Archaeo-Epigraphic Data Concerning the Community of *Legio* VII Servicemen in *Dalmatia*: A Dataset for *'Fratres Romani in Dalmatia'*

EWAN SHANKS COOPEY [iD]

BRIAN BALLSUN-STANTON [iD]

*Author affiliations can be found in the back matter of this article

ABSTRACT

This dataset consists of data related to the inscribed Roman monuments of the Seventh Legion (*Legio* VII) and the servicemen they commemorate in the province of *Dalmatia* (eastern Adriatic coastline and hinterland) from 30 BCE/BC – 259 CE/AD, as well as select areas outside the province. The dataset incorporates geographical and textual information found in typical epigraphic datasets alongside less typically captured visual, historical, biographical, archaeological, and bibliographic data from regional scholars. This dataset has the potential to facilitate both in-depth quantitative and qualitative research into *Legio* VII and its design structure can also be applied onto other Roman material corpora to relationally capture archaeo-epigraphic data. It can also be used as a learning device.

CORRESPONDING AUTHOR:

Ewan Shanks Coopey

PhD Candidate and Sessional Academic, Macquarie University Department of History and Archaeology, AU

ewan.coopey@hdr.mq.edu.au

(1) OVERVIEW

CONTEXT

Over the past three decades, studies of the Roman army have become more interested in the social dynamics of the so-called 'military'. This interest has generated a newfound understanding of the army as a diverse social entity with many intersecting and overlapping communities of combatants and non-combatants, all of which are held together by a sense of shared identity and practices [1, 2]. A partially related phenomenon is the so-called 'epigraphic habit': the proliferation of inscribed Roman monuments between the 1st–3rd centuries CE/AD, now often referred to as the 'Roman epigraphic culture' [3, 4, 5]. The military communities of the Roman Empire were significant participants in this 'epigraphic culture', with inscribed funerary monuments becoming engrained within their social fabric [6, 7].

However, scholarship is typically saturated with evidence from central and northern Europe, North Africa, Egypt, and select sites in the Roman East like Dura Europos. As outlined in the accompanying Master's thesis, the southeastern European regions of the Roman Empire are often, therefore, less studied in discussions of the Roman military as a social entity, despite the great deal of archaeo-epigraphic material available [8]. That said, these regions are not unstudied, with local scholars producing many robust catalogic works, detailed journal articles, and typologically vigorous chapters (see 2 Methods). However, their research is not always easily accessible to an online, English-speaking audience. This dataset draws upon their research, particularly the detailed work of Domagoj Tončinić, to provide a particularly well-defined and in-depth case-study of a community of Roman servicemen in *Dalmatia*, as preserved by, and expressed through, their inscribed monuments [9].

The coastline of *Dalmatia* was first annexed as part of *Illyricum*, which was established for Julius Caesar in 59 BCE/BC and subsequently expanded under Octavian (later, Augustus) through several unconnected minor and major conflicts [10]. The most significant conflict, the *bellum Batonianum* ('war of the Batos'), occurred between 6-9 CE/AD. While the date of the administrative split of *Illyricum* into *Dalmatia* in the south and *Pannonia* in the north is contested, it is agreed that the regions were at least unofficially and militarily treated as different entities as early as the reign of Tiberius (14-27 CE/AD), partially on account of the *bellum Batonianum* [11, 12]. The seventh legion arrived in *Dalmatia* during this uprising and built their fortress at *Tilurium* soon after, before transferring to *Moesia Superior* by 59 CE/AD [8, 9]. During their time in the province, the legionaries and members of their extended community erected many commemorative monuments.

