

Pottery Production, Landscape and Economy of Roman Dalmatia

Interdisciplinary approaches

edited by

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Preface

Goranka Lipovac Vrkljan and Ana Konestra

This volume stems from the data collected through research of Roman pottery production centres of the coast and islands of the Roman Province of Dalmatia (eastern Adriatic) within the project *RED – Roman Economy in Dalmatia: production, distribution and demand in the light of pottery workshops* (IP-11-2013-3973, Croatian Science Foundation), conducted at the Institute of Archaeology in Zagreb.

Our research on pottery workshops along the coastal areas of Dalmatia started from very modest, merely preliminary knowledge of their existence in the area, and on their dating in Hellenistic and Roman times. Indirect indicators were the main source of data relevant for production detection, with exceptions being the more direct identification of workshop features at Smrdelji and Vis (*Issa*).

Thanks to the discovery of a well-preserved pottery production complex at Crikvenica, within the area of ancient *Ad Turres* (*Tabula Peutingeriana*, V, 463) and the *saltus* of Sextus Metilius Maximus, new possibilities for multidisciplinary analysis emerged. The model applied for research into the Crikvenica workshop has been implemented during the project's activities at other potential pottery workshop locations on the Dalmatian coast and islands, with the aim to confirm or better define them.

One part of the contributions within this volume presents archaeological research regarding the complex at Crikvenica; aspects of pottery analysis are presented by I. Ožanić Roguljić, while M. Ilkić tackled numismatics. Crikvenica's commercial potential is testified by distribution of its products, about which new information is presented by I. Borzić and co-authors, as well as P. Maggi.

Through a multidisciplinary analysis of various finds a wider reconstruction of the landscape, especially in light of the availability of raw material resources, was attempted. This aspect is preliminarily presented by the contributions of E. Goršić and K. Miculinić. Wider has been the application of geoarchaeological methods, applied not only at Crikvenica but also at other sites with supposed pottery production, primarily with the aim of determining their characteristics through geophysical prospection, the results of which are presented by F. Welc. Immediately after the preliminary analysis, the potential of the site at Plemići Bay was ascertained, thus, apart from the above-mentioned interdisciplinary methods, new fieldwork has also been carried out,

centring on its harbour infrastructure, and presented by M. Parica and M. Iklić.

A new impulse in research of Late Hellenistic and Roman workshops in Dalmatia has been given from the late 2000s by the archaeometric analysis of certain wares, focused on determining their workshop provenances, as the archaeological data is to date too scanty. Within the project, new results of archaeometric analyses of supposed Dalmatian Hellenistic pottery have been obtained and are illustrated by M. Ugarković and B. Šegvić. Determining the reference group of Crikvenica's pottery and studying its distribution has also been tackled archaeometrically, as presented by the works of T. Zubin Ferri and A. Grizelj.

The interdisciplinary approach applied to data collection was continued through its elaboration with the creation of the RED project spatial database, as outlined by N. Šegvić.

The results obtained thus far are indicative of the existence of a substantial number of workshops active from the 1st to the end of 3rd centuries AD, which are, for now, mainly recognised in Liburnia. The fact of diversely organised pottery production in this area of the eastern Adriatic generates new insights into the Roman economy within the province, allowing the editors to draft in their contribution an overview of this aspect.

We would like to thank all research group members and external collaborators for their scientific efforts in the project's activities and for presenting their results within this volume. Finally, special thanks go to our colleagues S. Pesaveno Mattioli and M.-B. Carre for their introductory contribution, which helps place eastern Adriatic pottery production within a wider Adriatic context.

During the implementation of the activities of Project RED the following institutions provided us with spatial data: State Geodesic Administration (Hrvatska geodetska uprava – DGU), Hrvatske vode and Javna ustanova Zavod za prostorno uređenje Primorsko – goranske županije. Numerous Croatian and foreign museums and scientific institutions helped us with the acquisition of samples and collaboration, while several cities, municipalities and private individuals allowed us to conduct our research on their territory or property. We thank them all for their help and collaboration.

