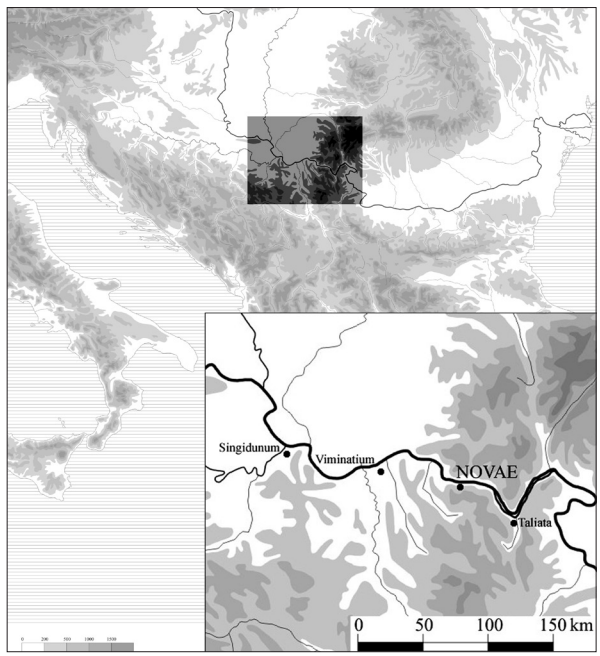
MIROSLAV VUJOVIĆ

Clay slingshots from the Roman fort Novae at Čezava (Serbia)

This paper deals with finds of clay slingshots discovered during the archaeological investigations of the Roman military camp *Novae* in the Iron Gates gorge. Castle *Novae* is situated in eastern Serbia, 18 km downstream from the entrance to the Iron Gates gorge, at the confluence of the Čezava river with the Danube (Fig. 1). It was investigated from 1965–1970 as part of the project accompanying the construction of the Djerdap I power plant and the raising of the level of the Djerdap reservoir, during which many archaeological sites were flooded[1]. The *Novae* fort was one of the first large Roman camps in the gorge, situated at a strategically important site. It was positioned at the confluence of one of the Danube's tributaries, in close proximity to the route of the Roman road stretching through the Iron Gates gorge[2]. The importance of the *Novae* castle is also indicated by the fact that it was inhabited from the first half of the 1st until the end of the 6th centuries, with short interruptions. The camp was erected 100 m away from the river bank, on a ridge protruding into the Danube's main stream (Fig. 2). The port of the Danube fleet, partially excavated by archaeologists, was formerly sited here. This was the most convenient point to wade across the Danube in the gorge, especially in summer, when the water level was low, and in winter when the Danube would freeze making it possible to cross the river on foot.



1 Iron Gate section of Roman limes, Serbia. – After Vujović 2007 (note 7), 298, Fig. 1.

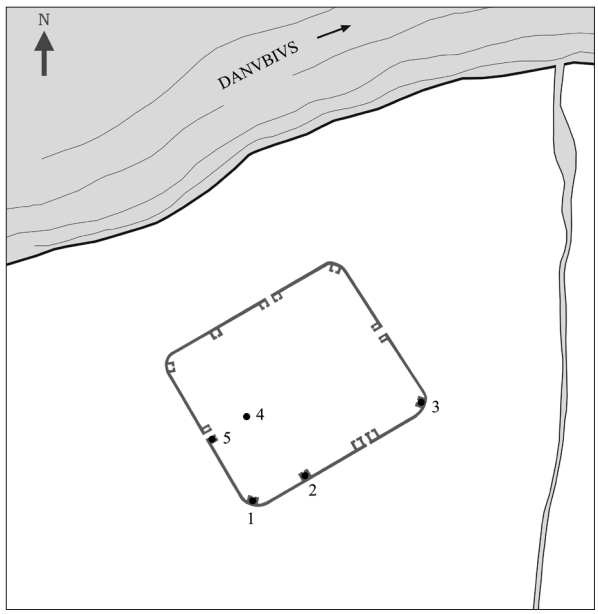
According to data surviving from Roman itineraries, the *Novae* castle was situated on the *Singidunum* – *Viminacium* – *Taliata* road, 12 miles away from the settlement of *Cupae*, the present-day Golubac[3]. Systematic archaeological investigations began as late as the mid 1960s. Unfortunately, in spite of the invested efforts, it was not possible to research the whole camp because the level of the Danube had risen. Most attention was focused on uncovering the fortifications: the ramparts, towers and gates. The interior of the fortification was only partially researched. On that occasion, the *principia*, *horreum*, remains of the soldiers' barracks, paved *via principalis*, and an early Byzantine church built in the first half of the 6th century were uncovered.

