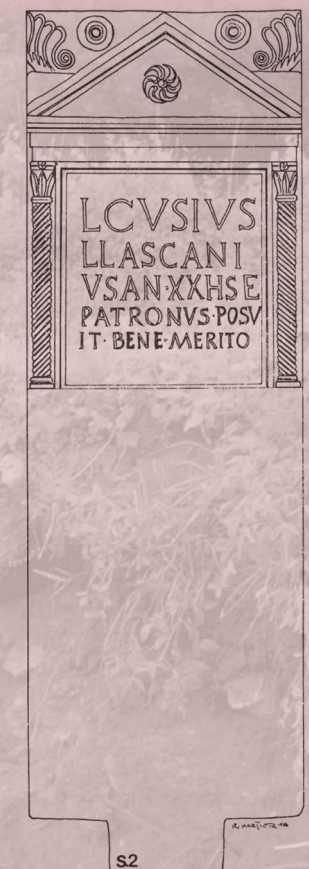
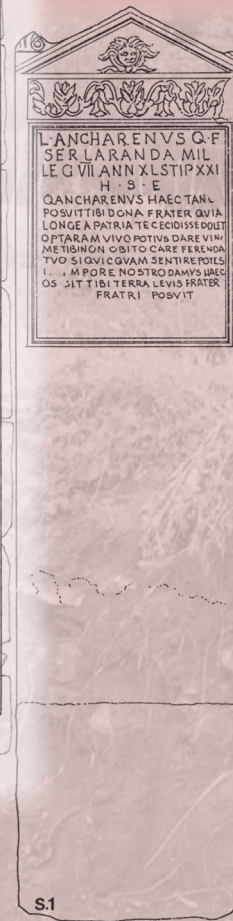
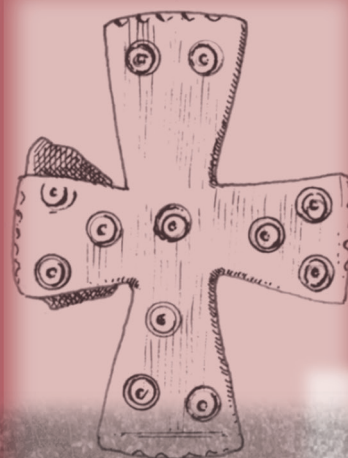




# Studia honoraria archaeologica

Zbornik radova u prigodi 65. rođendana prof. dr. sc. Mirjane Sanader

Studia honoraria archaeologica





## **Studia honoraria archaeologica**

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*Uredili*

Domagoj Tončinić

Iva Kaić

Vinka Matijević

Mirna Vukov

*Recenzenti*

Bruna Kuntić-Makvić

Boris Olujić

Ana Pavlović

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Krešimir Rončević

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Uredili

Domagoj Tončinić, Iva Kaić,  
Vinka Matijević, Mirna Vukov

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Zagreb, 2020.







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# Roman amphorae from Tilurium

Mirna VUKOV, Zagreb

*The paper deals with the findings of amphorae from the Roman legionary fortress Tilurium, situated in the Roman province of Dalmatia. The author offers an overview of all amphorae published so far, found in research campaigns 1997 – 2010 and by locals during fieldwork. The content, provenance and dating of amphorae were analyzed, giving us an insight into dietary habits of Roman soldiers and the origin of imported goods. Wine, olive oil, fish products and fruit were transported to Tilurium in various types of amphorae from many parts of the Empire. Wine was imported from Italy, Aegean and Hispania, while olive oil was brought from Italy, Istria, Hispania and African provinces. Fish products were imported from Hispania, while dried fruit was brought from Italy and the eastern Mediterranean. Most of amphorae could be dated to the 1<sup>st</sup> and 2<sup>nd</sup> century CE, although several types of Late Republican and Late Antiquity origins are also represented.*

**Key words:** Dalmatia, Tilurium, legionary fortress, food supply, amphorae

## Introduction\*

I am dedicating this article to prof. dr. Mirjana Sanader, my professor and mentor, who has devoted much of her scientific career to the study of the Roman military and the legionary fortress Tilurium. It is a great honor to publish a paper about Roman amphorae from Tilurium in the proceedings on the occasion of her 65<sup>th</sup> birthday.

