

The Roman stronghold at Nadleški hrib, Notranjska region

Boštjan LAHARNAR

Izvleček

Prispevek obravnava rimsko utrdbo na Nadleškem hribu v Loški dolini. Predstavljeni so načrt najdišča, rezultati geofizikalnih raziskav, analize vidnosti in optimalnih poti ter opredelitev drobnih najdb. Rimska vojska je Nadleški hrib za postavitev utrdbe izbrala zaradi njegove strateške lege. Gradnjo datiramo v obdobje od Cezarjeve uprave Galije Cisalpine in Ilirika do avgustejske dobe. Utrdba je torej igrala vlogo pri rimskem osvajanju ali v zaledju balkanskih vojnih žarišč avgustejske dobe.

Ključne besede: Slovenija, Loška dolina, Nadleški hrib, druga polovica 1. st. pr. n. št., avgustejska doba, rimska vojska, rimska utrdba

Abstract

This article deals with the Roman stronghold at Nadleški hrib in Loška dolina. It presents a plan of the site, the results of the geophysical surveys, a viewshed and analyses of energy-optimal pathways, and defines small archaeological finds. The Roman army chose to build the stronghold at Nadleški hrib because of its strategic position. We date the construction from Caesar's administration of Cisalpine Gaul and Illyricum to the Augustan Period. The stronghold, therefore, played a role either during the Roman conquest or in the hinterland of the military conflicts in the Balkans during the Augustan Period.

Keywords: Slovenia, Loška dolina, Nadleški hrib, second half of the 1st century BC, Augustan Period, Roman army, Roman stronghold

1. INTRODUCTION

The remnants of the stronghold at Nadleški hrib have long been known, and the site is often mentioned in archaeological and historical publications on Roman (military) history and the archaeology of the south-eastern Alpine region. The site, with surprisingly well-pronounced remains of ramparts and a typical entrance in the shape of a *clavicula* (Fig. 1), however, has not yet seen any significant archaeological excavations or a comprehensive approach to the problems it poses. Consequently, the more recent papers simply repeat the dated "technical data" regarding its preservation, as well as dating and interpretations that are no longer valid.

The survey included geodesic measuring and the development of a site map. Geophysical surveys were done on a section of the site. Data on metal

detector finds, dug up by unauthorised searchers were gathered and defined by typology and chronology. The aim was to explain the strategic and spatial logistics of the stronghold by means of geographical information systems (viewshed and energetically optimal pathways analyses). On the basis of the gathered information, an attempt was made to place the site into a wider historical and geographical context.

2. GEOGRAPHICAL LOCATION

Nadleški hrib is a 642-meter high plateaued hill above the present-day village of Nadlesk in the north-western part of the Loška dolina (Fig. 2). It forms the end of a ridge, which is part of the mountainous region between Cerkljansko polje



Fig. 1: Nadleški hrib. View on the ramparts forming the *clavicula* shape entrance.

Sl. 1: Nadleški hrib. Pogled na nasipa, ki oblikujeta vhod v obliki klavikule.

and Loška dolina, and descends from Križna gora (856 m), Devin (792) and Ulaka (683) into the flatlands of Loška dolina. From its top, Nadleški hrib provides an exceptional panoramic view of the whole of Loška dolina towards Bloke, Racna gora, Babno polje, as well as the northern slopes of Snežnik and the eastern slopes of Javorniki.

3. HISTORY OF THE RESEARCH

According to Attilio Degrassi, the site at Nadleški hrib was first mentioned by a Trieste researcher, Pietro Kandler, in the mid-19th century (Degrassi 1954, 120). In August 1935, Balduin Saria visited Nadleški hrib (Slovenec newspaper, 22nd August 1935). He recorded the approximate measurements and the perimeters of the Roman stronghold, referred to in all subsequent literature. According to Saria, the stronghold is 127 m long and 159 m wide and has an 8.5 m-wide entrance in the shape of a *clavicula*. The size of the stronghold, therefore, comprises roughly 2 ha, which would meet the requirements of stationing a cohort of 500 men, i.e. *cohors quingenaria* (Saria 1935a, 745; id. 1935b, 60; id. 1939, 118). Saria dug a trench through the rampart, which turned out to be made of earth (Saria 1935a, 745). The trenching revealed only one “atypical” fragment (Saria’s oral statement in Kahrstedt 1940, 183). In his article

published in *Jugoslovenski istoriski časopis*, Saria linked the stronghold to Octavian’s campaign against the Iapodes in 35 and 34 BC (Saria 1935a, 746). In another two articles, he mentioned a possibility that the stronghold could have been used for a siege of the Iapodian settlement at Ulaka (Saria 1935b, 60) or for monitoring a significant traffic route between Italy and the Ljubljana Basin during the turbulent period following the Roman conquest (Saria 1935b, 60; id. 1939, 199; also Schmid 1937, 28).

The next to write about the stronghold at Nadleški hrib was Ulrich Kahrstedt (1940, 183–188). He rejected the siege camp hypothesis. He felt one cohort would not have been enough to lay siege of the Ulaka hillfort; either the camp should have been larger or there should have been more of them. Kahrstedt also realised that the topographical features of Nadleški hrib would prevent a successful siege. The hill is surrounded from three sides by marshy and flood-prone flatlands; should the besieged break out, the attackers would have found themselves caught between the enemy and the marshes (Kahrstedt 1940, 183–184). Based on his research of camps with a *clavicula*, Kahrstedt (1933, 144–152) assumed the stronghold was of a later date than Saria had suggested. According to Kahrstedt, camps with a *clavicula* mostly appeared as late as the Flavian period. The border between Italy and Pannonia ran along this territory from



Fig. 2: The position of sites Nadleški hrib and Ulaka above Stari trg pri Ložu.

Sl. 2: Lega najdišč Nadleški hrib in Ulaka nad Starim trgom pri Ložu.

(Source / Vir: TTN5 ©GURS)

Nero's rule onwards. He was of the opinion that the garrison in the stronghold had been guarding the Italian border during the times of Nero and onward (Kahrstedt 1940, 185, 188). Saria disagreed with Kahrstedt's dating of the camps

with a *clavicula*, stating that such entrances were much earlier and citing the camp of Mauchamp at Berry-au-Bac, presumably built by Caesar's soldiers (Saria 1939, 118–119).

Degrassi agreed with Kahrstedt that there had been no camps with a *clavicula* in the Augustan Age. Nonetheless, he rejected his dating of the stronghold to the times of Nero or later. He claimed this had been a peaceful period, where one would not expect the construction of military facilities. Therefore, he linked the stronghold with the defence system of *Praetentura Italiae et Alpium* during the Marcomannic Wars (Degrassi 1954, 119–121). His thesis was accepted also by Massimiliano Pavan (1955, 396).

Jaroslav Šašel pointed out that the stronghold at Nadleški hrib had not yet been sufficiently researched. He believed that, considering the historical situation, the dating by Saria was justified (Šašel 1971, 64). In his publications, he defined Nadleški hrib as a post on the north-eastern border of Cisalpine Gaul, which played a prominent part during the Late Republic and the occupation phase (Šašel 1969, 174–175; id. 1975, 96; id. 1975–1976; id. 1985, 550).

Claudio Zaccaria supported the opinions of Degrassi and Pavan and linked the stronghold to the defence system against Germanic invasions during the Macromannic Wars (Zaccaria 1981, 76; id. 1992, 90).

According to Božidar Slapšak, the Roman military garrison at Nadleški hrib was perhaps overseeing the central local settlement at Ulaka during 1st century AD (Slapšak 1997, 12).

In his master's thesis, Andrej Gaspari briefly summarised the history of the research of the stronghold and indicated its approximate size on a map (Gaspari 2000, 64–65, Fig. 4).

4. DOCUMENTING VISIBLE STRUCTURES AND THE GEOPHYSICAL SURVEYS

Basic premises, aims and research methods

Before our research was conducted, a provisional sketch of the stronghold at Nadleški hrib, based on the measurements from literature, was made by Andrej Gaspari (2000, Fig. 4). All other publications only repeat Saria's report of the remains of a 127 × 159-m cohort fort with an 8.5-m entrance in the form of a *clavicula*. Our aim was to survey and verify the current condition of the site and make a site plan with accurately measured and spatially positioned visible structures.

The site surveying was carried out in Gauss-Krueger coordinate system, using a GPS device and a total station. With the GPS surveying, the so-called RTK system was applied, which is precise

to 0.7–2.5 cm. Where the accuracy was hindered by thick vegetation, the measurements were accurate to 0.30–0.80 m. Where due to unusually thick vegetation and consequently poor reception of the satellite signal, the GPS system failed, the measurements were obtained by a total station.

All recognisable features of the surface were surveyed. The potentially natural (e.g. sinkholes), as well as artificial (e.g. ramparts) formations were recorded. Our attention was drawn to Saria's claim that the ramparts were exclusively earthen (Saria 1925a, 745) and to his designation of the site as a fort. It is our opinion that due to insufficient research, "stronghold" as a more general term would be more appropriate. As a rule, the term "fort" (Ger. *Kastell*, Slov. *kastel*) refers to a (more or less) permanent stronghold covering from 0.6 to 6 ha. Depending on its size, a fort usually housed a garrison of Roman military auxiliaries (*auxilia*) from some to five hundred (*cohors quingenaria*) or a thousand (*cohors milliaria*) men (Johnson 1987, 13; Welfare, Swan 1995, 11). In Britain as well as the Germanic provinces, the forts from the early 1st century were predominantly fortified with an earthen rampart and a ditch. Although there are some known forts from the 1st century with a stone wall, they are nevertheless much more typical of the rules of Domitian and Trajan and onward (Johnson 1987, 59, with examples: 245–318).

In contrast, a camp (Ger. *Lager*, Slov. *tabor*) was a temporary or short-term military post, usually fortified with a rampart and a ditch (Jones 2012, 18). The rampart was made of turf, earth, stones and/or gravel and capped by a timber palisade. A camp would cover from 0.5 to 23 ha of ground (Welfare, Swan 1995, 11, 17). During a campaign, the Roman army would build marching (campaign) camps. A construction camp was set up where the army was engaged in more prominent building projects, such as roads or fortresses. Siege camps were used for besieging, and practice camps for training (Davies, Jones 2006, 6; Jones 2012, 19–29).

The distinction between forts and camps, therefore, is not always clear (Welfare, Swan 1995, 24–26). Also, the earthen ramparts in forts can be significant for dating purposes. In view of this, the data regarding the construction of the rampart at Nadleški hrib should be valuable for interpreting the site, so we decided to test the claim of the earthen rampart by geophysical surveying.¹

¹ The description of the geophysical surveys and their results was done in collaboration with Gašper Rutar (Center



Fig. 3: Nadleški hrib. Area investigated by geoelectric resistivity method.

Sl. 3: Nadleški hrib. Prikaz območja meritev z metodo geoelektrične upornosti tal.
(Source / Vir: DOF ©GURS)

The measurements made using the geoelectric resistivity method were collected from a regular grid of 20×20 -m quadrants, with traverse lines and measured points one meter apart. The terrain was chosen on the basis of preserved traces on the surface and the level of overgrowth; 6 800 m² of the terrain was surveyed (Fig. 3).

Ground Penetrating Radar (GPR) was used to produce GPR profiles of parallel traverse lines; this is an extremely effective method for detecting possible underground structures. A series of

eight GPR profiles was made across the distinct depression within the stronghold and four GPR profiles across the *clavicula* (Fig. 4).

The results of the terrain surveys

Based on the measurements obtained by the GPS and the total station, a siteplan was made (Figs. 5, 6). A 5.5 to 7-m wide and 0.5 to 1.3-m high rampart runs for 104.7 m along the north-western side of the hill, from the contour line with elevation 636 m towards north-east. After 23.5 m, the rampart discontinues and forms an entrance in the form of a *clavicula*. The first part is 10 m long and dissipates towards the top of the hill in the form of a gradual half-circle. The width of the entrance

za preventivno arheologijo, Ljubljana). The geophysical surveys are explained in more detail in the report: G. Rutar, *Poročilo o geofizikalnih raziskavah na Nadleškem hribu* (Zavod za varstvo kulturne dediščine, Center za preventivno arheologijo), Ljubljana 2009.

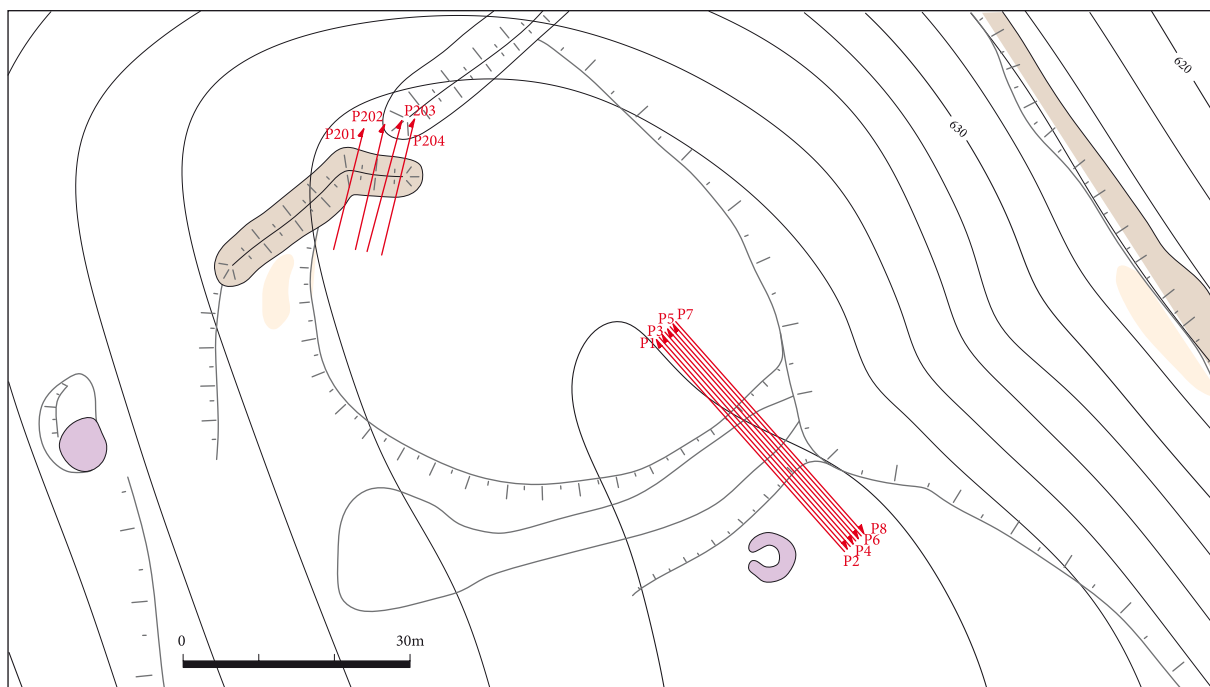


Fig. 4: Nadleški hrib. Position of GPR profiles (R. Klasinc).
 Sl. 4: Nadleški hrib. Potek georadarskih profilov (R. Klasinc).

is 3.6 m on the outside and 2.4 m on the inside. The other part of the rampart continues towards north-east and starts lowering after 22.5 m along a steep slope, until, 43 m lower, at the contour line with elevation 624 m, it makes a half-circular turn towards south-east. Its continuation is discernible in a 3.3 to 5-m wide terrace and a distinct break in the slope along the length of 124 m.

