

APPRODI



# **ADRION, Charter routes from antiquity to modern times**



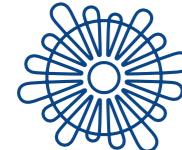
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from antiquity to modern times

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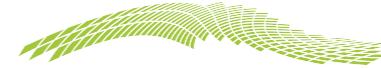
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**(EBOOK)**

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## Introduction

The Adriatic Sea has always been a busy sea from every point of view. Egidio Ivetic explains it well in an essay presented in this volume and in one of his recent works called "History of the Adriatic". The traffic in this Sea can be measured according to the number of ships that, before the pandemic, used to land and depart from the Adriatic ports: more than 40.000 in total. An impressive number especially if compared to its Western sibling, the Tyrrhenian Sea whose yachting traffics are more intense.

If we compare the current situation with a not too distant past, we can understand how the role of this "liquid territory" (a neologism invented by the memorable Fernand Braudel) - as a system of relationships- has not changed much. An immense "space-movement", an impressive traffic system made of *liquid plains connected through a series of wide or narrow doors*. Herodotus, who believed the Adriatic was not a sea but rather a piece of land, was the first one to recognize the ambivalence of this Sea whose function has always been to connect rather than divide.

Certainly, as we can see below, the Mitteleuropean vocation of this Sea has decreased dramatically. The most significant ports of the Adriatic, from an historical point of view, Trieste, and Rijeka - which represent the most important outlet of the traffics in the industrial area of the Po Valley- have been largely surpassed by Ravenna and, above all, by Ancona and Venice which gather most of the traffic related to the goods, people, and trade flows.

A distinctive feature of this Sea that we can recognize nowadays, as in ancient times, is its tendency towards specialization, towards conformity between ports: on one hand, goods refer to other cargo ports, mostly those with logistic platforms in line with the original productive area; on the other, people, especially tourists moving mostly from (north-) west to (south-) east. Despite this shift of centrality between ports, which as we will see is something that over the centuries has often occurred between Adriatic ports, it is possible to make a distinction between traffics that can be defined as longitudinal - that is traffics that connect the Mitteleurope with the Mediterranean and the Black Sea - and diagonal traffics which used to connect the western and eastern shores. The latter were not so developed in terms of goods and people's flows, but culturally speaking, they were extremely important, especially if we consider the history of this Sea, where the Italian and Balkan shores were involved in some forms of contamination often considered as a series of never-ending antagonisms with no apparent solutions.

The Adriatic Sea has become part of the history of the peoples who lived there, first as a possibility, and then as a road and as a history. The Greeks sailed along it, especially close to the Dalmatian coast, founding Epidarum (The Republic of Ragusa) and Epidamon (Durres), and reaching Spina which served as a crossroad for trading with the inhabitants of the Po Valley and Etruria. The Romans made use of the Adriatic space (the so-called Superum Sea) to expand their domains towards the Aegean Sea and the Asia Minor, by taking advantage of the peninsular harbors that could better serve as strategic links with the East. On one hand, if the Italian coast had the port of Brindisi, connected to Rome by the Appian Way; on the other hand, the opposite shores had the port of Durres which used to connect the Thessaloniki sea, and later the Constantinople one, through the Via Egnatia in Macedonia. From a strategic point of view, the Romans believed that the very centre of the Adriatic

Sea, besides the important crossroad represented by the Brindisi port, was the city of Rimini where the so-called Via AEmilia, Via Flaminia and Via Popilia used to intersect. This multi-modality, that is the constant search for some sort of contiguity between the land and sea connections, was one of the distinctive features of the Roman strategy which allowed them to exploit the Adriatic Sea as a major roadway and turning it as an entirely Roman Sea: something that will never happen again in the course of history, not even during the Venetian domination.

And like every story, even the Adriatic has its own protagonist: La Serenissima. Originally located, in the Early Middle Ages, in Ravenna - as a buffer city between the Barbarian Kingdoms and the Byzantine Empire- La Serenissima managed to implement a markedly pragmatic and strategically fruitful policy, achieving some great results like the hijack of the Fourth Crusade against Constantinople and the subsequent conquest of the primary role in what the historians call the 13<sup>th</sup> Century "trade revolution". The very core of this revolution was the creation of a real Trust by La Serenissima: the salt trust (J.C. Hoquet) whose production and trade processes begin, at first, in the Venetian lagoon, to be later extended to the Istrian-Dalmatian Centres and then to Romagna. The salt will soon become the keystone for the construction of a trade system that will reach its very peak between the 15<sup>th</sup> and 16<sup>th</sup> century. But, above all, the salt was crucial for the establishment of a control and a dense network of trade routes that will constitute the ganglions and the nodes of an extensive network which will turn out to be a self-supporting system until the decline of the so-called *Stato da Mar*. The control over such an intense network of communications was given by the galleys, long and narrow boats that could be maneuvered with rapidity and accuracy since they were structurally equipped with oars. As a result, they were extremely ideal for battle. In times of peace, these boats were often used for the transport of spices and other goods, proving to be a versatile tool, particularly adequate for the Adriatic-Ionian coasts which used to be a place for both the traffic of goods and the military power of Venice. When they were not used for battles, the galleys were given to merchants and ship owners through auctions. The system of maritime routes adopted by the fleet of La Serenissima was traversed by small fleets of ships which were gathered in a specific line-up to limit the risks of potential attacks against the whole convoy. In fact, this system of routes could trigger a constant trade flow between the western, the eastern and the southern coasts of the Adriatic, sensibly increasing the investment opportunities even for small savers. It is the case of the so-called *colleganza* (or *commenda*): very modern contractual forms (today we would call them Joint Ventures) which spread the risk of investment between the owner of the money (generally the limited partner) who used to advance the capital, and a merchant, who then used the money to carry out a series of tasks related to transportation and supply. At the end of the job, the whole capital was paid back, and all the profits were split between all the parties according to some pre-existing agreements.

The business carried out by the Republic of Venice also benefited, to some extent, other Italian cities, and municipalities. An exemplary case is the city of Florence that, despite not having any natural outlets to the Adriatic Sea, managed to strengthen its trade relations with Rimini and Ancona. The conquest of Constantinople by the Turks, in the middle of the 15<sup>th</sup> century, marks the rise of a new threat in this scenario: the Muslim corsairs whose presence, as we are going to see, symbolically reinforced the Venetian power over the control of its Gulf. In this scenario, the inter-Adriatic exchanges were extremely important from a local development point of view. Since the late Middle Ages, the areas rich in precious natural resources were forced to move towards a sort of specialization which, in many cases, will be maintained during the whole Venetian domination. The Venetian Prealps and the Dalmatian mountains regularly supply wood to the Venetian shipyards, the region of Apulia becomes the main wheat belt and olive oil producer of the Adriatic, also supplying wood from the Gargano's forests to the Republic of Ragusa's arsenal. Building stones were exported from Istria and, from the Balkan hinterland, significant quantities of wool, leather and metals were

shipped to the ports of Zadar, Split and Ragusa. In the Po Valley, the production and export of hemp grew, and in some areas of the Marche region there was a significant expansion of cereal crops.

From a manufacturing point of view, there is a sort of specialization process: many products come from Dalmatia, the Venetian hinterland and the Mitteleurope are shipped to Venice, while in Ancona (and Rimini) it is possible to witness a specialization in the trade of Florentine fabrics, of Fabriano paper, of Umbrian potteries and of many other manufactured articles produced in Tuscany (goldsmithery, weapons, leather, etc.). Finally, the passage of people in the Adriatic Sea was quite consistent. After the great plague in the first half of the 14<sup>th</sup> century, the job gaps in the labour market of the flourishing Italy were filled by people coming from the Dalmatian and Albanian coasts. The western shore of the Sea appeared to the Orientals like a sort of fertile paradise, already at the end of the 14<sup>th</sup> century. The trade towns used to capture and select outcasts and fugitives coming from the Balkan hinterland (often coming from the ancient Klis, right above Split, which used to be a Turkish territory), running away from the Turkish invasions. Only those that were good enough for war and crafts were invited to stay. From the second half of the 15<sup>th</sup> century, right after the Turkish conquest of most of the Balkans, this flow of people will become more intense, to start progressively decreasing from about the 16<sup>th</sup> century onwards.

Ancona and Ragusa took great advantage of these flows of goods and people, triggered by what we may call nowadays as a new trade model. Especially Ragusa which, during the 16<sup>th</sup> century, threatened the Venetian trade monopoly over its Sea. Consequently, the Republic of Venice, in order to limit the attractiveness of the nearby Ragusa, started an expansion project of the port of Split. In the same century, the importance of Rimini, Pesaro, Fano as well as - moving towards south - Trani, Barletta and Bitonto grew substantially.

The defeat of Agnadelo was a serious blow to the Venetian hegemonic status in the Adriatic. In addition to this, the State of the Church started to claim its power over the *Superum Sea*. In 1532, the Pope gained control of the port of Ancona and started to build strong ties with Ragusa. Therefore, he began supplying the cities of Lombardy with increasing quantities of salt coming at first from Sicily and then from Apulia. By doing so, he threatened the Venetian salt trust which represented the very core of the Venetian control policy in its' Gulf. In addition to this, Ragusa showed a proud and consistent diplomatic and mercantile autonomy. In fact, the commercial influence of the city extends to the region of Transylvania where, between the 15<sup>th</sup> and the 17<sup>th</sup> century, many consular offices were founded, mostly run by Marranos expelled by the Iberian Peninsula.

Due to the relatively recurring wars with the Turks and due to two severe plague epidemics that occurred in just over 50 years (1576, 1630), at the end of the 16<sup>th</sup> century, Venice had to face a real supply problem. The lack of lumber coming from the Venetian and Dalmatian hinterlands, as well as the expensive cost of labour that necessarily increased due to the sizes of the corporations and the lack of job opportunities after the 1576 plague (the Venetian arsenal used to cover an area of 250.000 sqm and more than 3000 people were employed in the construction of galleys and galleasses), triggered a severe crisis that will lead to the establishment, in the Adriatic Sea, of a series of navies coming from the North of Europe, especially from England and The Netherlands. These navies, besides keeping the shipping costs down, since their shipyards could count on the large forests of the Baltic area, started selling ships at more competitive prices than Venice whose production costs were higher.

Between the 15<sup>th</sup> and the 17<sup>th</sup> century, the Adriatic had to face the urgent issue linked to piracy. In the Gulf of Venice, the piracy was a widespread phenomenon because the shape of the Adriatic - a long and narrow sea, full of islands, peninsulas, inlets and, most of all, cities along the western coast which started fostering the pirates' business- became a suitable place for the development of these illegal activities. As already mentioned, it can be said, paradoxically speaking, that the growth of the

pirates' activity became one of the most important indicators of the Adriatic Sea development: the merchants' ships were often equipped with cannons or small cannons and used to house armigers. While the convoy technique became one of the many solutions adopted to fight the Sea robberies. In the 16<sup>th</sup> century, a complex system of visual signals was adopted: smoke signals but also fire signals on the top of hills and mountains, along the coasts and on control towers. Michel De Montaigne wrote in one of his journals documenting a trip to Italy that this warning system was so (potentially) effective that a signal coming from the Apulian areas could reach Venice in just a couple of hours. At the end of the 18<sup>th</sup> century, there were approximately 700 control towers along the Italian shores, right in between the Delta and the Molise region. Unfortunately, nowadays, only ten towers have survived: testimonies of a Sea that went through a development that even if it was rough sometimes, it was still rich enough to attract such business activities.

During the Venetian-Byzantine domination at first, and later during the Venetian domination, the Adriatic coasts witnessed an intense coastal navigation traffic, strictly linked to the journeys at sea of merchants sailing towards trade fairs, like the one held in Senigallia, or towards religious places like Bari and Loreto. As a consequence, the presence of the piracy phenomenon was deeply connected to the possibility of profitable robberies. The piracy presence in the Adriatic led to a reorganization of the maritime routes and of the way of sailing. In fact, between the 17<sup>th</sup> and the 18<sup>th</sup> century, there was a gradual reorganization of the Adriatic maritime routes: in 1719, Charles VI granted the status of free ports to Trieste, Rijeka and Senj, establishing the freedom of navigation in the Adriatic Sea: a serious blow to the power of Venice, marking the beginning of its fall. The tax exemptions of the three ports, the protection granted to businessmen and shipowners- especially the ones coming from the Northern part of Europe- and the free port status of the port of Ancona granted by the Pope determined a serious shift of the economic axis and the Adriatic maritime routes in a longitudinal direction, as we can find them nowadays. The home Sea, little by little, symbolically ceases to be the Gulf of Venice, to become the modern Adriatic. At the end of the 18<sup>th</sup> century, Venice lost its independence at the hands of the French. Consequently, the port of Trieste acquired a central position, as the real MittelEuropean gate since in 1382 it became part of the domains of the Duke of Austria, avoiding the Venetian domination. The Adriatic Sea became the Sea of the Austro-Hungarian Empire: Trieste, Rijeka and Split turned out to be the terminals of the Empire territories as well as the real nerve centres to control the imperial commercial and maritime power.

The appearance of the maritime routes in the Adriatic changes again and, this time, once and for all. If the historical events and the social dynamics of the Adriatic helped to shape the unity of this sea, now it must deal with a major change. In the 19<sup>th</sup> century, the Adriatic served as a moderator between the Muslims, the Catholics, and the Orthodoxies, thanks to the strong - and still regretted- positivism of the Habsburg imperial administration. Nevertheless, the 20<sup>th</sup> century determines a severe change of the Adriatic status. A change that, according to many researchers - as we are about to see in this text- has yet to be completed. A change that can be understood if we consider the cultural contamination given by thousands of years of navigation, by the religious enclaves or by the simple communities (like the Arbëreshë communities in the South of Italy, or the Italian-speaking communities in Dalmatia). The very same city of Loreto, on the Italian coast, is the perfect synthesis of these continuous contaminations. This city is quite famous for the shrine of the Holy House which, according to the legend, was carried from Nazareth to Tersatto. The presence of this Holy House seems to highlight the existence of a sort of Adriatic cultural unity, that is not only linked to religion, but it is in some ways almost ancestral, given by all the similarities between places, rituals, and beliefs.

Ultimately, a dense network of geographical, historical, and cultural filaments and nodes seems to surround this Sea. The Approdi Project was meant to be an attempt to reconnect some of these threads. The Approdi Project - From Ancient Maritime Routes to Eco-Touristic Destinations - is a

European project that focuses on the promotion and valorization of five ancient harbor sites within the Adriatic- Ionian area:

- ▶ Corfu, Greece
- ▶ Dubrovnik, Croatia
- ▶ Durrës, Albania
- ▶ Ortona, Italy
- ▶ Venice, Italy

In the past, all these involved territories hosted significant ancient harbors. Nowadays, similar destinations are often considered scarcely attractive for tourists and quite useless to cities' development. Additionally, there's always an insufficient involvement of community actors in the cultural heritage valorisation.

Approdi involved territories are characterized for having been in the past landing places of ancient maritime commercial routes. These harbor areas have been always considered marginal to cities' development, having been seen mostly as boarding and landing places, thus scarcely attractive for visitors. Anyway, these places enclose the history of towns to be valorized and made as "common value" and can then represent public spaces for citizens as well as for tourists, besides being included into cultural, historical, and touristic paths. The common territorial challenge faced by the project is then that ancient harbor sites have a high but unused potential for economic growth as ecotourism destinations, especially off-season and are also characterized by an insufficient involvement of community actors in cultural heritage promotion and valorization.

Approdi's main objective is to promote and valorise cultural heritages in the s.c. Adrion area by enhancing the management and promotion of ancient harbor sites as tourist destinations and by improving the involvement of local communities. The Ortona, Venice, Dubrovnik, Durres, and Corfu old harbours will be valorised as new potential destinations by applying innovative techniques, such as geo-archaeological investigations. All the findings will be then exposed in Museum's exhibitions or zero impact and zero infrastructures' solutions for an innovative coastal and lagoon archaeological park. For these reasons, Approdi aims at a qualitative change in tourism demand with a transnational approach and at increasing visibility of the valorised new destinations.

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## The Adriatic Sea as a Space of Transnational History<sup>1</sup>

### Abstract

The thesis here presented considers the Adriatic Sea as a maritime region and a cultural region of the Mediterranean and Europe, and as a transnational historical space in which the thread of memory can be retraced. For all its specificities, indeed, the Adriatic could be perceived as a small-scale Mediterranean. This is a proposal of "making history" in a middle space between the canonical Italian history and the history of South-eastern Europe and therefore a proposal open to transnational historiographical experiences.

**Keywords:** History of the Adriatic, Mediterranean history, transnational contexts.

In a more meaningful way than other places in the Mediterranean, the Adriatic Sea can be perceived as a region, as a big system that connected the shores and the inlands as well. It could be indicated as a smaller scale Mediterranean, especially from an historical point of view. During the Roman era, the Adriatic was referred to as *Adriaticum Mare*, but also as *Mare Superum* as opposed to the Tyrrhenian Sea that was *Mare Inferum*. The first descriptions of the so-called *oikoumene* - a Greek term for the known and inhabited world from a Mediterranean perspective - date back to Ptolemy and his *Geography* written around the 150 a.c. where he depicted the Adriatic Sea as a Mediterranean inlet or *Sinus Adriaticus*.

The term *Adriatic Sea* became commonly used in the Early Middle Ages, but sources from the 13<sup>th</sup> century show how this term was often flanked or replaced by the expression Gulf of Vinegia(Venice). During the 16<sup>th</sup>-17<sup>th</sup> centuries, the traditional cartography often displayed the double wording Adriatic Sea *olim* Gulf of Venice. A common wording that continued until the end of the Republic of Venice, in 1797. The Croatian, Serbian and Bosnian translation of the *Adriatic Sea* is *Jadransko more*, while the Slovenian and Albanian ones are respectively *Jadransko morje* and *Deti Adriatik*. According to the idioms, as well as to the literary traditions of southern Slavic peoples, the Adriatic Sea is often depicted as a blue sea, especially compared to the white Aegean Sea or the black sea (Black Sea).

The first cartographic representations of the Adriatic Sea as a depicted concept or as an object date back to the late medieval<sup>2</sup> pilot books. We have a clear picture of the Adriatic (along with its full personality) in the famous Fra Mauro Map (around 1450), in the Marciana Library in Venice, in *Theatrum Orbis Terrarum* maps of Abraham Ortelius from Antwerp (1570) and mostly in the magnificent map of Europe made by Mercator (Gerardus Kremer, Rupelmonde, County of Flanders) in 1554<sup>3</sup>. Ibn Khaldun, in the second half of the 14<sup>th</sup> century, indicated the Adriatic Sea as the Gulf of Venice, while the Ottoman cartographer Piri Reis depicted the Adriatic, in the 16<sup>th</sup> century, as a fundamental part of

<sup>1</sup> This article was adapted from the original Italian version published in *Mediterranea, Ricerche Storiche*, 2015, 35. We are deeply grateful to the Author and the Publisher for the permission granted.

<sup>2</sup> Tucci 1973, 50-85; Quaini 1976, 6-24. As general references: Woodward 1975; Woodward 2007; Woodward, 2002; Federzoni 2001; Baumgärtner, Stercken 2012. See also: Casti 1998; Casti 2013.

<sup>3</sup> Lago, Rossit 1981; Lago, 1989; Lago 1992; Lago, 1996; Lago, 2000. Moreover, for East Adriatic: Marković, 1993; Kozličić, 1995; Marković, 1998; Novak, Lapaine, Mlinarić 2005; Hrvatski kartografi. Biografski leksikon, 2009.

the Mediterranean<sup>4</sup>. To the famous Venetian cartographer Vincenzo Coronelli, we owe the detailed description of the Adriatic shores and inland during the 18<sup>th</sup> century<sup>5</sup>.

The great French engineer and cartographer Charles François Beautemps-Beaupré is considered the father of the scientific approach to calculate, along the coast, marine depths, and distances from Trieste to the Bay of Kotor. This was one of the world's first ever reconnaissance, in 1806-1809 (Kozličić 2006). The objective depicted dimension of the Sea is often accompanied by a series of perceptions of the maritime space from those who live along the coast. From this perspective, it is quite interesting to trace back a common history between the two Adriatic shores. Common maritime habits on both sides of the Sea can be distinguished until the mid-twentieth century: Dalmatian large boats in Senigallia during the Senigaglia Fair or in Porto Recanati during the pilgrimages towards Loreto; boats from Chioggia and Burano docked in Istrian harbors; boats from Kotor in Trieste as well as boats from Ancona and Fano in Lošinj, Zadar and Split. Photographs, paintings, and postcards from the early 20<sup>th</sup> century managed to keep alive a world that had survived the age of the steamships and the first airplanes. A world made of small cabotage, bragozzos, trabaccolos, pielegos and brazzeras. Actually, the small cabotage differentiated the Adriatic from the other Mediterranean Seas<sup>6</sup>.

After all, the Adriatic Sea is nothing but a Mediterranean inlet that stretches for 783 Kilometres between the Gulf of Trieste and the 39°45' parallel that passes through Santa Maria di Leuca, Corfù (from Kephali Cape to Karagol Cape) and the mouths of Butrint river in Albania; its southern boundary according to the International Hydrographic Organization<sup>7</sup>. The Strait of Otranto, whose width is approximately 72 km, is traditionally considered as the gate of the Adriatic. The sea's average width is 248 kilometres; with a minimum of 100 kilometers on the 45° parallel, between Istria and the Po river mouth, and a maximum of 355 kilometres between Vasto and Antivari (Bar)<sup>8</sup>.

A long and narrow sea which facilitates the traffic between its two shores or its two different "souls". The Adriatic Sea shares with Italy its central position in the Mediterranean, while it shares with the Balkans and the South-Eastern Europe the same fate of the Eastern Mediterranean.<sup>9</sup> The global historical narrative depicts the Adriatic as the Mediterranean intersection<sup>10</sup>. It is one of the most distinctive features within the Mediterranean Europe<sup>11</sup>. It used to be the deep south for those coming from beyond the Alps. According to Fernand Braudel - the inimitable expert of the Mediterranean history - "the Adriatic is probably the most coherent maritime region. By itself and by analogy, it poses all the problems implied in the study of the entire Mediterranean" (Braudel 1976, 118).<sup>12</sup> If "the Atlantic

<sup>4</sup> Brummett, 2007, 13-25; Ibn Khaldun 1967-68; Soucek 1996. Moreover: McIntosh, 2015, 303-318; Pedani, 2105, 319-324.

<sup>5</sup> For Venetian cartography: Marinelli 1881; Valle, 1968; Zeni 1989; Tavoni 1999.

<sup>6</sup> For images: Marcotti 1899; Baedeker 1929; Ambrosini, Rossini 2010. Cfr. moreover, Yriarte 1878; Jackson 1908; Hichens 1913; Hodgkinson 1955. For small cabotage seafaring: Marzari 1982; Marzari 1988; Marzari 1993; Marzari 1995.

<sup>7</sup> International hydrographic organization, *Limits of oceans and seas*, Monte Carlo, 1953(Special publication n. 28, 3<sup>rd</sup> edition), p. 17. On Adriatic Geography: *Jadransko more*, in *Pomorska enciklopedija*, 1985, 135-214. The stretch of sea between Otranto and Cape Linguetta (which closes the bay of Vlora) is often referred to as an alternative dividing line of the southern Adriatic.

<sup>8</sup> Maritime distances between the coasts: Vosila 1977.

<sup>9</sup> Anselmi 1991; Turri 1999; Turri, Zumiani 2001; *L'Adriatico. Mare di scambi tra Oriente e Occidente*, 2003; Cocco, Minardi 2007; Moroni 2010.

<sup>10</sup> Cfr. *Worlds together, worlds apart. A history of the modern world from the Mongol Empire to the present*, Norton, New York, 2002.

<sup>11</sup> Here we consider the Mediterranean as a unitary geographical space but composed of three distinct parts, especially in a geographical, historical, and strategic sense: Mediterranean Europe, from the Strait of Gibraltar to the Bosphorus, equal to 80% of the coastal development of the sea; the Levant (or Asian Mediterranean), from the Bosphorus to Suez; the North African Mediterranean, from the Suez to the Strait of Gibraltar. Mediterranean Europe needs a clearer geographical, historical and cultural framework both in the context of Europe and the Mediterranean as a whole. Cfr. Conti, Segre 1998; Lacoste 2006. Moreover: Silvestri 1968; Jerch, 2007; Carli, Di Cristofaro Longo, Fusco 2009.

<sup>12</sup> On the internal seas: ivi, 94-132. Moreover: Braudel 1987; Horden, Purcell 2000, 9-25.

or the Pacific are the seas of long distances - according to Predrag Matvejević - the Mediterranean is the Sea of proximity, while the Adriatic is the Sea of intimacy" (Matvejević 1993, 23).

By all means and purposes, the Adriatic is a small scale Mediterranean<sup>13</sup>. A sea with many meanings. But, as it happens with the Mediterranean, it is the history of the Adriatic that determines the identity that everybody knows and recognizes. On one hand the geography of the Adriatic, along with its elongated, narrow shape, recalls a certain simplicity, but on the other hand, its history is full of skirmishes that have divided worlds, sediments of a complex past. The complexity of being a meeting place of different events originated in distant epicentres.

Coming back to our ideal map, it is possible to distinguish the different regions and the areas according to their religions and churches, but it is also possible to notice how in the western Balkans, defined by the Adriatic Sea, the Eastern boundaries of the Catholic Church intertwines with the Western ones of the Orthodox Church and the southern ones of the Islamic Church, like nowhere else in the world. The history of the Eastern Adriatic explains similar "overlaps"<sup>14</sup>. For instance, we can also think about all those empires having the Adriatic Sea as their furthest border, like the Byzantine, the Charlemagne's Empire, the Ottoman Empire, the Holy Roman Empire, the Napoleon's Empire, or the Austrian Empire. Basically, if we compare the Adriatic to other close and frontier seas such as the Baltic and Black Sea, it used to be a crossing point or even a mediation area. Even if, especially in recent history, it witnessed many conflicts between sovereign states (just think about the rivalry between the Italian and the Austro-Hungarian navalism from 1866 to 1918) the *Issue of the Adriatic* concerned the fate of Eastern Italian borders and the ones of the rising Yugoslavian state (1918-1920) or even the following contrasts between Italy and Yugoslavia, from 1920 until the Treaty of Osimo in 1975.

For many years, the Adriatic Sea has been the scenario of many important events that happened in the Mediterranean and in Europe, such as the history of Venice, the history of Italy, the history of the Balkans or the very same history of Central Europe. Very few contexts, even if we consider a global scene, can boast so many conflicting and yet connotative events, so many references to different civilizations and the coexistence of so many apparent oppositions, all bundled up in one time and space. Not to mention the economic cycles of the whole sea and its coasts, the long durations of small cabotage seafaring and transhumance, the many-centuries-old cycles of Adriatic fairs and religious pilgrimages. In short, the Adriatic is more about history than geography.

How to interpret a similar history? How to interpret a Sea from an historical point of view? As Braudel has taught, we need to look for different eras from an economic, social and political point of view that are deeply connected to the Sea, conceived as a territory and as an object of historical reading. Based on this thesis, in recent years Peregrine Horden and Nicholas Purcell have moved forward, formulating the definition of the Mediterranean as "The corrupting Sea". By this, they mean a Sea that has a strong influence on the local contexts but it is also capable of bringing small entities together through countless interconnections urged by a general sense of uncertainty and by the needs for sustenance. Because of all these reasons, the Mediterranean has been a set of micro-systems, full of exceptions and peculiarities with a specific tendency to relate to each other and to develop networks of interdependencies, from a minimum scale of contiguity to a maximum scale of trans maritime connections<sup>15</sup>.

The Mediterranean itself has a multiplicity of different situations and simultaneously represents a multiplicity of processes aiming at connecting, from time to time, all the single places that are part of it and try to "Mediterraneanize" them<sup>16</sup>. According to Horden and Purcell, it is time to change our approach to historical research. So far, history has been made mainly in the Mediterranean, a history that tells what happened along the Mediterranean shores. Now it is time to make history of the Mediterranean, conceived as a maritime entity with its own features which we need to understand how they were and how they functioned over time (Horden, Purcell 2000, 39-49).<sup>17</sup> For sure, any observations made over the centuries about the Adriatic proves Horden and Purcell's thesis. In other words, the Adriatic has served as a corrupting sea, constantly connecting its shores and the people who live by. After all, it has already been said that it is a small-scale Mediterranean (Anselmi 1991, 13-42, 327-363). Anyway, the sea is not just an organism or a mechanism. It connects men and goods, but also ideas, languages and cultures. While unifying, it divides, and this is the exact case of the Adriatic Sea, at the very centre of different and contrasting experiences of civilization. So, it is fine to discuss the history of the Adriatic, but it is also important to avoid separating it from the history in the Adriatic, especially during the modern and contemporary ages.