In the village of Gardun near Trilj, situated in the hinterland of the Dalmatia's capital Salona, a Roman legionary fortress Tilurium is located. The fortress is strategically located on the northeastern plateau above the right bank of the Cetina river (*Hippus flumen*), which enabled excellent control over the river crossing and river communication. From this strategic position, it was possible to monitor the important road routes leading from ancient Salona to Narona in the southeast and to former Delminium in the northeast (Sanader & Tončinić 2010: 42).

Based on the epigraphic sources, it has been known that the first permanent military unit to reside in the legionary fortress Tilurium was *legio VII* (from 42 CE known as *legio VII Claudia Pia Fidelis*). The exact time of arrival of the legion in the Roman province of Dalmatia is unknown, but most authors agree that it was sometime during the Dalmatian-Pannonian Uprising (6 – 9 CE) when the legion came from the territory of Macedonia or Moesia (Zaninović 1984: 68–69; Tončinić 2011: 11–15). After the departure of *legio VII* to Viminacium in Upper Moesia, which occurred approximately during the mid-1<sup>st</sup> century, several auxiliary units were epigraphically attested in Tilurium - *cohors II Cyrrhestarum*, *ala Claudia nova*, *ala (Tungrorum)*

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\* This work has been fully supported by Croatian Science Foundation under the project IP-2018-01-4934 „Understanding Roman Borders: the Case of the Eastern Adriatic” (AdriaRom).

*Frontoniana*, *cohors Aquitanorum*, *cohors I Belgarum*, *cohors III Alpinorum* and *cohors VIII voluntariorum civium romanorum* (Zaninović 1984: 72–73; Sanader & Tončinić 2010: 34–37; Tončinić et al. 2011: 364; Urbanc 2012: 131–133). *Cohors VIII* was the last military unit that left *Tilurium*, as testified by an inscription of a *centurio* on a sacrificial altar erected in 245 CE (CIL III 2706 = 9724; Zaninović 1984: 70; 2007: 182). Despite that, *Tilurium* preserved its military significance until the end of Antiquity. The station of *beneficiarii consularis* was developed in a civilian settlement known as *Pons Tiluri* (It. Ant. 337,5) or *Ponteluri* (Rav. Cosm. IV, 16), located beneath the legionary fortress, next to the bridge on the Cetina river (Zaninović 2007: 183; Glavaš 2016: 23). *Tilurium* was never given municipal status, however, the results of archaeological excavations and the analysis of small findings indicate the existence of Late Antique horizon that can be dated until the 6<sup>th</sup> century CE (Šimić-Kanaet 2010: 58; Tončinić & Vukov 2018: 40–43).

Despite the great historical importance of the site and numerous findings stored in museums, the systematic archaeological research did not start until 1997 (Sanader 1998: 243–255). Since then, the research has been conducted under the management of Prof. Dr. Mirjana Sanader from the Department of Archaeology, Faculty of Humanities and Social Sciences, University of Zagreb. During more than twenty years of excavations, remnants of the fortress architecture have been uncovered, as well as a large number of ceramic, glass, metal, stone and bone findings. So far, a large number of scientific papers, several doctoral dissertations (Šimić-Kanaet 2009; Buljević 2016; Ivčević 2016) and four comprehensive monographs (Sanader 2003; Šimić-Kanaet 2010; Sanader et al. 2014; 2017), dealing with the architecture, stone monuments and archaeological material found in excavations, have been published. The ceramic material found in research campaigns 1997 – 2010 was thoroughly analyzed and published by Dr. Zrinka Šimić-Kanaet (Šimić-Kanaet 2010; 2017; Vukov 2020: 229–239).

