

# THE ROMAN PORT OF ANCONA DURING THE TRAJANIC ERA: SCALE, CAPACITY AND URBAN SETTING

## RIMSKA LUKA ANCONA U TRAJANOVO DOBA: VELIČINA, KAPACITET I URBANO PODRUČJE

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### KEY WORDS:

*Adriatic, Ancona, harbour, Trajan*

*During the Trajanic era, Ancona was one of the greatest ports of the Western Adriatic. Scholars have so far considered its remains from a limited historical and topographic perspective. This paper explores the Roman port of Ancona during the Imperial period, through a multidisciplinary examination of literary, archaeological and epigraphic sources. This paper investigates the scale, capacity and urban setting of Ancona's port. Using topographic observations and excavation data, the first section summarises the form and development of the port and identifies its recurring elements, including the quay, mole(s), lighthouse, horrea, etc. The second section investigates the agents and sponsorships responsible for the construction of Ancona's port. The third section examines the capacity of the port. Using epigraphic, statistical and shipwreck data, it assesses the capacity of the port, by analysing berth widths and the mooring and manoeuvring of ships. The fourth section explores its urban setting and makes a case for the practical and monumental characters of the port. Supporting information on the port topography and epigraphic and archaeological data are presented in the Table.*

### KLJUČNE RIJEČI:

*Jadran, Ancona, luka, Trajan*

*U doba Trajana, Ancona je bila jedna od najvećih luka na zapadnom Jadranu. U prošlosti su znanstvenici sagledavali njezine ostatke s ograničenog povijesnog i topografskog motrišta. U ovome radu razmatra se rimska luka Ancona u carskom razdoblju kroz multidisciplinarnu analizu književnih, arheoloških i epigrafskih izvora. Rad preispituje veličinu, kapacitet i urbano okruženje luke Ancone. U prvome djelu, kroz topografska razmatranja i podatke o iskapanjima donosi se pregled oblika i razvitka luke i prepoznaju elementi koji se ponavljaju, među ostalima gat, mol(ovi), svjetionik, horrea itd. Drugi dio bavi se izvođačima i investitorima zaslužnima za izgradnju luke Ancone. U trećem dijelu preispituje se kapacitet luke. Epigrafski i statistički podatci te podatci prikupljeni u istraživanjima olupina potopljenih brodova omogućili su procjenu kapaciteta luke kroz analizu širine vezova, načina vezivanja brodova i brodskih manevara. Četvrti dio istražuje njezino urbano okruženje i iznosi zaključke u pogledu praktičnih i spomeničkih obilježja luke. Informacije koje idu u prilog topografiji luke te epigrafski i arheološki podaci prikazani su u tablici.*

## ANCONA

Ancona is one of the main harbour cities of the Central Adriatic. It is situated on the northern side of the Conero promontory. Ancona lies in a natural bay, and the site is on a coastal plain consisting of consolidated sands and clay, which are exposed to the action of erosion. To the north of Ancona, the Esino River flows into the Adriatic. Ancona's bay is framed by hills that surround the city centre. The hills are Colle Guasco (N) and Posatore – Astagno (S), which form a natural barrier that encloses the urban centre within a bay.<sup>1</sup> On the southern side, the bay formed an enclosed basin, passing by the Scogli di Santa Lucia, an extension of the ridge which was formed by a series of hills including Col Pelago, Marino, Santo Stefano and Astagno.<sup>2</sup> The northern side of the bay was formed by the Scogli San Clemente, San Clementino and Volpe, which constituted the natural continuation of the NE ridge formed by the Cardeto, Cappuccini and Guasco hills (Fig. 1).<sup>3</sup>

Ancona was perhaps founded by settlers from Syracuse during the 5<sup>th</sup> century BC, and its name probably derived from its shape, which is reminiscent of an elbow.<sup>4</sup> Established as a strategic centre and node between the north and south, between Latium and the Balkans, it became a permanent naval base during the Illyrian War in 177 BC, and gained the title of municipium immediately after this period.<sup>5</sup> It received major improvement works under Trajan, and the port was reinforced. Ancona became one of the main harbours of the Western Adriatic owing to these improvements. Exchange to and from this port city also took place on a large scale from the 16<sup>th</sup> century, when it was a pivotal destination for traders

<sup>1</sup> M. LANDOLFI, 1992, 19.

<sup>2</sup> G. ANNIBALDI, 1953, 262; M. LANDOLFI, 1992, 15.

<sup>3</sup> S. SEBASTIANI, 1996, 18; A. NASO, 2000, 41; M. LUNI, 2003, 30.

<sup>4</sup> M. MORETTI, 1945, 21; S. SEBASTIANI, 1996, 16; F. COLIVICCHI, 2002, 112-115.

<sup>5</sup> S. SEBASTIANI, 1996, 27; M. SALVINI, 2009.

## ANCONA

Ancona je jedan od najvažnijih lučkih gradova srednjeg Jadrana. Prostire se na sjevernim padinama planine Conero. Ancona je smještena u prirodnom zaljevu te leži na obalnoj ravnici sastavljenoj od konsolidiranih pijesaka i glina izloženih djelovanju erozije. Sjeverno od Ancone nalazi se ušće rijeke Esino. Zaljev Ancone okružen je brdima koja okružuju središte grada. Colle Guasco (na sjeveru) i Posatore – Astagno (na jugu) čine prirodnu barijeru koja zatvara gradsko središte unutar zaljeva.<sup>1</sup> S južne strane, zaljev zatvaraju hridi Scogli di Santa Lucia koje predstavljaju nastavak grebena kojega čini niz uzvisina među kojima su Col Pelago, Marino, Santo Stefano i Astagno.<sup>2</sup> Sjevernu stranu zaljeva tvore hridi Scogli San Clemente, San Clementino i Volpe koje su nekoć predstavljale prirodni nastavak sjeveroistočnog grebena kojega su činile uzvisine Cardeto, Cappuccini i Guasco (Sl. 1).<sup>3</sup>

Pretpostavlja se da su Anconu osnovali doseljenici iz Sirakuze u 5. stoljeću pr. Kr., a ime je vjerojatno dobila po obliku kojim podsjeća na lakat.<sup>4</sup> Uspostavljena kao strateški centar i čvorište putova između sjevera i juga, između Lacija i Balkana, Ancona je služila kao ratna luka rimske flote u ilirskom ratu 177. pr. Kr. da bi odmah po završetku tog razdoblja postala municipium.<sup>5</sup> Za vladavine Trajana provedeni su brojni radovi na poboljšanju strukture te je ojačana sama luka. Zahvaljujući tim radovima, Ancona je postala jedna od najvažnijih luka zapadnog Jadrana. Vrlo intenzivna trgovina u tom se lučkom gradu odvijala od 16. stoljeća kada je on postao ključno odredište trgovaca koji su poslovali s Osmanskim Carstvom i unutar njega. Ancona je bila pod kontrolom Papinske Države kao njezin najvažniji grad

<sup>1</sup> M. LANDOLFI, 1992, 19.

<sup>2</sup> G. ANNIBALDI, 1953, 262; M. LANDOLFI, 1992, 15.

<sup>3</sup> S. SEBASTIANI, 1996, 18; A. NASO, 2000, 41; M. LUNI, 2003, 30.

<sup>4</sup> M. MORETTI, 1945, 21; S. SEBASTIANI, 1996, 16; F. COLIVICCHI, 2002, 112-115.

<sup>5</sup> S. SEBASTIANI, 1996, 27; M. SALVINI, 2009.

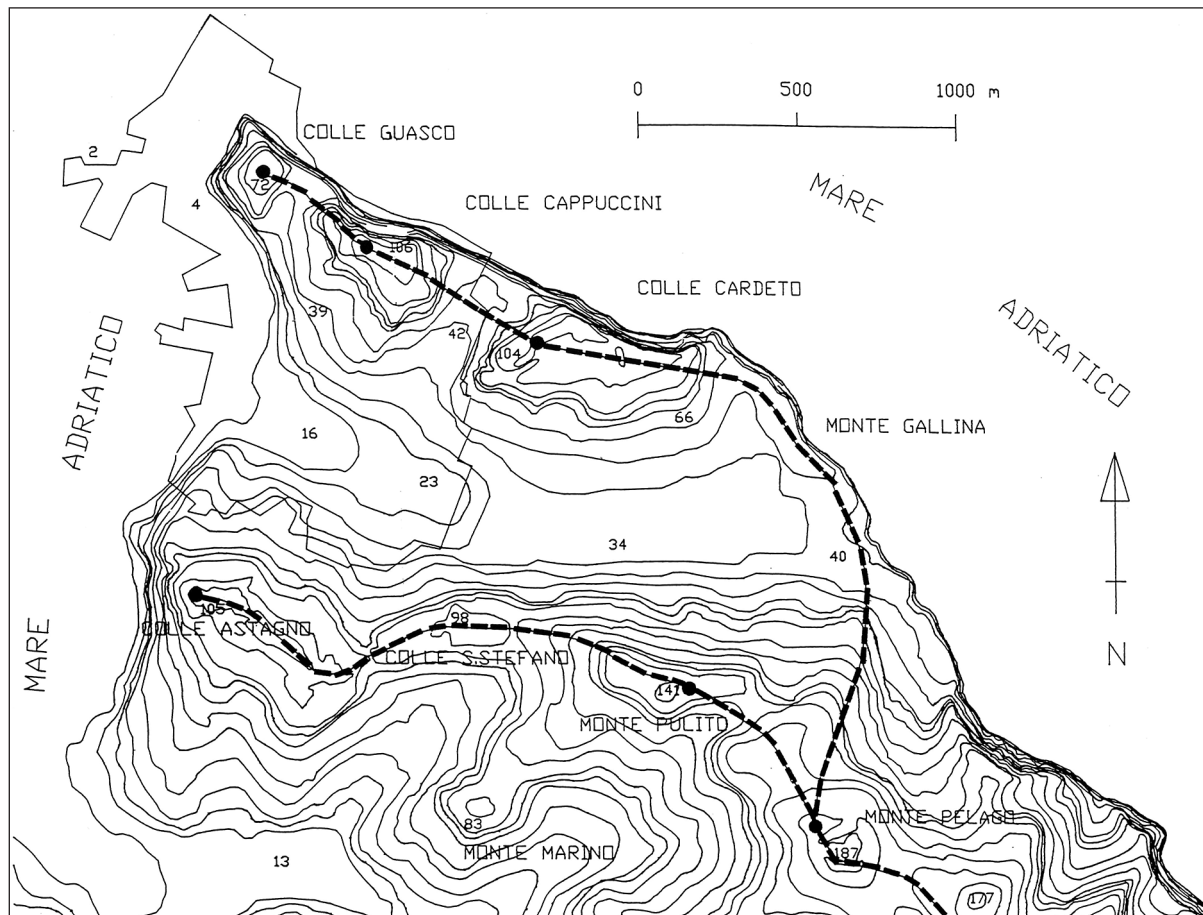


FIGURE 1 Ancona's promontory and hills (after S. SEBASTIANI, 1996, 14, Fig. 13)

SLIKA 1. Poluotok i brda Ancone (prema S. SEBASTIANI, 1996, 14, sl. 13)

who had business with and in the Ottoman Empire. Ancona was under the control of the Papal State, being its main city on the Adriatic coast. During the 18<sup>th</sup> century, the city underwent massive restoration and the ancient port was reinforced under Pope Clement VII, who commissioned the works of Luigi Vanvitelli.<sup>6</sup>

Literary accounts provide a starting point for the exploration of the port's layout and setting. The earliest mention of Ancona's harbour comes from Pseudo-Scylax, who refers to the temple of Diomedes and links it with the port, and also provides information on the existence of landing places in its bay. The author also estimates the journey and sailing times necessary to reach Ancona from an undefined region (perhaps the Aegean), quantifying it as two days and one night. He also argues that

na jadranskoj obali. Čitav je grad podvrgnut masovnoj obnovi u 18. stoljeću, dok je pod Papom Klementom VII. obnovljena antička luka, za što je angažiran Luigi Vanvitelli.<sup>6</sup>

Književna djela donose prve opise koji služe kao polazište za istraživanje izgleda same luke i njezina okruženja. Prvi spomen luke Ancone nalazimo kod Pseudo Skilaka koji upućuje na Diomedov hram dovodeći ga u vezu s lukom i spominjući vezove u zaljevu. Autor također procjenjuje vrijeme potrebno da bi se stiglo i doplovilo do Ancone iz nepoznate regije (možda iz Egeje), spominjući dva dana i jednu noć. Također tvrdi da su Anconu osnovali Sirakužani oko 5. stoljeća pr. Kr., koji su izgradili njezinu luku, te navodi da je grad smješten na granici s agerom *Gallicus* (sjeverno od Ancone).<sup>7</sup>

<sup>6</sup> M. NATALUCCI, 1960.

<sup>6</sup> M. NATALUCCI, 1960.

<sup>7</sup> Ps. Sc. 16; A. NASO, 2000, 22; L. ANTONELLI, 2003, 85.

Ancona was established by the Syracusans in about the 5<sup>th</sup> century BC, who provided it with a port, and he refers to it as being located along the boundary with the ager Gallicus (N of Ancona).<sup>7</sup>

Strabo depicts Ancona as the main maritime city of the Picenum. He describes the site as being located upon a promontory and arranged along a curving tongue of land, oriented toward the enclosed harbour.<sup>8</sup> He also defines it as a Greek settlement, founded by colonists from Syracuse who escaped Dionysius' tyranny.<sup>9</sup> However, recent work has indicated that very little archaeological evidence confirms this point and that Ancona enjoyed frequent contact with Greece, Magna Graecia and Sicily.<sup>10</sup> This integrated system of contacts in the pre-Roman period is also confirmed by Pseudo-Scylax and Strabo.<sup>11</sup> Concerning trans-maritime contacts, Strabo follows Pseudo-Scylax's account and makes reference to the cult of Diomedes in Ancona. This cult was also identifiable at Ravenna and signals the spread of the divinity along the Northern Adriatic, probably introduced by merchants.<sup>12</sup> Other Roman authors make brief references to the mooring and its territory, including Mela and Pliny the Elder who give a clear description of the 'elbow' shape of the settlement, and they report that there was a docking place there.<sup>13</sup> This literary evidence reveals the use of the port in the late Republican and early Imperial periods when contacts between Ancona and other Mediterranean markets were growing.

Livy refers to Ancona as one of the most strategic harbours for sailing towards the Balkan Adriatic coast.<sup>14</sup> The historian states that Ancona was used as a logistic base for military operations during the Illyrian Wars.