Like all the other seas, the Adriatic is nothing but a "liquid plain" where it is possible to identify, over time, a series of maritime routes, ships' flows, connections between shores, the traffic of goods, migrations, the exploitation of resources, fishing, political and military power, sovereignty, the struggles for geo-strategic dominance. Nevertheless, it is also the Sea of maritime people and rulers, of maritime and economic history as well as of political history.

Further, the Adriatic is also coast: a set of coastal regional systems, a sort of membrane representing the seafront for those who come from the hinterland and the land front for those who come from the sea; a habitat almost everywhere and almost always anthropized, with even minimal settlements, not necessarily facing the sea, but also the hinterland. The coast has always had a double meaning, more ambiguous than the maritime one. To grasp this meaning, we should picture the Adriatic world from a different perspective, as opposed to the one we are used to. That is as a liquid island with many routes and a coast that serve as a facade towards the continent. So, we should picture the Adriatic as a liquid island and a series of shores that surround it. The narrow strip of land, that membrane just few kilometres deep made of dunes, lagoons, river mouths, inlets, promontories, cliffs and insular systems represent the so-called "Human Adriatic", the territory, the landscape transformed by people where we used to live, and we have kept living with the sea. To be more specific, we are talking about Venice, Ancona, Trieste, Split, Rijeka, Bari, Durres and many other ports, islands, lagoons, and coasts.

Nevertheless, it is obvious that even if a place is overlooking the sea, it does not mean that it can be defined as a "maritime place". What really matters is to have a maritime culture. Along the western coasts of the Adriatic, it is possible to find a lot of different places. Some of them are "more maritime" and some less such as Trani, Ancona, Chioggia, and Venice. While on the Eastern coast, there are whole regions like Istria and Dalmatia<sup>18</sup>. Lastly, as it happens with the Great Mediterranean, it is also possible to find the Great Adriatic, that is a series of hinterland regions that have some sort of relationship with the sea. It is a wide area whose borders are quite difficult to define. It could be an area 30 km away from the coast, but it could also include some faraway places such as Benevento,

<sup>13</sup> Adriatic meanings: Anselmi 1996; Anselmi 1997; Anselmi 2000. Moreover: Matvejević 1995; Fiori 2005. See also: Leogrande 2012; Conti 2014.

<sup>14</sup> Anderson 2001, 18-27; Bromberger 2007, 291-307. For the Adriatic context: Bosetti 2006; Gullino, Ivetic 2009; Ivetic 2014, 7-14.

<sup>15</sup> Horden and Purcell's book is now a reference for Mediterranean studies. Brilliant in its approach and in wondering how to make history of the Mediterranean, it convinces less if taken as a self-sufficient history. Horden, Purcell 2000, 89-230.

<sup>16</sup> See in Harris 2005; Miller 2013. Moreover: 2002; Morris 2003, 30-55; Marino 2011, 385-412. More on the significance of the Mediterranean: Bono 1999; Virtanen 2001; Moscati 2001; Guaracino 2007; Bono 2008; Cannizzaro, Corinto, Porto 2009.

<sup>17</sup> Mediterranean Stories: Carpenter, Lebrun 1998; Abulafia 2003; Lacoste 2008; Abulafia 2011.

<sup>18</sup> On the meanings of the sea and 'maritimity': Corbin 1990; Peron, Rieucau 1996; Tugnoli 1997; Corbin., Richard 2004; Frascani 2008.

L'Aquila, Perugia, Bologna, Ferrara and Padua. It is also important to bear in mind that, in some ways, even the capitals of all those countries overlooking the sea were considered as Adriatic, even though they were far away from the sea, such as Rome, Naples, Vienna, Budapest, Belgrade, also Istanbul, and recently Ljubljana, Zagreb and Sarajevo.

When it comes to the sea, there are three different levels: the liquid element, the coastal membrane, and the surrounding territories. The regional coastal system, made of lands, islands, populations, economies, and cultures represent the very core of the whole maritime region. These are the places where it is possible to understand what being a community means but also what the differences between them are.<sup>19</sup> The coastal systems are nothing but regions; many of them are famous and recognizable regardless of their relationship with the Adriatic. For instance, there are Salento, il Tavoliere delle Puglie (Table of the Apulias) and Gargano that represent the modern Apulia; along the Apennine coast, it is possible to find, right in between Termoli and Pesaro, the ancient Picenum that is what we call nowadays Molise, Abruzzo, and Le Marche: a uniform territory from a geographical point of view, but quite separated from an historical one.

Then, it is also possible to find the lower region of Romagna, the Po estuary, then the Venetian lagoon between the Po and the mouths of the Isonzo, the mouth of the Venetian and Friulian plains. On the eastern side of the Adriatic, we find the cliff of Il Carso with Trieste, Istria (both the peninsula and the region), Dalmatia (an ancient region with both a large archipelago, made of over four thousand islands and cliffs, and a continental piece of land right in between Zadar, Ragusa and the Mouths of Kotor).

Parallel to the archipelago, we find the Croatian coast, between Rijeka and the Velebit (or Morlacco) channel, while in the southern part of Dalmatia there is Herzegovina: a Balkan region that even if it is not by the sea, it is characterized by a Mediterranean landscape. So, we can say that is an Adriatic region, even if it is (the only) a non-maritime one. Moving towards the south, beyond Dalmatia, there is the Montenegrin coast that stretches till the Drin River, where the coast starts to be lower and the Albanian coast begins, with sandy shores and coastal marshes. Finally, The Adriatic ends with the rocky peninsula of Karaburm, the Butrinto mouths in Albania and Corfu which may be considered as the key entrance points of the Adriatic.

Keeping this big picture in mind, there are about ten regional segments, each one with its own peculiarities which have persisted over time. Each of one them bears witness to old civilizations and empires, states, and nations. And this the Adriatic. But is there an Adriatic above the sea? Although there are an Adriatic Euroregion from 2006 and a European Adriatic-Ionian Macro-region from 2014 - that gathers all the provinces, districts, and municipalities of seven countries along the shores and it serves as an institutional organization that brings together high education institutions, municipalities and chambers of commerce. We cannot really say that there has been an Adriatic region that was recognized as such by all the actors involved, over the centuries. There was no awareness or some sort of consciousness, not even from those who lived in those territories, of an Adriatic world even if its existence was real and it used to connect all those countries. In fact, for many years, the Gulf of Venice has been quite famous. Venice has been more popular throughout the world than the Adriatic and regardless of it. After all, even the so-called *Monde méditerranéen*, the Mediterranean region was first a product of geographers (like Carl Ritter) and then of historians (Henri Pirenne, Fernand Braudel). Over time, the idea of a Mediterranean region from a cultural point

of view, slowly starts to become popular. A region made of a common archeological background, common mindsets, costumes and lifestyles<sup>20</sup>.

For decades, cultural anthropologists have tried to understand what factors made those populations as Mediterranean but without success.<sup>21</sup> Horden and Purcell's studies aimed at answering the question "What is the Mediterranean?" So, it seems legitimate to ask, "What is the Adriatic?". Despite the efforts from individual scholars and initiatives aimed at opening a dialogue between the shores, the idea of a common Adriatic history is still missing or at least it is struggling to emerge, as well as it is missing an effective historiographical interchange. The Adriatic history is a collection of all the valuable cultural histories, overlapped by the national ones, of each coastal segment (seven segments, as many as the Adriatic states: Italian, Slovenian, Croatian, Bosnian, Montenegrin, Albanian and Greek).

It is not easy to have a historical perspective of this sea. In fact, it is possible to notice a thematic fragmentation: different stories and historiographies starting from the Middle Ages till the contemporary ages, even if in the last decades we witness a clearer distinction between nations. Between the 7th and the 19th centuries, it is possible to find almost a dozen regional histories that intertwine with at least seven national perspectives about the ancient past of the Adriatic. It is a long period during which the eastern shore is pictured as an area with different boundaries from a political, religious and cultural perspectives as *Antemurale Christianitatis*, while the western shore faces the history of two or even three Italies: that is Italy of municipalities, Feudal Italy and Italy of the Church with Venice (Galasso 1979, 173-189). During contemporary history, we have gone back to the idea of one Adriatic as a geo-strategic place for nations and nation states' politics and economy<sup>22</sup>. To move beyond the differences and the unambiguous historical perspectives (as already mentioned, there are seven of them), it is necessary to see and accept the Adriatic as a cultural context or even as a *cultural region*. To be more specific, we could take the so-called *Latin Arch* as an example: an initiative that aims at valorising the Romance linguistic and cultural dimension in the area between Andalusia and Calabria. This is one of the most interesting features of Western European Adriatic which finds a sense of uniformity in being both Latin and Catholic; but it is also a way of interpreting the western side of the Mediterranean. The Adriatic, on the other hand, is not the space for uniformity but it is the meeting place between dissimilarities. It is the place where the Italian language (or at least all the different dialects) met the southern Slavic languages - namely Slovenian, Croatian and Serbian as well as Albanian (Ivetic, 2014, 9-14). In western part of the Adriatic, the so-called Slavia, a cultural and linguistic group idealized during the XIX century managed to reach and be part of the Mediterranean. From a linguistic point of view, the Croatian population, is a Slavic population but from a cultural perspective, it can be largely considered as Mediterranean. In the very same shores, the catholic confessional tradition lived for centuries together with the Orthodox religion practiced in Serbia, Montenegro, Albania and Greece.

In fact, quite often we tend to forget that for over six hundred years, from 555 b.C. to 1204, the Byzantine Empire formally ruled over the eastern shores of the Adriatic: in Dalmatia, Dioclea or Zeta (today's Montenegro) and Albania. Even nowadays it happens that we tend to underestimate the Islamic religion practiced in these regions that used to be under the Ottoman domination or in

<sup>20</sup> There is a Mediterranean in the strict sense of the word, to which reference is made here, and there is the great Mediterranean, which includes the Black Sea and the Sea of Azov, contiguous but not fully Mediterranean seas. (Braudel: «Mar Nero... mediterraneo soltanto per metà»). Cfr. Abulafia 2011, XXIII-XXIV.

<sup>21</sup> On the Mediterranean Sea as a category and cultural significance: Kayser 1996; Cremonesi 2007; Chambers, 2007; Cassano 1996; Cassano, Zolo 2007; Fuschi 2008; Baldacchino 2010.

<sup>22</sup> Historical vision of the Adriatic Sea: Cassi 1915; Cessi 1953; Anselmi 1991; Falaschini, Graciotti, 2001.

<sup>19</sup> As reference: Houston 1964; King, Proudfoot, Smith 1997; Hughes 2005.

places like Mostar (Bosnia and Herzegovina) or Durres, where it is one of the most common religions. Additionally, we tend to forget that the Ottoman empire had been an Adriatic state from 1496 till the end of December 1912 or that the Germans also ruled over Istria and Trieste, considered as their southernmost Mediterranean lands being the boundaries of Holy Roman Empire and direct possessions of the Habsburgs, respectively from 1376 and 1382 till October 1918. These two cities were also considered as part of a new Germany after the Frankfurt assembly in 1848 (Mayer, Winkler 1986). Nevertheless, even the western side of the Adriatic is quite complicated, especially when we think about all the numerous minor communities (like the Slavic, Albanian, Greek, Orthodox, Jewish, and Armenian ones) that were scattered in the different cities and the countryside close to the coast. A real jungle of communities and related experiences. After all, this is the Mediterranean. The Sea, considered as a physical space, has a crucial vantage point: it can't be pictured or defined using the same ideological pattern that we adopt for a state or nation.

The geographical determinism of the historical narrative, that strives to understand everything about one single place, goes back to Braudel. The geography of the Sea can set the history and the historical narrative free from all the deterministic logics belonging to political histories (of limited duration) and national histories (historicistic and ideological *per sé*). Therefore, the Sea is an historical object. It is a remarkable written work where it is possible to read the past. It also offers alternative stories to the ones offered by the classical historical narratives. The geography of the Sea in an historical time, as a meeting place of different events, dynamics, and experiences, makes it a comparative written text because it allows us to understand all the diversities that are part of itself. So, it is a place full of comparisons<sup>23</sup>. Therefore, we can say that it is a physical space, a reality, an historical text, a vehicle of historical knowledge and historical experiences.

A history of the Adriatic can be considered, if we picture it as the result of the historical and historiographical investigations, as an alternative to the national histories of all the countries that are part of this Sea and that largely influenced the cultural history of this part of Europe over the last two centuries. The history of the Adriatic can be a transnational thalassography and the Adriatic as a space where to make a transnational history happen (Miller 2013, 1-26; Subrahmanyam 2013, 277-283). Moreover, over the years, besides the development of the world history, large scale historiography has seen the greatest and most interesting progress in the Atlantic studies, but also in the studies of Pacific and Indian Oceans, as part of the histories of big ocean spaces considered as great narratives (synthesis narratives), places for historical comparisons and a framework for analytical approaches<sup>24</sup>. Due to the complexity of its history, the Mediterranean represents the fourth ocean, a sea that has been studied since the eighteenth century, since the times of Edward Gibbon and his *History of the decline and fall of the Roman Empire*, as a place of culture and civilizations. If the Pacific Ocean represents vastness and the Atlantic can be seen as the result of modern times, the Mediterranean is related to ancient times and, from a certain perspective, even to the eternity, if we think about the history of humanity. A *History-Sea* as it says Fernand Braudel and the Adriatic, as part of the Mediterranean, is nothing but a supporting character, with a minor role in the great historical processes and plans<sup>25</sup>.

<sup>23</sup> On the tendency to historicize oceans and seas cfr. Klein, Mackenthun 2004; Bentley, Bridenthal, Wigen 2007.

<sup>24</sup> About Atlantic Ocean: Bailyn 2005; Douglas, Games, Lane, Wright 2007; Games, Rothman 2008; Greene, Morgan 2009; Ordahl Kupperman 2012; Thornton, 2012. About the Indian Ocean: Chaudhuri 1990; Das Gupta, Pearson 1999; Pearson 2003; Kearney 2004; Halikowski 2011; Bowen, Mancke, Reid 2012. About Pacific Ocean: Spate 1979; Spate 1983; Spate 1988; Freeman 2009; Matsuda 2011.

<sup>25</sup> Hodgson 1974; Wallerstein 1978; Abu-Lughod 1989; Lewis, Wigen 1997; Gunder 1998; Gunn 2003; Darwin 2007; Bayly 2007; Bentley, Subrahmanyam, Wiesner-Hanks 2015; McNeill, Pomeranz 2015.

All this in the aftermath of Braudel, until today, when we have proposals for a history of the Mediterranean as a heuristic paradigm involving archaeology, history, cultural anthropology, art history and literature: *A companion to Mediterranean history*, a stimulating product if we consider the addressed topics. Surprisingly a careful consideration of the national historiographies of the Mediterranean is lacking and we have just a quick mention within recent English studies, almost a paradigm for the historical Mediterranean of the 21st century (Horden, Kinoshita 2014, 1-7).<sup>26</sup>

The Adriatic is part of Mediterranean narrative. In fact, we can find the Adriatic right after the three big Oceans and the very same Mediterranean (and other Mediterranean's waiting for their history), right in between the Baltic Sea and Black Sea which, recently, have been the object of several historiographic investigations as border seas, or both meeting and mediation points, seas with a complex history<sup>27</sup>. If we compare the Adriatic to other big seas - quite ambiguous and disconnected- and the irregular Mediterranean (although every corner of it is largely known), from a global perspective, the Adriatic - as already mentioned before - is the perfect example of a Region-Sea or transnational space, that is a defined, linear and yet contrasting place. As it happens for oceanographic studies, so for the history of the sea made by men (not only maritime history), the Adriatic can be considered as a privileged point of research and reflection. Unlike other open seas, in the Adriatic you can perceive a relevant cultural history if captured as a whole and if connected in every detail: Venice, Ravenna, Split, Bari, Ragusa, cathedrals, places of worship, saints, artists and writers from Dante to Byron, Leopardi, but also musical inspirations, from Vivaldi to Rossini.

The Adriatic shows its full uniformity in its cultural history<sup>28</sup>. The sea can be something more than a place that connects different lands. Some pioneers such as Sante Graciotti, a notable Italian scholar of Slavic culture, stated about the so-called *homo adriaticus*, a third level culture referring to a mix between romance and Slavic cultures that took place along the eastern shores of this sea (for instance, the Republic of Ragusa). This hypothesis constituted the basis for a new theory about the crossing of civilizations or even a civilization born on the borders of different civilizations. As well as an 'Adriaticity', as self-awareness of a shared cultural history among Adriatic nations (Graciotti 2006, 7-14).

From this standpoint, all over the globe and even in textbooks, there are very few examples of Seas that can evoke the idea of themselves when it comes to culture and popular culture. This phenomenon does not happen anywhere else, neither in the Pacific Ocean, or in the Indian Ocean or the Chinese seas (East Chinese Sea, Western Chinese Sea). On the Atlantic side, it does not either happen in the Caribbean, which is quite a vast and fragmented sea. And then there is the Mediterranean, that we need to consider given its worldwide history. Other seas that we might consider are the Aegean Sea with its classic, Greek history; the Baltic, important if we think about the Medieval Hansa, the North Sea with its maritime people, the populations living along the shores and its languages. And finally, the Adriatic which, according to this perspective, is more than just a sea.

The Adriatic is an historical transnational space. Considering what we have already said, this is the thesis that we are proposing. A thesis based on the belief that the Adriatic is more than just a sea, it is a Region-Sea or a Mediterranean and European cultural region, that bears witness from the past. The Adriatic as an history which is right in between the classical history of Italy and the history of south-eastern Europe, so the histories of Slovenia, Croatia, Bosnia and Herzegovina, Montenegro,

<sup>26</sup> See also: Bayly 2012, 3-25.

<sup>27</sup> Kirby, Hinkkanen 2000; Palmer 2005; King 2004; Higman 2011; Chandra, Prabha Ray 2013.

<sup>28</sup> Branca, Graciotti 1983; Graciotti 1992; Graciotti, Massa, Pirani 1993; Falaschini, Graciotti, Scaroni 1998; Braccesi, Graciotti 1999; Graciotti 2001; Graciotti 2009.

Albania, and Greece are. Giving this, there is still a whole historiography that needs to be built, even if during the 1960s, Philippe Braunstein mentioned the need to do it (Braunstein, 1971, 1270-1278). In 2001, a *Histoire de l'Adriatique* was published: a book of more than 600 pages, written by Pierre Cabanes; the very first book about these topics, whose importance was not fully appreciated by the people living in the Adriatic.<sup>29</sup> An isolated work made by some French historians (not by chance) who are right outside the Adriatic. In short, there is much to do, starting with those who made history on both sides of this sea.

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## Adriatic navigation routes in antiquity

### Abstract

Analyses data of antique writers in relation to frequency of Adriatic sailing. On the ground of those data certain concentrations of settlements on east Adriatic coast is being noted, primary developed due to the fact that in the period, during ancient world, east Adriatic was represented with far most consistency of navigation than the west part of the same sea. There are numerous reasons: the agricultural wealth of the surrounding area, mineral resources, agricultural and livestock products from the inlands, meteorological factors, the orography of the terrain, oceanographic and hydrographic features, the protection provided by the island belt, etc. Therefore, the East Adriatic waters were a significant sailing link in the Ancient times, connecting Europe with the markets on the Mediterranean coasts of Asia and Africa.

**Keywords:** the Adriatic, sailing routes, Ancient times, urbanism, communication corridors of the coasts – inlands, writings of the Ancient geographers and historians

Certain concentrations of settlements are present on Adriatic during the ancient world, of smaller or greater degree of urbanisation conditioned by conjuncture in sea-traffic, agricultural richness of the surroundings, profusion of ore, agricultural and cattle-breeding products of hinterland. In addition it was conditioned by meteorological factors, orography of the ground, oceanographic and hydrographic features, and by the existence or non-existence of the protection range of islands, and similar. These are in closest connection with the fact that Adriatic is traffic corridor, which connected Europe with Asia and Africa for millenniums (Kojić 1967, 1-32; Stražičić 1986, 15-36). The sailing was not done as today (Lakoš, 1985, 333-353; Lakoš, 1989, 499-528);<sup>1</sup> using almost the central part of Adriatic, when the ship's seakeeping qualities are on the high level of security, so they sail across the central part of the Adriatic, and mainly the one of east Adriatic, in two basic navigation categories: *long and short coastal navigation*,<sup>2</sup> conditioned by relatively low reliability on the construction of that period ships. Naturally, the sailing was done in overseas navigation from one coast to another. The entire analysis of the mentioned sailing, supported by the recent scientific findings, is given in this paper. The focus is on the East Adriatic and the concentration of settlements,

<sup>1</sup> On the ancient world basic works are: Brusić, 1970, 549-568; Brusić, 1991, 225-240; Čečuk, 1968, 383-415. Also see works by M. Kozličić in basic sources and reference literature.

<sup>2</sup> The term *long coastal navigation* refers to the navigation in the Mediterranean, entering Mediterranean ports. The term *short coastal navigation*, when referring to the Adriatic, stands for the navigation on the Adriatic Sea. Although the definitions of these two types of navigation are relatively similar there are significant differences between them. Long coastal navigation includes a longer sailing route that only enters the most important harbours. However, meteorological, economic and geopolitical factors can "make" sections of such a navigation that can be classified as short coastal navigation. Unlike long coastal navigation, by short coastal navigation almost all harbours are entered so the sailing is much longer (in terms of time and distance). That is why travellers, taking into consideration a great "loss" of time, try to avoid short coastal navigation whenever possible. Besides these two types of navigation there is a third one, *long navigation*. Basically it refers to the same type of navigation as long coastal navigation, but it does not refer to seas but to oceans as well. Since coastal navigation is not possible in the oceans the attribute "coastal" is omitted. Also, there is a cabotage (ital. *cabotaggio*), which primarily refers to the navigation in the waters of one state or of a unique system of customs and trade. This means that in the Adriatic context cabotage is of the level of short coastal navigation. Cf. Brajković, 1983, 122-123.

primarily along the East Adriatic coast, which owes its prosperity during the Ancient times primarily to such sailing routes.

For older periods the concentration of settlements conditioned by sea-traffic is noticed in the area of river *Padus* (*Adria*, *Numana*, *Spina*) used as support for trade: overseas – coast – coastal hinterland.<sup>3</sup> Subsequently, with the spread of Roman government, this urbanisation would reach higher ranges. Somewhat to the SE, besides *Aquileia*, *Tergestrum* (Trieste) was being developed, joined in late Antiquity by *Aegida* – *Capris* (Koper).<sup>4</sup> In addition, in the coastal hinterland, with the conquest of Rome, instead of mythical presentation of the Adriatic's mouth of the river *Danubius* – *Danuvius* (the Danube), *Nauportus* (Ljubljana) is being noticed, as a link via Slovenian Karst, towards river *Dravus* (Drava) and the real *Danubium*.<sup>5</sup>

More to the south, on the Istrian coast there are two exceptionally important settlements: *Parentium* (Poreč) and *Pola* (Pula), both important centres of Istrian agriculture (Matijašić, 1988a; Matijašić, 1988b, 41-59). However, they are important headquarters of overseas navigation towards *Padus* and *Ancona*. Moreover, the data on the ferry *Pola* – *Ancona* are present still from Antiquity,<sup>6</sup> and the notions of the *Padus* route, where from Middle Ages there is the presence of the Venice, could only be

speculated for the ancient world.<sup>7</sup> Although these two important agglomerations, namely *Parentium* and *Pola*, have existing sea links coast – inland, the existence of Učka Mountain in hinterland,<sup>8</sup> would focus their trading over sea and along east Adriatic coast, more than in the deep inland. A number of smaller or greater settlements would develop in the neighbourhood of these two places, and, till the late Antiquity, a lot of orientation points important for navigation would be noticed.<sup>9</sup>

Further on along the coast there are rivers *Arsia* (Raša) and *Oeneus* (Riječina), and closely connected *Senia* (Senj). This aquatorium, though in fact relatively short coastal belt, is the area where a number of settlements would establish during Antiquity: *Alvona* – *Albona* (Labin), *Flanona* (Plomin), *Lauriana* (Lovran), *Tarsatica* (Trsat – Rijeka), *Raparia* (Kraljevica), *Turres* (Crikvenica), *Volcera* (Novi Vinodolski), *Senia* (Senj), *Lopsica* (Sv. Juraj).<sup>10</sup> Besides these coastline, there is a number of island settlements: *Apsoros* (Osor, on the island of Cres), *Crepsa* (Cres, on the island of Cres), *Curicta* (Krk, on the island of Krk) and *Arba* (Rab on the island of Rab).<sup>11</sup> In comparison to *Parentium* – *Pola*'s part of the coast, this route has relatively hard, but still functional contact with the coastal hinterland. It is the reason of relatively early noticing the area of *Velika* and *Mala Kapela* (*Delphion oros*; *Albion oros*),<sup>12</sup> while the continuation of the link towards river *Saus* (Sava),<sup>13</sup> would be noticed during the Roman conquest at the end of the 1<sup>st</sup> century B.C. It is the importance of river *Colapis* (Kupa).<sup>14</sup> However, by Pliny the Elder there is specification of cave named *Senta* (Plin. NH 2,115), what should be seen as a distorted name of *Senia* (Senj). Namely, this cave is, metaphorically, the birthplace of wind bora. According to Pliny the Elder, it is situated on the Dalmatian coast, has steep and wide gorge, and if small object is

<sup>3</sup> The same area, from Middle Ages on, is the centre of Venetian Republic. The reason of so relevant affirmation of this coastal belt, however with ooze seabed, and therefore unavailable for maritime activity, lies in extraordinary connections with European hinterland and relatively good hydro meteorological characteristics. Namely, the following area, the wider aquatorium of the bay of Trieste, is closer to the end of such connections, but it is also the belt of extreme bora. Therefore it will develop the trade of amber, and a number of settlements of high urbanisation, at which *Aquileia* and *Tergestrum* will be the most important due to their colonial status, but they won't establish as relevant maritime centres in Middle Ages. If there had not been constant insisting of Austria to make Trieste personal sea "exit" during history (since 1382), it would have hardly developed as it is today. The opposite is with the Venice surrounding lagoons. They are with ooze seabed, but for centuries lasting human intervention managed to improve it to satisfactory conditions. Besides, the very same lagoons protect central settlement from the devastating action of the sea and the wind. In addition, the river Po stretches, therefore its canyon could have been used to trade on in the interior of Europe. On the other side, as bora blows off NE, that element makes it unfavourable for any kind of navigation along Adriatic. The angle of the wind is simply inconvenient for square sail that is dominant almost till the end of Middle Ages. The wind is only favourable when sailing from the bay of Trieste towards the mouth of river Po and surrounding settlements. There the favourable wind would have been waited that blows off W towards E to set a course towards west Istria (Poreč, Rovinj, Pula). Further on, in case of favourable wind, the sailing would continue towards SE, or waiting in the protection of the island range of west Istrian coast for the appearance of the wind. Probably these elements, known from the medieval portolanos, hold the reason of early Greek (Athens) colonisation of the aquatorium around the mouth of *Padus* river, and later Syracuse influence. However these are still unexplored questions when considering the above mentioned aspects. For now see Kozličić, 1994, 347-372; Kozličić, 1995c, 41-138; Kozličić, 1996a, 257-279; Lane, 1977.

<sup>4</sup> Plin. NH 3,129 (Agida); Rav. 4,31 et 5,14 (Capris). In addition, the most important data on geographical and historical sources, where certain site is mentioned, are being given in footnotes. For the complete information on the sources see Kozličić, 1990a; Kozličić, 1990b; Mayer, 1957.

<sup>5</sup> Subsequently writers took this mythical observation present still in Aristotle's "De historia animalium", 8,13. The first to dispute it was Pliny the Elder (Plin. NH 3, 126-128), but even he was not certain as to what was the problem. Namely, by taking over Aristotle's information on Black-sea pilchards, notwithstanding he points out that they move from Danube to Adriatic in subterranean water channels (Plin. NH 9,53). Cfr. Križman, 1997, 268-269.

<sup>6</sup> Strab. 7,5,3-4 (the distance "the top of" Adriatic – Pola, then Pola – Ancona, with the specification of "Veneti land" as the one on the "right", what means that the measure proceeded from navigation from the bay of Trieste, then along west Istrian coast, which in fact makes, to the one southbound, the territory of Veneti on the right, and Istria on the left); Plin. NH 3,129. According to Strabo it is the distance of 800 stadia, which is about 80 nautical miles (1 nautical mile is 1852 metres long). Pliny the Elder gives the distance Tergestrum – Pola of 105, while Pola – Ancona is of 120 Roman miles. As according to Plin. NH 2,85 one Roman mile is 8 stadia long, it would mean that first 105 miles is 840 stadia, while another 120 miles is 960 stadia, or that first is 84, and another 96 nautical miles. These are relatively similar data, with the differences arisen from non-too-expert calculations. Cfr. Kozličić, 1990a, 76-80.

