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Geme i prstenje helenističkog
razdoblja iz Diomedova svetišta
na rtu Ploči

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U tekstu se objavljuju geme iz helenističkog razdoblja pronađene tijekom arheoloških istraživanja u razdoblju od 1996. do 1998. godine na lokalitetu rt Ploča (Plinijev *promunturium Diomedis*, *Nat. hist.* 3,141). Geme iz ovog vremena još uvijek su slabo istraženo područje i do danas je o njima napisano tek nekoliko kataloga. Mahom se čuvaju u muzejskim i privatnim kolekcijama, a mjesto i kontekst nalaza često su im nepoznati. Pojedini primjerci helenističkih gema objavljeni su u katalozima materijala iz arheoloških istraživanja, uglavnom grobova, ali bez opširnije analize i komentara o njima. Na rtu Ploči pronađeno je osam gema, od kojih je šest s prikazima, a dvije bez ikakva prikaza. Na dvije geme prikazani

Hellenistic gems and finger
rings from the Diomedes
sanctuary on Cape Ploča

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Hellenistic-era gems found during archaeological research at the Cape Ploča site (Pliny's *promunturium Diomedis*, *Nat. hist.* 3,141) in the period from 1996 through 1998 are published in this text. Research into the gems from this period is still scant. Up to the present, only a few catalogues on them have been compiled. Most of these gems are held in museums and private collections, and the sites and context of their discovery are often unknown. Individual examples of Hellenistic gems have been published in catalogues of materials from archaeological research, generally graves, but unaccompanied by any broader analysis or commentary. Eight gems were found on Cape Ploča, of which six have images depicted on them, while two

su kraljevski portreti, od kojih je jedan identificiran kao portret Aleksandra Velikog, na dvije su prikazani životinjski motivi, na jednoj biljni, a jedan je motiv mitološki. Osim samih gema pronađeno je nekoliko ulomaka željeznog prstenja, koje treba razmatrati zajedno s gemama, jer se radi o funkcionalno povezanim predmetima. Zbog slabog poznavanja helenističke gliptike iz jasnih arheoloških konteksta u svjetskoj znanosti, objava helenističkih gema i prstenja pronađenih tijekom arheoloških istraživanja na rtu Ploči, iz dobro poznatog konteksta pomorskog svetišta, ima stoga osobitu stručnu i znanstvenu vrijednost.

Ključne riječi: helenističke i italske gema, prstenje, rt Ploča, Diomedovo svetište

do not. Two gems feature royal portraits, of which one has been identified as Alexander the Great, two have animal motifs, one has a plant motif, and one has a mythological motif. Besides the actual gems, several pieces of iron finger rings have been found, which should be considered together with the gems because they are functionally linked items. Due to the scant knowledge of Hellenistic glyptic art from unambiguous archaeological contexts in the international scholarship, the publication of the Hellenistic gems and finger rings found during archaeological research at Cape Ploča, from the well-documented context of a maritime sanctuary, therefore has particular research and scholarly value.

Key words: Hellenistic and Italic gems, rings, Cape Ploča, Diomedes sanctuary

Lokalitet, istraživanje i kontekst nalaza

Rt Ploča ili antički Diomedov rt, kako ga Plinije naziva (*promunturium Diomedis*, *Nat. hist.* 3.141), smješten je blizu današnjeg sela Ražanj, između šibenske Rogoznice i trogirске Marine. U antičkoj je geografiji ovaj rt posvećen grčkom heroju Diomedu smješten na Hilejskom poluotoku (*paeninsula Hyllis*), koji je bio vrlo važan reljefni oblik, na moru uočljiv s velike udaljenosti, prema kojemu su brodovi usmjevali svoj kurs.¹ Kako je taj dio obale potpuno otvoren moru, bez ikakve zaštite otoka, sam rt je izložen snažnim južnim vjetrovima i buri, koji se u posebnim meteorološkim okolnostima znaju i sukobljavati iznad samog rta. Iznenađne promjene smjera vjetrova, snažne struje oko rta te pojava ukrižanih valova dali su ovom rtu vrlo lošu reputaciju među pomorcima od ranih vremena.²

Ivan Lučić (Lucius), povjesničar iz 17. st. prvi je povezo rt Ploču s Plinijevim rtom posvećenim Diomedu, *promunturium Diomedis*.³ Iako su tijekom stoljeća učenjaci i stručnjaci dovodili u sumnju ovu Lučićevu tezu, arheološka istraživanja provedena na samom rtu u nekoliko kampanja (1996., 1997. i 1998.) potvrdila su njezinu ispravnost.⁴ Tim je istraživanjima potvrđeno postojanje grčkog svetišta u razdoblju od kraja 4. st. pr. Kr. do početka 1. st. po. Kr.⁵ Samo svetište nalazi se na najvišoj točki rta, pedesetak metara od crkvice sv. Ivana Trogirskog. Istraženo je područje

Site, research and find context

Cape Ploča, or the Promontory of Diomedes as Pliny called it (*“promunturium Diomedis,” Nat. hist.* 3.141), is situated near the modern-day village of Ražanj, between Rogoznica, south of Šibenik, and Marina, near Trogir. In ancient geography this promontory dedicated to the Greek hero Diomedes was placed on the Hyllis Peninsula (*paeninsula Hyllis*), which was a very important relief form, visible at sea from great distances and used by ships to adjust their course.¹ Since this part of the coast is entirely open to the sea, without any protection from nearby islands, the promontory itself is quite exposed to powerful southerly and bora winds, which, under certain meteorological conditions, sometimes even collide directly above the promontory. Sudden changes in the direction of winds, powerful currents around it and the appearance of cross swells have given this promontory a very bad reputation among sailors since the earliest days.²

Ivan Lučić (Lucius), a 17th-century historian, was the first to link Cape Ploča to Pliny's promontory dedicated to Diomedes, *promunturium Diomedis*.³ Although scholars and experts have cast doubt on Lučić's theory over the centuries, archaeological research conducted at the cape itself at several times (1996, 1997 and 1998), has confirmed its validity.⁴

* Geme i prstenje pronađeni tijekom istraživanja na rtu Ploči preliminarno su analizirani u sklopu neobjavljene doktorske radnje L. Šešelj, *Promunturium Diomedis: svetište na rtu Ploča i jadranska pomorska trgovina u helenističkom razdoblju*, Zadar, 2010, 341-352. U ovom se članku uz dopunjenu tipološko-stilsku analizu pronađenih artefakata donosi i interpretacija ovih nalaza u kontekstu helenističkoga pomorskog svetišta. Materijal se čuva u Muzeju grada Šibenika, uz čije se dopuštenje objavljuje. Fotografije gema br. 1, 3-6 za Muzej grada Šibenika načinio je T. Šmider, ART4, grafičke i informatičke usluge, Zagreb. Ostale fotografije i njihovu obradu načinili su L. Šešelj i S. Bilić-Dujmušić. Ovom prilikom zahvaljujem na podacima i poticaju u objavi ovog arheološkog materijala djelatnicima Muzeja grada Šibenika, a osobito voditelju antičke zbirke Toniju Brajkoviću. Recenzentima zahvaljujem na korisnim primjedbama koje su pomogle da se ovaj tekst upotpuni i poboljša.

1 Čače 1997, str. 22-23.

2 Kozličić 1990, str. 161; Peljar za male brodove 2003, str. 169.

3 Lučić 1986, str. 199-205.

4 Kirigin, Čače 1998, str. 63-110; Bilić-Dujmušić 2002, str. 485-497; Bilić-Dujmušić 2004, str. 129-140.

5 Čače, Šešelj 2005, str. 165.

* The gems and finger rings found during research at Cape Ploča underwent a preliminary analysis as part of an unpublished doctoral dissertation by L. Šešelj, *Promunturium Diomedis: svetište na rtu Ploča i jadranska pomorska trgovina u helenističkom razdoblju*, Zadar, 2010, 341-352. Besides a supplemented typological-stylistic analysis of the discovered artefacts, this article also provides an interpretation of these finds in the context of the Hellenistic maritime sanctuary. The materials are held in the Šibenik City Museum, which has granted permission for their publication. The photographs of the gems under no. 1, 3-6 were taken for the Šibenik City Museum by T. Šmider, ART4 (graphic and IT services), Zagreb. The remaining photographs and their processing were done by L. Šešelj and S. Bilić-Dujmušić. I would like to take this opportunity to thank the staff of the Šibenik City Museum, and especially Toni Brajković, the curator of the antiquities collection, for providing the information and encouragement for the publication of this work. My thanks also go to the reviewers for their useful remarks which have helped to enrich and improve this text.

1 Čače 1997, pp. 22-23.

2 Kozličić 1990, p. 161; Peljar za male brodove 2003, p. 169.

3 Lučić 1986, pp. 199-205.

4 Kirigin, Čače 1998, pp. 63-110; Bilić-Dujmušić 2002, pp. 485-497; Bilić-Dujmušić 2004, pp. 129-140.

površine 52 m², te su pronađeni ostaci dvaju suhozida. Budući da je na ovome mjestu pronađena većina arheoloških predmeta (ulomci keramike, novac, ostaci nakita itd.), može se pretpostaviti da je ovaj prostor veličine oko 10 x 4 m bio *temenos*, središte posvećenog prostora na kojem se odvijala ritualna aktivnost. Pronađeni arheološki predmeti mogu se kategorizirati kao predmeti koji su služili za samo odvijanje obreda i predmeti koji su bili zavjetni darovi ljudi koji su posjećivali to mjesto. O tome izravno svjedoče natpisi urezani na površinu keramičkih posuda, grafiti. Svi grafiti pisani su alfabetom i na grčkom jeziku. Mahom se radi o posvetama Diomedu, čije je ime potvrđeno nekoliko desetaka puta. Osobito su zanimljivi natpisi u obliku formula, gdje se uz osobno ime dedikanta javlja i fraza "i posada broda". Upravo ovi rukom urezani natpisi izravna su potvrda da je ovo mjesto bilo posvećeno Diomedu, koji se na Jadranu štovao kao božanstvo, o čemu svjedoči i bogata antička književnost.⁶ Formule koje govore o posjetiteljima svjedoče da su upravo pomorci bili redoviti posjetitelji ovog osamljenog i izoliranog svetišta usred jadranske obale.⁷

Analiza arheoloških nalaza iz svetišta ukazuje da je glavni ritual na ovome mjestu bio libacija - žrtva ljevanica. Potvrđuju to nalazi brojnih ulomaka keramičkih posuda, koje su uglavnom služile za pripremu i pijeње vina.⁸ Ritual libacije označava početak i kraj svakog grčkog obreda. Njime se na simboličan način obilježava odlazak i nada u sretan povratak, pa je osobito bio značajan za pomorce. Ritual libacije bio je popraćen molitvama i zavjetima, kako čitamo u brojnim književnim izvorima, o čemu posredno svjedoče i drugi nalazi u svetištu. Osim predmeta koji su bili dio obreda, u svetištu su nađeni i predmeti koje su nakon uspješnih putovanja pomorci u znak zahvalnosti ostavljali kao zavjetni dar svom božanskom zaštitniku.⁹ To su bili različiti osobni predmeti poput dijelova nakita, odjeće, obuće, što potvrđuje i grčka poezija (*Anth. Pal.*, 6.245); zatim dijelovi broda (čavli, oplata) i broskog pribora (*Anth. Pal.*, 6.38.), novac itd.¹⁰ Geme i prstenje koji su nađeni u svetištu na rtu Ploča, spadaju u kategoriju zavjetnog dara, ono što Grci nazivaju naprosto *doron* i možemo s priličnom uvjerenjivošću kazati da su ih ostavljali njihovi vlasnici kao osobne predmete koji su za njih imali

This research confirmed the existence of a Greek sanctuary in the period from the end of the 4th century BC to the beginning of the 1st century BC.⁵ The sanctuary itself is situated on the promontory's highest point, roughly 50 meters from the small Church of St. John of Trogir. The researched area encompasses a surface of 52 m², and the remains of two stacked stone walls were found. Since most of the archaeological items (potsherds, coins, remains of jewellery, etc.) were found at this site, it may be assumed that this space with dimensions of roughly 10 x 4 m was a *temenos*, the centre of the sanctified space in which rituals were performed. The discovered archaeological artefacts may be categorized as items used for the performance of rituals and items that were votive offerings left by the people who visited this place. Inscriptions carved onto the surface of ceramic vessels (graffiti) directly testify to this. All graffiti are written with Greek letters in the Greek language. Mostly they are dedications to Diomedes, whose name has been confirmed several dozen times. The inscriptions written as a formulas, in which the dedicant's name is also accompanied by the phrase "and the ship's crew," are particularly intriguing. It is in fact these hand-written inscriptions which directly confirm that this place was dedicated to Diomedes, who was venerated on the Adriatic Sea as a deity, to which the rich Classical literature testifies.⁶ Formulas indicating visitors also testify to the fact that sailors regularly visited this solitary and isolated shrine in the middle of the Adriatic coast.⁷

An analysis of the archaeological finds from the sanctuary indicates that the primary ritual conducted here was the libation - the poured offering. This is confirmed by the finds of numerous potsherds from vessels generally used to prepare and drink wine.⁸ The libation denoted the beginning and end of each Greek rite. It symbolically marked departure and hope for a happy return, so it was particularly significant to sailors. The libation ritual was accompanied by prayers and vows, as one can read in numerous literary sources, and to which the other finds in the sanctuary testify indirectly. Besides items used in rituals, items left by sailors as votive offerings to their patron deity after a successful voyage were also found in the sanctuary.⁹ These were various personal articles such as jewellery, clothing and footwear, which are also confirmed in Greek

6 O antičkim književnim izvorima koji spominju Diomedu na Jadranu potanje u Katičić 1995, str. 333-386.

7 Čaće, Šešelj 2005, str. 166, 168.

