje; one hobnail of Type D, diam. 18 mm; three of the C type, diam. 14 mm; three cannot be typologically attributed (not cleaned), diam. 12, 14 and 15 mm.⁷⁷
- 21 Gradišče at Čepna: one hobnail of Type D, diam. 18 mm;⁷⁸ nine hobnails of Types A and C, diam. 12–14 mm.⁷⁹
- 22 Žerovnišček: seven hobnails,⁸⁰ of types and head diameters as shown in **Fig. 12**.
- 23 Nadleški hrib: eight hobnails,⁸¹ of types

67 NMS Inv. No. R 27127.

68 NMS Inv. No. R 26395.

69 Bernardini et al. 2015, Fig. 3: 3, Fig. 4.

70 Information kindly provided by Federico Bernardini, Multidisciplinary Laboratory, The “Abdus Salam” International Centre for Theoretical Physics, Trieste, Italy).

71 Bernardini et al. 2018, Figs. S4–S8.

72 Sakara Sučević 2004, 137: Cat. Nos. 203–213, 215–217.

73 Laharnar 2015a, 28, Pl. 2: 1 and an unpublished hobnail (NMS Zn 389).

74 NMS Inv. Nos. R 27041–R 270444, R 27048–R 27052, R 27054–R 27065, R 27069, R 27071–R 27072 and Acc. No. 2018/26-3. The type could not be established for all hobnails as they have not been cleaned/conserved yet; uncertain attribution is marked with a

question mark (?).

75 Gaspari 2009, 333, Fig. 7: 5–6; Laharnar 2013b, Fig. 4; Laharnar 2015a, Pl. 2: 10–12; NMS Acc. No. 2011/3-1.

76 Istenič 2019, 347, Fig. H7–8, Pl. 19: H7, H8.

77 NMS Acc. No. 2018/27-1; no other finds have been recorded from the site.

78 NMS Acc. No. 2018/42-1; found on the western slope, outside the hillfort delimited by ramparts.

79 NMS Acc. No. 2018/42-2; hobnails of Type C have numerous small dots around the perimeter.

80 Laharnar 2009, 118, 119, Pl. 5: 10–16; Laharnar 2015a, 29, Pl. 2: 17–23.

81 Laharnar 2016, 95, Fig. 6: 11–18; Laharnar & Lozić 2019, Fig. 14: 10–15.

82 Unpublished. The hobnails have not been cleaned yet and their typological attribution is in many cases either not certain or not possible.