<sup>7</sup> The real confirmations could be traced in Venetian portolanos. Cfr. Kretschmer, 1909, 248 (Portolano Pietro de Versi: *Venexia – San zane in pellago / Sveti Ivan na pučini, SSW Rovinj/*), 311 (Portolano Parma-Magliabecchi: *Vinegia – Cau distria / Koper/*), 360 (Portolano Gratiosus Benincasa: *Vinegia – Parenzo*), 498 (Portolano Rizo: *Venexia – Constantinopoli et Alexandria; the sea route from Venice to Pula: Venexia – Muram / Murano – Liuenza / Livenza, NW Caorle/ – Sancta Chaterina / Porto Santa Margherita, NW Caorle – Chauorle / Caorle – Piram / Piran/*). The analogy is with Rosaccio, 1606, Fol. 1 (Venetia – Parenzo, in detail PAVIĆ, M., 2000, 173-194). Out of presented it is evident that from Middle Ages the following sea route is used: Venice – west Istria – aquatorium of east Adriatic – east coast of Ionian Sea – west coast of Aegean Sea – Bosporus and Dardaneli – Istambul. At the same time, as it is noted from the portolano brought by Kretschmer, the navigation was done along the coast, but mostly on the middle of the sea to reach Koper, Piran, Poreč or Rovinj. Out of the very same reasons still in late Antiquity municipium is formed in Rovinj (Rav. 4,30-31 et 5,14).

<sup>8</sup> Učka Mountain is not named in the sources of Antiquity, but it is charted on the "Tabua Peutingeriana" of late Antiquity. Namely, it is brought as a nameless oronym where river Raša (*Arsia flumen*) springs out – cfr. Križman, 1997, 359. Subsequently, from medieval to modern times, mostly it is mentioned in the sources as Romanic name *Caldiera*.

<sup>9</sup> *Tabula Peutingeriana*: Silvo (Savudrija), Arsia flumen (Raša), Alvona (Labin), insula Ursaria (Vrsar), insula Pullaria (Brijuni archipelago); *Itinerarium Antonini Augusti* (271,1: Ningum – Mirna); *Cosmographia* by the Anonymous Geographer of Ravenna (4,30: Humago – Umag; Sepparis – Sipar, Neapolis – Novigrad, Rougno – Rovinj; 4,31: Silbio – Savudrija, Humaho – Umag, Siparis – Sipar, Neapolis – Novigrad, Rugino et Ruiigno – Rovinj, Nessatio – Vizače, Arisia – Raša; 4,36: Aragone – Dragonja, Nengone – Mirna / later, from medieval to modern times, quite often is present Romanic name Quito/, Arisia – Raša; 5,14: Silbonis – Savudrija, Humago – Umag, Sipparis – Sipar, Neapolis – Novigrad, Revigno – Rovinj, Nesatium – Vizače).

<sup>10</sup> Plin. NH 139-140; Ptol. Geogr. 2,16,2; Rav. 4,22 et 5,14.

<sup>11</sup> The island settlements are being noticed much earlier on behalf of Greek and Roman authors, but hydro meteorological and agrarian factors, and, naturally, the orography of the coast, obstruct their development, which is completely unlike the island settlements of the central Dalmatia. Basic sources are: *Apsoros* (Mela 2,114; Plin. NH 3,140; Ptol. 2,16,8; Rav. 5,24), *Arba* (Plin. NH 3,140; Ptol. 2,16,8; Tab. Peut.), *Crepsa* (Plin. NH 3,140; Ptol. 2,16,8); *Curicta* (Caes. BC 3,10,5; Strab. 2,5,20 et 7,5,5; Flor. 2,13; Plin. NH 3,139; Ptol. 2,16,8). Certainly, the origin of their knowledge comes from the fact that the trade with amber and tin was done even here, in the bottom of bay of Rijeka, and therefore, these islands, where the cities were situated, are known relatively early, and are named *Apsirtides* and *Absirtides* (Artemid. in Steph. Byz., s.v.; Ps.-Scymn. 373; Strab. 2,5,20 et 7,5,5; Plin. NH 3,151, Ptol. 2,16,8), then *Elektrides* (Artemid. in Steph. Byz., s.v.; Ps.-Scymn. 373; Strab. 2,5,20 et 7,5,5; Plin. NH 3,151, Ptol. 2,16,8), but also *Kassiterides* (Ps. Scymn. 392-392). Elektrides according to Greek *electron* = amber, and Kassiterides = tin. According to this, the first material is famous as an ornament, and the second extraordinary important in the production of bronze. On these islands cfr. Kozličić, 1990b, 122-124.

<sup>12</sup> Aristot., *De mir. ausc.* 839 b, 104; Strab. 4,6,1. Cfr. Kozličić, 1990a, 69; Mayer, 1957, 37, s.v. *Albion oros*.

<sup>13</sup> Strab. 7,5,2; Plin. NH 3,128 et 147-148; App. Illyr. 22; Ptol. 2,15,1 et 4; Tab. Peut.; Rav. 4,20.

<sup>14</sup> Plin. NH 3,148; Strab. 4,6,10 et 7,5,2. By this the link of Kupa towards Sava is expressly noted by Pliny the Elder: *Saus per Colapianos Breusque* (in Danuvium defluit) – Plin. NH 3,147. Cfr. Mayer, 1957, 194-195, s.v. *Colapis*.

thrown in, it would be ejected out by the storm like whirlpool even during calm day.<sup>15</sup> Moreover these are characteristics of bora, which is the strongest in this area, so it would be the essential reason that urbanization has not reached higher degree still during the ancient world. However, there is another important fact. All previously mentioned ports along *Padus*, around the bay of Trieste (*Sinus Tergestinus*), as well as those on west Istrian coast have its agricultural environment, what is of importance not only in Antiquity. Therefore, this is the area with more settlements that acquired Roman colonial status. The settlements on east Istrian coast, on Kvarner and along Velebitski kanal (channel) as well as those on neighbouring islands (*Apsoros*, *Crepса*, *Curicta*, *Arba*), were lacking agricultural soil, and therefore, could not skip the step of Roman municipality.

It is similar with the river *Telavium* – *Tedanios* (*Zrmanja*),<sup>16</sup> and the ports closely connected with it as a corridor that linked hinterland with the coast: *Ortopla* (*Stinica*), *Vegia* – *Begia* (*Karlobag*), *Argyruntum* (*Starigrad-Paklenica*) and *Corinium* (*Karin*).<sup>17</sup> Somewhat south of this belt follows agriculturally wealthy area of *Aenona* – *lader*, where *lader* (Zadar) would establish as a Roman colony, and in the vicinity, on the coastal edge, *Aenona* – *Nona* (*Nin*) and *Colentum* (*Murter*).<sup>18</sup> However, *lader* is situated after the triple range of protection island belt,<sup>19</sup> on the coast of relatively wide and very convenient channel for navigation (Zadarski kanal) that directs sea traffic towards NW and SE. Moreover, as it has adequate connections towards *Telavium*, and via this river deeper link to hinterland, and over island ranges with the opposite Adriatic coast, through the ferry E – W in direction of *Ancona*,<sup>20</sup> its position was estimated as remarkable. By this it should be kept in mind that navigation *Pola* – *lader* was not done through Kvarner and Podvelebitski kanal, or Kvarner – *Riječki zaljev* (bay) – *Kvarnerić*, because it would mean the navigation in the bora dominating aquatorium, but directly from Pula to the S of Premantura promontory and *Kamenjak* cape,<sup>21</sup> and then towards *Kvarnerićka vrata*, along

<sup>15</sup> Plin. NH 2,115: *Montium vero flexus crebrique vertices et conflexa cubito aut conftracta in umeros iuga ac concavi vallium sinus, scindentes inaequalitate ideo resultantem aera (quae causa etiam voces multis in locis reciprocas facit sine fine) ventos generant. iam quidam et specus, qualis in Dalmatiae ora vasto preecepis hiatu, in quem deicto levi pondere quamvis tranquillo die turbini similis emicat procella; nomen loco est Senta.* Cfr. Kozličić, 1990a, 261-262.

<sup>16</sup> Plin. NH 3,140; Ptol. 2,16,2. Cfr. Kozličić, 1990a, 239-246; Kozličić, 1990b, 86-98.

<sup>17</sup> Plin. NH 3,140; Ptol. 2,16,2; Rav. 4,22 et 5,13-14.

<sup>18</sup> *Aenona* (Plin. NH 3,140; Ptol. 2,16,2; Rav. 4,22 et 5,14); *lader* (*Mela* 2,57; Plin. NH 3,140-141 et 152; Ptol. 2,16,2; *Tab. Peut.*; Rav. 4,16 et 5,14); *Colentum* (Plin. NH 3,140; Ptol. 2,16,8; Rav. 5,24).

<sup>19</sup> Towards the high seas of Adriatic from NW to SE those are: *Premuda* – *Škarda* – *Tramerka* – *Dugi otok* – *Kornatski arhipelag* (archipelago). After this follows the central range: *Silba* – *Ist* – *Molat* – *Zverinac* – *Sestrunj* – *Iž* – *Rava* – *Lavdara* – *Sit* – *Žut*. The third, internal, range is comprised of: *Rivanj* – *Ugljan* – *Pašman* – *Vrgada*. However, Zadarski kanal is protected by the island range from the influence of bora of Podvelebitski kanal (channel). Those are: *Vir*, *Pag* and *Maun*. All these island ranges lead from Zadarski kanal to *Kvarnerić*, as an interior sea passage among *Cres* and *Lošinj* on the west, and *Krk*, *Rab* and *Pag* on the east. Likewise, if bound NW, it is possible to proceed from Zadarski kanal to *Kvarnerićka vrata* (straits) in the protection belt of *Olib* and *Silba*. Some of these islands were still named in Antiquity: *Rubricata* – *Vrgada* (Rav. 5,24), *Portunata* – *Kornati* (?) (Plin. NH 3,140), *Pamodus* – *Premuda* (*Tab. Peut.*; Rav. 5,24), *Moa* – *Maun* (Rav. 5,24), *Malata* – *Molat* (Rav. 5,24), etc. In general they are called *Liburniae* (Ps. Scymn. 374; Apoll. Rhod. 4,564; Strab. 2,5,20 et 7,5,5-9), and by Pliny the Elder (Plin. NH 3,152): *nec pauciores Liburniae Celadussae*.

<sup>20</sup> It. Ant. 497,2: *Ancona* – *lader* is 850 stadia. It is differently expressed data of Pliny the Elder on the distance Italia – Liburina of 100 Roman miles (Plin. NH 3,45), that is 800 stadia. Cfr. Kozličić, 1990a, 313. However, it should be kept in mind that the link *lader* – west Adriatic coast is the inheritance from the period of Liburnian sea dominance – Čače, 1984, 7-16. On the antique sailing in Zadar aquatorium cfr. Brusić, 1991, 225-240, and on the significance of *Colentum* Čače, 1988, 65-72.

<sup>21</sup> South of Pula is Premantura promontory. On the life in Antiquity on this place Jurkić, 1979, 253-261. This promontory is extremely significant in the navigation of east Adriatic, because it is the extreme south part of Istria, and therefore an orographic object important to notice as early as possible, in order to continue towards NW along west Istrian coast, or alternatively, through Kvarner, towards *Riječki zaljev* and Podvelebitski kanal in direction of SE.

the *Silba* and *Olib* in *Virsko more* (sea), respectively in addition to Zadarski kanal.<sup>22</sup> The identical navigation would be done during Middle Ages, when the very same position of Zadar in the middle of east Adriatic, with coastal, overseas and hinterland connections would make it the crucial centre of Venetian government on the coast.

Down the coast follows aquatorium with a number of specific qualities. The first is the small area of Šibenik that, comparing to the *lader* area, did not manage to rise above the status of municipality, again probably because of the lack of agriculturally cultivable land. Moreover, this is again the area of strong bora (the *bora* of Šibenik).<sup>23</sup> However, in spite of this, this is exceptionally important area for navigation, because it connects northern with central Dalmatia. The most significant object on this belt, at the same time the division towards central Dalmatia, is *Ploča* cape, *Planka*, famous *Promunturium Diomedis* situated on *paeninsula Hyllis* (Plin. NH 3,141). It is also a hydro meteorological division of northern and central Dalmatia, conditioned by orography, and therefore marked as one of toponyms connected with Greek mythological Diomedes (Kozličić, 1990a, 155-162). Finally, this cape is the division of east Adriatic island range.

To the south, precisely to the southeast and east of Promontorium Diomedis, is the aquatorium with exceptional urbanisation still from the period of Greek colonisation of Adriatic. At the beginning those were *Issa* (Vis on the island Vis) and *Pharos* (Stari Grad on island Hvar),<sup>24</sup> and later the influence of Greeks from *Issa* (*Issaei*),<sup>25</sup> through to period of 3<sup>rd</sup> to 1<sup>st</sup> centuries B.C., spread onto the neighbouring coastline in a fan-shaped form; on the north *Tragurion* – *Tragurium* (Trogir, the island and the settlement of the same name), on the south (*Epetion* – *Epetium* (Stobreč near Split), and in the middle *Salona* (Solin), this central settlement that would reach the highest degree of urbanisation on east Adriatic.<sup>26</sup> The reasons of this are numerous. Firstly, it has very wide agricultural area (*Kaštelansko polje*), and it is situated under the *Klis* for centuries traffic route with cattle-breeding, agriculture and ore wealthy interior (Katić, 1962, 267-434).

On the edges of this, so called, Issean fan are the mouths of *Titius* (*Krka*) and *Nestos* – *Hippius* (*Cetina*) rivers. There would develop *Scadrona* (*Skradin*) and *Oneum* (*Omiš*), then *Petuntium* (*Podstrana* between Split and Omiš),<sup>27</sup> and inside the fan, between *Tragurium* and *Salona*, veteran settlement *Siculi*,<sup>28</sup> and at the end of Antiquity *Spalatum* (Split).<sup>29</sup> However, during Antiquity, none of these

<sup>22</sup> E.g. *Pola* – *lader* is 150 Roman miles (Plin NH 3,140) or in *Itinerarium Antonini Augusti*, maritime part (*Itinerarium maritimum*), where, due to the mistake of copyist, *Pola* – *lader* is 450 (CCCCL), in stead of 1450 stadia (MCCCL) – It. Ant. 272,1 et It. Ant. mar. 496,6-7. It is the ancient data on the distance of Liburnian coast which was measured in inland sea, i.e. *Arsia* – *Riječki zaljev* (bay) – Podvelebitski kanal (channel) – *Ljubački zaljev* (bay) – *Povljanski kanal* (channel) – Zadarski kanal (channel) – Šibenski kanal (channel) – *Kanal Svetog Ante* (channel) – *Prukljansko jezero* (lake) – *Titius* (*Krka*).

<sup>23</sup> Here is important *Scadrona* – today Skradin (Strab. 7,5,4; Plin. NH 3,141; Ptol. 2,16,2; *Tab. Peut.*; Rav. 4,16 et 5,14). As well as river *Titius* – *Krka* (Plin. NH 3,129 et 139; Ptol. 2,16,2).

<sup>24</sup> *Issa* (Ps.-Scyl. 23; Ps.-Scymn. 413; Apoll. Rhod. 4,563; Polyb. 2,8,5.., 2,11,11 et 32,9,2; Strab. 2,5,20 et 7,5,5; Caes. BC 3,9; Bell. Alex. 47; Mela 2, 114; App. Illyr. 7; Plin. NH 3,152; Ptol. 2,16,9; It. Ant. 519,4; Rav. 5,24), *Pharos* (Ps.-Scyl. 23; Ps.-Scymn. 426; Sholia in Apoll. Rhod. 4,1215; Strab. 7,5,5; Diod. 15,13,6; App. Illyr. 7; Plin. NH 3,152; Ptol. 2,16,9; *Tab. Peut.*; Rav. 5,24). On Greek colonisation of this part of east Adriatic cfr. Čače, 1994, 33-54; Kozličić, 1990a, 170-186.

<sup>25</sup> Polyb. 2,11,12; Plin. NH 3,142.

<sup>26</sup> *Tragurium* (Polyb. 32,9,2; Strab. 2,5,20 et 7,5,5; Mela 2,57; Plin. NH 3,142 et 152; Ptol. 2,16,9; *Tab. Peut.*; It. Ant. 272,6; Rav. 4,16 et 5,14); *Epetium* (Polyb. 32,18; Plin. NH 142; Ptol. 2,16,3; Rav. 4,16); *Salona* (Strab. 7,5,5; Mela 2,57; Caes. BC 3,9; Bell. Alex. 42; Luc. Phars. 4,104; App. Illyr. 11; Plin. NH 3,141-142; It. Ant. 269,7.., 272,7.., 497,3 et 8; *Tab. Peut.*; Rav. 4,16 et 5,14).

<sup>27</sup> For *Titius* and *Scadrona* the sources are mentioned previously in footnote 26. *Nestos* (Ps.-Scyl. 23; Apoll. Rhod. 4,337). The confirmation of the name *Hippius* is given by Mayer, 1957, 242, s.v. *Nestos*. *Oneum* (Plin. NH 3,142; Ptol. 2,16,3; *Tab. Peut.*; Rav. 5,14); *Petuntium* (Plin. NH 3,142; Ptol. 2,16,3; Rav. 4,16).

<sup>28</sup> Plin. 3,141: *Siculi*, in quem locum divus Claudio veterans misit; Ptol. 2,16,3; *Tab. Peut.*; Rav. 5,14. Previously assigned in place Bijače, recently it is moved to Resnik. As the same time, recent hydro archaeological researches showed that there was, very early, at the turn of the 4<sup>th</sup> to 3<sup>rd</sup> century B.C., important harbour, with strong Hellenistic influence.

<sup>29</sup> *Tab. Peut.*; Rav. 4,16 et 5,14. *Spalatum* developed inside the walls of Diocletian palace, which was built on the remains of older settlement. Cfr. Mayer, 1957, 319-320, s.v. *Spalatum*.



**Picture 1.** The cardinal Adriatic navigation route of sailing ships during ancient times

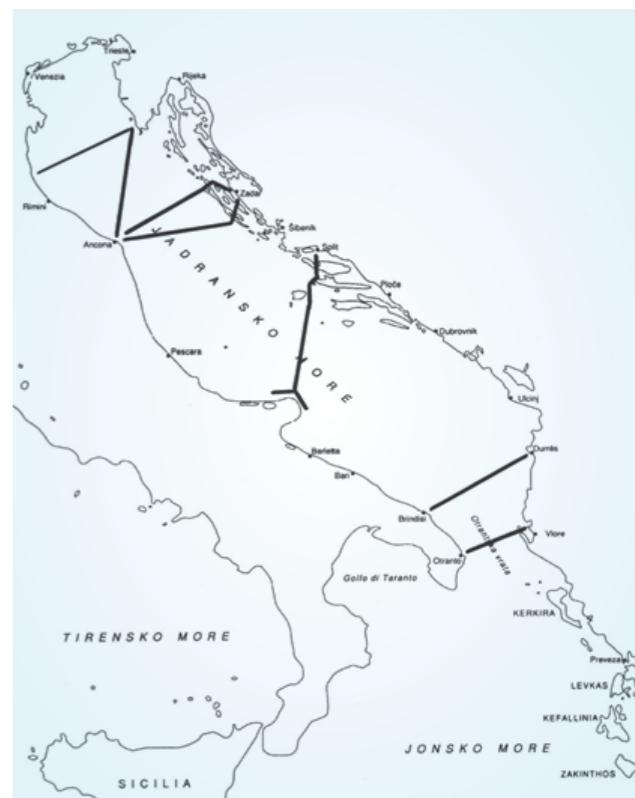
3,141) = Ploča cape, Issa = Vis, Insulae ... Diomedia (Strab. 2,5,20; Plin. NH 3,141) = Palagruža and Mala Palagruža, Gargano, which signifies N – S navigation, even then when, instead of Ploča cape, the navigation was commenced from Kaštelanski zaljev (bay), with Salona situated on the eastern part. In this manner, as by previous routes, the ferry is set where the sailing was performed without greater difficulties and the use of compass. This claim is not insignificant at all. These sea routes are, in Pseudo-Scylax' categories, the whole day of sailing, i.e. 50–60 nautical miles (Kozličić, 1990a, 74–128; Kozličić, 1990c, 589–597). This presumes that all land would be out of sight, since the visibility on the sea, even when it is the clearest, i.e. during bora, does not reach over 30 km (about 15 nautical miles). Consequently, the one who navigates on these routes, even during bora, has about 20 nautical miles of the middle part of the way when there is neither departing or arriving land in the eyesight. This fact is not too much pleasing to the contemporary seaman, on the modern vessel, in spite of enormous number of different sophisticated navigation equipment, that allow safe and precise control of

settlements, as well as those on adjoining islands (Issa, Pharos) would move to a higher degree than municipality. The reason is in the nearly situated strong centres such as Iader, Salona and Narona. Moreover, the links through the river valleys of Titius and Nestos are not optimal, due to their narrow and relatively impassable gorges, the Nestos' more impassable than Titius'.<sup>30</sup> Moreover, they did not have their own agricultural area.

At the same time, this fan of Greeks from Issa was not directed only towards coast. Its other end, as with west Istrian coast and Iader, had direct connection with the opposite Adriatic coast.<sup>31</sup> With west Istrian coast it was the ferry E – W towards the mouth of river Padus or N – S in the direction of Ancona. Iader offered sea route towards Ancona through two directions: NE – SW if navigation was done Iader – Kvarnerička vrata, or E – W if Dugi otok and Velika Proversa was reached from Zadarški kanal. In the area of central Dalmatia it is more favourable. Ancient sea route marked by places of Diomedes' cult was used: Promunturium Diomedis (Plin. NH 3,141)

the ship to the destination. Therefore earlier, even during ancient world, the navigation was only performed on the overseas ferries in the cardinal (N, E, S, W) or non-cardinal directions (NE, SE, SW, NW). Consequently, on the routes reliably determined from the basic knowledge of the east, where the sun arises, and elementary constellation knowledge.<sup>32</sup>

However, this aquatorium, bounded by Issa, Pharos and Salona, is significant as a territory of connections of south and central Adriatic, and ships' directing from these parts to Gargano.<sup>33</sup> Another important characteristic is the fact that here two sea routes are being offered for the continuation of sailing towards SE, by this the route Brački kanal (channel) – along the coast – is of smaller relevance, though it leads through Neretvanski kanal (channel), whether bound SE or NW. Again the problem arises with bora, but this time under the mountain Biokovo (the bora of Makarska). Therefore, due to early Greek colonisation, the navigation was rather done through Splitska vrata, that are defined with two or little bit more stadia by Pseudo Scylax in 23<sup>rd</sup> chapter of his work "Periplus".<sup>34</sup> From there the navigation proceeded to the extreme west cape of the island Hvar, Pelegrin, and on through Paklinski and Šćedrovski kanal (channel) towards Neretvanski kanal to Narona,<sup>35</sup> or, on the other hand, through Korčulanski and Pelješki kanal



**Picture 2.** The most important transadriatic routes of sailing ships during ancient times

<sup>30</sup> It is significant that in Rizo's portolano of 1490 the channel of Sveti Ante, which is used to navigate from Šibenski kanal to Prukljansko jezero (lake), and on to Šibenik or Skradin, and from Skradin on the Krka River to Knin, is called Porte de Tenin. It means that this sea passage was still then understood as a route for the Knin in the interior. The complete passage is: "E vase per vna bocha stretta per entro do monti che se chiamano porte de tenin e dentro da quella bocha e vn gran freo e largo ed e in quel freo la citade de sibenicho e pose andar per vn streto per aqua suxo infra terra in fina scardona la qual sie infra terra mia 18 e poi tornerai a sebenicho e da sebenicho a chauo cesta per staria sono mia 12 e trouase asai ixole e statij" – Kretschmer, 1909, 502.

<sup>31</sup> Plin NH 3,45: distance Italia – Corcyra Melaena and Issa. The ferries of Claudius Ptolemaeus, present on his "Fifth chart of Europe" are given in Kozličić, 1990a, 306. This sea route leads from Salona to Splitska vrata (sea passage between islands Brattia /Brac/ and Solentia /Šolta/), then further by the extreme western cape of island Pharos (Hvar) to Issa. In addition the navigation was performed near the islands that carried the name of Diomedes (Plin. NH 3,151: *Insulae ... Diomedia*), which, after recent archaeological researches, cannot be compared with Tremiti, but with Palagruža and Mala Palagruža islands. At the end the route reached Gargano peninsula on Italic coast. It is N to S navigation, and it was possible even before compass invention. On this route, that could be called today Diomedes' sea route, cfr. Kozličić, 1996b, 39–44.

<sup>32</sup> For millenniums navigation was predetermined with shorter or longer waiting for the favourable wind. Even then when overseas ferry was the sailing route, but the sky was cloudy. It is important due to the fact that only during clear day it is possible to follow the place of sunrise, its path, and sunset. To the experienced seaman this was more than enough to determine cardinal directions: N, E, S, W (Strab. 1,1,6). If the night would catch them on the sea they could orientate according to position of Big and Little Dipper, which is the method of orientation known since the times of Phoenicians. (Strab. 1,1,16). There is also the factor of winds' structure that differentiated not only by the direction of blowing, but also by accompanying meteorological characteristics. They are remarkable brought by Pliny the Elder (Plin. NH 2,119–121) – Kozličić, 1990a, 259. It can be noticed that in Antiquity there are not only cardinal but also non-cardinal directions, the following line: N, NE, E, SE, S, SW, W, and NW. There are also a number of winds that make narrowed wind rose of 16 winds: ENE, SSE, SSW and NNW. Subsequently, during Middle Ages, this wind rose, crossed with compass needle, would have even greater significance, and therefore it would be present in all portolanos – Kretschmer, 1909, 183–188. However, the whole wind rose made of 32 winds (one wind –  $360^\circ : 32 = 11,25^\circ$  or  $11^\circ$  and  $15'$ ) would be brought by Vincenzo Maria Coronelli 1693 in his "Corso Geografico". On this cfr. Kozličić, 2001, 173–176.

<sup>33</sup> The route towards Gargano meant the possibility of extension to Golfo di Manfredonia, and further along Italic coast to SE, but also quite often the navigation to Ancona, especially for the ships coming from the south part of east Adriatic. Those are typical ferries Salona – Aternum (It. Ant. mar. 497,3) or Salona – Sipontum (It. Ant. mar. 497,8). On this with necessary argumentation Kozličić, 1990a, 150–154; Kozličić, 1996b, 39–44.

<sup>34</sup> It is the sea passage between Šolta and Brač. These islands are known very early in Ps.-Scyl. 23. Cfr. Kozličić, 1990a, 92, with the older reference literature. Later Roman sources are: Brattia (Plin. NH 3,152; Tab. Peut.; It. Ant. 519,4; Rav. 5,24); Solentia (It. Ant. 519,4; Tab. Peut.; Rav. 5,24).

<sup>35</sup> The navigation after Splitska vrata through Hvarska kanal again would lead the ship to aquatorium of Makarska; therefore nothing would be acquired. Because of this, the navigation was done to the south, around Hvar, in the protection of the south part of this island. Naturally, during the wind bora. But if there was not any bora, there was no reason not to sail from Splitska to Brački in Neretvanski kanal. This sea route was rather shorter. However, it should be kept in mind that already seamen of Antiquity were aware of the fact that the navigation should not be done on the shortest but on the safest way, no matter how long is the route traversed. Those, who were not aware of this, or did not consider meteorological characteristics of this coast, experienced average. On these accidents cfr. Gluščević, 1994, 13–32; Lakoš, 1989, 499–528.