## Amphorae from Tilurium

With more than 30 000 fragments, a ceramic material represents the most numerous category of findings among archaeological material excavated in *Tilurium*. Among those, in addition to the numerous tableware and cookware, a large number of amphora fragments were found. This paper seeks to summarize all findings of amphorae found in the research campaigns from 1997 to 2010. Hundreds of amphorae fragments were found during these 14 excavation campaigns, including 456 diagnostic fragments (Šimić-Kanaet 2010; 2017).<sup>1</sup> The analysis will also include nine fragments of amphorae from the private collections

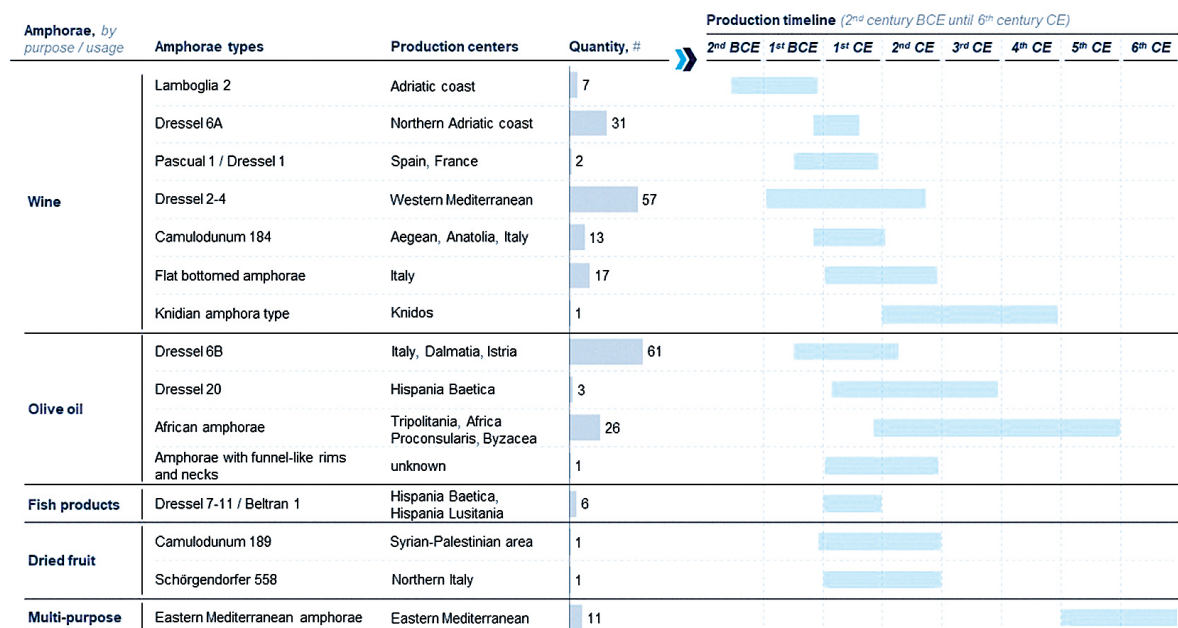


Figure 1. Overview of amphora types in *Tilurium* (by: M. Vukov, 2019).

<sup>1</sup> The amphorae found during archaeological excavations originate from the position of military dormitory (*centuriae*) and the building of indeterminate purpose built along the western rampart of the fortress.



of N. Tadinac, S. Tadinac and S. Roguljić found by locals during fieldwork (Bekić 1998: 234), as well as seven amphorae from *Tadinac I* and *Tadinac II* collections now deposited in the Museum of the Cetina Region in Sinj (Čerina 2011). Amphorae found in post-2010 campaigns are still in the publishing process and will therefore not be included in this paper.

The aim of this paper is to provide an insight into the military supply of the Roman legionary fortress Tilurium based on amphorae published so far. Amphorae were two-handled vessels used to store and transport a variety of products, such as wine, olive-oil, fish products and dried fruit. They were often distributed from remote areas and as such are the best indicators of trade, economy and food consumption (Peacock & Williams 1986: 2). Among published amphorae from Tilurium, 28 different types were distinguished. Most fragments belong to amphorae for transporting wine (128 fragments) and olive oil (91 fragments), while a smaller number of amphorae were used for the transport of fish products (6 fragments) and fruit (2 fragments).