The project collected biographical, geographical, epigraphic, historical, and bibliographic data related to 130 inscribed monuments and 137 individuals; primarily members of the seventh legion, but also members of other units who served alongside them. These 130 inscribed monuments are predominantly funerary stelae (inscribed stone slabs with epitaphs). However, *arae* (altars), *tituli* (isolated epitaphs with no, or minimal decorations), *tegulae* (roof tiles), administrative monuments, and fragmentary inscriptions of a funerary or sacral nature (where the original form is hard to discern) were also collected. This represents the entire extant published corpus of materials belonging to or referencing the seventh legion in Dalmatia as of November 2020. However, there are vast amounts of unpublished inscriptions in museum collections in the region, and more relevant monuments may come to light once these collections are worked through.[1]

SPATIAL COVERAGE

Description: Majority of the monuments are from the surrounds of three sites: the fortress of *Tilurium* (Gardun), the provincial capital of *Salona* (Solin), and the veteran settlement of *pagus Scunasticus* (Ljubuški). However, the dataset covers material from areas of modern Croatia, Bosnia and Herzegovina, Serbia, and Turkey (Figure 1). The specific findspots (Roman Province, Ancient Site, Modern Site, Latitude, Longitude) of the monuments in this dataset are recorded in Table 1. Coordinates are given in WGS84.

Northern boundary: 44.7 N (*Viminacium*, Drmno)
Eastern boundary: 32.4 E (*Iconium*, Konya)
Southern boundary: 37.5 N (*Cormasa*, Gâvur Ören)
Western boundary: 15.2 E (*Iadera*, Zadar)

The physical monuments in this dataset are lost, held in museums, or in states of secondary use,[2] primarily across Croatia and Bosnia and Herzegovina:

- Arheološka zbirka Franjevačkog samostana u Sinju/ Archaeological collection of the Franciscan Monastery in Sinj
- Arheološka zbirka Marka Matijevića u Solinu/The Archaeological collection of Marko Matijević in Solin
- Arheološki muzej u Splitu/Archaeological Museum in Split
- Arheološki muzej u Zadru/Archaeological Museum in Zadar
- Basilica of Santa Maria, Porto (Italy)
- Muzej Cetina krajina/Museum of the Cetinska Region
- Muzej Triljskog kraja/Trilj Regional Museum
- Muzej grada Trogira/Trogir City Museum
- Muzej u Humcu (Franjevački samostan u Humcu)/ Museum of Humac (Franciscan monastery of Humac)
- Zemaljski muzej Bosne i Hercegovine/The National Museum of Bosnia and Herzegovina