(channel) and further towards SE along the coast. In this manner, Tauris (Šćedro) is noticed early, later identically treated by Venetian portolanos.<sup>36</sup>

In addition, colony Narona (Vid near Metković) was situated at the end of Neretvanski kanal. This is only a Roman period version of an earlier emporium mentioned by Theopomitus,<sup>37</sup> which is logical because Narona is situated at the mouth of the river Naron, for millenniums used in trading with ore, livestock and agricultural products with the wealthy interior.<sup>38</sup> Moreover, this agglomeration would have exceptionally fertile valley near the mouth of the river, therefore it would develop into one of the greatest Adriatic emporiums.<sup>39</sup>

<sup>36</sup> Tauris – Caes. BC 43; *Tab. Peut.* The island, with the exception of navigation orientation point, has no other significance, not only during the ancient world, but even later. And otherwise, as it is seen from previous text and footnotes, if the islands are not urbanised they are in function as a navigation orientation points. It is the same during Middle Ages and modern time. This is unambiguously presented in Rizo's portolano of 1490. For west Istrian coast he specifically brings 14 islands and shallow waters grouped around Poreč, Rovinj, and in front of Pula. The extreme southern shallow water is today's Albanež, S of Kamenjak, the extreme south cape of Istria. Consequently, the islands that served as orientation points to those coming from Venice or on the way to Venice, or, respectively, to the south. Those islands are: Secha = Pličina Lim, bank, SW Vrsar; Veschoeliche = Civran (?), bank, NNW Poreč; San Nicholo et San Nicolo = Sveti Nikola, island, SW Poreč; Sancta Felicitade = Frijitali, assembly islets, SSW Poreč; Tre schoi = Sveti Nikola + Tovarjež + Rasohe, islands, SE and SSW Poreč; Figarola = Figarola, island, NNW Rovinj; Sancto Andrea = Sveti Andrija, island, SSW Rovinj; Secha = Seka, cape and island, NW Pula; Seror = Sestrice, islands, SSE Rovinj; Ixole e scoi Breoni = Brijuni, coastal archipelago, NW Pula; Veruda = Veruda, island and little bay, SSW Pula; Ixola biancha = Albanež, bank, S rt Kamenjak (SSE Pula). The data from Kretschmer, 1909, 498-501. The analogy is with north Dalmatia. Here Susak is an important island for the seaman sailing from Kamenjak cape towards Kvarnerička vrata. The identical situation is with Prvić, Vrgada and Murter islands for the seaman coming from SE to proceed towards Zadarški kanal and on along the coast in the direction of NW. Moreover, several islands are mentioned in the function of quarantine stations. Those are: Sansegio = Susak, island, SW Lošinj – SE Porer; Uegla = Krk, island, SSE Rijeka; Leurosi = Ošljak + Galovac, islands, used for quarantine isolation of ships, cargo and crew that came from ports desolated by contagious diseases. Situated SW Zadar; Scoi de Laurana et Scoi de Lavrana = Veli Školj + Sveta Eufemija, islands, in front of Pakoštane, SE Zadar; Vergada = Vrgada, island, SE Zadar; Morter = Murter, island, NW Šibenik; Preuichio = Prvić, island, NW Šibenik – Kretschmer, 1909, 501. The situation is not at all different for central Dalmatia. First is stressed island Arkandel south of Ploča cape, then Šolta and Brač, and then follows Hvar with the specification of the islands used for quarantine station, and finally Šćedro. These island are: Sancto Archanzolo = Arkandel, island, S Šibenik (SSE cape Ploča); Šolta = Šolta, island, SW Split; Braza = Brač, island, SE Split; Liesna = Hvar, island, SSE Split; Scigli piani chiamati li bazili = Lukavci, islands, SE luka Hvar; Torchola et Trochola = Šćedro, island, ESE port Hvar – Kretschmer, 1909, 502. In addition, for south Dalmatia the situation is the same. The important islands are Korčula, Lastovo and Lastovci, Mljet, while of Dubrovnik's islands – Elaphites – only Lokrum is noted. Here is this sequence: Churzola = Korčula, island, WNW Dubrovnik; Croma = Lokrum, island, SE Dubrovnik; Lagusta = Lastovo, island, W Dubrovnik; Agustini = Lastovci, coastal archipelago, E Lastovo island (W Dubrovnik); Meleda = Mljet, island, NW Dubrovnik – Kretschmer, 1909, 502-503. The complete analogy is in ROSACCIO, G., 1606. According to this, about 50 islands are functioning as an orientation points for millenniums. If it is known that east Adriatic consists of 1.233 islands, the group of navigationally important islands makes only 4%. The island Tauris is one of those islands.

<sup>37</sup> Theopomitus' information of emporium at the mouth of river Naron is mentioned by Strab. 7,5,9 and Arist., *De mir. asc.* 839b, 104 – Kozličić, 1990a, 60, 69. This information is present by Ps. Scyl. 24 – Kozličić, 1990a, 97-117. The role of Greeks in this emporium is still unknown, but future archaeological research could cast new light on it.

<sup>38</sup> Naron (Ps.-Scyl. 24; Strab. 7,5,5 et 9; Mela 2,57; Plin. NH 3,143; App. Illyr. 11; Ptol. 2,16,3; Rav. 4,16); Narona (Mela 2,57; Plin. NH 3,142 et 21,7; Ptol. 2,16,7; It. Ant. 338,4; Tab. Peut.; Rav. 4,16 et 5,14). After Narona of Antiquity, from Middle Ages an important role here would have emporiums of medieval Bosnia: Drijeva and Brštanik. After the Osmanli conquests Opuzen (*Fort Opus*), Metković and Gabela would establish; the dominance would take Metković as a river port. With the increase of the average tonnage, which became possible with the introduction of steal at the end of 19<sup>th</sup> century, the ships get bigger draught. In spite of gouging riverbed of Neretva from Metković to the mouth, which was done during Austro-Hungarian rule, already before World War II it would be noticed that river port in Metković could not in long term receive the ships that have essentially different quality from the last centuries. Therefore, for the first time in history, the position is moved to the mouth of Neretva, so the settlement Ploče is being build after World War II as the youngest port and city agglomeration of this coast. On all these issues with the relevant reference literature cfr. Kozličić, 1990a, 97-117.

<sup>39</sup> By this Naron is not only considered as a traffic corridor towards the centre of Bosnia. In the same manner the river Bosna is taken into consideration, no matter whether its name of Antiquity is *ad Ba...[flu]men*, CIL 3,3201 = 10159 + 3198, b = 10156 b, and *Bat(h)inus flumen*, Vell. 2,114. Namely, the source of the river is relatively near the source of Neretva, therefore following the flow of the rivers grain-bearing Panonia could be reached, and this was very important during ancient world and later periods. On the same route, like on the previously mentioned one's, the salt would be transported to inland, of the same importance to people and livestock breeding. For Venice and Dubrovnik the trade with salt, from Middle Ages onward, would become the most important issue of exchange with inland, and the foundation of their maritime economy. Finally, in order to destroy Dubrovnik's salt monopoly, Bosnian medieval rulers built Herceg Novi (*Castel Nuovo*) on the coast of Boka kotorska. On these issues in detail cfr. Tošić, 1976, 37-50; Tošić, 1982, 69-78; Tošić, 1983, 123-137.

However, there is still one important factor. Narona has a direct connection through Neretvanski with Pelješki channel, a relatively narrow sea passage where the ships always sailed. The navigation was also possible along the south side of island Korčula (Corcyra Melaena – Corcyra Nigra), but then the protection belt of east Adriatic islands would be lost, because the ship would be exposed to open sea waves and south wind.<sup>40</sup> These were the reasons why still in the 6<sup>th</sup> century B.C., most likely on the place of today's Korčula, the Cnidian colony was developed, which would base a great part of its prosperity on the direct connection with the mouth of Neretva river, and in general control of coastal sea-traffic that, partly, took place in front of their settlement. Consequently, the interests for the land are similar as by Isseans. Therefore, these Isseans, using for centuries long co-living of Greek and Illyrian cultural and ethnical elements, would found own subcolony of agrarian nature in Lumbarda on the east part of Korčula (3<sup>rd</sup> century B.C.). However, in later times, as in previous examples, the degree of urbanisation would not rise above municipality.<sup>41</sup> The reason of this, probably, is the vicinity of strong colonial centres, here two important Roman colonies: Narona and Epidaurum (Cavtat) on the southeast.

South of Black Corcyra is new important maritime stronghold – previously mentioned Epidaurum.<sup>42</sup> As a Roman colony it depended upon Konavosko polje (field). Although in the vicinity of protection belt of Dubrovnik's Elaphites, and of Melita (Mljet) and Molunat peninsula,<sup>43</sup> till the late Antiquity Epidaurum would not achieve higher status in urbanisation than *Epitaurum id est Ragusium*,<sup>44</sup> i.e., in contemporary geographical categories, Cavtat is Dubrovnik in the sense of transferred living continuation, which does not mean that there was no urbanised living in the area of Dubrovnik before the arrival of refugees from Epidaurum. Is the reason of this observation a great exposure of the aquatorium to the south wind, especially SE of Dubrovnik; because east Adriatic archipelago, observed from NW to SE, ends near the reefs of Cavtat, or due to a relatively poor connections of central settlement (Epidaurum) with the inland and the lack of overseas navigation, is not known till now. However this belt is important in the sense of coastal navigation continuity.

More to the SE along the coast, new significant centre of urbanisation is Epidamnus – Dyrrachium (Albanian Durrës, Croatian Drač).<sup>45</sup> However, before Epidamnus there is the bay of Boka kotorska with Risinium (Risan) and Acrinium (Kotor), and the line Butoa, Olcinium, Scodra to the SE.<sup>46</sup> Still in "Periplus"

<sup>40</sup> Valid confirmation of this route is a relatively early notice of Pelješac peninsula as "a piece of land that stands out towards the sea" – Ps.-Scyl. 23.

<sup>41</sup> Of Korčula as Cnidian colony is witnessed by Ps. Scymn. 428; Strab. 2,5,20 and 7,5,5; Plin. NH 152, and on the later influence of Isseans on Korčula Polyb. 32,9,2. On Cnidian and Issean colonisation of Korčula cfr. Kozličić, 1990a, 280-288. Other relevant sources are: Ps. Scyl. 23; Apoll. Rhod. 4,567; Mela 2,114; App. Illyr. 7; Ptol. 2,16,9; Tab. Peut.; It. Ant. 520; Rav. 5,24. It is Black Corcyra, which is the antique name for Corcyra of Adriatic i.e. Korčula, as a difference from Ionian Corcyra or Corfu. This Ionian Corcyra is also known in the early sources – e.g. Herod. 3,48-53 et 7,145; Ps.-Scyl. 22.

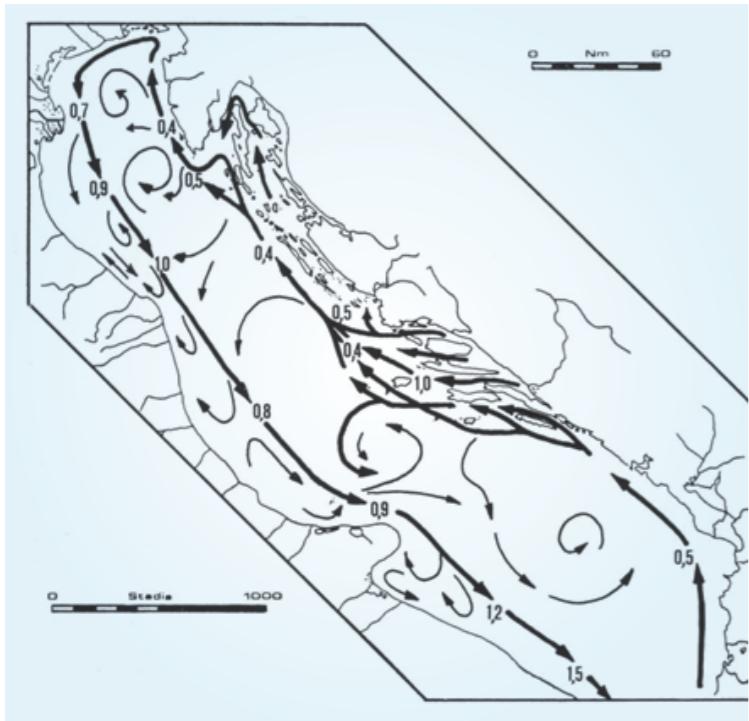
<sup>42</sup> Bell. Alex. 44; Plin. NH 3,143-144; Ptol. 2,16,3; It. Ant. mar. 520; Tab. Peut.; Rav. 4,16 et 5,14.

<sup>43</sup> Plin. NH 3,152 writes "VII Elaphites". Today those are: Jakljan, Olipa, Šipan, Lopud, Kolocep, Daksa and Lokrum. They are all situated between Pelješac peninsula and Dubrovnik. Melita, today's Mljet, is known in the Antiquity sources: Ps.-Scyl. 23; Apoll. Rhod. 4,572; Plin. 3,152; App. Illyr. 16; Ptol. 2,16,9; It. Ant. 520, 1-2; Tab. Peut. This island is often carelessly confused with the Mediterranean Malta, and Adriatic Molat, NW Zadar or even with Molunat peninsula, SE Dubrovnik. This is especially done in the medieval portolanos where all of them are named the same. However, Molat is confirmed by Rav. 5,24 (*Malata*), but antique name of Molunat is not known. Cfr. Mayer, 1957, 217, s.v. *Malata et Maluntum*.

<sup>44</sup> Rav. 4,16. For later sources cfr. Mayer, 1957, 282-283, s.v. *Ragusium*.

<sup>45</sup> Epidamnus is an earlier and Dyrrachium subsequent Roman name of this important agglomeration. Sources: Herod. 6,127; Thucid. 1,24,1; Ps.-Scyl. 25-26; Ps.-Scymn. 435; Strab. 7,5,8; Mela 2,56; Flor. 2,13; Plin. NH 3,145; Ptol. 3,12,1-2 et 8,12,3.

<sup>46</sup> Risinium (Polyb. 2,11,6; Strab. 7,5,7; Plin. NH 3,144; Ptol. 2,16,3; Tab. Peut.). Boka kotorska was firstly known as Risinium river, and than later as Risinium bay (Ps.-Scyl. 25; Polyb. 2,11,16; Strab. 7,5,3; Ptol. 2,16,3). Acrinium – Kotor (Plin. NH 3,144; Ptol. 2,16,3); Butua (Ps.-Scyl. 24-25; Plin. NH 3,144; Ptol. 2,16,3; Tab. Peut.; Rav. 4,16); Olcinium – Ulcinj (Liv. 45,26; Plin. NH 3,144; Tab. Peut.; Ptol. 2,16,3; Rav. 4,16); Scodra – Skadar (Polyb. 28,8,4; Liv. 43,20., 44,30-32 et 45,26; Plin. NH 3,144; Ptol. 2,16,7; It. Ant. 339,4; Rav. 5,14). Scodra is situated on Lake Skadar, named at that time Lacus Labeatis (Liv. 44,31: *in lacum Labeatum et ex Labeatide palude*), connected with the sea via river named Barbanna – Bojana (Liv. 44,31,3).



**Picture 3.** The Adriatic sea currents according to latest insights of mareographic research. They are of essential importance at the analysis of navigation routes for sailing ships in ancient time.

Skadar, and Dyrrachium in the bottom of the bay of the same name. This protected their ports from the perilous south wind influence.

Out of the previous text it is evident that east Adriatic coast, observed through the level of coastal settlements' urbanisation, during the ancient world has special qualities. This is also confirmed by Strabo. Namely, he writes that there are good ports during the complete Illyrian coast navigation. The reason of this is vicinity of the coast and adjoining islands, while the opposite Italic coast is completely without ports. Although of this kind, Illyrian littoral was poorly appreciated, probably because of the void of knowledge about its qualities. However, more because of the wild people and their plundering customs. The area above the littoral; coastal hinterland, is mainly mountainous, cold and snowy, and the part turned north even greater, which produces the reason why the grapevine is so rare, even on the plains.<sup>47</sup> According to this, Strabo's testimony explicitly confirms east Adriatic as a navigation corridor of this sea.

This remark is supplemented by Pliny the Elder. According to him, the characteristic of this coast is more than thousand islands, natural shallow sea with negligible sea currents that penetrate through narrow channels.<sup>48</sup> Pliny the Elder points out fundamental facts – 1.233 islands which is the true number – then oceanographic and hydrographic characteristics (sea currents, sea depth) that made east Adriatic more navigable than west Adriatic. But Pliny the Elder, as the other authors, was not aware the full meaning of his observations. After all Strabo was not aware of this, too. He also stresses that the most of navigation is done on east than on west Adriatic, but he was not able to answer why.

<sup>47</sup> Strab. 7,5,10.

<sup>48</sup> Plin. NH 3,151: "Illyrici ora mille amplius insulis frequentatur, natura vadoso mari aestuariisque tenui alveo intercursantibus".

of Pseudo-Scylax, after Butoa, there is the definition of night, besides daily navigation, which is only particular for west Istrian coast. This means that the coast was used for navigation, but geographically so oriented that, firstly, the navigation was done directly to Dyrrachium on the east, and then towards Ionian Corcyra on the south. This coastal belt is greatly exposed to the south winds, therefore one of the reasons that higher degree of urbanisation developed only in Scodra and Dyrrachium. By this, it is particularly important to point to the fact that these two settlements have own agricultural land, and exceptionally qualitative connection with the inland, while the nearness of Otranto, facilitated overseas navigation. Moreover, both settlements are relatively deep in the coast; Scodra on the bank of Lake Skadar, and Dyrrachium in the bottom of the bay of the same name. This protected their ports from the perilous south wind influence.

Moreover, from the above could be noticed that there existed at least elementary comprehension that the climate of this coast is not the most favourable, at least concerning the winds. There is the information of the cave Senta, then aforesaid Strabo's testimony and similar data of Pseudo Scymnus.<sup>49</sup> Despite such facts, during ancient times basic navigation route was along eastern Adriatic coast, especially in long coastal navigation. Naturally in the protection belt of east Adriatic archipelago, especially considering the quality of those days' ships, that used only square sail, and with weak seakeeping qualities.<sup>50</sup> On the one hand the navigation was not easy at all, but from the available sources it could be concluded that it was done in this manner. Here is the general coastal route, with the modern geographic toponyms: Venice – overseas navigation to Poreč or Rovinj – then on the route towards Pula along Kamenjak, the extreme south cape of Istria, on along Unije to Susak – and then towards Kvarnerička vrata – along Silba and Olib through Virsko more in Zadarski kanal – further through Pašmanski kanal in Murtersko more (sea), then along Šibenski kanal – further around Ploče cape, first in Drvenički, and then in Splitski kanal, along the western part of Hvarska kanal to Pelegrin, the extreme west cape of Hvar, and further through Paklinski and Šćedrovski kanal, into Korčulanski and Neretvanski kanal if on the route to the mouth of Neretva, or through Pelješki kanal, if on the SE course – from Pelješki to Mljetski kanal, and, in addition, along the coast to Corfu and the exit of Adriatic.

The above-mentioned groups of agglomerations with the very existence confirm such a route. However, as a counterargument, when considering such groups, it could be said the same for the west coast. There also existed groups of settlements, formed around important centres: e.g. Ravenna, Ancona, Aeternum, Sipontum, Barium, Brundisium. Naturally, their development was essentially conditioned by sea traffic, but this does not mean that the supremacy is taken of east Adriatic. Strabo and Pliny's testimonies are clear.

The answer on the nature of this route is not given by ancient world sources. It cannot be even traced from the medieval portolanos, though this very same route could be noticed. The reason lies in the level of human comprehension and the general knowledge of the sea and maritime activities that was available to the writers of ancient, medieval and first centuries of early modern times. The true answer is gained at the beginning of 19<sup>th</sup> century. It was done by Charles François Beautemps-Beaupré, famous French hydrographer, who performs first hydrographic survey of our coast at the beginning of 19<sup>th</sup> century.<sup>51</sup> Other scientific and research papers from the 20s of this century should be added here, from which the "Atlas of navigation charts" and then the first real Adriatic pilot by captain Giacomo Marieni would result.<sup>52</sup> Marieni explicitly advocates "if we want to sail S – N", i.e. SE – NW, "regardless the season of the year eastern coast should be used". However, "when sailing N – S, i.e. NW – SE, "western coast should be kept, but only during pleasant season of the year (spring, summer)". I.e., he recommends west coast navigation in direction NW-SE only during nice weather, while "careful and conscious" seaman "would sail along east coast in spite of opposite currents, but because of bora". Thus he would be able to "use many shelters and anchorages as opposed to western coast where he could get sea wrecked due to the lack" of shelters, protected ports and

<sup>49</sup> Ps.-Scymn. 380-385. The analysis of this datum is given in Kozličić, 1990a, 155-162.

<sup>50</sup> About the ships in Adriatic during the ancient world with older reference literature cfr. Kozličić, 1993, 17-43.

<sup>51</sup> Beautemps-Beaupré, 1849, 32-121. Scientific analysis of Adriatic as sea in Kozličić, 1995c, 259-279; Kozličić, 2006, *passim*. Analogously for western Istrian coast: Kozličić, 1995d, 41-138.

<sup>52</sup> Carta, 1824; Marieni, 1830; Marieni, 1845. First edition of Marieni pilot (Marieni, 1830) and "Atlas of nautical charts of Adriatic" (Carta, 1824) in State Archive, Zadar.

large anchorages in particular (Marieni, 1830, 12). All the later pilots of the Adriatic from 19. and 20. century propose similar.<sup>53</sup>

The results attained in this paper definitely confirm the basic thesis emphasised in the introductory part. The eastern Adriatic aquatorium is sea-traffic corridor of this sea during all periods. At the same time, western coast navigation functions for local needs only. The basic reason is the orography of both coasts and closely connected meteorology. There are two dominating winds: bora (NE) and scirocco (SE). Though it creates outstanding sea waves, scirocco was never estimated as too dangerous wind, although reasonable seaman never neglected the perils of sailing during scirocco. Bora was always held more dangerous, because it blows in gusts, and with this characteristic it made sailing more perilous. Therefore during the history, even till the 19<sup>th</sup> century, seamen had fear from this wind, almost to the level of phobia. Moreover, bora is a result of eastern Adriatic belt configuration and oronimy, including general geographical position of this aquatorium on European south. Notwithstanding, the only protection from bora was navigation within the same aquatorium, in the protection belt of its archipelago. At the same time, archipelago sailing enabled typical terrestrial navigation, which was especially important during the period when there was no compass, or even subsequently, when it was in use, but navigation instruments were rare and unreliable. Besides, the sea depths and currents were almost on the level of desirable optimum for the ships of that period. The western Adriatic aquatorium has opposite characteristics; too strong currents, low and difficult coast by terrestrial navigation, shallow and ooze seabed, but numerous and better equipped ports - but they could not afford shelter from bora because they were not protected by the range of islands. The result of such a line of objective facts is specific concentrations of settlements along the east Adriatic coast that were analysed in this paper in detail.

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## The pilgrimage paths: elements for a better understanding of the medieval developments of Adriatic-Ionian Routes

### Abstract

The pilgrimage with all its associated cultural and religious implications was a deeply rooted phenomenon throughout the medieval period. All the pilgrims, men and women, knew very well that the pilgrimage's experience contributed to change their perspectives and to remove - albeit temporarily - the certainties linked to their home country, town, house, and family. Over the course of the centuries, this movement of thousands of people contributed to establish and develop a network of paths, by land and sea, through which they could move from the remotest places of Asia, and Europe, to the main destinations of the so-called *peregrinations majores*, that were Rome, Jerusalem, and, from the eleventh century, Santiago de Compostela (Stopani 1991, 1-12).

**Keywords:** adriatic ancient ports, Ortona, pilgrims, Adriatic, pilgrimage paths

In the early centuries of the Middle-Ages, Rome played the lion's share in these *peregrinations majores* because it was where the head of all the Christians, and the successor of St. Peter (30-64/68), resided. However, this did not mean that, during this period, all the pilgrims went to Rome as there is enough evidence to demonstrate that there were already organized forms of pilgrimages towards the Holy Land since the fourth century. A good example to prove this aspect is to look the architectural structure of the Basilica of the Nativity at Bethlehem and the Basilica of the Holy Sepulchre at Jerusalem which had ample inner spaces to host many visitors, and, at the same time, to allow an easy circulation around the sacred places. In the eighth century the Islamic conquest substantially slowed the pilgrims' flux towards the Holy Land (Stopani 1991, 21).

The outgoing and incoming pilgrims travelled on a series of different routes, which implied a journey by land, by sea, or, in some cases, a combination of both. Hardly surprising the itineraries followed by the pilgrims were not the same and changed according to the circumstances of a specific period. In the case of Rome, most of the pilgrims opted to travel by land on the road called *Monte Bardone*, which linked the upper part of the Italian Peninsula with the Apennines in today's regions of Emilia-Romagna and Toscana. From there the path went through Lucca, Siena, and it connected, in proximity of the Lake of Bolsena, with the remains of the *via Cassia* which directly brought to Rome. From the twelfth century new paths emerged. Rome could thus be reached through the crossings of the Apennines' pass located in today's regions of Marche and Umbria which connected with the former consular roads like the *via Flaminia* (Stopani 1988, 97-98).

In the case of the path for Jerusalem the itineraries were more complex, and more characterized by a series of radical changes - climate, food, habits - which would severely affect the pilgrims on their way for the Holy Land. Despite the first known account of a pilgrimage to Jerusalem - the *Itinerarium Burdigalense* written between 333 and 334 - which indicates that all outward journey was made by land, with exception of the crossing of the Dardanelles' strait, most of the pilgrims travelled by land until the main harbours located along the Adriatic coast of the Italian Peninsula, from where they

embarked for the Dalmatian or the Greek coast. From there they continued their journey by land to Constantinople, and afterwards to Jerusalem (Miller, 1916; Stopani 1991, 24).

Given its natural conformation which stretched towards the other side of the Adriatic coast, the Apulia's region, and its main ports – above all Bari, Brindisi, Otranto, and Taranto – became the key hubs of the pilgrim's maritime path. It is worth to remember that the pilgrims' movement was not just towards Jerusalem, but also towards the coast of Apulia. From the fifth century onwards, the spread of St. Michael's cult, whose epicentre was the abbey dedicated to him on the Gargano's mountain, attracted a growing flux of pilgrims from the Italian Peninsula, Europe, but also from the Byzantine empire. A good example is provided by the account of the pilgrimage made by the St. Artellaide, a young woman and daughter of Lucio, Byzantine proconsul at the time of the emperor Giustiniano (482-565). In the description of her pilgrimage to St. Michael's abbey, she stressed the importance, in the Adriatic paths, of the Siponto's harbour, which, according to the *Itinerarium maritimum*, was more active than those of Salona and Valona in the sixth century.<sup>1</sup>

From the ninth century the visit to St. Michael's abbey became a common aspect of the pilgrims' path prior to their embarkment for the Holy Land in the main harbours of Apulia. According to the *Itinerarium Bernardi Monachi Franchi*, a chronicle compiled by the French monk Bernard in 870, the journey implied a forced stop at St. Michael's abbey, from where the pilgrims continued to Bari, and then to finally arrive at the "harbour of the town of Taranto, where we found six ships."<sup>2</sup> Yet, it is worth to remember that, up until the tenth century, the pilgrimage by sea towards Jerusalem remained a difficult experience due the Muslim's occupation and incursions in the southern part of the Italian Peninsula, the presence of criminals along the roads, and the dearth of proper structures which could provide assistance to the pilgrims. Things began to slowly change from the end of the tenth century when, the conquest of Antiochia by the Byzantine emperor Niceforo Foca (912.c-969) and the conversion to Christianity of the duke Geza I of Hungary (1040.c-1077), allowed a slow but steady consolidation of the pilgrimage towards Jerusalem. In this case most of the pilgrims travelled by land because the journey was less expensive than by sea (Stopani 2005, 21-22; Stopani 1991, 21).

At the onset of the eleventh century, with the beginning of the Crusades, the preferred way to go to the Holy Land returned to be the travel by sea, thus favouring the rise of the Adriatic harbours as crucial links in the pilgrim's networks towards Jerusalem. In that sense the main coastal cities of Apulia and their harbours rose to prominence.<sup>3</sup> Amid the pilgrims' path, the harbour of Bari emerged as seminal connecting point between the Adriatic and the Ionian (Stopani 2005, 25). There is enough evidence which demonstrates that Bari was considered by the pilgrims as "an excellent city which is located on the border of the sea." (Carnotensis 1978, 98-101).<sup>4</sup>

Two seminal factors played in favour of this city: the first was the presence of structures which provided assistance to the pilgrims; the second were the relics of St. Nicholas (270-343), bishop of Myra, which had been translated into the homonymous cathedral in 1087, albeit his cult was already widespread in the region before this event (Gambacorta 1961, 487-502). These relics had a

strong impact amid the flux of pilgrims who, prior and after their embarkment, used to gather "in the church of blessed Nicolas" in order to obtain the benediction before their embarkment for the Holy Land, and, in some cases, for their return home.<sup>5</sup> The spread of the cult of St. Nicholas brought to a progressive identification of the harbour of the city with the saint himself. A telling example is that of St. Teotonio (1082-1162), the Portuguese saint, who, in his journey from Portugal to Jerusalem in the twelfth century, accounted to have disembarked after ten weeks of travel in the harbour of St. Nicolas, which was meant to indicate Bari.<sup>6</sup> A further case comes from the experience of Matthew of Paris (1200-1259), an English Benedictine, who, in his *Iter de Londinio in Terram Sanctam* of 1253, identified Bari with St. Nicholas (Miller 1895, 84-90).