8 Šešelj 2010, str. 630.

9 Burkert 2001, str. 68-69, 93.

10 Van Straten 1981, str. 96-97.

5 Čaće, Šešelj 2005, p. 165.

6 More details on Classical literary sources that mention Diomedes on the Adriatic in Katičić 1995, pp. 333-386.

7 Čaće, Šešelj 2005, pp. 166, 168.

8 Šešelj 2010, p. 630.

9 Burkert 2001, pp. 68-69, 93.

osobitu vrijednost. Samim time, ovi predmeti postaju žrtva osobito draga bogu.¹¹

Helenističke geme¹²

Pregled istraživanja helenističkih gema¹³

Helenistička gliptika iz jasno poznatih arheoloških konteksta još uvijek je slabo poznato područje.¹⁴ Napisano je tek nekoliko kataloga o gemama koje se čuvaju u muzejskim i privatnim kolekcijama diljem svijeta. Pojedini primjerci dani su u katalogima materijala iz grobova, ali bez opširnijih analiza i komentara.¹⁵

Prvi koji je grčkim gemama pristupio znanstveno bio je Adolf Furtwängler, koji je u djelu *Die antiken Gemmen* dao reprezentativne primjerke helenističkih gema i komentirao njihovu ikonografiju, stil i tehnike izrade.¹⁶ Također je sakupio brojne citate antičkih pisanih izvora o dragom kamenju i njegovoj upotrebi. Njegovo poglavlje o helenističkim gemama još uvijek je polazna točka za sve koji proučavaju taj oblik zanatstva. Gisela Richer je 1956. godine objavila djelo *Engraved Gems of Greeks and Etruscans*,

poetry (*Anth. Pal.*, 6.245), followed by parts of a vessel (nails, hull lining) or its rigging (*Anth. Pal.*, 6.38.), coins, etc.¹⁰ The gems and rings found in the shrine at Cape Ploča belong to the category of votive offerings, that which the Greeks called *doron*, and it may be said with considerable certainty that these were left by their owners as personal articles that had particular value to them. These items therefore became sacrifices to a very beloved god.¹¹

Hellenistic gems¹²

Overview of research into Hellenistic gems¹³

Hellenistic glyptics from unambiguously known archaeological contexts are still an under-researched field.¹⁴ Only a few catalogues have been compiled featuring gems held in museums and private collections throughout the world. Individual examples have been published in catalogues of materials from graves, but unaccompanied by any broader analysis or commentary.¹⁵

The first to approach the Greek gems scientifically was Adolf Furtwängler, who, in his work *Die antiken Gemmen*, provided ideal examples of Hellenistic

11 Potanje o zavjetnim darovima u Šešelj 2010, str. 628-636; Šešelj 2012, str. 360-361.

12 Pojam helenističke geme u ovom radu koristi se isključivo kao kronološki termin za razdoblje od kraja 4. st. pr. Kr. do kraja 1. st. pr. Kr., a ne kao stilsko-tipološki termin oko kojeg postoje sporenja u literaturi.

13 Općenito govoreći, geme su minerali pravilne kristalne strukture i u osnovi se dijele na drago i poludrago kamenje. Drago kamenje su rijetki minerali koji se odlikuju jakim lomom svjetlosti, disperzijom, čistom i lijepom bojom, prozirnošću, velikom tvrdoćom i kemijskom otpornošću i oni se uglavnom koriste za izradu nakita. Poludrago kamenje su lijepi minerali koji nisu rijetki kao drago kamenje, ali se također upotrebljavaju za izradu ukrasa, npr. granat, ahāt, tirkiz. Kad se govori o gemama u smislu nakita, onda se uglavnom radi o neorganskoj tvari s točno određenim kemijskim sastavom i pravilnom unutrašnjom strukturom. U prirodi ima više od 4000 različitih minerala, ali samo ih se 50-ak koristi za izradu gema, jer su ostali previše mekani za oblikovanje. U kategoriju gema ponekad se svrstavaju i ukrasni predmeti izrađeni od drugih vrsta organskog i neorganskog materijala poput bisera, gaga, koralja, školjaka, bjelokosti, jantara i stakla. Hall 2000, str. 138-149.

14 Spier 1992, str. 76.

15 O bogatim grobovima iz helenističkog Taranta vidi npr. De Juliis *et al.* 1985.

16 Furtwängler 1900, str. 147-169.

10 Van Straten 1981, pp. 96-97.

11 More details on votive offerings in: Šešelj 2010, pp. 628-636; Šešelj 2012, pp. 360-361.

12 The term Hellenistic gems is used in this work exclusively as a chronological term for the period from the end of the 4th to the end of the 1st centuries BC, and not as a stylistic/typological term, which has been the subject of some debate in the relevant literature.

13 Generally speaking, gems are minerals with an orderly crystalline structure that are basically divided into precious and semi-precious stones. Precious stones are rare minerals characterized by a high refractive index, dispersion, a pure and lovely colour, transparency, great hardness and chemical resistance, and they are generally used for making jewellery. Semi-precious stones are attractive minerals which are not as rare as precious stones, but are also used to make decorative items, e.g., granite, agates or turquoise. When speaking of gems in terms of jewellery, then these are mostly non-organic substances with a precisely specified chemical structure and an orderly internal composition. Over 4,000 different minerals occur in nature, but only about 50 of them are used to make gems, because the rest are too soft to be worked. The gem category sometimes also includes decorative items made of other organic and non-organic materials, such as pearls, jet, coral, shells, ivory, amber and glass. Hall 2000, pp. 138-149.

14 Spier 1992, p. 76.

15 On the rich graves of Hellenistic Tarentum, see, e.g., De Juliis *et al.* 1985.

s ikonografskom klasifikacijom helenističkih gema.¹⁷ Datirala je svaku pojedinu gemu, ali ta u osnovi stil-ska datacija temeljena je na znanstvenoj spekulaciji. Tu zadaću potpunije je obavio John Boardman u svojoj knjizi *Greek Gems and Finger Rings* koju je objavio 1970., skupivši sve grčke pečate i geme od brončanog do klasičnog doba, sve arheološke dokaze koje je mogao tada prikupiti i sve ono što je povijest umjetnosti mogla dati u smislu stilskih analiza. U posljednjem poglavlju govori o prijelaznom razdoblju prema rimskog gliptici, gdje drži da su helenističke geme nastale iz kasnoklasičnih skarabeja i skaraboida u “krasnom stilu, temi i obliku”.¹⁸ U knjizi Petera Zazoffa *Die antiken Gemmen* iz 1983. godine, u pregledu antičkih gema od brončanog doba jedno je poglavlje posvećeno helenističkim gemama, a jedno italiskim i kasnorepublikanskim, dakle gemama nastalima u istom razdoblju, ali u različitim radionicima na Istoku i Zapadu.¹⁹ Iako postoji razlika u terminologiji, ipak je na području Italije jako teško razlučiti što su kasnohelenističke, a što ranorimske geme, to više što su majstori koji su ih izrađivali bili grčkog ili istočnog podrijetla, vrlo pokretni, a često su razvijali svoj vlastiti stil, kombinirajući različite tradicije kasnoetrusčkih tehnika, koje su i same bile pod grčkim utjecajem i novijim utjecajima s helenističkog Istoka (Grčke, Makedonije, Male Azije, Sirije, Egipta).²⁰ Tek je Dimitris Plantzos u svojoj doktorskoj radnji *Hellenistic Engraved Gems*, objavljenj 1999. godine, pokušao na znanstveno prihvatljiv način utvrditi kriterije za proučavanje ovog materijala i staviti ga unutar povijesnog i društvenog konteksta helenističkog razdoblja.

Stoga se u novije vrijeme u svjetskoj znanosti određivanje tipologije prstenja i gema temelji na tipologiji koju je donio Plantzos u svojoj knjizi, pa je to učinjeno i za materijal pronađen na rtu Ploči, gdje god je bilo moguće identificirati ga na ovaj način, dok je za

gema i komentirao na njihovu ikonografiju, stil i obradnju.¹⁶ He also gathered numerous citations of written Classical sources on precious gems and their use. His chapter on Hellenistic gems is still the point of departure for anyone who wants to study this form of artisanry. In 1956, Gisela Richer published *Engraved Gems of the Greeks and Etruscans*, with an iconographic classification of Hellenistic gems.¹⁷ She dated each individual gem, but this essentially stylistic dating was rooted in scholarly speculation. This task was carried out much more thoroughly by John Boardman in his book *Greek Gems and Finger Rings* which he published in 1970, having gathered all Greek stamps and gems from the Bronze through the Classical Ages, all archaeological evidence available to him at the time and everything that art history could offer in the sense of stylistic analysis. In his last chapter, he spoke of the period of transition into Roman glyptics, in which he maintained that Hellenistic gems emerged from late Classical scarabs and scaraboids in an “exquisite style, theme and form.”¹⁸ In Peter Zazoff’s book *Die antiken Gemmen* from 1983, the overview of Antique-era gems from the Bronze Age includes a section dedicated to Hellenistic gems, and another to Italic and late Republic gems, thus gems which emerged in the same period, but in different workshops in the East and West.¹⁹ Even though there are differences in terminology, it is nonetheless rather difficult to distinguish late Hellenistic from early Roman gems in Italian territory, all the more so since the master craftsmen who made them were of Greek or Eastern origin, very itinerant, and they often developed their own style, combining different traditions of late Etruscan techniques, which were themselves under Greek influence, and newer influences from the Hellenistic Orient (Greece, Macedonia, Asia Minor, Syria, Egypt).²⁰ Only Dimitris Plantzos, in his doctoral

17 Richer 2006, str. 36-40, 121-133. Ovo djelo je izašlo u nekoliko ponovljenih izdanja: 1956., 1968. i 2006.

18 Boardman 1970, str. 359-365.

19 Zazoff 1983, str. 193-213, 260-305.

20 Zazoff 1983, str. 268, 269, 274, 275; Spier 1992, str. 76-77. Valja naglasiti mišljenja današnjih stručnjaka, koji su daleko pažljiviji u svojim klasifikacijama i jasnim određivanjima na osnovi samo stilskih i tehničkih odlika što je to “grčko”, a što je “rimsko”. U razdoblju od 3. do 1. st. pr. Kr. ovakve podjele ostaju potpuno nejasne s obzirom na povijesne okolnosti i spajanja utjecaja s raznih strana, te su takve klasifikacije, uz često zbunjujuću terminologiju, nekorisne za bilo kakvo ozbiljnije bavljenje ovom problematikom, <https://www.beazley.ox.ac.uk/gems/styles/hellenistic/default.htm>.