Eastern Adriatic Hellenistic and Roman pottery and ceramics production sites

Goranka Lipovac Vrkljan, Ana Konestra and Marina Ugarković

What follows is a gazetteer of sites connected to pottery and ceramics production along the coastal areas of ancient Dalmatia, their locations being presented on Figure 1. They are sorted chronologically, starting with Hellenistic sites followed by those datable to Roman times. A classification has also been applied, based on the certainty of production features/workshop locations, with the following criteria:

1. *Direct indicators of production/certain workshops:* sites where a kiln, kiln fragments, kiln furniture, substantial amounts of wasters are present and can be spatially confined to a precise location. Also, data from archaeometric analysis has been regarded as significant.

2. *Indirect indicators of production/supposed workshops:* sites where a combination of elements occurs, such as wasters or moulds, backed by other data such as distribution or analogies, but where kiln remains are not certain, so the presence of a workshop can only be supposed. The exact geographical location of these sites can be pinpointed with variable certainty. Here, as well, data from archaeometric analysis have been regarded as significant.

3. *Other indicators of production:* sites where only movable indicators are present – finds, moulds – but that can be linked to a wider location within a defined area.

These categories indicate the strength of the evidence that can prove the existence of a workshop or pottery production features within a certain location or wider area (see also Hasaki 2011). It must be added that the data on the second, and especially the third category are still vague and derive from either single finds, dated finds/research, or works in progress. In any case, we chose to include, for the sake of completeness, all evidence and information on pottery and ceramics production that is reliable enough.

Hellenistic pottery production sites

Direct indicators of production/certain workshops

Issa (Vis island)

Indicators: pottery wasters; kilns/kiln fragments; moulds; kiln spacers; archaeometric analysis; distribution; typo-chronological and stylistic analysis.

Products: fineware/tableware: Gnathia, Late Gnathia and other similar ware, black-slipped, grey-slipped, red-slipped; white-slipped; plain-painted and plain wares (possibly Alto-Adriatico and red-figure ware); domestic ware, amphorae, coroplastic, probably storage vessels and kitchenware as well.

Time-frame: (advanced 4th?) mid 3rd-1st centuries BC.
Bibliography: Abramić 1949; Cambi 1991; Forti 1965: 153-154; Kirigin and Marin 1985a, b; Kirigin 1983; 1985; 1990; 1996; Kirigin 1999: 419-421; Kirigin *et al.* 2005:11; 2006: 193-194; Kirigin 2008; Čargo 2007; 2008; Čargo and Miše 2010; Nikolanci 1976: 152; Miše 2010; 2012; 2013; 2015; Stanić 1927: 93; Šegvić *et al.* 2016; Šešelj 2010: 442-443; Ugarković 2013; 2015; 2016; Ugarković, Šegvić 2017.

Indirect indicators of production/supposed workshops

Pharos (Hvar island)

Indicators: pottery wasters; kiln fragments; moulds; kiln spacers; distribution.

Products: amphorae (different types, including Corinth B type); loom weights; coarseware (painted coarse ware); coroplastic; tiles (Corinthian and Laconian); possibly fineware-tableware (e.g. black-slipped ware) and pithoi.

Time-frame: 4th-3rd, possible 2nd and 1st centuries BC as well.

Bibliography: Jeličić Radonić and Katić 2015: 140-145; Katić 1999-2000; Kirigin *et al.* 2002; Kirigin 2004; 2017; 2018; Katić 2005; Migotti 1989; Popović 2010; Šešelj 2010: 449-452.

Siculi

Indicators: moulds; archaeometric analysis.

Products: fineware, including relief ware, grey-ware, brown-slipped ware, red-slipped ware; domestic ware; storage vessels.

Time-frame: 2nd-1st centuries BC.

Bibliography: Bilich 1994; Brusić 2004: 16-21; Čargo and Miše 2010: 13; Kamenjarin and Šuta 2011; Kamenjarin 2014; 2017; Miše 2010: 59, 60; Šegvić *et al.* 2012; Šešelj 2005; 2008.