Strabon prikazuje Anconu kao glavni pomorski grad Picenuma. Opisuje lokaciju na uzvisini raspoređenu duž zakrivljenog rta okrenutog prema luci koju obuhvaća.<sup>8</sup> Osim toga, prepoznaje je kao grčku naseobinu koju su utemeljili kolonisti iz Sirakuze koji su pobjegli od Dionizijeve tiranije.<sup>9</sup> Međutim, novija istraživanja pokazala su da vrlo mali broj arheoloških nalaza potvrđuje tu teoriju i da je Ancona bila često u dodiru s Grčkom, Velikom Grčkom i Sicilijom.<sup>10</sup> Taj integrirani sustav kontakata u predrimskom razdoblju potvrđuju i Pseudo Skilak i Strabon.<sup>11</sup> Što se tiče prekomorskih veza, Strabonov opis podudara se s onim Pseudo Skilaka, spominjući kult Diomeda u Anconi. Prisutnost kulta prepoznata je i u Ravenni, ukazujući na rasprostranjenost kulta tog božanstva duž sjevernog Jadrana i navodeći na zaključak da su ga vjerojatno donijeli trgovci.<sup>12</sup> Drugi rimski autori spominju vezove na ovom području, među njima Mela i Plinije Stariji koji donose jasan opis naselja u obliku „laktata”, kao i mjesta za privez.<sup>13</sup> Ovi pisani izvori ukazuju na uporabu luke tijekom kasnorepublikanskog i početkom ranocarskog razdoblja, u doba kad su se intenzivirali kontakti između Ancone i ostalih sredozemnih trgovišta.

Livije navodi da je Ancona bila jedna od najvažnijih strateških luka u pomorskom prometu prema balkanskoj obali Jadranskog mora.<sup>14</sup> Povjesničar navodi da je Ancona služila kao logističko središte za vojne operacije u vrijeme ilirskih ratova. Iako ne donosi detaljan opis same luke, Livije ukazuje na postojanje dobro opremljene luke u razdoblju rimske republike.<sup>15</sup> K tome ističe kako je Ancona odabrana kao sjedište flote kojom su zapovijedali Furije Gaj i Lucije Kornelije Dolabela koji su opremili luku s 20 brodova

<sup>7</sup> Ps. Sc. 16; A. NASO, 2000, 22; L. ANTONELLI, 2003, 85.

<sup>8</sup> Strab. 5.4.2.

<sup>9</sup> Strab. 5.4.2; M. LUNI, 1995.

<sup>10</sup> F. COLIVICCHI, 2008, 31-46.

<sup>11</sup> L. ANTONELLI, L. LAZZARINI, 2013, 158.

<sup>12</sup> V. MANZELLI, 2000.

<sup>13</sup> Pompon. 2.64; Plin., HN 3.12.111.

<sup>14</sup> Livy 41.1-3.

<sup>8</sup> Strab. 5.4.2.

<sup>9</sup> Strab. 5.4.2; M. LUNI, 1995.

<sup>10</sup> F. COLIVICCHI, 2008, 31-46.

<sup>11</sup> L. ANTONELLI, L. LAZZARINI, 2013, 158.

<sup>12</sup> V. MANZELLI, 2000.

<sup>13</sup> Pompon. 2.64; Plin., HN 3.12.111.

<sup>14</sup> Livije 41.1-3.

<sup>15</sup> Livije 35.16.3; Polyb. 12,5/1-3.

Although the port itself is not described in detail, Livy's account suggests the existence of a well-equipped port in the Republican period.<sup>15</sup> Moreover, he points out that Ancona was selected as the home port of a fleet commanded by Furius Caius and Lucius Cornelius Dolabella, who armed the harbour with 20 ships for protecting the Adriatic coast against Illyrian piracy.<sup>16</sup> During the Civil Wars, Aurelius Victor records the murder of Lucius Cornelius Cinna, who was killed near the harbour while he was launching a fleet against Sulla.<sup>17</sup> During the early Imperial period, Tacitus reports the landing at Ancona of a fleet led by Piso, who came from Dalmatia with the aim of reaching Rome for Germanicus' funeral.<sup>18</sup> Another source, Catullus, sailing from the Black Sea to the Northern Adriatic, lists city ports including Ancona.<sup>19</sup> He describes the port's layout as *apertus*, perhaps in order to define its crescent shape. His description of the cult of Venus, and the presence of her temple, suggests the connection between the goddess and the sea, shipping and seamanship.<sup>20</sup>

The port began a phase of significant improvement in the early 2<sup>nd</sup> century AD, thanks to the works commissioned by Trajan.<sup>21</sup> In this phase, the harbour was equipped with new walls and warehouses facing the waterfront. A new mole probably replaced the previous one, perhaps no longer adequate for landing the increasing number of ships that docked in Ancona's port. Trajan's work, which aimed to make Ancona's port a safer landing place for sailors in Eastern Italy, is primarily attested to by the evidence of the arch, which still stands on the northern mole of Ancona's port (Fig. 2).<sup>22</sup> The Attic inscription is clearly indicative of the con-

koji su imali štititi jadransku obalu od ilirskih pirata.<sup>16</sup> U razdoblju građanskih ratova, Aurelije Viktor zabilježio je pogibiju Lucija Kornelija Cine, ubijenog u blizini luke dok je vodio flotu na Sulu.<sup>17</sup> U ranocarskom razdoblju Tacit nas izvještava o tome kako je u Anconi pristala flota koju je predvodio Pizon doplovivši iz Dalmacije kako bi stigao u Rim na Germanikovu sahranu.<sup>18</sup> Nadalje, Katul ploveći od Crnog mora do sjevernog Jadrana nabraja gradove-luke uključujući Anconu.<sup>19</sup> Opisuje luku kao *apertus*, možda kako bi opisao njezin oblik polumjeseca. Njegov opis Venerina kulta, kao i postojanje njezina hrama ukazuju na povezanost božice i mora, plovidbe i pomorstva.<sup>20</sup>

Početkom 2. stoljeća po Kr. luka je ušla u fazu značajnih renovacija zahvaljujući radovima koje je naručio Trajan.<sup>21</sup> U toj je fazi luka dobila nove zidine i skladišta na samoj obali. Pretpostavlja se da je novi mol zamijenio prethodni koji više nije bio dovoljan za pristajanje sve većeg broja brodova privezanih u luci. Trajanove radove čiji je cilj bio učiniti luku Anconu sigurnijim pristaništem za mornare u istočnoj Italiji potvrđuje u prvome redu postojanje ostataka slavoluka koji se još uvijek nalazi na sjevernom molu luke Ancone (Sl. 2).<sup>22</sup> Natpis na atici kojem se jasno iščitavaju podaci o izgradnji i renovaciji luke također donosi podatke o važnim ideološkim aspektima carskog patronata. Vraćanje statusa Ancone kao najvažnijeg logističkog uporišta i pozornost koju joj je posvećivao carski patron uvjerila je čitavu generaciju znanstvenika u točnost pretpostavke da ju je Trajan koristio kao polazište za Drugi dački rat. Brojni znanstvenici još jedan dokaz ispravnosti te teorije vide u drugoj sceni

<sup>15</sup> Livy 35.16.3; Polyb. 12.5.1-3.

<sup>16</sup> Livy 41.1.2; C. DELPLACE, 1993, 29.

<sup>17</sup> Aur. Vict., *Caes.* 69.4.

<sup>18</sup> Tac., *Ann.* 3.9.

<sup>19</sup> Catull. 36.11.17.

<sup>20</sup> Catull. 36.11.17.

<sup>21</sup> K. LEHMANN-HARTLEBEN, 1963, 231; S. SEBASTIANI, 1996, 47.

<sup>22</sup> CIL IX, 5894; M. SALVINI, 2009, 547.

<sup>16</sup> Livije 41.1.2; C. DELPLACE, 1993, 29.

<sup>17</sup> Aur. Vict., *Caes.* 69.4.

<sup>18</sup> Tac., *Ann.* 3.9.

<sup>19</sup> Katul 36.11.17.

<sup>20</sup> Katul 36.11.17.

<sup>21</sup> K. LEHMANN-HARTLEBEN, 1963, 231; S. SEBASTIANI, 1996, 47.

<sup>22</sup> CIL IX, 5894; M. SALVINI, 2009, 547.

struction and renovation of the port and also provides evidence of the important ideological aspects of imperial sponsorship. The return of the role of Ancona's port as a major logistical base, and the attention paid by the Imperial sponsor, persuaded a generation of scholars to assume that Trajan used it as a starting point for the Second Dacian War. For many scholars, further evidence of this idea comes from the second scene of the relief of Trajan's Column (see scene LXXIX).<sup>23</sup> No textual sources from that period make direct reference to the renovation of Ancona's port by the emperor. Ancona's port is also mentioned in late Antique accounts. Procopius records Genseric's plan to regain control of the port because of its central role.<sup>24</sup> He also notes that, during the Gothic Wars, Ancona was still considered by the Byzantines as an important commercial and strategic harbour.<sup>25</sup>

Literary evidence allows us partly to establish Ancona's harbour setting and its importance over time. These sources suggest that it was used originally as a commercial port in the pre-Roman and early Roman periods, and also as a military harbour from the Republican to the Augustan period. During the Trajanic period, Ancona's harbour may have increased in importance and capacity, thus allowing larger ships to be accommodated along its docks. Epigraphic and archaeological sources, however, allow us further insights into the port's topography. Although we can now draw on archival sources as well as archaeological data and over thirty years of fieldwork, our understanding of the layout, urban setting and capacity of

reljefa na Trajanovu stupu (v. scenu LXXIX).<sup>23</sup> U pisanim izvorima iz tog razdoblja nigdje se izrijeком ne spominje povezanost između obnove luke Ancone i cara. Luka Ancona spominje se i u kasnoantičkim izvorima. Prokopije spominje Gajzerikov plan da ponovno uspostavi kontrolu nad lukom zbog njezine središnje uloge.<sup>24</sup> Također ističe kako su za vrijeme gotških ratova Bizantinci Anconu još uvijek smatrali važnom trgovačkom i strateškom lukom.<sup>25</sup>



FIGURE 2 Arch of Trajan at Ancona. See also the inscription CIL IX, 5894 and mole area (after F. UGOLINI, 2017, 492, Fig. 2.50b)

SLIKA 2. Trajanov slavoluk u Anconi, v. i natpis CIL IX, 5894 i područje mola (prema F. UGOLINI, 2017, 492, sl. 2.50b)

Pisani izvori nam omogućuju djelomičan uvid u izgled luke i njezino značenje kroz različita povijesna razdoblja. Sudeći prema njima, Ancona je izvorno korištena kao trgovačka luka u predrimskom i ranorimskom razdoblju te kao vojna luka od razdoblja Republike do Augustova doba. U Trajanovo doba luka Ancona dobila je na važnosti, a povećan joj je i kapacitet kako bi se i veći brodovi mogli vezati na njezine molove. Daljnje uvide u topografiju luke omogućavaju nam epigrafski i arheološki izvori. Iako u današnje vrijeme

<sup>23</sup> C. CHICORIUS, 1909; S. SETTIS, A. LA REGINA, G. AGOSTI, 1988; A. CLARIDGE, 1993, 5-22; F. COARELLI 1999.

<sup>24</sup> Procop., *Goth.* 2.13.

<sup>25</sup> Procop., *Goth.* 6.13.7; 6.17.7.

<sup>23</sup> C. CHICORIUS, 1909; S. SETTIS, A. LA REGINA, G. AGOSTI, 1988; A. CLARIDGE, 1993, 5-22; F. COARELLI, 1999.

<sup>24</sup> Prokop., *Goth.* 2.13.

<sup>25</sup> Prokop., *Goth.* 6.13.7; 6.17.7.

Ancona's harbour has not improved greatly. Research on this topic remains static because projects have been conducted in isolation and results dispersed across only a few papers; only restricted access is available to the data gathered during the *Soprintendenza* fieldwork and no major parts of this work have been published; and, finally, scholarly contributions have been published only in Italian and this has limited the audience. This neglect has discouraged scholars from studying this specific harbour site and, even taking into account the works of Alfieri, Lilli and Sebastiani, our comprehension of Ancona's harbour during the Roman era is but in its infancy.<sup>26</sup>

This paper aims to provide an entry point, in English, into this most important of topics; I aim to improve our understanding of the scale, capacity and setting of Ancona's harbour and to encourage further studies. Another aim is to encourage those who conducted major fieldwork during the 2000s that it is time for the long-awaited publication of the results.<sup>27</sup> Publication of the results will assist us in building a more nuanced understanding of the form, operation and development of Ancona; this in-depth understanding is necessary if we are to expand our knowledge of the port system and the economy of the Adriatic region in Roman times.

This paper is divided into four sections: the first section explores the port layout and its structures (quay, mole(s), lighthouse, port facilities) as well as the form of Ancona's harbour; the second section analyses the agents and sponsors responsible for the construction of the port; the third section assesses the scale and capacity of the harbour; and the fourth section examines the monumentality of the public buildings within the harbour sector, providing some considerations on the scale of the Trajanic harbour of Ancona.

<sup>26</sup> N. ALFIERI, 1938, 151-235; S. SEBASTIANI, 1996; M. LILLI, 1997, 49-77.

<sup>27</sup> M. SALVINI, 2001; M. SALVINI, 2009.

imamo na raspolaganju arhivske i arheološke podatke, iako su iza nas više od tri desetljeća terenskog rada, ne znamo mnogo više o izgledu, urbanom okruženju i kapacitetu luke u Anconi. Istraživanja te teme ne napreduju jer se projekti provode izolirano, a rezultati istraživanja raspršeni su u svega nekoliko radova; ograničen je pristup podacima prikupljenima u okviru terenskih istraživanja koja je predvodio nadležni odjel, *Soprintendenza*, a k tome taj rad većinom ostaje neobjavljen; naposljetku, doprinosi znanstvenika objavljuju se samo na talijanskom jeziku, čime se ograničava broj čitatelja. Takvo zanemarivanje obeshrabruje znanstvenike u proučavanju ovog lučkog lokaliteta tako da su, čak i uzevši u obzir doprinos autora kao što su Alfieri, Lilli i Sebastiani, naše spoznaje o luci Anconi u rimsko doba tek u povojima.<sup>26</sup>

Ovim radom nastoji se pružiti uvod, na engleskom jeziku, u ovu krajnje važnu temu; želja mi je produbiti spoznaje o veličini, kapacitetu i okruženju luke Ancone i potaknuti daljnja istraživanja. Sljedeći cilj je potaknuti one koji su proveli glavninu istraživanja u prvom desetljeću 21. stoljeća da objave dugo iščekivane rezultate.<sup>27</sup> Objavljivanje rezultata pomoći će nam da izgradimo istančaniju predodžbu o obliku, funkciji i razvoju Ancone; takvo dubinsko razumijevanje nužno je ako želimo proširiti saznanja o sustavu luka i gospodarstvu Jadrana u rimsko doba.