16 Furtwängler 1900, pp. 147-169.

17 Richer 2006, pp. 36-40, 121-133. This work was published in several repeated editions: 1956, 1968 and 2006.

18 Boardman 1970, pp. 359-365.

19 Zazoff 1983, pp. 193-213, 260-305.

20 Zazoff 1983, pp. 268, 269, 274, 275; Spier 1992, pp. 76-77. The opinions of today’s experts are noteworthy, as they are far more careful in their classifications and unequivocal in their descriptions as to what is “Greek” and what is “Roman” based solely on stylistic and technical features. During the period from the 3rd to the 1st centuries BC, such divisions became entirely unclear given the historical circumstances and co-mingling of the different sides, and these classifications, together with often confusing terminology, are useless for any truly serious consideration of this problem,

identifikaciju mogućih "italskih" gema uglavnom korišten Zazoff.²¹ No kako u našoj znanstvenoj literaturi problematika helenističke gliptike i prstenja gotovo i nije zastupljena, u ovom se članku donose osnovne informacije o tehničkim značajkama materijala korištenog za izradu gema i prstenja, načinu i mjestu njegove izrade, funkciji, trgovini ovim predmetima, te o kontekstu nalaza helenističkih gema u svetištima. Većina podataka preuzeta je iz djela D. Plantzos, 1999., ako nije drugačije navedeno.

Oblici i materijali gema i prstenja

Najvažnija novina koju je donijelo helenističko razdoblje bilo je stavljanje geme u metalni prsten, na način kako se to i danas radi. Premda to nije bilo nepoznato ni ranijim razdobljima, u praksi je bilo prilično rijetko. Ranije su geme bile uglavnom konveksne, oblika skarabeja, pa se tako i nazivaju u stručnoj literaturi. U 4. st. pr. Kr. običaj je bio probušiti im rupu i nositi ih na uzici ili žici. No od kraja ovog stoljeća barem jedna strana geme postaje ravna i nastaje prepoznatljiv oblik: ovalno izdužen, ponekad s istaknutim rubovima. Osim ovog oblika javlja se cijeli niz varijacija u veličini i oblicima, od okruglih, ovalnih, izduženih, pa je njihova klasifikacija na osnovi oblika uglavnom nekorisna. Uz zlato i srebro uobičajeni metali za izradu prstenja u helenističkom razdoblju bili su bronca, olovo i željezo, premda se koriste i staklo, kost i kamen, koji su po svemu sudeći bili namijenjeni manje imućnom dijelu stanovništva.²²

Na osnovi dosadašnjih spoznaja moguće je dati neke opće zaključke o razvoju oblika helenističke gliptike. Na početku helenističkog razdoblja osobito je bilo omiljeno veliko, visoko ispučeno kamenje, dužine 30-50 mm, na kom se rade kraljevski portreti. Prema kraju prvog stoljeća uobičajeno postaje kamenje s ravnom plohom. Na izduženom ovalnom kamenju (ponekad dužem od 30 mm) uglavnom su ugravirane vitke stojeće figure. Glave i poprsja nalaze se na manjem, kružnom kamenju ili pasti, obično ravne prednje i stražnje plohe. Tijekom 1. st. pr. Kr. prstenje postaje manje i javljaju se neki novi oblici; kružno i ovalno kamenje s vrlo uskim licem, visokim stranama i širokim stražnjim dijelom su uobičajeni.²³

dissertation *Hellenistic Engraved Gems*, published in 1999, attempted to set forth criteria in a scientifically acceptable manner for the study of these materials and to place them within the historical and social context of the Hellenistic era.

Therefore, more recently the classification of a typology for finger rings and gems in international scholarship is based on the typology compiled by Plantzos in his book, so that was also done for the materials found at Cape Ploča, wherever it was possible to identify them in his manner, while Zazoff was generally used for the identification of potential "Italic" gems.²¹ However, since the problem of Hellenistic glyptics and finger rings is virtually absent in the Croatian scholarly literature, this article contains the basic information on the technical features of the materials used to make gems and rings, the manner and location of their production, their function, the market for these items, and the find context of the Hellenistic gems in shrines. Most of the data has been assumed from the work of D. Plantzos, 1999, unless specified otherwise.

Forms and materials of the gems and rings

The most important novelty brought by the Hellenistic era was the mounting of gems onto metal rings, in the manner that is still practiced today. Even though this was not unknown in earlier periods, it was rather rare in practice. Earlier the gems were generally convex, scarab-shaped, so that this is what they are called in the scholarly literature. In the 4th century BC, the custom was to pierce a hole in them and wear them on a string or wire. But as of the end of that century, at least one side of the gem became flat and the recognizable form emerged: ovally oblong, sometimes with prominent edges. Besides this form, an entire series of variations in size and shape appeared, from round and oval to oblong, so their classification based on shape is largely useless. Besides gold and silver, the metals normally used to make finger rings in the Hellenistic era were bronze, lead and iron, although glass, bone and stone were also used, which were by all indications intended for the less wealthy sector of the population.²²

21 Također postoji i otvorena baza podataka za pretraživanje helenističkih gema, *Beazley Archive*, gdje je moguće pronaći osnovne informacije o gemama iz ovog razdoblja kao i iz različitih kolekcija. <http://www.beazley.ox.ac.uk/gems/default.htm>.

22 O vrijednosti pojedinih materijala vidi osobito u Plinija *Nat. Hist.*, 37, a o povećanom korištenju staklene paste u ovom razdoblju Zazoff 1983, str. 271.

23 Plantzos 1999, str. 35.

<https://www.beazley.ox.ac.uk/gems/styles/hellenistic/default.htm>.

21 There is also an open database for searching Hellenistic gems, the Beazley Archive, in which basic information on gems from this period and from different collections can be found: <http://www.beazley.ox.ac.uk/gems/default.htm>.

22 On the value of individual materials, see in particular Pliny *Nat. Hist.*, 37; on the increased use of glass paste

Velika promjena u helenističkom razdoblju javlja se kod upotrebe materijala. Otvaranje zemalja Bliskog i Dalekog istoka nakon Aleksandrovih osvajanja dovele je do intenzivnog uvoza dragog kamenja i ostalih luksuznih roba u grčki svijet. Osim materijala u Europu je došao i perzijski običaj ukrašavanja nakita i posuđa dragim kamenjem. Helenistički je svijet vrlo brzo postao očaran efektom koji nastaje kontrastom boja dragog kamena i metala.²⁴ Materijal korišten u klasičnoj grčkoj gliptici bilo je uglavnom kamenje svijetlih boja iz skupine kalcedonskih silikata. Od njih je u helenističkom razdoblju ostao omiljen jedino karneol, posebno u sjajnoj crvenoj varijanti.²⁵ Od kraja 4. st. uvozi se kamenje živih boja, i to varijante kvarca kao što je ametist,²⁶ kalcedoni poput sarda i ahata,²⁷ silikati iz skupine granata,²⁸ poput peridota²⁹ i berila.³⁰

24 Plantzos 1999, str. 36.

25 *Karneol* ili *karneol*, spada u skupinu kalcedona. Proziran je i karakteristične crveno-narančaste boje koju mu daje željezni oksid. Najkvalitetniji karneol dolazi iz Indije. Hall 2000, str. 93.

26 *Ametist* je kristalni kvarc koji dolazi u nijansama purpurne, ljubičaste ili lila boje. Ponekad se ametist zagrijava i onda mijenja boju u žutu, i tada se naziva *citrin*. Obično se nalazi u riječnim depozitima. Hall 2000, str. 82.

27 *Ahat* se obično nalazi u stijenama nastalima od vulkanske lave i karakterizira ga paleta različitih boja i nijansi zelene, bijele, sive, koje su raspoređene u nepravilnim koncentričnim pojasevima. Ime je dobio po sicilskoj rijeci *Achates* (dan. Dirillo) koja izvire u Hiblejskim planinama i ulijeva se u more kod grada Gele. Antički izvori, Teofrast i Plinije Stariji spominju rijeku kao mjesto odakle je vađen ahat, koji se izvezio po cijelom antičkom svijetu. *Sard* spada u grupu kalcedona i sličan je ahatu po vulkanskom podrijetlu i raznobojnim pojasevima po kojima se lako prepoznaje. Obično se javlja u smeđoj, bijeloj i crnoj boji. Hall 2000, str. 88.

28 *Granati* su skupina silikonskih minerala od kojih je najpoznatiji *almandin*, kamen tamnocrvene boje. Ime je dobio po antičkom gradu Alabanda u Kariji. Ležišta su poznata u Italiji na području Kampanije oko Vezuva, u južnom Uralu, Češkoj, Njemačkoj (Bavarska), Velikoj Britaniji, Švedskoj i Norveškoj; na području Azije najpoznatija su ležišta u Pakistanu. Hall 2000, str. 59.

29 *Peridot* ili *olivin* nastaje kristalizacijom iz magme pa dolazi kao sastavni mineral nekih eruptivnih stijena. Karakterizira ga maslinastozelena boja i masno-stakleni sjaj. Najpoznatije antičko ležište bilo je na tzv. Zmjijskom otoku u Crvenome moru, gdje su ga vadili još egipatski faraoni koji su ga zvali Sunčev dragulj. Hall 2000, str. 113.

30 *Beril* je berilijsko-aluminijski ciklosilikat koji dolazi u brojnim varijantama što se razlikuju po boji. Zeleni beril se zove smaragd, plavi akvamarin, žuti heliodor, bezbojni goshenit, ružičasti morganiit. Najpoznatiji

Based on current knowledge, it is possible to draw some general conclusions on the development of Hellenistic glyptic shapes. A large, highly protruding stone, 30-50 mm long, featuring royal portraits, were favoured at the beginning of the Hellenistic era. Near the end of the 1st century, stones with flat surfaces became customary. Generally slim standing figures were engraved onto the oblong oval stone (sometimes longer than 30 mm). Heads and busts can be seen on smaller, circular stones or glass paste, normally with flat frontal and back surfaces. During the 1st century BC, rings became smaller and appeared in certain new forms; circular and oval stones with very narrow faces, high sides and wide back sections are customary.²³ A major change in use of materials emerged during the Hellenistic era. The opening of the lands of the Near and Far East after Alexander's conquests led to the intensive import of precious stones and other luxury goods into the Greek world. Besides these goods, the Persian custom of decorating jewellery and vessels with precious stones also came to Europe. The Hellenistic world very soon became enchanted with the effect created by the contrast between the colours of precious stones and metals.²⁴ The materials used in classical Greek glyptics were generally lighter-coloured stone from the chalcedonic silicas. Of them, only carnelian, particularly the red variant, remained favoured in the Hellenistic era.²⁵ From the end of the 4th century onward, stones with more lively colours were imported, including quartzes, like amethysts,²⁶ chalcedonies, like sard and agate,²⁷ and silicates from

in this period, Zazoff 1983, p. 271.

23 Plantzos 1999, p. 35.

24 Plantzos 1999, p. 36.

25 Carnelian (or cornelian) is a chalcedony. It is transparent and typically has a red-orange colour caused by iron oxide impurities. The highest quality carnelians come from India. Hall 2000, p. 93.

26 Amethyst is a quartz crystal which comes in shades of purple, violet or lilac. Sometimes amethysts are heated and the colour changes to yellow, after which it is called citrine. They are normally found in riparian deposits. Hall 2000, p. 82.

27 Agate is normally found in rocks formed by volcanic lava and they are characterized by a palette of different colours and nuances of green, white and grey distributed in irregular concentric bands. The name is derived from the Sicilian river Achates (today Dirillo) which springs from the Hyblaean Mountains and flows into the sea at the city of Gela. Classical sources, such as those written by Theophrastus and Pliny the Elder, mentioned the river as a place where agates were extracted, and then imported throughout the ancient world. Sard is in the chalcedony group as well and it is similar to agate in terms of its volcanic origin and

Svaki od njih ima svoju karakterističnu boju kojoj se već u antici pridavala važnost, te se ponekad preporučivalo da se prema boji reže i oblik i motiv, jer na taj način dolazi do izražaja sjaj i ljepota kamena.³¹

Danas se zna za mjesta gdje su se vadile mineralne sirovine, no u ovom su razdoblju i geme i rezači gema bili toliko pokretni da samo podrijetlo minerala nema osobito značenje u proučavanju i korištenju krajnjeg proizvoda. Na primjer, vrlo cijenjeno drago kamenje uvozilo se iz Indije. Godine 117. pr. Kr., za Ptolemeja VIII. Euergeta II., kreće Eudoks iz Kizika u Indiju noseći bogate darove u zamjenu za parfeme i drago kamenje; drugi put je krenuo nakon što je isti kralj umro.³² Važan proizvođač bila je Arabija te i Etiopija, koja je bila poznata kao glavni izvor ametista. U Egiptu su Ptolemejevići imali monopol na trgovinu i eksploataciju dragog kamenja u rudnicima u svojim zemljama. Sudeći po izvorima posebno je bio cijenjen peridot, koji se vadio na tzv. Zmijskom otoku ili, kako su ga još zvali Grci i Rimljani, *Topaziois* (moderni Zagbargad, *engl.* St John's Island). To je pusti, nenaslanjani otok vulkanskog podrijetla koji se nalazi u Crvenome moru, 188 Nm od Asuana, a poznat je već 5000 godina po ležištima dragog i poludragog kamenja. Kao i danas, i u antici je vrijedilo pravilo: što je zemlja iz koje dragi kamen dolazi dalja i egzotičnija, njegova vrijednost raste. Geme su uvijek bile percipirane kao vrijedni predmeti, luksuzna roba i za njima je uvijek postojala potražnja.