Investigations confirmed the importance of the Roman fort at Čezava, as one of the oldest on this

[1] M. P. Vasić [Васић], Чезава, Castrum Novae. Starinar 33/34, 1984, 91 ff.

[2] The road construction commenced in the first decades of the 1st century AD, and continued in the period of Traian's preparations for the Dacian wars (101–102 AD, and 105–106 AD).

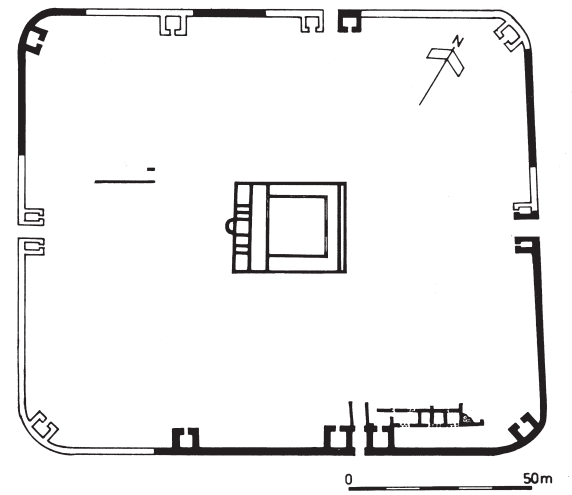
[3] Itin. Ant. 218,1 (Novas); Tab. Peut. 7,3 (ad Novas).



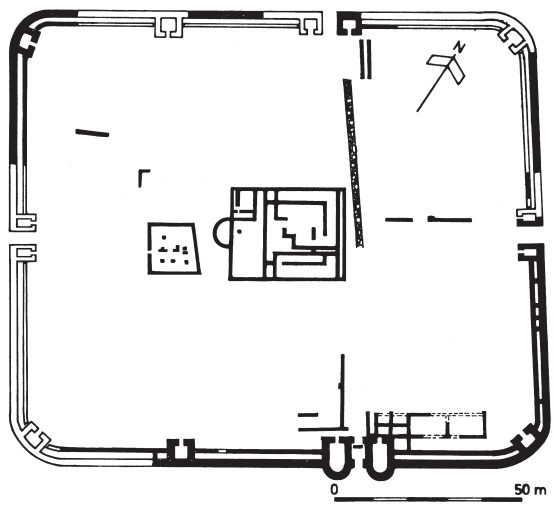
2 Location of Roman fort *Novae* at Čezava with the positions of the clay slingshot finds. – After Vujović 2007 (note 7), 306, Fig. 4.

part of the Danube border. Several building stages were established, mainly coinciding with those identified in other forts in the Iron Gates gorge[4]. The first timber and earth fortification was built in the first half of the 1st century AD, most probably during the reign of the Emperor Claudius I, or even earlier in Tiberius's time, and was restored during the reign of Domitian. Very little survived from the original camp, because of the subsequent intensive construction works on the same site[5].

The first stone fortification was erected on this site at the end of the 1st or the beginning of the 2nd centuries AD, certainly within the time of the Roman preparations for the first Dacian war. To this construction phase belong surviving remains of a rectangular fortification (dimensions: 140 × 120 m, or 1.6 ha) with quadrangular interior towers placed at the corners, in the middle of the rampart, and around the gates (Fig. 3). The camp interior had a



3 Roman fort Novae, 2nd century. – After Vasić 1984 (note 1), 98, Fig. 6.



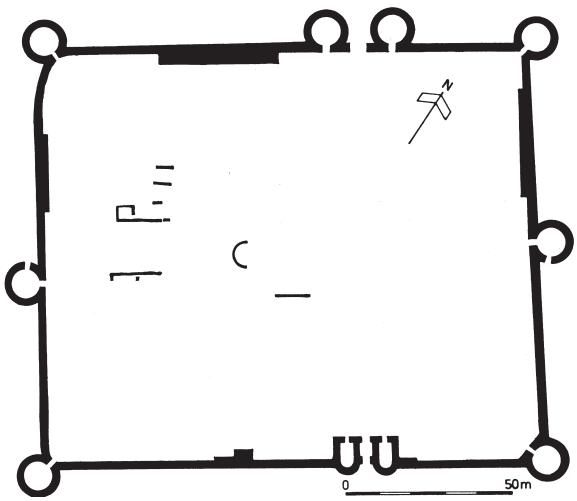
4 Roman fort Novae, 3rd century. – After Vasić 1984 (note 1), 100, Fig. 7.

principia with a central courtyard and a porch, part of the soldiers' barracks, as well as a stone paved street, the *via principalis*, stretching in a NW-SE direction[6]. This phase lasted until the end of the 2nd century AD.