Ovaj rad podijeljen je na četiri dijela: u prvome dijelu riječ je o izgledu luke i njezinih dijelova (gat, mol(ovi), svjetionik, lučki objekti), kao i o obliku luke Ancone; drugi dio bavi se analizom nositelja i sponzora izgradnje luke; u trećem dijelu donosi se procjena veličine i kapaciteta luke; četvrti dio propitkuje monumentalnost javnih objekata u lučkom sektoru te donosi neka razmatranja o veličini luke u vrijeme Trajana.

<sup>26</sup> N. ALFIERI, 193., 151-235; S. SEBASTIANI, 1996; M. LILLI, 1997, 49-77.

<sup>27</sup> M. SALVINI, 2001; M. SALVINI, 2009.

## PORT LAYOUT

Roman Ancona lies on the western slope of the northernmost projection of the Conero promontory, beside a wide bay which was a natural shelter and a favoured landing spot in the Central Adriatic. Ancona's harbour terminated at the sites of the ancient Greek and Trajanic moorings, which were close to Scoglio Volpe and San Clemente.<sup>28</sup> The bay is crescent shaped and this feature allowed scholars to hypothesise the location of some port structures, such as the quay.<sup>29</sup> Further surveys identified the bottom of the harbour and the layout of Trajan's port, and permitted scholars to argue that the port was arranged along the rocky bank facing the city since this was the only arrangement which would have allowed larger ships to anchor (Fig. 3).<sup>30</sup>

During the Imperial period, the urban centre itself was arranged in order to exploit the natural environmental conditions. This layout meant a new physiognomy for the port's features, but also for the city centre: a main quay followed the main waterfront, a large mole overlapped the natural rocky tongue that stretched out to the sea, and facilities such as warehouses meant that goods could be loaded and unloaded here. However, around the 1<sup>st</sup> century AD, the form of Ancona's port still largely depended on its natural environment and its seabed. The mole and the quay were arranged along the southern side of the bay which had a sea bottom that was shallower than the northern side, where the sea reached its maximum depth.<sup>31</sup> The shape of the port allowed large ships to moor along the northern side, that is, on either side of the Scogli Volpe and San Clemente, since it was deep enough for medium and large ships to dock, while the southern sector had to be used for ships with a

<sup>28</sup> S. SEBASTIANI, 1996; A. NASO, 2000, 42-43.

<sup>29</sup> A. PERUZZI, 1832, 64.

<sup>30</sup> N. ALFIERI, 1938, 233; M. MORETTI, 1945, 10.

<sup>31</sup> G. CELLO, L. COPPOLA, 1984, 97-109; G. CELLO, L. COPPOLA, 1989, 37-47.

## IZGLED LUKE

Rimska Ancona prostirala se na zapadnim padinama najsjevernijih obronaka rta Conera uz širok zaljev koji je predstavljao prirodni zaklon i omiljeno privezište srednjeg Jadrana. Luka Ancona sezala je do mjesta na kojima su bili vezovi u razdoblju grčke antike i u Trajanovo doba, u blizini hridi Scoglio Volpe i San Clemente.<sup>28</sup> Zaljev ima oblik polumjeseca na temelju čega su znanstvenici pretpostavili lokaciju nekih lučkih objekata, primjerice gata.<sup>29</sup> Daljnjim pregledima uočeno je dno luke i plan Trajanove luke, što je znanstvenike navelo na zaključak da je luka bila smještena uz stjenovitu obalu okrenutu gradu jer je to bio jedini mogući položaj koji bi omogućio sidrenje većim brodovima (Sl. 3).<sup>30</sup>

U carskom razdoblju projektirana je gradska jezgra kako bi se iskoristili prirodni uvjeti okoline. Taj je projekt označio novu karakterističnu fizionomiju luke, ali i gradske jezgre: glavni gat je pratio obalu, dok je uz prirodan stjenoviti rt koji se protezao daleko u more izgrađen veliki mol, a objekti poput skladišta omogućavali su utovar i istovar. Međutim, oko 1. stoljeća po Kr., oblik luke i dalje je uvelike bio uvjetovan prirodnim okruženjem i morskim dnom. Mol i gat postavljeni su duž južne strane zaljeva čije je dno bilo pliće nego na sjevernoj strani gdje je more bilo najdublje.<sup>31</sup> Takav oblik luke omogućavao je vezivanje velikih brodova na sjevernoj strani, s jedne ili druge strane stijena Scogli Volpe i San Clemente, s obzirom na to da je more bilo dovoljno duboko za pristajanje srednjih i velikih brodova, dok je južni dio bio rezerviran za brodove s plitkim gazom kao što su plovila poput onih otkrivenih na lokalitetima Palombina i Cattolica.<sup>32</sup>

<sup>28</sup> S. SEBASTIANI, 1996; A. NASO, 2000, 42-43.

<sup>29</sup> A. PERUZZI, 1832, 64.

<sup>30</sup> N. ALFIERI, 1938, 233; M. MORETTI, 1945, 10.

<sup>31</sup> G. CELLO, L. COPPOLA, 1984, 97-109; G. CELLO, L. COPPOLA, 1989, 37-47.

<sup>32</sup> M. C. PROFUMO, 1992, 491; A. J. PARKER, 1992; M. C. PROFUMO, 2003, 390.





The city of Ancona benefits from the unique environment of its Adriatic surroundings. This hilly geographical setting acted as a natural shelter for the port and the facilities. The geographical setting also influenced the arrangement of most of the structures, which were situated along the coastline, and the disposition of the urban centre, in the narrow space between the coast and the slopes of the surrounding hills. On the southern side of the city, the Conero promontory constitutes a natural shelter that favoured urban and port development.

## QUAY

The features of the port have been more fully understood thanks to the most recent fieldwork led by the *Soprintendenza Beni Archeologici Regione Marche* (between 1999 and 2002), whose excavation focused primarily on Ancona's waterfront, especially the area of modern Lungomare Vanvitelli, formerly named Via Saffi (An1–2) (Fig. 4; see Table 1).<sup>34</sup> This excavation led archaeologists to identify a section of the Roman quay and also several structures that allowed the partial reconstruction of the layout of Ancona's port.<sup>35</sup> The fieldwork, especially in the site named Casa del Capitano, brought to light evidence of the main quay, which was dated to the Trajanic period (An8) (Fig. 5).<sup>36</sup> Earlier evidence, including remains of wooden structures built on clay, indicates the continuity in use of the quay, confirming that at least part of the site as we now know it was already established in the 2<sup>nd</sup> century BC.<sup>37</sup> Surveys

<sup>34</sup> SBAM, 1999–2002; M. SALVINI, 2001, 12; M. SALVINI, 2009, 531; M. SALVINI, L. PALERMO, 2014, 589–605; M. SALVINI, L. PALERMO, 2017, 159–187; F. UGOLINI, 2017.

<sup>35</sup> S. SEBASTIANI, 1996; M. LILLI, 1997; M. SALVINI, 2001, 12; M. SALVINI, 2009, 545; M. SALVINI, L. PALERMO, 2014, 589–605; M. SALVINI, L. PALERMO, 2017, 159–187.

<sup>36</sup> M. LILLI, 1997, 54.

<sup>37</sup> M. SALVINI, 2009, 545–546.

klon za luku i lučke objekte. Geografski položaj utjecao je i na razmještaj većine objekata koji su raspoređeni duž obale, kao i na organizaciju gradske jezgre na uskom prostoru između obale i padina okolnoga gorja. Na južnoj strani grada nalazi se rt Conero kao prirodni zaklon koji je pogodovao razvoju grada i luke.

## GAT

Saznanja o karakteristikama luke produbljena su zahvaljujući recentnijim terenskim istraživanjima koja je vodio Odjel za arheološku baštinu Regije Marche (*Soprintendenza Beni Archeologici Regione Marche*) od 1999. do 2002., fokusirajući se u prvo me redu na obalu Ancone, osobito na područje današnjeg Lungomare Vanvitelli koji se nekoć nazivao Via Saffi (An1–2) (Sl. 4.; vidjeti Tablicu 1).<sup>34</sup> Zahvaljujući ovim iskapanjima arheolozi su otkrili dio rimskoga gata, kao i nekolicinu objekata koji su omogućili djelomičnu rekonstrukciju izgleda luke Ancone.<sup>35</sup> U iskapanjima, osobito na lokalitetu Casa del Capitano, otkriveni su dijelovi glavnoga gata datiranog u Trajanovo doba (An8) (Sl. 5).<sup>36</sup> K tome, raniji nalazi, uključujući ostatke drvenih struktura izgrađenih na ilovači, ukazuju na kontinuitet upotrebe gata, potvrđujući da je barem dio današnjeg lokaliteta izgrađen još u 2. stoljeću pr. Kr.<sup>37</sup> Pregledima je potvrđeno da su objekti izgrađeni u Trajanovo doba bili namijenjeni ojačavanju ranijih pristaništa te da njima nisu zamijenjeni objekti kao što je

<sup>34</sup> SBAM, 1999–2002; M. SALVINI, 2001, 12; M. SALVINI, 2009, 531; M. SALVINI, L. PALERMO, 2017, 159–187; M. SALVINI, L. PALERMO, 2014, 589–605; F. UGOLINI, 2017.

<sup>35</sup> S. SEBASTIANI, 1996; M. LILLI, 1997; M. SALVINI, 2001, 12; M. SALVINI, 2009, 545; M. SALVINI, L. PALERMO, 2014, 589–605; M. SALVINI, L. PALERMO, 2017, 159–187.

<sup>36</sup> M. LILLI, 1997, 54.

<sup>37</sup> M. SALVINI, 2009, 545–546.



FIGURE 4 Archaeological map of the harbour sector at Ancona (F. UGOLINI, 2018)

SLIKA 4. Arheološki karta područja luke Ancone (F. UGOLINI, 2018)

have ascertained that Trajan's structures reinforced earlier docks and did not replace structures such as the quay itself and also former jetty, which was identified in proximity to the San Clemente rock.<sup>38</sup>

The ancient harbour had a quay which ran parallel to the current waterfront in Lungomare Vanvitelli, and, more precisely, from the current

sam gat ili prethodni mol otkriven u blizini stijene San Clemente.<sup>38</sup>

Antička luka imala je gat koji se prostirao paralelno s postojećom rivom koja se naziva Lungomare Vanvitelli odnosno, točnije, od današnje Casa del Capitano preko ulica Via Loggia i Via Papa Giovanni XXIII do trga Piazza Dante Alighieri, gdje je otkriveno

<sup>38</sup> N. ALFIERI, 1938, 82; S. SEBASTIANI, 1996, 86.

<sup>38</sup> N. ALFIERI, 1938, 82; S. SEBASTIANI, 1996, 86.



FIGURE 5 *Remains of the quay dating from the Augustan period at Lungomare Vanvitelli* (Soprintendenza Beni Archeologici Marche, 1999; DIA 284525)

SLIKA 5. *Ostaci gata datirani u Augustovo doba na položaju Lungomare Vanvitelli* (Soprintendenza Beni Archeologici Marche, 1999; DIA 284525)

Casa del Capitano, through via Loggia and via Papa Giovanni XXIII to Piazza Dante Alighieri, where, for 400 m, the principal, albeit irregular, quay and platform structures were identified as running approximately parallel to the current harbour front (E of the modern harbour front) (An1, An 3, An 5, An8). Structures of stone, brick and concrete found in Lungomare Vanvitelli (Casa del Capitano) illustrate the ancient port alignment and convey an overall impression of the form of the Roman port, also attesting that limited geomorphological changes, such as erosion, have affected the site which still lies in this area. The extension from the Arsenale (Banchina Nazario Sauro) area marks the continuity of the quay – mole line, which was most likely related to Trajan's reinforcement (An4, An10). Lungomare Vanvitelli has been interpreted as a central area of Ancona's port since it was the site of a quay, platform, docking points and an intersection with the jetty, as well as buildings such as warehouses.

400 m glavnih, iako nepravilnih objekata – gata i platforme – koji su se protezali otprilike paralelno s današnjom lučkom obalom (istočno od suvremene lučke obale) (An1, An3, An5, An8). Objekti od kamena, opeke i betona otkriveni na lokaciji Lungomare Vanvitelli (Casa del Capitano) ukazuju na razmještaj antičke luke i daju općenitu predodžbu o obliku rimske luke, potvrđujući i da su na lokalitet koji se još uvijek nalazi na tom području u ograničenoj mjeri utjecale geomorfološke promjene kao što je erozija. Produžetak od područja Arsenala (Banchina Nazario Sauro) čini kontinuitet gata – liniju mola koja je vjerojatno bila povezana s ojačanjima iz Trajanova doba (An4, An10). Lungomare Vanvitelli je interpretiran kao središnji dio luke s obzirom na to da su se tamo nalazili gat, platforma, privezišta i križanje s molom, kao i građevine kao što su skladišta.

## MOLE(S)

A sector of the main mole, the so-called 'Trajan's mole', which was built by exploiting part of the seafront embankment, has also been identified in the building named Casa del Capitano. The mole extended beyond the arch and was directly linked to the rocky portion of land (An7). As explored above, this sector which ran from Casa del Capitano to the Arsenale, provides evidence of the quay structures; in fact, this is also the area of the quay's terminus, and it was connected with the mole that began approximately in this sector. Along this section, towards the arch, the whole platform, now known as Banchina Nazario Sauro, contains the remains of the Trajanic mole.<sup>39</sup> Fieldwork has revealed the remains of a mole which was constructed using wooden piles (foundation, cofferdam) and an aggregate of concrete and stones. The limited archaeological evidence allows us to analyse the building techniques: the data demonstrate that these structures were assembled together, using *opus reticulatum* and *opus caementicium* techniques.<sup>40</sup> This suggests that parts of the structures date to the Imperial period (c. early 2<sup>nd</sup> century AD).<sup>41</sup> Here at Ancona, the adopted materials, rarely seen along the Adriatic, may be linked to the building method that used pozzolana mortar (buildings were constructed with rubble and ashlar blocks) and wood (beams) for the cofferdams, which allowed concrete to be placed underwater. Such construction can be noted in port structures facing the open sea, such as those at Anzio, Cosa, Caesarea Maritima and Leptis Magna.<sup>42</sup>

Due to limited access to the result of the Soprintendenza fieldwork, it is not possible to comment further on the mole. Further-

<sup>39</sup> CIL IX, 5894; M. LILLI, 1997, 57; M. SALVINI, 2009, 537-538.

<sup>40</sup> E. GALLI, 1936, 321-336.

<sup>41</sup> M. SALVINI, 2009, 544-546.

<sup>42</sup> R. BARTOCCINI, 1958, 120; A. M. McCANN, J. BOURGEOIS, 1987, 137-140; A. RABAN, 2009, 100-182; J. P. OLESON, 2014, 6-11.

