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ZBORNIK III.  
MEĐUNARODNOG  
ARHEOLOŠKOG  
KOLOKVIJA

ATTI DEL III  
COLLOQUIO  
ARCHEOLOGICO  
INTERNAZIONALE

PROCEEDINGS OF THE 3<sup>rd</sup>  
INTERNATIONAL  
ARCHAEOLOGICAL  
COLLOQUY

# Rimske keramičarske i staklarske radionice

**Proizvodnja i trgovina  
na jadranskom prostoru**

Officine per la produzione di  
ceramica e vetro in epoca romana  
Produzione e commercionella  
regione adriatica

Roman pottery and  
glass manufactures  
Production and trade  
in the adriatic region

GORANKA LIPOVAC VRKLJAN  
BARTUL ŠILJEG  
IVANA OŽANIĆ ROGULJIĆ  
ANA KONESTRA

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ZA ARHEOLOGIJU  
SERTA INSTITUTI  
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VOLUME 12

# Rimske keramičarske i staklarske radionice

GORANKA LIPOVAC VRKLJAN / BARTUL ŠILJEG / IVANA OŽANIĆ ROGULJIĆ / ANA KONESTRA

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Roman Pottery and Glass Manufactures.  
Production and Trade in the Adriatic Region



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**RIMSKE KERAMIČARSKE I STAKLARSKE RADIONICE**

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**OFFICINE PER LA PRODUZIONE DI CERAMICA E VETRO IN EPOCA ROMANA**

PRODUZIONE E COMMERCIO NELLA REGIONE ADRIATICA  
ATTI DEL III COLLOQUIO ARCHEOLOGICO INTERNAZIONALE  
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**ROMAN POTTERY AND GLASS MANUFACTURES**

PRODUCTION AND TRADE IN THE ADRIATIC REGION  
PROCEEDINGS OF THE 3<sup>rd</sup> INTERNATIONAL ARCHAEOLOGICAL COLLOQUY  
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*Cijenjeni kolegice i kolege,*

pred vama je Zbornik III. Međunarodnog arheološkog kolokvija Rimske keramičarske i staklarske radionice. Proizvodnja i trgovina na jadranskom prostoru koji sadržava tekstove sudionika Kolokvija održanog u Crikvenici 4. i 5. studenog 2014. godine. Raduje nas kontinuitet održavanja Kolokvija i mogućnost objave Zbornika nakon svakog održanog skupa, osobito jer je riječ o tematski definiranim trogodišnjim skupovima. Kao i proteklih godina, bez znanstvenog interesa i napora autora tekstova, bilo bi iznimno teško održati ne samo slijed objave već i znanstvenu kvalitetu Zbornika.

Tekstovi objavljeni u ovom Zborniku sadržajno su povezani s osnovnom temom Kolokvija, antičkim keramičarskim i staklarskim radionicama. Rasprave tako zahvaćaju široku problematiku: od prostorne organizacije radionica i obilježja njihove proizvodnje do problema distribucije predmeta te tipoloških analiza keramičkih i staklarskih nalaza. Poseban doprinos za uspostavu referentnih arheoloških i interdisciplinarnih kriterija pri definiranju lokalne proizvodnje nalazimo u nizu rasprava bilo da je riječ o proizvodnji kasnohelenističke keramike, keramike tankih stijeni, tere sigilate i njihovim lokalnim varijantama. Naša istraživanja lokalne proizvodnje keramike na priobalju rimske provincije Dalmacije, a koja se provode u sklopu znanstvenog istraživačkog projekta RED, Roman Economy in Dalmatia: production, distribution and demand in the light of pottery workshops (HRZZ, IP-11-2013-3973), posebno keramičarskoga proizvodnog kompleksa u Crikvenici, doprinos su poznavanju lokalnih proizvodnih obilježja ovog prostora.

Na kraju još jednom zahvaljujemo svim sudionicima III. Međunarodnog arheološkog kolokvija, autorima te svim suradnicima u pripremi i objavi ovog Zbornika. Nadamo se da će zanimljivost tekstova privući pažnju i pozitivnu reakciju znanstvene javnosti te da će prezentirane teme pridonijeti budućim znanstvenim istraživanjima.

Zahvale pripadaju Znanstvenom odboru Kolokvija i Znanstvenome izdavačkom savjetu Zbornika koji su svojim aktivnim sudjelovanjem pridonijeli znanstvenoj vrsnosti i Kolokvija i Zbornika. Posebno hvala Gradu Crikvenici i Muzeju Grada Crikvenice koji je, kao i uvijek do sada, preuzeo velik dio izdavačkog tereta i pratio naše znanstvene i stručne interese, želeći pridonijeti popularizaciji iznimnog lokaliteta keramičarske radionice o kojem skrbi. Za kraj, zahvaljujemo na podršci matičnoj ustanovi, Institutu za arheologiju, u čijoj je ediciji Zbornik Instituta za arheologiju / Serta Instituti Archaeologici ovaj Zbornik i objavljen.

**Spettabili colleghe e colleghi,**

Con il presente volume vi presentiamo gli Atti del III Colloquio archeologico internazionale *“Officine per la produzione di ceramica e vetro in epoca romana. Produzione e commercio nella regione adriatica”* che raccoglie i contributi dei partecipanti al Colloquio tenutosi a Crikvenica il 4 e 5 novembre 2014. Siamo lieti della continuità con cui si tiene il Colloquio, come anche la possibilità di pubblicare gli Atti con la stessa cadenza, soprattutto trattandosi di incontri tematici triennali. Come negli anni precedenti, senza l'interesse scientifico e lo sforzo degli autori sarebbe impossibile mantenere tale costanza e soprattutto la qualità scientifica degli Atti.