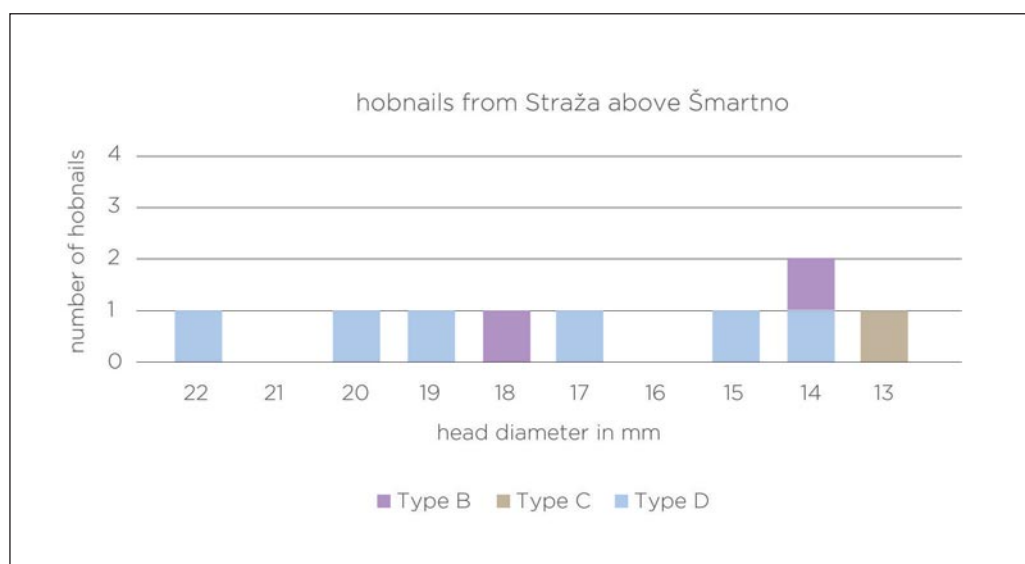


Fig. 16: Head diameters of the hobnails from Straža above Šmartno as measured on the items kept in the NMS.

and diameters as shown in **Fig. 13**.

- 24 Ulaka-tabor: seventeen hobnails,⁸² of types and diameters as shown in **Fig. 14**; the hobnail with a head diam. of 17 mm (**Fig. 15**) was never attached to a shoe sole.
- 25 Ulaka: four hobnails – Type A?, diam. 16 mm; Type D, diam. 15 mm; Type C, diam. 17 mm; type ?, 16 mm.⁸³
- 26 Gobavica above Mengeš: two hobnails of Type D, diam. 15 and 17 mm.⁸⁴
- 27 Straža above Šmartno: eleven hobnails,⁸⁵ of types and diameters as shown in **Fig. 16**.
- 28 Dunaj near Jereka: one hobnail of Type D,

diam. 20 mm.⁸⁶

- 29 Ravelnik near Bovec: one hobnail of Type D, diam. 14 mm.⁸⁷
- 30 Velike bukve above Gorenji Logatec: one hobnail of Type D.⁸⁸
- 31 Stari trg near Višnja Gora: one hobnail of Type D.⁸⁹

5. Discussion

Sites given in List 1 fall in six groups:

- a) fortified hilltop settlements of indigenous population (4 – Gradec near Sedlo,⁹⁰ 5 – Sveta Helena near Podbela,⁹¹ 8 – Gradišče in Polje,⁹² 10, 11, 12 – Tabor and/or Strmca near

83 NMS Inv. Nos. R 18540, R 27033, R 27034, R 26574.

84 Horvat 2015, 185–187, 197, 198, Fig. 7: 8–9.

85 Horvat 2015, 193, 194, Pl. 2: 6–16. The hobnails of the C type with a diameter of 11 and 12 mm (o.c. Pl. 2: 17, 18) are not included as I presume they are later than Early Augustan.

86 The NMS, Inv. No. R 26602, unpublished.

87 Pers. comm. Jana Horvat.

88 Švajncar 2018, figures on pp. 141, 142.

89 Found during the excavation carried out in August and September 2019; information kindly provided by Sašo Porenta, Arheološke raziskave in trženje kulturne dediščine, Primož Stergar s.p.

90 Mlinar et al. 2014, 20, 21, 24.

91 Štular 2011, 399.

92 Mlinar et al. 2018, 20, –21, 38.

93 Istenič 2018, 298, 299, Fn. 54.

94 Sakara Sučević 2004.

95 Horvat 1995, 201, Pl. 14: 8–26; Laharnar 2015a, 14, 15, Figs. 4, 5, Pl. 2: 1–3.

96 Horvat 1995, 199–201, Pls. 7–13, 14: 1–7.

97 No excavation was carried out at the site, but numerous small finds were collected by individuals using metal detectors; most of them lack precise findspot data. The site includes a prehistoric hillfort and a cemetery on the south-eastern slope; several small finds suggest ritual offerings (Gaspari 2009).