## MOL(OVI)

U građevini poznatoj kao Casa del Capitano otkriven je i dio glavnoga mola, takozvani „Trajanov mol”, koji je izgrađen nastavljajući se na dio nasute obale. Mol se protezao iza slavloluka i bio je izravno povezan sa stjenovitim dijelom obale (An7). Kako je utvrđeno gore, taj dio, koji je prolazio od objekta Casa del Capitano do Arsenala, potvrđuje postojanje strukture gata; na tom je mjestu gat završavao, a na njega se nastavljao i otprilike na tom dijelu počinjao mol. Čitava obalna platforma duž tog dijela, prema slavoluku, danas poznata kao Banchina Nazario Sauro, sadržava ostatke Trajanova mola.<sup>39</sup> Iskapanjima su otkriveni i ostaci mola sagrađenog od drvenih stupova (temelji, pregrade) te kombinacije betona i kamena. Ograničen broj arheoloških nalaza omogućava nam analizu građevinskih tehnika: nalazi pokazuju da su građevine sastavljene primjenom tehnika *opus reticulatum* i *opus caementicium*.<sup>40</sup> To upućuje na dataciju dijelova objekata u carsko razdoblje (približno početkom 2. stoljeća).<sup>41</sup> Materijali korišteni ovdje u Anconi, kakvi se inače rijetko susreću na jadranskoj obali, mogli bi biti povezani s načinom gradnje pri kojem se rabi mort od pucolana (*pozzolana*) (objekti su građeni od građevinskog krša i klesanih kamenih blokova) i drvo (grede) za pregrade, zahvaljujući čemu je beton mogao biti pod vodom. Takav način gradnje zamjetan je na lučkim objektima okrenutima otvorenom moru na lokalitetima Anzio, Cosa, Caesarea Maritima i Leptis Magna.<sup>42</sup>

Zbog ograničenog pristupa rezultatima terenskih istraživanja Soprintendenze nije moguće iznositi daljnje komentare o molu. Osim toga, dio mola još nije u potpunosti

<sup>39</sup> CIL IX, 5894; M. LILLI, 1997, 57; M. SALVINI, 2009, 537-538.

<sup>40</sup> E. GALLI, 1936, 321-336.

<sup>41</sup> M. SALVINI, 2009, 544-546.

<sup>42</sup> R. BARTOCCINI, 1958, 120; A. M. McCANN, J. BOURGEOIS, 1987, 137-140; A. RABAN, 2009, 100-182; J. P. OLESON, 2014, 6-11.

more, part of this mole has not yet been fully investigated due to the disappearance of the remains over time and its overlapping by modern structures (An4, An7, An10). Therefore, the extent of the area of the mole has been only hypothetically identified. However, considering the presence of the arch, as well as the location and form of the rocky tongue, it might have run for roughly 300 m or so in the sector west of the arch that faces towards the open sea. Earlier fieldwork suggests that Trajan's mole is perhaps not the only one. A secondary mole might have been built on the southern side of this harbour over part of the Scogli Santa Lucia, which stretched towards the open sea for around 100 m, in the area of the Lazzaretto (An13).<sup>43</sup> However, owing to the limitations of fieldwork here and the lack of reliable archaeological evidence, little can be said with any certainty.<sup>44</sup> For Trajan's mole, and the Lazzaretto structure, an assessment of the real dimensions is challenging.

## LIGHTHOUSE

Archaeological evidence does not permit us to identify the lighthouse. Scholars argue that, around the end of the 3<sup>rd</sup> century BC, the area where the Temple of Venus was located assumed this function.<sup>45</sup> A structure built along the top of Colle Guasco on the top promontory would theoretically have provided a means of signalling to sailors entering the harbour (An14). Promontories facing the sea could have hypothetically signalled the presence of the harbour, as in other similar ports in the Marche (e.g. Cupra Marittima, Santa Marina Alta at Pesaro),<sup>46</sup> or, as along the Tyrrhenian coast (e.g. the promontory of Capo Circeo), where a tower, standing upon the hill, marked

sti istražen s obzirom na to da su ostatci s vremenom nestali ili su preko njih izgrađeni novi objekti (An4, An7, An10). Stoga je područje prostiranja mola identificirano tek hipotetski. Međutim, s obzirom na postojanje slavoluka, kao i na lokaciju i oblik stjenovitoga rta, moguće da se prostirao oko 300 m u dijelu zapadno od slavoluka koji gleda na otvoreno more. Na temelju ranijih iskapanja može se pretpostaviti da Trajanov mol nije bio jedini. Sekundarni mol vjerojatno je bio izgrađen u južnom području luke, djelomično preko stijena Scogli Santa Lucia koje su se protezale prema otvorenom moru, dužinom od oko 100 m, na mjestu Lazareta (An13).<sup>43</sup> No, uslijed ograničenosti iskapanja u tom području, kao i nedostatka pouzdanih arheoloških dokaza, nije moguće iznositi pouzdane tvrdnje.<sup>44</sup> Što se tiče Trajanova mola i strukture Lazareta, teško je procijeniti stvarne dimenzije.

## SVJETIONIK

Nema arheoloških dokaza koji bi omogućili identifikaciju svjetionika. Znanstvenici navode da se krajem 3. stoljeća pr. Kr. objekt takve funkcije mogao nalaziti na području na kojem se nalazio Venerin hram.<sup>45</sup> Objekt izgrađen na samom vrhu uzvisine Colle Guasco teoretski je mogao poslužiti kao signalizacija pomorcima na ulasku u luku (An14). Brda okrenuta prema moru hipotetski su mogla poslužiti za označavanje postojanja luke, kao što je slučaj s drugim sličnim lukama u regiji Marche (primjerice Cupra Marittima, Santa Marina Alta u Pesaru)<sup>46</sup> ili na obali Tirenskog mora (primjerice rt Capo Circeo) gdje toranj na brijegu obilježava ulaz

<sup>43</sup> ASR, 100, 1; M. LILLI, 1997, 55.

<sup>44</sup> M. LILLI, 1997, 56.

<sup>45</sup> N. ALFIERI, 1986, 251; M. LANDOLFI, 1992, 25; S. SEBASTIANI, 1996, 30; L. PANI ERMINI, 2003, 94-115.

<sup>46</sup> L. QUILICI, 1992, 410; M. LILLI, 1995, 39-41.

<sup>43</sup> ASR, 100, 1; M. LILLI, 1997, 55.

<sup>44</sup> M. LILLI, 1997, 56.

<sup>45</sup> N. ALFIERI, 1986, 251; M. LANDOLFI, 1992, 25; S. SEBASTIANI, 1996, 30; L. PANI ERMINI, 2003, 94-115.

<sup>46</sup> L. QUILICI, 1992, 410; M. LILLI, 1995, 39-41.

the entrance into the port.<sup>47</sup> If this hypothesis is valid, the site of Colle dei Cappuccini may have hosted such a structure, since it was the location where the lighthouse was rebuilt by Pope Pius IX in 1859,<sup>48</sup> even though no evidence from this area reveals the presence of an ancient building.

## URBAN SETTING: PORT BUILDINGS

Roman Ancona was planned differently from many other Roman Adriatic cities, such as Aquileia, Ravenna, Rimini, because it had a hilly landscape that impeded its arrangement following the *cardo – decumanus* scheme. The Guasco, Cappuccini and Cardeto hills enclose the urban centre and its port in a narrow space. Here, the main *decumanus* extends from the waterfront towards the hinterland: the modern Corso Matteotti, which lies above via Amendola, marks the development of the *decumanus* road, and several small *cardi* partially exploited the hill space and traversed the main *decumanus*. The port occupies a small sector of the city: the waterfront is taken up by the quay, mole and warehouse buildings, and in the area between the seafront and urban centre, *domus* and storage buildings attest to the close connections between the port and city. These structures further support our interpretation of the presence of a well-established port which reached its zenith in the 2<sup>nd</sup> century AD. During this period, the restoration of the port affected the wider urban landscape of Ancona, making the port and city a continuous complex of structures.<sup>49</sup> In order to understand more fully this context, it is necessary to explore the buildings and analyse their connections with the port.

As established by the *Soprintendenza* field-

u luku.<sup>47</sup> Ako je ta hipoteza točna, moguće da se takav objekt nalazio na lokalitetu Colle dei Cappuccini s obzirom na to je na tom mjestu papa Pio IX. dao ponovno izgraditi svjetionik 1859.,<sup>48</sup> iako nema dokaza s tog područja koji bi ukazivali na postojanje antičkog zdanja.

## URBANO PODRUČJE: LUČKE GRAĐEVINE

Plan rimske Ancone razlikovao se od plana mnogih drugih rimskih gradova na Jadranskom kao što su Akvileja, Ravenna ili Rimini s obzirom na brdoviti reljef koji je onemogućio razmještaj u odnosu na kardo i dekuman. Brda Guasco, Cappuccini i Cardeto ograničavaju uzani prostor urbane jezgre i pripadajuće luke. Ovdje se glavni dekuman prostire od obale prema unutrašnjosti: ulica Corso Matteotti, koja prolazi iznad ulice Via Amendola, prikazuje razvoj dekumana, dok se nekolicina manjih karda dijelom proteže obroncima križajući se s glavnim dekumanom. Luka zauzima manju površinu grada: na obali su se smjestili gat, mol i skladišni objekti, dok *domus* i spremišta, raspoređeni u dijelu između obale i urbane jezgre, svjedoče o tijesnoj povezanosti luke i grada. Te strukture idu u prilog našem tumačenju postojanja već uhodane luke koja je svoj vrhunac doživjela u 2. stoljeću po Kr. Obnavljanje luke tijekom tog razdoblja utjecalo je na širi urbani krajobraz Ancone, preobrazivši luku i grad u povezani kompleks građevina.<sup>49</sup> Radi boljeg razumijevanja konteksta potrebno je istražiti građevine i raščlaniti njihove veze s lukom.

Kako je utvrđeno u iskapanjima koja je predvodila *Soprintendenza*, razmještaj skladišta i trgovina usko je povezan s lučkim objek-

<sup>47</sup> B. GIARDINA, 2010, 91.

<sup>48</sup> A. ATTI, 1864.

<sup>49</sup> E. GALLI, 1936, 321-336; N. ALFIERI, 1983, 9-34.

<sup>47</sup> B. GIARDINA 2010, 91.

<sup>48</sup> A. ATTI, 1864.

<sup>49</sup> E. GALLI, 1936, 321-336; N. ALFIERI, 1983, 9-34.



FIGURE 6 *Remains of port buildings, e.g. storage spaces, Piazza Dante Alighieri* (Soprintendenza Beni Archeologici Marche, 1999; DIA 293678)

SLIKA 6. *Ostaci lučkih građevina, primjerice spremišta, Piazza Dante Alighieri* (Soprintendenza Beni Archeologici Marche, 1999; DIA 293678)

work, the arrangement of warehouses and stores is closely connected with the port structures. From the time Trajan's jetty was rebuilt to guarantee better shelter for the ships docking in the port, the overall plan was adjusted to provide for the construction of warehouses and other facilities that improved the commercial capacity of the harbour and supplied the needs of the larger city. Moreover, the cisterns and dry docks in proximity to the waterfront (dated to the early 2<sup>nd</sup> century AD) suggest that quasi-industrial, e.g. ship-repairing, watering, and commercial activities were carried out in and around the port area.<sup>50</sup>

Port structures (oriented N–S) dated to the early 2<sup>nd</sup> century AD, and thus perhaps related to Trajan's restoration, were identified as warehouses, stores and commercial buildings, in an area running from the current Istituto Nautico

tima. Od vremena rekonstrukcije Trajanova mola koji je osigurao bolji zaklon za brodove privezane u luci, cjelokupni projekt prilagođen je kako bi se omogućila izgradnja skladišta i drugih građevina kojima se poboljšao trgovački kapacitet luke, istodobno zadovoljavajući potrebe većega grada. Osim toga, cisterne i suhi vezovi u blizini obale (datirani u početak 2. stoljeća po Kr.) upućuju na to da su se u samoj luci, kao i u okolnom području, obavljale kvaziindustrijske djelatnosti kao što su popravci brodova, opskrba vodom i trgovačke aktivnosti.<sup>50</sup>

Lučki objekti (orijentirani S–J) datirani na početak 2. stoljeća po Kr. te stoga vjerojatno povezani s Trajanovom obnovom prepoznati su kao skladišta, trgovine i trgovačke građevine smještene u području od današnjeg Istituto Nautico na Lungomare Vanvitelli, preko ulice

<sup>50</sup> S. SEBASTIANI, 1996, 38.

<sup>50</sup> S. SEBASTIANI, 1996, 38.



at Lungomare Vanvitelli, passing via Giovanni XXIII, Piazza Dante Alighieri and Arco Rusi towards via Santa Maria della Piazza (N–S) (Fig. 6).<sup>51</sup>

Moving from N to S, these port buildings may be identified as follows (An2–12):

– (An8) Five rectangular and vaulted warehouses at Casa del Capitano (Lungomare Vanvitelli), arranged on two floors and following the vaulted structures of the main quay, were built with brickwork and *opus reticulatum* walls and extended towards the seafront.<sup>52</sup> The building techniques adopted and the presence of *opus mixtum* indicate that these structures should probably be interpreted as part of the port renovation during the Imperial period (early 2<sup>nd</sup> century AD). In some of these warehouses, evidence of the addition of clay pipes for drainage (for the regulation of the hydraulic system which was probably planned to limit the slope's erosion in proximity to the port area) can be noted;

– (An6, An 11) Five rooms were observed between Lungomare Vanvitelli and via Giovanni XXIII. These structures, which are rectangular in shape and arranged perpendicular to the coastline, contain the remains of brick walls, and walls built in *opus quadratum* (limestone blocks). The structure, which also shows evidence of a portico, has been dated to the early 2<sup>nd</sup> century AD through stratigraphic analysis and has been identified as a warehouse for the storage of goods.<sup>53</sup> However, due to their location and size (each room is 16.50 x 5.25 m), the rooms may have been built for other purposes. This site has assumed particular value in the research of the port because similar buildings have been found at Palazzo Angeli (N of the Piazza Dante Alighieri), which contain not only the remains of the quay but also brick structures that should be interpreted as ware-

Via Giovanni XXIII, trga Piazza Dante Alighieri i luka Arco Rusi prema ulici Via Santa Maria della Piazza (S–J) (Sl. 6.).<sup>51</sup> Od sjevera prema jugu moguće je identificirati sljedeće lučke objekte (An2–12):

– (An8) pet pravokutnih i presvođenih skladišta kod lokaliteta Casa del Capitano (Lungomare Vanvitelli), koji su raspoređeni na dva kata i prate presvođene građevine glavnoga gata. Izgrađene su od opeke, sa zidovima u tehnici *opus reticulatum*, proširujući se prema obali.<sup>52</sup> Primijenjene tehnike građenja i upotreba tehnike *opus mixtum* upućuju na to da bi ove objekte vjerojatno trebalo interpretirati kao dio obnove luke u carskom razdoblju (početkom 2. stoljeća). U jednom dijelu tih skladišta uočljivi su tragovi dodatnih terakotnih drenažnih cijevi (za regulaciju hidrauličkog sustava čija je namjena vjerojatno bila ublažiti eroziju na obroncima u blizini područja luke);

– (An6, An 11) zamijećeno je pet prostorija između Lungomare Vanvitelli i ulice Via Giovanni XXIII. Te strukture pravokutnog oblika, raspoređene okomito na obalu, sadržavaju ostatke zidova od opeke i zidova građenih tehnikom *opus quadratum* (od vapnenačkih blokova). Građevina na kojoj su vidljivi i tragovi portika stratigrafskom analizom datirana je na početak 2. stoljeća po Kr. te je prepoznata kao skladište za čuvanje dobara.<sup>53</sup> Međutim, sudeći po njihovoj lokaciji i veličini (površina svake prostorije je 16,50 x 5,25 m) moguće je da su prostorije imale neku drugu namjenu. Lokalitet se smatra osobito vrijednim u okviru istraživanja luke s obzirom na to da su u Palazzo Angeli (sjeverno od trga Piazza Dante Alighieri) otkrivene slične građevine koje sadržavaju ne samo ostatke gata, nego i objekte od opeke koje bi trebalo interpretirati kao skladišta, a datirane su u Trajanovo doba te obnovljene u

<sup>51</sup> S. SEBASTIANI, 1996, 42-47; SBAM, 2000; M. SALVINI, 2009, 532-545.