Inside the stronghold, directly behind the entrance there is a levelled-out, roughly half-circular plateau (Fig. 5: A), 53 to 57 m in diameter. The plateau is separated from the highest part of the hill by a pronounced depression (Fig. 5: B) widening towards the west into a slope terrace and recognisable on the steep eastern slope only as an unpronounced hollow.

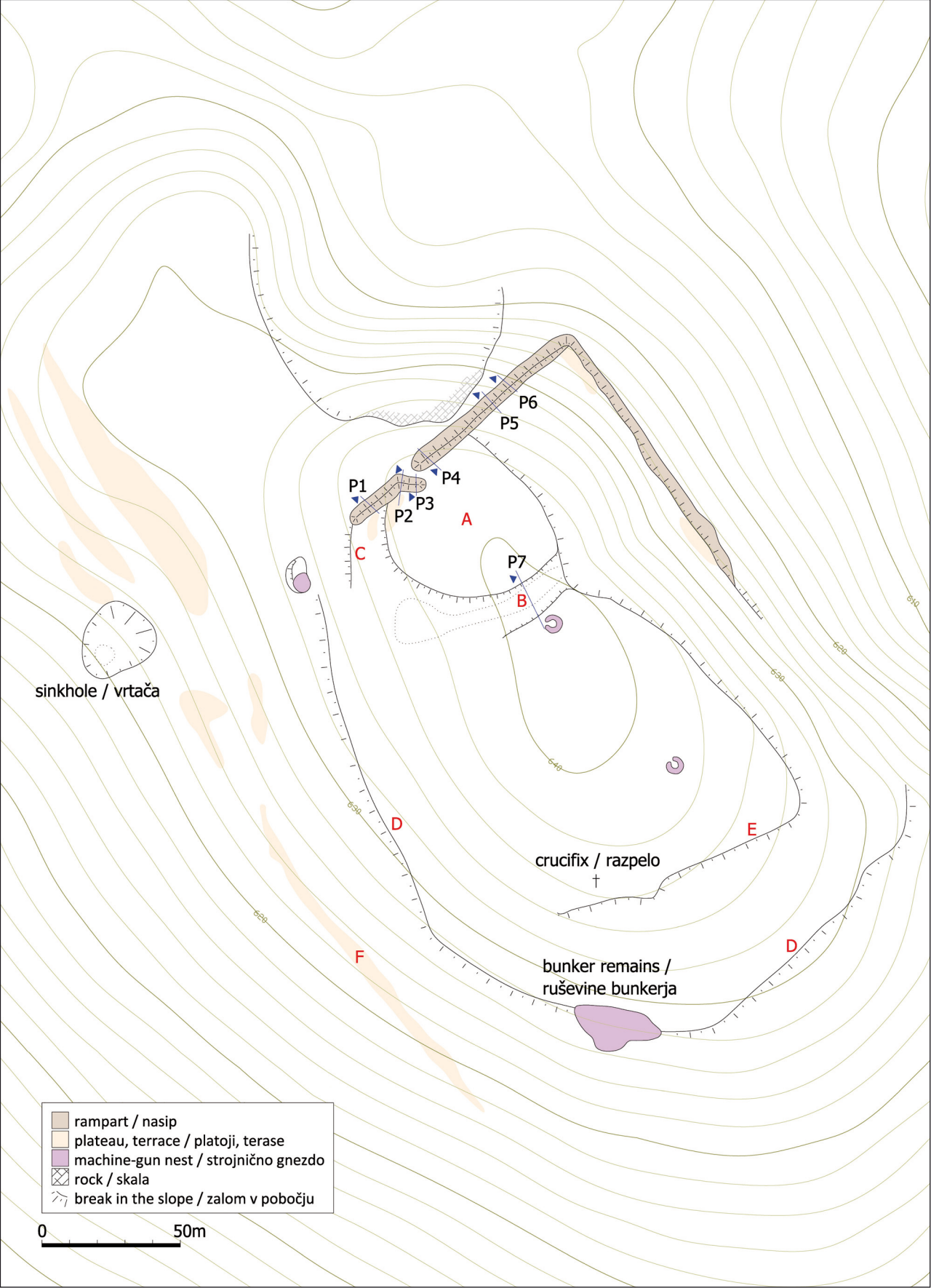
We could not make out any remains of the rampart on the western and southern sides of the hill. A part of the western rampart could perhaps be discerned in a slight, 23-m long break in the slope (Fig. 5: C) towards the south. The slope is descending gently towards the west. The first more pronounced break in the slope runs between the contour lines with elevations 628 and 634 m (Fig. 5: D), which then continues into the southern slope of the hill. Below the break, there are several terraces to the west, which are most likely predominantly natural features or a result of later

agricultural usage. A narrow and long terrace running from these terraces towards south-east (Fig. 5: F) is an abandoned cart track, probably drawn on the Josephinic military map, dated between 1763 and 1784 (Rajšp, Ficko 1995, sheet 1; G. Rutar's report [p. 7, 9 Fig. 3]²). Likewise, towards the south, the slope from the highest part of the hill descends gradually towards Nadlesk. There is a pronounced break in the slope at the crucifix between the contour lines with elevations 634 and 636 m (Fig. 5: E) and lower, where the western break continues (Fig. 5: D).

The geoelectric resistivity method has indicated distinct contrasts in the areas of the levelled-out (perhaps man-made?) plateau inside the stronghold (Fig. 7: 1) and the machine-gun nest from more recent past (Fig. 7: 2). There are several layers of soil in the pronounced depression, and the results show a considerably lesser resistivity in comparison to its surroundings (Fig. 7: 3). Similar results were generated for the levelled-out ground (Fig.

² See note 1.

Fig. 5: Nadleški hrib. Plan of the site (R. Klasinc).
 Sl. 5: Nadleški hrib. Načrt najdišča (R. Klasinc).



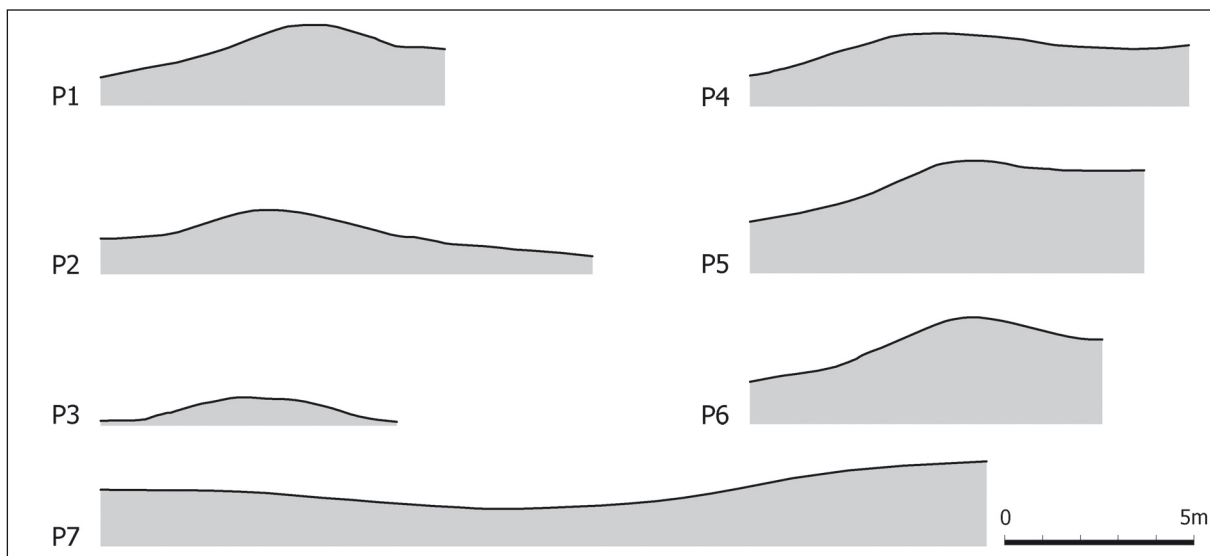


Fig. 6: Nadleški hrib. Cross sections of the ramparts and the depression. For the cross sections orientation see marks P1–P2 on Fig. 5.

Sl. 6: Nadleški hrib. Profili nasipov in poglobitve. Za smeri pogledov glej oznake P1–P7 na sl. 5.

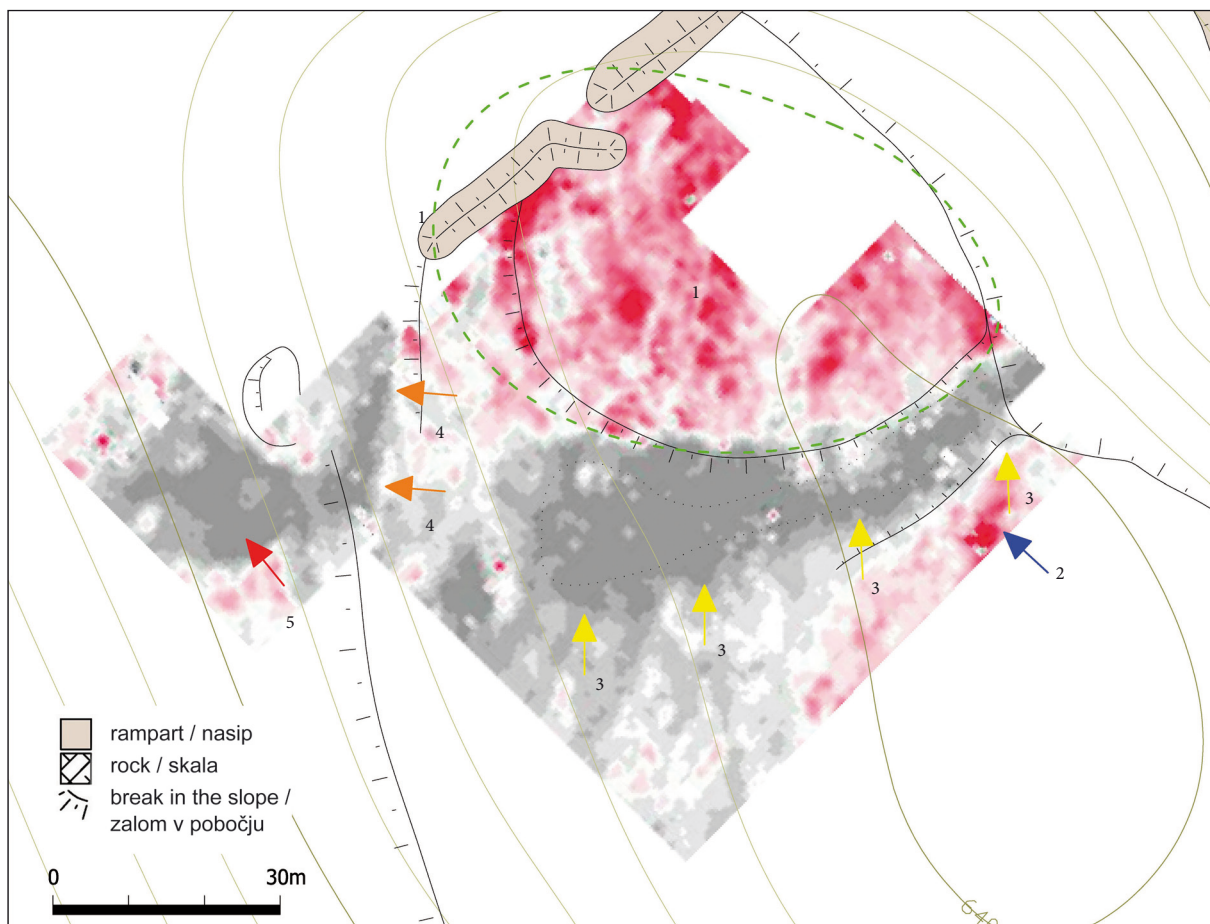


Fig. 7: Nadleški hrib. Display of the geoelectric resistivity method results. 1 – levelled-out plateau, 2 – machine-gun nest, 3 – depression, 4 – levelled-out ground, 5 – depression (R. Klasinc and G. Rutar).

Sl. 7: Nadleški hrib. Prikaz rezultatov meritev z metodo geoelektrične upornosti tal. 1 – izravnano plato, 2 – strojnično gnezdo, 3 – poglobitev, 4 – izravnavo, 5 – poglobitev (R. Klasinc in G. Rutar).

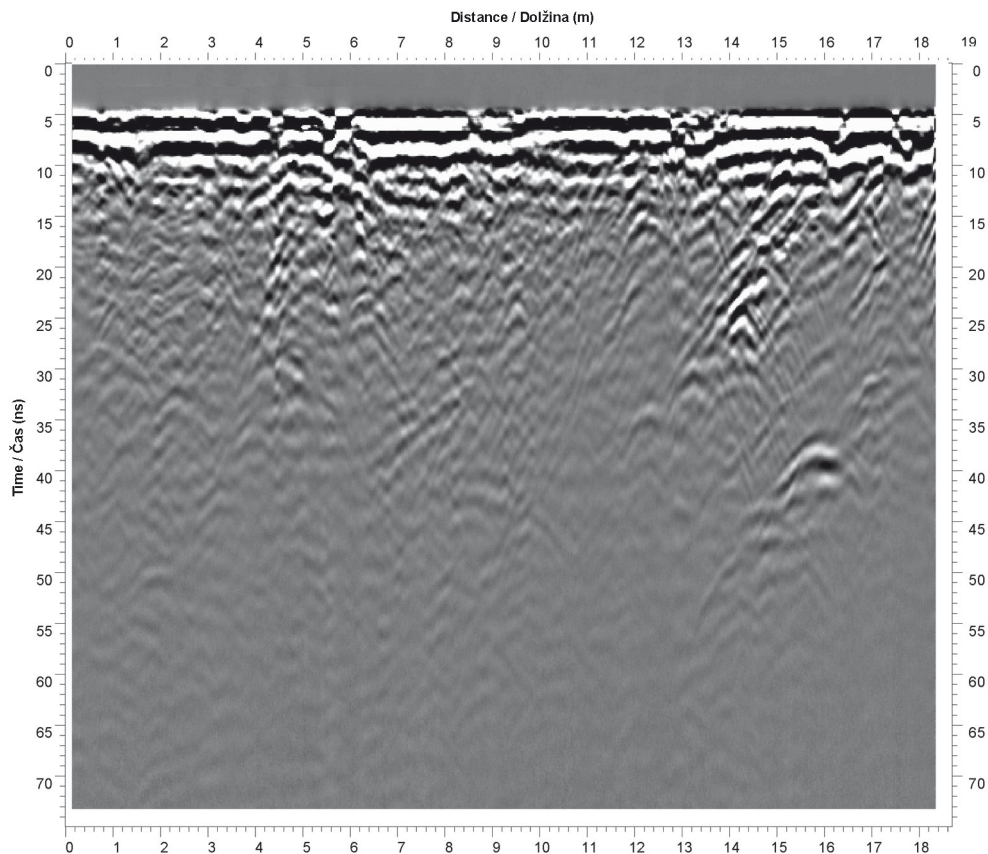


Fig. 8: Nadleški hrib. GPR section no. P 204 across the rampart (between 3 and 7 m) and part of the rampart (between 13 and 16 m) by the entrance (for GPR section position see Fig. 4). (GPR: G. Rutar)