### Amphorae for transporting wine (*amphorae vinariae*)

The oldest fragments of amphorae documented in Tilurium belong to the **Lamboglia 2** type. So far, 7 fragments of this type have been found (Šimić-Kanaet 2010: 44, cat. no. 2779–2784, 2813). It is believed that this type of amphorae was developed in the mid-2<sup>nd</sup> century BCE and continued the production until the end of the 1<sup>st</sup> century BCE when it was replaced by the Dressel 6A type (Peacock & Williams 1986: 99–100; Bezeczky 1998: 228). They were produced in central and northern regions of Italy and on the Eastern Adriatic coast (Bezeczky 1998: 228).

The **Dressel 6A** amphora type, which was developed from the tradition of the Lamboglia 2 at the end of the 1<sup>st</sup> century BCE, is represented with 31 fragments (Bekić 1998: 239, P. 2: 10, 11; Šimić-Kanaet 2010: 44, cat. no. 2786–2793, 2795–2801, 2805–2810, 2815, 2816, 2916, 2983, 3080, 3124, 3125). They were produced on the western and northern Adriatic coast until the mid-1<sup>st</sup> century CE (Panella 2001: 195). Three fragments from Tilurium bear the stamp *M. Her(ennius) Picens* (Bekić 1998: 239; Šimić-Kanaet 2010: 47, cat. no. 2810) which helps in their precise dating. Namely, *M. Herennius* was consul in 34 BCE, and his son in 1 CE (Bezeczky 1998: 230).

Two fragments of amphorae might be attributed to the **Pascual 1 - Dressel 1** type (Šimić-Kanaet 2010: 45, cat. no. 2884, 2899). This type of amphorae was developed in the late Republican time from the Italian Dressel 1B type and was produced in northeastern Spain and southern France by the end of the 1<sup>st</sup> century CE (Peacock & Williams 1986: 93).

The most represented type of wine amphorae in Tilurium is the **Dressel 2-4**, with a total of 57 fragments (Šimić-Kanaet 2010: 44–45, cat. no. 2868–2883, 2885–2887, 2889–2898, 2915, 2993–2996, 3005, 3008, 3025, 3026, 3029, 3037, 3042, 3043, 3045, 3049, 3053, 3057, 3061–3069; 2017: 87, cat. no. 200; Čerina 2011: 220, cat. no. 2). This type was developed in Campania out of the tradition of Hellenistic amphorae from the Aegean island of Cos during the second half of the 1<sup>st</sup> century BCE. The production spread to many sites in the western Mediterranean where it continued until the 2<sup>nd</sup> century CE. Production centers of this type have been documented in Italy, Spain, France and England (Peacock & Williams 1986: 105–106; Freed 2000: 461).

The **Camulodunum 184**, also known as the Late Rhodian amphora type, is represented with 13 fragments (Šimić-Kanaet 2003: 126, cat. no. 140; 2010: 45, cat. no. 2902–2910, 3093; 2017: 88, cat. no. 208, 209). This type of amphorae with characteristic horn-shaped handles was developed on the island of Rhodes at the end of the 1<sup>st</sup> century BCE. The production spread to other Aegean islands, the Anatolian coast and Italy where it continued until the beginning of the 2<sup>nd</sup> century CE (Peacock & Williams 1986: 102; Bezeczky 1998: 233).

Another type of wine amphorae represented in Tilurium are **flat-bottomed amphorae**. So far, 17 fragments of this type have been found (Šimić-Kanaet 2010: 46, cat. no. 2964, 2976, 3010–3014; 2017: 88, cat. no. 201–207, 221–223). They were produced during the 1<sup>st</sup> and 2<sup>nd</sup> century CE in the workshops of Emilia Romagna (Forlimpopoli, Rimini), Etruria, Umbria, Picenum and the Veneto region (Ožanić 2005: 140).