<sup>52</sup> SBAM, 1984, n. 03/59.

<sup>53</sup> S. SEBASTIANI, 1996, 47; M. LILLI, 1997, 63-74; M. SALVINI, 2009, 548.

<sup>51</sup> SBAM, 2000; S. SEBASTIANI, 1996, 42-47; M. SALVINI, 2009, 532-545.

<sup>52</sup> SBAM, 1984, br. 03/59.

<sup>53</sup> S. SEBASTIANI, 1996, 47; M. LILLI, 1997, 63-74; M. SALVINI, 2009, 548.

houses: these are dated to the Trajanic period and were restored during the Antonine period (An9);

– (An3) Further buildings (stores?) were identified during the 1950s, when several remains of Roman structures came to light directly in front of the headquarters of the Guardia di Finanza (close to Casa del Capitano) and near Arco Russi.<sup>54</sup> Later on, in the area along the current quay (Banchina Nazario Sauro), the remains of walls that formed square and rectangular rooms were identified (An2).

– (An12) Further undefined buildings along the waterfront (again Lungomare Vanvitelli at Santa Maria della Piazza) provide archaeological evidence for two rooms that contained the remains of a colonnade and also mosaics and frescos, which may be datable to the Trajanic period.<sup>55</sup> However, doubts still exist about the correct chronology of these buildings. They might have functioned as reception spaces, hypothetically as part of a wider group of administrative offices near the port area;

– (An5) A Roman building that contained remains of rooms and their foundations, and also part of a columned peristyle, was discovered along the Lungomare Vanvitelli (in the 1960s) during the restoration of the church of Santa Maria della Piazza, where other walls were also found. The building stretched towards the sea.<sup>56</sup> The presence of masonry structures (brick and stone blocks) along via della Loggia, very close to Santa Maria, was also noted. These two sites probably mark the southern end of the quay line, as well as the port facilities.

Evidence of the structures here is particularly rich compared to other Adriatic sites, including Aquileia, Ravenna and Rimini; however, our understanding of the buildings is still fragmentary because, together with the lack of

doba Antonina (An9);

– (An3) daljnje građevine (spremišta?) identificirane su 50-ih godina 20. stoljeća kad je neposredno ispred zgrade u kojoj se nalazi sjedište današnje financijske inspekcije, Guardia di Finanza (pored lokaliteta Casa del Capitano) i u blizini Arco Russi otkriveno nekoliko ostataka rimskih objekata.<sup>54</sup> Kasnije su u području uz današnji gat (Banchina Nazario Sauro) otkriveni ostaci zidova koji su tvorili kvadratične i pravokutne prostorije (An2);

– (An12) ostale nedefinirane građevine uz obalu (opet uz Lungomare Vanvitelli kod crkve Santa Maria della Piazza) arheološka su potvrda postojanja dviju prostorija koje su sadržavale ostatke kolonade, kao i mozaika i fresaka, koje bi se moglo datirati u Trajanovo doba.<sup>55</sup> Međutim, još je upitna točna kronologija tih građevina. Moguće je da su služile kao prostorije za prihvata, hipotetski kao dio šire skupine administrativnih prostorija u blizini područja luke;

– (An5), u sklopu radova na restauraciji crkve Santa Maria della Piazza, lokaliteta na kojem su pronađeni i drugi zidovi, 60-ih godina 20. stoljeća otkrivena je uz Lungomare Vanvitelli rimska građevina koja je sadržavala ostatke prostorija i njihovih temelja te dio peristila. Građevina se prostirala prema moru.<sup>56</sup> Zabilježeno je i postojanje kamenih struktura (blokova od opeke i kamena) uz ulicu Via della Loggia, veoma blizu crkve Santa Maria. Ta dva lokaliteta vjerojatno označavaju južni kraj linije gata, a time i lučkih objekata.

Dokazi postojanja građevinskih objekata ovdje su osobito bogati u usporedbi s drugim jadranskim lokalitetima, uključujući Akvileju, Ravenu i Rimini; međutim, naša saznanja o građevinama i dalje su fragmentarna s obzirom na to da je, osim što nalazi nisu objavljivani, bilo i puno naknadne gradnje. Trajno

<sup>54</sup> M. SALVINI, 2009, 549; ASAM, 1966–67, N. 02/62.

<sup>55</sup> G. ANNIBALDI, 1953, 262; S. SEBASTIANI, 1996, 46; ASAM, 2000; M. SALVINI, 2009, 540.

<sup>56</sup> ASAM, 1966–1967.

<sup>54</sup> M. SALVINI, 2009, 549; ASAM, 1966–1967, br. 02/62.

<sup>55</sup> G. ANNIBALDI, 1953, 262; S. SEBASTIANI, 1996, 46; ASAM, 2000; M. SALVINI, 2009, 540.

<sup>56</sup> ASAM, 1966–1967.

publications, there has been much rebuilding. Continued occupation and geomorphological processes, including coastal change, have modified the setting of these remains.<sup>57</sup> Nonetheless, some of the evidence is still distinguishable in Ancona. These structures were likely planned for commercial purposes, as attested by the continued use of part of these facilities at least until the 17<sup>th</sup> century.<sup>58</sup> The structures, which seem to have been developed primarily for the storage of goods and materials, probably facilitated transshipment operations. They were probably completed around the Trajanic period and had their pivotal centre around the port complex, can be seen in most detail in the area known as Istituto Nautico (N side, An2) and the area around Palazzo Anziani in Piazza Stracca (S side, An9).

General insights into these structures allow us to propose that the Guardia Costiera building, on the southern side of Arco Russi, marks the continuation of the port area, as remains of brick warehouse complexes, supported with vaults and with dimensions that are common for this type of building, can be identified (An3). Moreover, these structures were developed across two floors, as visible in Casa del Capitano, and were also provided with a portico of columns, as in the structures of Palazzo degli Anziani. Casa del Capitano's structures seem to be linked with the remains under the Istituto Nautico (An2), which suggests the location of a long line of stores. In most of these structures, evidence of the building techniques used, such as *opus reticulatum* and *mixtum* that date to the Imperial period, indicate Trajanic restoration.<sup>59</sup> This suggests that the enlargement of the port facilities in Ancona reached its peak during the mid-Imperial period, although further work was undertaken in later phases.<sup>60</sup> The front line of the warehouses, as

naseljavanje u kombinaciji s geomorfološkim procesima, uključujući i izmjene obale, modificiralo je okruženje u kojem su se nalazili spomenuti ostatci,<sup>57</sup> ali unatoč tome, u Anconi se oni još uvijek razaznaju. Zgrade su vjerojatno imale trgovačku namjenu, čemu u prilog govori i činjenica da je dio objekata bio u uporabi najmanje do 17. stoljeća.<sup>58</sup> Ti objekti, koji su, po svemu sudeći, izgrađeni u prvome redu da bi se u njima čuvali roba i materijali, vjerojatno su olakšavali prekrcaj. Detalji građevina čija je izgradnja vjerojatno okončana u doba Trajana i čije je središte bilo u neposrednoj blizini lučkog kompleksa moguće je vidjeti na lokalitetu Istituto Nautico (sjeverna strana, An2) te unutar Palazzo Anziani na trgu Piazza Stracca (južna strana, An9).

Na temelju općeg uvida u te građevine možemo pretpostaviti da zgrada obalne straže, Guardia Costiera, južno od Arco Russi, označava nastavak područja luke, s obzirom na to da su prepoznatljivi ostaci skladišnih kompleksa od opeke poduprtih svodovima, dimenzija uobičajenih za ovu vrstu građevina (An3). Nadalje, građevine su izgrađene na dva kata, kako vidimo na Casa del Capitano, a imale su i trijem, kao što je slučaj s Palazzo degli Anziani. Čini se da je Casa del Capitano povezana s ostacima otkrivenima ispod instituta Istituto Nautico (An2), upućujući na lokaciju dugog niza skladišta. Na temelju tehnika gradnje kao što su *opus reticulatum* i *opus mixtum* većinu objekata moguće je datirati u carsko razdoblje, ukazujući na vjerojatnu obnovu u Trajanovo doba.<sup>59</sup> To upućuje na zaključak da je proširenje lučkih objekata Ancone doseglo vrhunac u srednjem carskom razdoblju, iako su daljnji radovi izvođeni i u kasnijim fazama.<sup>60</sup> Moguće je da se prvi red

<sup>57</sup> S. SEBASTIANI, 1996, 45-65; M. SALVINI, 2009, 547-550.

<sup>58</sup> S. SEBASTIANI, 1996, 45-54.

<sup>59</sup> G. LUGLI, 1957, 515; F. C. GIULIANI, 1990, 181.

<sup>60</sup> Procop., *Goth.* 2.11.4; 2.13.5; 3.30.17; N. ALFIERI, 1977, 93; G. SCHMIEDT, 1978, 216; N. ALFIERI, 1983, 29.

<sup>57</sup> S. SEBASTIANI, 1996, 45-65; M. SALVINI, 2009, 547-550.

<sup>58</sup> S. SEBASTIANI, 1996, 45-54.

<sup>59</sup> G. LUGLI, 1957, 515; F. C. GIULIANI, 1990, 181.

<sup>60</sup> Prokop., *Goth.* 2.11.4; 2.13.5; 3.30.17; N. ALFIERI, 1977, 93; G. SCHMIEDT, 1978, 216; N. ALFIERI, 1983, 29.

also evidenced by some antiquarian evidence that confirms their continued use over time, may have extended beyond the area of Santa Maria della Piazza (An12).<sup>61</sup> The development of these buildings after the Trajanic period along the port's front line receives further support from the presence of a paved route-way which probably flanked via della Loggia, via Saffi and Lungomare Vanvitelli. This marks the space of the port site in proximity to the quay, allowing us to recognise this sector as one area where loading and unloading operations were probably carried out (An5).<sup>62</sup>

## CONCLUSIONS

The crescent-shaped harbour of Ancona exploited the rocky seafront, and a quay (c. 400–500 m long) was established. The structures were extended by the addition of a mole (c. 300 m long) which was used to anchor ships and allowed men to disembark and goods to be unloaded. Further docking places were probably located all along the quay to guarantee easier access to the harbour, the more efficient delivery of goods, and to facilitate the connections with the stores and the port facilities. Hypothetically, a southern mole, located along the Lazzaretto, may have served as an additional landing place (c. 100 m long), although there is little evidence of this sector. As yet, no direct evidence attests to the location of the lighthouse.

The port and city at Ancona were built following the slope of the hill. The improvements undertaken in the Trajanic period not only meant that the port was provided with buildings such as stores and warehouses, but perhaps also private *domus* located in proximity to the waterfront. The maritime façade at Ancona is a monumental work, especially the

skladištâ, potvrđen i određenim antikvarnim dokazima koji upućuju na njihovu kontinuiranu upotrebu tijekom vremena, prostirao i dalje od područja crkve Santa Maria della Piazza (An12).<sup>61</sup> Nadalje, na razvoj tih građevina uz lučku obalu nakon Trajanova doba upućuje postojanje popločenoga puta koji je vjerojatno pratio ulice Via della Loggia, Via Saffi i Lungomare Vanvitelli. Time je obilježen i prostor luke u blizini gata, omogućivši nam da taj dio prepoznamo kao područje u kojem su se vršili ukrcaj i iskrcaj (An5).<sup>62</sup>

## ZAKLJUČCI

Pri izgradnji luke Ancone koja je imala oblik polumjeseca iskorištena je stjenovita obala te je izgrađen gat dužine oko 400–500 m. Objekti su prošireni dodavanjem mola dužine oko 300 m koji je služio za privez brodova i iskrcaj putnika i dobara. Vjerojatno je duž čitavog gata bilo još pristaništa koja su omogućavala jednostavniji pristup luci, učinkovitiju isporuku dobara i bolju povezanost između spremišta i lučkih objekata. Mogući južni mol smješten uz Lazaret mogao je služiti kao dodatno pristanište (dužine oko 100 m), iako je tek mali broj nalaza iz ovog dijela luke. Zasad nema izravnih dokaza koji bi potvrdili lokaciju svjetionika.

Luka i grad Ancona izgrađeni su slijedeći reljef obronaka okolnih brda. Poboljšanja provedena u Trajanovo doba omogućila su opremanje luke građevinama poput spremišta i trgovina, a moguće da je tada u blizini obale izgrađen i *domus*. Obalno pročelje Ancone monumentalno je djelo, osobito objekti gata i mola te Trajanov slavoluk. Slavoluk je zacijelo pojačavao vizualni dojam u kombinaciji s vizurom gata i lučkih objekata. Upravne prostorije i spremišta smješteni su podalje

<sup>61</sup> A. LEONI, 1810; M. LILLI, 1997, 65; M. SALVINI, 2009, 548.

<sup>62</sup> M. SALVINI, 2009, 547–553.

<sup>61</sup> A. LEONI, 1810; M. LILLI, 1997, 65; M. SALVINI, 2009, 548.