Other indicators of production

Iader

Indicators: mould.

Products: fine ware/relief ware.

Bibliography: Brusić 1999: 14; Čondić and Vuković 2017: 62; Šešelj 2009: 480; Šešelj and Ilkić 2015: 423.

Sv. Klement (Pakleni islands, Hvar)

Indicators: moulds.

Products: fine ware/relief ware.

Bibliography: Ugarković and Konestra 2018: 79.

Roman pottery production sites

Direct indicators of production/certain workshops

Crikvenica

Indicators: remains of workshop architecture and installations; wasters.

Products: amphorae (11 types); household pottery (c. 90 types) including finewares; loom-weights; ceramic building materials.

Time-frame: 1st-2nd centuries AD.

Bibliography: Lipovac Vrkljan 2009; 2016; 2017; Ožanić Roguljić 2012.

Podšilo (Lopar, Rab island)

Indicators: excavated remains of kiln(s); data from geophysical survey.

Products: ceramic building materials?

Time-frame: 3rd century

Bibliography: Lipovac Vrkljan, Šiljeg 2010; 2012; Konestra *et al.* 2018 in press.

Mahućina (Lopar, Rab island)

Indicators: supposed remains of kiln(s); wasters; data from geophysical survey.

Products: ceramic building materials?

Time-frame: Roman/Late Roman.

Bibliography: Lipovac Vrkljan *et al.* 2015.

Plemići

Indicators: wasters; kiln fragments.

Products: amphorae; ceramic building material.

Time-frame: early Roman?

Bibliography: Parica and Ilkić 2017.

Rakitnica

Indicators: kiln.

Products: ceramic building material.

Time-frame: Roman.

Bibliography: Brajković 2011.

Smrdelji

Indicators: kilns (exact location unknown).

Products: ceramic building material.

Time-frame: 1st century AD.

Bibliography: Marun 1998; Patsch 1900; Wilkes 1979; Škegro 1999; Pedišić, Podrug 2008.

Issa (Vis island)

Indicators: remains of kiln/s; wasters; mould.

Products: amphorae (?); table ware (jugs); coroplastic; *dolia*; lamps.

Time-frame: 1st-3rd centuries AD.

Bibliography: Čargo and Miše 2010.

Indirect indicators of production/supposed workshops

Soline – Sv. Petar (Krk island)

Indicators: wasters; kiln fragments.

Products:

Time-frame: Roman.

Bibliography: Lipovac Vrkljan and Starac 2007; Lipovac Vrkljan *et al.* 2017.

Sv. Martin (Krk island)

Indicators: wasters; kiln fragments?

Products:

Time-frame: Roman.

Bibliography: Lipovac Vrkljan *et al.* 2017.

Gonar

Indicators: traces of possible kiln; small amount of ceramics; kiln fragments?

Products:

Time-frame: Roman?

Bibliography: Lipovac Vrkljan *et al.* 2017.

Dinjiška (Pag island)¹

Indicators: kiln remains.

Products:

Time-frame:

Bibliography: Gluščević 1989; Kurilić 2011; Oštarić and Kurilić 2013: 274.

Other indicators of production

Caska (Pag island)

Indicators: amphorae typology; amphorae and tegulae stamps; lamps typology.

Products: amphorae Dr. 2-4 and 'Caska type 1?'; tegulae

Time-frame: early Augustan or Tiberian.

Bibliography: Grisonić 2017; Kurilić 2016.

Novalja (Pag island)

Indicators: kiln remains/destroyed; wasters.

Products: amphorae Dressel 6B?; ceramic building material.

Time-frame: Roman.

Bibliography: Gluščević 2017.

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¹ Although remains of a kiln are reported at the site, they are today destroyed and there are no indications that would with certainty place it in antiquity, thus, it was chosen to locate it within the sites with indirect indicators.