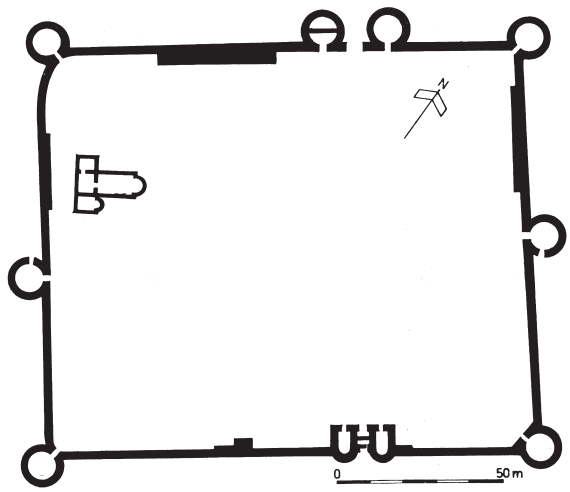
[4] P. Petrović/M. Vasić, The Roman frontier in Upper Moesia: archaeological investigations in the Iron Gate area. In: P. Petrović (ed.), Roman limes on the middle and lower Danube. Cahiers des portes de Fer, Monogr. 2 (Belgrade 1996) 15 ff. see 20 ff.

[5] Vasić 1984 (note 1) 95 Fig. 3.

[6] In the investigation of the layers belonging to this stage, a fragmented honorary inscription was discovered, dated 98 AD; M. Mirković, Cohors I Montanorum u Gornjoj Meziji. Arh. Vestnik 26, 1975, 220 ff.



5 Roman fort Novae, 4th century. – After Vasić 1984 (note 1), 101, Fig. 8.



6 Roman fort Novae, 6th century. – After Vasić 1984 (note 1), 103, Fig. 9.

The *Novae* camp was partially renovated at the beginning of the 3rd century, probably during the reign of Septimius Severus, when the rampart was fortified by a parallel wall built on the inner side (Fig. 4). To the southeast gate, the *porta principalis dextra*, massive U-shaped towers were added. This construction phase lasted until the second half of the 3rd century.

During the first half of the 4th century, the fortification gained a completely new appearance and slightly larger dimensions (143 × 122 m). The old plan of the camp was not followed, so that new ramparts were erected with round towers (Fig. 5). The northeast and southwest gates, *porta praetoria* and *porta decumana*, were sealed up, and replaced by towers. The southeast gate, *porta principalis dextra*, kept its former appearance, while round towers were added to the northern gate, *porta principalis sinistra*. From this gate, a road stretched towards the banks of the Danube on which a port was built, most probably in this period. In the middle of the 5th century, the fortification was destroyed in a great fire and devastation brought about by the advance of the Huns along the Danube in 441–443.