<sup>62</sup> M. SALVINI, 2009, 547–553.

quay and mole structures and the Arch of Trajan. The visual impact here would have been made all the greater by the presence of the arch and the monumental quay line with the port facilities. The administrative and storage spaces are located further from the seafront;<sup>63</sup> these structures are also visible in some Tyrrhenian ports, such as Centumcellae, Ostia and Terracina, and are a sign of economic value and the cities' links with road networks, which connected the harbour, commercial centre and urban contexts.<sup>64</sup>

In part, the amphitheatre, which is also situated between Colle Guasco and Cappuccini, and above all the Temple of Venus, located at the top of Colle Guasco, would have had an impact on the visitor's view of the city, especially sailors and mariners entering the port (An15).<sup>65</sup> It should be noted that the particular difficulties posed by geomorphological conditions most likely prompted planners to adapt the buildings to the natural rocky, hilly environment. The notable number of port buildings and facilities along the seafront and the vital role they played in a narrow space between the port and its surrounding hills may have led planners to dedicate this area to warehouses, stores and facilities, and the area between the amphitheatre and along the cardus road to private accommodation, some of which would have been owned by people involved in port activities.

### ***The construction of Ancona's port: agents and sponsorships***

In terms of agents responsible for the construction of port structures, major Adriatic harbours including Aquileia, Ravenna and Ancona must have required, at least during the phases of renovation and consolidation in the early Imperial period, a large number

od obale;<sup>63</sup> te su građevine vidljive i u nekim tirenskim lukama, primjerice Centumcellae, Ostia i Terracina, te su znak gospodarske vrijednosti grada, kao i povezanost luke, trgovačkog središta i urbane cjeline cestovnom mrežom.<sup>64</sup>

Amfiteatar koji se također nalazio između brda Colle Guasco i Cappuccini, a ponad svega Venerin hram koji se smjestio na samome vrhu brda Colle Guasco, imali su važno mjesto u vizuri grada kakva se pružala posjetiteljima, osobito mornarima i pomorcima pri ulasku u luku (An15).<sup>65</sup> Valja istaknuti kako su specifični problemi izazvani geomorfološkim datostima zacijelo ponukali projektante da građevine prilagode prirodnom stjenovitom i brdovitom okruženju. Moguće je da su značajan broj lučkih objekata i građevina uz obalu te ključna uloga koju su oni imali na uskom prostoru između luke i okolnih brda naveli projektante da ovo područje popune skladištima, spremištima i gospodarskim objektima, a područje između amfiteatra i duž karda privatnim smještajnim objektima, od kojih su neki vjerojatno bili u vlasništvu ljudi koji su sudjelovali u lučkim aktivnostima.

### ***Izgradnja luke Ancone: izvođači i ulagači***

Kad je riječ o izvođačima zaslužnima za izgradnju lučkih objekata, na radovima u najvećim jadranskim lukama, uključujući Akvileju, Ravenu i Anconu, mora da je – osobito u fazi renovacije i konsolidacije u ranocar-skom razdoblju – bio angažiran velik broj inženjera i radnika. Nisu dostupni izravni dokazi koji bi nam omogućili potpuni uvid u identitet tih ljudi i napore koje je bilo potrebno uložiti u izgradnju jadranskih luka, iako ikonografski i epigrafski podaci upućuju na to da je, barem kad je riječ o Anconi,

<sup>63</sup> S. SEBASTIANI, 1996, 51-84.

<sup>64</sup> S. BASTIANELLI, 1954, 36; O. TESTAGUZZA, 1964, 54; O. TESTAGUZZA, 1970, 187; L. QUILICI, 1993, 63.

<sup>65</sup> N. ALFIERI, 1938, 49-50; M. MORETTI, 1945, 61-70.

<sup>63</sup> S. SEBASTIANI, 1996, 51-84.

<sup>64</sup> S. BASTIANELLI, 1954, 36; O. TESTAGUZZA, 1964, 54; O. TESTAGUZZA, 1970, 187; L. QUILICI, 1993, 63.

<sup>65</sup> N. ALFIERI, 1938, 49-50; M. MORETTI, 1945, 61-70.

of engineers and workers. There is no direct evidence available which allows us to understand fully the identity of these people and the precise scale of effort needed to construct Adriatic harbours, although iconographic and epigraphic evidence may suggest that, at least in Ancona, the emperor directly intervened by sponsoring the building of the harbour.<sup>66</sup> It would be dangerous to propose that there was overall, direct imperial intervention related to the construction of Adriatic ports in general, though some archaeological evidence, such as at Ravenna and Ancona, is linked to the Claudian and Trajanic periods.<sup>67</sup> Apart from the evidence from Ancona, which clearly indicates the investment of the emperor in the renovation works, there are few references to sponsors, engineers, builders or customers of the facilities, though Imperial intervention seems plausible (for instance, Claudius' intervention at Ravenna).<sup>68</sup> The seat of the Roman navy at Ravenna, together with the considerable number of guilds and corporations of workers in the Northern Adriatic, implies a large imperial-sponsored workforce that may have been exploited or employed for the consolidation and renovation of the port facilities.<sup>69</sup> Only Aquileia would have had local agents, e.g. magistracies, as is partly suggested by the sparse epigraphic evidence, including that from Aquileia and Parentium, in the inscriptions of Eutyches and Abudius Verus respectively.<sup>70</sup>

The literary and historical evidence is mostly silent on those who generally played a role in planning and building the port facilities, apart from two inscriptions that mention *caementa-*

uključen bio sâm car, ulažući u izgradnju luke.<sup>66</sup> Bilo bi presmjelo tvrditi da je posrijedi bila sveobuhvatna izravna carska intervencija u izgradnju jadranskih luka općenito, iako je dio arheoloških nalaza, primjerice u Raveni i Anconi, povezan s razdobljem Klaudija i Trajana.<sup>67</sup> Osim nalaza iz Ancone koji nedvojbeno ukazuju na carevo ulaganje u radove na obnovi, tek se na nekoliko mjesta upućuje na sponzore, inženjere, graditelje ili korisnike objekata, iako se pretpostavka o carskoj intervenciji doimlje održivom (primjerice Klaudijeva intervencija u Raveni).<sup>68</sup> Stožer rimske mornarice u Raveni, kao i značajan broj cehovskih i radničkih udruženja sjevernog Jadrana, vjerojatno je činila i mnogoljudna radna snaga koju je financiralo Carstvo i koja je vjerojatno korištena ili angažirana na konsolidaciji i obnovi lučkih objekata.<sup>69</sup> Jedino je Akvileja, čini se, imala lokalne izvođače, odnosno magistrare, na što dijelom upućuju rijetki epigrafski nalazi, među kojima su oni iz Akvileje i Parentija na natpisima Eutiha, odnosno Abudija Vera.<sup>70</sup>

O onima koji su općenito bili važni u projektiranju i izgradnji lučkih objekata u književnim i povijesnim izvorima uglavnom nema spomena, uz iznimku dvaju natpisa u kojima se spominju *caementarii* mizenske flote, datiranih u 1., odnosno 2. stoljeće po Kr.<sup>71</sup> Oni vjerojatno upućuju na postojanje arhitekta/inženjera koji radi s betonom ili je specijalist za betonske strukture pod morem i sudjelovao je u izgradnji vojne luke.<sup>72</sup> Sličan podatak uočen je i kad je riječ o Mizenumu te

<sup>66</sup> CIL IX, 5894; S. FRANZOT, 1999, 76-77.

<sup>67</sup> M. MAIOLI, 1990, 375-414; M. SALVINI 2009, 555-560.

<sup>68</sup> CIL IX, 10.

<sup>69</sup> P. GIACOMINI, 1990, 321-362.

<sup>70</sup> G. BRUSIN, 1934, 80; C. ZACCARIA, 2012, 49-66; AE 1934, 234 (*stationes utrasque emporii ex commodiis suis ampliavit et restituit*); CIL V, 328 (*molis exstructibus*); CIL V, 1008 (about via Annia, at Aquileia: *monumentum fieri iussit ea pecunia decreto decurionum viae stratae sunt ab Annia ad murum*).

<sup>66</sup> CIL IX, 5894; S. FRANZOT, 1999, 76-77.

<sup>67</sup> M. MAIOLI, 1990, 375-414; M. SALVINI, 2009, 555-560.

<sup>68</sup> CIL IX, 10.

<sup>69</sup> P. GIACOMINI, 1990, 321-362.

<sup>70</sup> G. BRUSIN, 1934, 80; C. ZACCARIA, 2012, 49-66; AE 1934, 234 (*stationes utrasque emporii ex commodiis suis ampliavit et restituit*); CIL V, 328 (*molis exstructibus*); CIL V, 1008 (o ulici Via Annia, u Akvileji: *monumentum fieri iussit ea pecunia decreto decurionum viae stratae sunt ab Annia ad murum*).

<sup>71</sup> J. P. OLESON, 2014, 34.

<sup>72</sup> CIL X, 3414, 3479; J. P. OLESON, 2014, 35-36.

*rii* of the fleet of Misenum, which date to the 1<sup>st</sup> and 2<sup>nd</sup> centuries AD.<sup>71</sup> These may signal the existence of an architect/engineer working in concrete or specialising in maritime concrete who was involved in the construction of the military port.<sup>72</sup> A similar figure has also been identified at Misenum and in Tunisia.<sup>73</sup> The presence of the fleet at Ravenna, together with the many *opus quadratum* and *caementicium* remains identified at the sites of Aquileia and Ancona, suggests the possible presence of advisors who may or may not have been soldiers who applied their expertise to the building of structures. Perhaps, therefore, mariners and soldiers located at Aquileia, Ravenna and perhaps Ancona as well would have potentially operated as a specialist workforce.

### ***Assessing the capacity of Ancona's port: berth widths, ships' mooring and manoeuvring***

Roman ports in the Adriatic are clearly similar in terms of scale. Their geographical context probably forced the Romans to exploit the territory by building quays to reinforce the main pre-existing riverbanks and coastlines. Coastlines and river mouths were equipped with large quays and were provided with one and sometimes two moles. These, as seen in Trieste, Ancona and perhaps Rimini, improved docking for a good number of ships and also helped disembarking and loading operations. In this scenario, most of the Adriatic ports were formed by a main quay and a curving or crescent-shaped mole that stretched out from the seafront. No evidence allows us to say whether these port basins were enclosed by further moles forming inner ports, as at Carthage, Leptis Magna and Portus. Instead, in riverine and lagoon environments, as at Aquileia and Ravenna, quays reinforced the

Tunisu.<sup>73</sup> Nazočnost flote u Ravenni te brojni ostaci objekata izgrađenih tehnikom *opus quadratum* i *opus caementicium* otkrivenih na nalazištima u Akvileji i Anconi upućuju na moguću prisutnost savjetnika – vojnika ili civila – koji su u izgradnji objekata primjenjivali svoja stručna znanja. Stoga je moguć zaključak da su mornari i vojnici smješteni u Akvileji, Ravenni te moguće i u Anconi djelovali kao specijalizirana radna snaga.

### ***Procjena kapaciteta luke Ancone: širina vèza, vezivanje brodova i brodski manevri***

Rimske luke na Jadranu nedvojbeno su slične veličine. Njihov geografski kontekst vjerojatno je prisilio Rimljane da iskoriste teritorij izgradnjom gatova kako bi ojačali glavne riječne i morske obale koje su postojale otprije. Morska obala i ušća rijeka opremljeni su velikim gatovima te jednim do dva mola. Ti su objekti, kao što je slučaj u Trstu, Anconi te možda u Riminiju, osiguravali lakši pristanak brojnim brodovima te jednostavniji iskrcaj i ukrcaj. Po tom scenariju, većina jadranskih luka sastoji se od glavnog gata i zakrivljenog mola ili mola u obliku polumjeseca koji seže daleko od obale. Nema dokaza koji bi potvrdili jesu li ti lučki bazeni bili opasani dodatnim molovima čineći unutrašnje lučice kao što je bio slučaj s Kartagom, Leptis Magnom i Portusom. Umjesto toga, na ušćima rijeka te u lagunama, primjerice u Akvileji i Ravenni, riva je ojačana gatovima, što je graditeljima omogućilo projektiranje dobro opremljenih unutarnjih luka. U slučaju Ancone, slična organizacija luke potiče na razmišljanje o mogućem broju brodova na vezu. U svrhu procjene kapaciteta luke Ancone potrebno je proučiti podatke o manevrima i vezivanju (bokom ili krmom), ali i vrste, dimenzije i gazove brodova.

Osobito velik izazov predstavlja istraživa-

<sup>71</sup> J. P. OLESON, 2014, 34.

<sup>72</sup> CIL X, 3414, 3479; J. P. OLESON, 2014, 35-36.

<sup>73</sup> CIL X, 3392; J. P. OLESON, 2014, 36.

<sup>73</sup> CIL X, 3392; J. P. OLESON, 2014, 36.



FIGURE 7 Harbour basin capacity, considering medium-sized ships, e.g. 150 tons (F. UGOLINI, 2018)

SLIKA 7. Kapacitet lučkog bazena na temelju brodova srednje veličine, primjerice 150 tona (F. UGOLINI, 2018)

main banks and allowed builders to plan well-equipped inner harbours. In the case of Ancona, similar port arrangements allow us to consider the potential number of ships docked. In order to assess the capacity of Ancona's port, it is worth exploring data on manoeuvring and mooring (side-on or end-on), but also the types, dimensions and draught of ships.

It is particularly challenging to explore the mooring and manoeuvring of ships. Our un-

nje vezivanja brodova i brodskih manevara. Naša saznanja o načinu vezivanja brodova krmom ili bokom ograničena su. Valja napomenuti da brodovi nisu u svim jadranskim lukama (primjerice u Akvileji) mogli pristajati pramcem, iako je za vezivanje bokom na gat potrebna veća širina vèza. Ipak je vjerojatnije da su se vezivali bokom. Nalazi reljefa u Portusu, Salernu i Torloniji, ali i mozaika u Ostiji na lokalitetu Piazzale delle



derstanding of whether ships moored end-on or side-on to the quay is provisional. It should be noted that boats could not dock stern-first in all Adriatic ports (e.g. Aquileia), although mooring side-on to the quay required greater berth width. Still, it is more likely that they moored side-on. Evidence from the Portus, Salerno and Torlonia reliefs, but also from the mosaic at Ostia, Piazzale delle Corporazioni, which depict the activities of the *saccarii*, provides insights into the loading and unloading operations carried out at harbour quays (Fig. 7).<sup>74</sup> This evidence, which is mainly related to Latium and Campania, dates to the 1<sup>st</sup> and 3<sup>rd</sup> centuries AD and clearly indicates that cargo ships were moored by adopting two methods of mooring along the quay: side-on and end-on. Iconographic evidence from the Imperial period suggests the broad adoption of these berthing techniques. Prevalently, the evidence depicts mooring end-on, although the Salerno relief and the Torlonia relief depict mooring side-on and unloading operations. In fact, such a way of mooring made the unloading of large quantities of grain sacks easier and quicker. However, the scattering of ringed bollards, as noted at ports such as Aquileia and Ravenna, may support the hypothesis that end-on mooring was prevalent across the Adriatic.