Dosadašnje stilske, ikonografske i tehničke analize helenističkih gema upućuju na dva velika središta proizvodnje: Aleksandriju, koja je vjerojatno bila glavni proizvođač gema, i središta na maloazijskoj obali (možda Sard, koji je poznatiji u rimsko carsko doba).³³ Maloazijski proizvodi prepoznatljivi su po svojoj ikonografiji, koja je usko vezana uz prikaze na novcu, ali su daleko od kvalitete izrade i maštovitosti koja je primjenjivana u aleksandrijskim radionicama. Osim ova dva glavna središta sigurno ih je bilo nekoliko na području kopnene Grčke, u Sirakuzi, u središtima na Pontu, a od 2. st. pr. Kr. i u italjskim radionicama, ponajprije Akvileji, starim etruščanskim središtima, a tijekom 1. st. pr. Kr. i u Rimu, gdje su

the granite group,²⁸ such as peridot²⁹ and beryl.³⁰ Each of these had their typical colour to which importance had already been accorded during Antiquity, and sometimes recommendations for carving shapes and motifs were made based on the colour, because the lustre and beauty of the stone came to its fullest expression in this way.³¹

Today the sites at which these minerals were mined is known, but at that time, gems and their cutters were so mobile that the actual origin of the minerals has little significance in the study and use of the end product. For example, highly prized precious stones were imported from India. In 117 BC, Eudox of Cyzicus set off for India on behalf of Ptolemy VIII Euergetes II carrying rich gifts in exchange for perfumes and precious stones; he set off for a second time after the same king had died.³² Other important producers were Arabia and Ethiopia, the latter known as the primary source of amethyst. In Egypt, the Ptolemaic dynasty held a monopoly on the trade and exploitation of precious stones in the mines in their territories. Judging by the sources, particular value was accorded to peridot, which was extracted on the so-called Serpent

multi-coloured, easily-recognizable bands. It normally occurs in colours such as brown, white and black. Hall 2000, p. 88.

zeleni smaragd u antici dolazio je iz egipatskih rudnika. Hall 2000, str. 75-78.

31 Plantzos 1999, str. 36. Cijela 37. knjiga Plinijeve *Prirodopisa* (*Nat. Hist.* 37) posvećena je dragom kamenju, raspravi o bojama, tehnikama, vrijednosti, korištenju itd. Iako Plinije govori o svom vremenu, u svim poglavljima daje informacije i o ranijoj republikanskoj, tj. helenističkoj fazi.

32 Hölbl 2001, str. 204.

33 Plantzos 1999, str. 100.

28 Granites are a group of silicon minerals of which the best known is almandine, a dark-red stone. Its name comes from the ancient city of Albanda in Caria. Deposits are known in Italy in the Campania region around Vesuvius, in the southern Urals, the Czech Republic, Germany (Bavaria), Great Britain, Sweden and Norway; in Asia the best-known deposits are in Pakistan. Hall 2000, p. 59.

29 Peridot, or olivine, emerges due to the crystallization of magma and appears as a compositional material in certain igneous rocks. It is characterized by an olive-green colour and vitreous lustre. The best known ancient deposits were on the so-called Serpent Island in the Red Sea, where they were already extracted by the Egyptian pharaohs, who called them the "gems of the sun." Hall 2000, p. 113.

30 Beryl is a beryllium-aluminium cyclosilicate which occurs in numerous variants that differ in colour. Green beryl is called emerald, blue is called aquamarine, yellow is called heliodor, colourless is called goshenite, and pink is called morganite. The best known green emeralds in Antiquity came from Egyptian mines. Hall 2000, pp. 75-78.

31 Plantzos 1999, p. 36. The entire 37th book of Pliny's *Natural History* is dedicated to precious stones, a discussion of colours, techniques, value, use, etc. Even though Pliny spoke of his own time, in all of its chapters he provided information on the earlier Republic, i.e., the Hellenistic phase.

32 Hölbl 2001, p. 204.

djelovali grčki majstori.³⁴ No problem lokacije radio-nica helenističkih i italskih gema još uvijek nije razriješen do kraja.³⁵

U antici, kao i danas, veliki problem predstavljala je terminologija. Premda je moderna znanost načinila klasifikaciju minerala na osnovi kemijske i kristalne strukture, arheolozi i draguljari ipak imaju svoju terminologiju, koja se ne mora nužno podudarati s mineraloškom. U arheologiji, kao i u antičko vrijeme, kamen se određuje ponajprije po boji. Tako će današnji mineralog različite boje možda staviti pod istu vrstu minerala, dok će antički draguljar klasifikaciju načiniti na osnovi boje i karakterističnih oznaka na kamenu. Tako će dva kamena različite strukture, ali slične boje klasificirati kao isti dragi kamen; primjerice, među mnoštvom granata zasigurno će biti i sjajno crveni karneol i pokoji sard.

Osim dragog i poludragog kamenja u helenističkoj glyptici najveću popularnost imalo je staklo. Većina danas poznatih gema načinjena je upravo od stakla. To se zasigurno može pripisati činjenici da su staklo i njegove preradevine bili puno jeftiniji od uvoznog kamenja i pristupačniji manje bogatoj i manje zahtjevnoj klijenteli.³⁶

Tehnike obrade

Tehnika rezanja gema razvijena je u arhajskom razdoblju u Grčkoj, kada je počelo korištenje kotačića za rezanje (engl. *wheel-cutting*). To je uključivalo brojne oblike i veličine metalnih svrdla za rezanje rubova, izvedbu točkica i sl. Oni su obično izrađivani od željeza i bakra. Cijeli sustav radio je na principu tokarskog stroja s horizontalnom rotacijom dok je majstor držao kamen među prstima ili pomoću nekakvog drvenog držača. Uvođenje fiksnog svrdla omogućilo je veću preciznost i izradu više detalja. Taj način obrade dragog kamenja ostao je u upotrebi do danas. Ručna svrdla i dalje se koriste za proizvodnju perlica. Za posebno tvrdo kamenje korištena su različita abrazivna sredstva, a često i odbici od samog kamena. Koristio se također i brusni papir, kao i različiti lubrikanti, poput vode i ulja, za završno poliranje površine.

Pitanje korištenja optičkih pomagala još uvijek nije do kraja razriješeno. Premda su leće za povećavanje bile poznate, kao i mogućnosti stakla i drugih kristala, ipak se drži da su od presudne važnosti u izradi bile vještina i iskustvo majstora. Dok je majstor radio na gemi, ona je cijela bila zamrljana odbicima i

Island or, as it was called by the Greek and Romans, Topaziois (modern Zagbargad, or St John's Island in English). This is a barren, uninhabited volcanic island in the Red Sea, 188 Nm from Aswan, and known for 5,000 years as a source of precious and semi-precious stones. In Antiquity, as today, the prevailing rule was: the farther the country from which the precious stone comes, the greater its value. Gems have always been perceived as valuable items, luxury goods, and they have always been in demand.

All previous stylistic, iconographic and technical analyses of Hellenistic gems point to two major production centres: Alexandria, which was probably the primary gem producer, and the coast of Asia Minor (perhaps Sardis, which was better known during the Roman imperial period).³³ The products of Asia Minor are recognizable in terms of their iconography, as they are closely associated with images on coins, but they are far from the craftsmanship and ingenuity applied in the Alexandrian workshops. Besides these two main centres, there were certainly a few in the territory of mainland Greece, in Syracuse, in the Pontic centres, and, as of the 2nd century BC, in Italic workshops, first and foremost in Aquileia, the old Etruscan hubs, and in Rome during the first century BC, where Greek craftsmen were active.³⁴ But the problem of locating the Hellenistic and Italic gem workshops has still not been entirely resolved.³⁵

In Antiquity, as today, terminology was a major problem. Although modern science has established the classification of minerals based on their chemical and crystalline structure, archaeologists and jewellers nonetheless have their own terminology, which need not correspond to mineralogical terms. In archaeology, as in Antiquity, a stone is primarily specified by its colour. Thus, today's mineralogist may classify examples of different colours under a single mineral, while the jewellers of Antiquity created classifications based on colour and typical features on a stone. Thus, two stones with different structures but similar colours would be classified as the same precious stone; for example, the multitude of granites certainly included the lustrous red carnelian and the occasional sard.

Aside from precious and semi-precious stones, glass had the greatest popularity in Hellenistic glyptics. Most of the gems known today were actually made of glass. This may certainly be ascribed to the fact that glass and its derivatives were far less expensive than

34 Plantzos 1999, str. 100-101; Henig 1983, str. 153; Zazoff 1983, str. 275-276.

35 Spier 1992, str. 76.

36 Zazoff 1983, str. 271; Plantzos 1999, str. 38.

33 Plantzos 1999, p. 100.

34 Plantzos 1999, pp. 100-101; Henig 1983, p. 153; Zazoff 1983, pp. 275-276.

35 Spier 1992, p. 76.

tekućinom koja se koristila i jedini način provjere načinjenog bilo je često otiskivanje, a ne vizualno nadgledanje tijekom obrade. Koliko je vremena trebalo da se obradi jedan kamen, ostaje upitno, a pretpostavke se kreću od nekoliko dana do nekoliko mjeseci, što je ovisilo o brojnim čimbenicima. Većina autora drži da je ovaj zanat bio obiteljski i da se nasljeđivao iz generacije u generaciju, kao i većina drugih zanata u helenističkom razdoblju. U prilog ovoj tezi idu i epigrafski spomenici od kojih je najpoznatiji nadgrobni spomenik rezača gema, zvanog *Doros*, koji je umro u dobi od 18 godina, pa se pretpostavlja da je zanat počeo učiti još u djetinjstvu. Iz književnih izvora znamo za čuvenog tvorca Augustova pečata, Dioskurida, čijoj se vještini dive Plinije Stariji, Svetonije i Dion Kasije, koji kažu da je svoju vještinu prenio sinovima koji su naslijedili očev zanat.³⁷

Kako smo već naveli, rezači gema bili su prilično pokretni i radionice su osnivali u različitim zemljama. Dio majstora svakako je radio na prostoru kasnorepublikanske Italije, koja osobito privlači različite obrtnike velikim priljevom bogatstva, koje se ovdje slijeva preko Kampanije i Dela, dok je dio majstora u Italiju došao kao robovi nakon rimskog osvajanja.³⁸ Utjecaji iz Grčke, Makedonije, Egipta i Azije dominantni su u Rimu i Italiji u ranoj fazi, a neki majstori usvajaju i već postojeće utjecaje koji su razvijeni tijekom stoljeća na ovom prostoru i prilagođuju se ukusima nove klijentele. Tek polovicom 1. st. pr. Kr. jasno se vide rimske značajke, koje će se nastaviti u carsko doba, osobito u portretima važnih rimskih političkih i vojnih osoba, što je jasno vidljivo kad se portreti s gema usporede s onima na novcu.³⁹ Za ovo razdoblje bitno je imati na umu i činjenicu da u Italiji ne samo da djeluju grčki, tj. "helenistički" majstori, nego i da dolazi do velikog priljeva obrađenih gema zbog rimskog osvajanja i trgovine na Istoku, pa je jako teško jasno odrediti pripadnost pojedinih gema određenim radionicama. Za tzv. italske geme, za koje se drži da su rađene na različitim područjima Italije, karakteristično je spajanje tradicija obrade koje se oslanjaju na kasnoetrusku tradiciju, ali i jake helenističke utjecaje s Istoka.⁴⁰ Osobito ovdje valja istaknuti tehniku obrade *a globolo*, koja u osnovi koristi svrdla kojima se stvaraju zaobljenja od kojih se onda sastoji često i cijela figura. Iako se ova tehnika javlja u 5. st. pr. Kr., svoj vrhunac doživljava u 4. st. i kasnije u helenizmu, tj. kasnoj republici, kada postaje i dominantna tehnika, koja diktira i stil. Međutim, ovdje valja istaknuti

imported precious stones and more accessible to the less wealthy and less discriminating clientele.³⁶

Crafting techniques

Techniques for cutting gems were developed in the Archaic period in Greece, when the use of wheel-cutting began. This entailed numerous shapes and sizes of metal drills to cut edges, render dots, etc. They were normally made of iron and copper. The entire system functioned on the principle of a horizontally-rotating lathe, while the craftsman held the stone either between his fingers or in some sort of wooden holders. The introduction of the fixed drill facilitated greater precision and the production of more details. This crafting method has remained in use to the present. The hand-drill is still used to produce beads. Various abrasives were used for particularly hard stones, often even chips from the stone itself. Sandpaper was also used, as well as various lubricants, such as water and oil, for the final polishing of the surface.