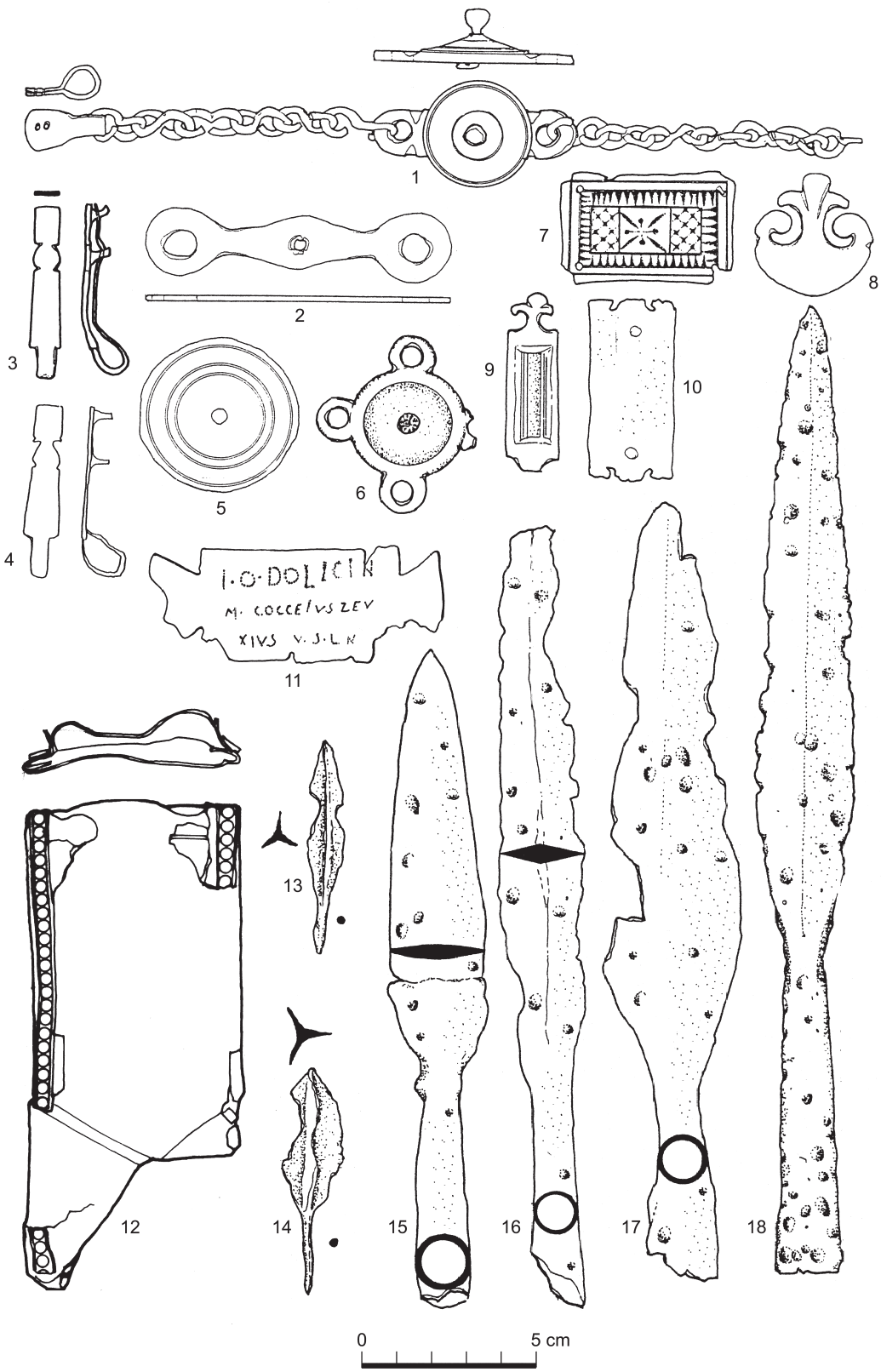
Novae was rebuilt again in the first half of the 6th century, during the reign of Justinian I (Fig. 6). On that occasion, in the northwest part of the camp a single-nave church was constructed. At the end of this century the *Novae* fortification saw the final downfall of the limes, when it was destroyed and deserted.

Archaeological investigations of the Roman military camp at Čezava yielded a large number of finds, including parts of Roman arms and military equipment (Fig. 7). These artifacts attest to the presence and character of Roman military units in this part of the limes. On this occasion, we will discuss finds of clay slingshots, *glandes latericae*, remarkable specimens not only within the context of the Roman fortifications on the right bank of the Danube, but also throughout the wider territory as well. In addition to several lead slingshots kept in the National Museum in Belgrade, samples from Čezava are the only testimony to the use of slingshots on the territory of Serbia in the Roman period[7].

Clay slingshots from Čezava were found either as individual samples, or in larger numbers (Fig. 2). Apart from individual finds in the central section of the camp, most slingshots were found around the southeast rampart, in a tower dating from the 2nd to 3rd centuries, situated between the *porta principalis dextra* and tower IV. On this spot, 90 samples were discovered in a hoard[8]. A smaller number of identical shots were uncovered in the investigations of towers V and III. The total number of finds amounted to 147 specimens.

[7] M. Vujović [Вујовић], Белешке о присуству римских праћкаша на тлу Србије (Notes on the presence of Roman slingers in Serbia). Glasnik Srpskog Arh. Drustva 23, 2007, 297 ff. see 301 ff. Fig. 2.