Sl. 8: Nadleški hrib. Georadarski profil št. P 204 čez nasip (med 3. in 7. metrom) in del nasipa (med 13. in 16. metrom) pri vhodu v utrdbo (za položaj profila glej sl. 4). (Georadar: G. Rutar)

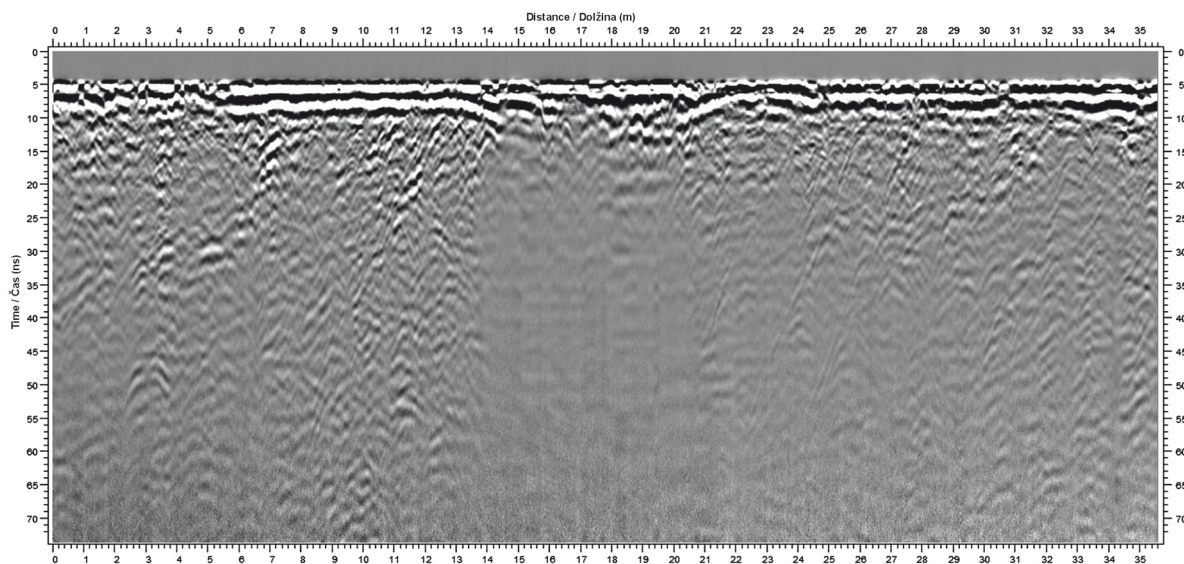


Fig. 9: Nadleški hrib. GPR section no. P 5 across the ditch-like depression (between 14 and 21 m) within the stronghold (for GPR section position see Fig. 4). (GPR: G. Rutar)

Sl. 9: Nadleški hrib. Primer georadarskega profila čez poglobitev (med 14. in 21. metrom) v notranjosti utrdbe (za položaj profila glej sl. 4). (Georadar: G. Rutar)

7: 4) and the depression (Fig. 7: 5) outside the stronghold, which are most likely natural features.

At the *clavicula*, the GPR profiles show man-made layers just below the surface (Fig. 8) and deeper anomalies of geological origins. The profiles across the distinct depression reveal a deepening of the rock base (Fig. 9). The signal weakens considerably with depth, probably because of water or clay composition of the soil.

5. DISCUSSION

Ramparts and size

The surviving ramparts run at an almost 90 degree angle to each other and form a rounded corner. The actual size of the stronghold is thus far impossible to ascertain. Saria estimated the length of the sides to be 127 and 159 meters respectively and concluded the area covered c. 2 ha (Saria 1935a, 745). Our surveys revealed the north-western rampart to be 104.7 m long and the north-eastern rampart 124 m long, encompassing an area of c. 1.3 ha.

Associating the location of the rest of the ramparts with the pronounced breaks in the slope (Fig. 5: D,E) is speculation. The breaks could be naturally occurring or the result of later agricultural usage. The circumstances of the trenching by a Mr Pirc from Ljubljana remain unclear. Apparently, he was requested by Saria to excavate near the crucifix. The trenching across the rampart (perhaps across the break E on the south-eastern slope; Fig. 5: E) apparently revealed some dry-walling and shards (M. Urleb;³ Gaspari 2000, 65, n. 57). Nothing tangible is known about the apparent trenching; the claim about the discovery of a dry-walled structure could actually indicate the discovery of a plot boundary or a patching-up of a cart track. In the Franciscan land register from the late 1800s for the municipality Nadlesk,⁴ the south-eastern slopes of Nadleški hrib are marked as pastures.

The earthen ramparts of the Roman military stronghold, visible on the surface, have no parallels in Slovenia or, indeed, Central Europe. In Slovenia, the remnants of ramparts and ditches of Roman military camps have been identified only through excavations (Mason 2008; Hvalec et al. 2009, 3; Gaspari 2010, 113–116) or, as crop-

markings through analyses of aerial photographs (Grosman 1996, 65–66).

Parallels can be found in specific grasslands in England, Wales and Scotland, where 35% of the documented Roman military camps display visible structures on the surface (Jones 2009, 11). Such examples have mainly survived on higher grounds with pastures. In lowland agricultural areas, ramparts were often levelled out by modern-day ploughing and can also only be discovered by identifying crop-markings, using LIDaR technology or by excavations (Welfare, Swan 1995, 1–6; Davies, Jones 2006, 7–10; Jones 2012, 64–69). Excavations in Great Britain have, furthermore, revealed cases where, upon leaving, the Roman army filled in the ditches with material from the ramparts (Welfare, Swan 1995, 18).

The width of the ramparts of Nadleški hrib is comparable to those of the ramparts in England, which survive as surface features; their width varies from 1.9 to 6.4 m (Welfare, Swan 1995, 17). In Wales, most of the ramparts, which survive as surface features, are between 3 and 4 m wide and between 0.3 and 0.9 m high (Davies, Jones 2006, 22). The GPR profiles of the ramparts by the entrance would support Saria's claim that they were made of earth. More precise data about the architecture of the rampart, e.g. about the possible use of wooden stakes, could be gathered only by excavations. That is to say, excavations of Roman strongholds have revealed various approaches to construction of such earthwork (Fig. 10; Johnson 1987, 73–77, Fig. 36).

The ramparts of some Roman military camps in Rhineland are also comparable in dimensions. The camps were fortified with ramparts of wood and earth (Ger. *Holz-Erde-Mauer*); the inner and outer faces of the rampart were made of timber and planks and filled in by soil and gravel (example: Fig. 10: 7). This type of construction was probably used for the ramparts of the recently discovered camp at Hedemünden, which are 5–6 m in width and 0.8 to 1.2 m in height (Grote 2005, 20–22).

At the site of Tribuna in Ljubljana, the remnants of a Roman stronghold with a rampart were found, whose outer side was dry-walled. The inside of the rampart was constructed from timber, stones and earth (Hvalec et al. 2009, 3). The existence of an earthen rampart in combination with wooden posts and perhaps a wooden outer face from the second stage of the Roman fort at Obrežje is probably indicated by postholes in the upper infill material of the inner ditch and in-between the two ditches (Mason 2008, 191).

³ M. Urleb, Dossier Nadleški Grič, the archives of the Archaeological department of Notranjski muzej v Postojni.

⁴ <http://giskds.situla.org/giskd> [last checked 4.8.2013].

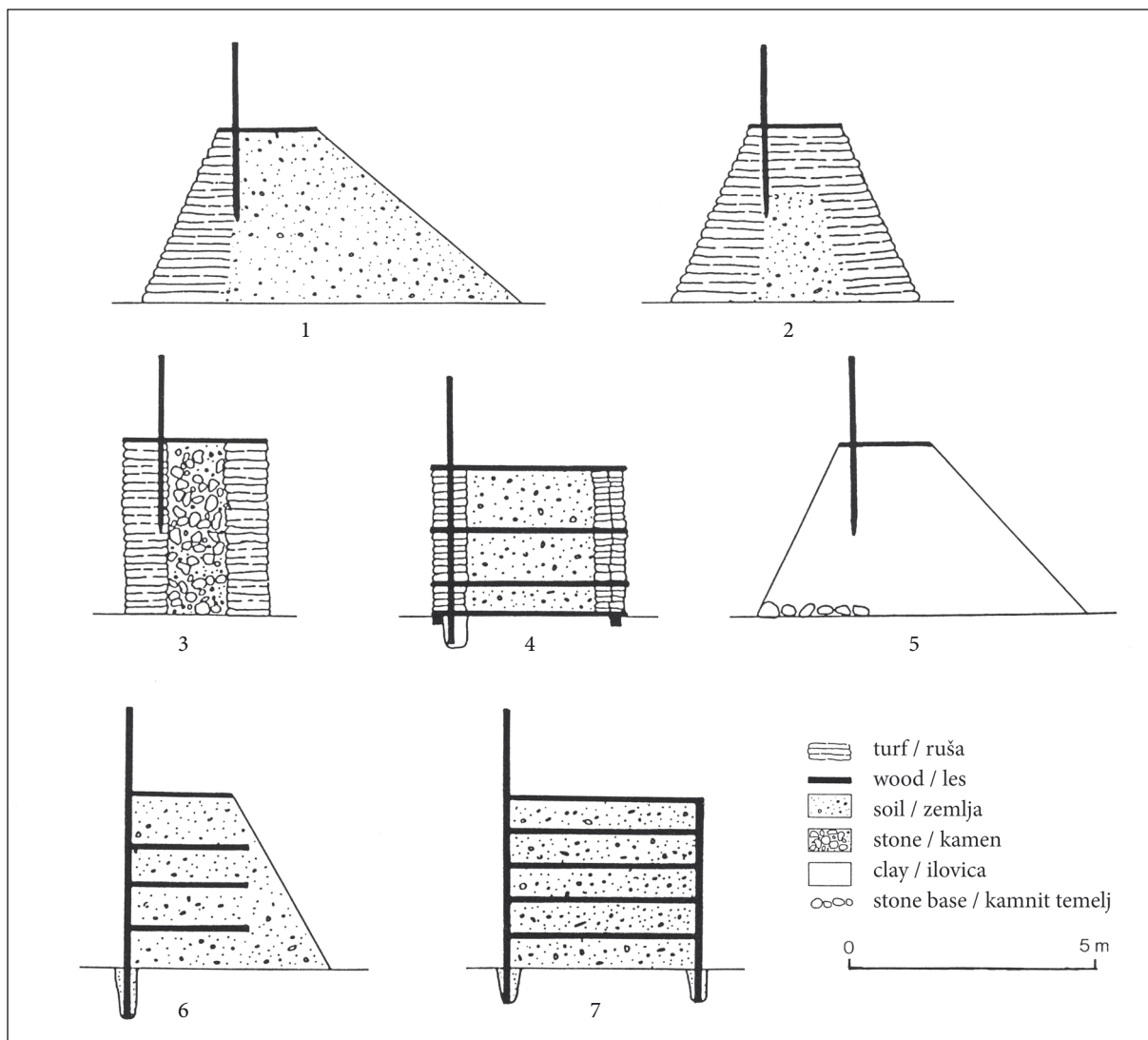


Fig. 10: Different constructions of earthen ramparts of Roman strongholds.

Sl. 10: Načini gradnje zemljenih nasipov pri rimskih vojaških utrdbah.

(After / Po Johnson 1987, Fig. 36)

The entrance

The entrance in the shape of a *clavicula* is the most typical archaeological remnant at Nadleški hrib, which enables defining the ramparts as remains of a Roman military stronghold. This *clavicula* belongs to the most common variation of such entrances; i.e. among internal *claviculae*. The Roman army was also constructing external, double and “Stracathro” type *claviculae* (Fig. 11; Lenoir 1977, 701–701, Fig. 3: a; Jones 2009, 13–17). At Nadleški hrib, one part of the rampart makes a slow curving turn towards the inside of the stronghold and, together with the other part, prevents direct access. Such an entrance forced

the attackers to expose their right flank during a raid attempt (Reddé et al. 2006, 88; Mason 2008, 189; Gaspari 2010, 26, 113). The entrance with a *clavicula* at Nadleški hrib was resourcefully constructed on the edge of a very steep rock face below the top of the north-western slope (Fig. 5), as an additional obstacle to any enemy who might attempt to break in through the entrance.

To date, all attempts at dating the stronghold relied heavily on the dating of *clavicula*-shaped entrances (cf. Chapter History of the research). Due to lack of archaeologically researched *claviculae*, until quite recently one of the main sources for their dating was the text *De munitionibus castrorum*, which in Chapter 55 describes the construction of such

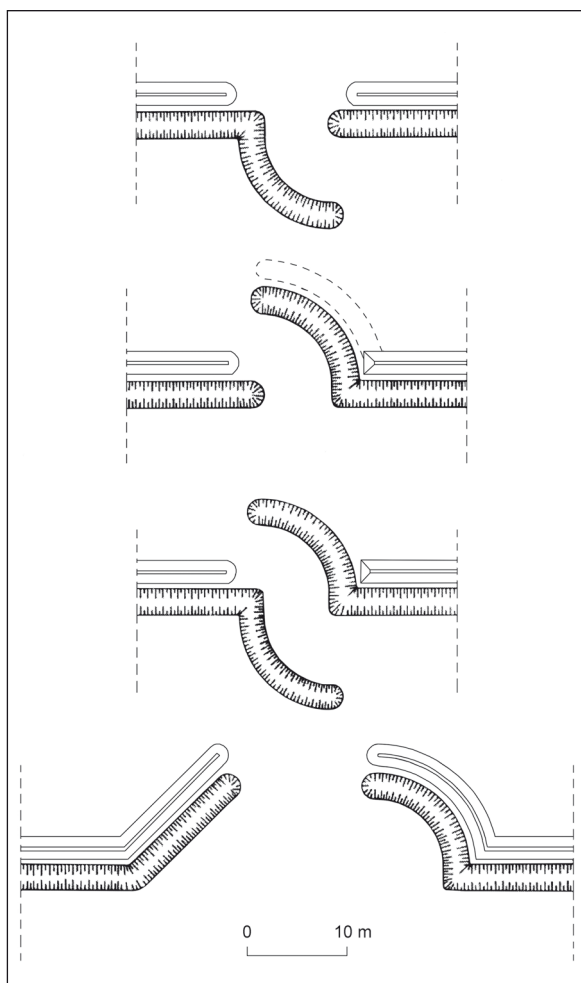


Fig. 11: Variants of *clavicula*-type entrances.
 Sl. 11: Različice vhodov v obliki klavikule.
 (After / Po Lenoir 1977, Fig. 3)

entrances. The text is part of a military manual, which used to be attributed to *Hyginus Gromaticus*, a writer from the Trajan era. Nowadays, it is generally agreed that it is part of a 3rd century text combined of earlier writings; therefore, more recent publications refer to the author as *Pseudo-Hyginus*. Some scholars attempted to date this work on the basis of historical events, which are probably reflected in it, while others analysed its grammatical and vocabulary traits. Most of them date the text to the late 1st century or the times of Domitian and Trajan. A *clavicula* is also portrayed on Trajan's Column in Rome (with a short synopsis of earlier treaties: Gilliver 1993, 33; and Jones 2009, 18–19).