The question of whether optical aids were used has not been entirely resolved. Although magnifying glasses were known, as were the properties of glass and other crystals, it is nonetheless believed that the skill and experience of the craftsman were of paramount importance. While the craftsman was working on the gem, it was entirely smudged with chips and the liquids being used, so the only way to verify what was done was by frequently pressing it with one's fingers, rather than visual inspection while working. How much time was needed to work a single stone remains open to question, but it is assumed that several days to several months were required, which depended on numerous factors. Most scholars maintain that this trade was familial and inherited from generation to generation, like most other trades in the Hellenistic era. This hypothesis is backed by epigraphic monuments, among which the best known is the gravestone of a gem engraver named *Doros*, who died at the age of 18, so it is assumed that he began to learn his craft already as a child. The literary sources mention the famed creator of the Gem of Augustus (*Gemma Augustea*), Dioscurides, whose skill was praised by Pliny the Elder, Suetonius and Cassius Dio; the latter noted that he passed his skills down to his sons, who had inherited their father's trade.³⁷

As already noted, gem engravers were rather mobile and they established workshops in various countries. Some of these craftsmen certainly worked in the territory of late Republican Italy, which particularly

37 Henig 1983, str. 153.

38 Zazoff 1983, str. 290; Boardman 1970, str. 362.

39 Boardman 1970, str. 362, 365.

40 Zazoff 1983, str. 268-269, 274-275.

36 Zazoff 1983, p. 271; Plantzos 1999, p. 38.

37 Henig 1983, p. 153.

da tehnika *a globolo* nije ekskluzivno vezana uz etrušanske tradicije, nego je nalazimo i u Aziji, osobito na seleukidskom području, odakle se proširila po cijelom Istoku i dominira u helenističkom razdoblju.⁴¹

Geme u svetištima

Najčešći arheološki kontekst u kojem se nalaze geme su nekropole i svetišta, dok su nalazi iz naselja puno rjeđi. Geme su uglavnom kao dio nakita stavljan uz pokojnika i vjerojatno su bile njegovo osobno vlasništvo, dok se u svetištima posvećuju kao vrijedan dar bogovima. Velika grčka svetišta u Ateni i na otoku Delu od klasičnog razdoblja vodila su evidenciju o svim darovima koji su pohranjeni u hramu, jer su služili kao "zlatna" rezerva polisa. Geme se u ovim popisima najčešće spominju kao dio prstenja, a rjeđe kao samostalni predmeti. Međutim, kako se dade zaključiti iz ove evidencije, prava vrijednost pripisivana je metalu u kojem se gema nalazila. Tek u helenističkom razdoblju postoje naznake da su se geme također tretirale kao vrijedni predmeti, jer se tada prvi put navode dimenzije samog kamena.⁴² Uz drago i poludrago kamenje, od kojeg se najčešće spominju oniks, jaspis i karneol, te plemenite metale, manje imućni ljudi često su kao dar ostavljali željezno prstenje i staklene geme, kako kaže Plinije (*Nat. hist.* 35.48.6.) ...*vitreis gemmis e volgi anulis*. Plemeniti metali, drago kamenje i općenito nakit postaju uobičajeniji i dostupniji širem krugu ljudi u helenističkom razdoblju, što je arheološki moguće ustanoviti po bogatim nalazima iz helenističkih nekropola.⁴³ Osim toga, potkraj 2. st., a osobito u 1. st. pr. Kr. brojni čuveni Rimljani kao dio ratnog plijena donose i drago kamenje s Istoka, kojim paradiraju u trijumfalnim povorkama, a dio posvećuju bogovima u hramovima na Kapitolu, u hramu Venere Praroditeljice ili Apolonovu hramu na Palatinu.⁴⁴

Što se tiče nalaza iz jasnih konteksta pomorskih svetišta, postoji tek nekoliko slučajeva koji se spominju u znanstvenoj literaturi, ali bez detaljnijih analiza i cjelovite objave materijala. U južnoj Italiji, na rtu Santa Maria di Leuca, na lokalitetu Punta Ristola, područje Grotta Porcinara, otkriveni su ostaci svetišta, koje su tijekom više stoljeća posjećivali i pomorci. Pronađeni su uglavnom fragmenti posuda za pijeće i posluživanje vina, datirani od arhajskog razdoblja do razdoblja kasnoga Rimskog Carstva. Na brojnim

attracted tradesmen due to the massive influx of wealth from Campania and Delos, while some craftsmen came to Italy as slaves after Roman conquest.³⁸ Influences from Greece, Macedonia, Egypt and Asia were dominant in Rome and Italy in the early phase, and some craftsman mastered already existing influences which developed over the centuries in this area and adapted them to the tastes of their new clientele. It was only in the mid-1st century BC that Roman features could be seen, which would continue in the imperial period, particularly in portraits of important Roman political and military personalities, which was clearly apparent when the portraits from gems are compared to those on coins.³⁹ For this period, it is worthwhile to keep in mind that not only were Greek, i.e., "Hellenistic" craftsmen active in Italy, but finished gems also flooded in from the East in the wake of Roman conquests and trade, so it is rather difficult to determine which individual gems came from which specific workshops. The so-called Italic gems, which are believed to have been made in various territories in Italy, were characterized by the merger of crafting traditions which were rooted in late Etruscan traditions, but also the strong Hellenistic influences from the East.⁴⁰ Particularly notable here is the *a globolo* technique, which involves use of a rounded cutting tip that creates spheroids from which entire figures are often composed. Even though this technique appeared in the 5th century BC, it had its peak in the 4th century and later during the Hellenistic era, i.e., during the late Republic, when it became dominant, and even dictated styles. However, noteworthy here is that the *a globolo* technique was not exclusively tied to the Etruscan tradition, rather it can also be found in Asia, especially in Seleucid territory, whence it spread throughout the East and dominated in the Hellenistic era.⁴¹

Gems in sanctuaries

The most common archaeological context in which gems may be found are necropolises and sanctuaries, while finds from settlements are far rarer. Gems as components of jewellery were generally deposited with the deceased and were probably owned by that individual, while in sanctuaries they were dedicated as valuable offerings to the gods. The major Greek shrines in Athens and on the island of Delos maintained records since the Classical period on all of the offerings stored in the temples, because they served as

41 Boardman 1970, str. 321-322, sl. 981-988.

42 Plantzos 1999, str. 12-17.

43 Npr. o nalazima iz helenističke nekropole Tarenta vidi u katalozima De Juliis (ed.) 1985; Lippolis (ed.) 1994; Hempel 2001; iz Ankone Colivicchi 2002.

44 Plin. *Nat. Hist.* 37.5 i 6.

38 Zazoff 1983, p. 290; Boardman 1970, p. 362.

39 Boardman 1970, pp. 362, 365.

40 Zazoff 1983, pp. 268-269, 274-275.

41 Boardman 1970, pp. 321-322, Fig. 981-988.

ulomcima posuda, ali i na okolnim zidovima spilja, pronađeni su zavjetni natpisi na grčkom, lokalnom mesapskom i latinskom jeziku. Natpisi govore da su posvete bile namijenjene brojnim božanstvima: grčkima, rimskima, ilirskima, mesapskima, kao što su npr. Bat, Jupiter, Afrodita, Ini itd. Osim posuda za piće nađeni su ulomci posuda za ulje, svjetiljke, utezi i amfore. Pronađeni su i primjerci i novca, olovni utezi, čavli i nakit, među kojim i prstenje.⁴⁵

Južno od Peloponeza, na otočiću Mikridragoneri, blizu otoka Kitere, nedavno su pronađeni ostaci pomorskog svetišta iz helenističkog razdoblja. Uz brojne nalaze helenističke i ranorimske keramike i novčića, spominju se i nalazi prstenja. Iako su nađeni brojni natpisi pomoraca, još uvijek nije poznato kome je svetište bilo posvećeno.⁴⁶ Za razliku od ovog arheološki slučajno otkrivenog svetišta, u Crnome moru blizu ušća Dunava nalazi se mali otok Leuka na kom se štovao kult grčkog heroja Ahileja (današnji Zmij-ski otok, pripada Ukrajini). Ahilejev kult na ovom otoku bio je čuven već u antičko vrijeme i poznat je iz antičke književnosti, ali ga spominju i arheolozi. Priča kaže da je Ahilejeva majka, božica mora Tetida, nakon što joj je sin ubijen, uzela njegovo tijelo i donijela ga na ovaj otok, da počiva među besmrtnicima. Na samom otoku pronađena je keramika datirana u 5. st. pr. Kr., a među pronađenim posudama osobito je zanimljiv crnopremazani lekit s posvetnim natpisom: "Glaukije, sin Poseideija, posvetio me Ahileju, gospodaru Leuke."⁴⁷ Postoje brojne priče koje su postale dio grčke pomorske tradicije na Crnome moru, koje govore kako su mornari kazivali da su vidjeli Ahileja kako trči oko otoka u punoj ratnoj opremi, ili da su ga približavajući se otoku čuli kako pjeva ili jaše na konju. Kažu da im se Ahilej ukazivao kako su prilazili bijelome otoku, baš kao i Dioskuri, ali da je on manje moćan od Dioskura, jer se oni javljaju pomorcima svagdje i mogu im pomoći u nevolji, dok se Ahilej javlja samo onima koji prilaze Leuki. Istraživači 19. st. privučeni tim antičkim pričama posjetili su otok i izvijestili o arhitektonskim strukturama na otoku koje bi se mogle povezati s ostacima hrama što ga spominju književni izvori. Oni također spominju i Ahilejevu statu u hramu te brojne darove koji su ostavljani u svetištu, među ostalim i prstenje, dragocjeno kamenje, novčiće, fiale i natpise. Arheološki nalazi ukazuju da je svetište korišteno od arhajskog do ranog carskog razdoblja.⁴⁸

the "gold" reserve of a given polis. In these inventories, gems were most often mentioned as components of finger rings, and more rarely as separate items. However, it may be concluded from these records that the actual value was ascribed to the metals on which the gems were set. It was only during the Hellenistic era that there were indications that gems were also treated as valuable objects, because the dimensions of the stones themselves were first mentioned during that period.⁴² Besides precious and semi-precious stones, among which the most oft-mentioned were onyx, jasper and carnelian, and precious metals, less wealthy people often gave offerings consisting of iron rings and glass gems, as Pliny stated (*Nat. hist.* 35.48.6.) "...vitreis gemmis e volgi anulis." Precious metals, precious stones and jewellery in general became more common and more available to a wider circle of people in the Hellenistic era, which can be archeologically ascertained on the basis of the rich finds from Hellenistic necropolises.⁴³ Additionally, at the end of the 2nd century and particularly at the beginning of the 1st century BC, numerous notable Romans brought precious stones from the Orient as wartime spoils, with which they then paraded in triumphal processions, dedicating a portion to the gods in their temples on the Capitoline Hill, in the temple of Venus Genetrix or the temple of Apollo on the Palatine Hill.⁴⁴

As for finds from the unambiguous contexts of maritime sanctuaries, there are only a few cases mentioned in the scholarly literature, but without detailed analyses and comprehensive publication of the materials. The remains of a sanctuary also visited by sailors over the centuries was found in southern Italy, on the Capo Santa Maria di Leuca, at the Punta Ristola site in the Grotto Porcinara area. Generally fragments of vessels for drinking and serving wine were found, dated from the Archaic era to the later period of the Roman Empire. Votive inscriptions in Greek, the local Messapian language and Latin were found on many potsherds, and also on the surrounding cave walls. The inscriptions indicate that their dedications were intended for numerous deities: Greek, Roman, Illyrian and Messapian, such as, for example, Battus, Jupiter, Aphrodite, Ina, etc. Pieces of vessels for oil, oil lamps, weights and amphorae were also found in addition to drinking vessels. Examples of coins, lead

45 Cremonesi *et al.* 1978, str. 68-69, 78, 91-176, 209-216, 223-227. O prstenu vidi T. 35, 212.

46 Johnston 2002, str. 26.

47 Hedreen 1991, str. 319.

48 Hedreen 1991, str. 320, 322.

42 Plantzos 1999, pp. 12-17.

43 E.g., on finds from the Hellenistic necropolis of Tarentum, see the catalogues by De Juliis (ed.) 1985; Lippolis (ed.) 1994; Hempel 2001; from Ancona, Colivicchi 2002.