98 Laharnar 2015b; Laharnar 2018, 43–44.

99 Laharnar 2009.

100 Laharnar 2015a, 17.

101 Horvat 2015, 185–188, 197, Figs. 1–2, 7.

102 Horvat 2015, 173–184, Figs. 1–4, 192–196, Pls. 1–6.

103 Gabrovec 1966, 248, 249, Pls. 1, 2: 1–12; Gabrovec 1976, 296–298, Figs. 3, 4; Gabrovec 1987, 32, 33.

- Povir,⁹³ 15 – Kaštelir near Nova vas,⁹⁴ 16 – Baba near Slavina,⁹⁵ 17 – Ambrožovo gradišče,⁹⁶ 18 – Stari grad above Unec,⁹⁷ 21 – Gradišče at Čepna,⁹⁸ 22 – Žerovnišček,⁹⁹ 25 – Ulaka,¹⁰⁰ 26 – Gobavica above Mengeš,¹⁰¹ 27 – Straža,¹⁰² 28 – Dunaj near Jereka,¹⁰³ 29 – Ravelnik near Bovec,¹⁰⁴ 30 – Velike bukve above Gorenji Logatec, presumably also 20 – Grmada above Zagorje¹⁰⁵
- b) Roman forts/military sites (13 – Grociana piccola, 23 – Nadleški hrib, 24 – Ulaka-tabor) and perhaps 31 – Stari trg near Višnja Gora
- c) battlefield sites (1 – Grad near Reka, 2 – Gradišče in Cerkno, 3 – Vrh gradu near Pečine)
- d) cult sites (6 – Gradič v Kobaridu,¹⁰⁶ 7 – Tonovcov grad near Kobarid,¹⁰⁷ 9 – Berlotov rob¹⁰⁸)
- e) river site (19 – the Ljubljanica)
- f) Roman roads (14 – roads in the hinterland of Tergeste).

The sites of the first group are prehistoric settlements, most of them at strategically important positions.¹⁰⁹ In addition to hobnails, lead slingshot from the second half of the 1st century BC to the Early Principate, as well as other roughly contemporaneous militaria were found at several of these sites and hint at

Roman assaults. Such sites are 25 – Ulaka,¹¹⁰ 16 – Baba near Slavina,¹¹¹ 17 – Ambrožovo gradišče,¹¹² 18 – Stari grad above Unec¹¹³ and perhaps 22 – Žerovnišček.¹¹⁴

Ulaka was the main and largest hillfort in south-eastern Notranjska.¹¹⁵ The Roman military installations at Nadleški hrib and Ulaka-tabor were most probably involved in its conquest, as will be shown below. A find from the site that may be contemporaneous with the hobnails is an Alésia type brooch,¹¹⁶ while the dating of the tent peg is broader.¹¹⁷

At Stari grad above Unec, six Alésia type brooches,¹¹⁸ thirteen Jezerine type brooches¹¹⁹ and a coin hoard with the latest coin minted in 42 BC¹²⁰ suggest that a Roman military intervention took place here after 42 BC.

In the case of Žerovnišček, the date of the Roman conquest and the end of the indigenous settlement¹²¹ might be inferred from the latest of the 22 Roman coins from the site, a *denarius* minted in 47 BC.¹²² Later Roman militaria¹²³ suggest that Roman soldiers were again at the site at the beginning of the 1st century AD.

104 The site comprises a hilltop settlement (where the hobnail was found) and a cult site outside the rampart (Horvat 2018).

105 No other finds are known from the site. Dular and Tecco Hvala (Dular J. & Tecco Hvala S., Topografski zapisnik, 31. 3. 1999, Inštitut za arheologijo ZRC SAZU) mention a stone rampart on the eastern side of the site.

106 Božič 2011, 262; Osmuk 1997; Osmuk 1998.

107 Horvat 2009, 362, 363; Božič 2011.

108 Mlinar et al. 2018, 19; Laharnar & Turk 2018, 166–168, Figs. 188–191, 193, 195, 196.

109 Ex. Laharnar 2009, 97, 115; Laharnar 2015b, 123; Laharnar 2018; Istenič 2018, 298, 299, Fn. 54; Gaspari 2009, 316–317, Figs. 1, 2.