I contributi pubblicati sono contestualmente connessi al tema principale del Colloquio, quello delle officine per la produzione di ceramica e vetro. Le discussioni comprendono ampie problematiche: dall'organizzazione delle officine, alle caratteristiche dei loro prodotti e della loro distribuzione, fino ad analisi tipologiche di rinvenimenti ceramici e vitrei. Un particolare apporto alla definizione di criteri di referenza archeologici e interdisciplinari relativi a produzioni locali è dato da diverse discussioni che spaziano dalla produzione di ceramica tardo ellenistica, a quella di ceramica a pareti sottili e *terra sigillata*, nonché delle loro varianti locali. Le nostre ricerche relative alla produzione ceramica nell'area costiera della provincia Dalmazia, portati avanti nell'ambito del progetto RED, *Roman Economy in Dalmatia: production, distribution and demand in the light of pottery workshops* (HRZZ, IP-11-2013-3973), in particolare del centro produttivo di Crikvenica, contribuiscono alla conoscenza delle caratteristiche dei prodotti locali di quest'area.

Per finire ringraziamo nuovamente tutti i partecipanti al III Colloquio archeologico internazionale, tutti gli autori e tutti i collaboratori che hanno contribuito alla preparazione e alla pubblicazione del volume. Ci auguriamo che le interessanti tematiche degli articoli pubblicati attireranno l'attenzione della comunità scientifica e produrranno nuovi spunti di riflessione su cui impostare sempre nuove ricerche scientifiche sul tema.

Estendiamo i nostri ringraziamenti al Comitato scientifico del Colloquio e al Comitato scientifico editoriale degli Atti, che con la loro attiva partecipazione hanno contribuito alla qualità di entrambi. Un sentito ringraziamento alla Città di Crikvenica e al Museo civico di Crikvenica, che ha, come sempre, assunto un importante ruolo nella pubblicazione del volume e ha saputo supportarci nei nostri interessi scientifici, con la costante volontà di contribuire alla conoscenza dell'eccezionale sito produttivo del quale si prende cura. Infine, ringraziamo per il sostegno il nostro ente, l'Istituto di Archeologia, nell'ambito della cui collana Zbornik Instituta za arheologiju / Serta Instituti Archaeologici questi Atti sono pubblicati.

Goranka Lipovac Vrkljan

**Dear Colleagues,**

welcome to the Proceedings of the 3<sup>rd</sup> International Archaeological Colloquium *‘Roman pottery and glass manufactures. Production and trade in the Adriatic region’* in which gathered together are the texts of the participants of the Colloquium held in Crikvenica from 4<sup>th</sup> – 5<sup>th</sup> November 2014. We are very pleased with the continued staging of the Colloquium and the possibility of publishing each collection of Proceedings after the meeting, especially as it concerns the thematically defined triennial conferences. As in previous years, without the scientific interest and the support of the authors, it would be extremely difficult to continue not only with the publication but also to keep up the scientific quality of the Proceedings.

The texts published in these Proceedings are by their content linked with the basic theme of the Colloquium, with ancient ceramist and glassmaker's workshops. The papers, therefore, cover a wide range of issues: from the spatial organisation of the workshops and the characteristics of their production to the problems of the distribution of the items and the typological analyses of the ceramic and glass finds. We encounter a particular contribution to the establishment of referential archaeological and interdisciplinary criteria in the definition of the local production in a number of discussions whether it concerns the production of Late Hellenistic ceramics, thin-walled ware and *terra sigillata*, and their local variants. Our investigations of the local pottery production in the coastal area of the Roman province of Dalmatia, and which are being carried out within the scientific research project RED, *Roman Economy in Dalmatia: production, distribution and demand in the light of pottery workshops* (HRZZ, IP-11-2013-3973), particularly of the pottery producing complex in Crikvenica, are a contribution to the understanding of the local production characteristics of this area.

To end with I would like to thank all the participants of the 3<sup>rd</sup> International Archaeological Colloquium, the authors and all the collaborators in the preparation and publication of these Proceedings. We hope that the appeal of these texts attracts the attention and positive reaction of the scientific public and we believe that the presented themes will contribute to future scientific research.

Our thanks go to the Scientific Committee of the Colloquium and the Scientific Publishing Board of the Proceedings who with their active participation have contributed to the scientific quality of the Colloquium as well as the Proceedings. Special thanks go to the Town of Crikvenica and the Crikvenica Municipal Museum which, as always, has taken on a great part of the publication expense and has followed our scientific and expert interests, with the wish to contribute to the popularisation of the exceptional site of the pottery workshop about which it cares. To finish with we would also like to thank the support of our parent institution, the Institute of Archaeology, in whose edition of the Proceedings of the Institute of Archaeology / Serta Instituti Archaeologici these Proceedings are also published.

Goranka Lipovac Vrkljan



## Tegulae with stamps from the Pansiana workshop from Archaeological museum in Split\*

Tegulae with stamps from the Pansiana workshop from Archaeological museum in Split

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PRETHODNO PRIOPĆENJE  
PRELIMINARY REPORT

The article analyzes 367 stamps from the Pansiana workshop which were brought to the Archaeological Museum in Split during the period from 1884 to 1926.

### KEY WORDS:

Pansiana  
Archaeological Museum in Split  
Dalmatia  
tegulae  
stamp

U radu je obrađeno 367 pečata radionice Pansiana koji su doneseni u Arheološki muzej u Split u razdoblju od 1884. do 1926. g.