44 Plin. *Nat. Hist.* 37.5 and 6.

Za razliku od gospodara Crnog mora, na Jadranu je osobito među grčkim pomorcima štovan Diomed. Brojne priče vežu ga uz otok na kojem se, kažu, nalazi i njegov grob, a za kojeg su arheološka istraživanja potvrdila da se radi o Palagruži. Iskopavanja provedena tijekom devedesetih godina, a zatim sustavna iskopavanja od 2002. do 2008. na središnjem platou Velike Palagruže, Salamandriji, otkrila su brojne arheološke nalaze koji se mogu vezati uz postojanje tog pomorskog svetišta. Pronađeno je nekoliko tisuća ulomaka finog stolnog posuđa, koje se može datirati od kraja 6. st. pr. Kr. do potkraj 1. st. po. Kr.⁴⁹ Na više od 200 ulomaka keramike identificirani su posvetni natpisi pomoraca, među kojima je više puta potvrđeno i Diomedovo ime. Osim keramičkog posuđa koje mahom pripada posudama za pijenje i posluživanje vina, a koje je korišteno kao dio rituala, pronađeni su i drugi predmeti, poput statua od terakote, novca, čavala, kocaka za igru te nakita, među kojim se nalazi i nekoliko ulomaka željeznog prstenja i gema.⁵⁰

Geme i prstenje na rtu Ploči - katalog

Geme

Geme pronađene na rtu Ploči stilski odgovaraju načinu obrade gema u helenističkom razdoblju. Bez izravnih analogija teško je precizirati mjesta njihove izrade, ali stilske osobine upućuju na radionice ptolemejskog Egipta, osim geme na slici 2, koja bi se mogla pripisati maloazijskim radionicama, te geme na slici 5, koja bi mogla pripadati tzv. italskim gemama. Ovim "italskim" gemama možda bi trebalo na osnovi stilskih i tehničkih odlika pripisati i geme na slikama 3 i 4.

Geme s rta Ploče ovalnog su ili okruglog oblika, a donja strana im je ravna, što jasno upućuje da su bile namijenjene za nošenje u prstenu, čemu u prilog idu i nalazi nekoliko komada metalnog prstenja te tragovi bronce na staklenoj pasti (sl. 7 i 8). Budući da nedostaju precizne mineraloške i spektrografske analize, određivanje vrste kamena temelji se na tradicionalnoj metodi opservacije, koja se oslanja na boju i druga vanjska obilježja vidljiva na pojedinoj gemi, poput nečistoća, stanja materijala itd. U nedostatku preciznijih databilnih elemenata geme se datiraju od 3. do 1. st. pr. Kr., dok je pobliže određenje na osnovi analogija moguće načiniti jedino za geme koje se stilski pripisuju "italskim" radionicama s kraja 2. i početka 1. st. pr. Kr.

weights, nails and jewellery, among them rings, were also found.⁴⁵

South of the Peloponnese, the remains of a maritime sanctuary from the Hellenistic era were discovered on the islet of Mikri Dragonara, near the island of Kytthera. Besides numerous finds of Hellenistic and early Roman pottery and coins, finds of finger rings have also been mentioned. Even though numerous inscriptions by sailors were found, to whom the sanctuary was dedicated remains unknown.⁴⁶ In contrast to this archeologically coincidentally discovered sanctuary, there is a small island, Leuke, in the Black Sea at the mouth of the Danube, on which the cult of the Greek hero Achilles was venerated (today it is called Snake Island, and it belongs to Ukraine). The cult of Achilles on this island had already been well known in Antiquity and was known in the literature of the time, but it has also been noted by archaeologists. According to the myths, the sea goddess Thetis, the mother of Achilles, took his body after he was killed and brought it to this island, so that he could rest among the immortals. Pottery dated to the 5th century BC was found on the island, and among the vessels discovered there the most interesting is a Black-glazed lekythos with a dedicatory inscription: "Glaukos, son of Poseidon, dedicated me to Achilles, lord of Leuke."⁴⁷ There are numerous stories that became a part of Greek seafaring lore on the Black Sea, which recount that sailors claimed to see Achilles dashing around the island in full military regalia, or that they heard him singing or riding on horseback as they approached the island. They said that Achilles would appear to them as they approached the white island, just like the Dioscuri, but that he was less powerful than the latter, because they appeared to sailors anywhere and could assist them in trouble, while Achilles only appeared to those who approached Leuke. Attracted by these ancient stories, 19th century researchers visited the island and reported on the architectural structures there that could be tied to the remains of the temple mentioned in literary sources. They also mentioned the statue of Achilles in the temple and numerous offerings that were left in the sanctuary, including, among other items, finger rings, precious stones, coins, phialae and inscriptions. The archaeological finds indicate that the sanctuary was used from the Archaic to the early imperial periods.⁴⁸

45 Cremonesi *et al.* 1978, pp. 68-69, 78, 91-176, 209-216, 223-227. On the rings see Pl. 35, 212.

46 Johnston 2002, p. 26.

47 Hedreen 1991, p. 319.

48 Hedreen 1991, pp. 320, 322.

49 Kirigin *et al.* 2010, str. 87-110.

50 O prstenu i gemama vidi u Kirigin 2003, str. 375, sl. 13; Kirigin *et al.* 2010, str. 98, sl. 9,4.

S obzirom na motive koji se javljaju na njima, ove geme se mogu podijeliti na: muške kraljevske portrete (sl. 1 i 2), biljne i životinjske prikaze (sl. 3-6) te geme bez prikaza (sl. 7 i 8).

Muški kraljevski portreti zapravo su helenistički izum koji je usko vezan uz nastojanja vladara da propagira svoju sliku podanicima. Obiteljska sličnost na ovim portretima je velika, ali je uvijek mješavina realističkoga i idealističkog prikazivanja, koja nastoji vladara predstaviti kao heroja ili božanstvo, ističući time njegov status i autoritet. Ti se portreti najčešće prepoznaju po dijademi; kod ranih ptolemejskih vladara ona se prikazuje kao uska vrpca, koja kod prikaza vladara u 2. i 1. st. pr. Kr. postaje dosta šira. Vrpce se često prikazuju kako padaju na vrat ili dekorativno lepršaju. Isti motiv se javlja i na seleukidskim portretima. Općenito ih karakterizira kratka kosa i naglašene prepoznatljive crte lica. Kod Ptolemejevića to je posebno vidljivo na prikazu brade, teških vjeđa i frizure, dok su kod Seleukida posebno istaknute kosti lica i zakrivljeni nos.⁵¹ Prototip za geme vjerojatno je uziman s prikaza na novcu, jer je često kopiran u staklu, koje je bilo daleko jeftiniji materijal, pa samim time i dostupniji srednjem i siromašnijem sloju stanovništva koje je ipak željelo posjedovati ovakve predmete. Staklene geme rade se u kalupima, što omogućuje serijsku proizvodnju pa su isti prikazi rašireni na širokom području. Osim toga, staklo je moguće bojati pa se teoretski može dobiti imitacija bilo kojeg kamena.

Biljni i životinjski svijet (sl. 3-6) uvijek je bio inspiracija umjetnicima, bilo kao središnji dio prikaza, bilo kao sporedni, dekorativni dio. Osobito zanimanje za ovu tematiku vidljivo je u gliptici kasnog helenističkog i augustovskog razdoblja. Katkad prikazi životinja imaju simbolično značenje, poput dupina, koji je omiljen motiv u 2. i 1. st., osobito među zajednicama koje se bave pomorstvom, npr. na otoku Delu. Česti su i prikazi životinja s astrološkim značenjem, npr. jarca ili ribe. Ovi motivi rašireni su tijekom cijeloga helenističkog razdoblja na vrlo širokom području, te ih je bez preciznog konteksta nemoguće datirati. Za geme s ovim prikazima pretpostavlja se da su bile privatno vlasništvo pojedinaca, a ne dio službene propagande koja se razabire u kraljevskim portretima.⁵²

1. Ovalna staklena gema 9 x 11 mm, dosta oštećene površine. Stražnja strana je ravna, a vjerojatno je bila ravna i prednja na kojoj se nalazi portret - poprsje. Muški kraljevski portret karakterizira kratka kosa s frizurom *anastole* i dijademom, ravan nos, zaobljena brada, naglašena obrva, što

As opposed to the lord of the Black Sea, Diomedes was particularly revered among the Greek sailors in the Adriatic Sea. Numerous stories tied him to the island on which, they said, his tomb was located, and which archaeological research has ascertained as Palagruža. Excavations conducted during the 1990s, and then systematic excavations conducted on the central plateau of Velika Palagruža, Salamandrija, from 2002 to 2008, uncovered numerous archaeological finds which may be tied to this maritime sanctuary. Several thousand fragments of fine tableware were found which can be dated from the end of the 6th century BC to the end of the 1st century AD.⁴⁹ Dedicatory inscriptions by sailors have been identified on over 200 potsherds, and among them the name Diomedes has been confirmed many times. Besides ceramic vessels, largely those for drinking and serving wine and used as a component of rituals, other items were also found, such as terracotta statues, coins, nails, playing die, and jewellery, among them several pieces of iron finger rings and gems.⁵⁰

Gems and finger rings on Cape Ploča - catalogue

Gems

The gems found at Cape Ploča stylistically correspond to the methods used to work gems in the Hellenistic era. Without direct analogies, it is difficult to ascertain the precise site of their production, but the stylistic traits indicate the workshops of Ptolemaic Egypt, except for the gem in Fig. 2, which may be ascribed to the workshops of Asia Minor, and the gem in Fig. 5, which may have been one of the so-called Italic gems. The gems on Fig. 3 and 4 should perhaps also be ascribed to the "Italic" gems based on their stylistic and technical features.

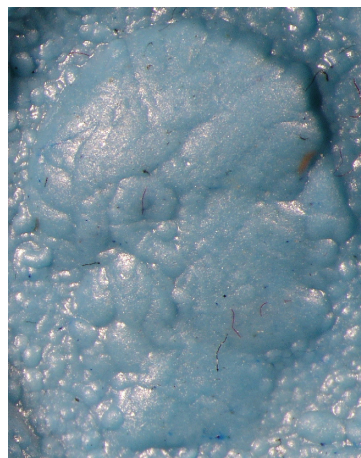
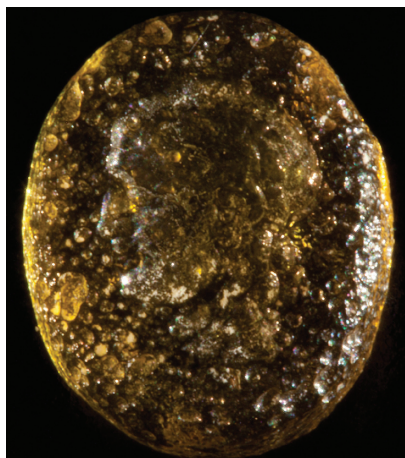
The gems from Cape Ploča are either oval or round, and their lower sides are flat, which clearly indicates that they were intended for mounting on a ring, a supposition backed by the discovery of several pieces of metal finger rings and traces of bronze on glass paste (Fig. 7 and 8). Since a precise mineralogical and spectrographic analysis is lacking, the determination of the type of stone is based on traditional observational methods, which depends on the colour and other external features visible on an individual gem, such as impurities, the condition of the substance, etc. In the absence of precise datable elements, the gems have been dated from the 3rd to 1st century BC, while

51 Plantzos 1999, str. 44, 54.

52 Plantzos 1999, str. 99.

49 Kirigin *et al.* 2010, pp. 87-110.

50 On the finger rings and gems, see Kirigin 2003, p. 375, Fig. 13; Kirigin *et al.* 2010, p. 98, Fig. 9, 4.



Sl. 1, 1a. Šibenik, Muzej grada Šibenika. Gema i otisak gema s prikazom portreta Aleksandra Velikog
Fig. 1, 1a. Šibenik, Šibenik City Museum. Gem and gem imprint with image of Alexander the Great



Sl. 2. Šibenik, Muzej grada Šibenika (izgubljena). Gema s prikazom neidentificiranog kraljevskog portreta
Fig. 2. Šibenik, Šibenik City Museum (lost). Gem with unidentified royal portrait



Sl. 3, 3a. Šibenik, Muzej grada Šibenika. Gema i otisak gema s prikazom konja
Fig. 3, 3a. Šibenik, Šibenik City Museum. Gem and imprint of gem with image of horse



Sl. 4, 4a. Šibenik, Muzej grada Šibenika. Gema i otisak gema s prikazom ptice močvarice
Fig. 4, 4a. Šibenik, Šibenik City Museum. Gem and imprint of gem with image of wading bird

su sve značajke Aleksandrova portreta. Dobra usporedba s Plantzos 1999, sl. 145.