Data collection and design were conducted at Macquarie University, Macquarie Park, NSW, 2109, Australia.
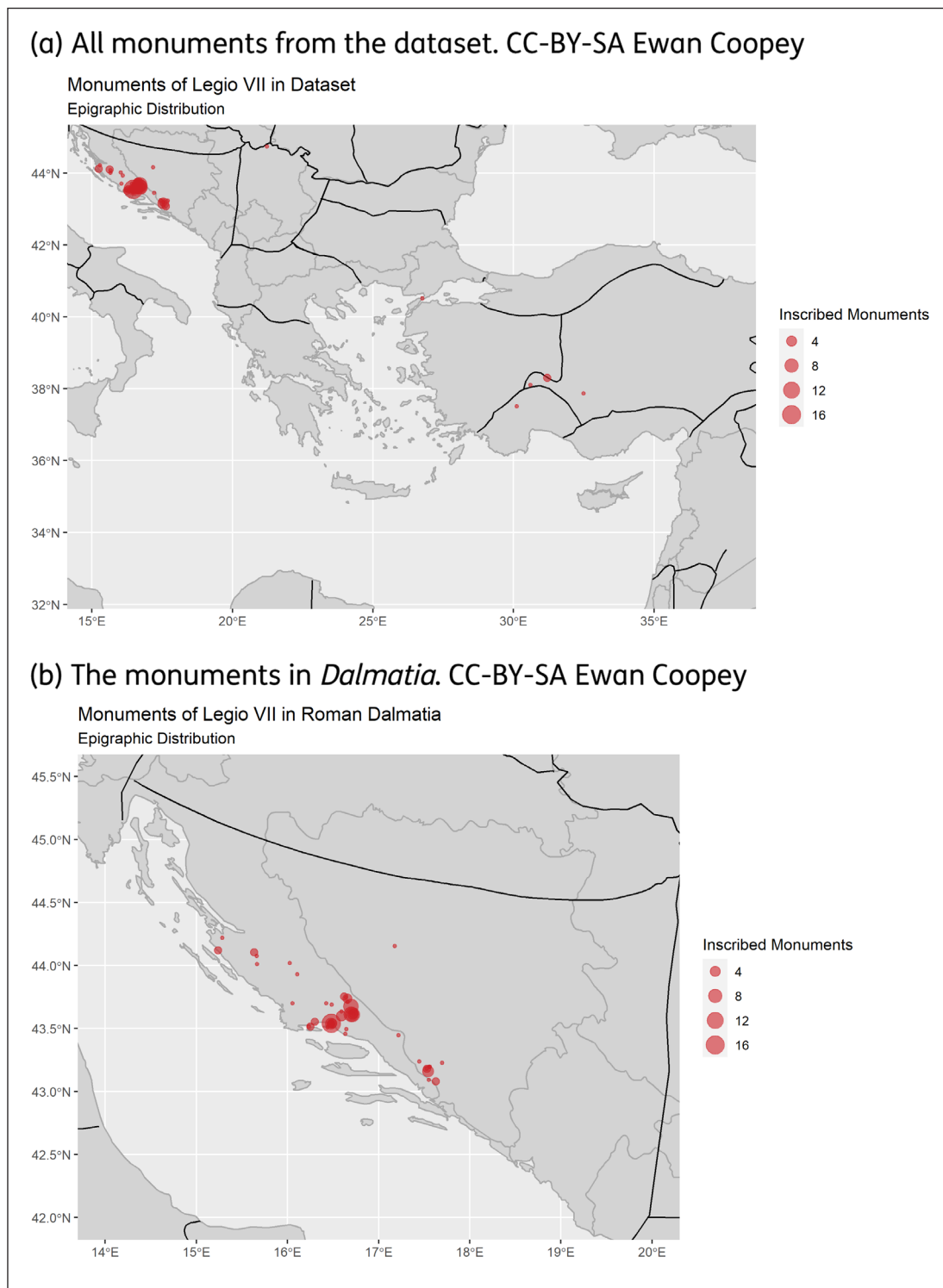
Figure 1 Monuments from the dataset plotted onto the provinces c.69CE/AD using R. scripts and the table analysis/all_monument_with_location.csv (code available on GitHub and Zenodo at /r_scripts/using_db_data.R).

TEMPORAL COVERAGE

30 BCE/BC–259 CE/AD (Majority of the corpus is from the 1st century CE/AD).

(2) METHODS

Data from offline works by scholars of the Dalmatian region were transcribed into tables, cross-referenced with online sources, and then normalised into a relational database.

STEPS

1. Database design (sql, SQLite): Using sample data, an inventory of data sources, and analytical questions, the authors created multiple tables in an SQL database normalised to third normal form.