### KLJUČNE RIJEČI:

Pansiana  
Arheološki muzej u Splitu  
Dalmacija  
tegule  
pečat

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*Pansiana*, alongside *Solonas*, *A. Faesoni*, and *Quinti Clodi Ambrosi* workshops, belongs to the most common Northern Adriatic group of manufacturers and distributors of building materials (Matijašić 1988: 63). The workshop operated from 45 BC to AD 79 distributing its products along the Adriatic coastal region. The production began as a private workshop owned by the consul *Gaius Vibius Pansa Caetronianus*. After his death the workshop was under the control of Roman emperors where it remained until the reign of Vespasian (Matijašić 1983: 985; Righini 1998b: 54; Pedišić, Podrug 2008: 88–89; Pellicioni 2012: 12). Emperor Augustus intensified the production and expanded the scope of brick products distribution. Other Roman Emperors, from Tiberius to Vespasian, continued with the production, imprinting on the products their own names along with the name of the workshop (Matijašić 1983: 960; Righini 1998b: 54; Pedišić, Podrug 2008: 89; Pellicioni 2012: 72). The workshop was located in Northern Italy, south of the Po River's delta (Matijašić 1983: 988; 1998: 102; Pellicioni 1998: 134; Righini 1998a: 50). Although researchers believe there must have been more factories (Pellicioni 2012: 68), only the existence of one, located in Voghenza, has been archaeologically proven (Righini 1998b: 55; Pedišić, Podrug 2008: 89; Pellicioni 2012: 12).

### Collection Of The Brick Stamps From The Archeological Museum In Split

In the Museum's inventory book under the label *Fa-Imovnik terracotta. Opeke, crijepovi (tegulae, lateres)* Mons. Frane Bulić and Mihovil Abramić have, by 1929, registered 1536 tegulae and other brick items with stamps. Stamps represented are: *Arriana*, *Cai Titi Hermerotis*, *Cartoriana*, *Cinniana*, *Dalmati*, *Evaristi*, *Faesonina*, *Pansiana*, *Solonas*, *Quinti Clodi Ambrosi*, *LEG IIII flavia felix*, *LEG XI Claudia pia fidelis*, *COH VIII voluntariorum civium Romanorum* and others. All stamps have been published in the museum journal *Bullettino di archaeologia e storia dalmata / Vijesnik za arheologiju i historiju dalmatinsku*. Frane Bulić published the stamps, with every stamp being given an inventory number, a proposed reading of the inscription and additional information about the circumstances of its discovery. There were however no typological or chronological details. With

regard to onomastic criteria and dimensions of letters and decorative elements, Mihovil Abramić has divided stamps into several groups (Abramić 1927–1927: 130–132).

According to the inventory book and to the publications in museum's journal, 641 tegulae fragments with stamp from the *Pansiana* workshop were brought to the Archaeological Museum in Split until 1926 (Tab. 1; Tab. 2). Examination of epigraphic collection revealed that a part of material cannot be located (Tab. 2). 367 fragments of tegulae with the *Pansiana* stamp were found, of which 292 fragments had a preserved inventory number and 75 fragments were without an inventory number (Tab 1). There are two possible explanations for the fragments without an inventory number. The first possibility is that these tegulae have been inventoried and published, however were not found given that over time the inventory number has deleted. Another possibility is that these tegulae have entered the Museum sometime after 1926 and have not even been inventoried. These stamps are analysed and included in the discussion, however, we have no information on the location of findings. Given the origin of inventoried samples, it is possible to assume, with high probability that they originate from Salona or central Dalmatia. Most tegulae in the Museum were obtained by purchase. Some findings were found in archaeological excavations of Salona, organized by Archaeological Museum in Split while a small number of finds was donated by citizens as well as by historical-archaeological society "Bihać".

### Sites

Most of the stamps from the *Pansiana* workshop, stored in the Archaeological Museum in Split, come from Salona (212 samples; 57,77%). Apart from Salona stamps were found at 18 sites in its immediate surroundings. These are Bijaći (14 samples; 3,81%), Kamen (8 samples; 2,18%), Žrnovnica (7 samples; 1,91%), Podstrana (6 samples; 1,63%), Kaštel Stari Miri (4 samples; 1,09%), Kučine Libovac (3 samples; 0,82%), Stobreč (2 samples; 0,54%) and Kamen Epetium, Kaštel Lukšić Gostini, Kaštel Novi Javorje, Kaštel Stari Gomile, Kaštel Sućurac, Klis, Lokve Spalato, Omiš Jesenice, Omiš Skalice and Vranjic (one sample each; 0,27%).



Map 1  
The *Pansiana* stamp sites from the Archaeological Museum in Split (author: M. Vukov)

Karta 1  
Lokalizacije s kojih potječu pečati Pansiana iz Arheološkog muzeja u Splitu (izradila: M. Vukov)

The finding place for 76 stamps or 20,71% of all findings is unknown. Only Naronna (24 samples; 6,54%) stands out regarding concentration of the finds in Salona and its surroundings, and as such is in the second place by a total number of stamps. Mr Jerko Moskovita donated stamps to the Museum in 1926, whilst Carl Patsch (Patsch 1907: 26–27; Patsch 1908: 95) and Mihovil Abramić (Abramić 1926–1927: 130–132) published them (Map 1).

### Typological And Chronological Analysis Of The Stamps

The long durability of the workshop has resulted in a great variety of stamp types that differ in content and length of texts, ligatures, punctuation and decorative elements. Giovanni Uggeri analysed and typologized in 1975 stamps from the Ferrara area (Righini, Biordi, Pellicioni Golinelli 1993: 41; Pedišić, Podrug 2008: 89). Robert Matijašić proposed in 1983 a classification of stamps into nine different types within which he singled out sixty-two orthographic variants (Matijašić

1983: 962–985). In 1992, Valeria Righini divided stamps into twenty different types with seventy-four orthographic variants (Righini, Biordi, Pellicioni Golinelli 1993: 43–44), a typology which she abridged in 1998 proposing eighteen types and seventy-one variant (Righini 1998a: 45–49). Maria Teresa Pellicioni supplemented in 2012 Valeria Righini's typology by dividing stamps into eighteen types and seventy-eight variants (Pellicioni 2012: 42–43). Typological and chronological definition of stamps from the Archaeological Museum in Split was possible due to previously listed works.