110 Laharnar & Lozić 2019. Twenty-six slingshot: Laharnar 2011, 348, 349, 356, Fig. 7, Pls. 1: 7, 2: 2, 3, 14–40; Laharnar 2015a, 17, 18, Figs. 8, 13.

111 Twenty-eight slingshot: Laharnar 2011, 345, 346, 356, Fig. 5, Pl. 2: 4–13; Laharnar 2015a, 14, Fig. 4.

112 Forty-five slingshot: Laharnar 2011, 345, 346, 356, Fig.

5, Pl. 2: 4–13; Laharnar 2015a, 19, 20, Figs. 10, 14, Pl. 4: 1–3; Gaspari 2009, 333, Fig. 7: 3, 4; unpublished slingshot (NMS Inv. Nos. 26386, 26578–26581, 27014, 27015, 27312–27318 and Acc. No. 2018/26).

113 Forty-three slingshot (Laharnar 2011, 347, 348, Fig. 6, Pls. 1: 3, 5, 6, 2: 1; Laharnar 2015a, 15, 16, Fig. 6).

114 Two slingshot (Laharnar 2015a, 29, Pl. 2: 14–5).

115 Laharnar 2015a, 17; Laharnar & Lozić 2019.

116 Istenič 2005b, 207, Pl. 1: 10; Laharnar 2015a, 29, Pl. 3: 1.

117 Laharnar 2015a, 30, Pl. 3: 3.

118 Laharnar 2015a, 15, Pl. 2: 2–9.

119 Laharnar 2012, 94, Pls. 31: 55–57, 32: 58–67.

120 Laharnar 2015a, 17.

121 Laharnar 2009, 115.

122 Laharnar 2009, 109, 110, Table 1.

123 Laharnar 2009, 107, 115, Pl. 5: 9.

124 The latest coin from the hoard was minted in 74 BC; the finds also include a fragment of a conchoidal brooch and the handle of an Idrija type cup (Laharnar 2015a, 14, 15, Pl. 2: 1–3).

The latest finds including a coin hoard from Baba near Slavina cannot be reliably dated after the 70s/60s BC.¹²⁴

Most of the finds from Ambroževo gradišče imply a Roman military presence, presumably in connection with a military installation of the Augustan period.¹²⁵ The hobnails, but possibly also other artefacts, indicate an even earlier Roman military intervention. These other items include a fragment of a copper alloy fitment belonging to a Roman sword scabbard dated between 60 BC and the Late Augustan period,¹²⁶ a coin hoard with the latest Roman coin minted in 82 BC,¹²⁷ and a handguard, presumably brass, that may be from a sword of a type produced roughly between 40 and 15 BC probably in Roman workshops and intended for men of leading social strata outside the Roman state who occasionally collaborated with the Roman army.¹²⁸

Other sites of the first group did not reveal slingshot or artillery missiles that would clearly point to a military attack, but they did yield several finds that chronologically (partly) overlap with the period indicated by the hobnails and may be related to Roman soldiers: 5 – Sv. Helena near Podbela,¹²⁹ 15 – Kaštelir near Nova vas,¹³⁰ 26 – Gobavica,¹³¹ 27 – Straža above Šmartno.¹³²

In conclusion, the hobnails found at pre-Roman settlements, most of them strategically

positioned hillforts, may be related to Roman assaults or measures taken to assert military control. In the early phases of Roman occupation, setting up military posts at strategically located indigenous settlements is a practice known in several regions.¹³³

At Nadleški hrib, a site of the second group comprising Roman forts/military sites, earthworks indicate two construction phases. Small finds suggest that the later phase is Middle/Late Augustan. Hobnails and a catapult bolt with pyramidal head provide a broad dating of the earlier phase. The slingshot can be from either the early or the late phase.¹³⁴