Only one fragment of the bottom (Šimić-Kanaet 2010: 45, cat. no. 2914) can be attributed to the **Knidian amphora type**. This amphora type was produced on the Greek island of Knidos from Hellenistic until Byzantine times (Bezeczky 1998: 233; Starac 2006: 95–96). They were very rare on the Eastern Adriatic coast, where only a few individual findings have been found so far (Starac 2006: 96).

### Amphorae for transporting olive oil (*amphorae oleariae*)

The most frequent type of amphorae used to transport olive oil is the **Dressel 6B**. It is predominant type in both Dalmatia and Tilurium, where 61 fragments have been found (Šimić-Kanaet 2003: 126, cat. no. 136, 137; 2010: 44, cat. no. 2803, 2812, 2817–2867, 2936, 2984, 2991; 2017: 87–88, cat. no. 211, 212, 215–220). It is believed that this type developed in the mid-1<sup>st</sup> century BCE in Cisalpine Gaul from where the production spread throughout northern Italy, Dalmatia and Istria. Two production centers have been documented in Istria – workshop of *C. Lecanius Bassus* in Fažana near Pula and workshop of *T. Statilius Taurus Sisenna* and *Calvia Crispinila* in Loron near Poreč. During the time of Vespasian, workshops came under the control of Roman Emperors where they remained until the reign of Hadrian when production ceased (Starac 1997: 143–144, 149). Import from northern Italy has been attested by a stamp *Pacci*, produced in the Po valley during the second half of the 1<sup>st</sup> century CE (Šimić-Kanaet 2010: 47, cat. no. 2812).



Figure 2. Amphora with funnel-like rim and neck (photo: Sanja Budić-Leto)

Only one fragment could be attributed to the type of **amphorae with funnel-like rims and necks** (Šimić-Kanaet 2010: 88, cat. no. 214). The center of production of this form is still unknown, although it is believed that they were developed out of tradition of the late Dressel 6B type. They were produced during the 1<sup>st</sup> and 2<sup>nd</sup> century CE (Bezeczky 1987: 35–36; Starac 2006: 96–97).

Import of Hispanic olive oil is evidenced by 3 fragments of the **Dressel 20** amphora type (Šimić-Kanaet 2010: 45, cat. no. 2999, 3001, 3071). These widely distributed large globular amphorae were produced in the province of Hispania Baetica from the time of Tiberius until the late 3<sup>rd</sup> century CE (Peacock & Williams 1986: 136).

Around the 3<sup>rd</sup> century CE, Italian, Istrian and Hispanic olive oil was replaced by African oil. It was imported from the African provinces from where it was distributed in various types of amphorae. These amphorae were produced in Tripolitania, Africa Proconsularis and Byzacena from the end of the 1<sup>st</sup> century until the 6<sup>th</sup> century CE (Starac 2006: 100; Šimić-Kanaet 2010: 46). So far, based on their characteristic ceramic structure, 26 fragments have been attributed to different types of African amphorae. Some of them are: Keay XXIV, Keay XXV, Keay XXV E, Keay XXVY, Keay XXVI, Keay XXXV, Keay XXXVA, Keay XXVB, Keay XXXVI, Keay XXVIH and Tripolitanian III (Šimić-Kanaet 2010: 46, cat. no. 2917–2927, 2929, 2931, 2932, 2950, 2956, 2957, 2958, 2961, 2978, 3000, 3023, 3039; Čerina 2011: 219–220, cat. no. 5–7).

### Amphorae for transporting fish products and fruit

Fish products were imported in the **Dressel 7-11 / Beltran 1** amphora type that was produced in Hispania Baetica and Hispania Lusitania from the end of 1<sup>st</sup> century BCE to the end of 1<sup>st</sup> century CE (Peacock & Williams 1986: 118–119). So far, only six fragments of this type have been found in Tilurium (Šimić-Kanaet 2003: 127, cat. no. 138, 139; 2010: 45, cat. no. 2900, 2901, 2977, 2991).