ROMAN PROVINCE	ANCIENT SITE	MODERN SITE
Dalmatia		
Dalmatia		Dicmo
Dalmatia		Dugopolje
Dalmatia		Gorica
Dalmatia		Imotski
Dalmatia		Krug
Dalmatia		Popovići
Dalmatia		Prud
Dalmatia		Razvođe
Dalmatia		Vaganj-Jajce
Dalmatia	*Aequum*	Glavice
Dalmatia	*Aequum*	Hrvace
Dalmatia	*Aequum*	Krinj-Hrvace
Dalmatia	*Aequum*	Sinj
Dalmatia	*Aequum*	Sinjsko polje
Dalmatia	*Aequum*	Čitluk
Dalmatia	*Andetrium*	Gornji Muć
Dalmatia	*Andetrium*	Gornji Postinje
Dalmatia	*Asseria*	Podgrađe
Dalmatia	*Burnum*	Kistanje
Dalmatia	*Corinium*	Donji Karin
Dalmatia	*Iadera*	Zadar
Dalmatia	*Municipium Riditarum / Rider*	Danilo
Dalmatia	*Narona*	Vid
Dalmatia	*Narona*	Čitluk
Dalmatia	*Pagus Scunasticus*	Filovača
Dalmatia	*Pagus Scunasticus*	Glavica-Ljubuški
Dalmatia	*Pagus Scunasticus*	Gračine-Humac
Dalmatia	*Pagus Scunasticus*	Grebine-Vitaljina
Dalmatia	*Pagus Scunasticus*	Humac
Dalmatia	*Pagus Scunasticus*	Smokovice-Hardomilje
Dalmatia	*Pagus Scunasticus*	Veljaci
Dalmatia	*Pagus Scunasticus*	Vuna-Hardomilje
Dalmatia	*Pons Tiluri*	Trilj
Dalmatia	*Salona*	Kapljuč
Dalmatia	*Salona*	Klis
Dalmatia	*Salona*	Solin
Dalmatia	*Siculi*	Bijaći
Dalmatia	*Spalatum*	Split
Dalmatia	*Tilurium*	Gardun

ROMAN PROVINCE	ANCIENT SITE	MODERN SITE
Dalmatia	*Tilurium*	Košute
Dalmatia	*Tilurium*	Trilj
Dalmatia	*Tilurium*	Vojnić
Dalmatia	*Tragurium*	Seget Donji
Dalmatia	*Tragurium*	Trogir
Galatia	*Antiochia Pisidiae*	Yalvaç
Galatia	*Apollonia / Tymandus*	
Galatia	*Cormasa*	Gâvur Ören
Galatia	*Iconium*	Konya
Moesia Superior	*Viminacium*	Drmno
Thracia	*Lysimacheia*	Bolayir

Table 1 Table contains the various locations covered by the dataset.

2. Data entry (csv, Excel): Authors transcribed archaeological, analytical, historical, and bibliographic data concerning the monuments of *Legio* VII found in works produced by scholars local to the region, including Domagoj Tončinić, Dino Demicheli, and Ivan Matijević [9, 13, 14].
3. Validation: data was corroborated with Epigraphik-Datenbank Clauss / Slaby (EDCS) and Epigraphic Database Heidelberg (EDH),[3] and Trismegistos, Pleiades, or Google Maps.[4]
4. Analysis (sql): prepared SQL queries joined multiple tables for visualisation and analysis. These queries have been materialised as views in this database.

QUALITY CONTROL

Where possible, records from scholarly sources were cross-checked with inscriptions from EDCS and EDH. Location data was validated from Trismegistos and Pleiades.

CONSTRAINTS

- Limited denormalisation of controlled vocabularies into free text due to time constraints.
- Previously published material only, no access to unpublished museum archives
- Limited provenience and provenance data
- military_status.csv had rendering problems in Open Context

(3) DATASET DESCRIPTION
OBJECT NAME

Community and Identity in the Roman Seventh Legion: Digitally mapping funerary monuments referring to Legio VII servicemen and related members of the military community in Roman *Dalmatia*.

DATA TYPE

The Open Context repository (https://doi.org/10.6078/M7X34VK8) contains rendered data by table in a linked open data compatible format.