The importance played by the harbour of Bari combined with the proximity of the city with Rome, which could be easily reached by the pilgrims on their ongoing travel to Jerusalem and during their return. This is witnessed by the account of Peter the Hermit (1050-1115) the pilgrim who, in his travel account of the late twelfth century, stated to have disembarked at Jerusalem, from where he "proceeded to Rome without obstacles."<sup>7</sup> The importance of the maritime paths linked with the resumption of the former consular roads, like the *via Casilina* or the *via Traiana*, which were part of the network of communications that connected Rome with the southern part of the Italian Peninsula during the Roman period. From the eleventh century a series of accounts display that the above roads were selected by the pilgrims in their journeys to the harbours, thus beginning to be commonly called *via Francigena* (Trinchera 1865, 21).<sup>8</sup>

Beyond Bari, other Apulian harbours rose to prominence; one of these was Brindisi (Stopani 2005, 25-26). The *Liber de existencia riveriarium*, a Pisan pilot book of the end of the thirteenth century, clearly mentioned the importance of this port for anyone who wanted to "transfer to the Adriatic coast of Dalmatia." (Dalché 1995, 156).<sup>9</sup> To the eyes of the pilgrims, but also of the crusaders, Brindisi was a seminal transit point, and this is demonstrated by its mention in a good number of accounts. An example is provided by the experience of the French prince Guglielmo, who in 1101 crossed, with his army, all the Italian Peninsula, and arrived in Brindisi, where he embarked for Valona, from which he would pass through "the land of the Bulgarians" in order to go to Jerusalem.<sup>10</sup> According to a prevalent opinion amid the crusaders and the pilgrims, Brindisi was a safe harbour because it was "the most sheltered from the winds." (De Pouille 1961, 224).<sup>11</sup> The personal experience of the English pilgrim Saewulf further proves this aspect. In 1102, he and his companions initially sailed from Monopoli but, once in open sea, they were on the brink to wreck due to the strength of the waves, thus forcing them to return, and to leave for Corfu from the harbour of Brindisi the following day.<sup>12</sup>

The paths followed by the pilgrims to reach the Apulian ports were not homogenous, although there was a certain tendency to privilege the network of the consular roads. One of these paths involved a journey on the *Via Appia* from Rome to Capua, from which it passed through Benevento, Eclano, Venosa to Taranto, and then went on to Brindisi. This itinerary could be different in the sense that it was also possible - once in Benevento - to opt to use the *Via Traiana*, which passed through Canosa,

<sup>1</sup> Acta sanctorum martii/a Johanne Bollando S. I. colligi feliciter coepta a Godefrido Henschenio et Daniele Papebrochio eiusdem Societatis Jesu aucta, digesta et illustrata, Antverpiae, apud I. Meursium, 1668, vol.I, p.263; *Itineraria romana*, a cura di Otto Cuntz, Stutgardiae, in aedibus B. G. Teubneri, 1990, vol.I, pp.78-79.

<sup>2</sup> *Itinera et Descriptiones Terrae Sanctae, Itinera Latina Bellis Sacris Anteriora*, Genevae, Typis J.-G. Fick, 1877, vol.I/1, p. 201, (original citation "ad portum Tarentine civitatis ubi invenimus naves sex.")

<sup>3</sup> The bibliography on the Crusades is extremely developed. For an overview see Le crociate: l'Oriente e l'Occidente da Urbano II a San Luigi: 1096-1270; *Mediterraneo medievale: cristiani, musulmani ed eretici tra Europa e Oltremare (secoli IX-XIII)*; Franco Cardini, *Le Crociate in Terrasanta nel Medioevo*.

<sup>4</sup> Original citation "quae civitas optima in maris margine sita est."

<sup>5</sup> *Itinera Hierosolimitana*, cit., vol.I, pp.100-109, (original citation "in ecclesia beati Nicolai.")

<sup>6</sup> Dalena 2000, note nr. 58, pag. 191.

<sup>7</sup> *Itinera Hierosolimitana*, cit., vol.I, p. 241 (original citation "Romam sine mora proficiscitur.")

<sup>8</sup> Document nr. XX.

<sup>9</sup> Original citation "transfretrum sinus Adriatici mari a latere Dalmatiae."

<sup>10</sup> *Itineraria Hierosolimitana*, cit., I, p.206 (original citation "terra Bulgarorum.")

<sup>11</sup> Original citation "Portum Brundisii, qui tutior esse videtur."

<sup>12</sup> Saewulf, *Incipit certa relatio de situ Ierusalem* (1102-1103), in *Itineraria Hierosolimitana*, cit., II, p.7.

Bari, and Brindisi and then arrived in Otranto, which was on the extremity of the Salento's peninsula (Maiuri 1960, 150; Stopani 1991, 25-28). The pilgrims could also use a further path to arrive in Apulia. Indeed, from Rimini, the city which was connected both with the *via Flaminia* and the *via Amelia*, the pilgrims could travel on the costal roads along the Adriatic. Yet the few mentions of this itinerary in the sources demonstrate that this option was rarely followed, also because it did not include a stop in Rome (Stopani 1991, 25-28).

The prominence of the Apulian ports in pilgrim's paths for the Holy Land was also favoured by the widespread presence of houses and hospices which belonged to the Order of the Templars. All along the coast the sources display that the Templars had established structures at Barletta, Bari, Brindisi, Giovinazzi, Monopoli, and Trani. Moreover, there were dedicated structures to assist the crusaders and the pilgrims on the *Appia Antica* - at Castel Garagnone, Gravina, and Spinazzola - as well as on the *Via Traiana* - at Andria, Ruvo, Soverezzo, and Terlizzi (Capone 1981, 193-207; Houben 2004).

The strong link which was established by the Templars with the main coastal towns of the Apulia's region also emerges in the pilgrims' account of that period. A noteworthy example was the travel's description left by the Icelandic monk Nikulas Saemundarson, who, during his travel to Jerusalem made between 1151 and 1154, carefully recorded the distances, the itineraries, but, more particularly, the presence of relics and sanctuaries. In his account he described the travel which brought him to visit the abbey of Monte Gargano, the cathedral of Bari, and the cities of Brindisi, Barletta, Trani, Bisceglie, and Giovinazzo. Of all places visited, Saemundarson remarked the beauty of the artistic good - inspired by the Holy Sepulchre in Jerusalem - which could be found in the cathedrals of Barletta and Brindisi, a tangible sign of the deep and steady links that existed between these cities and the Holy Land.<sup>13</sup>

Most of the important pilgrim accounts and chronicles, which were written between the twelfth century and the first half of the thirteenth century, stressed the fact that the overall number of ports found in Apulia was far greater than those found on the remaining part of the Adriatic coast until Venezia, thus remarking how this part of the Italian Peninsula seemed to be the natural point of departure for the Levant (Dalena 2000, 196). This aspect was clearly emphasized in an account of the thirteenth century which listed the ports of Santa Maria de Leuca, Otranto, Lecce, Brindisi, Bari, Trani, Barletta, Siponto, Vieste, and then Termoli, that was mentioned as "the last harbour of Apulia".<sup>14</sup>

Amid the above ports, Otranto was another crucial site in the pilgrims' path. Its key role emerged during the Norman period, when, thanks to the efforts of Roberto il Guiscardo (c.1015-1085), it gained a growing reputation as the best landing site for any type of ships, and as the natural junction towards the mainland. Two seminal elements favoured the port of Otranto: the first was that its excellent position within the network of communications which connected the city with the surrounding territory; the second was its proximity to the eastern Adriatic coast. According to the chronicler Guglielmo di Puglia, Otranto had always been preferred to Brindisi, because its harbour was one of the safest of the Southern Adriatic.<sup>15</sup> A further aspect to consider is that, since the last years of the Byzantine occupation, Otranto had already become a pivotal point in the commercial and military

connections with Greece, and more broadly with the Eastern Mediterranean (Von Falkenhausen 1978, 138-139; Poso 2007, 141-145).

With the Norman conquest the military capacity of Otranto strengthened, because the port was progressively used for the military expeditions against the Muslims in Sicily, and against the Byzantine strongholds on the eastern Adriatic coast. Yet the death of Roberto il Guiscardo in 1085 brought to a drastic halt the military role of Otranto, which lost of importance compared to Brindisi.

The military decline did not mean that the harbour was excluded from the maritime traffic of merchandise and people in that area (Poso 2007, 145). During the eleventh and twelfth century Otranto was considered an attractive dock both for the movement of goods and the transportation of people. The commercial agreement which, in 1104, was signed between the city and Venice further contributed to improve the position of the harbour in the broader network of the mercantile paths which linked the lower part of the Adriatic Sea, Apulia, and the Levant (Ortalli 1997, 53-74). Otranto thus became a crucial departing site for the Holy Land. Once again, the first-hand experience of Seawulf provides information on the role held by Otranto in the pilgrims' path. According to him, some pilgrims "embark in Bari, some in Barletta, and others more from Siponto or Trani. Others prefer to cross the sea from Otranto, last harbour of Apulia."<sup>16</sup>

By contrast to the other Apulian ports which, most of the time, were exclusively used as a departing point, Otranto was also a harbour where arrived the pilgrims from the Eastern part of the Mediterranean, and more precisely from the Ionian Islands, Cyprus, and the Greek ports. The fact that Otranto was a crucial crossroad between the Adriatic and the Ionian Sea must have been evident already during the late antiquity. This aspect emerges in one of the hagiography on the most iconic saint of Apulia, St. Nicholas, who, during his travel to the Italian Peninsula, left the monastery of San Luca of Stirio and embarked at Lepanto - today's Nafpaktos - on a ship bound to Otranto (Limone 1988, 1-101, 143, 152).<sup>17</sup> A further mention of Otranto as an arrival point for the pilgrims from the Levant is provided by another hagiography on the life of St. Nicholas, which was written - possibly around at the mid of the thirteenth century - by the deacon of Trani Armando upon the occasion of the translation of the saint's relics in the cathedral of Bari. In his work, the deacon accounted that a group of pilgrims from Syria had avoided a shipwreck, and safely arrived at Otranto thanks to a miraculous intervention of the saint.<sup>18</sup>

From the twelfth century up until the and the fourteenth century, the harbour of Otranto continued to keep steady maritime links with the Levant. The sources well display how it was deemed a safe docking point both for the crusaders and the pilgrims. In the former case a good example is provided by the descriptions on the itinerary followed by the French king Philippe II (d.1223) during his return from the third crusade in 1191. The king with his army left from San Giovanni d'Acri and stopped in Rodi, from where they proceeded for Cefalonia and Corfù. From there they were granted permission to dock at Otranto. Beyond the details on the itinerary, the accounts on the arrival of Filippo II at Otranto are useful because they emphasize the geographical proximity of this harbour to Paxos and Corfù. This latter was distant only fifty miles from Otranto, half less than the route from Brindisi to Paxos, which were separated by 100 miles.<sup>19</sup>

<sup>13</sup> *Itineraria Hierosolimitana*, cit., II, pp.216-217; for a deeper analysis of Saemundarson's itinerary in the Italian Peninsula see Raschellà 1985-1986.

<sup>14</sup> *Itineraria Hierosolimitana*, cit., I, p. 196; *Itineraria Hierosolimitana*, cit., II, pp. 6-7; *Monumenta Germaniae Historica, Scriptores*, Hannoverae, 1885, XXVII, pp. 129-130, (original citation "qui est ultimus portus de Apulia".)

<sup>15</sup> *La geste de Robert Guiscard / Guillaume de Pouille*, ed. Marguerite Mathieu, Palermo, Tip. Pio X, 1961, IV, pp. 210; V, p. 242; Pardo 2002, 301-324.

<sup>16</sup> *Itineraria Hierosolimitana*, cit., II, pp. 6-7.

<sup>17</sup> See also: Oldfield, 2014.

<sup>18</sup> See *In translatione sancti Nicolai Peregrini confessoris legenda* (B.H.L. 6226), cit., pp. 103-104, 164.

<sup>19</sup> *Gesta regis Henrici secundi. The Chronicle of the Reigns of Henry II and Richard I*, a. D. 1169-1192. 1867, pp. 185, 205-206; *Chronica magistri Rogeri de Houdene*. 1870, pp. 126, 166.

That Otranto and Corfù were the key terminals of a well-developed path is further evinced by a series of mentions found in the pilgrims' accounts of the thirteenth and fourteenth centuries. The *Iter de Londinio* of Matthew de Paris specifically accounted that Otranto was the first harbour where the pilgrims left and arrived from their travel to Jerusalem. The document also indicated that from Otranto – as well as from Barletta, Trani, Bari, and Brindisi – it was possible to find a ship where the pilgrims could embark for Tiro, Sidone, and San Giovanni d'Acri, the most important ports of the Syrian-Palestinian area (Miller 1895, 89-90; Parks 1954, 179-185). Another indication comes from the description made by an anonymous English pilgrim who travelled to the Holy Land between 1344 and 1345. The text specifically highlights that the pilgrim had embarked for Corfù in the harbour of Otranto on a ship commanded by an Apulian captain, and that he had to wait for a long time before he could get on board due to the presence of pirates along the coasts of Otranto (Golubovich 1923, 427-460).

Even during the fourteenth century the pilgrim's chronicles continue to provide indications on Otranto. In particular, the harbour was integrated in the maritime route which was developed between Jerusalem and Venice, which, during the three decades of the thirteenth century, progressively assumed a hegemonic position as the main departing point for the pilgrims willing to go to the Holy Land (Poso 2007, 154-155). The prominent role held by Venice was linked to the fact that, between the late thirteenth century and the early decades of the fourteenth century, the number of regular passengers, and particularly the merchants, began to fade. This decline was offset by the growing number of pilgrims who chose to travel by sea, thus explaining the reason which, in 1227, brought the doge Pietro Ziani (d.1129) to approve the installation of small "cabins" on the ships of the Venetian fleet.<sup>20</sup>

The *Liber peregrinationis*, the pilgrim's account travel written by the Augustinian Jacopo da Verona (b. c.1290) in 1335, offers a certain amount of information on the maritime paths which connected Venice and the Holy Land. Of all the places mentioned Otranto is where Jacopo da Verona, together with other pilgrims and travellers, arrived after having sailed for ten days after their departure from Venice unfolded at the end of May 1335. Of Otranto, where the pilgrim remained for eleven days, Jacopo da Verona was impressed by its flourishing economy, the multitude of people, and the "great Jewish community."<sup>21</sup>

A further mention that Otranto was a usual stop-over in the maritime itineraries for the eastern Mediterranean is found in the already mentioned account left by the anonymous English pilgrim. He reported that, due the presence of pirates, he was forced to stay for a long time in Otranto, where he could finally embark on a galley ship which came from Brindisi and which was bound to Corfù.<sup>22</sup> Even the non-Christian pilgrims and travellers were impressed by the capacity of Otranto's harbour, and especially by its proximity with Corfù. The Jewish explorer and geographer Beniamino di Tudela (1130-1173) in his long travel to the Holy Land and afterwards to Asia, made between 1159 and 1167, remarked this aspect by observing that Otranto was just two days of navigation away from Corfù (Colafemmina 1975, 81-100).<sup>23</sup> For the Muslim geographer Muhammad al-Idrisi (1099-1165) the distance between the two ports was even shorter, and the overall travel could be done in one day.<sup>24</sup>

The short distance between Otranto and Corfù, and more broadly with other ports of the Eastern Mediterranean, favoured a continuous movement of people but also of a wide array of foodstuffs and handmade artefacts. With regards to this latter point a precious description is that made by Galfredo di Langele, an ambassador at the service of the English King Edward I (1239-1307), who in late November 1292 stopped at Otranto during his return-travel from Persia, where he had been sent on a diplomatic mission. During his permanence he bought bread, wheat, wine, cheese, olive oil, fruits, vinegars, meat, onions, parsley, roosters; fish, hay for horses, salt, candles, and horseshoes, and pottery, a clear indication that the harbour was part of prosperous import and export system (Desimoni 1879, 621-622).

If the Apulian ports were the main departing and arrival centres to/from the Holy Land, the harbours of the Central Adriatic coast were less involved in the pilgrim paths during the Middle Ages. However, there were some noteworthy exceptions to this trend, and this is represented by the harbour of Ortona. Given its geographical location at the centre of the Adriatic coast, Ortona was already an active port during the classical era. The Greek geographer Strabone (60A.C.-24 AD) identified it as *Ortona, navale Frentanorum*, i.e. capital and port of the *Frentani*, the oldest Italic population who resided in that area, and who had already developed commercial links with the other populations of the central and southern Adriatic coast (Falcone 2004).<sup>25</sup>

With the annexation to Rome, the city became a *municipium*, and enhanced the role of its port, where it was attested a *collegium fabrum lanariorum et navicularium* (De Luca 1987, 5).<sup>26</sup> A further element which shows the important role of Ortona is demonstrated by its inclusion – in the sixth segment – in the *Tabula Peutingeriana*, one of the oldest map which depicted the military roads and the main cities of the Roman empire (Miller 1916, 216).<sup>27</sup> During the medieval period, and more precisely between the last decades of the twelfth century and the first half of the thirteenth century, Ortona and its harbour experienced an economic growth, favoured by the establishment of the *Stuoli Marittimi* which were associations of merchants and ship owners with the key aim to develop maritime convoys able to travel for long distances. The birth of these mercantile associations were favoured by the fact that, in 1196, Enrico VI (1165-1197), king of Sicily, granted to Ortona the *Capitulare de Bajulazione*, a special administrative and juridical status, which granted the city the exemption from paying the taxes on the building of the ships, and, at the same time, set precise rules for the commercial activities (Felice 1983, 5). From the twelfth century onwards the main commercial partner of Ortona, and of the other ports located along the Abruzzo's coast, became the Republic of Venice. The military and political prominence of Venice favoured the development of the harbour of Ortona. According to a notarial act signed in the month of August 1200, Ortona was mentioned as an important harbour within the commercial networks which unfolded between the two shores of the Adriatic (Felice 1983, 5-6; Aquilano 1997, 59-130; Costantini 2000, 53-58).<sup>28</sup> Other sources of that period stressed how the harbour of Ortona was actively involved in the movement of goods. For example, a certain Ioannes de Ceccaris, a local poet, remarked that Ortona was a very rich town which kept commercial links with the Greeks and with all the other parts of the Italian Peninsula (Felice 1983, 6). A further tangible demonstration was the mention of the harbour Ortona in the previously cited Pisan pilot book of the thirteenth century (Dalché 1995, 155).

<sup>20</sup> Gli Statuti Marittimi Veneziani fino al 1255, 1903, p. 49; Tucci 1991, 7-10.

<sup>21</sup> Liber Peregrinationis di Jacopo da Verona, pp. 14-15 (original citation "magno multitudo Judeorum"); Cardini 2002, 230-232.

<sup>22</sup> Itinerarium cuiusdam anglī, in Golubovich, Biblioteca bio-bibliografica della Terra Santa, cit., p. 443.

<sup>23</sup> See also The Itinerary of Benjamin of Tudela. Critical Text, Translation, and Commentary, 1907.

<sup>24</sup> L'Italia descritta nel Libro del re Ruggero compilato da Edrisi / testo arabo pubblicato con versione e note, 1883, p.77.

<sup>25</sup> For a recent reassessment of the commercial links developed by the *Frentani* within the central and southern part of the Adriatic see De Benedettis 2016.

<sup>26</sup> See also Staffa 1993, 51-120.

<sup>27</sup> On the *Tabula Peutingeriana* see Bosio 1983; *Tabula Peutingeriana: le antiche vie del mondo*, 2003.

<sup>28</sup> Ortona e la Repubblica di Ragusa, cit., document nr. 1, p. 6.

Despite its steady connections with the eastern part of the Adriatic, and to a lesser extent, with the Levant, the dearth of sources impedes to assess how many pilgrims decided to embark at Ortona to reach the Holy Land during the medieval period. This might appear striking as this harbour was mentioned in the travel accounts left by Seawulf and St. Teotonio. Indeed, both remembered that along the coasts which stretched between Termoli and Venice there were just the harbours of Ortona, Acre, Pescara, Ancona, and Ravenna. Yet the two pilgrims limited to include Ortona in the list without any further information on it.<sup>29</sup>

By contrast to the Apulian ports, Ortona seemed more as an arrival point for the pilgrims. A series of traditions combined with the available evidence corroborate this statement. According to Ferdinando Ughelli (1595-1670), a Cistercian monk and the author of a history all the Italian dioceses, Ortona was one of the first town to be reached by the apostles directly from the Holy Land. In his account of Ortona, Ughelli went on to account how the cathedral of St. Thomas' apostle (1<sup>st</sup> century BC - 72 AD), the first nucleus of which was built during the early-medieval period, welcomed pilgrims "from the remotest regions of the world" who came to venerate the relics of the saint (Ughelli 1717, 773-774).<sup>30</sup>

Ughelli's emphatic statement relied on fact that, since 1258, the relics of St. Thomas - who was deemed the first Catholic missionary to operate along the coastal areas of today's India - were translated from the island of Schio to Ortona. Evidence of this translation is provided by a notarial register from Bari, which demonstrates that, in that year, three galleys from Ortona participated as ally of the Republic of Venice in conflict against the Republic of Genoa. The conflict gave the small expedition of Ortona the opportunity to disembark on Chio and to steal the relics from the island, where they had arrived from Syria following their removal from India (Pansa 1920, 29-62; Lettieri 1974, 173-176; Politi 1982, 226-231).<sup>31</sup>

The translation of St. Thomas's relics had thus a deep impact on Ortona that, in few years, became a well-known pilgrimage site both for those who came from the Italian Peninsula and for those who travelled from the Mediterranean. Possibly the best way to gauge the sudden rise of Ortona as a crucial point of interest for the pilgrims is provided by the fact that it was visited by St. Brigit of Sweden (1303-1373) during the pilgrimage that, in the years 1364-1370, brought her to visit the churches of Assisi, St. Michael of Monte Garganico, St. Nicholas of Bari, St. Bartholomew of Benevento, and St. Matthew at Salerno. In her *Reuelationes* the Swedish saint clearly stressed the importance of Ortona because it was where the relics of St. Thomas could be venerated.<sup>32</sup>

It might be possible that a consistent part of the pilgrims who visited Ortona arrived from the Levant, and more precisely from the areas under the Byzantines' control. This hypothesis is supported by the fact that, from the late twelfth century, a certain number of Byzantine icons began to be venerated in Ortona - such as that contained in the sanctuary of St. Mary of Costantinople - as well as in other cities of Abruzzo (Polidoro 1991; Pellegrini 2002, 356-359).<sup>33</sup> What is sure is that, by the time of the translation of St. Thomas' relics, Ortona had strengthened its commercial relations with Ragusa as well as with other prominent harbours - like Brazza, Cattaro, Curzola, Lesina, Lissa, Sebenico,

Spalato, Traú, and Zara - of the Eastern Adriatic. This commercial connection combined with the growing arrival of migrants from the Dalmatian area, who, in the most cases, used Ortona as a base for their travel to Rome.<sup>34</sup> The rise of Ortona as a pilgrim's centre also fitted within the broader growth of the phenomenon associated with the micro-pilgrimages - linked to the cult of relics or to the miraculous appearance of a saint - which, from the late twelfth century, became more and more consistent in the central and southern part of the Italian Peninsula (Dalena 2000, 200-202).

With the Muslim conquest of San Giovanni d'Acri in 1291, which ended the period of the Christian crusades, the pilgrimages towards the Holy Land began to wane in favour of Rome and Compostela. We must remark that, despite the Muslim conquest, the pilgrims continued to travel to Jerusalem thanks to the good relations established by king Giacomo II d'Aragona (1267-1327) with the sultan of Egypt Al Nasir Muhammad (1285-1341). Yet, during that period, the pilgrim paths towards the Holy Land underwent a series of deep changes, especially in the itineraries (Dalena 2006, 30-31).<sup>35</sup> A significant modification was that the progressive exclusion of the main harbours located in the Central and Southern parts of the Italian Peninsula from the pilgrims' paths, who instead chose to travel by sailing along the Tyrrhenian and Ionic coasts, with frequent stopovers in the harbour of Messina, which was distant fourteen days of sailing from San Giovanni d'Acri.<sup>36</sup> The only exception to this pattern was the port of Santa Maria de Leuca, where the ships usually stopped in order to get supplies.<sup>37</sup>

With regards to the Apulian harbours, their decline was linked to the deep economic and political instability which, between the second half of the fourteenth century and the first half of the fifteenth century, shattered the southern part of the Italian Peninsula (Dalena 2006, 204). A second factor which influenced the pilgrims' path was the definite rise of Venice as the almost exclusive departing and arrival point for Jerusalem. Given its predominant military and political influence in the Levant, the pilgrims soon viewed the departure and the arrival from Venice as the only viable option. This was evident even for those pilgrims who decided to combine the pilgrimage to Rome with that to Jerusalem. A clear demonstration is provided by the account of the Burgundian pilgrim Bertradon de La Broquière (c.1400-1459), who, after having visited Rome in 1432, decided to travel by land to Venice in order to embark for the Holy Land (Schefer and Cordier 1882, 1-5). A further indication of the hegemonic role held by Venice is found in the account of an anonymous French pilgrim who, in 1480, arrived in Venice from the Holy Land and wished to visit the tomb of St. Peter's in Rome, which he reached by travelling through Loreto, and by using part of the *Via Flaminia* (Schefer and Cordier 1882, 116-125).

Another factor which played in favour of Venice was the high level of safety that its fleet could provide to the pilgrims. According to the Franciscan Francesco Suriano (1450-1529), a well-known expert of the Middle-East, the main reason to choose the harbour of Venice for any pilgrim bound for the Holy Land was that "no other nation is so safe from pirates and maritime thieves than the Venetian."<sup>38</sup> Suriano's emphatic statement was confirmed by two concrete aspects: the first were the figures of pilgrims who annually left from Venice; the second was the flow of money which

<sup>29</sup> *Monumenta Germaniae Historica*, cit., XXVII, p.130.

<sup>30</sup> Original citation "remotissimis Mundi regionibus".

<sup>31</sup> On the conflict between Genoa and Venice for the supremacy in the Mediterranean see Benvenuti, 1989.

<sup>32</sup> Santa Brigitta, *Reuelationes s.tae Brigittae olim a card. Turecremata recognitae & approbatae, & a Consaluo Duranto episcopo Feretrano notis illustratae. Et hac postrema editione facta collatione cum m. ss. Vat. alisque antiquis codicibus emendatae, & in duos tomos distributae. Primus complectitur Tractatum de diuinis visionibus, reuelationibus, apparitionibus, extasi, & raptu, ab eodem episcopo nuper editum, & libros quinque Reuelationum nouis notationibus varijsque lectionibus locupletatos, Romae, apud Ludouicum Grignanum, 1628, vol.II, chapter 4, pp. 191-192; on St. Brigid's pilgrimages see Jørgensen 1991.*

<sup>33</sup> See also Marciani 1953, 28-29; Marini 1958, 45-51.

<sup>34</sup> *MGH, Diplomata Regum et Imperatorum*, vol. V, doc. nr. 185; Marciani 1965, 14-47; Iubatti and Di Lullo 1987, 9-16; Felice 1983, 1-7; Pierucci, 232-233; Aquilano 1997, 62-63; Pierucci 2016.

<sup>35</sup> See also Sensi 1998, 233-262.

<sup>36</sup> *MGH*, cit., vol. XVI, pp. 335-341; Stopani, "Itinerari e problemi," cit., p. 29.

<sup>37</sup> Mention of the harbour of Santa Maria di Leuca is found in the travel's account of the Genoese Simone Laccavela, who stopped there in 1351. See Dotson 1985, 267-282.

<sup>38</sup> *Il Trattato di Terrasanta e l'Oriente*, cit., p.16 (original citation "nulla altra natione è tanto sicura dai pyrati et ladri maritti quanto la Veneta.")

enriched the Republic of Venice through the organized transportation of pilgrims to the Holy Land. For example, the available sources for 1384 show that, during that year, six galleys and one ship, with an overall number of 600 pilgrims, left for the Holy Land. The figures for the rental costs are more difficult to assess, but a possible estimate indicate a roughly sum of 20.000-25.000 crowns per year (Tucci 1991, 36-37).

At the onset of the sixteenth century the pilgrim paths towards the Holy Land dramatically faded due to the Turkish conquest (Shaw 1976). This inevitably impacted on the system run by Venice, which organized less and less transports towards the Holy Land. A proof is that, in 1522, only two dedicated ships were recorded to have embarked pilgrims bound for Jerusalem, a tangible decline compared to the previous century. Despite the statutes of Venice for the sixteenth century continued to regulate the movement of pilgrims, there is evidence of only one travel which was organized in 1545, and which tragically concluded due to a shipwreck. At the end of the sixteenth century the pilgrimage towards Jerusalem had by then concluded (Tucci 1991, 39-41). The best way to highlight the end of this phenomenon was the comment made by the English explorer and writer Fynes Moryson (1566-1630), who, visiting Venice in 1595, stated that "this custome [to travel to the Holy Land] is growne out of use, since few are found in these daies who undertake this journey, in regard of the Turkes imposing great exactions, and doing foule injuries to them." (Moryson 1907, 447).<sup>39</sup>

In conclusion it is possible to assess that the pilgrim paths which were established and developed between the Adriatic and Ionian during the medieval period did not follow a homogeneous pattern. What emerges from the analysis is that, between the late eleventh century until the late decades of the fourteenth century, the main harbours of Apulia acted as important axes for the pilgrims' paths, both as departing and arrival points. By contrast the harbours of the Central Adriatic coast were more on the periphery of the pilgrims' itineraries, a consequence of the predominant position held by Venice, which succeeded to keep a hegemonic position up until the mid-sixteenth century by virtue of its commercial, military, and political superiority in the Levant.