There are only two fragments that can be attributed to amphorae used to transport fruit. First of them belongs to the **Camulodunum 189** type (Šimić-Kanaet 2017: 88, cat. no. 210). These “carrot shaped”

amphorae, used to transport a variety of fruits (dates, figs, olives, grapes), were produced in the Syrian-Palestinian area from the end of 1<sup>st</sup> century BCE to the end of 2<sup>nd</sup> century CE (Carreras Monfort & Williams 2002: 133–144). The second fragment belongs to the **Schörgendorfer 558** amphora type (Šimić-Kanaet 2010: 46, cat. no. 3002) in which green and black olives were transported. They were produced during the 1<sup>st</sup> and 2<sup>nd</sup> century CE at unspecified location, most likely somewhere in northern Italy (Borzić & Jadrić-Kučan 2010: 529).

### Amphorae for multi-purpose content

Several different types of amphorae used for the transport of wine, oil and fish products were produced from the 5<sup>th</sup> to the 7<sup>th</sup> century in the wider area of the Eastern Mediterranean (Cyprus, Syria, Cilicia, Black Sea coast) (Šimić-Kanaet 2010: 46). Singled out among them were: Late Roman 1A (LR 1A), Late Roman 2 (LR 2), Late Roman 4 (LR 4), Agora M273 and Almagro 51C (Šimić-Kanaet 2010: 46, cat. no. 2928, 3016–3022, 3027; Čerina 2011: 220, cat. no. 3, 8).

### Conclusion

During the archaeological excavations of Roman legionary fortress Tilurium from 1997 to 2010, 456 diagnostic fragments of amphorae were found. When we include findings from private collections, we get a number of 472 diagnostic fragments, of which 242 can be typologically determined. Among those, 28 different types of amphorae were distinguished. The results of typological analysis provided insight into the function, origin and chronology of amphorae imported by Roman soldiers in the legionary fortress Tilurium. Amphorae for transporting wine (128 fragments) and olive oil (91 fragments) are most numerous, while amphorae for fish products (6 fragments) and fruit (2 fragments) are present in smaller numbers. One of the reasons of such a numerical display is probably the fact that wine and olive oil were part of the basic diet that was made available to soldiers by the military, while other groceries, such as fish sauces, fruit and nuts, soldiers had to pay for themselves (Davies 1971: 125).

Further analyses of amphorae indicate the contact between Tilurium and numerous areas of the Mediterranean region. Wine was imported from Italy in Lamboglia 2, Dressel 6A, Dressel 2-4 and flat-bottomed amphorae, from the Aegean in Camulodunum 184, Dressel 2-4 and Knidian amphorae, and from Hispania in Pascual 1 – Dressel 1 and Dressel 2-4 amphorae. Olive oil was imported from Italy and Istria in Dressel 6B amphorae, from Hispania in Dressel 20 amphorae, and from African provinces in various amphora types. Fish products were imported in the Dressel 7-11 type from Hispania, while dried fruit was brought from Italy in Schörgendorfer 558 amphorae and from the Eastern Mediterranean in the Camulodunum 189 amphorae.

The first import of amphorae is evidenced in the Late Republican period when the wine from Italy was transported in the Lamboglia 2 amphora type. The most extensive diverseness of amphora types was imported during the 1<sup>st</sup> and 2<sup>nd</sup> century CE while the legionary and auxiliary units were permanently stationed at the fortress. As opposed to Burnum, the other legionary fortress in Dalmatia, where only amphorae from 1<sup>st</sup> century CE, excavated at its amphitheater, were documented (Borzić & Jadrić-Kučan 2010: 526) amphorae from the Late Roman period, dating from the 3<sup>rd</sup> to 6<sup>th</sup> century CE, are represented at Tilurium. Although the last military unit left Tilurium in the mid-3<sup>rd</sup> century CE, analysis of small archaeological finds, i.e. amphorae indicates the continuity of life during Late Antiquity in this area. Various types of amphorae from Eastern Mediterranean and African provinces were imported during this timespan.