All the finds from the recently discovered Roman camp/fort at Ulaka-tabor are pre-Augustan,¹³⁵ suggesting the site is contemporaneous with the earlier occupation/phase at Nadleški hrib. It is presumed that the forts at Nadleški hrib and Ulaka-tabor were used to conquer, in pincer movement, the major indigenous settlement at Ulaka.¹³⁶

At Grocciana piccola, the archaeological interpretation of the LiDAR and ground penetrating radar (GPR) data indicate two successive forts. The few small finds from the site do not allow us to narrow the dating indicated by the Type D hobnail, which is probably related to the later fort.¹³⁷

The three battlefield sites (**List 1: 1–3**) are prob-

125 Horvat 1995, 199–201; Laharnar 2015a, 20–25.

126 Laharnar 2015a, 31, Pl. 3: 21.

127 FMRSI V 45/2.

128 Laharnar 2012, 38, 227, Pl. 6: 53; Istenič 2010.

129 A fan-shaped terminal of a sword scabbard (unpublished, NMS Inv. No. R 26917) that might be Early Augustan (Dolenz 1998, 49–53, Pl. 1: M1).

130 A brooch of the Alésia type and eight brooches of the Jezerine group (Sakara Sučević 2004, 162, 163, Cat. Nos. 80–87, 99).

131 A brooch of the Alésia type and a finger-ring with a chalcedony intaglio (Horvat 2015, 185–187, Fig. 7: 1, 3).

132 A slingshot and a finger-ring (Horvat 2015, 178–180, 188, 189, Pls. 1: 1, 2: 2).

133 Horvat 2015, 189, Fn. 156.

134 Laharnar 2013a; Laharnar 2016, 88, 89, 91, 94, Fig. 6: 1,

5–9.

135 In addition to the hobnails, a part of a Late Republican pilum, a single barbed bolt, a catapult bolt, a slingshot and coins are chronologically significant (Laharnar, Istenič, forthcoming).

136 Laharnar & Lozić 2019.

137 Bernardini et al. 2015, E1521–E1523, E1526–E1527, Fig. 3: 1–3.

138 Istenič 2005a; Istenič 2015.

139 Gradič near Kobarid was a sanctuary on the west slope of the Iron Age settlement at Kobarid. It is dated from the 2nd century BC to the 4th century AD (Laharnar et al. 2015, 245, Fig. 3: 9; Božič 2011, 262); Tonovcov grad near Kobarid: Božič 2011; Berlotov rob: Mlinar et al. 2018, 19; Laharnar & Turk 2018, 166–168, Figs. 188–191, 193, 195, 196.

ably linked to Octavian's Illyrian Wars (35–33 BC).¹³⁸

All three cult sites, Gradič in Kobarid, Tonovcov grad near Kobarid and Berlotov rob, were in use in the Iron Age.¹³⁹ Regarding the small finds related to the Roman military other than the hobnails, Gradič only yielded a brooch of the Alésia type.¹⁴⁰ No finds clearly linked to the Roman army from the 1st century BC are known from Tonovcov grad. In fact, no finds, Roman or non-Roman, can be dated later than LT D1b (i.e. after 70/60 BC) with the exception of the Jezerine type brooches;¹⁴¹ these might be related to the Roman military, but also to a non-military Roman or indigenous population. The situation is different at Berlotov rob, which revealed several militaria possibly from the same period as the hobnails.¹⁴²

From the Ljubljana, few militaria date from the middle of the 1st century BC to the Early Augustan period.¹⁴³ They suggest that the supply line along the Ljubljana was active not only in the Augustan period, but also during Octavian's Illyrian Wars.¹⁴⁴

6. Conclusions

The hobnails discussed in this paper are characteristic of Roman military footwear between (80/)/60 and 20/15 BC. Their distribution in the wider eastern hinterland of Aquileia indicates Roman military activities in northern Istria (**Fig. 1: 15**), western Slovenia and the hinterland of Trieste (**Fig. 1: 1-15, 27**), in central Slovenia/the Ljubljana Basin (**Fig. 1: 16-25, 26, 30, 31**) and

Notranjska (**Fig. 1: 16-25**).