In recent years, there have been a growing number of archaeological discoveries of the *claviculae* of Roman military strongholds from various parts of the former Roman Empire.

The *clavicula* at Mauchamp near Berry-au Bac in France (cf. Chapter History of the research: Saria 1939, 118–119) remains an argument for the use of such entrances in the time of Julius Caesar. It is still debatable whether the camp can be associated with Caesar's campaign of 57 BC, because there is evidence of military activities in the area from the Flavian period, as well. However, modern excavations in Alesia (Alise-Sainte-Reine) uncovered an internal *clavicula* in camps A (Mont Auxois) and C (Côte-d'Or) from Caesar's siege of 52 BC, which would suggest that the dating of the Mauchamp camp to the time of Caesar's Gallic Wars could well be justified (Reddé 1995; Jones 2009, 19). Faux-Vésigneul is another example of a military camp associated with Gallic Wars; it has two internal *claviculae* (Reddé 1995, 277; id. 2011, 63–64).

Several sites associated with the Roman army from the period of Cantabrian Wars (26–19/15 BC) were documented in northern Spain, including some Roman military camps with entrances in the shape of a *clavicula* (Morillo 2011, 11–26; Torres-Martínez et al. 2012, 529–531).

Several Roman strongholds with *claviculae* are known from Egypt. Among them, the camp of Qasr Ibrim A, dated on the basis of amphoras and eastern terra sigillata to 1st century BC and historically associated to Gaius Petronius's military campaign of 23 BC (Maxfield 2009, 71–72).

A *clavicula* was discovered in the so-called Eastern camp (*Ostlager*), 1.5 km east of the main camp in Haltern. Both camps are from the Late Augustan Age (Kühlborn 2005, 209–211).

Unambiguous evidence of *claviculae* from the Augustan Age came to light with the excavations of the Roman fort at Obrežje in the Sava Valley. The excavations have revealed a two-phase stronghold with at least one of the entrances in the shape of a *clavicula* during both periods of use (probably during the Pannonian war and the Pannonian-Dalmatian rebellion) (Mason 2008, 189–191, Fig. 2).

During excavations of the site at NUK 2 in Ljubljana, two ditches triangular in cross-section were discovered in the area where parts of the original ground survive. One of them partially forms the shape of a *clavicula*. According to Andrej Gaspari, the ditches are remains of a practice camp from the time immediately preceding the building of the colony in Emona, which he dates, on the basis of close stratigraphic sequencing and particularly coin finds, to the last years of Emperor Augustus and the Early Tiberian period (Gaspari 2010, 25–27, 78).

The stronghold at Nadleški hrib probably had at least one more entrance. Indicating that are the rules of positioning entrances in Roman military camps, preserved in ancient written sources. Vegetius recommends positioning the entrance of *porta praetoria* facing east or facing the enemy (Vegetius I, 23). *Pseudo-Hyginus* writes that *porta decumana* is always positioned at the highest point of the camp to allow monitoring the area, whereas *porta praetoria* always faces the enemy (*Pseudo-Hyginus* 56). Judging by the recommendations of the two authors, the surviving entrance at Nadleški hrib cannot be a *porta decumana*, because it lies lower down the slope.

The interior

A levelled-out plateau lies inside the stronghold, directly behind the entrance (Fig. 5: A). The results of geoelectric resistivity measurements of the area reveal anthropogenic changes, but cannot identify the structures.

We have attempted to explain the ditch-like depression (Fig. 5: B) at the edge of the levelled-out plateau A towards the south-east. To use such a depression for a defensive ditch would make sense. However, the ditch would have to run along the outside of the stronghold, which does not agree with the position of the north-eastern rampart. If this were indeed a defensive ditch, the size of the stronghold would be considerably smaller than Saria saw and that we managed to identify. In this case, the stronghold would be limited to the lower part of the hill; its strategic position would be less favourable, which seems unlikely. Besides, the ditch-like depression, which measures 4.7 m at its narrowest point, is much wider than the defensive ditches of Roman military camps. They were normally about 1.8 m wide (Welfare, Swan 1995, 18) or between 0.5 and 1.8 m wide (Davies, Jones 2006, 25). The same applies to the width of comparable ditches in Rhineland, e.g., the ditch in the camp at Hedemünden was between 3.5 and 4 m wide (Grote 2005, 22), and the one at Oberaden between 2.5 and 4 m (Kühlborn, Schnurbein 1992, 12–16). Even in the case of the camp at Farnsfield (Nottinghamshire), where the ditch was the only defence, its width was no more than 2.8 m (Welfare, Swan 1995, 18). We can therefore assume that the ditch-like depression is a natural feature.

Saria's hypothesis that the stronghold at Nadleški hrib housed a cohort of five hundred men (*cohors*

quingenaria) is repeated several times in other publications. However, inferring the number of soldiers solely on the basis of the stronghold's size can be disputable. This is particularly true of the strongholds positioned on rough terrain. Welfare and Swan, for example, believe that the steep slopes of the Fell End camp (Northumberland) did not allow setting up tents. Similar can be said for the extremely steep north-eastern slope within the stronghold at Nadleški hrib.

Likewise, the two authors broached the subject of sometimes too confident searches for internal structures within temporary camps. A strict internal organisation within relatively permanent strongholds (rows of tents, sheds, headquarters, stables etc.), clearly described in written sources of the time (*Polybius*, *Pseudo-Hyginus*, *Vegetius*) and confirmed in many cases through excavations, was not a rule for temporary strongholds. Rough terrain, strategic position and the circumstances on the battlefield called for pragmatic solutions, which undoubtedly often departed considerably from instructions in military manuals (Welfare, Swan, 16, 22).

Selection of location – strategic position

Considering the nature of the terrain, the stronghold at Nadleški hrib had to be irregular in shape, which has already been suggested by Gaspari (2000, 64). Possible traces of a western rampart in the break of the terrain, connecting to the north-eastern rampart (Fig. 5: C), seems to confirm this.

Departures from an ideal rectangular ground plan with rounded corners (the so-called playing-card form) for Roman camps and forts are not unusual (Johnson 1987, 245–318; Welfare, Swan 1995, 16; Davies, Jones 2006, 16–20; Jones 2012, 84–86). It is understandable that the army adapted to the features of the terrain. The positioning of a fair part of the stronghold on a steep north-eastern slope is more unusual. A small number of similar camps, partly situated on steep hill slopes, are documented in England. Most typical among them are the camps at Higher Kingdom (Devon), Bloomy Lane (Cumbria) and Fell End in Northumberland (Welfare, Swan 1995, 8). In these cases, as well as in the case of the stronghold at Nadleški hrib, strategic advantages seemed to play the key role in such positioning. They were more important than the standard playing-card form and the internal visual coherence.

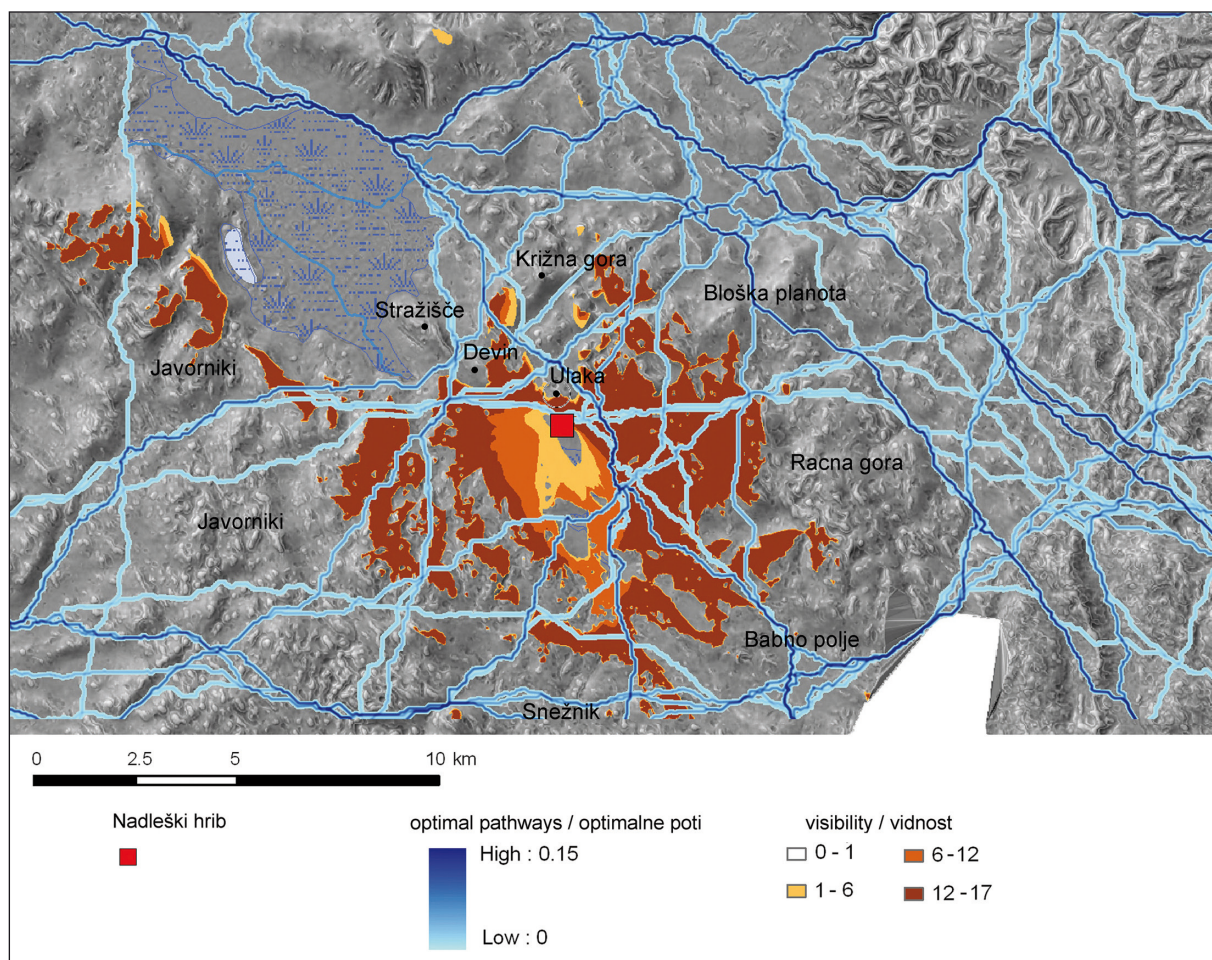


Fig. 12: Network of energetically optimal pathways in the area of Cerkljano polje and Loška dolina; and model of visibility from Nadleški hrib (B. Štular).

Sl. 12: Prikaz mreže energetske optimalnih poti prek Cerkljanskega polja in Loške doline ter barvni in vrednostni prikaz rezultatov analize vidnosti za Nadleški hrib (B. Štular).

Nadleški hrib offers a superb view of the entire Loška dolina, as has been confirmed by our viewshed analysis. The visibility has been calculated on the DEM with the cell size 25 m (©GURS) from the highest point as well as from a hundred random points on the hillside (e. g. Lake, Woodman, Mithen 1998, 27–38) and five points on the rampart of the stronghold (source DEM 25 and point measurements by GPS and a total station). The result is therefore a model of graded visibility from the Nadleški hrib distinguishing visible from not-visible areas and between areas of good and poor visibility (Fig. 12).

The garrison in the stronghold could therefore monitor all the paths to and from Loška dolina. The pass below Stražišče leads towards Cerkljano polje, the pass below Križna gora towards Bloke, and the passage between Racna gora and the Snežnik

massif towards Babno polje and Gorski Kotar (Gaspari 2000, 8). In this sense, the positioning of the stronghold fully follows the recommendations of *Pseudo-Hyginus*, who claims that a camp should be situated at a safe distance from the woods and narrow valleys or should overlook them: the woods and narrow valleys could be used by the enemy for a surprise attack (*Pseudo-Hyginus* 57).

There is a long-standing hypothesis about a prehistoric and, later, Roman route, leading from the Pivka area over Javorniki to Loška Dolina and further on to Babno polje (Premierstein, Rutar 1899, 7; Puschi 1902, 26–27). Šašel assumed that Stari trg in Loška dolina was actually the crossroads between the route Emona-Tarsatica and the so-called Iapodian road from Tergeste through Divača and Stari trg towards Colapiani (Bela krajina) and Lika. According to Šašel, the

two routes were particularly salient for Roman military operations during the occupation stage, and it is possible that the stronghold at Nadleški hrib would be evidence for them in the region of Loška dolina (Šašel 1975, 75, 96, Fig. 19).

Within our research, we carried out a GIS analysis of energetically optimal pathways using the so-called natural pathway method (Whitley, Hicks 2001; Poglajen 2006; Mlekuz 2010). Twenty starting points were used in the analysis and an optimal pathway computed from each starting point. The search algorithm used was designed specifically for the data source that was used (DEM 25, ©GURS) and the highly diverse terrain (Podobnikar et al. 2004; Štular 2006). Optimal pathways between each pair of points were computed (380 repetitions in total), and the results were added up. Since the earliest permanent trails commonly avoid flood-prone areas (cf. Štular 2011), such areas were considered not passable in our model. The weakness of the method is the edge effect, which diminishes the interpretative value of the results within a 2-km edge of the analysed area. Hence, the edge area has been omitted from the final result. Using the natural pathway method, high values are interpreted as highly passable. The result is a network of optimal trails (passable throughout the year) crossing the study area in all directions (Fig. 12).

Small finds

The first archaeological finds at Nadleški hrib are mentioned by Saria. While trenching near the entrance, he discovered a fragment of “atypical” pottery (cf. Chapter History of the research). The National Museum of Slovenia keeps the following metal detector finds from the site at Nadleški hrib: three lead slingshots (Fig. 13: 1–3), an iron awl (Fig. 13: 4) and four coins.

The lead slingshots (Fig. 13: 1–3) belong to the most numerous group of such items; i.e. spindle-shaped bullets (shape IIb according to Völling). They were in use in the Roman army from the 3rd century BC until late antiquity (Völling 1990, 34–35). One of the slingshots from Nadleški hrib has both its tips flattened (Fig. 13: 2). Used slingshots often have one flattened or one crushed point, whereas two flattened points would suggest a deliberate fashioning of the blunt points after the missile was cast. Two of the slingshots are heavier than 70 g (87.67 and 96.09 g), which is the main characteristics of lead slingshots of the period from Caesar till the late

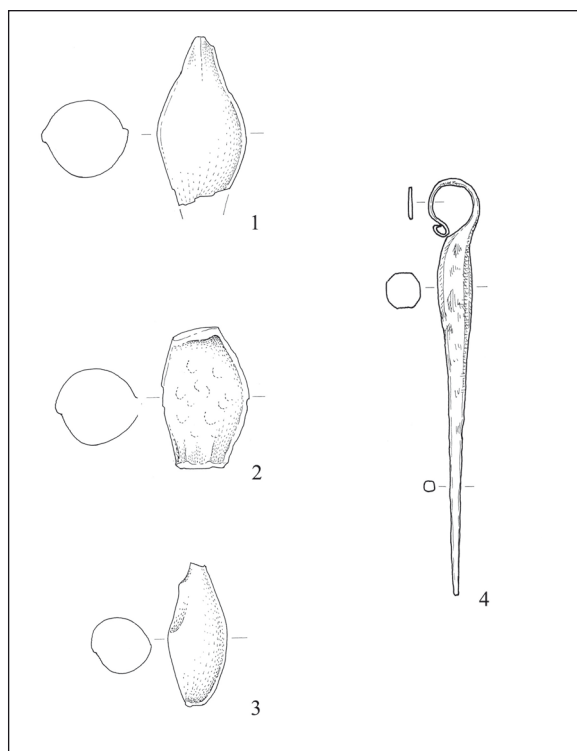


Fig. 13: Nadleški hrib. Lead slingshots and awl (scale = 1:2). (Drawings: I. Murgelj)

Sl. 13: Nadleški hrib. Svinčeni izstrelki za pračo in šilo (M. = 1:2). (Risba: I. Murgelj)

Augustan Age, found at some other sites in the Notranjska region (Laharnar 2011).