In the end, we can see that the food products being brought into Tilurium in amphorae, often from distant parts of the Empire, demonstrate organized military logistics as well as a varied and rich diet of Roman legionaries.



## Ancient sources

- It. Ant.* *Itinerarium Antonini Augusti et Hieroslymitanum*, Berolini, 1848.  
*Rav. Cosm.* *Ravennatis Anonymi Cosmographia et Guidonis Geographica*, Berolini, 1860.

## Abbreviations

- CIL *Corpus Inscriptionum Latinarum*, Berlin.

## Bibliography

- Bekić 1998 L. Bekić, „Tri manje privatne zbirke s Garduna“, *Opuscula Archaeologica* 22, Zagreb, 1998, 233–242.
- Bezeczky 1987 T. Bezeczky, *Roman Amphorae from the Amber Route in Western Pannonia*, Oxford, 1987.
- Bezeczky 1998 T. Bezeczky, „Amphora types of Magdalensberg“, *Arheološki vestnik* 49, Ljubljana, 1998, 225–242.
- Borzić & Jadrić-Kučan 2010 I. Borzić & I. Jadrić-Kučan, „Opskrba hranom u rimskom legijskom logoru u Burnumu – analiza amfora“, in: M. Sanader et al. (eds.), *Weapons and military equipment in a funerary context. Proceedings of the XVII<sup>th</sup> Roman Military Equipment Conference*, Zagreb, 2010, 523–535.
- Buljević 2016 Z. Buljević, *Ranorimsko salonitansko i tilurijsko stakleno posuđe u kontekstu nalaza staklenog posuđa s područja provincije Dalmacije* (unpublished PhD thesis, University of Zagreb), Zagreb, 2016.
- Carreras Monfort & Williams 2002 C. Carreras Monfort & D. F. Williams, „Carrot amphoras: a Syrian or Palestinian connection?“, in: J. H. Humphrey (ed.), *The Roman and Byzantine Near East* 3, Portsmouth, 2002, 133–144.
- Čerina 2011 D. Čerina, „Osam amfora iz arheološke zbirke Muzeja Cetinske krajine“, *Izdanja Hrvatskog arheološkog društva* 27, Zagreb, 2011, 219–227.
- Davies 1971 R. W. Davies, „The Roman Military Diet“, *Britannia* 2, Cambridge, 1971, 122–142.
- Freed 2000 J. Freed, „Adoption of the Koan Amphora to the Production of “Dressel 2-4” Amphoras in Italy and Northeastern Spain“, *Rei Cretariae Romanae Fautores acta* 36, Abingdon, 2000, 459–466.
- Glavaš 2016 I. Glavaš, *Konzularni beneficijariji u rimskoj provinciji Dalmaciji*, Zagreb, 2016.
- Ivčević 2016 S. Ivčević, *Tipologija i kronologija rimske vojne opreme u doba principata na području između rijeka Krke i Cetine* (unpublished PhD thesis, University of Zagreb), Zagreb, 2016.
- Ožanić 2005 I. Ožanić, „Tipovi amfora iz Cibala“, *Vjesnik za arheologiju i povijest dalmatinsku* 98, Split, 2005, 133–149.
- Panella 2001 C. Panella, „Le anfore di età imperiale del Mediterraneo occidentale“, in: P. Lévêque & J. P. Morel (eds.), *Ceramiques hellenistiques et romaines* III, Paris, 2001, 177–275.
- Peacock & Williams 1986 D. P. S. Peacock & D. F. Williams, *Amphorae and the Roman economy*, New York, 1986.
- Sanader 1998 M. Sanader, „Tilurij – rimski vojni logor: prethodno izvješće s arheoloških istraživanja u 1997. i 1998.“, *Opuscula archaeologica* 22, Zagreb, 1998, 243–255.
- Sanader 2003 M. Sanader, *Tilurium I. Istraživanja = Forschungen* 1997. – 2001., Zagreb, 2003.
- Sanader & Tončinić 2010 M. Sanader & D. Tončinić, „Gardun – antički TILURIUM = Gardun – The ancient TILURIUM“, in: I. Radman-Livaja (ed.), *Nalazi rimske vojne opreme u Hrvatskoj = Finds of the Roman Military Equipment in Croatia*, Zagreb, 2010, 33–53.
- Sanader et al. 2014 M. Sanader, D. Tončinić, Z. Buljević, S. Ivčević & T. Šeparović, *Tilurium III. Istraživanja* 2002. – 2006. godine, Zagreb, 2014.