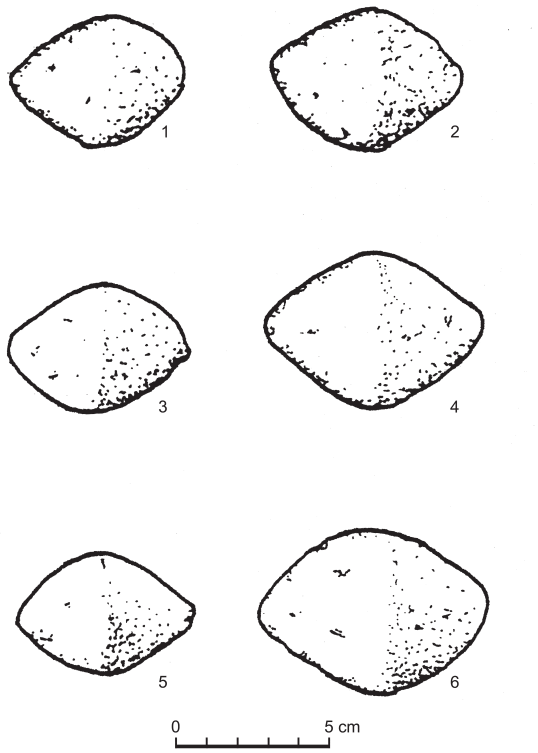
[8] D. Pribaković, Čezava – rimsko-vizantijsko utvrđenje. Arh. pregled 11, 1969, 150 ff. see 153.



7 Finds from Roman fort Novae at Čezava. – Drawing: Author.



8 Clay slingshots from Čezava. – After Vujović 2007 (note 7), Pl. I.



9 Biconical slingshots from Čezava. – Vujović 2007 (note 7), 305, Fig. 3,1–6.

Slingshots were made of refined clay baked hard (Fig. 8). On the basis of their appearance it can be concluded that soft clay was first kneaded by hand, and then modelled by rolling clumps between the palms or a flat surface. In this manner, samples were given an appropriate aerodynamic form, most frequently biconical, oval or olive shaped (Fig. 9–11). Modelled in such a manner slingshots were left to dry in shadow on a hard surface.

The aforementioned concentration of clay slingshots was not circumstantial. A plausible explanation could be that ammunition was collected and placed at convenient places along the ramparts and towers scheduled to house slingers and archers in the efficient defence of the fortifications (Fig. 2). Considering that the effective range of slingshots could have been between 100 and 200 m (very dangerous at c. 65 m), a soldier placed on the camp ramparts and towers could have covered a vast area in the closest vicinity of the fortification[9]. This allowed control of the road and also part of the river bank with the port and the river itself. That could have been of great significance had the enemy attempted to cross the Danube.

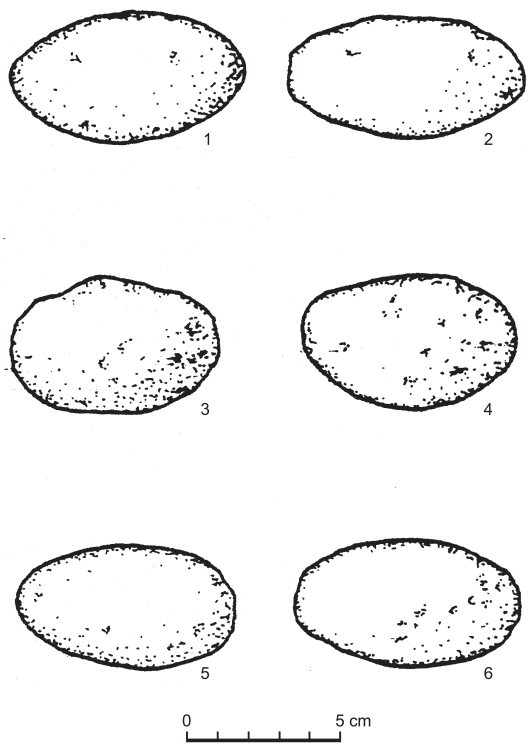
Most shots were found in the layers dated, on the basis of other finds, to the 2nd and first half of the 3rd centuries. The abovementioned hoard with 90 slingshots was found in the interior of the rectangular tower on the southern rampart of the fortification from Traian's period (Fig. 3). It cannot be seen in the fortification plan from the period of the tetrarchs, which indicates that the period in which a deposit of clay slingshots was created ought to be broadly dated to the reign of the emperors from the Antonin and Severian dynasties. This chiefly coincides with the dating of the other hoards of Roman clay slingshots in Germany and Britain[10].