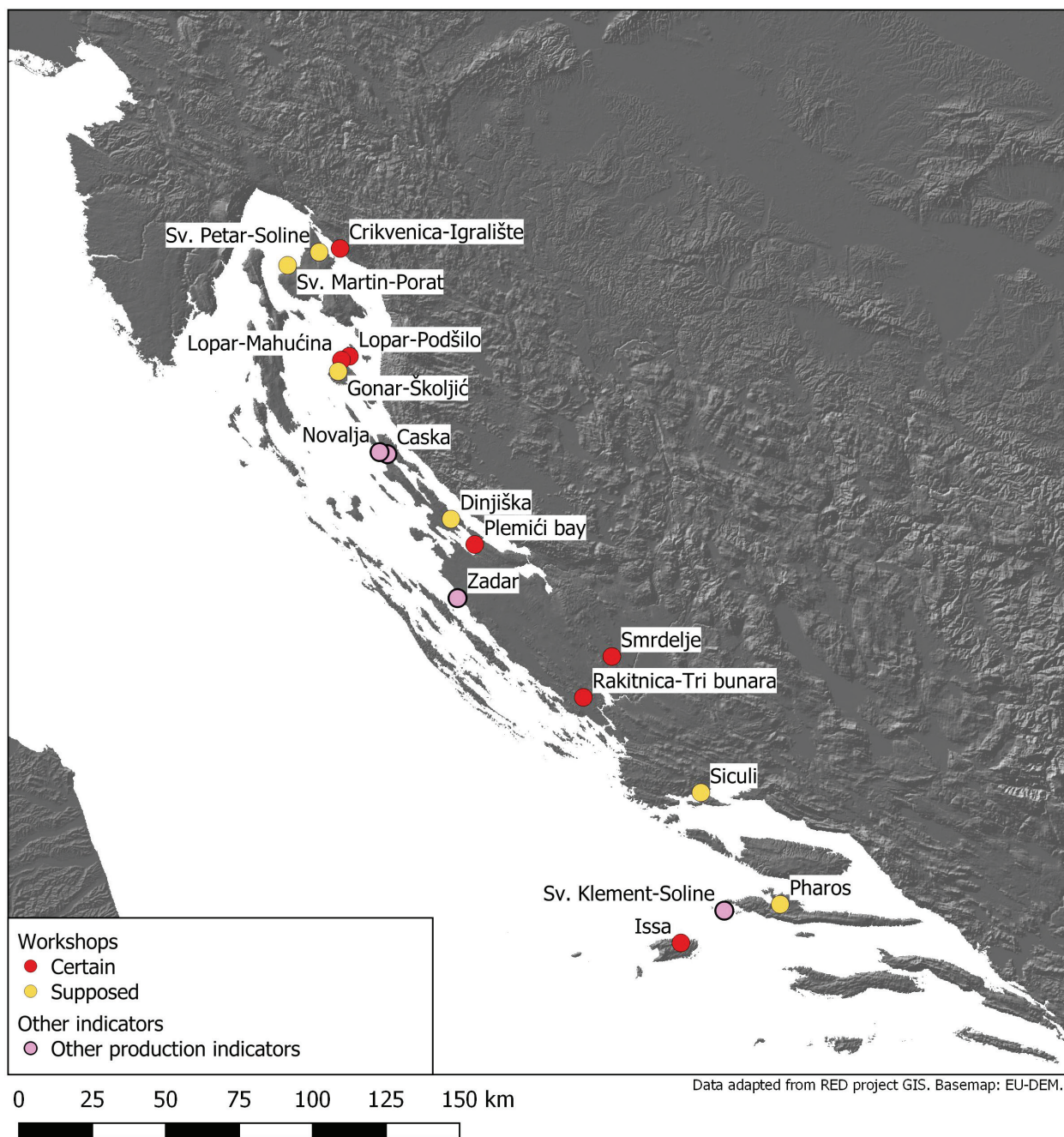


Figure 1. Map of Eastern Adriatic Hellenistic and Roman pottery and ceramics production sites.

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