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<sup>39</sup> On the English travellers to continental Europe between the mid-sixteenth century and early seventeenth century see Hadfield 2001.

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## A geo-archeological approach applied to the Ortona coast (central Adriatic)

### Abstract

In the frame of the APPRODI ADRION project, the study area corresponding to the administrative limit of Ortona city has been analysed to develop an archive of archeological and geological data based on a GIS environment which includes aerial/satellite images, digital elevation model as well as historical maps.

Ortona is mentioned in the V Geography book of Strabone as epineion (military harbor) of Frentani, a pre-Roman population, established from the 6th century BC along the Abruzzo coast and in the internal territory of the Valle del Sangro. Afterward, it was a fortified settlement (castrum) with a military port and an arsenal to defend the promontory and the population. The city is organized in two ancient quarters: Terravecchia and Terranova, formed by a complex Middle Age internal district. In such a diverse territory, the interest in the past history of the town has been strong over time, but not systemic. The main objective of this work was to collect the available information on the historical, archaeological and geological settings on the evolution of the coastal area within the Ortona administrative limit.

This interdisciplinary geo-archaeological approach highlights the strong importance of combining the different information to correctly assess the historical and environmental evolution which appears not well exploited for this area while it has been successfully applied in other adriatic coastal sites.

There are still many open questions on the use and presence of ports in this western side of the central Adriatic sea during greek and roman period which deserve further study and investigations and this work is a first step for a more detailed work in the future.

**Keywords:** geo-archaeology, adriatic ancient ports, Ortona

### Introduction

Geoscience and archaeology can largely support each other in deciphering the most recent history of our planet (Pollard 1999). In the last decades these disciplines have shared technical expertise and approach to better understand the Quaternary rock records and climatic settings which constrain the human evolution. We used this interdisciplinary geoarchaeological approach as first attempt to reconstruct the evolution of the ancient port of Ortona in the framework of the Approdi - Adrion Interreg project.

Ortona, in the province of Chieti, is a town of about 24000 inhabitants and stands on a sandstone promontory, ~70 meters above sea level. It was defined "la Pizzuta" from local historian De Lectis<sup>1</sup> for its morphology and position towards the Adriatic Sea.

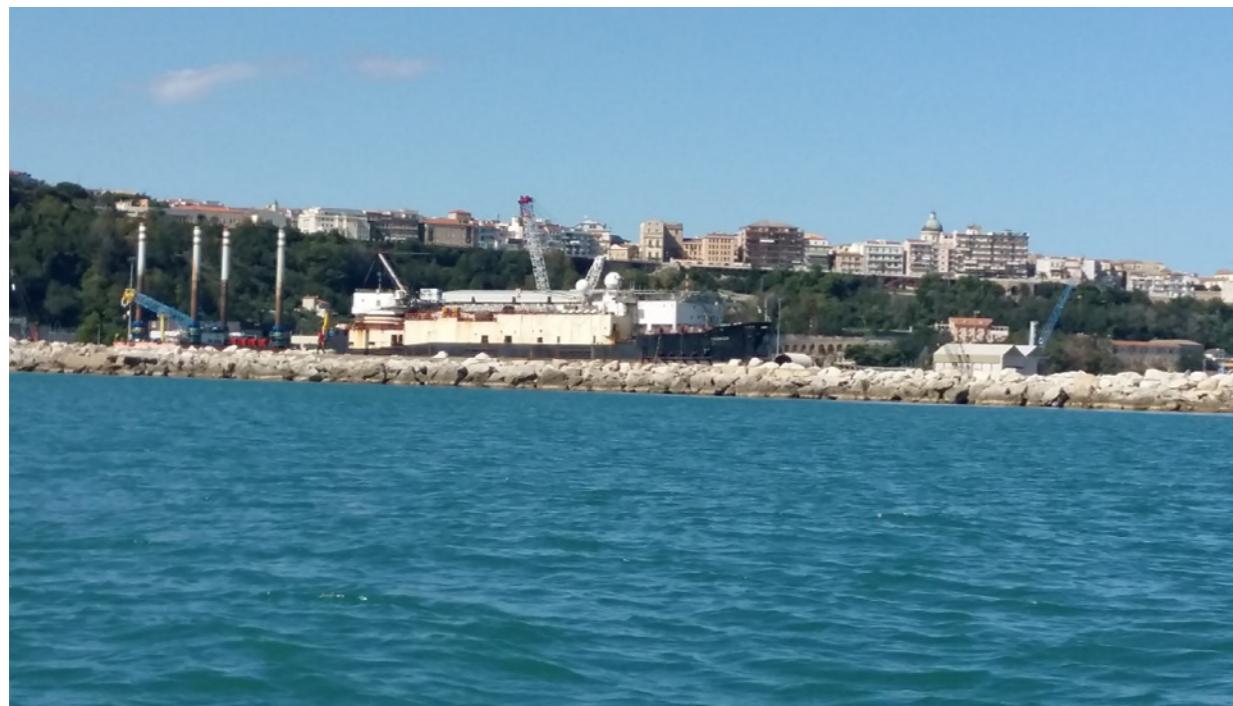


Figure 1. View of the Ortona town from the modern harbour.<sup>2</sup>

The history of the city was characterized by the close relationship with the sea, which favored the trade, the birth of the shipyards and the commercial exchanges in the Adriatic, both with Venice, Dubrovnik (republic of Ragusa) and with other Croatian and Illyrian cities.

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The relics of the Apostle Thomas arrived by sea on 6<sup>th</sup> September 1258 from the Island of Chios in the Aegean Sea, signing the city, from the religious and human point of view. Ortona is mentioned in the V Geography book of Strabone, which defines *epineion* (military harbor) of Frentani, a pre-Roman population, established from the 6th century BC along the Abruzzo coast and in the internal territory of the Valle del Sangro (Romanelli 1996).

It was a fortified village with a military port and an arsenal to defend the promontory and the population. The city is organized in two ancient quarters, Terravecchia and Terranova, on a complex series of internal districts, formed in the Middle Ages and mostly dedicated to agriculture as they were linked to St. Thomas monastic order. In such a diverse territory, the interest in the past history of the town has been strong over time, but not systemic: since the 19th century, numerous scholars

ed archaeologists have carried out surveys in areas of interest, reporting various archaeological remnants of the town and the structure of the complex ancient port system (Orlandi 1999; Staffa 2002, 359; Fossataro et al. 2005; Orlandi et al. 2016).

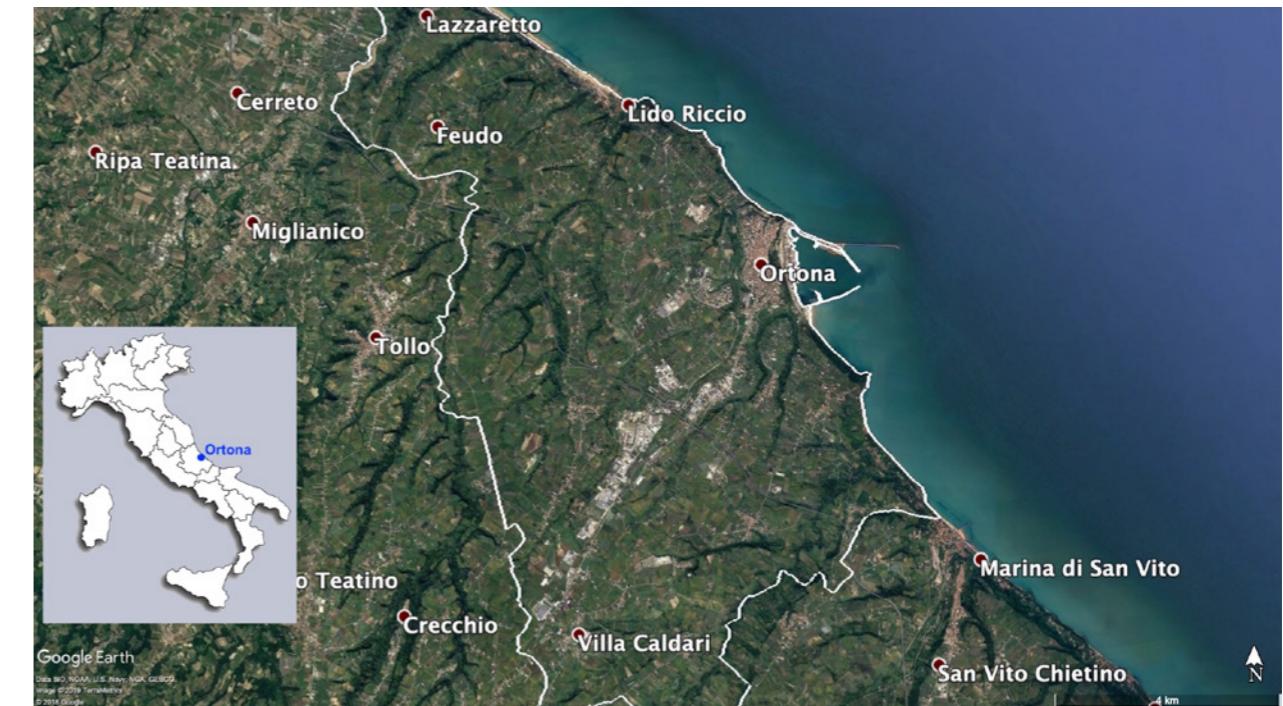


Figure 2. The Ortona administrative boundaries (image Google).

In the frame of the APPRODI ADRION project, the study area corresponding to the administrative limit of Ortona (Figure 2) has been considered to build an archive of archeological and geological data to propose touristic tour. We built a digital archive in GIS environment with different type of data including aerial and satellite images, digital elevation model as well as historical maps.

## History of Ortona and ancient Adriatic routes

The Adriatic is a narrow sea and so finding land was not so difficult for sailors; it was indeed difficult to approach it and to land due to the natural morphology of the coasts. One had to be a very skillful sailor, with good knowledge of coasts, rocks, reefs, winds, and currents, and of signs that can help in predicting weather conditions. That knowledge could not have been acquired without regular connections among Adriatic communities throughout prehistory and history, before the invention of navigation instruments.

The study of ancient sources highlighted that several authors, both Greek and Latin, indicate the presence of "ports" in the Abruzzo region, but often in very controversial ways. For example, two opposite pictures of Livy (X,2-4)<sup>3</sup>, attesting that the coasts of this region are unsuitable lands for

<sup>1</sup> Giovan Battista De Lectis, local historian and ecclesiastic of Ortona, XVI century

<sup>2</sup> Picture from L. Marinangeli

<sup>3</sup> Tito Livio. *Ab urbe condita Libro X*.

ports, and, on the other hand, Strabone,<sup>4</sup> testifying the existence of 'epineia', (Fig.4) the ancient Greek term for ports of non maritime centres, which were generally located not far apart (between 5 and 10 Km). The term 'epineion', however, does not necessarily imply that they were small outlet; for example, considering that ports like the Pireus and Ostia were considered epineia respectively of Athens and Rome, but specifically pointing out the distant location of the main town and the probable status of 'non-town' for the settlement born around the port.

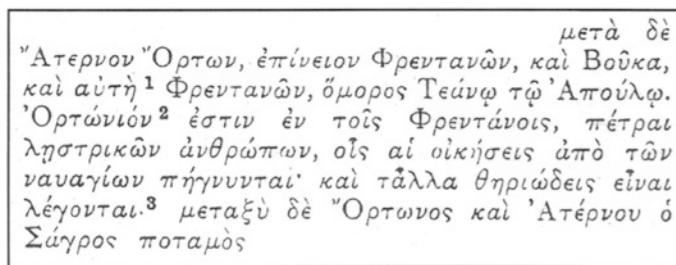


Figure 3. The first time that Ortona is mentioned by Strabone.<sup>5</sup>

Regarding the geographical conditions of the area, certainly, there are not adverse streams which do not allow a proper navigation along the Adriatic coast (see also Berlinghieri 2003, 17-26, 157-162).

Generally, there are three kinds of currents:

- 1) one very deep going from Greece to Italy through Venice,
- 2) another one following the same direction of the first but with stronger intensity and causing troubles for navigation in certain short period of the years, and
- 3) a stream, but the most important for our study, directly influenced by the winds.

The combinations of the streams and the result is a cyclic stream who changes its direction from season to season favouring the navigation from Greece to Italy through Venice during summer and vice-versa during the winter (Fossataro 2005).

The hypothesis that the western Adriatic coast was used for maritime trade since the Greek period, finds a certain consensus among specialists of Adriatic history. The discovery of attic pottery in several sites on the Adriatic coast south of Conero promontory (Ancona) supports this hypothesis.

The western coast was also offering shelters for the cabotage routes thanks to the estuaries of the rivers from the Potenza river to Termoli. If topographic continuity alone cannot prove the existence of an archaic maritime route, the discoveries of attic ceramics in this area suggests that a western road leading from the Otranto Canal to the north of the Adriatic had to coexist with the eastern route. These western coastal sites would have even had a role of "redistributors" of attic products inward, thanks to the exploitation of the internal valleys of the rivers.

Alternatively, Kirigin et al. proposed the "open sea" route to sail the Adriatic from Corfu with Palagruža island as intermediate stop (Figure 4).<sup>6</sup>

The above brief discussion highlights the lack of knowledge about the ancient sailing routes and the importance of further investigate the archaeological reconstruction of ancient ports and their connections across the Adriatic Sea. An attempt to collect the available data on the archaeological sites of the Adriatic Sea, has been done by a network of research institutes (Adriaticum Mare association) to built a web-based atlas.<sup>7</sup>

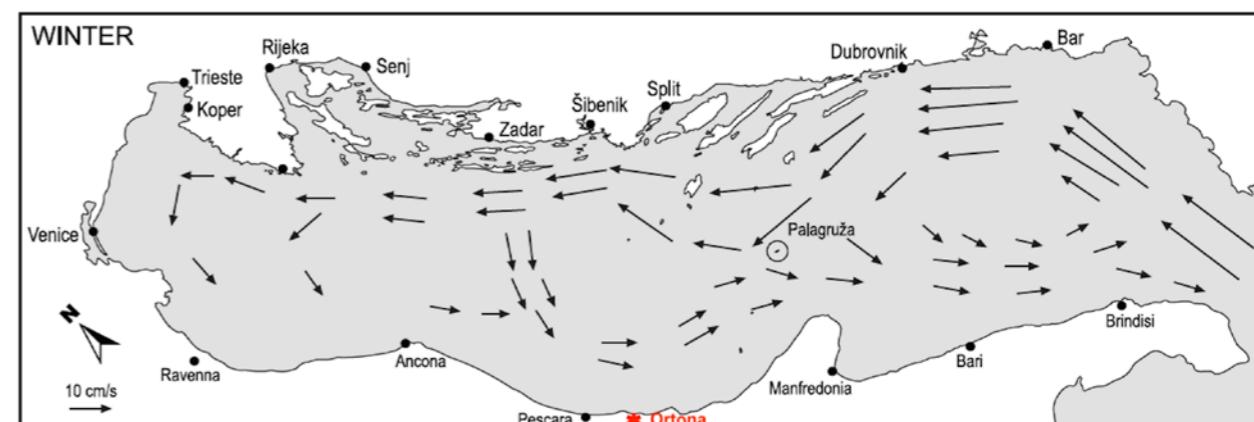
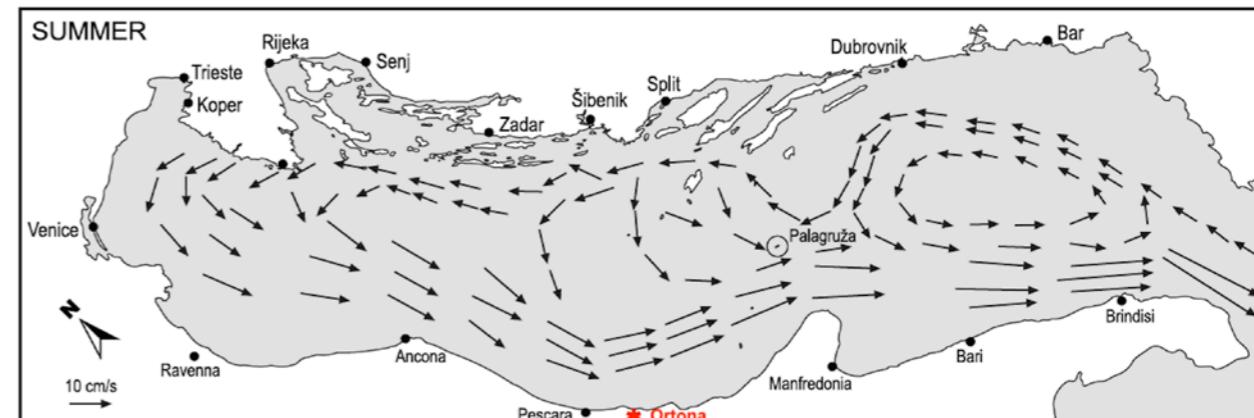


Figure 4: Surface currents in the Adriatic during summer and winter (modified from), (Kirigin, Johnston, Vučetić and Lušić 2009).

From an historical point of view, Ortona may have been an important maritime town although not comparable with some others in the Adriatic Sea, such as Venice (Figura 5). As the historian Antonio Falcone wrote in his book *Storia di Ortona* (Falcone 2004): "...the most characterizing element of the historical course of Ortona is in the fact that it was a maritime town and an harbour town.... The connection with the sea was fundamental for the main facts involving the town, from immigrations to the wine trade, which in turn determined the grapevine growing in the most of its land, to the social, cultural, and commercial relationships with the rest of the Adriatic Sea coastline".

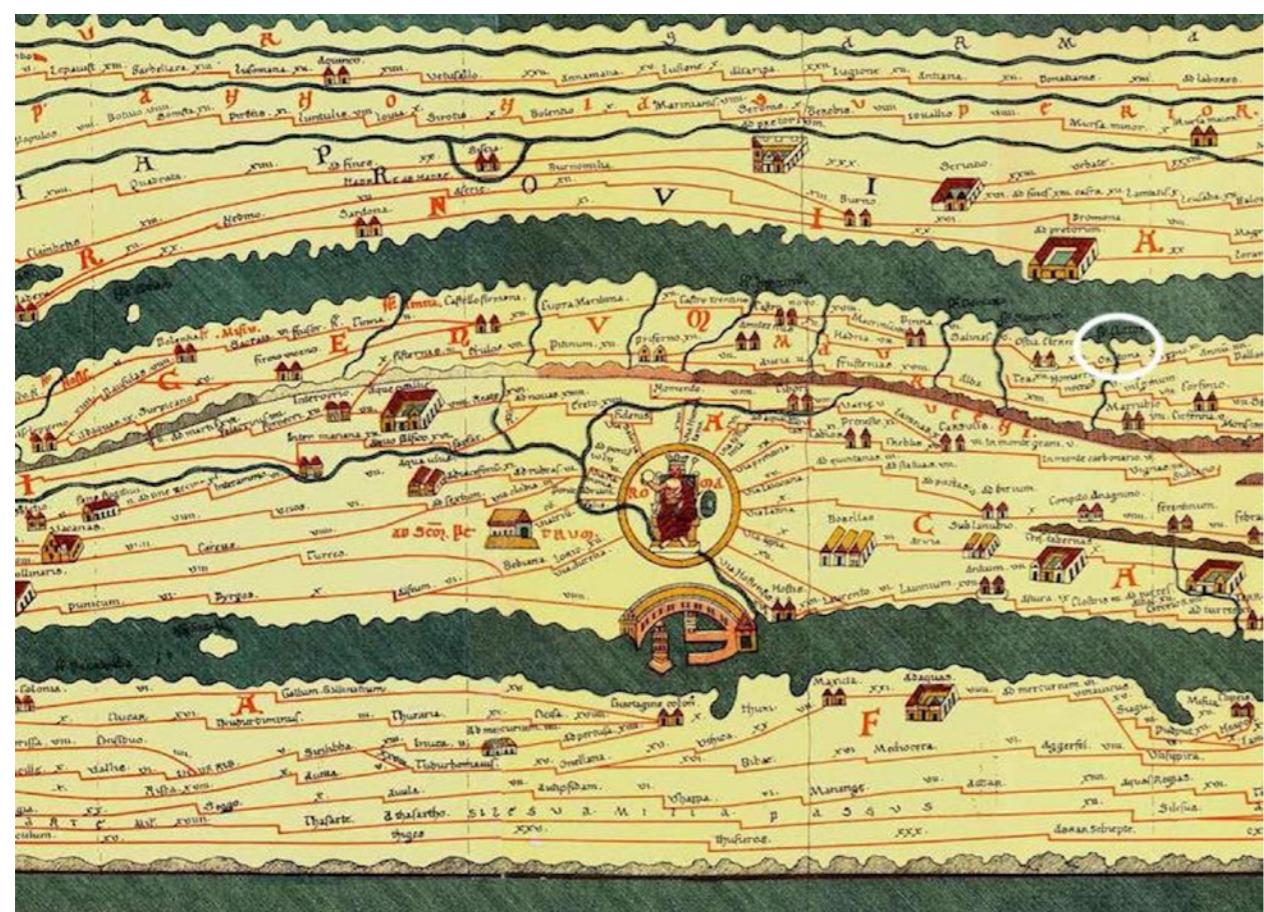
<sup>4</sup> Strabone. *Opera Geografia*, Libro V. "...After Aterno is Ortona the maritime arsenal of the Frentani, and then Buca which also belongs to the Frentani, its territory borders on Teano Apulo. Ortona is a stony place in the Frentani area inhabited by robbers, who build their homes with the relics of the castaways, and live bestially in all the rest. Between Ortona and Aterno flows the Sagro that divides the Frentani from the Peligni: and the navigation from the Picentino to the Apuli that the Hellenes call Daunii, is about four hundred and fifty stadiums."

<sup>5</sup> Ibid.

<sup>6</sup> Kirigin, Johnston, Vučetić and Lušić 2009.

<sup>7</sup> Adriaticum Mare association web-based atlas. The website *Adriaticum Mare* is focused on developing the historic and archeological research throughout the Adriatic region, from the Protohistoric to the Middle Ages. Its main activity is *AdriAtlas*, a digital Atlas of the ancient Adriatic, accessible on line to the scientific community and as well as to the larger public.

Fossataro noted that the Latin sources following a 'Livian Tradition', attest the absolute lack of ports in contrasts with Greek sources that reported some *epineia* in Abruzzo, in particular near the ancient Hortona (modern Ortona), in the area actually called 'Scalo'. Regarding the place-name 'Scalo', mentioned above, is very important as name-reference because in Italian means 'maritime outlet', attesting the commercial relevance of the area. However, even among the Latin sources there is not an homogeneous view: Pliny (*Nat.Hist.*, III, 106) described a different situation from Livy, calling even "portuosus" part of the region, in direct and probably deliberate contrast with the Livian '*importuositas*'. This apparent discordance has not to be interpreted as a negative feature of the region, but as a use of the coast which had a sort of discontinuity during time, and therefore, the sources testify different situations in different periods, according to the age of the sources and to the political situation of the area (Fossataro, 2005).



**Figure 5.** The Poutinger Map (XII-XIII century)<sup>8</sup> based on an ancient roman map with the indication of Ortona (white circle)

The oldest remains within the Ortona town were found during the restoration work of the Aragonese Castle. They came from the Bronze Age (from XV to XIII century B.C.) and allowed to point out the presence of a settlement in the area.

<sup>8</sup> Levi Annalina e Levi Mario Attilio, La Tabula Peutingeriana, in scala 1:1, Edizioni Edison, 1978. The Peutinger Map is an illustrated version of the ancient Roman road network map, drawn probably in the 13th-century from a roman chart. It has been named after the german antiquarian Konrad Peutinger who recovered it in the 16th-century. The map is now conserved at the Austrian National Library in Vienna. It has been included in the UNESCO's Memory of the World Register in 2007 and exposed to the public for one day to celebrate this award.

Indo-European populations from the Balkans, mostly Illyrians from Bosnia, arrived by sea and occupied the hills around Ortona during the 4th century BC. They were mainly warriors, shepherds, seamen, fishermen and pirates who from nomads became sedentary.

During the V century B.C. a group of Sanniti reached down the coast, coming from an area which were probably located at the modern boundaries between Campania and Molise regions. Those people renamed themselves as Frentani, as the name of the river Frentum (Fortore today), and established along the coast, between Ortona to the N, and Termoli to the S.

Later in the V century B.C., the Frentani population came to war with the Romans and then they became *cives romani*. Later on, several commercial relationships were established between Rome and the Adriatic coast, especially through the Tiburtina-Valeria-Claudia road, which connected Rome with Ostia Aterni (the present Pescara). At that time, the main economical activities in Ortona were certainly addressed to the sea and in particular to the commercial routes toward the Eastern Adriatic coasts and the Greek islands, as well. The trading activities were probably increased in frequency and number under the Roman government and the protection against the pirates. These favourable conditions allow us to speculate that many goods from Rome were delivered through the harbour of Ortona<sup>9</sup>. Strabone also documented the ability of the Frentani to build docks and ships and thus accomplish maritime activities.

After the fall of the Roman Empire, the N-S route became the most relevant for the commerce and the military affairs as well. The bridging position of Ortona (Figure 5) also allowed the cultural contamination and it is visible today in the art and literature. During this time, the "route crossing Abruzzi" were strategically relevant for the interior of Abruzzo, due to the several connections between Naples and Florence and toward the Northern Italy and the rest of the Europe. Ortona passed from the dukedom of Benevento to the dukedom of Chieti, and its role in the maritime traffics became much more relevant.

The maritime traffics of Ortona strongly developed since the Suevians. A commercial league was founded between Ortona and Lanciano, in order to create maritime companies in the Mediterranean area. This league was so important that in 1196 Arrigo VI issued a naval law, in order to regulate the behaviour of the commercial companies operating through the sea and introduced customs exemptions for specific traffics and for the naval works.

Coming back to the harbour system of the Abruzzo region, it is clear that it was weak and mainly supported with a number of stocks for the arrangement of goods, distributed along the coastline and included within the defensive network based on the coastal towers (Pierucci and Benegiamo 2013). This defensive network was able to protect the maritime business and allow its further development.

At the beginning of the Modern Age, the Abruzzo region was mainly connected with the Ragusa Republic having the latter, the greatest fleet in the whole Adriatic Sea in its harbours. Goods reached Abruzzo at the time of the important exhibitions occurring in the city of Lanciano. Nevertheless, the

<sup>9</sup> According to this hypothesis, Gino Albi in his book "L'Abbruzzo marittimo" (1914), wrote: "At the time of the war with Rome, Ortona already had a great naval relevance. Then, after the peace and the subsequent alliance, Ortona became a military base of the Roman navy. This condition allowed the naval industries and the trading to develop".

harbours were also used to deliver the goods directly produced in the area, and specifically the wine and the olive oil, as documented in several books and papers.<sup>10</sup>

In between the XIV and XV centuries, the maritime traffics became much relevant in Ortona. The historian Corrado Marciani, expert in the economic and commercial relationships between Abruzzo, Venice and the eastern coast of the Adriatic Sea, wrote: "The maritime cities of Abruzzo which were mainly involved in the commercial relationships with the Ragusa Republic were Lanciano, Ortona and Vasto, because of the commercial exhibitions of May and August, the presence of the harbour, very used for the connections with L'Aquila and Rome, and the fertility of its land, respectively" (Felice 1983).

In 1830, the king Ferdinando II designated an expert commission with the aim of establishing the most suitable localization of a harbour along the Abruzzo coastline (Figure 6): the choice was Ortona

After the unity of Italy in 1860, and the consequent union of the Kingdom of Naples with the Kingdom of Italy, the maritime traffics of Ortona started to decline, while the relationships with the capital Rome became stronger.



Figure 6. Map of the Ortona region from an atlas created during the Borbouns' domination.<sup>11</sup>

<sup>10</sup> For example, the abbey Domenico Romanelli, in a paper dated 1805, wrote: "the countries of Ortona produce high quality oil and abundant wine which are exchanged with people of the other side of Adriatic ... the town reached the culmination of prosperity before and during the Roman Age .... The harbour held the Frentani's fleet and the commercial ships, also according to Strabone, and this availability allowed the development of the naval manufacture" (Romanelli 1996). Also, the historian Fernand Braduel wrote: "the Adriatic Sea was like a river where the transfer of goods was much easier and cheaper than along terrestrial routes. Since the Abruzzo shoreline were in central position along that river, it was certainly positively influenced. Its harbours became more and more important along the N-S and E-W direction, as well, thus increasing the commercial relationships with the East" (Felice 1983).