The awl (Fig. 10: 4) cannot be dated precisely. The best parallels have been found among awls from the settlements and strongholds from late antiquity (Ulbert 1981, 178, Pl. 25: 265; Ciglencečki 1994, Pl. 2: 11; Pl. 8: 12), in male early-medieval graves from northern Dalmatia (Belošević 1980, 120–122, Pl. 40: 5–12), and a potential early-medieval depot from the Ljubljana (Knific 2004, 193, Fig. 2: 4; id. 2011, Pl. 2: 4).

Two large Tauriscan silver tetradrahmas⁵ and two Roman asses from the 2nd century BC (*FMRSl* IV, 103: no. 41), recovered from Nadleški hrib, are kept by the Numismatic Cabinet of the National Museum of Slovenia.

Large Tauriscan silver tetradrahmas were minted as early as the 2nd century BC (Kos, Šemrov 2003, 386–387). The end of Celtic minting and the subsequent decrease of Celtic coins in circulation are associated with the period around 26/25 or 16/15 BC. However, the Celtic silver coins were

⁵ I am grateful to Alenka Miškec (Numizmatični kabinet Narodnega muzeja Slovenije, Ljubljana) for this information.

unquestionably still in circulation together with Roman money at least in the first decades AD (Kos 1997, 246; id. 2002, 147–158).

The two roman Republican asses from 2nd century BC are halved. Numismatic research of the halving of early Imperial asses has shown that the practice was mostly typical of the Augustan Age (Miškec 2009, 295).

This has been confirmed by the recent research of the coins from Slovenian sites. The halving of asses, for example, was established in the Roman fort at Obrežje; the coin analysis has indicated the fort was in use during the Pannonian-Dalmatian rebellion (Miškec 2009, 296). During the 2008 excavations at location NUK 2 in Ljubljana, 88 copper coins were recovered from the Late Augustan and Early Tiberian layers, 48 of which were halved (Gaspari 2010, 87–88).

When the halving of Republican asses, which include the two examples from Nadleški hrib, actually started is not clear, however. The coins from the site of Andagoste in northern Spain show that the halving of Republican asses was already present in the 4th decade BC (Ocharan Larrondo, Portila Unzueta 2002, 318–323).

6. CONCLUSION

The Roman army chose to build the stronghold at Nadleški hrib for its strategic position, which allows the monitoring of all the trails in and out of Loška dolina. There can be no doubt that the controlling of the routes, which led from Okra/Razdrto and Postojna gate past Cerkniško polje and across Loška dolina towards Dolenjska and into Kvarner, was crucial during the Roman conquest, as well as the period that immediately followed. The rare finds would suggest that the stronghold was not in use for long, or that it was only used sporadically. The halved Republican asses and the entrance in the form of a *clavicula* would suggest a possibility that the stronghold was in use from the time of Caesar's administration of Cisalpine Gaul and Illyricum to Augustan Period. Taking into account the historical situation, it would seem possible that the Romans built the stronghold during the conquest of the region of the present-day Loška dolina (Octavian's Wars in Illyricum?) or during the Augustan Period, in the hinterland of the military events in the western Balkans (the Pannonian war and the Pannonian-Dalmatian rebellion).

Translation: Katarina Jerin

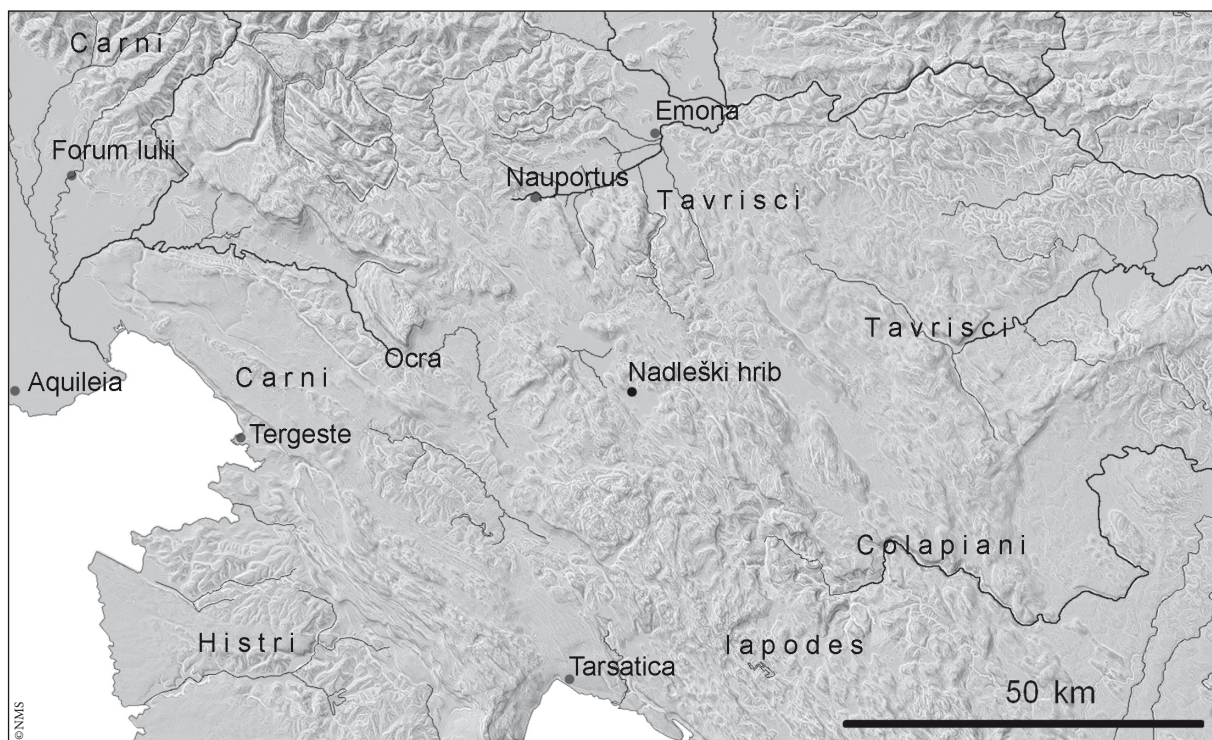


Fig. 14: South-western Slovenia and neighbouring regions from the first half of the 1st century BC to the middle of the 1st century AD.

Sl. 14: Jugo zahodna Slovenija med prvo polovico 1. st. pr. n. št. in sredino 1. st. n. št..

- BELOŠEVIĆ, J. 1980, *Materijalna kultura Hrvata od VII do IX stoljeća*. – Zagreb.
- CIGLENEČKI, S. 1994, Höhenbefestigungen als Siedlungsgrundeinheit der Spätantike in Slowenien. – *Arheološki vestnik* 45, 239–266.
- DAVIES, L., R. H. JONES 2006, *Roman Camps in Wales and the Marches*. – Cardiff.
- DEGRASSI, A. 1954, *Il confine nord-orientale dell' Italia Romana. Ricerche storico-topografiche*. – Bern.
- FMRSI IV: A. Šemrov, *Die Fündmunzen der römischen Zeit in Slowenien IV*. – Mainz 1998.
- GASPARI, A. 2000, *Ulaka. Prazgodovinska in rimska naselbina nad Starim trgom pri Ložu*. – Master thesis / magistrsko delo, Oddelek za arheologijo, Filozofska fakulteta Univerze v Ljubljani.
- GASPARI, A. 2010, "Apud horridas gentis..." . *Začetki rimskega mesta Colonia Iulia Emona / Beginnings of the Roman Town of Colonia Iulia Emona*. – Ljubljana.
- GILLIVER, M. C. 1993, The *de munitionibus castrorum*: Text and Translation. – *Journal of Roman military Equipment Studies* 4, 33–48.
- GROSMAN, D. 1996, Antično Posavje. – In / V: Guštin et al. 1996, *Rimsko podeželje / Roman Countryside*, 43–82, Ljubljana.
- GROTE, K. 2005, *Römer Lager Hedemünden. Vor 2000 Jahren: Römer an der Werra*. – Hann., Münden.
- HVALEC, S. et al. 2009, *Utrip tribune. Doživetja arheološkega vsakdana*. – Ljubljana.
- JOHNSON, A. 1987, *Römische Kastelle des 1. und 2. Jahrhunderts n. Chr. in Britannien und in den germanischen Provinzen des Römerreiches*. – Kulturgeschichte der antiken Welt 37.
- JONES, R. H. 2009, "Lager mit *claviculae*" in Britannia. – In / V: S. W. Hanson (ed. / ur.), *The Army and Frontiers of Rome, Papers offered to David J. Breeze*, Journal of Roman Archaeology, Supplementary series 74, 11–23.
- JONES, R. H. 2012, *Roman camps in Britain*. – Gloucestershire.
- KAHRSTEDT, U. 1933, Lager mit *claviculae*. – *Bonner Jahrbücher* 138, 144–152.
- KAHRSTEDT, U. 1940, Zwei Erdlager in Jugoslavien. – *Serta Hoffilleriana*, *Vjesnik hrvatskog arheološkog društva* 21, 183–188.
- KOS, P. 1997, *Leksikon antične numizmatike*. – Ljubljana.
- KOS, P. 2002, A Find of Celtic Coins from the Area of Balina Glavica (*Sinotion*) in Dalmatia. – *Vjesnik Arheološkog muzeja u Zagrebu* 35, 147–158.
- KOS, P., A. ŠEMROV 2003, Skupna najdba keltskih in rimskih novcev v reki Ljubljanici. Doprinos h kronologiji novcev plemena Tavriskov / A hoard of Celtic and Roman coins from the Ljubljanica River. A contribution to the chronology of the coinage of the Taurisci. – *Arheološki vestnik* 54, 381–395.
- KNIFIC, T. 2004, Sekerovitá hrivna iz reke Ljubljanice (Slovenija). – In / V: G. Fusek (ed. / ur.), *Zborník na počest Driny Bialekopvej*, *Archaeologica Slovaca Monographiae* 7, 191–195.
- KNIFIC, T. 2011, Early mediaeval hoards of iron items in Slovenia. – *Archaeologia Adriatica* 4, 85–99.
- KÜHLBORN, J.-S. 2005, Die Ausgrabungen in den frühkaiserzeitlichen Militäranlagen an der Lippe 1995–2004. – In / V: G. A. Lehmann, R. Wiegels (eds. / ur.), *Römische Präsenz und Herrschaft im Germanien der augusteischen Zeit. Der Fundplatz von Klakries im Kontext neuerer Forschungen und Ausgrabungsbefunde*, Abhandlungen der Akademie der Wissenschaften zu Göttingen. Philologisch-Historische Klasse, Dritte Folge 279, 201–211.
- KÜHLBORN, J.-S. in S. v. SCHNURBEIN 1992, *Das Römerlager in Oberaden 2*. – Bodenaltertümer Westfalens 27.
- LAHARNAR, B. 2011, Roman lead slingshots (*glandes plumbeae*) in Slovenia / Rimski svinčeni izstrelki za pračo (*glandes plumbeae*) iz Slovenije. – *Arheološki vestnik* 62, 339–374.
- LAKE, M. W, P. E., WOODMAN, S. J., MITHEN 1998, Tailoring GIS Software for Archaeological Applications: An Example Concerning Viewshed Analysis. – *Journal of Archaeological Science* 25, 27–38.
- LENOIR, M. 1977, Lager mit *clavicule*. – *Mélanges de l' Ecole française de Rome* 89/2, 697–722.
- LLOBERA, M. 2003, Extending GIS-based visual analysis: the concept of visual scapes. – *International Journal of Geographical Information Science* 17/1, 25.
- MASON, P. 2008, The Roman Fort at Obrežje and Augustan Military Activity in the Sava Valley in Slovenia. – In / V: J.-S. Kühlborn (ed. / ur.), *Rom auf dem Weg nach Germanien: Geostrategie, Vormarschstrassen und Logistik*, Bodenaltertümer Westfalens 45, 187–198.
- MAXFIELD, V. A. 2009, Where did they put the men? An enquiry into the accommodation of soldiers in Roman Egypt. – In / V: S. W. Hanson (ed. / ur.), *The Army and Frontiers of Rome, Papers offered to David J. Breeze*, Journal of Roman Archaeology, Supplementary series 74, 63–82.
- MISKEC, A. 2009, The Augustan conquest of southeastern Alpine and western Pannonian areas: coins and hoards / Avgustejska zasedba jugovzhodnoalpskega prostora in zahodne Panonije: posamične in zakladne novčene najdbe. – *Arheološki vestnik* 60, 283–296.
- MLEKUŽ, D. 2010, Time geography, GIS and archaeology. – In / V: F. Contreras, F. J. Melero (eds. / ur.), *Fusion of Cultures: Proceedings of the 38th Conference on Computer Applications and Quantitative Methods in Archaeology*, 443–445, Grenada.
- MORILLO, Á. 2011, The Roman occupation in the north of Hispania: war, military deployment and cultural intergration. – In / V: G. Moosbauer, R. Wiegels (eds. / ur.), *Fines imperii-imperium sine fine? Römische Okkupations- und Grenzpolitik im frühen Principat. Beiträge zum Kongress "Fines imperii – imperium sine fine?"* Osnabrück vom 14. bis 18. september 2009, Osnabrücker Forschungen zu Altertum und Antike-Rezeption 14, 11–26.
- OCHARAN LARRONDO, J. A., M. PORTILA UNZU-ETA 2002, Andagoste (Cuartango, Álava): un nuevo escenario de las guerras de conquista en el norte de Hispania. – In / V: *Arqueología military Romana en Hispania*, *Gladus* 5, 311–325.
- PAVAN, M. 1955, *La provincia romana della Pannonia superior*. – Atti della Accademia nazionale dei Lincei, Memorie, Classe di Scienze morali, storiche e filologiche 8/6, Roma.
- PODOBNIKAR, T., S. TECCO HVALA, J. DULAR 2004, Iterative approach to ancient paths modelling in the