From a total of eighteen types, that is, a number of types differed by Maria Teresa Pellicioni and Valeria Righini, six types of stamps (1, 5, 9, 13, 15, 17) are not present in the collection from the Archaeological Museum in Split. The analogies to the types 1, 9, 13, 15 and 17 could not be found among published stamps from the sites of the province of Dalmatia. In contrast, type 5 (*QCP Pansiana*) is represented in Gračine (Dodig 2007: 40–44).







Type Pellicioni 2 (a-n) = Righini 2 (a-n) = Matijašić III (1-12) contains an engraved name *Pansiana*, that is, a cognomen version of workshop's first owner, consul *Gaius Vibius Pansa*. Given that it has no indication for a more precise dating, this type is broadly designated to the period from after the first owner's death until the reign of Emperor Tiberius, that is, between 43 BC and AD 14 (Righini 1998a: 51; Pellicioni 2012: 50). 106 stamps from the collection belong to this type (cat. no. 1–76, 284–313). The collection includes seven varieties of stamps, along with typologically indeterminable samples (Tab. 3). The majority of stamps were found in the area of Salona, while the remaining stamps were found on the sites of Bijaći, Kamen, Kaštel Stari Gomile, Kaštel Stari Miri, Klis, Kućine Libovac, Narona, Omiš Skalice, Stobreč and Žrnovnica. The finding place of thirty stamps is unknown. The analogies for this type in the province of Dalmatia can be found in Bribirska glavica (Pedišić, Podrug 2008: 108, cat. no. 8), Burnum (Kandler, Zabehlicky-Scheffenegger 1979: Pl. 22: 6, 7.), Pakoštane, Sveti Filip i Jakov, Tinja, Vrana (Bersa 1903: 148), Podgrađe near Benkovac (Bersa 1903: 148; Juras 2011: 213, cat. no. 12), Posuški Gradac (Patsch 1904: 289), Velika Mrdakovica (Pedišić, Podrug 2008: 128, cat. no. 106) and Zadar (Bersa 1903: 148).

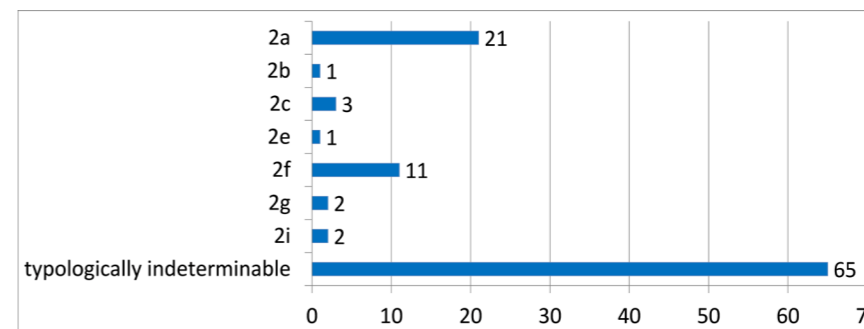
Type Pellicioni 3 (a-b) = Righini 3 (a-b) is similar to the previous one, however within the cognomen *Pansiana* the first letter N is omitted. Therefore, the stamp contains an engraved name *Pasiana*, as the other official version of workshop's first owner's cognomen (Righini 1998a: 53). This stamp type is dated to the period between 43 BC and AD 14 (Righini 1998b: 53; Pellicioni 2012: 50). Four stamps from the collection belong to this type (cat. no. 77–80). All four stamps can be attributed to the type Pellicioni 3a = Righini 3a. Three stamps were found in Salona, and one on the site of Žrnovnica, Krilace. The analogy to this variant in the province of Dalmatia can be found in Tribunj (Pedišić, Podrug 2008: 130, cat. no. 114), while the variant Pellicioni 3b = Righini 3b is represented on the site Lokvišće in Jadranovo (Lipovac Vrkljan, Starac 2014: 96, Fig. 1).

Type Pellicioni 4 (a) = Righini 4 (a) contains an engraved cognomen *Pansiana* and the initials *LAS*. Initials are embedded in smaller letters within the *Pansiana* text. This stamp type is dated to the period between 43 BC and AD 14

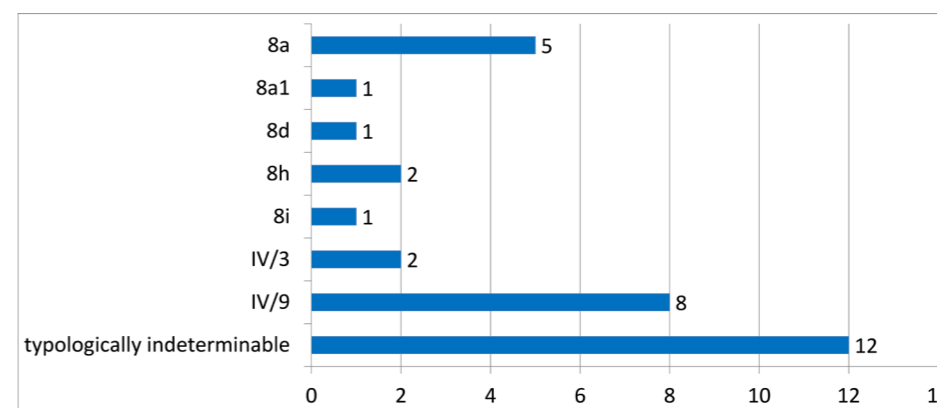
(Pellicioni 2012: 50). Seven stamps from the collection belong to this type (cat. no. 84–89, 316). Six samples were found in Salona while the finding location of one stamp is unknown. Herby the known number of finds is doubled. Only seven samples of this type have been known thus far, six of which were found in the Voghenza necropolis (Zerbinati 1993: 104; Righini 1998b: 53; Pellicioni 2012: 50) and one sample in Žirje (Pedišić, Podrug 2008: 123, cat. no. 83).