<sup>11</sup> Antonio Rizzi-Zannoni geografo di Sua Maestà e terminato nel 1808. Napoli, s.n., 1788-1812. Atlante geografico del Regno di Napoli delineato per ordine di Ferdinando IV re delle Due Sicilie & C. & C

Then, with the construction of the coastal railway connecting Ancona, Pescara and Foggia in 1863, the coastal lands increased their importance because many people came down from the hills and founded new towns close to the coastline. At the same time, the coastal railway produced a systematic decline of the maritime trading, mainly because the railway was able to assure quickness and correctness of the delivery, and a risks reduction as well.

## Coastal evolution and climate in the late quaternary

Geological and geomorphological landscape studies are necessary to archaeology because drive the settlement changes. Coastal regions provide a wide range of resources to the populations that inhabit them. Coastal landscapes are increasingly the focus of discussions from the earliest exploitation of littoral resources, to the inundation of the earliest permanently settled fishing villages and eventually, formative centres of urbanisation.

On the other hand, the acceleration of sea level rise caused by global warming and considering the vertical land movements that affect the active tectonic region of the Mediterranean basin, the maritime archaeological sites play a key role in understanding the local and global causes of their submersion. Thus, it is necessary to define the overall climatic and tectonic settings that control the sea level variations when talking about the coastal evolution through time.

Fundamental constraints on the recent studies of coastal evolution is given by radioisotopic dating. Specifically, the study of oxygen isotope ratios in nanofossils of deep-sea cores in the second half of the XX century, has revealed a consistent pattern representing changes in the ocean-atmosphere system through time and the major variations in this dataset have been defined as numbered stages, which are now commonly known as "Marine Isotope Stages" (MIS) (Railsback et al. 2015) compiled a global scheme of marine isotope substages: the 18% changes directly as a result of temperature fluctuations, so it provides a very good record of the climate. High oceanic 18% values represent cold climates, while lower values indicate a warm climate; this trend occurs because of the effects of precipitation and evaporation. During cold periods some of the ocean's water is evaporated and stored in ice caps or mountain glaciers, meaning a lower sea level, while during warmer periods sea levels rise as the ice melts and once again is added to the volume of the oceans.

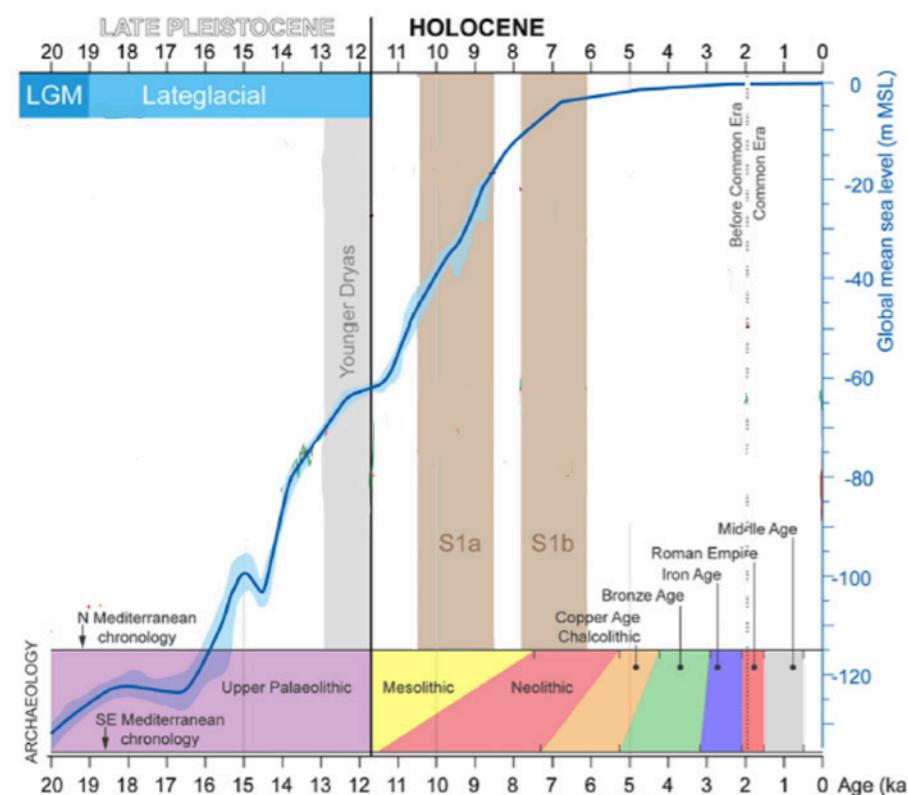
Currently, 21 stages of MIS have been identified in the last 1 million years, including the last glacial maximum event (LGM) which occurred about 18.000 years ago. The principal contributions to sea level change along the Italian coast are:

- (i) the sea level response to the past glacial cycle;
- (ii) changes in ocean volume in more recent times from thermal expansion, recent glacier melting etc.;
- (iii) vertical land movements (tectonic uplift).

Together, these components result in a complex spatial and temporal pattern of relative sea-level change around the central Mediterranean coastline, observations which provide information on rock rheology, on rates of vertical tectonic movements, and on the global ice-ocean balance during glacial cycles. Furthermore, observations of sea-level change around the coast include the age-height relationship of geological deposits and archaeological structures whose positions relative to coeval sea level can be established.

Lambeck et al. revised all published geomorphological and archeological data on sea level variations along the Italian coasts based on observations from more than 130 coastal sites with

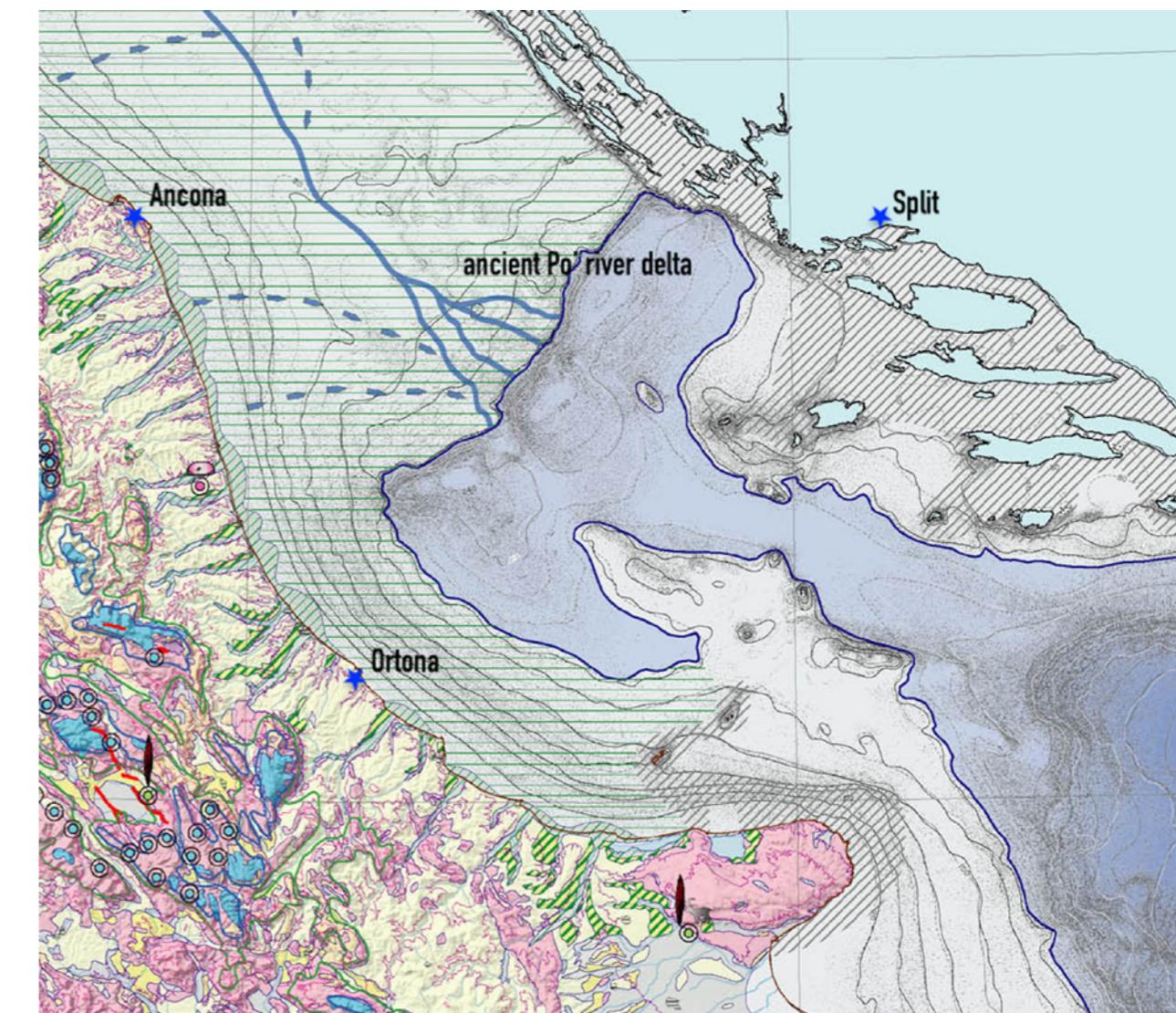
different geomorphological and archaeological settings, adding estimates of the vertical tectonic contribution to the relative sea level change (Figure 7) (Lambeck et al. 2011). This curve represents the main updated reference for the eustatic variations of the Mediterranean area.



**Figure 7:** Relative sea level changes since the last 20.000 yrs BP and archaeological period. (modified from<sup>12</sup>) S1a and S1b refers to presence of sapropel deposits.<sup>13</sup>

During the lower Paleolithic, marine terraces and shorelines formed during MIS 5.5 (~125 krys BP) known as the Tyrrhenian highstand with warmer climate and higher sea level, lies at different altitude along the Adriatic and Tyrrhenian coasts, varying from a few meters to about 120-140 m (Bordoni and Valensise 1999, 71-110) due to a later uplift associated with the Apennines formation.

On the contrary, the configuration of the Adriatic side during the upper Paleolithic period (glacial condition) was dramatically different from the present one. The Ortona territory was more similar to a tundra environment because the Adriatic Sea level was ~120 m below its present position (Figure 8) and only at 6.000 yrs BP it raised up to a few meters below its present level. Since then, it has been characterised by slower rates of sea level rise.



**Figure 8:** Palaeogeographic reconstructions of paleo-environments and coastline (blue line) during the last glacial maximum (LGM) ~22.000 years ago in Italy<sup>14</sup>

Thus, the most recent tectonic uplift may have exposed archaeological remnants which were originally at lower altitude as happened in the Apulia region (Mastronuzzi et al. 2017, 65-78) where archaeological sites located along the coasts (above or below the present sea level) of central Apulia region have been used to estimate the relative sea level changes in this region since the Bronze Age. In this work, the relative sea level changes were estimated using detailed topographic surveys, tide analyses and/or hydrodynamic equations. Although not all archaeological markers allowed univocal interpretations, the relative sea level stands higher than about 2 m from present one during the Bronze Age, and at least 0.90 m in the last 2.0/1.5 krys was estimated by Mastronuzzi et al.

Afterward, Europe experienced a relatively mild climate conditions during the earliest centuries of the second millennium (known as *Medieval warm period*, Figure 9). Agriculture was possible at higher

<sup>12</sup> (Benjamin et al. 2017, 29-57)

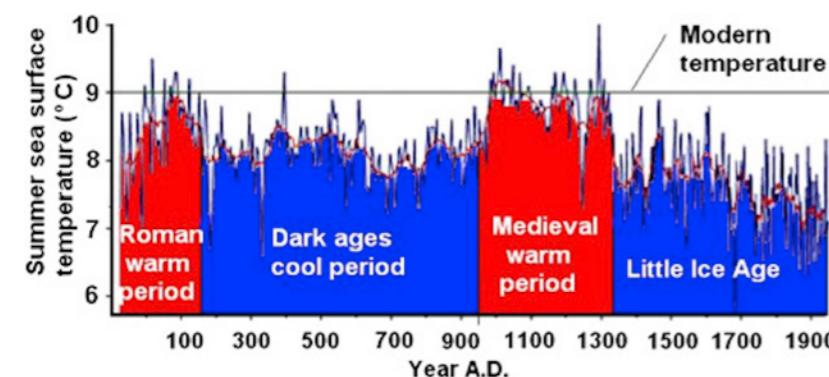
<sup>13</sup> In the eastern Mediterranean, the depositional sequences of deep waters are characterised by the quasi-cyclical occurrence of dark layers, rich in organic carbon, called 'sapropels'. They correspond to hypoxic or anoxic episodes that are recorded east of the Sicily Strait (Fig. 1) and during which oxygen starvation occurred in deep basins and caused the collapse of the deep ecosystems, but affected the entire water column. The causes that led to the sapropel formations are still a question of debate, but their deposition was probably influenced by astronomical forces and generally corresponds to periods of enhanced monsoon rainfall.

<sup>14</sup> CLIMAX Maps Italy, C. Margottini and G.B. Vai, 2004. During the Last Glacial Maximum, the large Po plain was reaching the middle Adriatic and the sea level was about 120 m below the present one.

latitudes (and higher elevations in the mountains) than is currently possible in many regions. For example, grapes were grown in England several hundred kilometers North of their current limits of growth, and subtropical flora such as fig trees and olive trees grew in regions of Europe (northern Italy and parts of Germany).

Geological evidence indicates that mountain glaciers throughout Europe retreated substantially at this time, relative to the glacial advances of later centuries. A host of historical documentary proxy information such as records of frost dates, freezing of water bodies, duration of snow cover, and phenological evidence (e.g., the dates of flowering of plants) indicates that severe winters were less frequent and less extreme at times during the period from about 900–1300 AD in central Europe.

Another important climatic change has been registered between roughly AD 1300 and 1850: the Little Ice Age (Figure 9), a period of regionally cold conditions.



**Figure 9:** Temperature variations in the last 2000 years (Sicre et al. 2008, 137–142).

There are indications that average winter temperatures in Europe and North America were as much as 2°C lower than at present. From historical evidences, we know that the Baltic Sea froze over, as did many of the rivers and lakes in Europe. Pack-ice expanded far south into the Atlantic making shipping to Iceland and Greenland impossible for months. These conditions led to widespread crop failure, famine, and population were reduced to starvation and poverty. In summary, on the basis of the literature, we can refer to the following range of sea level variation for the central Adriatic coastline (Table 1):

Age BP	Period	Relative (RSL) and eustatic (ESL) sea level above present
140 kyr - 100 kyr	Lower Palaeolithic/ Late Pleistocene	ESL: + 8 m*
125 kyr	Tyrrhenian Period	Marine terraces of Tyrrhenian age (125 kyr) along the Italian coastline have been uplifted up to ~140m during the Apennines formation
100 kyr - 40 kyr	Middle Palaeolithic/ Late Pleistocene	ESL: Min -20 m - Max -80m*
30 kyr-18 kyr	Upper Palaeolithic/ Late Pleistocene	Last Glacial Maximum (LGM): ~22 Kyr ESL: - 120m*
10 kyr- 5 kyr	Holocene	ESL: + 8 m*
3.3 kyr - 2 kyr	Lower Bronze age/ Holocene	RSL: max + 2 m***

LGM: last glacial maximum  
\*(Lambeck et al., 2011) \*\*(Mastronuzzi et al., 2017) \*\*\*(Lambeck, 2004)

**Table 1.** Main sea levels in the last 140 kyr.

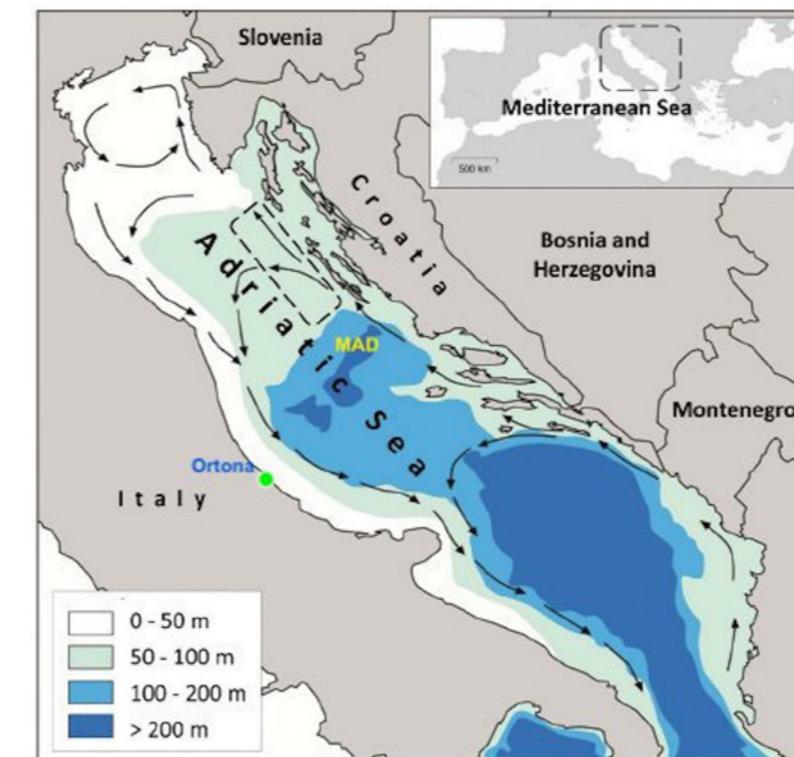
This geo-archaeological approach is largely missing for the Ortona area and generally is not followed for the entire Abruzzo region. This work represents an initial attempt to establish the potentiality of combining different types of geological, climatic and archaeological information collected either from the literature or processing satellite data.

The Adriatic Sea is a narrow epicontinental basin and with its shallow depth makes this area one of the key sites of winter cooling and consequent deep-sea ventilation in the Mediterranean area through a mechanism of dense water formation.

The main morphological features detected on the bathymetry of the Adriatic reflect the oceanographic circulation that is responsible for banking fine sediments along its western side, at current sea levels. Away from the near-shore area, the seafloor morphology of the Adriatic reflects, instead, processes that were active when global sea level was 120 m lower than today and the area occupied by the modern continental shelf was a broad alluvial plain (Figure 8).

Based on the reconstructed bathymetry, and already knowing that away from the areas of modern sedimentation the seafloor is substantially a relict alluvial plain of the Last Glacial Maximum (when sea level was about 120 m below the modern position), he also sketched a conceptual image of the network of interpreted fluvial valleys debouching in the Mid Adriatic Deep (MAD). These valleys were drowned during the following sea level rise between 19.000 and 5.000 years BP.

The central Adriatic has indeed been affected by large historical tsunamis of which the 1627, 1646, 1731 AD and December 8, 1889 were the most devastating (Tinti et al. 1995, 227–241). Further investigations would be needed to better understand the evolution of these intriguing features in the Ortona offshore and to reconstruct the geological evolution of the sea floor in this area.



**Figure 10:** General bathymetry of the Adriatic Sea (Trincardi et al. 2014).

From a topographic point of view, proceeding from East to West one passes into a fairly gentle way to the hills, reaching an average altitude of about 100 m above sea level. The coast of Ortona is mostly dominated by high cliffs (Figure 11), the presence of sandy/pebble beaches is very limited (i.e. northern side of the port).

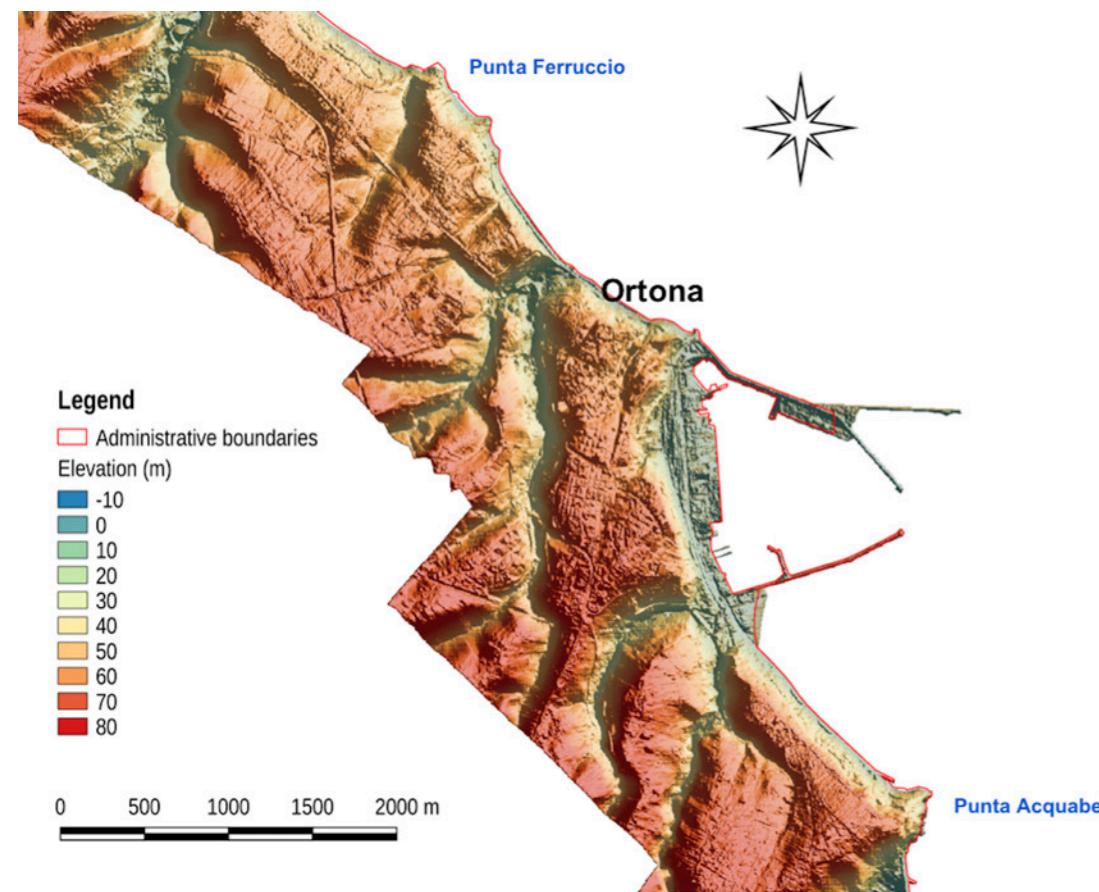


Fig.11: Altimetric view of the Ortona coastal area based on LIDAR data.<sup>15</sup>

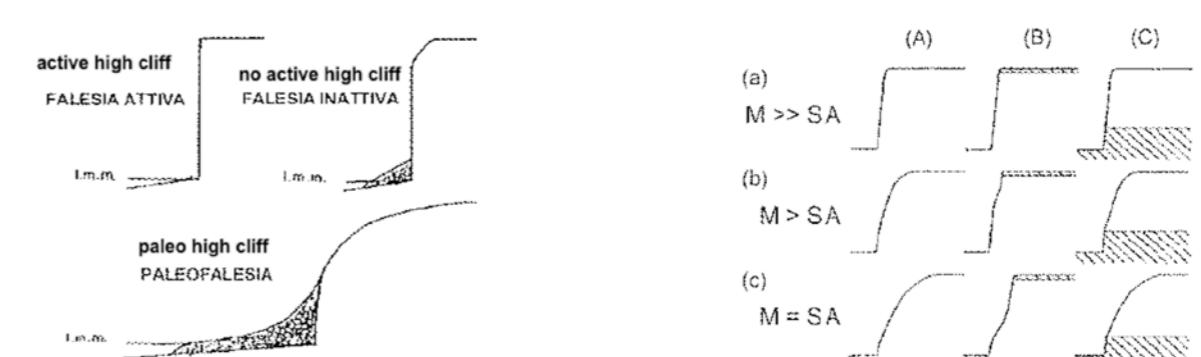
The coastal area is also affected by active and quiescent landslide phenomena. D'Alessandro et alii proposed a classification of the coast based on morpho-evolutive features and related to rock lithology, stratigraphy, subaerial and marine erosional strength (Figure 12)(D'Alessandro et ali 2001, 53-60).

Thus, based on this work, this part of the Adriatic coast appears to be mostly not active in the last century in terms of landslide but with high potential to develop new mass movements of variable size if erosional processes (mainly marine wave energy) increase. The same authors, based on the available maps and aerial images, observed a general coastal retreat between 1876 and 1954, while in 1954-1976, some beaches progradation have been observed likely due to the construction of artificial barriers.

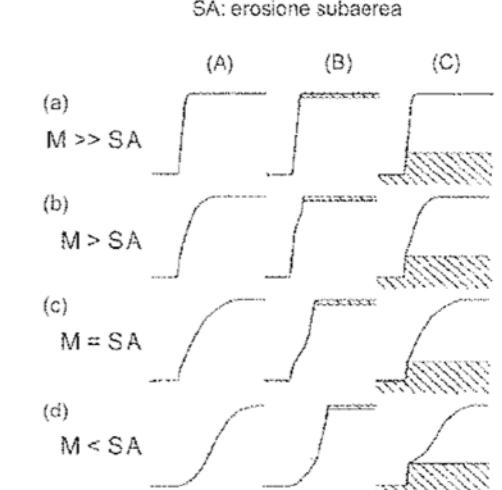
Afterward, an intensification of the erosive process characterizes the coast, even where artificial barriers are present. An overall retreating process is active nowadays with a rate higher in the Mucchia Tower and Punta Ferruccio area, reaching ~90 m of retreating between 1876-1985.

Litologia: (A) omogenea; (B) più resistente al tetto; (C) più resistente alla base

M: erosione marina  
SA: erosione subaerea



Evoluzione di una falesia (da ERNERY & KHUN, 1982; leggermente modificato)



Matrice per la classificazione delle falesie  
(da ERNERY & KHUN, 1982)

#### High cliff classification

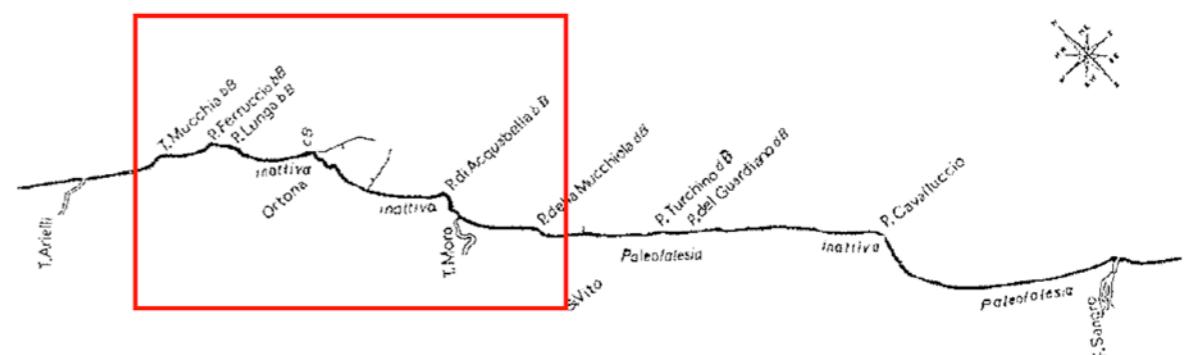


Figure 12. Cliff classification of the Abruzzo coasts.<sup>16</sup> (A) homogeneous lithology; (B) lithology more resistant on the top of the sequence (C); lithology more resistant at the bottom of the sequence; M: marine erosion; SA: subaerial erosion; (a) very strong marine erosion; (b) strong marine erosion; (c) same erosional strength; (d) strong subaerial erosion.