Ancona's port, for instance, which had an overall berth width of ca 600–900 m, could have accommodated ca 65–75 ships (c. 7–8 m wide) mooring end-on to the quay. However, only 25–35 ships could have anchored side-on to the quay (e.g. using ships of the size attested to in the Cervia, Comacchio and Grado shipwrecks, which are c. 25–28 x 7–8 m). The small berth width of most of the Adriatic ports and the type of products imported and exported did not necessarily result in the use of the whole quay, as end-on mooring was sufficient for unloading materials. Scholars have recently proposed that mooring-points and bollards

Corporazioni koji prikazuje nosače (*saccarii*) pri radu, omogućavaju uvid u način na koji se obavljao ukrcaj i iskrcaj na lučkim gatovima (Sl. 7.).<sup>74</sup> Ti nalazi koji se pretežno odnose na Lacij i Kampaniju datiraju iz 1. i 3. stoljeća i nedvojbeno ukazuju na vezivanje teretnih brodova na gat na jedan od dva načina: bokom i krmom. Ikonografski nalazi iz carskog razdoblja svjedoče o širokoj primjeni tih tehnika vezivanja. Nalazi ukazuju pretežno na vezivanje krmom, iako je na reljefu iz Salerna, kao i na reljefu iz Torlonije, prikazano vezivanje bokom i istovar. Taj način vezivanja zapravo je omogućio jednostavniji i brži istovar velikih količina vreća žita. Osim toga, raširenost kamenih blokova s rupama za provlačenje konopa koji su služili kao alke za privez, karakterističnih za luke kao što su, na primjer, Akvileja i Ravenna, mogla bi ići u prilog hipotezi da je na čitavom Jadranu prevladavalo vezivanje krmom.

Tako je, primjerice, luka Ancona, čija je ukupna širina privezišta bila od 600 do 900 m, mogla prihvatiti približno 65 do 75 brodova (širine oko 7–8 m) privezanih krmom na gat. Međutim, bokom se na gat moglo privezati samo 25–35 brodova (primjerice veličine brodova iz brodoloma kod mjesta Cervia, Comacchio i Grado, koja iznosi približno 25–28 x 7–8 m). Mala širina privezišta većine jadranskih luka te vrsta uvoznih i izvoznih proizvoda nisu nužno rezultirali korištenjem čitavog gata s obzirom na to da je vezivanje krmom bilo dostatno za istovar materijala. U novije doba, znanstvenici su iznijeli teoriju da su se koristili vezovi i bitve kako bi se brodovima omogućilo sidrenje.<sup>75</sup> Brodovi su se privezivali krmom što je omogućavalo jednostavan istovar sirovina i manufakturnih proizvoda koji su se zatim pohranjivali u skladištima smještenima oko lučkog bazena. Prsteni za privezivanje, rampe i stepenice omo-

<sup>74</sup> O. TESTAGUZZA, 1970; G. BOETTO, 2009, 56; E. MARTELLI, 2013, 19.

<sup>74</sup> O. TESTAGUZZA, 1970; G. BOETTO, 2009, 56; E. MARTELLI, 2013, 19.

<sup>75</sup> M. REDDÉ, J. C. GOLVIN, 2005, 87.

were exploited to allow boats to anchor.<sup>75</sup> The ships were anchored from the stern, which permitted easy unloading of raw materials and manufactured objects, which were then stored in warehouses located around the port basin. The docking rings, but also ramps and steps, permitted anchoring using hawsers and long rope and allowed the ship to be moored at the stern.

Did ancient ships of any size have problems mooring at Ancona's port? Did these vessels, in light of their size, have easy access to mooring end-on to the quay? Studies on ancient ships clearly indicate that the draught was less than c. 1.5 m for small- and medium-sized galleys.<sup>76</sup> The *largae naves*, such as cargo ships, must have had a draught of up to 3.5 m.<sup>77</sup> These considerations on draughts allow us to understand which type of galleys moored here at Ancona and how they accomplished this mooring. Studies on the geomorphology of the Adriatic Sea during the early Imperial period demonstrate that the Northern Adriatic from Aquileia to Ancona had a sea bottom depth of between 6 and 10 m, which would have easily allowed medium-sized vessels and, although it was more challenging, perhaps big cargo ships such as those of the Herculaneum and Alexandria types to dock.<sup>78</sup> Our knowledge of the Adriatic Sea depths and the reading of the sizes and draughts of ships allow us to propose that mooring end-on to the quay was the most suitable technique and also provides an insight into the type of galleys that sailed along the Adriatic.

In this scenario, it is possible to provide a preliminary assessment of the capacity of Ancona's port that was planned following the quay-mole schema and built as an open basin rather than an inner one: taking as models the

gućavali su vezivanje debelom užadi i dugim konopima tako da se brod mogao privezivati krmom.

Jesu li antički brodovi bilo koje veličine imali problema pristajati u Anconi? Jesu li plovila, s obzirom na njihovu veličinu, mogla jednostavno pristati krmom na gat? Izučavanje antičkih brodova jasno ukazuje na to da su manje galijske, kao i galijske srednje veličine, imale gaz pliće od oko 1,5 m.<sup>76</sup> *Largae naves*, primjerice teretni brodovi, vjerojatno su imali gaz do 3,5 m.<sup>77</sup> Takva razmišljanja o dubini gaza omogućavaju nam da si predložimo galijske koje su se nalazile na vèzu ovdje u Anconi i način njihova privezivanja. Istraživanja geomorfologije Jadranskog mora u ranocar-skom razdoblju pokazuju da je dno sjevernog Jadrana, od Akvileje do Ancone, bilo duboko između 6 i 10 m, što je bilo dovoljno za pristajanje srednjih plovila, ali – iako teže – i za velike teretne brodove kao što su oni pronađeni u podmorju Herkulaneja i Aleksandrije.<sup>78</sup> Naša saznanja o dubini Jadranskog mora i literatura o veličini i gasu brodova upućuju nas na zaključak da je vezivanje krmom bila najprikladnija tehnika te pružaju uvid u vrste galijske koje su plovile Jadranom.

U svjetlu tog scenarija moguće je osigurati približnu procjenu kapaciteta luke Ancone koja je projektirana po shemi gat – mol i izgrađena kao otvoreni, a ne unutrašnji bazen: uzmemo li kao primjer brodove poput onih otkrivenih na lokacijama Comacchio, Grado, Palombina i Kyrenia (do 150 tona) ili veće trgovačke brodove poput onih čije su olupine pronađene na lokacijama Albenga i Antikythera (300 tona) kakvi su bili uobičajeni u 1. i 2. stoljeću po Kr., luka Ancona mogla je primiti otprilike 65 do 75 brodova (oko 600 x 300 m, plus 100 m?) (Sl. 7).<sup>79</sup> Procjenu

<sup>75</sup> M. REDDÉ, J. C. GOLVIN, 2005, 87.

<sup>76</sup> M. BONINO, 2000, 463.

<sup>77</sup> A. VEGGIANI, 1991, 10; S. CREMONINI, 1993, 145-171; S. CREMONINI, 1994, 1-103; G. BOETTO, 2000, 59; S. McGRAIL, 2001, 157.

<sup>78</sup> S. McGRAIL, 2001, 156.

<sup>76</sup> M. BONINO, 2000, 463.

<sup>77</sup> A. VEGGIANI, 1991, 10; S. CREMONINI, 1993, 145-171; S. CREMONINI, 1994, 1-103; G. BOETTO, 2000, 59; S. McGRAIL, 2001, 157.

<sup>78</sup> S. McGRAIL, 2001, 156.

<sup>79</sup> L. CASSON, 1971, 157; S. McGRAIL, 2001, 156; S. McGRAIL, 2008, 610; J. P. OLESON, 2014, 606-637.

Comacchio, Grado, Palombina and Kyrenia ships (up to 150 tons capacity), or the larger merchant boats such as Albenga and Antikythera (300 tons), which were common in the 1<sup>st</sup> and 2<sup>nd</sup> centuries AD, the port arrangement allowed ca 65–75 ships at Ancona (c. 600 x 300 m, plus 100 m?) (Fig. 7).<sup>79</sup> The assessment on port capacity needs further revision and would benefit from a consideration of the hypothetical docking procedure of cargo boats that carried marble and stone.<sup>80</sup> In fact, the spread of Istrian stone and marble across the Central Adriatic attests to the near certain presence of these ships in Ancona's port.

### ***The port of Ancona and its urban setting: monumental and public buildings***

In the Adriatic, among the monumental buildings situated along the waterfront, particular attention should be paid to the honorific and public structures such as arches and bridges. One of the most well-preserved monumental structures is the Arch of Trajan at Ancona.<sup>81</sup> The arch represents an important marker that attests to the setting of the mole; but this building would also have provided a monumental vista to those entering the port. This building was probably visible when approaching the port from both the south and north, since the mole stretched towards the open sea, as attested to here at Ancona; this would mean that such buildings, including the mole and related arch, constituted key elements of the marine façade. The commissioning of the building would have emphasised that the emperor was not only the main sponsor but also a patron who was dedicated to improving these infrastructures, for instance as at Portus.

Some details visible in the dedicatory in-

kapaciteta luke potrebno je dodatno revidirati te bi bilo dobro uzeti u obzir hipotetski postupak pristajanja teretnih brodova koji su nosili mramor i kamen.<sup>80</sup> Zapravo, širenje istarskog kamena i mramora diljem srednjeg Jadrana svjedoči o gotovo sigurnom pristizanju tih brodova u Anconu.

### ***Luka Ancona i njezino urbano područje: monumentalne i javne građevine***

Od monumentalnih građevina na Jadranu smještenih uz obalu osobitu pozornost valja obratiti na počasne i javne objekte kao što su slavoluci i mostovi. Jedna od najbolje očuvanih monumentalnih građevina je Trajanov slavoluk u Anconi.<sup>81</sup> Slavoluk je važan znak koji upućuje na poziciju mola, istodobno tvoreći monumentalnu vizuru svima koji ulaze u luku. Zdanje je vjerojatno bilo vidljivo pri uplovljavanju u luku s juga i sa sjevera s obzirom na to da se mol pružao prema otvorenom moru, to bi značilo da su slične građevine, uključujući mol i slavoluk, činile glavne elemente priobalnog pročelja. Car kao naručitelj gradnji mogao je biti ne samo glavni sponzor, nego i patron koji se obvezao poboljšavati cjelokupnu infrastrukturu, kao na primjer u Portusu.

Neki detalji vidljivi u posvetnom natpisu na slavoluku upućuju na važnost ove građevine, a treba istaknuti i neuobičajen način izražavanja:<sup>82</sup>

*Imp(eratori) Caesari Divi Nervae f(ilio) Nervae | Traiano optimo Aug(usto) Germanic(o) | Dacico pont(ifici) max(imo)... | ... providentissimo principi | senatus p(opuli)q(ue) R(omanus) quod accessum | Italiae hoc etiam addito ex pecunia sua | portu tutiorem navigantibus reddiderit*

Senat i narod Rima (posvećuju ovaj spo-

<sup>79</sup> L. CASSON, 1971, 157; S. McGRAIL, 2001, 156; S. McGRAIL, 2008, 610; J. P. OLESON, 2014, 606-637.

<sup>80</sup> B. RUSSELL, 2013, 209.

<sup>81</sup> N. ALFIERI, 1938; M. MORETTI, 1945; S. SEBASTIANI, 1996.

<sup>80</sup> B. RUSSELL, 2013, 209.

<sup>81</sup> N. ALFIERI, 1938; M. MORETTI, 1945; S. SEBASTIANI, 1996.

<sup>82</sup> CIL IX, 5894.

scription of the arch suggest the scope of this building. The unusual language should also be noted:<sup>82</sup>

*Imp(eratori) Caesari Divi Nervae f(ilio) Nervae | Traiano optimo Aug(usto) Germanic(o) | Dacico pont(ifici) max(imo)... | ... providentissimo principi | senatus p(opuli)q(ue) R(omanus) quod accessum | Italiae hoc etiam addito ex pecunia sua | portu tutiorem navigantibus reddiderit*

To emperor Caesar Nerva Trajan Best Augustus, son of the deified Nerva, Germanicus, Dacicus, pontifex maximus...most foresightful emperor, the Senate and people of Rome (have dedicated this monument), because by this additional harbour, paid from his own money, he has rendered the entrance to Italy safer for sailors.

The titlature indicates *providentissimo princeps*, which is a rarity in the early Imperial period and a *unicum* in the Adriatic; in fact, other examples appear much later in the 3<sup>rd</sup> century AD.<sup>83</sup> The use of this term is unprecedented in a monumental building and may imply that the construction of this harbour was an action of true foresight. This term, which is in the superlative 'most foresightful', was the best way to pay homage to the emperor, thanking him for his involvement and highlighting his qualities.<sup>84</sup>

*Accessum Italiae* should also briefly be discussed, for which no analogies have been found, especially in a marine context. This title indicates access to the peninsula, in this case for those coming from the east. Ancona was an ideal gateway to Rome from the Adriatic. In this context, it should be noted how the emperor favoured the improvement of certain cities and connections with Italy in the 2<sup>nd</sup> century AD. The arch was an important

menik) imperatoru Cezaru Nervi Trajanu Najboljem Augustu, sinu deificiranog Nerve, Germaniku, Dačkom, pontifexu maximusu... najdalekovidnijem caru, jer je ovom dodatnom lukom, koju je platio svojim novcem, omogućio mornarima sigurniji ulazak u Italiju

Titlatura navodi *providentissimo princeps*, što je rijetkost u ranocarskom razdoblju te *unicum* na Jadranu, s obzirom na to da se drugi primjeri javljaju mnogo kasnije, u 3. stoljeću.<sup>83</sup> Upotreba ovog termina nema presedana u spomeničkom graditeljstvu te bi mogla značiti da je izgradnja ove luke bila istinski dalekovidno djelo. Ovim terminom u superlativu koji znači „najdalekovidniji” na najbolji se način iskazuje počast caru i zahvalnost na njegovu angažmanu, istodobno ističući njegove osobine.<sup>84</sup>

Osim toga, trebalo bi ukratko spomenuti i termin *accessum Italiae*, za čiju uporabu nema analogija, osobito ne u pomorskom kontekstu. Ovaj naslov označava pristup poluotoku, u ovom slučaju onima koji dolaze s istoka. Ancona je bila idealan pristup Rimu s Jadrana. U tom kontekstu valja napomenuti da je car bio sklon poboljšanju određenih gradova i veza s Italijom u 2. stoljeću. Slavoluk je bila važna građevina koja je obilježavala ulazak u Italiju s Jadrana, a njegova izgradnja implicira da je nakon obnove car vjerojatno davao prednost ključnoj lokaciji Ancone kao jedne od glavnih luka u regiji. Veličina slavoluka (oko 13,21 x 10 x 4,16 m) poklapa se s pojedinostima natpisa. Slavoluk je veoma sličan drugima iz istog razdoblja kao što su oni na lokalitetima Benevento, Canosa, Capua, ali i Maktar u Tunisu te Timgad u Alžiru, iako se slavoluk u Anconi ističe po rubnom položaju na području mola; njegovo postojanje baš na tom mjestu podrazumijeva da su tu bila svojevrsna „morska vrata” koja su omogućavala

<sup>82</sup> CIL IX, 5894.