- Iron Age study of the Dolenjska region (Slovenia). – In / V: K. Fischer Ausserer et al. (eds. / ur.), *Enter the past: the e-way into the four dimensions of cultural heritage*, Proceedings of the 30th conference, BAR. International Series 1227, 254–257.
- POGLAJEN, S. 2006, Iskanje rimske cestne mreže v severozahodni Istri. – In / V: D. Perko (ed. / ur.), *Geografski informacijski sistemi v Sloveniji*, 211–222, Ljubljana.
- PREMERSTEIN von, A., S. RUTAR 1899, *Römische Strassen und Befestigungen in Krain*. – Wien.
- PUSCHI, A. 1902, I valli romani delle Alpi Giulie. – *Archeografo triestino* 24 (suppl.), 3–34.
- RAJŠP, V., M. Ficko 1995, *Slovenija na vojaškem zemljevidu 1763–1787. Karte 1 / Josephinische Landesaufnahme 1763–1787 für das Gebiet der Republik Slowenien. Karten 1, Sekcije / Sectionen 221–225, 230–239, 246–247, 250, 60*. – Ljubljana.
- REDDÉ, M. 1995, “*Titulum et clavicula*” à propos des fouilles récentes d'Alésia. – *Revue Archéologique de l'Est et du Centre-Est* 46, 349–356.
- REDDÉ, M. 2011, L'Armée romaine et les peuples gaulois de César à Auguste. – In / V: G. Moosbauer, R. Wiegels (eds. / ur.), *Fines imperii-imperium sine fine? Römische Okkupations- und Grenzpolitik im frühen Principat. Beiträge zum Kongress “Fines imperii – imperium sine fine?” Osnabrück vom 14. bis 18. september 2009, Osnabrücker Forschungen zu Altertum und Antike-Rezeption* 14, 63–73.
- REDDÉ, M., P. BRULET, R. FELLMANN, J. K. HAALBOS, S. VON SCHNURBEIN 2006, *L'architecture de la Gaule romaine. Les fortifications militaires*. – Documents d'archéologie française 100.
- SARIA, B. 1935a, Terenski rad Arheološkog seminarja Univerze kralja Aleksandra I. u Ljubljani. – *Jugoslovenski istoriski časopis* 1–2, 744–746.
- SARIA, B. 1935b, Ulaka – Metulum? – *Glasnik Muzejskega društva za Slovenijo* 16/1–2, 59–60.
- SARIA, B. 1939, Doneski k vojaški zgodovini naših krajev v rimski dobi. – *Glasnik Muzejskega društva za Slovenijo* 20/1–4, 115–152.
- SCHMID, W. 1937, Ulaka. Japodska naselbina nas Strim trgom pri Ložu. Prvo poročilo o raziskovanjih I. 1936. – *Glasnik Muzejskega društva za Slovenijo* 18/1–2, 17–32.
- SLAPŠAK, B. 1997, Starejša zgodovina Rodika. – In / V: M. Pregelj (ed. / ur.), *Rodik med Brkini in Krasom. Zbornik ob 350. letnici cerkve*, 19–64, Koper.
- ŠAŠEL, J. 1969, Zur Verteidigung der Nordostgrenze in der provincia Cisalpina. – *Roman Frontier Studies* 1969, 174–177, Cardiff (= *Opera selecta*, Situla 30, 1992, 404–407).
- ŠAŠEL, J. 1971, Loški potok. – In / V: J. Šašel, P. Petru, *Claustra Alpium Iuliarum I. Fontes*. – Katalogi in monografije 5, 64.
- ŠAŠEL, J. 1975, Rimske ceste v Sloveniji. – In / V: *Arheološka najdišča Slovenije*, 74–104, Ljubljana.
- ŠAŠEL, J. 1975–1976, Iuliae Alpes. – *Atti VII, Ce.S.D.I.R.* 601–618 (= *Opera selecta*, Situla 30, 1992, 432–449).
- ŠAŠEL, J. 1985, Zur Frühgeschichte der XV. Legion und zur Nordostgränze der Cisalpina zur Zeit Caesars. – *Römische Geschichte, Altertumskunde und Epigraphik. Festschrift für Artur Betz zur Vollendung seines 80. Lebensjahres, Archäologisch-epigraphische Studien* 1 (= *Opera selecta*, Situla 30, 1992, 469–477).
- ŠTULAR, B. 2006, Prostor blejskih planin v srednjem veku / Raum der Bleder Almen in Mittelalter. – In / V: T. Cevc (ed. / ur.), *Človek v Alpah*, 230–241, Ljubljana.
- ŠTULAR, B. 2011, Mreža poti / Path Network. – In / V: S. Ciglenečki, Z. Modrijan, T. Milavec, *Poznoantična utrjena naselbina Tonovcov grad pri Kobaridu. Naselbinski ostanki in interpretacija / Late antique fortified settlement Tonovcov grad near Kobarid. Settlement remains and interpretation*. – *Opera Instituti Archaeologici Sloveniae* 23, 53–64.
- TORRES-MARTÍNEZ, J. H., A. MARTÍNEZ VELASCO, C. PÉRES FARRACES 2012, Augustan campaigns in the initial phase of the Cantabrian War and Roman artillery projectiles from Monte Bernorio oppidum (Villarén, prov. Palencia). – *Archäologisches Korrespondenzblatt* 42/4, 525–548.
- ULBERT, T. (ed. / ur.) 1981, *Ad Pirum (Hrušica). Spätromische Passbefestigung in den Julischen Alpen*. – Münchner Beiträge zur Vor- und Frühgeschichte 31.
- VÖLLING, T. 1990, Funditores in römischen Heer. – *Saalburg Jahrbuch* 45, 24–58.
- WELFARE, H., V. SWAN 1995, *Roman Camps in England*. – London.
- WHITLEY, T. G., L. HICKS 2001, *Using A Geographic Information System (GIS) Approach to Extract potential Prehistoric and historic period Travel Corridors Across a Portion of North Georgia*. – SEAC conference paper [http://www.brockington.org/papers/SEAC2001-WhitleyandHicks.pdf].
- ZACCARIA, C. 1981, Le fortificazioni romane e tardo antiche. – In / V: *Storia ed evoluzione dell'arte delle fortificazioni in Friuli*, Castelli del Friuli 5, 61–95, Udine.
- ZACCARIA, C. 1992, L'arco alpino orientale nell'età romana. – In / V: S. Santoro Bianchi (ed. / ur.), *Castelraimondo. Scavi 1988–1990. I. Scavo*, Cataloghi e monografie archeologiche dei Civici musei di Udine 2, 75–98.

Rimska utrdba na Nadleškem hribu na Notranjskem

1. UVOD

Ostanki rimske utrdbe na Nadleškem hribu so že dolgo znani in najdišče je pogosto omenjeno v arheološki in zgodovinski literaturi, ki se ukvarja z rimsko (vojaško) zgodovino in arheologijo jugovzhodnoalpskega prostora. Na najdišču, kjer presenečajo zlasti dobro vidni ostanki nasipov in značilnega vhoda v obliki t. i. ključnice – klavikule (*sl. 1*), sicer še ni bilo večjih arheoloških raziskav, prav tako še ni bila celostno obravnavana problematika utrdbe. S tem se tudi v novejši literaturi ponavljajo zastareli “tehnični podatki” o njeni ohranjenosti in napačne datacije ter interpretacije.

Ob raziskavi smo opravili geodetsko izmero in izdelali načrt najdišča. Na delu najdišča smo izvedli geofizikalne raziskave. Zbrali smo podatke o detektorskih najdbah, ki so jih izkopali nepooblašчени iskalci, in jih tipološko ter kronološko opredelili. Želeli smo razložiti strateško in prostorsko logiko utrdbe, pri čemer smo si pomagali z geografskimi informacijskimi sistemi (analiza vidnosti in optimalnih poti). Na podlagi zbranih podatkov smo skušali najdišče umestiti v širši zgodovinski in geografski okvir.

2. GEOGRAFSKA LEGA

Nadleški hrib je 642 m visoka planotasta vzpetina nad današnjo vasjo Nadlesk v severozahodnem delu Loške doline (*sl. 2*). Predstavlja zaključek grebena, ki je del hribovitega sveta med Cerkljanskim poljem in Loško dolino, in se prek Križne gore (856 m), Devina (792 m) in Ulake (683 m) izteče v ravninski svet Loške doline. Z vrha Nadleškega hriba je dober pregled nad celotno Loško dolino proti Blokam, Racni gori, Babnemu polju ter na severna pobočja Snežnika in vzhodna pobočja Javornikov.

3. ZGODOVINA RAZISKAV

Attilio Degrassi navaja, da je najdišče na Nadleškem hribu prvi omenil tržaški raziskovalec Pietro Kandler sredi 19. st. (Degrassi 1954, 120). Avgusta 1935 se je na Nadleškem hribu mudil Balduin Saria (časopis *Slovenec*, 22. avgust 1935). Zabeležil je približne mere in obseg rimskega

tabora, ki se navajajo v vsej kasnejši literaturi. Po Sariu je utrdba široka 127 in dolga 159 m ter ima 8,5 m širok vhod v obliki klavikule. Območje utrdbe naj bi torej obsegalo površino pribl. 2 ha, kar ustreza prostoru za namestitev kohorte s 500 možmi – *cohors quingenaria* (Saria 1935a, 745; id. 1935b, 60; id. 1939, 118). Saria je v bližini vhoda čez nasip izkopal sondo, ki je pokazala, da so nasipi zemljena nasutja (Saria 1935a, 745). Ob sondiranju je odkril zgolj eno “neznačilno” črepijo (Kahrstedt 1940, 183 po ustni informaciji B. Saria). V prispevku za *Jugoslovenski istoriski časopis* je Saria utrdbo povezal z Oktavijanovim pohodom proti Japodom v letih 35 in 34 pr. n. št. (Saria 1935a, 746). V drugih dveh objavah je omenil, da je utrdba morda služila obleganju japodske naselbine na Ulaki (Saria 1935b, 60) ali nadzoru pomembne komunikacije med Italijo in Ljubljansko kotlino v nemirnem obdobju takoj po rimski osvojitvi (Saria 1935b, 60; id. 1939, 119; tako tudi Schmid 1937, 28).

Naslednji je o utrdbi na Nadleškem hribu pisal Ulrich Kahrstedt (1940, 183–188). Zavrnil je možnost, da bi šlo za oblegovalno utrdbo. Zgolj ena kohorta je bila po njegovem mnenju premalo za obleganje gradišča na Ulaki. Tabor bi moral biti večji ali pa bi jih moralo biti več. Kahrstedt je tudi ugotovil, da topografske značilnosti Nadleškega hriba ne dopuščajo možnosti uspešnega obleganja. Hrib je namreč s treh strani obdan z močvirno in poplavno ravnico, kar pomeni, da bi se napadalci ob izpadu oblegancev znašli ujeti med sovražnikom in močvirjem (Kahrstedt 183–184). Na podlagi svoje raziskave taborov s klavikulo je Kahrstedt (1933, 144–152) menil, da je utrdba mlajša, kot je domneval Saria. Po Kahrstedtu so se tabori z vhodi v obliki klavikule pojavili večinoma šele v flavijskem obdobju. Meja med Italijo in Panonijo naj bi na tem območju potekala od obdobja Nerona dalje. Posadka v utrdbi je torej po njegovem mnenju varovala mejo Italije v času Nerona in kasneje (Kahrstedt 1940, 185, 188). Saria je nasprotoval Kahrstedtovi dataciji taborov s klavikulo, saj je opozoril, da so takšni vhodi precej starejši, pri tem je navedel primer tabora Mauchamp pri Berry-au-Bacu, ki naj bi ga zgradili že Cezarjevi vojaki (Saria 1939, 118–119).

Degrassi se je strinjal s Kahrstedtom, da taborov s klavikulami v avgustejski dobi še ni bilo. Zavrnil

pa je njegov predlog datacije utrdbe v Neronov in mlajši čas. Menil je, da je bilo to mirno obdobje, v katerem ni pričakovati gradenj vojaških objektov. Zato je utrdbo povezal z obrambnim sistemom *Praetentura Italiae et Alpium* v času markomanskih vojn (Degrassi 1954, 119–121). Njegovo tezo je sprejel tudi Massimiliano Pavan (1955, 396).

Jaroslav Šašel je opozoril, da utrdba na Nadleškem hribu še ni dovolj raziskana, glede na zgodovinsko situacijo se mu je zdela datacija Sarie upravičena (Šašel 1971, 64). V objavah je Nadleški hrib označil kot postojanko na severovzhodni meji Galije Cisalpine, ki je imela pomembno vlogo v obdobju pozne republike in v okupacijski fazi (Šašel 1969, 174–175; id. 1975, 96; id. 1975–1976; id. 1985, 550).

Cludio Zaccaria se je pridružil mnenjema Degrassija in Pavana ter utrdbo povezal s sistemom obrambe pred germanskimi vpadi v času markomanskih vojn (Zaccaria 1981, 76; id. 1992, 90).

Po mnenju Božidarja Slapšaka je v 1. st. n. št. rimska vojaška posadka na Nadleškem hribu morda nadzirala središčno domorodno naselbino na Ulaki (Slapšak 1997, 12).

Andrej Gaspari je v magistrskem delu kratko povzel zgodovino raziskav utrdbe in na karti označil njen približen obseg (Gaspari 2000, 64–65, sl. 4).

4. DOKUMENTIRANJE VIDNIH STRUKTUR IN GEOFIZIKALNE RAZISKAVE

Izhodišča, cilji in uporabljene metode

Pred našimi raziskavami je približno skico obsega utrdbe na Nadleškem hribu na podlagi mer, navedenih v literaturi, izdelal Andrej Gaspari (2000, sl. 4). Sicer se v literaturi zgolj ponavljajo navedbe Saria o ostankih kohortnega kastela z merami 127 × 159 m in 8,5 m širokim vhodom v obliki klavikule. Z meritvami smo zato hoteli preveriti obstoječe stanje na najdišču ter izdelati načrt najdišča z natančno izmerjenimi in prostorsko umeščenimi vidnimi strukturami.

Meritve smo izvajali v Gauss-Kruegerjevem koordinatnem sistemu z napravo sistema globalnega določanja lege (GPS) in s totalno postajo. Meritve s sistemom globalnega določanja lege so bile opravljene v t. i. načinu RTK, ki omogoča natančnost med 0,7 in 2,5 cm. Kjer zaradi gostega rastja ni bilo mogoče izvesti meritev takšnih vrednosti, so meritve dosegale natančnost od 0,3 do 0,8 m. Kadar zaradi zelo gostega rastja in posledično slabega sprejema satelitskega signala meritve s sistemom

globalnega določanja lege niso bile mogoče, smo jih izvedli s totalno postajo.

Z meritvami smo dokumentirali vse prepoznane značilnosti v reliefu. Beležili smo tako potencialno naravne (npr. vrtače) kot umetne tvorbe (npr. nasip). Našo pozornost je pritegnil Sariov podatek, da so nasipi le iz zemlje (Saria 1935a, 745), in njegova oznaka najdišča za kastel (1935b, 60), ki so jo povzeli tudi kasnejši pisci. Menimo, da je zaradi nezadostne raziskanosti kot splošnejša oznaka ustreznejša utrdba. S terminom kastel (nem. *Kastell*, angl. *fort*) so namreč praviloma označene (razmeroma) trajne utrdbe, ki merijo od 0,6 do 6 ha. V njih so bile, odvisno od velikosti, navadno nameščene posadke pomožnih enot rimske vojske (*auxilia*) od nekaj mož do 500 (*cohors quingenaria*) in 1000 (*cohors milliaria*) mož (Johnson 1987, 13; Welfare, Swan 1995, 11). Tako v Britaniji kot v germanskih provincah so bili kasteli zgodnjega 1. stoletja večinoma utrjeni z zemljenim nasipom in jarkom. Posamezni kasteli so sicer imeli zidane obzidne strukture že v 1. st., so pa vendarle značilnejše od domicijansko/trajanskega obdobja naprej (Johnson 1987, 59, s primeri: 245–318).