Type Pellicioni 6 (a) = Righini 6 (a) = Matijašić II/2 contains the initials *Q(uinti) C(avari) P(risci)* with motifs of stylized palmettes imprinted among the letters. Although this type does not contain the cognomen of the first owner's name, it is, on the basis of association with the type Pellicioni 5 (a) = Righini 5 (a) = Matijašić II/1, which contains the text *QCP Pansiana*, attributed to the *Pansiana* workshop (Righini 1998a: 52; Pellicioni 2012: 51). The dating of this type is not agreed upon. Robert Matijašić dates it to the period between the consification of the first owner's assets and the appearance of Emperor Augustus stamp (43–27 BC) (Matijašić 1988: 63), while Valeria Righini and Maria Theresa Pellicioni attribute this type to the late Republican and Augustan period (43 BC–AD 14) (Righini 1998a: 52; Pellicioni 2012: 51). Two stamps from the collection belong to this type and they were found in Kamen and Salona (cat. no. 90–91). According to the available data not a single fragment of this type has been found on the locations in the province of Dalmatia. Robert Matijašić states that a fragment of this type was found in Zadar, however, the finding has not been published (Matijašić 1983: 964; 1988: 66, 70).

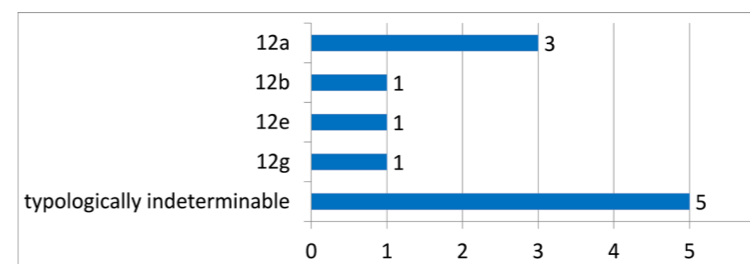
Type Pellicioni 8 (a-1) = Righini (a-1) = Matijašić IV (1-15) contains an engraved name *Ti(beri) Pansiana*, that is a first two letters of Emperor Tiberius' name and a name *Pansiana*. This stamp type dates to the reign of Emperor Tiberius, between AD 14 and AD 37. Thirty-two stamps from the collection belong to this type (cat. no. 92–118, 317–321). Seven varieties of this type are represented, along with typologically indeterminable stamps (Tab. 4). The majority of the stamps was found in the Salona area, while the remaining stamps were found in Bijaći, Kamen, Kaštel Stari Miri, Podstrana Poljica and Žrnovnica Krilace. The finding location for five stamps is unknown. The analogies for this type in the province of Dalmatia can be found in Bribirska glavica



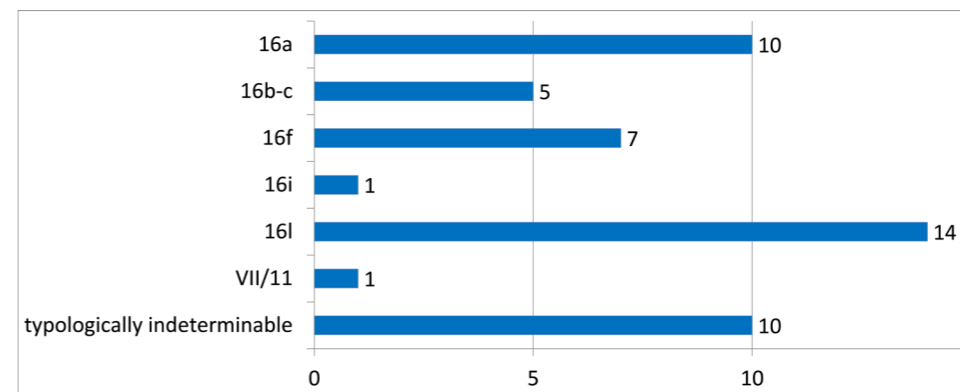
Tab. 3 The ratio of specific variants within the type Pellicioni 2 (a-n) = Righini 2 (a-n) = Matijašić III (1-12)  
 Tab. 3 Odnos pojedinih varijanti unutar tipa Pellicioni 2 (a-n) = Righini 2 (a-n) = Matijašić III (1-12)



Tab. 4 The ratio of specific variants within the type Pellicioni 8 (a-1) = Righini 8 (a-1) = Matijašić IV (1-15)  
 Tab. 4 Odnos pojedinih varijanti unutar tipa Pellicioni 8 (a-1) = Righini 8 (a-1) = Matijašić IV (1-15)



Tab. 5 The ratio of specific variants within the type Pellicioni 12 (a-g) = Righini 12 (a-g) = Matijašić V (1-6)  
 Tab. 5 Odnos pojedinih varijanti unutar tipa Pellicioni 12 (a-g) = Righini 12 (a-g) = Matijašić V (1-6)



Tab. 6 The ratio of specific variants within the type Pellicioni 16 (a-o) = Righini 16 (a-p) = Matijašić VII (1-17)  
 Tab. 6 Odnos pojedinih varijanti unutar tipa Pellicioni 16 (a-o) = Righini 16 (a-p) = Matijašić VII (1-17)

(Pedišić, Podrug 2008: 110, cat. no. 19), Korčula (Domaszewski, Hirschfeld, Mommsen 1902: 408, 3213, 3b-c), Kotor (Domaszewski, Hirschfeld, Mommsen 1902: 408, 3213, 3a), Podgrađe near Benkovac (Bersa 1903: 149; Ćurković 2008: 88, cat. no. 15, 16; Juras 2011: 209, cat. no. 4), Split (Zglav-Martinac 2010: 181, Fig. 4) and Žirje (Pedišić, Podrug 2008: 123, cat. no. 85).