The use of clay slingshots is very old and can be followed from the Neolithic period to late antiquity[11]. Until the 2nd century AD, lead slingshots were more frequently used in the Roman army. They had

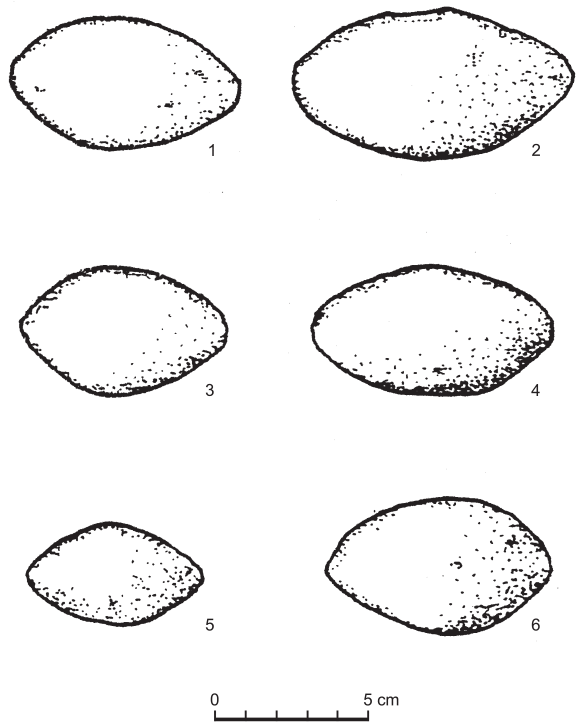
[9] D. Baatz, Schleudergeschosse aus Blei – Eine waffentechnische Untersuchung. Saalburg Jahrb. 45, 1900, 59 ff. see 64 f.

[10] S. S. Frere/J. J. Wilkes, Strageath: excavations within the Roman fort, 1973–86 (London 1989) 177 f.; Th. Völling, Funditores im römischen Heer. Saalburg Jahrb. 45, 1990, 24 ff. see 48 ff.; M. C. Bishop/J. C. N. Coulston, Roman military equipment from the Punic Wars to the fall of Rome (London 1993) 115 note 19.

[11] W. B. Griffiths, The sling and its place in the Roman imperial army. In: C. van Driel-Murray (ed.), Roman military equipment: the sources of evidence. Proceedings of fifth ROMEC. BAR Internat. Ser. 476 (Oxford 1989) 255 ff. see 258; Völling 1990 (note 10) 34, 37 ff.



10 Oval slingshots from Čezava. – After Vujović 2007 (note 7), 305, Fig. 3,7–12.



11 Olive-shaped slingshots from Čezava. – Vujović 2007 (note 7), 305, Fig. 3,13–18.

a better range and took less space in the baggage of an individual warrior or a unit. The advantage of baked clay shots was that they were made of easily available and cheap material. Also, it was possible to organize simple and mass production. In addition to the organized production in military brick plants and potters' workshops, they could also have been made by ordinary soldiers. The engagement of slingers in the Danube Basin was not confirmed in written historical sources and epigraphic findings. In addition to the finds of slingshots, perhaps the best illustration of their engagement on this territory is the famous scene from Traian's column in Rome (Fig. 12) depicting Roman slingers fighting against the Dacians[12]. Although seemingly a simple and primitive weapon, the sling and its use are described in great detail in classical written sources. Most authors emphasise that slingshots were used in the preparations and support of infantry attacks in order to decimate and disturb the enemy[13]. Mercenaries from Syria, Rhodes and the Balearic Islands engaged in the Roman army were commended as the most efficient in the ancient world[14]. However, drilling recruits to use slingshots was part of their regular service. For Vegetius, slingshot units belonged to the fifth combat line, together with archers and light infantry armed with javelin[15]. By shooting a large number of projectiles at the enemy, slingers inflicted damage and made advances on the battlefield more difficult. Moreover, they played a special role in sieges and the defense of the fortifications. The same author recommends the deployment of these troops against military elephants[16], and in naval battles in which they could either support or hinder the

[12] C. Cichorius, Die Reliefs der Traianssäule (Berlin 1896) Taf. LXVI.