Nasprotno je bil tabor (nem. *Lager*, angl. *camp*) kratkotrajna oz. začasna vojaška postojanka, navadno utrjena z nasipom in jarkom. Nasip je bil narejen iz ruše, zemlje, kamna in/ali kamnitega drobirja ter nadgrajen z leseno palisado. Tabori so obsegali površine od 0,5 do 23 ha (Welfare, Swan 1995, 11, 17). Rimska vojska je na bojnem pohodu gradila pohodne (dnevne) tabore. Delovni tabor je vojska postavila tam, kjer je bila angažirana pri večjih gradnjah, kot so npr. ceste ali legijski tabori. Ob obleganjih so uporabljali oblegovalne tabore, pri urjenju pa so gradili vadbene tabore (Davies, Jones 2006, 6; Jones 2012, 19–29).

Meja med kasteli in tabori torej ni vedno jasna (Welfare, Swan 1995, 24–26). Poleg tega so lahko zemljeni nasipi v kastelih pomembni tudi za datacijo. Iz povedanega sledi, da je podatek o strukturi nasipa na Nadleškem hribu tehten za interpretacijo najdišča, zato smo se odločili podatek o zemljenem nasipu preveriti z geofizikalnimi raziskavami.¹

¹ Opis poteka in rezultatov geofizikalnih raziskav je nastal v sodelovanju z Gašperjem Rutarjem (Center za preventivno arheologijo, Ljubljana). Geofizikalne raziskave so natančneje predstavljene v poročilu G. Rutarja: *Poročilo o geofizikalnih raziskavah na Nadleškem hribu* (Zavod za varstvo kulturne dediščine, Center za preventivno arheologijo), Ljubljana 2009.

Z metodo upornosti tal smo izvedli meritve v pravilni mreži kvadrantov velikosti 20×20 m, z razdaljo 1 m med prečnicami in 1 m med merilnimi točkami. Območje, predvideno za raziskavo z metodo upornosti tal, smo izbrali na podlagi ohranjenih površinskih sledov in stopnje zaraščenosti. Raziskali smo 6800 m^2 veliko površino (sl. 3).

Z georadarsko metodo smo izdelali georadarske profile vzporednih prečnic, kar omogoča dobro zaznavo morebitnih podpovršinskih struktur. Serijo osmih georadarskih profilov smo izvedli prek izrazite poglobitve v notranjosti utrdbe, serijo štirih georadarskih profilov pa prek klavikule (sl. 4).

Rezultati terenskih raziskav

Na podlagi meritev z napravo GPS in totalno postajo smo izdelali načrt najdišča (sl. 5; 6). Na severozahodni strani hriba poteka 5,5 do 7 m širok in 0,5 do 1,3 m visok nasip od izohipse s koto 636 m v smeri proti severovzhodu v dolžini 104,7 m. Po 23,5 m je nasip prekinjen in tvori t. i. vhod v obliki ključnice – klavikule (*clavicula*). Prvi krak je dolg 10 m in se v obliki blagega polkroga izteče v smeri proti vrhu hriba. Širina vhoda meri med 3,6 na zunanji in 2,4 m na notranji strani vhoda. Drugi krak nasipa poteka proti severovzhodu in se po 22,5 m nadaljuje po strmem pobočju, kjer se 43 m nižje, na izohipsi s koto 624 m, polkrožno zaobrne proti jugovzhodu. Njegovo nadaljevanje prepoznamo v obliki 3,3 in 5 m široke terase in izrazitega, 124 m dolgega preloma v pobočju.

V notranjosti utrdbe se takoj za vhodom nahaja izravnani plato približno polkrožne oblike (sl. 5: A) s premerom 53 do 57 m. Plato je od najvišjega dela hriba ločen z izrazito poglobitvijo (sl. 5: B), ki se proti zahodu razširi v pobočno teraso, na vzhodnem, strmem pobočju pa je opazna kot neizrazita globel.

Na zahodni in južni strani hriba ostankov nasipa nismo zasledili. Del zahodnega nasipa morda lahko prepoznamo le v blagem, 23 m dolgem zalomu pobočja (sl. 5: C), ki poteka proti jugu. Proti zahodu se pobočje blago spušča. Prvi izrazitejši zalom poteka med izohipsama s kotama 628 in 634 m (sl. 5: D) in se nato nadaljuje v južno pobočje hriba. Pod omenjenim zalomom se na zahodni strani nahaja več teras, ki so zelo verjetno večinoma naravnega nastanka ali posledica kasnejše kmetijske izrabe. Ozka in dolga terasa, ki poteka od omenjenih teras proti jugovzhodu (sl. 5: F), je opuščen kolovoz, katerega potek verjetno prikazuje Jožefinska vojaška

karta, nastala med letoma 1763 in 1784 (Rajšp, Ficko 1995, list 1; poročilo G. Rutarja [str. 7, 9 sl. 3]²). Tudi v smeri proti jugu se od najvišjega dela hriba pobočje enakomerno spušča proti Nadlesku. Izrazit zalom pobočja se nahaja pri razpelu med izohipsama s kotama 634 in 636 m (sl. 5: E) in nižje ob nadaljevanju zahodnega zaloma (sl. 5: D).

Metoda upornosti tal je pokazala izrazite kontraste na območju izravnane platoja (morda delo človeških rok?) v notranjosti utrdbe (sl. 7: 1) in strojničnega gnezda iz polpretekle dobe (sl. 7: 2). V izraziti poglobitvi je več prsti in rezultat kaže precej manjšo upornost od okolice (sl. 7: 3). Podobno velja za izravnavo (sl. 7: 4) in poglobitev (sl. 7: 5) zunaj utrdbe, ki sta verjetno naravnega izvora.

Georadarski profili kažejo pri klavikuli plitvo ležeče (nasute?) plasti (sl. 8) in globlje anomalije geološkega nastanka. Profili čez izrazito poglobitev kažejo, da se stik s skalno osnovo začne spuščati (sl. 9). Signal z globino zelo oslabi, verjetno zaradi vode ali glinene sestave prsti.

5. DISKUSIJA

Nasipi in obseg

Ohranjena nasipa potekata skoraj pravokotno drug na drugega in tvorita zaobljen vogal. Trenutno je nemogoče ugotavljati, kolikšen je bil dejanski obseg utrdbe. Saria je ocenil dolžini stranic na 127 in 159 m in tako sklepal na približno 2 ha veliko površino utrdbe (Saria 1935a, 745). Pri svojih raziskavah smo prepoznali severozahodni nasip v dolžini 104,7 m in severovzhodni nasip v dolžini 124 m, ki omejujeta površino pribl. 1,3 ha.

Povezovanje poteka ostalih nasipov z izrazitimi zalomi v pobočju (sl. 5: D,E) je zgolj domneva. Zalomi so morda naravna tvorba ali posledica poznejše kmetijske izrabe.

Povsem nejasne so okoliščine sondiranja nam neznanega g. Pirca iz Ljubljane, ki je menda po naročilu Saria kopal v bližini razpela. Sonde čez nasip (morda čez prelom E na jugovzhodnem pobočju, sl. 5: E) so domnevno razkrile suhozidno gradnjo in črepinje (arhivska dokumentacija³ in Gaspari 2000, 65 op. 57). O navedenem sondiranju ne vemo nič natančnega, navedba o odkritju suhozidne gradnje lahko nakazuje odkritje parcelne meje ali morda

² Glej op. 1.

³ M. Urleb, Dosje Nadleški grič, hrani arhiv Arheološkega oddelka Notranjskega muzeja v Postojni.

utrditve za kolovoz. Na Franciscejskem katastru iz druge polovice 19. st. za katastrsko občino Nadlesk⁴ so jugovzhodna pobočja Nadleškega hriba označena kot pašniki.

Na površini vidni zemljeni nasipi rimske vojaške utrdbe nimajo primerjav v Sloveniji niti v srednje-evropskem prostoru. Ostanke nasipov in jarkov rimskih vojaških utrdb so bili pri nas ugotovljeni le z izkopavanji (Mason 2008; Hvalec et al. 2009, 3; Gaspari 2010, 113–116) ali kot vegetacijski in barvni znaki pri analizi aerofotografij (Grosman 1996, 65–66).

Primerjave najdemo v specifičnem travnatem okolju Anglije, Wellsa in Škotske, kjer ima 35 odstotkov dokumentiranih rimskih vojaških taborov na površju vidne strukture (Jones 2009, 11). Taki primeri so se večinoma ohranili na višjih območjih, kjer so pašniki. V nižjih, poljedelskih območjih so bili nasipi pogosto zravnanji z modernim oranjem in jih prav tako lahko odkrijejo le s prepoznavanjem vegetacijskih znakov, z uporabo tehnologije LiDAR ali izkopavanji (Welfare, Swan 1995, 1–6; Davies, Jones 2006, 7–10; Jones 2012, 64–69). V Veliki Britaniji so z izkopavanji odkrili tudi primere, ki pričajo, da je že rimska vojska ob opustitvi utrdbe jarke zasula z materialom iz nasipov (Welfare, Swan 1995, 18).

Širina nadleških nasipov ne odstopa od širin na površju ohranjenih nasipov v Angliji, kjer so njihove širine med 1,9 in 6,4 m (Welfare, Swan 1995, 17). V Wellsu je večina na površju ohranjenih nasipov široka med 3 in 4 m in visoka med 0,3 in 0,9 m (Davies, Jones 2006, 22). Georadarski profili nasipov ob vhodu potrjujejo Sariovo omembo o zemljenih nasipih. Natančnejše podatke o arhitekturi nasipa, npr. o morebitni uporabi lesenih opornikov, bi lahko pridobili le z izkopavanjem. Izkopavanja rimskih utrdb so namreč pokazala različne načine gradenj zemljenih nasipov (sl. 10).

Z nadleškimi so primerljive dimenzije nasipov nekaterih rimskih vojaških taborov v Porenju. Tam so bili tabori utrjeni z okopi iz lesa in zemlje (nem. *Holz-Erde-Mauer*), ki so imeli zunanji lici grajeni iz lesenih brun in desk, notranjost pa je bila zapolnjena z zemljo in drobirjem (primer: sl. 10: 7). Tako so bili verjetno grajeni nasipi nedavno odkritega tabora Hedemünden, ki so ohranjeni 5 do 6 m v širino ter med 0,8 in 1,2 m v višino (Grote 2005, 20–22).

Na najdišču Tribuna v Ljubljani so odkrili ostanke rimske utrdbe z nasipom, katerega zunanje lice je bilo utrjeno s suhim zidom. Notranjost nasipa je bila zgrajena iz lesa, kamena in zemlje (Hvalec et al. 2009, 3). Obstoje zemljenega nasipa v kombinaciji z lesenimi oporniki in morda lesenim zunanjim licem v drugi fazi rimske vojaške utrdbe na Obrežju verjetno nakazujejo stojke v zgornjem polnilu notranjega jarka in v prostoru med obema jarkoma (Mason 2008, 191).

Vhod

Vhod v obliki klavikule (*clavicula*) je najznačilnejša arheološka ostalina na Nadleškem hribu, ki omogoča opredelitev nasipov za ostanke rimske vojaške utrdbe. Nadleška klavikula sodi v najpogostejšo različico tovrstnih vhodov, tj. med notranje klavikule. Sicer je rimska vojska gradila še zunanje in dvojne klavikule ter klavikule različice "Stracathro" (sl. 11; Lenoir 1977, 701–702, sl. 3: a; Jones 2009, 13–17). Na Nadleškem hribu se eden od krakov nasipa v blagem polkrogu zapogne v notranjost utrdbe in tako skupaj z drugim krakom onemogoča neposreden vstop. Tak vhod je prisilil napadalce, da so ob poskusu vstopa izpostavili svoj nezaščiten desni bok (Redd et al. 2006, 88; Mason 2008, 189; Gaspari 2010, 26, 113). Vhod s klavikulo so na Nadleškem hribu premišljeno zgradili tik na robu izrazite skalne strmine pod vrhom severozahodnega pobočja (sl. 5), kar je morebitnim sovražnikom predstavljalo dodatno oviro pri poskusu vpada skozi vhod.

Pri dosedanjih poskusih datacije utrdbe je bila ključna prav datacija vhodov v obliki klavikule (prim. Zgodovina raziskav). Ob pomanjkanju arheološko raziskanih klavikul je bil še nedavno eden glavnih virov za njihovo datacijo tekst *De munitionibus castrorum*, ki v 55. poglavju opisuje konstrukcijo tovrstnih vhodov. Besedilo velja za del vojaškega priročnika, ki so ga pripisovali Higinu Gromatiku (*Hyginus Gromaticus*), piscu iz časa Trajana. Danes je večinoma sprejeto, da gre pravzaprav za del besedila, ki je bilo v 3. stoletju sestavljeno iz starejših besedil. Zato uporabljajo v novejši literaturi za avtorja ime Psevdo-Higin (*Pseudo-Hyginus*). Nekateri so skušali besedilo datirati po zgodovinskih dogodkih, ki se verjetno zrcalijo v besedilu, drugi na podlagi slovničnih značilnosti in besedišča. Nastanek besedila večinoma datirajo na konec 1. st. oz. v čas cesarjev Domicijana in Trajana.

⁴ Vir: <http://giskds.situla.org/giskd> [zadnji dostop 4.8.2013].

Klavikula je upodobljena tudi na Trajanovem stebru v Rimu (s kratkim povzetkom starejših razprav: Gilliver 1993, 33 in Jones 2009, 18–19).

V zadnjih letih je vedno več arheoloških odkritij vhodov v obliki klavikule pri rimskih vojaških utrdbah iz različnih delov nekdanjega rimskega imperija.

Klavikula v Mauchampu pri Berry-au-Bacu v Franciji (glej Zgodovina raziskav: Saria 1939, 118–119) ostaja argument za uporabo tovrstnih vhodov v Cezarjevem času. Povezava tabora s Cezarjevimi pohodi 57 pr. n. št. je sicer še vedno vprašljiva, saj obstajajo dokazi o vojaških premikih na območju tabora tudi za flavijsko obdobje. A vendarle se z modernimi izkopavanji v Aleziji (Alise-Sainte-Reine), ki so razkrila notranjo klavikulo v taborih A (Mont Auxois) in C (Côte-d'Or) iz časa Cezarjevega obleganja 52 pr. n. št., zdi tudi datacija tabora Mauchamp v čas Cezarjevih galskih vojn povsem upravičena (Reddé 1995; Jones 2009, 19). Z galskimi vojnami je prav tako povezan vojaški tabor Faux-Vésigneul, ki je imel dva vhoda v obliki notranje klavikule (Reddé 1995, 277; id. 2011, 63–64).

Na severu Španije so uspeli dokumentirati več najdišč, ki so povezana z rimsko vojsko iz obdobja kantabrijskih vojn (26–19/15 pr. n. št.). Med njimi so tudi rimski vojaški tabori z vhodi v obliki klavikule (Morillo 2011, 11–26; Torres-Martínez et al. 2012, 529–531).

Več rimskih utrd s klavikulami je znanih v Egiptu. Med njimi je tabor Qasr Ibrim A, ki so ga na podlagi amfor in vzhodne sigilate datirali v 1. st. pr. n. št. in ga glede na zgodovinsko situacijo povezujejo s Petronijevim vojaškim pohodom leta 23 pr. n. št. (Maxfield 2009, 71–72).