Type Pellicioni 7 (a) = Righini 7 (a) = Matijašić V/7 contains the text *Pans(iana) Cae(saris)*. The dating of this type is not agreed upon. Robert Matijašić dates it to the period of Emperor Caligula (Matijašić 1983: 973–975), Valeria Righini opts for Giovanni Uggeri's opinion and dates it to the Octavian period (Righini 1998a: 52), while Maria Theresa Pellicioni dates this type to the period between the reigns of Emperors Augustus and Caligula (Pellicioni 2012: 51). Two stamps from the collection belong to this type (cat. no. 119–120). Given that this type is represented in Salona, where the stamps from the earlier period prevail, we could agree with Righini and suggest a dating to the late Republican or Augustan period. At the remaining sites in the province of Dalmatia, no analogies for this type could be found.

Type Pellicioni 11 (a-e) = Righini 11 (a-e) = Matijašić V (9-12) contains the text *C(aesaris) Pansiana*. There are five variants of the same type which differ in punctuation and decorative elements. Based on a reading of a letter C as

*Caesaris*, the stamp is attributed to the period of Emperor Caligula, between AD 37 and AD 41 (Righini 1998a: 46; 1998b: 55; Pellicioni 2012: 52). Five stamps from the collection belong to this type (cat. no. 121–123, 322–323). Three fragments were identified as a type Pellicioni 11 e = Righini 11 e, while for two stamps, due to fragmentation, it was not possible to determine the corresponding variant within the type. Two stamps were found in Salona while for one stamp the finding location is unknown. At the sites in the province of Dalmatia, no analogies for this type could be found.

Type Pellicioni 12 (a-g) = Righini 12 (a-g) = Matijašić V (1-6) contains the text *C(ai) Caesar(is) Pans(iana)*. According to the onomastic criteria, this type is attributed to the reign of Emperor Caligula, between AD 37 and AD 41 (Righini 1998a: 52; Pellicioni 2012: 53). Eleven stamps from the collection belong to this type (cat. no. 124–131, 324–326). Four variants are represented, along with typologically indeterminable stamps (Tab. 5). Five stamps were found in Salona and a single one, respectively, in Kamen, Naron, and Vranjic while the finding location for three stamps is unknown. The analogies for this type in the province of Dalmatia can be found in Gradina on Žirje (Pedišić, Podrug 2008: 123, cat. no. 86), Karlobag (Brunšmid 1898: 158), Naron (Mardešić 2006: 109, cat. no. 25), Podgrađe near

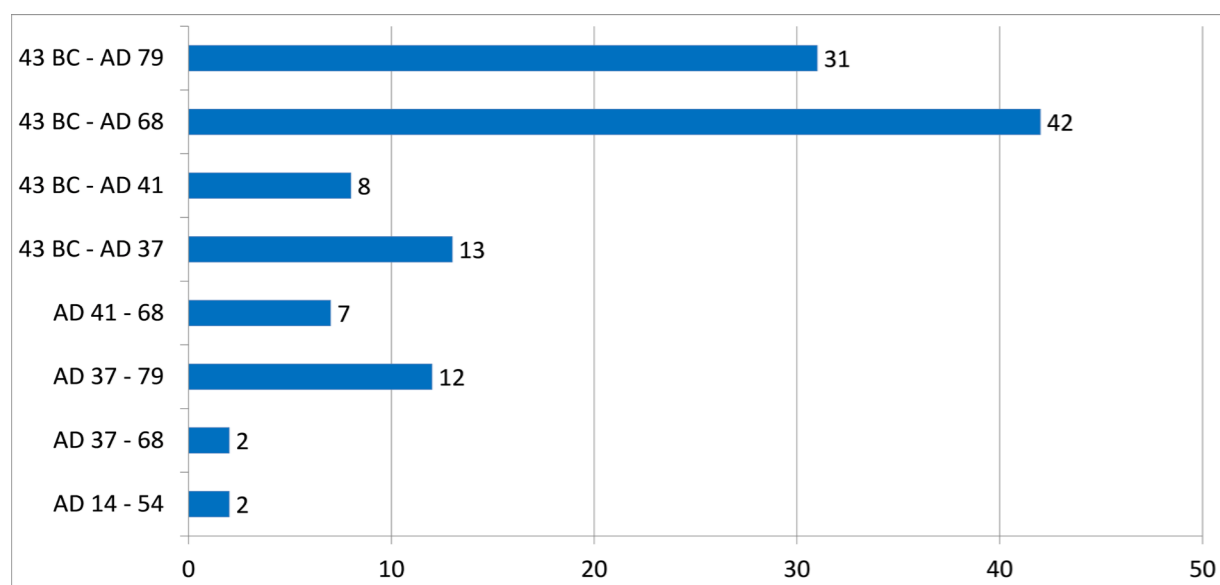
Benkovac (Juras 2011: 209, cat. no. 5), Skradin (Pedišić, Podrug 2008: 118, cat. no. 59, 60), Stari Grad on Hvar (Domaszewski, Hirschfeld, Mommsen 1902: 408, 3213, 4c; Kirigin 2001: 224, Pl. 1, 4) and Zadar (Bersa 1903: 149).

Type Pellicioni 14 (a-g) = Righini 14 (a-g) = Matijašić VI (1-17) contains the text *Ti(beri) Claudi Pans(iana)*. According to the onomastic criteria, this type is attributed to the reign of Emperor Claudius, between AD 41 and AD 54. Ten stamps from the collection belong to this type (cat. no. 132–140, 327). Two variants (14 b and 14 e) are represented, along with typologically indeterminable stamps. Eight stamps were found in Salona, one in Stobreč while the finding location for one stamp is unknown. In the province of Dalmatia, stamps were found in Bribirska glavica (Pedišić, Podrug 2008: 111, cat. no. 20–23.) and Naron (Mardešić 2006: 108, cat. no. 23.).