The project GitHub repository (https://github.com/EwanSC/BromansCoopey/releases/tag/v.1.0.3) released on Zenodo (https://doi.org/10.5281/zenodo.7052901) has **.csv** formatted files (data); **.sql** DDL (creating tables) and DML (inserting and querying data) scripts; a SQLite **.db** (binary SQLite 3.35.5 database); **.sh** (bash shell script); **.bib** (BibTeX formatted) and **.ris** formatted bibliographies; and readmes in **.md**; **.html**; and **.docx.**

FORMAT NAMES AND VERSIONS (IN GITHUB REPOSITORY RELEASED ON ZENODO)

- analysis/ (example analysis tables, comma delimited, UTF8)
  - all_corpora.csv
  - all_monument_with_location.csv
  - all_servicemen.csv
  - leg_vii_funerary_monument.csv
  - analysis_dictionary.docx (readme)
  - analysis_dictionary.html (readme)
  - analysis_dictionary.md (readme)
- data/ (data for this database, comma delimited, UTF8)
  - corpus.csv
  - findspot.csv
  - legio_serviceman.csv
  - military_status.csv
  - monument_corpus.csv
  - monument_serviceman.csv
  - monument.csv
  - unit.csv
  - data_dictionary.md (readme)
  - data_dictionary.html (readme)
  - data_dictionary.docx (readme)

- DB-SQL/ (various files related to the database)
  – bibliography_for_db.bib (bibliography file)
  – bibliography_for_db.ris (bibliography file)
  – BromansDB.db (SQLite binary database file)
  – create_monument_db.sql (SQL script used to ingest original_source_data into Bromans.DB)
  – rebuild_db.sh (BASH shell script for running create_monument_db.sql)
  – export_database.sh (shell script for exporting BromansDB.db into data/ and analysis/ csvs)
- original_source_data (original data, comma delimited, UTF8)
  – corpus.csv
  – findspot.csv
  – legio_serviceman.csv
  – military_status.csv
  – monument_corpus.csv
  – monument_serviceman.csv
  – monument.csv
  – unit.csv
- thesis/
  – ewan_coopey_2020_fratres_romani.pdf (thesis that database is related to)

CREATION DATES
(01/01/2020 - 13/10/2021)

DATASET CREATORS
Coopey, Ewan Shanks (primary investigator), Ballsun-Stanton, Brian (data scientist)

LANGUAGE
English; Croatian; Latin (inscriptions)

LICENSE
CC BY SA 4.0

REPOSITORY LOCATION
The dataset is published on Open Context: https://doi.org/10.6078/M7X34VK8. The data is also held on Zenodo: https://doi.org/10.5281/zenodo.7052901.

PUBLICATION DATE
09/02/2022

(4) REUSE POTENTIAL

The dataset facilitates further research into the servicemen of the seventh legion and their monuments in *Dalmatia*. It provides a small-scale case study of the Roman 'epigraphic culture' within the military. Current scholarly consensus on this phenomenon is that it was a varied and complex at both regional and Empire-wide levels, and small case studies, such as the one presented by this dataset, will allow us to better understand the spread and proliferation of inscribed Roman material [4, 5].

This dataset can be thought of as two distinct things, each with their own reuse potential. First, there is the data itself – transformed and presented as 'views' on the base table structure. This data is appropriate for epigraphers studying this era and region to supplement their research by stylistically, quantifiably, and/or spatially examining certain features of this military community. Second, is the 'SQL as Data Definition Language' specification in 'create_monument_db.sql' — which demonstrates a viable data schema for documenting the service of a Roman soldier as documented by monuments. Beyond the structure, this dataset has been designed to be extensible such that it can accept contributions via a GitHub 'Pull Request.'

The data in this dataset can be reused in both digital *and* traditional approaches to epigraphy and archaeology — preferably approaches combining features of both — as it has fields that can be queried and/or read manually; particularly on Open Context with its interactive user interface. This is the result of the dataset being a work of 'slow' and 'small' archaeological data: wherein the many contexts, layers, complexities, and histories are engaged with and appreciated [15, 16]. For instance, stylistic and biographical information not held in other repositories such as EDH has been captured and, because of the dataset's relational nature, rendered machine-legible, and therefore able to be integrated into SQL queries selecting attributes across all input-data sets. This includes data concerning sculptural features (portrait and/or decoration type), typological classifications according to Tončinić [9], the status of servicemen within the inscription (commemorator or commemorated), their specific office/s, how many monuments they are recorded upon, and the military unit they served in (such as VII or VII *Claudia Pia Fidelis*).