Vhod v obliki klavikule so odkrili v t. i. vzhodnem taboru (Ostlager), ki leži 1,5 km vzhodno od glavnega tabora v Halternu. Oba tabora sta iz poznoavgustejske dobe (Kühlborn 2005, 209–211).

Jasni dokazi o gradnji klavikul v avgustejski dobi so prišli na dan pri izkopavanju vojaške utrdbe na Obrežju. Izkopavanja so razkrila dvofazno utrdbo, ki je v obeh obdobjih uporabe (verjetno v času panonske vojne in panonsko-dalmatskega upora) imela vsaj enega od vhodov v obliki klavikule (Mason 2008, 189–191, sl. 2).

Pri arheoloških izkopavanjih na najdišču NUK 2 v Ljubljani so na površini ostanka prvotnih tal odkrili jarka trikotnega preseka. Eden od njiju je na določenem delu tvoril obliko klavikule. Po interpretaciji Andreja Gasparija so ti jarki ostanki vadbene tabora iz časa neposredno pred pozidavo

kolonije v Emoni. Gaspari jo na podlagi tesnega stratigrafskega sosledja in zlasti novčnih najdb datira v zadnja leta cesarja Avgusta in zgodnjeterbersko obdobje (Gaspari 2010, 25–27, 78).

Utrdba na Nadleškem hribu je verjetno imela vsaj še en vhod. Na to kažejo pravila postavitve vhodov v rimskih vojaških taborih, ki so se ohranila v antičnih pisnih virih. Vegetij priporoča postavitve vhoda *porta praetoria* v smeri proti vzhodu oz. v smeri sovražnika (Vegetius I, 23). Pseudo-Higin piše, da je *porta decumana* vedno postavljena na najvišjo točko tabora, od koder je zagotovljen nadzor nad območjem, *porta praetoria* pa je vedno v smeri sovražnika (Pseudo-Higinus 56). Glede na priporočila omenjenih piscev ohranjeni vhod na Nadleškem hribu torej ne more biti *porta decumana*, saj leži v nižjem delu hriba.

Notranjost

V notranjosti utrdbe se takoj za vhodom nahaja izravnani plato (sl. 5: A). Rezultati merjenja upornosti tal v tem delu kažejo antropogeno preoblikovanost, ne omogočajo pa prepoznavanja strukture.

Skušali smo razložiti pomen jarku podobne poglobitve (sl. 5: B), ki zamejuje izravnani plato A proti jugovzhodu. Uporaba takšne poglobitve za obrambni jarek bi bila smiselna, vendar bi moral jarek potekati na zunanji strani utrdbe, kar glede na potek severovzhodnega nasipa ni mogoče trditi. Če bi šlo za obrambni jarek, bi bil obseg utrdbe bistveno manjši, kot ga je videl Saria in tudi kot smo ga uspeli prepoznati sami. V tem primeru bi bila utrdba omejena le na nižji del hriba, kar bi zmanjšalo ugodnost njene strateške pozicije, a to se zdi malo verjetno. Poleg tega je jarkasta poglobitev s širino 4,7 m v najožjem delu precej širša od obrambnih jarkov rimskih vojaških taborov. Ti so bili navadno široki pribl. 1,8 m (Welfare, Swan 1995, 18) oz. med 0,5 in 1,8 m (Davies, Jones 2006, 25). Enako velja za širino jarkov taborov v Porenju. Tabor v Hedemündenu ima npr. jarek širok med 3,5 in 4 m (Grote 2005, 22), Oberaden pa med 2,5 in 4 m (Kühlborn, Schnurbein 1992, 12–16). Celo tabor Farnsfield (Nottinghamshire), ki je bil branjen zgolj z jarkom, je imel jarek širok 2,8 m (Welfare, Swan 1995, 18). Menimo torej, da gre v primeru jarkaste poglobitve za naravno tvorbo.

V literaturi je večkrat prepisana Sariova teza, da je bila v utrdbi na Nadleškem hribu nameščena kohorta 500 mož (*cohors quingenaria*), vendar je sklepanje o velikosti moštva zgolj iz predpostavljene

ne velikosti utrdbe lahko sporno. To še posebno velja za utrdbe, ki ležijo na razgibanih terenih. Walfare in Swanova npr. menita, da na strmih pobočjih tabora Fell End (Northumberland) niso mogli postaviti šotorov (Walfare, Swan 1995, 22). Podobno lahko trdimo za zelo strmo severovzhodno pobočje znotraj utrdbe na Nadleškem hribu.

Ista avtorja sta opozorila na včasih preveč optimistično iskanje notranjih struktur v kratkotrajnih taborih. Pravilna notranja organiziranost v razmeroma trajnih utrdbah (linije šotorov, barak, poveljniški prostor, hlevi itd.), o kakršni jasno poročajo antični pisni viri (Polibij, Psevdo-Higin, Vegecij) in ki je bila v več primerih ugotovljena z izkopavanji, za kratkotrajne utrdbe ni pravilo. Razgiban relief, strateška lega in trenutna situacija na bojišču so narekovali pragmatične rešitve, ki so gotovo večkrat močno odstopale od navodil v vojaških priročnikih (Walfare, Swan 1995, 16, 22).

Izbira kraja – strateška lega

Glede na oblikovanost reliefa je morala biti utrdba na Nadleškem hribu nepravilne oblike, kar je sklepal že Gaspari (2000, 64). To nakazuje tudi morebitna sled zahodnega nasipa v zalomu terena, ki se navezuje na severozahodni nasip (sl. 5: C).

Odstopanje od idealnega pravokotnega tlorisa z zaobljenimi vogali (v angleškem literaturi se uporablja izraz "*playing-card*" form – oblika igralne karte) za rimske tabore in kastele ni neobičajno (Johnson 1987, 245–318; Walfre, Swan 1995, 16; Davies, Jones 2006, 16–20). Razumljivo je, da se je vojska prilagodila danim možnostim na terenu. Bolj nenavadna je umestitev dobršnega dela utrdbe na strmo vzhodno pobočje. Maloštevilni podobni tabori z delom obsega na strmih pobočjih hribov so dokumentirani v Angliji. Najznačilnejši med njimi so tabori Higher Kingdom (Devon), Bloomy Lane (Cumbria) in Fell End v grofiji Northumberland (Welfare, Swan 1995, 8). Zdi se, da je bila za takšno umestitev tako angleških primerov kot utrdbe na Nadleškem hribu ključna zagotovitev strateških prednosti. Te so bile pomembnejše od standardne oblike "igralne karte" in notranje vizualne povezanosti.

Nadleški hrib omogoča dober pregled nad celotno Loško dolino, kar kaže tudi analiza vidnosti. Izračunali smo vidnost z najvišje točke (vir: DMV 25 ©GURS) in s 100 naključnih točk (t. i. *Total Viewshed*, npr. Lake, Woodman, Mithen 1998, 27–38, vir: DMV 25) na hribu ter s 5 točk na okopu utrdbe (vir: DMV 25 in točkovne meritve

z napravo globalnega določanja lege ter s totalno postajo). Rezultat je stopenjski model vidnosti, ki prikaže območja, vidna z Nadleškega hriba, ter slabo in dobro vidna območja znotraj njih. Mejo vidnosti predstavljajo vrhovi, ki obdajajo Loško dolino (sl. 12).

Posadka v utrdbi je torej imela zagotovljen nadzor nad vsemi potmi, ki so vodile v Loško dolino in iz nje. Dostopi v Loško dolino vodijo iz smeri Cerkniskega polja preko prevala pod Stražiščem, z Blok preko prevala pod Križno goro ter z Babnega polja in Gorskega Kotarja preko prehoda med Racno goro in snežniškim masivom (Gaspari 2000, 8). Postavitev utrdbe tako povsem sledi priporočilom Psevdo-Higina, ki pravi, da mora biti tabor postavljen na varni razdalji od gozdov in ozkih dolin oz. mora imeti pregled nad njimi. Gozdove in ozke doline bi sovražnik namreč lahko izkoristil za nenaden napad (*Pseudo-Hyginus* 57).

V literaturi je že dolgo prisotna teza o prazgodovinski in nato rimski poti, ki je vodila s Pivškega prek Javornikov do Loške Doline in dalje na Babno polje (Premmerstein, Rutar, 1899, 7; Puschi 1902, 26–27). Šašel je prav na območju današnjega Starega trga v Loški dolini predvideval križišče poti Emona–Tarsatica in t. i. japonske ceste iz smeri Tergesta prek Divače, Starega trga proti Kolapijanom (Bela krajina) in Liki. Poti sta bili po Šašlovem mnenju zlasti pomembni za rimske vojaške operacije v okupacijski fazi in ju morda na območju Loške doline nakazuje prav utrdba na Nadleškem hribu (Šašel 1975, 75, 96, sl. 19).

Med raziskavo smo izvedli analizo energetske optimalnih poti z uporabo t. i. metode naravnih poti (ang. *Natural Pathway*) (Whitley, Hicks 2001; Poglajen 2006; Mlekuž 2010). V analizi smo uporabili 20 izhodišč in izračunali optimalno pot iz vsakega izhodišča po metodi, ki je bila razvita namensko za uporabljeni vir podatkov (DMV25, ©GURS) in močno razgiban relief (Podobnikar et al. 2004; Štular 2006). Izračunali smo optimalne poti iz vsakega izhodišča do vseh ostalih, torej 380 ponovitev. Pri izračunu smo upoštevali dejstvo, da se tudi najstarejše stalne poti poplavnih območij izogibajo (prim. Štular 2011). Slabost metode je robni učinek (ang. *edge effect*), zato je interpretativna vrednost rezultatov na območju dvokilometrskega roba analiziranega območja nižja in jih v zaključni fazi analize nismo upoštevali. Pri uporabi metode naravnih poti so visoke vrednosti interpretirane kot območja z visoko prehodnostjo. Rezultat je mreža poti prek raziskovanega območja, ki so prehodna vse leto (sl. 12).

Drobne najdbe

Prve arheološke najdbe na Nadleškem hribu omenja Saria. Ob sondiranju v bližini vhoda je odkril odlomek "neznačilne" keramike (glej Zgodovina raziskav). Narodni muzej Slovenije hrani pod najdiščem Nadleški hrib detektorske najdbe: tri svinčene izstrelke za pračo (*sl. 13: 1–3*), železno šilo (*sl. 13: 4*) in štiri novce.

Svinčeni izstrelki za pračo (*sl. 13: 1–3*) pripadajo najštevilčnejši skupini tovrstnih predmetov, tj. izstrelkom vretenaste oblike. Völling jih je označil kot obliko IIb. Rimska vojska jih je uporabljala od 3. st. pr. n. št. do pozne antike (Völling 1990, 34–35). Eden od izstrelkov z Nadleškega hriba ima sploščeni obe konici (*sl. 13: 2*). Uporabljeni izstrelki imajo večkrat po eno sploščeno ali zmečkano konico, obe sploščeni konici pa prej kažeta na namerno oblikovanje topih konic po ulitju izstrelka. Dva od izstrelkov sta težja od 70 g (87,67 in 96,09 g), kar je glavna značilnost svinčenih izstrelkov za pračo z nekaterih drugih notranjskih najdišč iz obdobja od Cezarja do poznoavgustejske dobe (Laharnar 2011).

Šila (*sl. 13: 4*) ne moremo ožje datirati. Najboljše primerjave smo mu našli med šili iz poznoantičnih naselbin in utrd (Ulbert 1981, 178, t. 25: 265; Ciglencečki 1994, t. 2: 11, t. 8: 12), v moških zgodnj srednjeveških grobovih v severni Dalmaciji (Belošević 1980, 120–122, t. 40: 5–12) in v verjetnem zgodnj srednjeveškem depozitu iz Ljubljane (Knific 2004, 193, sl. 2: 4; id. 2011, t. 2: 4).

Numizmatični kabinet Narodnega muzeja Slovenije hrani z Nadleškega hriba dva velika keltska srebrnika tavrške skupine⁵ in dva rimska asa iz 2. st. pr. n. št. (*FMRSI* IV, 103: št. 41).

Velike srebrnike tavrške skupine so kovali že sredi 2. st. pr. n. št. (Kos, Šemrov 2003, 386–387). Konec keltskega kovanja in s tem zmanjševanje keltskih novcev v obtoku se povezuje z obdobjem okoli leta 26/25 ali 16/15 pr. n. št. Vendar so bili keltski srebrniki nedvomno v obtoku skupaj z rimskim denarjem vsaj še v prvih desetletjih n. št. (Kos 1997, 246; id. 2002, 147–158).

Rimska republikanska asa iz 2. st. pr. n. št. sta polovičena. Numizmatične raziskave polovičenja zgodnjeimperialnih asov so pokazale, da sodi ta pojav predvsem v avgustejsko obdobje (Miškec 2009, 295).

To potrjujejo tudi novejša raziskava novcev z najdišč v Sloveniji. Polovičenje asov je npr. izpričano v vojaškem taboru na Obrežju, za katerega analiza novcev nakazuje uporabo v obdobju panonsko-dalmatskega upora (Miškec 2009, 296). Med izkopavanji na lokaciji NUK 2 leta 2008 v Emoni je bilo v poznoavgustejskih in zgodnjeteriberijskih plasteh odkritih 88 bronastih novcev, od katerih je bilo 48 polovičenih (Gaspari 2010, 87–88).

Začetek polovičenja republikanskih asov, h katerim sodita tudi primerka z Nadleškega hriba, ni jasen. Novci z najdišča Andagoste v severni Španiji kažejo, da je bilo polovičenje republikanskih asov prisotno že v 4. desetletju pr. n. št. (Ocharan Larondo, Portila Unzueta 2002, 318–323).

6. SKLEP

Rimska vojska je Nadleški hrib za postavitev utrdbe izbrala zaradi njegove strateške lege, saj ta omogoča nadzor nad vsemi potmi, ki pripeljejo v Loško dolino in iz nje. Nadzor poti, ki so vodile od Okre/Razdrtega in Postojnskih vrat mimo Cerkniškega polja in prek Loške doline proti Dolenjski ter v Kvarner, je bil gotovo ključen tako ob rimskem osvajanju kot v obdobju takoj po osvojitvi. Maloštevilne najdbe nakazujejo, da utrdba ni bila dolgo v uporabi ali pa je bila uporabljena občasno. Republikanska polovičena asa in vhod v obliki klavikule nakazujejo možnost datacije uporabe utrdbe od obdobja Cezarjeve uprave Galije Cisalpine in Ilirika do vključno avgustejske dobe. Ob upoštevanju zgodovinske situacije se zdi verjetno, da so Rimljani utrdbo zgradili ob rimskem osvajanju območja današnje Loške doline (Oktavijanove vojne v Iliriku?) ali v zaledju vojaških dogajanj na zahodnem Balkanu v avgustejski dobi (panonska vojna, panonsko-dalmatski upor).

Boštjan Laharnar
Narodni muzej Slovenije
Prešernova cesta 20
SI-1000 Ljubljana
bostjan.laharnar@nms.si

⁵ Za informacijo se zahvaljujem Alenki Miškec iz Numizmatičnega kabineta Narodnega muzeja Slovenije.