[13] Baatz 1990 (note 9) 64; A. K. Goldsworthy, The Roman army at war 100 BC–AD 200 (Oxford 1996) 186 f.

[14] Völling 1990 (note 10) 25, 44.

[15] Veg. mil. 3,14.

[16] Ibid. 24



12 Roman slingers, Traian's Column, Rome. – After Cichorius 1896 (note 12) Taf. XLVI.

landing of troops[17]. Also, Caesar mentions that the tribesmen of *Nervii* used red-hot clay projectiles in order to set fire to the Roman camp[18].

The dimensions and weight of Čezava slingshots differed considerably. Their length varied between 5.5–10 cm, while the weight fluctuated from 42–259 gm. The weight range indicates that slingshots of different calibers could have been used for different purposes or for a different range. With regard to the ancient metric system, the weight range of Čezava projectiles fluctuates from 1½ (43.36 gm) to 9 ½ (256.6 gm) uncia, or between 10 (43.36 gm) and 60 (260.1 gm) drachmae: that is at a ratio of 1:6[19]. I hold the view that the metric coincidence is not accidental especially in view of the value of drachma, the more so if we take into consideration the fact that the most skilful slingers in the Roman army were recruited in Greece and in the east[20].

No reliable data about the crew of the *Novae* camp survive for the period preceding the 4th century. It was the *Notitia Dignitatum* that located two units here: *Auxilium Novense* and *Milites exploratores*[21]. Which units comprised the crew from the 1st to the 3rd centuries can only be guessed at. Judging by the size of the camp and its surface of 1.6 ha, it could have easily accommodated a unit comprising around 600 soldiers, or *cohors quiquenaria*, most probably *equitata*, which could be attested to by the finds of equestrian equipment discovered in the archaeological excavations of the fortification. A unit of such character was very convenient for guarding river crossings, monitoring the border and controlling the land and river pathways. In that regard, mention ought to be made of a fragmented honorary inscription originating from the end of the 1st or the beginning of the 2nd centuries relating to the construction of the first stone fortification near Čezava[22]. This inscription registers the construction activities of members of *cohors I Montanorum civium Romanorum*, and probably *cohors I Antiochensium*, both mixed units transferred to Moesia during Traian's preparations for the war with the Dacians. They were mentioned as part of its troops up to 168 AD[23]. A bronze plaque with a votive inscription dedicated to Iuppiter Dolichenus (Fig. 7, 11), originating from the 2nd century *principia* in *Novae*, could also confirm the presence of a Syrian unit, which could have had good slingers in their ranks[24].

Equestrian cohorts were well used in wars, along with infantry and cavalry in legions. In times of peace, they were also used on the borders of the empire for the defense and control of the *limes*. As for the interior of the provinces, they were employed for the protection of important strategic points, such as mines, land and river communication lines, customs station and larger urban centers[25]. Owing to their mixed composition and numbers, cavalry cohorts were used as universal troops trained for different kinds of combat. According to Vegetius, the regular training of cavalrymen and infantry included both archery and slinging[26]. That also confirms a fragment of the Emperor Hadrian's oration from 128 AD, when he addressed the troops in Numidia[27].

Finally the presence of baked clay slingshots in the fortifications of *Novae* on the Iron Gate limes, can be explained by the presence of such a special unit whose members were trained to use not only swords and spears, but also the ancient weapon of cattlemen and shepherds which, in the course of the historical development of warfare, survived many other types of weapons.

Miroslav Vujović
Faculty of Philosophy, Department of Archaeology
Ul. Čika-Ljubina 18–20
SRB-11000 Belgrade
mvujovic@f.bg.ac.rs

17 Ibid. 5,14.

18 Caes. gall. 5,43.

19 F. Hultsch, Griechische und römische Metrologie (Berlin 1882) 705 f. Tab. XII–XIII.

20 Völling 1990 (note 10) 25, 44.

21 Not. dign. 41,23–24.

22 Mirković 1975 (note 6) 220 ff.

23 The presence of *cohors I Antiochensium* was confirmed in the Moesian troops in 93 and 100 AD: Ibid. 220 ff.; CIL XVI 39,42.

24 Vasić 1984 (note 1) 118 fig. 22/11.

25 R. W. Davies, Service in the Roman army (Edinburgh 1989) 146 ff.

26 Veg. mil. 1,16.

27 Davies 1989 (note 25) 141 ff; CIL VIII 18042Aa.