This dataset and its structure are also both licensed as open source, allowing for contributions from our own future research and other researchers' compatible scholastic efforts. Indeed, we invite GitHub pull requests adding data, making queries, or integrating new data sources. In line with this, within Roman studies this structure can be applied onto corpora from across the Empire and the data itself can be incorporated into existing datasets, bringing southeastern European evidence into broader theoretically engaged discussions. Moreover, as it captures the types of biographical, sculptural, archaeological, and epigraphic data which are key for investigating the social dynamics of many a community (details surrounding mentioned persons, decorations, locations, shared groupings, and inscriptions), a researcher interested in other epigraphically attested communities could adapt this structure onto data from outside the Roman world as well.

Significantly, the dataset can support learning activities in university and community courses. It facilitates

engagement with 'real' and, for Roman studies students, relevant data in an accessible, online, and free-to-use way. The importance of this was significantly stressed during the COVID-19 pandemic, however the benefits of making archaeo-epigraphic material more accessible to students go far beyond the confines of the pandemic, with great potential to assist with distance learning for example [17]. While small, the dataset has been significantly structured so unanticipated questions can be asked without additional 'tinkering', thereby supporting novel future research questions [18, p 139]. The data can thus be used for a range of learning activities, from text-mining and GIS mapping to statistical analysis. Finally, the structure of the dataset can itself be used as a learning device, exemplifying how data can be structured to capture desired elements of epigraphic and archaeological material.

NOTES

1　The Arheološki Muzej u Splitu/Archaeological Musem in Split, for example, has over 6000 inscribed monuments, many of them unpublished. *pers. comm.* Nino Švonja (curator).

2　The state of being removed from original context for reuse in later periods.

3　EDCS: https://db.edcs.eu/epigr/epi.php?s_sprache=en; EDH: https://edh.ub.uni-heidelberg.de/.

4　Trismegistos: https://www.trismegistos.org/geo/; Pleiades: https://pleiades.stoa.org/; Google Maps: https://www.google.com/maps.

ACKNOWLEDGEMENTS

FUNDING STATEMENT

COMPETING INTERESTS

The authors have no competing interests to declare.

AUTHOR AFFILIATIONS

Ewan Shanks Coopey orcid.org/0000-0001-8633-6418
PhD Candidate and Sessional Academic, Macquarie University Department of History and Archaeology, AU

Brian Ballsun-Stanton orcid.org/0000-0003-4932-7912
Solutions Architect (Digital Humanities), Macquarie University Faculty of Arts, AU

REFERENCES

1.　**James, S.** The Community of Soldiers: A Major Identity and Centre of Power in the Roman Empire. *TRAC,* 1999; 1998: 14–25. DOI: https://doi.org/10.16995/TRAC1998_14_25

2.　**Allison PM.** Measuring Women's Influence on Roman Military Life: Using GIS on Published Excavation Reports from the German Frontier. *Internet Archaeology,* 2008; 24. DOI: https://doi.org/10.11141/ia.24.5

3.　**MacMullen R.** The Epigraphic Habit in the Roman Empire. *The American Journal of Philology,* 1982; 103(3): 233–46. DOI: https://doi.org/10.2307/294470

4.　**Woolf G.** Monumental Writing and the Expansion of Roman Society in the Early Empire. *JRS,* 1996; 86: 22–39. DOI: https://doi.org/10.2307/300421

5.　**Beltrán Lloris, F.** The "Epigraphic habit" in the Roman World. In Bruun C, Edmondson J (eds.), *The Oxford Handbook of Roman Epigraphy.* Oxford: Oxford University Press, 2014; 131–148. DOI: https://doi.org/10.1093/oxfordhb/9780195336467.013.008