<sup>83</sup> S. SEBASTIANI, 1996; C. F. NOREŃA, 2011.

<sup>84</sup> C. F. NOREŃA, 2011, 231-232.

<sup>83</sup> S. SEBASTIANI, 1996; C. F. NOREŃA, 2011.

<sup>84</sup> C. F. NOREŃA, 2011, 231-232.

building that marked the entrance to Italy via the Adriatic, and its construction implies that after the reconstruction the emperor would have privileged the key location of Ancona as one of the main ports of the region. The size of the arch (c. 13.21 x 10 x 4.16 m) fits with the details of the inscription. The arch is very similar to other arches of the same period, such as at Benevento, Canosa, Capua, but also Mactaris in Tunisia and Timgad in Algeria, although the arch at Ancona stands out for its presence in a liminal space at the edge of the mole area; its presence here implies that this was a sort of 'marine gate' providing access to Italy. It would also have emphasised the renovation of the port and the monumentality of the marine façade.

Those buildings that served as storage areas, including porticoes and horrea at Ancona, as well as the storage spaces located along the waterfront, likely had an impact on the view of sailors and traders. The adventus via the sea, rather than via land routes in a place such as Ancona, would have been striking for the people, since the works and construction commissioned during the Imperial period explicitly changed the appearance of this centre and these improvements prevalently affected the marine area.<sup>85</sup> The marine façade – that is, the line of the waterfront consisting, in sequence, of signalling buildings such as the lighthouse, public and monumental buildings, the arch, bridges, then the porticos and storage spaces – would most likely have been an appealing sight to sailors. An approach via land routes would not have been so impressive.

Other buildings including the amphitheatre and temples were situated, overlooking the coast, near the port facilities. The Temple of Venus, previously identified by fieldwork in 1948, built on the slope of Colle Guasco, looks directly towards the quay area.<sup>86</sup> Simi-

pristup Italiji. Osim toga, on je trebao istaknuti obnovu luke i monumentalnost priobalnog pročelja.

Objekti koji su služili za skladištenje u Anconi, uključujući portike i *horrea*, kao i spremišta smještena uz obalu, vjerojatno su utjecala na vizuru koja se pružala mornarima i trgovcima. U mjestima kao što je Ancona, dolazak s mora u velikoj je mjeri, puno više nego s kopna, utjecao na pogled ljudi, s obzirom na to da su radovi i objekti naručeni u carskom razdoblju izričito izmijenili izgled grada, a poboljšanja su bila pretežno usmjerena na priobalno područje.<sup>85</sup> Pogled na priobalno pročelje – odnosno na obalnu liniju u kojoj su se izmjenjivali signalni objekti kao što je svjetionik, javni i spomenički objekti, slavoluk, mostovi, pa onda portici i skladišni prostori – zacijelo bi se ucrtao duboko u pamćenje mornara. Pristup kopnenim putevima zasigurno nije bio tako dojmljiv.

Ostale građevine, uključujući amfiteatar i hramove, nalazile su se ponad obale, u blizini lučkih objekata. Venerin hram, otkriven u iskapanjima 1948., izgrađen na padini brda Colle Guasco, gledao je izravno na područje gata.<sup>86</sup> Slično tome, amfiteatar se nalazio na obroncima brda Colle Guasco na obali, u blizini Trajanova slavoluka koji je bio uz mol.<sup>87</sup> Stoga u tom kontekstu uočavamo gušći urbani uzorak nego u drugim lučkim gradovima, ne samo zbog carskog sponzorstva i podrške lokalnih uprava i trgovaca, nego i zbog dobro organiziranog plana gradnje koji je isticao monumentalnost i vizualni dojam priobalnog pročelja. Te građevine u kombinaciji sa skladištima, gatom i molovima te svjetionikom obilježavale su grad pri ulasku s morske strane. Pri ulasku s kopna posjetitelji i lokalno stanovništvo mogli su uočiti lukove, zidine i ceste, no ulazak u grad s mora izazivao je još veće divljenje. Mornari koji su plovili Jadranom zacijelo

<sup>85</sup> G. BOETTO, 2010, 112-122; H. SCHNEIDER, 2015, 21-51.

<sup>86</sup> M. MORETTI, 1945; G. TOSI, 2003, 498, 530.

<sup>85</sup> G. BOETTO, 2010, 112-122; H. SCHNEIDER, 2015, 21-51.

<sup>86</sup> M. MORETTI, 1945; G. TOSI, 2003, 498, 530.

<sup>87</sup> S. SEBASTIANI, 1996, 24; G. TOSI, 2003, 323.

larly, the amphitheatre is also located on the slope of Colle Guasco on the seaside and close to Trajan's arch that stood along the mole.<sup>87</sup> Therefore, in these contexts we note an urban pattern denser than other port cities owing not only to Imperial sponsorship and the support of local magistracies and the mercantile class, but also because of the well-organised construction plan that emphasised features of monumentality and the visual impact of the marine façade. These buildings, together with the warehouses, quay and mole structures, as well as the lighthouse, characterised the entrance to the city from the sea. While approaching the city by land transport, visitors and locals would have noted the presence of arches, walls and roads, but entering the city from the sea would have been even more awe-inspiring. Sailors along the Adriatic would have noted the monumentality of the Adriatic city, the long quay facing the sea and in the background the port facilities, amphitheatre, temples, and other great public buildings. Therefore, mooring along the quay would have also allowed for a broader view of all the other key constructions.

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(for Etnotrend d.o.o.)*

su zamjećivali monumentalnost ovog jadranskog grada, dugačkoga gata okrenutoga moru, a u pozadini lučke objekte, amfiteatar, hramove i ostale javne građevine. Stoga je i vezivanje uz gat vjerojatno omogućavalo širi pogled na sve ostale ključne građevinske objekte.

*Prijevod: Nina Matetić Pelikan  
(Etnotrend d.o.o.)*

<sup>87</sup> S. SEBASTIANI, 1996, 24; G. TOSI, 2003, 323.

TABLE 1 / TABELA 1.

Site ID Oznaka lokaliteta	N (dd.dd) S (dd.dd) E (dd.dd) I (dd.dd)	Site name Naziv lokaliteta	Sources Izvori	Building Građevina	Period Razdoblje	Description Opis	Material Materijal
An1	43.623272 13.509683	Lungomare Vanvitelli	S. SEBASTIANI, 1996, 33-35; M. SALVINI, 2009, 531-560; M. SALVINI, L. PALERMO, 2014; M. SAL- VINI, L. PALERMO, 2017.	Quay Gat	AD 100 100. po. Kr.	Masonry structures, main sector of the quay, paved road <i>Zidane strukture, glavni sektor gata, popločena cesta</i>	Stone blocks, bricks <i>Kameni blokovi, opeka</i>
An2	43.62376944 13.50926111	Istituto Nautico	M. LILLI, 1997, 50-76; M. SALVINI, 2009, 531-560; M. SALVINI, L. PALERMO, 2014; M. SALVINI, L. PAL- ERMO, 2017; F. UGOLINI, 2017.	Shipyard <i>Brodogradilište</i>	AD 100 100. po. Kr.	Large harbour wall, masonry structures with arch shape, rooms, columned and peristyle build- ing with 2 rooms <i>Velik lučki zid, zidane strukture u obliku luka, prostorije, građevina s kolonama i peristi- lom s 2 prostorije</i>	Brickwork, reticu- lated wall mosaics <i>Opeke, mozaici na zidu u tehnički opus reticulatum</i>
An3	43.622756 13.510061	Arco Russi - Guardia di Finanza	BEVILACQUA, 1889, 45; N. ALFIERI, 1983; M. LILLI, 1997, 50-76.	Sector of the quay, harbour wall <i>Sektor gata, lučki zid</i>	AD 50 – 120 50. – 120. po. Kr.	Masonry structures <i>Zidane strukture</i>	Concrete, stones <i>Beton, kamen</i>
An4	43.625017 13.506736	Banchina Nazario Sauro	M. LILLI, 1997, 50-76; M. SALVINI, 2009, 531-560; M. SALVINI, L. PALERMO, 2014; M. SALVINI, L. PAL- ERMO, 2017.	Mole, quay <i>Mol, gat</i>	AD 100 100. po. Kr.	Masonry structures <i>Zidane strukture</i>	Concrete, brickwork <i>Beton, opeka</i>
An5	43.619786 13.509806	Via Loggia	S. SEBASTIANI, 1996, 33-35; M. SALVINI, 2009, 531-560.	Waterfront quay line <i>Obalna linija gata</i>	AD 100 100. po. Kr.	Masonry structures <i>Zidane strukture</i>	Brickwork <i>Opeka</i>
An6	43.623872 13.5096	Via Papa Giovan- ni XXIII	S. SEBASTIANI, 1996, 38; M. SALVINI, 2009, 531-560.	Quay Gat	AD 100 100. po. Kr.	Masonry structures <i>Zidane strukture</i>	Stone blocks, bricks <i>Kameni blokovi, opeka</i>

Site ID <i>Oznaka lokaliteta</i>	N (dd.dd) S (dd.dd) E (dd.dd) I (dd.dd)	Site name <i>Naziv lokaliteta</i>	Sources <i>Izvori</i>	Building <i>Građevina</i>	Period <i>Razdoblje</i>	Description <i>Opis</i>	Material <i>Materijal</i>
An7	43.624431 13.507781	Trajan's Arch <i>Trajanov slavoluk</i>	N. ALFIERI, 1938, 151-236; S. SEBASTIANI, 1996, 36; M. LILLI, 1997, 50-76; M. SALVINI, 2009, 531-560.	Arch <i>Slavoluk</i>	AD 115 <i>115. po. Kr.</i>	Triumphal arch, bronze sculpture group placed along the main mole <i>Slavoluk, grupa brončanih skulptura, duž glavnog mola</i>	Bronze statue (frag- ments), marble, stones, inscription <i>Brončani kip (frag- menti), mramor, kamen, natpis</i>
An8	43.623386 13.509742	Casa del Capitano	M. LILLI, 1997, 50-76; M. SALVINI, 2009, 531-560.	Warehouse, stor- age spaces <i>Skladišta, spremišta</i>	50 BC - AD 50 <i>50. pr. Kr. - 50. po. Kr.</i>	3 vaulted structures facing the seaside ar- ranged on two levels (4.5 x 3.2 m, 5.1 x 3.3 m and 5 x 3.45 m); wall (32 x 45 m) <i>Tri presvođena ob- jeka okrenuta prema obali, raspoređena na dvije razine (4,5 x 3,2 m, 5,1 x 3,3 m i 5 x 3,45 m); zid (32 x 45 m)</i>	Bricks, concrete, Conero stone, gravel, amphorae dump, reticulated wall <i>Opeka, beton, kamen s Conera, šljunak, odlagalište amfora, zid u tehnici opus reticulatum</i>
An9	43.622683 13.510725	Piazza Stracca, Palazzo degli Anziani	S. SEBASTIANI, 1996; M. LILLI, 1997, 50-76.	Warehouses <i>Skladišta</i>	AD 115 <i>115. po. Kr.</i>	Buildings overlook- ing port quay served as stores, ware- houses <i>Građevine koje gledaju na lučki gat služile su kao spremišta, skladišta</i>	Bricks, concrete <i>Opeka, beton</i>
An10	43.624967 13.506181	Arsenale	N. ALFIERI, 1983, 9-34; M. LILLI, 1997, 50-76.	Mole <i>Mol</i>	AD 115 <i>115. po. Kr.</i>	Trajan's mole (300 m long) <i>Trajanov mol (dužina 300 m)</i>	Rocks, cliffs, stones <i>Stijene, klifovi, kamenje</i>
An11	43.622556 13.510419	Piazza Dante Alighieri	S. SEBASTIANI, 1996; M. LILLI, 1997, 50-76.	Harbour wall <i>Lučki zid</i>	AD 50 <i>50. po. Kr.</i>	Wall along the main quay <i>Zid duž glavnog gata</i>	Bricks, stones <i>Opeka, kamen</i>



Site ID Oznaka lokaliteta	N (dd.dd) S (dd.dd) E (dd.dd) I (dd.dd)	Site name Naziv lokaliteta	Sources Izvori	Building Građevina	Period Razdoblje	Description Opis	Material Materijal
An12	43.62045 13.510308	Piazza Santa Maria, Chiesa Santa Maria della Piazza	M. LILLI, 1997, 50-76.	Warehouses Skladišta	AD 50 - 115 50. - 115. po. Kr.	Warehouse Skladište	Bricks Opeka
An13	43.614389 13.503767	Banchina Giovan- na da Chio, Santa Lucia, Lazzaretto	M. LILLI, 1997, 50-76; M. SALVINI, 2009, 531-560.	S mole Južni mol	AD 50 - 115 50. - 115. po. Kr.	Small sector of mole 100 m long Manji dio mola, duljine 100 m	Stone blocks Kameni blokovi
An14	43.625081 13.5101	Piazza Duomo, Cattedrale San Ciriaco	N. ALFIERI, 1938, 151-236; S. SEBASTIANI, 1996, 29- 33; M. LILLI, 1997, 507-579; L. PANI ERMINI, 2003, 94-115.	Temple, lighthouse Hram, svjetionik	AD 50 50. po. Kr.	Foundation of a building identified as the temple of Venus Temelji građevine prepoznate kao Venerin hram	Stone blocks, columns Kameni blokovi, stupovi
An15	43.623738 13.511536	Via Giuseppe Birarelli	M. MORETTI, 1945; S. SEBASTIANI, 1996.	Amphitheatre Amfiteatar	AD 50 - 120 50. - 120. po. Kr.	Building structures Građevinski objekti	Blocks, foundations, amphora remains Blokovi, temelji, ostaci anfóra

## ABBREVIATIONS / KRATICE

- AE – Anné Epigraphique  
ASAM – Archivio Soprintendenza Archeologica Marche  
ASR – Archivio di Stato Roma  
SBAM – Soprintendenza Beni Archeologici Marche

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