Type Pellicioni 16 (a-o) = Righini 16 (a-p) = Matijašić VII (1-17) contains the text *Neronis Cl(udi) Pan(siana)*. According to the onomastic criteria, this type is attributed to the reign of Emperor Nero, between AD 54 and AD 68. Forty-eight stamps from the collection belong to this type (cat. no. 141–180, 328–335). Six variants are represented, along with typologically indeterminable stamps (Tab. 6). Most of the stamps were found in Salona, while the remaining stamps were found in Bijaći, Kamen Epetium, Kaštel

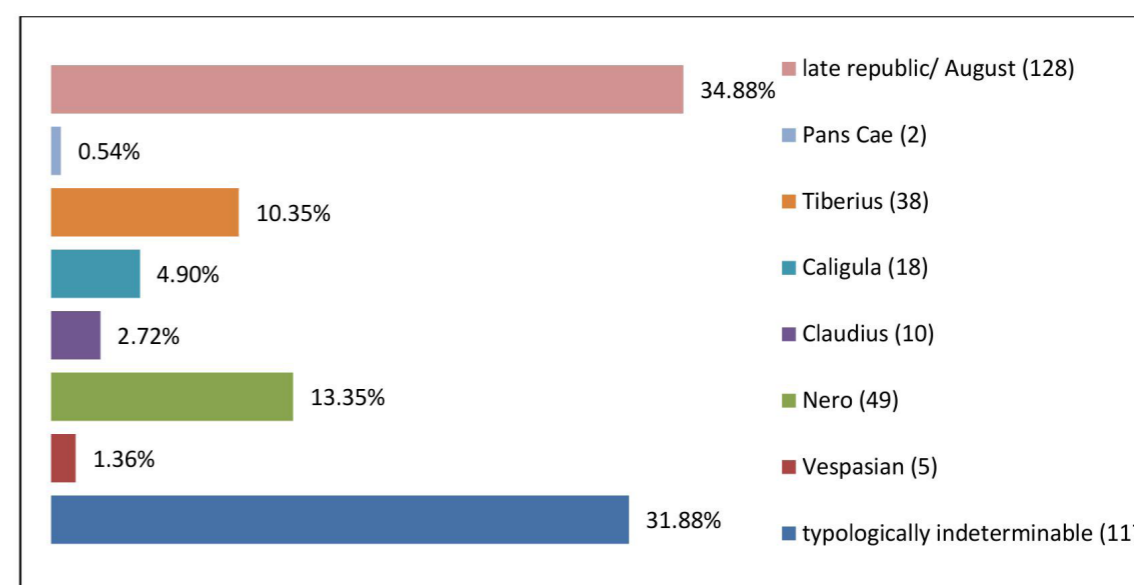
Lukšić Gostini, Kaštel Sućurac, Lokve Spalato, Naron, Podstrana Poljica, Sustipan Jesenice and Žrnovnica Krilace. The finding location for eight stamps is unknown. The analogies for this type in the province of Dalmatia can be found in Podgrađe near Benkovac and its surroundings (Bersa 1903: 148; Ćurković 2008: 85, cat. no. 9), Bribirska glavica (Pedišić, Podrug 2008: 112, cat. no. 26, 28), Danilo (Pedišić, Podrug 2008: 120, cat. no. 69.), Gradina on Žirje (Pedišić, Podrug 2008: 124, cat. no. 88.), Hvar (Domaszewski, Hirschfeld, Mommsen 1902: 408, 3213, 6h.), Naron (Mardešić 2006: 103, cat. no. 1, 3; 105, cat. no. 12.), Skradin (Pedišić, Podrug 2008: 118, cat. no. 61; 119, cat. no. 62–65.) and Sveti Juraj (Glavaš 2009: 77, Pl. 1: 6.).

Type Pellicioni 18 (a-b) = Righini 18 (a-b) = Matijašić IX (1-4) contains the text *Vesp(asiani) Caes(aris) Pansian(a)*. According to the onomastic criteria, this type is attributed to the reign of Emperor Vespasian, between AD 69 and AD 79. Five stamps from the collection belong to this type (cat. no. 181–185). All five stamps are attributed to the type Pellicioni 18b = Righini 18b = Matijašić IX/1. Four stamps were found in Salona and one in Naron. The analogies for this type in the province of Dalmatia can be found in Srma near Šibenik (Pedišić, Podrug 2008: 127, cat. no. 103, 104.) and on a fragment of an unknown origin stored in the Šibenik City Museum (Pedišić, Podrug 2008: 130, cat. no. 115.).



Tab. 7 The ratio of the proposed dating for typologically indeterminable stamps

Tab. 7 Odnos predloženih datacije za tipološki nedeterminirane pečate



Tab. 8 A chronological summary of the Pansiana stamps stored in the Archaeological Museum in Split

Tab. 8 Kronološki sažetak pečata Pansiana koji se čuvaju u Arheološkom muzeju u Splitu

From a total of 367 fragments of processed material, 117 stamps (32%) remained typologically indeterminable (cat. no. 186–283, 336–354). In cases when a better part of a stamp was missing a precise typological designation was not possible. Reconstruction of the original reading, when possible, was proposed for the stamps that have not been preserved in their entirety. Using the preserved part of the stamp, it was possible to limit a deduction to certain types to which stamps could have belonged to and thus broader dating of stamps was obtained (Tab. 7).

Thirteen stamps for which we find no analogies within existing typologies are also stored in the Archaeological Museum in Split. These stamps differ in decorative elements and punctuation marks from the already known variants. These stamps were singled out as new variants and included in the typology of V. Righini and M.T. Pellicioni in such a manner that they were given new numbers or letters next to their similar variants in already defined groups (Vukov 2016: Pl. 1). Four stamps belong to the late Republican or Augustan period (cat. no. 355–358), six to Tiberius (cat. no. 359–364), two to Caligula (cat. no. 365–366), and one to Nero's period (cat. no. 367). The stamps originate from Salona (8 samples) and Podstrana (one sample) while the finding location for four samples is unknown.