They appear at hillforts of the indigenous population, Roman forts, as well as battlefield and cult sites. Their presence at hillforts is probably mostly related to the sites' strategic position. With regards to the archaeological and historic context, the clearest evidence of a more narrow dating comes from the three battlefield sites from the Tolmin-Cerkno area that are relatively securely dated to Octavian's Illyrian Wars in 35–33 BC.¹⁴⁵

Evidence from Žerovnišček and Stari grad above Unec suggests Roman military actions after 47 and 42 BC, respectively, which would associate them with Octavian's Illyrian Wars. The finds from Baba near Slavina and possibly also the nearby (at a distance of about 600 metres as the crow flies) Ambroževo gradišče favour a few decades earlier dating that might historically be connected to the presumed Roman military actions in the Notranjska region following the incursion of the Iapodes to Tergeste and Aquileia in 52 BC.¹⁴⁶

For the rest of the sites given in List 1, archaeological contexts do not allow us to narrow the dating provided by the hobnails. They might therefore be connected either with Caesar's proconsulship in Gauls and Illyricum (59–49 BC) or with Octavian's Illyrian Wars.

Given the historic context, the Roman military actions in the northern Ljubljana Basin (Gobavica and Straža above Šmartno) cannot

140 Jana Horvat, pers. comm.; brooch: Istenič 2005b, 195–197, No. 14, Fig. 6, Pl. 1: 14.

141 Božič 2011, 251–260.

142 Three socketed single-lobed arrowheads (Mlinar et al. 2018, 76, 77, Cat. Nos. 67, 68 = NMS Inv. Nos. R 19066, R 19067 and unpublished, NMS Acc. No. 2019/77-2) with parallels from Gradišče in Cerkno (Istenič 2015, 56, Pl. 3: 19; general dating: from the Gallic Wars to the 1st century AD), two Alésia type brooches (Istenič 2005b, 192, 195, Nos. 5, 12, Figs. 2, 6, Pls. 1: 5, 12; Mlinar et al. 2018, 78, Cat. Nos. 75, 76), a socketed catapult bolt with a large pyramidal head (Mlinar et al. 2018, 76, Cat. No. 66, NMS Inv. No. R 26849) characteristic of

the Late Republican period and with parallels at Gradišče in Cerkno and Grad near Reka (Istenič 2015, 56, Pl. 3: 12–16; Istenič 2005a, Fig. 4: 1–5), as well as two slingshot (Mlinar et al. 2018, 77, Cat. No. 71; NMS Inv. Nos. R 19064, R 26863).

143 Istenič 2019, A1, 13, 34, 36, 38, 40, MM A22, H7, H8, Fig. 13, Pls. 1, 19; for A22 also see Istenič 2010; the A4 and MM A23 swords may also fall in this period (Istenič 2019, 40, Fig. 17, Pl. 1).

144 Istenič 2019, 256; Šašel Kos 2018.

145 Istenič 2005a; Istenič 2015.

146 Cf. Laharnar 2015a, 25; Strobel in this volume.

147 Cf. Horvat 2015, 190.

be earlier than those in western Slovenia.¹⁴⁷

Material evidence reveals Roman military actions as part of Octavian's Illyrian Wars in western Slovenia (Grad above/near Reka, Gradišče in Cerkno, Vrh gradu near Pečine) and probably also in Notranjska (Žerovnišček and Stari grad above Unec), which seem to be related to the Carni and Taurisci mentioned in Appian's Illyrian history.¹⁴⁸ With this evidence in mind, I am inclined to presume the same dating for the Roman forts at Nadleški hrib and

Ulaka-tabor, as well as for the conquest of the Ulaka hillfort, although an earlier date connected to the already mentioned incursion of the Iapodes to Tergeste and Aquileia in 52 BC should not be ruled out.

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