6.　**Hope VM.** Constructing Roman Identity: Funerary Monuments and Social Structure in the Roman World. *Mortality,* 1997; 2(2): 103–21. DOI: https://doi.org/10.1080/713685858

7.　**Speidel MA.** The Roman Army. In Bruun C, Edmondson J (eds.), *The Oxford Handbook of Roman Epigraphy.* Oxford: Oxford University Press, 2014; 319–44. DOI: https://doi.org/10.1093/oxfordhb/9780195336467.013.016

8.　**Coopey E.** 'Fratres Romani in Dalmatia: The Social Dynamics of Legio VII and the Construction of Community and Identity through Roman Funerary Monuments', MRes Thesis. Sydney: Macquarie University; 2021. DOI: https://doi.org/10.25949/19442537.v1

9.　**Tončinić D.** *Spomenici VII. legije na području rimske provincije Dalmacije/Monuments of Legio VII in the Roman Province of Dalmatia.* Arheološki muzej u Splitu, Split; 2011.

10.　**Džino D.** *Illyricum in Roman Politics, 229 BC–AD 68.* Cambridge: Cambridge University Press; 2010. DOI: https://doi.org/10.1017/CBO9780511675942

11.　**Džino D.** The Division of Illyricum in Tiberian Era: Long Term Significance. In Kovács P (ed.), *Tiberius in Illyricum. Contributions to the History of the Danubian Provinces under Tiberius' Reign (14–37 AD).* Budapest, Debrecen, 2017; 41–54.

12.　**Cesarik N.** Dalmatia after 9 AD: Separate Province or Part of the Province of Illyricum? *Anali Zavoda za povijesne znanosti Hrvatske akademije znanosti i umjetnosti u Dubrovniku,* 2022; 60: 9–21. DOI: https://doi.org/10.21857/mnlqgcrexy

13.　**Demicheli D, Tončinić D.** Stela Veterana VII. Legije Lucija Vetija Sekunda Iz Hrvaca Kod Sinja. *Archaeologia Adriatica,* 2008; 2(1): 349–58. DOI: https://doi.org/10.15291/archeo.959

14.　**Matijević I.** Neobjavljena Stela Veterana Legije Sedma Claudia Pia Fidelis Iz Sikula. *Miscellanea Hadriatica et*

Mediterranea, 2017; 3(1): 125–38. DOI: https://doi.org/10.15291/misc.1354

15. **Hugget J.** Is Less More? Slow Data and Datafication in Archaeology. In Garstki K (ed.), *Critical Archaeology in the Digital Age: Proceedings of the 12th IEMA Visiting Scholar's Conference*. Los Angeles: UCLA Cotsen Institute of Archaeology Press, 2022; 96–110. DOI: https://doi.org/10.2307/j.ctv2fcctzd.13

16. **Kansa EC.** Click Here to Save the Past. In Averette EW, Gordon JM, Counts DB (eds.), *Mobilizing the Past: The Potential of Digital Archaeology*. The Digital Press at The University of North Dakota, Grand Forks, 2016; 443–72. DOI: https://doi.org/10.31356/dpb008

17. **Garstki K.** Introduction: Challenges of a Critical Archaeology in the Modern World. In Garstki K (ed.), *Critical Archaeology in the Digital Age: Proceedings of the 12th IEMA Visiting Scholar's Conference*. Los Angeles: UCLA Cotsen Institute of Archaeology Press, 2022; 1–10. DOI: https://doi.org/10.2307/j.ctv2fcctzd.7

18. **Sobotkova A, Hermankova P.** The Emergent Archaeological Realities and Reusable Datasets: What Is the Priority? In Watrall E, Goldstein L (eds.), *Digital Heritage and Archaeology in Practice; Data, Ethics, and Professionalism*. Gainesville: University of Florida Press, 2022; 135–49. DOI: https://doi.org/10.5744/florida/9780813069302.003.0007