### Conclusion

During the period from 1884 to 1926 total of 641 tegulae with Pansiana stamp was brought to the Archaeological Museum in Split by Frane Bulić and Mihovil Abramić and subsequently published in the museum journal *Bullettino di archeologia e storia Dalmatia*. Examination of epigraphic collection revealed that a part of material cannot be located, while 367 fragments of tegulae with the *Pansiana* stamp were found.

Typological and chronological analysis showed that out of 367 fragments of tegulae with Pansiana stamp the most common stamps date to the late Republican or Augustan period (128 samples; 34,88%). To Tiberius reign, a period when the imprinting of the Emperor's along the workshop's name begins, is dated 10,35% of stamps. The stamps of Emperor Caligula are represented with 4,90% and of Emperor Claudius with 2,72% of samples.

From the time of Emperor Nero dates 13,35% of stamps and from the Vespasian's time only 1,36% of samples. Two samples belong to type "*Pans(iana) Cae(saris)*" whose dating in the literature has not yet been agreed upon (Tab. 8).

The research has indicated the greater incidence of certain types of stamps in the area of Salona and thus the province of Dalmatia (Tab. 9). Type "*Pansiana LAS*", so far known from only seven samples found in Voghenza (Zerbinati 1993:104; Righini 1998b: 53; Pellicioni 2012: 50) and Žirje (Pedišić, Podrug 2008: 123; cat. no. 83) is represented by six samples from Salona and one sample finding location of which is unknown. Type "*QCP*" known from several samples found in Rimini and Adria (Pellicioni 2012: 44, 46, 51) is represented by two samples from Salona and Kamen. Type "*Pans Cae*" known only from Rimini (Pellicioni 2012: 44, 51), although not represented in the collection, is also typical for the region of Dalmatia where it was found in the context of a military camp in Gračine (Dodig 2007: 40–44).

We can conclude that the results of the research fit into a wider picture of the province of Dalmatia in this time period, which was marked by numerous architectural projects through the process of Romanization. From the second half of the 1<sup>st</sup> century BC until the end of the 1<sup>st</sup> century large quantities of building material were imported into Dalmatia from dozens of Northern Adriatic workshops. Among those the most common was Pansiana, distributing its products along the Adriatic coast, from Picenum to Southern Dalmatia. From the middle of the 1<sup>st</sup> century the imported brick began to be replaced with the building material produced in military workshops in Dalmatia, and then in smaller local workshops.

SITES	LATE REPUBLIC / AUGUSTUS	TIBERIUS	PANS CAE	CALIGULA	CLAUDIUS	NERO	VESPASIAN
Benkovac	2a	8a1				16l	
Bijaći	2g	8a, IV/9				16b-c	
Bribirska glavica	2c	IV/9, IV/18			14b	16a, 16e, 16l	
Burnum	2b, 2g						
Danilo						16a	
Gračine, Humac	5a						
Islam, Benkovac						16b-c	
Kamen, Epetium						16f	
Kamen	6a			12a			
Karlobag				12b1			
Kaštel Lukšić, Gostini						16l	
Kašte Stari, Miri	2a, 2g	IV/9				16f	
Klis	2a						
Korčula		IV/3					
Kotor		8i					
Kučine Libovac	2a						
Lokve, Spalato						VII/11	
Lokvišće	3b						
Narona				12b1	14a	16a, 16b-c, 16d, 16f	18b
Omiš, Skalice	2c						
Pakoštane	2a						
Podgrađe, Benkovac	2c, 2h		8g1	12b			
Podstana, Poljica		8a				16i	
Salona	2a, 2b, 2c, 2f, 2i, 3a, 4a, 6a	8a, 8a1, 8d, 8h, IV/3, IV/9	V/7	11e, 12a	14b, 14e	16a, 16b-c, 16f, 16l	18b
Skradin	4b	8c		12b		16i	
Srima				12b		16l	18b
Stari Grad, Hvar							
Sv. Filip i Jakov	2c						
Sv. Juraj, Gornji Tučepi						16a	
Tinj	2a						
Tribunj	3a						
Vrana	2a						
Vranjic				12b			
Zadar	2e, 6a			12b	VI/1		
Žirje	4a	IV/3		IV/4		16l	
Žrnovnica, Krilace	2a, 3a	8h				16l	

Tab. 9  
Graphic representation of the Pansiana stamps from the Archaeological Museum in Split

Tab. 9  
Grafički prikaz pečata Pansiana iz Arheološkog muzeja u Splitu



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## SAŽETAK

### TEGULE S PEČATOM RADIONICE PANSIANA IZ ARHEOLOŠKOG MUZEJA U SPLITU

U radu su analizirane tegule s pečatom radionice *Pansiana* iz Arheološkog muzeja u Splitu. U razdoblju od 1884. do 1926. g. Frane Bulić i Mihovil Abramić u Muzej su donijeli te kasnije objavili u *Bullettino di archeologia e storia dalmata* 641 ulomak pečatiranih tegula. Nažalost ova zbirka nije nikad podrobno analizirana te unatoč objavi na talijanskom jeziku njezin je sadržaj kasno uključen u studije o pečatima radionice *Pansiana*. Tipološka i kronološka analiza pečata pokazuje kako se najintenzivniji import iz sjeverne Italije u provinciju Dalmaciju odvijao u razdoblju od kasne Republike do Augustova doba. Veća učestalost pojedinih tipova pečata proširila je znanje o kronologiji i distribuciji ovih proizvoda u provinciji Dalmaciji. Dosadašnje su tipologije proširene s deset dosad nepoznatih pečata radionice *Pansiana*.