- Sanader et al. 2017 M. Sanader, D. Tončinić, Z. Šimić-Kanaet, S. Ivčević, Z. Buljević, T. Šeparović & I. Miloglav, *Tilurium IV. Arheološka istraživanja 2007. – 2010. godine*, Zagreb, 2017.
- Starac 1997 A. Starac, „Napomene o amforama Dressel 6B“, *Izdanja Hrvatskog arheološkog društva* 18, Zagreb, 1997, 143–161.
- Starac 2006 A. Starac, „Promet amforama prema nalazima u Rovinjskom podmorju“, *Histria archaeologica* 37, Pula, 2006, 85–116.
- Šimić-Kanaet 2003 Z. Šimić-Kanaet, „Keramika“, in: M. Sanader (ed.), *Tilurium I. Istraživanja = Forschungen 1997. – 2001.*, Zagreb, 2003, 109–188.
- Šimić-Kanaet 2009 Z. Šimić-Kanaet, *Klasifikacija, kronologija i porijeklo rimske keramike iz Tilurija u rimskoj provinciji Dalmaciji* (published PhD thesis, University of Zagreb), Zagreb, 2009.
- Šimić-Kanaet 2010 Z. Šimić-Kanaet, *Tilurium II, Keramika 1997. – 2006.*, Zagreb, 2010.
- Šimić-Kanaet 2017 Z. Šimić-Kanaet, „Keramički nalazi“, in: M. Sanader, D. Tončinić, Z. Šimić Kanaet, S. Ivčević, Z. Buljević, T. Šeparović & I. Miloglav, *Tilurium IV. Arheološka istraživanja 2007. – 2010. godine*, Zagreb, 2017, 77–173.
- Tončinić 2011 D. Tončinić, *Spomenici VII. legije na području rimske provincije Dalmacije = Monuments of Legio VII in the Roman province of Dalmatia*, Split, 2011.
- Tončinić et al. 2011 D. Tončinić, A. Tabak & A. Librenjak, „Rimski vojni pečati u Cetinskoj krajini“, *Izdanja Hrvatskog arheološkog društva* 27, Zagreb, 2011, 361–379.
- Tončinić & Vukov 2018 D. Tončinić & M. Vukov, „Prenamjena rimskih kamenih spomenika iz Tilurija = Past and Present. The Afterlife of Roman Stone Monuments from Tilurium“, *Nova antička Duklja IX*, Podgorica, 2018, 37–63.
- Vrbanc 2012 P. Vrbanc, *Cohors VIII voluntariorum civium romanorum na području rimske provincije Dalmacije* (unpublished MA thesis, Faculty of Humanities and Social Sciences, University of Zagreb), Zagreb, 2012.
- Vukov 2020 M. Vukov, „Amphorae and Food supply at Roman military sites in Croatia“, in: S. Traxler, F. Lang (eds.), *Colloquium Lauriacum 2016. Das römische Heer – Wirtschaftsfaktor und Kulturträger. Beiträge zur Tagung im Museum Lauriacum – Enns, 22. – 24. September 2016* (Forschungen in Lauriacum 19), Linz, 2020, 229–239.
- Zaninović 1984 M. Zaninović, „Vojni značaj Tilurija u antici“, *Izdanja Hrvatskog arheološkog društva* 8, Split, 1984, 65–75.
- Zaninović 2007 M. Zaninović, „Beneficiarii consularis na području Delmata = Beneficiarii consularis in the territory of the Delmatae“, *Prilozi instituta za arheologiju u Zagrebu* 24, Zagreb, 2007, 181–184.