Aleksandrovi portreti na novcu i gemama javljaju se tek nakon njegove smrti, na čemu inzistiraju njegovi nasljednici, koji ih koriste za političku propagandu, opravdavajući i na taj način svoje pravo na vlast. Danas se drži da su portreti na gemama kopije tipova koji se javljaju na skulpturi i novcu. Vjeruje se da su kao model poslužili Lizipovi kipovi Aleksandra te Apelove slike. Portrete odlikuje manji ili veći stupanj realizma, a lako prepoznatljive značajke vidljive i na gemi s rta Ploče. Ti kvalitetno izrađeni portreti na jeftinim materijalima poput stakla ili kosti kopije su službenih portreta koje su se vrlo brzo proširile po cijelom helenističkom svijetu zajedno sa skupocjenijim dragim kamenjem. Smatra se da je ovaj tip portreta načinjen u većoj količini za časnike i visoke službenike, ali i sve obožavatelje Aleksandra Velikog, jer se javlja na vrlo širokom području.⁵³ Proizvodnju ovog tipa gema moglo bi se s obzirom na stilske značajke vezati uz ptolemejske radionice, uglavnom u Aleksandriji, ali uzimajući u obzir činjenicu da su draguljari bili prilično mobilni, to treba uzeti s rezervom.⁵⁴

2. Okrugli kamen, promjera 8-9 mm, s ugraviranim prikazom kraljevskog portreta - poprsja. Nažalost, gema je zagubljena,⁵⁵ pa se ne mogu dati točne dimenzije ni otisak, što smanjuje mogućnost preciznije interpretacije. Donja strana gema je ravna, a gornja je ispupčena. Ovaj realistični muški portret karakterizira kratka kovrčava kosa s dijademom, snažno naglašena vratna muskulatura, ravan nos i naglašena obrva te zaobljena uvučena brada. Oštećenje na površini gema koje se nalazi kod sljepoočnog dijela stvara sjenu i daje iskrivljenu sliku lica. Stilski bi se ova gema mogla vezati uz portrete seleukidskih kraljeva i pripisati maloazijskim radionicama.
3. Ovalna šira gema, dimenzija 14,2 x 13 mm, izrađena od jaspera ili žutog karneola. Kamen je dijelom zamućen. Površina gema ravna je s prednje i stražnje strane. Prikazan je konj spuštene glave, dugačkog repa. Na leđima životinje vide se četiri linije koje se pružaju prema trbuhu i ostavljaju dojam predmeta prebačenog preko

a closer determination based on analogies is only possible for the gems stylistically ascribed to the "Italic" workshops at the end of the 2nd and beginning of the 1st century BC.

Given the motifs which appear on them, these gems may be divided into: male royal portraits (Fig. 1 and 2), plant and animal depictions (Fig. 3-6) and gems without images (Fig. 7 and 8).

The male royal portraits were actually a Hellenistic innovation that was closely tied to the efforts of rulers to propagate their likeness among their subjects. The familial similarity on these portraits is considerable, but it is a mixture of realistic and idealistic portrayal, which endeavours to show the rulers as heroes or deities, thus underscoring their status and authority. These portraits are most often recognizable by the diadem; on earlier Ptolemaic rulers, it was depicted as a narrow ribbon, which became considerably wider in the images of rulers in the 2nd and 1st centuries BC. The ribbons are often shown as falling on the neck or decoratively fluttering. The same motif also appears on Seleucid portraits. Generally they are characterized by short hair and prominently recognizable facial features. On the Ptolemaic rulers, this is particularly apparent in the portrayal of the beards, heavy eyelids and hairstyles, while among the Seleucids the facial bones and hooked noses are prominent.⁵¹ The prototype for the gems was probably taken from images on coins, because these were often copied to glass, which was a far less expensive material and thereby more affordable to the middle and poorer classes of the population who nonetheless wanted to possess such items. Glass gems were mould-made, which enabled serial production, so the same images were widespread over a broad territory. Additionally, glass can be dyed, so it was at least theoretically possible to obtain an imitation of any type of stone.

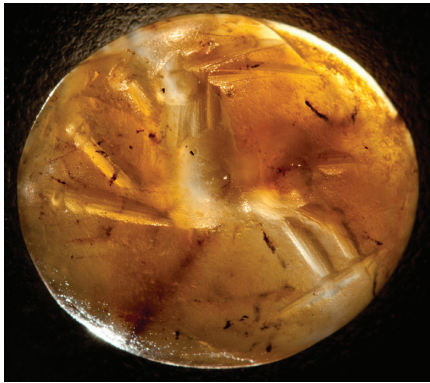
Animals and plants (Fig. 3-6) were always an inspiration to artists, either as the central part of a scene, or as an ancillary, decorative element. A particular interest in these themes is apparent in the glyptics of the Hellenistic and Augustan eras. Sometimes the images of animals have a symbolic significance, such as dolphins, which were a favourite motif in the 2nd and 1st centuries, particularly among communities involved in seafaring, e.g., on the island of Delos. Depictions of animals with astrological significance, e.g. goats or fish, are frequent. These motifs were widespread throughout the Hellenistic era over a very extensive territory, and they are impossible to date without a precise context. It is assumed that these gems were the private property of individuals, and not exponents

53 Plantzos 1999, str. 60-61.

54 Plantzos 1999, str. 63-64.

55 Dio materijala nađenog na rtu Ploči ustupljen je Muzeju grada Šibenika za potrebe izložbe *Blago šibenskog podmorja*. Ova gema nije vraćena s te izložbe.

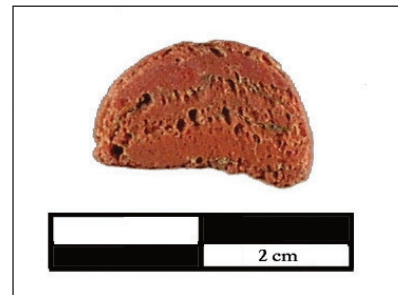
51 Plantzos 1999, pp. 44, 54.



Sl. 5, 5a. Šibenik, Muzej grada Šibenika. Gema i otisak gema s prikazom mitske životinje
Fig 5, 5a. Šibenik, Šibenik City Museum. Gem and imprint of gem with image of mythical animal



Sl. 6, 6a. Šibenik, Muzej grada Šibenika. Gema i otisak gema s prikazom grozda i lista loze
Fig 6, 6a. Šibenik, Šibenik City Museum. Gem and imprint of gem with image of a grape bunch and leaf



Sl. 7. Šibenik, Muzej grada Šibenika. Gema bez prikaza
Fig. 7. Šibenik, Šibenik City Museum. Gem without image

Sl. 8. Šibenik, Muzej grada Šibenika. Polovica gema bez prikaza
Fig. 8. Šibenik, Šibenik City Museum. Half of gem without image

leđa životinje; možda se radi o kakvoj tkanini u funkciji sedla. Ispod nogu je povučena linija koja prikazuje tlo i ostavlja dojam trodimenzionalnosti. Konj se u gliptici češće prikazuje kao dio skupine, upregnut u kola, s konjanikom i sl., a tjeđe kao samostalna figura. Usp. npr. Furtwängler 1900, IX/12, LI/9; Zazoff 1983, Taf. 74, 5/38. Možda ovu gemu stilski treba svrstati u tzv. italske geme, ali usporedbe s ostalim sličnim prikazima ne daju jasno određenje njezine provenijencije.

4. Izduženi ovalni oniks, dimenzija 11,5 x 7 mm. Površina geme ravna je s prednje i stražnje strane. Prikaz je plitko urezan. Radi se o ptici močvarici, vjerojatno vrsti čaplje. Vrlo fini rad naglašava elegantne izdužene noge i vrat ptice, a nekoliko znalačkih poteza naglašava dugačka pera i ostavlja dojam punoće krila. Usp. prikaz ptica močvarica kod Furtwängler 1900, IX/29, XIV/11, 29; Spier 1992, Fig. 171. Možda ovu gemu stilski treba svrstati u tzv. italske geme, rađene tehnikom *a globolo*, ali usporedbe s ostalim meni dostupnim prikazima ptica močvarica ne omogućuju jasno određenje njezina geografskog podrijetla.
5. Ovalna gema, dimenzija 11,6 x 13 mm, rađena vjerojatno od karneola. Kamen je dijelom zamućen i u njemu su vidljive nečistoće. Stražnja strana je ravna, dok je prednja prilično ispupčena i na njoj se nalazi prikaz životinje u trku. Prikaz nije potpuno jasan, jer se čini da se radi o dvojavu stvorenju, možda vrlo stiliziranoj Himeri. Prednji lik predstavlja četveronožnu životinju. Uz njenu glavu vidljivi su obrisi druge glave i visoki rogovi ili možda dugačke uši. Ispod vrata prednje životinje vidi se treća prednja noga. Iza stražnjih nogu je povučena linija koja naglašava tlo i ostavlja dojam životinje u galopu ili skoku. Usp. Zazoff 1983, Taf. 77, 2/65; Spier 1992, Fig. 171, 172. Na osnovi stilskih i tehničkih analogija s ovim gemama moguće je da se radi o "italskoj" proizvodnji koja se veže uz skupinu *Ornavasso*, koju treba datirati u kraj 2. ili početak 1. st. pr. Kr.
6. Ovalni narančasti karneol, dimenzija 12,9 x 10,2 mm. Stražnja strana je ravna, a prednja je blago ispupčena i na njoj se nalazi minuciozan prikaz grančice s grozdom i listom vinove loze. Detalji se izvrsno vide na otisku. Gema je oštećena na prednjoj strani. Budući da je rad vrlo fin, gemu

of official propaganda as may be discerned with the royal portraits.⁵²

1. Oval glass gem, 9 x 11 mm, with considerably damaged surface. Back side is flat, and front featuring portrait/bust was probably also flat. The male royal portrait has short hair in the *anastole* style and wears a diadem, nose straight, rounded chin, prominent eyebrows, all typical of Alexander's portrait. Compares well with Plantzos 1999, Fig. 145.

Alexander's portraits appeared on coins and gems only after his death, on which his successors insisted as they wanted to use them for political propaganda, justifying their own right to authority in this manner. Today it is maintained that the portraits on gems are copies of the types that appeared on sculptures and coins. It is believed that the statues of Alexander by Lysippus and the paintings by Apelles served as models. The portraits are characterized by greater or lesser degrees of realism, and the easily recognizable features visible on the gem from Cape Ploča. These finely rendered portraits on inexpensive materials such as glass or bone are copies of official portraits which had very rapidly spread throughout the Hellenistic world together with the expensive precious stones. It is believed that this portrait type was made in a higher quantity for officers and high officials, but also for all admirers of Alexander the Great, because they appeared over a very wide area.⁵³ Given the stylistic features, the production of this type of gem may be tied to the Ptolemaic workshops, mostly in Alexandria, but taking into account the fact that jewellers were rather itinerant, this should be taken with some degree of caution.⁵⁴

2. Round stone, diameter 8-9 mm, with engraved image of royal portrait/bust. Unfortunately, the gem has since been lost,⁵⁵ so I cannot provide the exact dimensions or an imprint, which reduces the possibility for a more precise interpretation. The lower side of the gem was flat, and the upper section protruded. This realistic man's portrait was characterized by short curled hair wearing

52 Plantzos 1999, p. 99.

53 Plantzos 1999, pp. 60-61.

54 Plantzos 1999, pp. 63-64.

55 A part of the materials found on Cape Ploča was ceded to the Šibenik City Museum for the needs of the exhibition "Treasure of the Šibenik Seafloor." This gem was not returned from that exhibition.



Sl. 9. Šibenik, Muzej grada Šibenika. Željezni prsten
Fig. 9. Šibenik, Šibenik City Museum. Iron finger ring

bih stilski i tehnički vezala uz helenističke radionice Istoka.

7. Okrugla gema promjera 12 mm, rađena od crvene staklene paste. Prednja i stražnja strana su glatke, bez prikaza. S donje strane gema vidljivi tragovi korodirane bronce.
8. Sačuvana polovica okrugle gema, širine 14 mm, rađena od crvene staklene paste. Prednja i stražnja strana su glatke, bez prikaza. S donje strane vidljivi su tragovi korodirane bronce.

Prstenje

Prstenje pronađeno na rtu Ploči po obliku spada u *Plantzos* tip III koji se stavlja široko u helenističko razdoblje i nešto kasnije.⁵⁶ Ovakvi oblici, izrađeni uglavnom od zlata poznati su i iz helenističkih nekropola Ankone⁵⁷ i Tarenta,⁵⁸ gdje su datirani u 3. i 2. st. pr. Kr. Iz nekropola Taranta poznato je prstenje načinjeno od različitih materijala, među kojima je i željezo. Zanimljivo je primijetiti da je željezno prstenje, iako spada u jeftinije materijale, ipak daleko manje zastupljeno u grobovima negoli prstenje načinjeno od bronce i olova.⁵⁹

9. Željezni prsten s masivnom ovalnom krunom, s ramenima koja se spuštaju, odgovara tipu III. Odgovarala bi mu gema dimenzija oko 1,4 x 1 cm. Širina prstena je oko 2,6 cm.
10. Željezni prsten s ovalnom krunom, s ramenima koja se spuštaju, odgovara tipu III. Odgovarala



Sl. 10. Šibenik, Muzej grada Šibenika. Željezni prsten
Fig. 10. Šibenik, Šibenik City Museum. Iron finger ring

a diadem, very prominent neck musculature, a straight nose and prominent eyebrows and a rounded, inwardly drawn chin. The damage to the surface of the gem was at the area of the temples, creating a shadow and a warped image of the face. Stylistically this gem may be linked to the portraits of Seleucid kings and ascribed to the workshops of Asia Minor.

3. Oval wide gem, dimensions 14.2 x 13 mm, made of jasper or yellow carnelian. The stone is partially clouded. The surface of the gem is flat on the front and back. A horse with lowered head and long tail is portrayed. Four lines extending toward the belly can be seen on the animal's back, creating the impression of something thrown over it; perhaps it represents some sort of fabric functioning as a saddle. Below the hoofs there is an extended line which portrays the ground and creates the impression of three-dimensionality. In glyptics, a horse is normally portrayed as part of a group, pulling a carriage, with a rider, etc., and more rarely as an independent figure. Cf., e.g., Furtwängler 1900, IX/12, LI/9; Zazoff 1983, Taf. 74, 5/38. Perhaps this gem may be stylistically counted among the so-called Italic gems, but comparisons with other, similar portrayals have not yielded an unambiguous determination of its provenance.
4. Oblong oval onyx, dimensions 11.5 x 7 mm. Surface of gem is flat on the front and back. Image is shallowly engraved. It is a wading bird, probably a species of heron. The very fine work emphasizes the bird's elegant long legs and neck, and several deft strokes emphasize the long feathers and create the impression of full wings. Cf. the image of a wading bird in Furtwängler 1900, IX/29, XIV/11, 29; Spier 1992, Fig. 171. Perhaps this gem should be classified among the so-called Italic gems, made by the *a globolo* technique, but

56 Plantzos 1999, str. 37.

57 Colivicchi 2002, str. 98, sl. 6.9.

58 De Juliis *et al.* 1985, str. 299, sl. 236.

59 Masiello 1994, str. 310-311.



Sl. 11. Šibenik, Muzej grada Šibenika. Željezni prsten
Fig. 11. Šibenik, Šibenik City Museum. Iron finger ring

bi mu gema dimenzija oko 1,1 x 0,8 cm. Širina prstena je oko 1,7 cm.

11. Željezni prsten s ovalnom krunom, s ramenima koja se spuštaju, odgovara tipu III. Kruna je ravna i metalna, 1,3 x 0,9 cm. Možda se na njoj nalazio ukras, ali običnim pregledom prstena to se, zbog korozije, ne može utvrditi. Širina prstena je oko 2 cm.
12. Ulomak krune i ramena željeznog prstena. Sačuvan je u dužini od 1,6 cm. Kruna je širine oko 1,1 cm. Vjerojatno ravna metalna kruna ovalnog oblika i ramena koja se spuštaju. Jako je oštećen.

Zaključna razmatranja

Geme i prstenje pronađeni na rtu Ploči stilski se i tipološki mogu svrstati u šire razdoblje od 3. do 1. st. pr. Kr., na žalost bez preciznijeg određenja. Na osnovi stilskih analogija i načina obrade, moglo bi se jedino gema određene kao "italske" staviti u kraj 2. ili početak 1. st. pr. Kr. Način izrade i motivi koji se javljaju na gemama mogu se vezati uz tradicije egiptskih, grčkih, maloazijskih i italskih radionica, no ni za jednu gemu nisu nađene izravne analogije u dostupnoj literaturi. Iako postoje jasne stilske sličnosti s ovim područjima, teško je precizirati gdje su gema uistinu bile načinjene, jer su sami majstori bili vrlo pokretni i pokrivali su široko područje Sredozemlja, a i gema su kao predmeti trgovine ili kao plijen stizale u različita područja, osobito u Italiju. Ono što svakako valja naglasiti jest da se ukus nositelja uklapa u vrijeme kada su pojedini tipovi ovih gema bili u modi, kao što je nošenje kraljevskih portreta, osobito vrlo popularnog lika Aleksandra Makedonskog. Sam materijal od kojeg su rađene gema i prstenje (staklo, željezo), nije imao osobitu vrijednost u ovom razdoblju, pa možemo kazati da su ti predmeti pripadali ne osobito imućnom društvenom sloju. Premda materijalna



Sl. 12. Šibenik, Muzej grada Šibenika. Željezni prsten
Fig. 12. Šibenik, Šibenik City Museum. Iron finger ring

comparisons with other available depictions of wading birds do not allow for a clear determination of its geographic origin.

5. Oval gem, dimensions 11.6 x 13 mm, probably made of carnelian. The stone is partially clouded and impurities are visible in it. The rear side is flat, while the front protrudes considerably and it bears an image of a running animal. The image is not entirely clear, because it appears to be a two-headed creature, perhaps a stylized Chimera. The frontal image is a four-legged animal. The contours of a second head and high horns, or perhaps long ears, are visible next to its head. The third front leg can be seen below the neck of the animal in the foreground. Behind the rear leg there is an extended line which emphasizes the ground and creates the impression of a galloping or leaping animal. Cf. Zazoff 1983, Taf. 77, 2/65; Spier 1992, Fig. 171, 172. Based on the stylistic and technical analogies, these gems may be from "Italic" production, which is associated with the *Ornavasso* group, and should be dated to the end of the 2nd or beginning of the 1st century BC.
6. Oval orange carnelian, dimensions 12.9 x 10.2 mm. Back side is flat, while front is slightly protruding and bears a miniscule depiction of a small branch with a wine grape bunch and leaf. The details can be seen quite well in the imprint. The gem was damaged on the front. Since the work is very fine, I would stylistically and technically link the gem to the Hellenistic workshops of the Orient.
7. Round gem with diameter of 12 mm, made of red glass paste. Front and back are smooth, without images. Traces of corroded bronze are visible on the gem's bottom.

vrijednost tih predmeta nije bila velika, oni su imali osobitu emocionalnu vrijednost za svoje vlasnike. Na to nas upućuje upravo činjenica da su ostavljani u svetištima kao zavjetni dar. Sve što znamo iz antičke književnosti upućuje na to da je većina pomoraca i ribara ipak bila siromašna i da su darovi koje su oni ostavljali svojim božanskim zaštitnicima imali često daleko veću simboličnu vrijednost od one materijalne. U konačnici to i jest smisao žrtvovanja: odreći se nečega što ima osobitu vrijednost za osobu koja žrtvu prinosi, dok sama vrijednost predmeta koja joj se pripisuje po nekim drugim, vanjskim kriterijima i nije toliko bitna.

Geme i prstenje ostavljani na rtu Ploči bili su sigurno osobno vlasništvo pomoraca koji su svetište posjećivali, a zatim su ih kao zavjetni dar ostavljali u znak zahvalnosti božanskom Diomedu nakon uspješno obavljenih putovanja i sigurnog povratka.

8. Preserved half of round gem, width 14 mm, made of red glass paste. Front and back are smooth, without images. Traces of corroded bronze are visible on the bottom.

Finger rings

In terms of their form, the finger rings found at Cape Ploča belong to Plantzos type III, which has been broadly dated to the Hellenistic period and slightly after.⁵⁶ Such forms, mostly made of gold, are also known from Hellenistic necropolis at Ancona⁵⁷ and Tarentum,⁵⁸ where they were dated to the 3rd and 2nd centuries BC. Finger rings made of different materials, among them iron, are known from the Tarentum necropolis. It is interesting to note that iron rings, although made of a less expensive material, were far rarer than rings made of bronze and lead.⁵⁹

9. Iron ring with massive oval crown and descending shoulders, corresponds to type III. A gem with dimensions of ca. 1.4 x 1 cm could be set on it. Its width is approximately 2.6 cm.
10. Iron ring with oval crown, descending shoulders, corresponds to type III. A gem with dimensions of ca. 1.1 x 0.8 cm could be set on it. Its width is approximately 1.7 cm.
11. Iron ring with oval crown, descending shoulders, corresponds to type III. Crown is flat and metal, 1.3 x 0.9 cm. It may have had an ornament, but this could not be ascertained by a standard inspection of the ring due to corrosion. The width of the ring is approximately 2 cm.
12. Fragment of crown and shoulder of iron ring. Preserved to a length of 1.6 cm. Crown is approximately 1.1 cm wide. Probably flat metal, oval crown and descending shoulders. Very damaged.

⁵⁶ Plantzos 1999, p. 37.

⁵⁷ Colivicchi 2002, p. 98, Fig. 6.9.

⁵⁸ De Juliis *et al.* 1985, p. 299, Fig. 236.

⁵⁹ Masiello 1994, pp. 310-311.

Concluding considerations

The gems and finger rings found at Cape Ploča can be stylistically placed within the broader period spanning the 3rd to 1st centuries BC, unfortunately without any more precise specification. Based on the stylistic analogies and craftsmanship, only the gems ascertained as “Italic” can be placed at the end of the 2nd or early 1st century BC. The production techniques and motifs that appear on the gems may be linked to the traditions of the Egyptian, Greek, Asia Minor and Italian workshops, but direct analogies in the available literature have not been found for any of these gems. Even though there are clear stylistic similarities to these areas, it is difficult to specify where the gems were actually made, because the craftsmen themselves were rather itinerant and covered a broad swath of the Mediterranean, and the gems, as objects of trade or as plunder, arrived at a variety of places, especially in Italy. Something that is certainly noteworthy is that the tastes of those wearing them corresponded to the time in which individual types of these gems were in fashion, such as the wearing of royal portraits, especially the very popular image of Alexander of Macedon. The actual materials from which the gems and rings were made (glass, iron) did not have particular value in this period, so it may be stated that these items belonged to a not particularly well-to-do social class. Even though the actual value of these items was not great, they had special value to their owners. This is indicated by the fact that they were left at sanctuaries as votive offerings. All that we know from Classical literature tells us that most sailors and fishers were rather poor and that the offerings they left to their divine patrons often had far greater symbolic rather than actual material value. This is, in fact, the ultimate point of making a sacrifice: forgoing something that had particular value for the person making the offering, while the actual value of the item accorded by some other, external criteria was not as important.

The gems and finger rings left at Cape Ploča were certainly the personal property of the sailors who visited the shrine, and then left them as votive offerings as a sign of gratitude to the divine Diomedes after a successfully concluded voyage and safe return.

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KRATICE / ABBREVIATIONS

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