Location	Cliff classification
Mucchia Tower	bB: coast dominated by marine erosion and more resistant lithology on top
Punta Ferruccio	bB: coast dominated by marine erosion and more resistant lithology on top
Punta Lunga	bB: coast dominated by marine erosion and more resistant lithology on top
Ortona	cB: equal strength of marine and subaerial erosion and more resistant lithology on top
Punta Acquabella	bB: coast dominated by marine erosion and lithology more resistant on top

Table 2. Morphometric classification of the Ortona coastal area.<sup>17</sup>

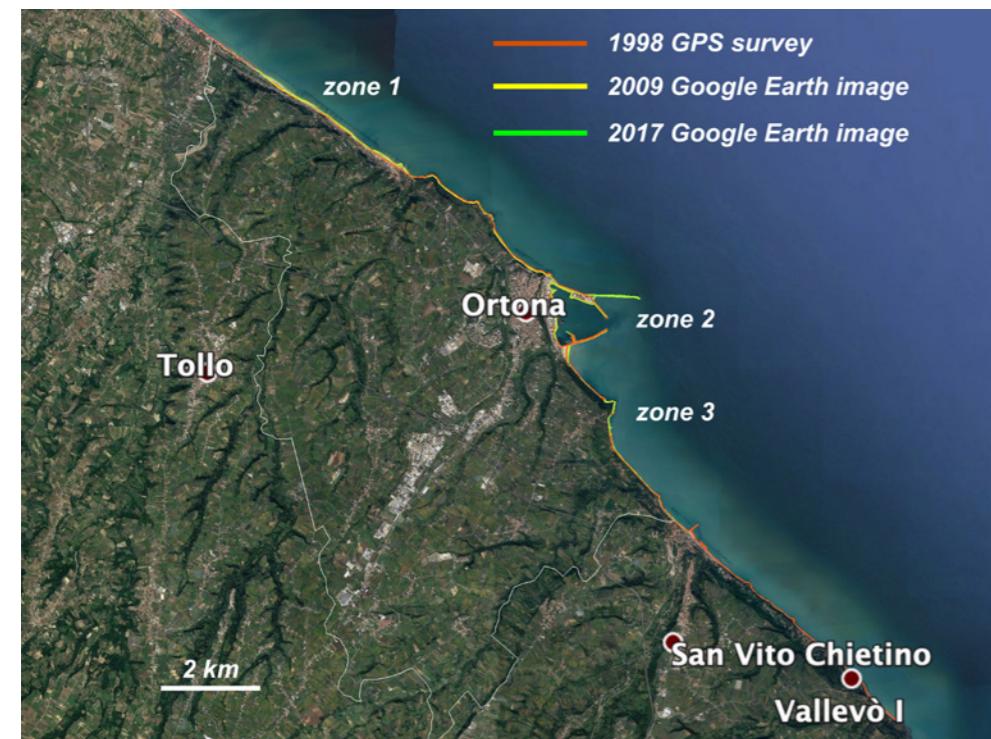
<sup>15</sup> LIDAR data courtesy of Ministero dell'Ambiente e della tutela del Territorio e del Mare MATTM of Italy.

<sup>16</sup> Aerial image of Regione Abruzzo, <http://opendata.regione.abruzzo.it/>

<sup>17</sup> Ibid.

In order to estimate the recent evolutive trend of the coastline within the Ortona administration limit, we compared the following set of data (Figure 13):

- ▶ GPS survey from Regione Abruzzo of 1998;
- ▶ Coastline from Google Earth image acquired on August 28<sup>th</sup> 2009;
- ▶ Coastline from Google Earth image acquired on June 25<sup>th</sup> 2017.



**Figure 13.**  
Comparison of the coastline variation from 1998 to 2017. The zone 1,2,3 represents sites where the variation of the coastline occurred.

This comparison basically confirms the stability of the coast as analyzed by D'Alessandro et al. but there are three zones where we observed significant changes in the period 1998-2017 as shown in Figure 13 (D'Alessandro et al. 2001, 53-60).

The major changes observed in Zone 1 (Figure 14) are related to variation of the beaches due to the placement of new artificial barriers. Similarly, Zone 2 shows changes in the development of new Ortona pier which occurred after the 1998 GPS campaign (Figure 15). Furthermore, there is an increase of the beach extension.

Zone 3 shows the uncertainties in determining the correct position of the coastline due to the different data resolution and approximative co-registration (Figure 16). A more detailed work with higher resolution datasets, meteo-marine data and information on the placement of artificial barriers is needed to correctly assess the coastal evolution of this area. However, this type of work is beyond the objectives of the APPRODI project and should be considered for future activities.

However, this preliminary comparison is acceptable to provide an overall estimation of the most recent coastline evolution which may have implication in the recognition of submarine archaeomaterials. An interesting example comes from the landslide which partially destroyed the Aragonese castle in 1946 (Figure 17).

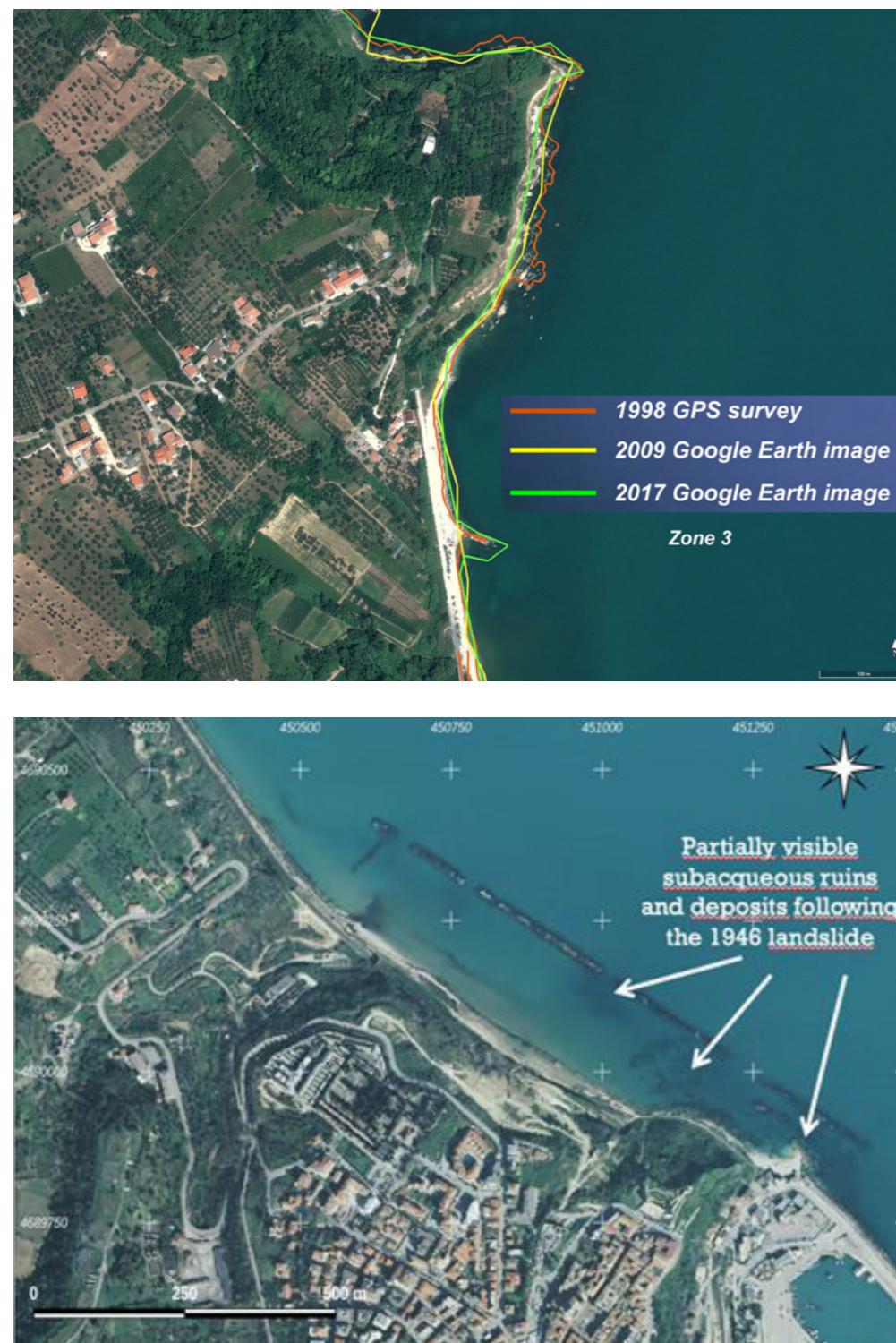


**Figure 14.** Comparison of the coastline variation from 1998 to 2017 in two sites of Zone1 (refer to Figure 13).



**Figure 15.** Comparison of the coastline variation from 1998 to 2017 in Zone2 (refer to Figure 13).





**Figure 16.** Comparison of the coastline variation from 1998 to 2017 in Zone3 (refer to Figure 13).

**Figure 17.** Aerial image<sup>19</sup> of the Ortona coastline in the 'Lo Scalo' site, in the northern side of the modern harbor, where subaqueous landslide deposits and ruins are visible.

## Archaeological and historical sites

The identification of the archeological and historical sites we mostly referred to the work done by Staffa 2002 and 2004 (Figure 18)<sup>20</sup>. There are out two main areas of archeological interest within the subaqueous remnants of the ancient Ortona harbour: the site of the Roman port corresponding to the "Scalo" area and a still visible part of medieval port, enclosed within the structures of the modern harbour (Orlandi 199; Staffa 2002, 2004; Fossataro, 2005).



**Figure 18.** Preliminary list of sites of interest from Staffa 2002 and 2004 over an aerial image.<sup>20</sup>

Fossataro, combined remote sensing, eco-sonar, thermo-photos to identify the position of the ancient pier to the North and within the modern structure, confirming that the Hortona harbour was an 'epineion' (Fossataro 2005). The preliminary underwater survey in the northern sector of the modern harbour, allowed the observation of squared stones, possible structures, which need a more systematic survey. Also, from the area of the port numerous materials were found (Figure 18) such as:

- ▶ several ancoras, attesting the maritime navigations;
- ▶ amphorae, amphora stops with stamps and decorations, probably related to the content of the vessels or to the potter product.

<sup>18</sup> Ibid.

<sup>19</sup> (Staffa 2002; Staffa 2006)

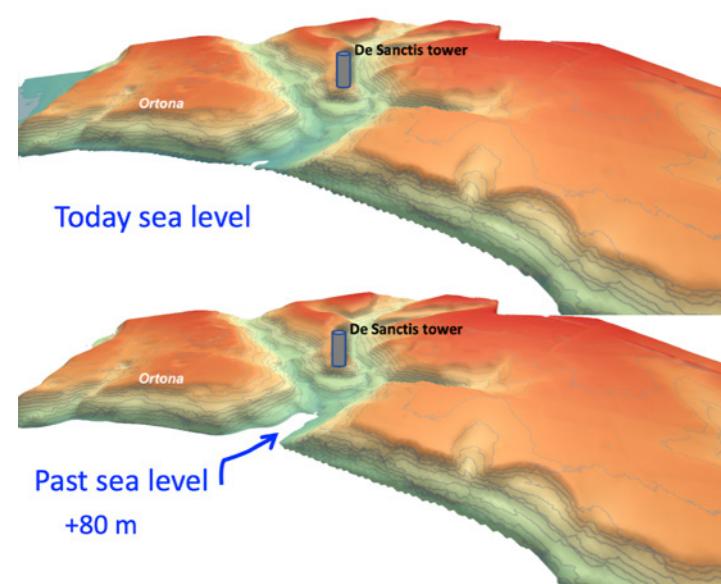
<sup>20</sup> Ibid.

Among the stamps one in particular is extremely important because is a Rodian Amphora, attesting trades with Greek areas.



**Figure 19.** Example of the archeological artifacts (Fossataro, 2005).

cio river valley was largely navigable (Figure 19). It is thus important to combine the archaeological and geological information to correctly interpret the evidences in the territory.



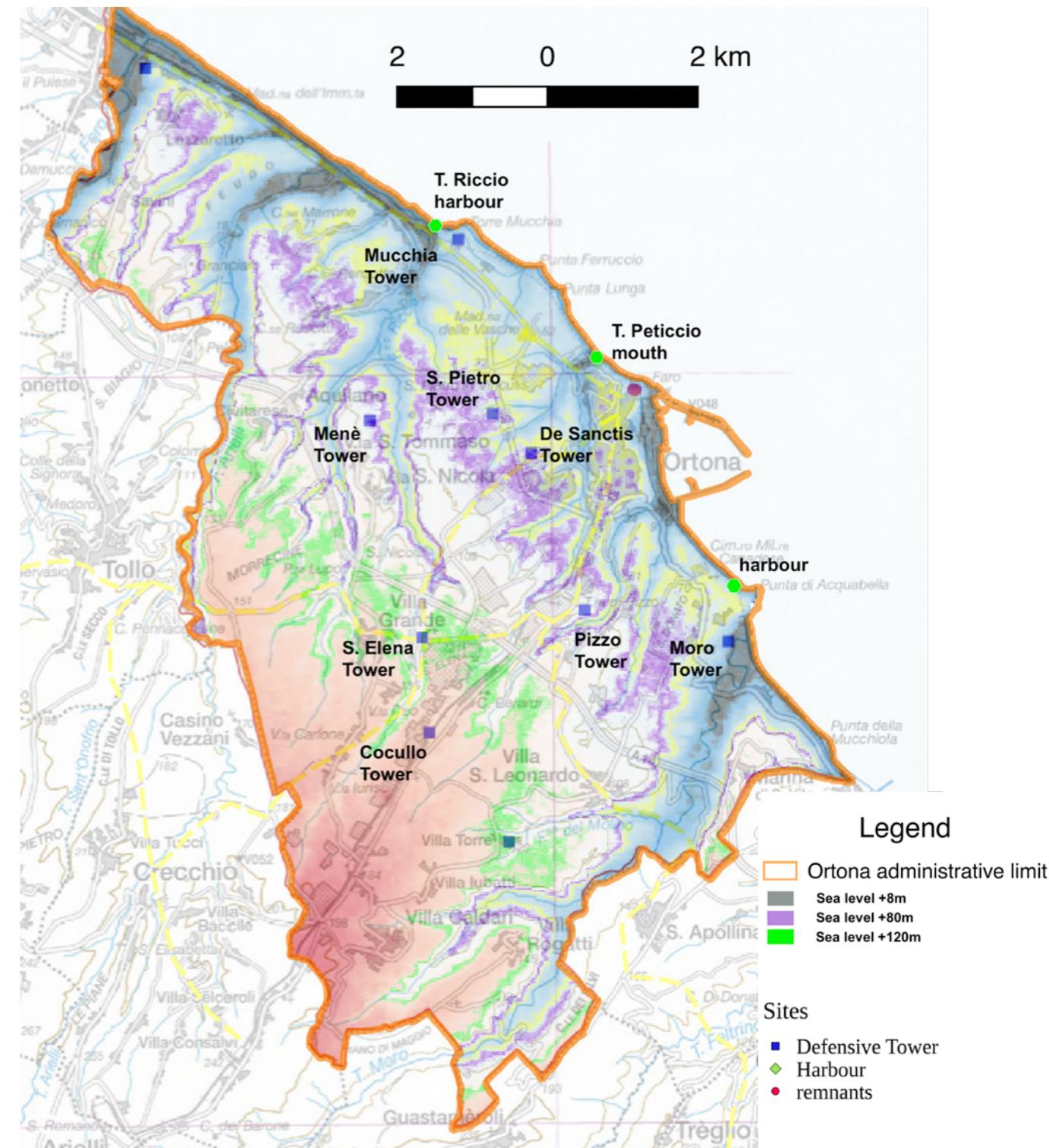
**Figure 20.** Reconstruction of the coastline position with the sea level +80m higher (bottom image) than current position (upper image) using a 3D digital elevation model reconstructed from LIDAR data<sup>21</sup>. (Vertical exaggeration x5)

However, it is not clear where the main town was located. Fossataro (2005)<sup>7</sup> suggested that at the beginning *Hortona* was born as a settlement related to the harbour and serving some internal and more important town, possibly *Teate* (modern Chieti) at about 18 Km away, but it soon became an important and developed urban centre, acquiring the role of town and not only port-settlement.

The sea level controls the level of navigability of the rivers and thus influenced the humans settlements. For example, we made a simulation of the sea level rise along the Ortona coastline and during a high sea level stand, the Peticcio river valley was largely navigable (Figure 19). It is thus important to combine the archaeological and geological information to correctly interpret the evidences in the territory.

Also, it is indeed interesting to note that the remnants of the inner towers (Staffa 2002<sup>6</sup> and 2004<sup>35</sup>) lie at similar altitude, drawing theoretical lines parallel to the coastline (Figure 18).

The innermost towers are located at an altitude of about 100 m in correspondence to main fluvial valleys. It would be worthwhile to plan further studies on the connection with the uplift rate due of the area due to the Apennines formation and sea level changes during the Quaternary geological evolution of this part of the central Adriatic, information not found in the literature and requires more detailed analysis and study which is beyond this project.

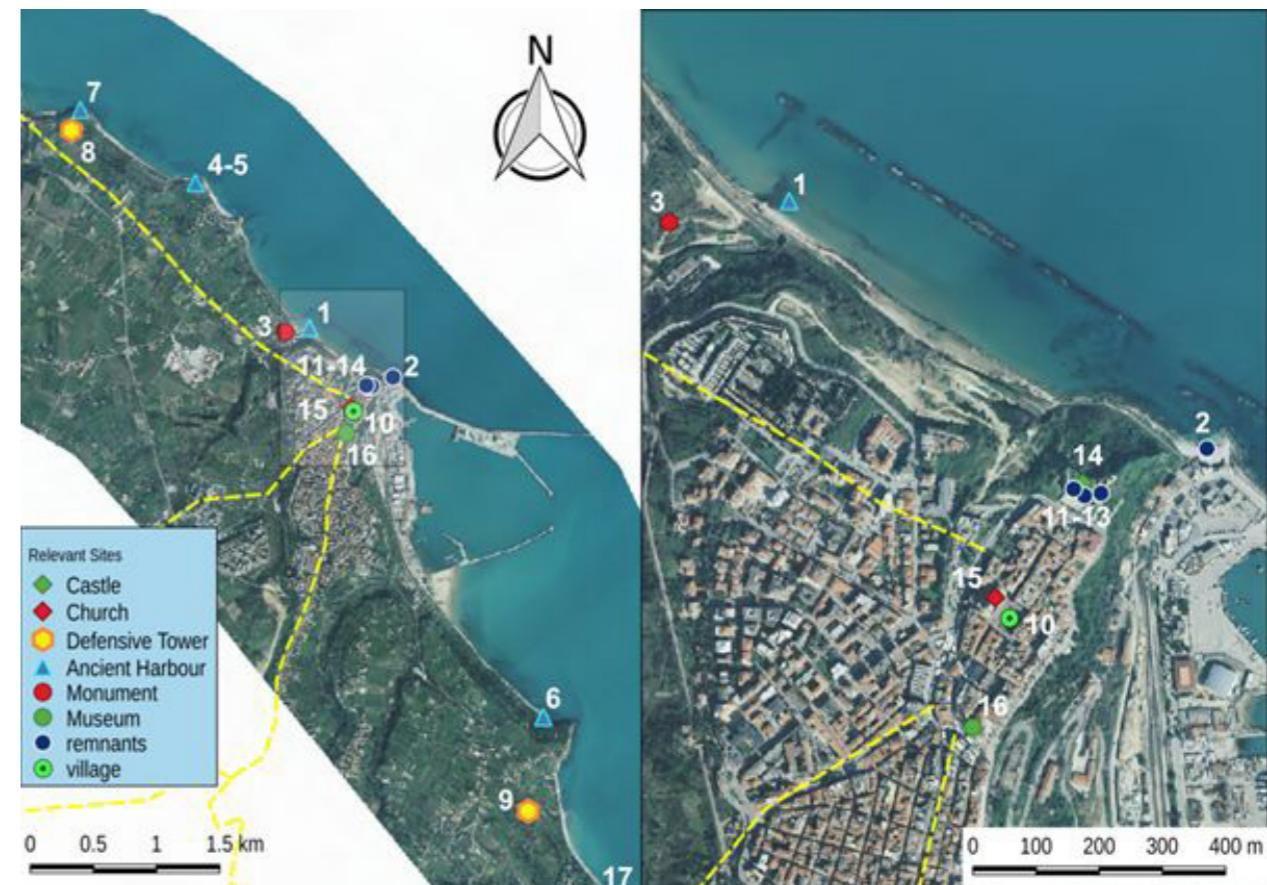


**Figure 21.** Defensive towers location and altitude compared to different position of past sea level in the Mediterranean area. Digital Elevation Model DEM from Regione Abruzzo (Staffa 2004).

To conclude our study, a list of the potential sites of interest for the APPRODI project is summarized in the following Table 2 and their positions is indicated in Figure 21.

<sup>21</sup> LIDAR data.

<b>id</b>	<b>Latitude</b>	<b>Longitude</b>	<b>Toponym</b>	<b>Age</b>	<b>Type</b>	<b>State of preservation</b>
1	42°21'46"N	14°24'2"E	Lo Scalo -Peticcio river Mouth	Pre-roman/Roman age	Ancient Harbour	Not available
2	42°21'34"N	14°24'31"E	La Ritorna beach	Middle age	Ancient Harbour	Not available
3	42°21'46"N	14°23'54"E	Peticcio Fountain	Renaissance	monument	Good
4	42°22'24"N	14°23'23"E	Ripari di Giobbe	Middle Paleolithic – Middle Ages	Defensive tower	Poor
5	42°22'42"N	14°22'43"E	Punta Ferruccio	Roman age	Ancient Harbour	Not available
6	42°20'7"N	14°25'23"E	Punta Acquabella	Roman age – Middle age	Ancient Harbour	Not available
7	42°22'37"N	14°22'39"E	Mucha Tower	Middle Ages	Defensive Tower	Poor
8	42°22'37"N	14°22'39"E	Settlement of Mucchia	Middle Ages	Defensive Tower	Poor
9	42°19'43"N	14°25'18"E	Moro Tower	Byzantine age	Defensive Tower	Poor
10	42°21'25"N	14°24'17"E	Terravecchia village-settlement of Hortona	Roman Age	Village	Good
11-12	42°21'32"N	14°24'22"E	Proto-Hystoric settlement (inside the Aragonese castle)	Bronze age – Iron age	Remnants	Poor
13	42°21'32"N	14°24'22"E	Roman cistern (inside the Aragonese castle)	Roman age	Remnants	Poor
14	42°21'32"N	14°24'22"E	Aragonese Castle	1447-1542	Castle	Poor
15	42°21'26"N	14°24'16"E	St. Thomas' cathedral	From roman age to present	Church	Good
16	42°21'20"N	14°24'14"E	Farnese palace	Late Renaissance	Museum	Good
17	42°18'59"N	14°26'17"E	"Costa dei Trabocchi" Bardella area	1500-1700	Typical fishing and food	Good

**Table 2.** List of identified archaeological and historical sites in the Ortona administration.**Figure 22.** Position of the identified sites over an aerial image from Regione Abruzzo.<sup>22</sup>

## Final remarks

Our objective was to collect the geological, archaeological and historical information to better understand the presence of ancient ports in the Ortona administrative area and prepare a list of potential sites of interest to be valorized for touristic purposes. This work represents an initial stage of a more detailed study to be carried out in the future to address all the remaining open questions. For example, it'd be useful to make a more detailed work combining different satellite/aerial images and geophysical survey of the shallow sea to provide a more complete context for the subaqueous archaeological exploration in search of the ancient ports.

<sup>22</sup> Aerial image of Regione Abruzzo, <http://opendata.regione.abruzzo.it/>

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## Ancient Harbors in their historical and archaeological Setting: The Case of Corfu.

The name of Κέρκυρα (Kerkyra) comes from Κόρκυρα (Korkyra), a nymph who was the daughter of Ασωπός (Asopos), a personified-deified big Greek river of the mainland. Poseidon fell in love with her and brought her on this island, and it was out of this incident that the island was named, since Korkyra became Kerkyra in the Doric dialect. The Φαιάκες (Phaeacians) were believed to be the first residents<sup>1</sup>, and the first founder was supposed to have been Φαίαξ (Phaeaks); his son Ναυσίθοος (Nausithoos) was believed to be the father of king Αλκίνοος (Alcinoos), known from the *Odyssey*, where Alcinoos and his daughter Ναυσικά (Nausicaa) are said to have helped Odysseus to return to Ithaca.

In fact, the penultimate stop of the return journey of Odysseus was the Homeric Σχερία/e<sup>2</sup>, which for many scholars, but also for many ancient authors, is identified with Korcyra/Kerkyra, the current Corfu. This idea, already popular in Antiquity, made Napoleon Bonaparte, when he occupied Corfu in 1797 (till then belonging to the Venetian republic), write that the island of Korkyra was the country of princess Nausicaa; he also noted that, when the Chief of Greek Orthodox priests welcomed the French commander, he officially offered him a copy of the *Odyssey* (Vidal-Naquet 2002, 39). Odysseus/Ulysses, after having abandoned Calypso and her island (Ογγυγία, Ogygia, also as difficult to identify as Corfu and Ithaca, despite the speculations identifying it with Gaudos, Γαύδος, a Greek island in the south of Crete), fell into a storm and reached a bay of Scheria as a shipwreck. There he fell asleep and, awaken, he met the Phaeacian princess, Nausicaa, as Homer states in the 6<sup>th</sup> book of *Odyssey*, vv. 149-160<sup>3</sup>.

<sup>1</sup> The Phaeacians had previously inhabited, according to Homer, far from any inhabited area, in Hypereia ('Υπερεία), near the uncultured Cyclops. With King Nausithoos, the son of Poseidon and Perivia, they settled in Scheria, although, as we will see this mythical Scheria is situated at the ends of the earth, not necessarily identified with real Kerkyra/Corfu. See Homer *Od. 6, 1-10* speaking of the original residence of the Phaeacians, Hypereia, outside the known world.

<sup>2</sup> It is Homer that calls the land "Scheria". *Od. 5, 34-35; 6, 1-12*.

<sup>3</sup> γονοῦμαί σε, ἀναστα: θεός νύ τις, ἢ βροτός ἐστι; εἰ μὲν τις θεός ἐστι, τοὶ οὐρανὸν εὑρὼν ἔχουσιν, Αρτέμιδι σε ἔγώ γε, Διὸς κούρῃ μεγάλῳ, εἰδός τε μέγεθός τε φυήν τ' ἄγχιστα είσκο: εἰ δέ τις ἐστι βροτῶν, τοὶ ἐπὶ χθονὶ ναιετάουσιν, τρὶς μάκαρες μὲν σοί γε πατήρ καὶ πόντια μήτηρ, τρὶς μάκαρες δὲ καστύγητοι: μάλα πού σφισι θυμός αἱὲν ἐνφροσύνησιν ιαίνεται εἰνεκα σεῖο, λευσσόντων τοιόνδε θάλος χορὸν εἰσοιχεύσαν. κείνος δ' αὖ περὶ κῆρι μακάρτατος ἔξοχον ἄλλων, ὃς κέ σ' ἔέδνοισι βρίσας οἰκόνδ' ἀγάγηται. οὐ γάρ πω τοιούτον ἴδον βροτὸν διφθαλμοῖσιν, οὐτ' ἄνδρ' οὔτε γυναῖκα: σέβας μ' ἔχει εἰσορόωντα.

[I] beseech thee, O queen,—a goddess art thou, or art thou mortal? If thou art a goddess, one of those who hold broad heaven, to Artemis, the daughter of great Zeus, do I liken thee most nearly in comeliness and in stature and in form. But if thou art one of mortals who dwell upon the earth, thrice-blessed then are thy father and thy honored mother, and thrice-blessed thy brethren. Full well, I ween, are their hearts ever warmed with joy because of thee, as they see thee entering the dance, a plant so fair. But he again is blessed in heart above all others, who shall prevail with his gifts of wooing and lead thee to his home. For never yet have mine eyes looked upon a mortal such as thou, whether man or woman; amazement holds me as I look on thee. Translated by A.T. Murray, as happens with all passages from the *Odyssey*].

The idea deriving from the *Odyssey* is about a prosperous place, similar to a paradise. Nausicaa gives fundamental information about the power of the kingdom and the king of Phaeacians in Hom., *Od.* 6, 194-196:

Φαίηκες μὲν τήνδε πόλιν καὶ γαῖαν ἔχουσιν,  
εἰμὶ δ' ἐγὼ θυγάτηρ μεγαλήτορος Ἀλκινόοιο,  
τοῦ δ' ἐκ Φαιήκων ἔχεται κάρτος τε βίη τε.

[“The Phaeacians possess this city and land, and I am the daughter of great-hearted Alcinous, upon whom depend the might and power of the Phaeacians.”]

Indeed, on his way to the palace Odysseus has the opportunity to admire the Phaeacian prosperity, expressed, among other elements, in the art of boats and in the existence of well-established harbours<sup>4</sup>, apart from the city walls and the market, and of course the grandiose palace:

Hom., *Od.* 6, 251-272  
 αὐτὰρ Ναυσικάα λευκώλενος ἄλλ' ἐνόησεν:  
 εἴματ' ἄρα πτύξασα τίθει καλῆς ἐπ' ἀπήνης,  
 ζεῦξεν δ' ἡμιόνους κρατερώνυχας, ἀν δ' ἔβη αὐτή,  
 ὥτρυνεν δ' Ὁδυσῆα, ἔπος τ' ἔφατ' ἐκ τ' ὀνόμαζεν:  
 ὅρσεο δὴ νῦν, ξεῖνε, πόλινδ' ἵμεν ὅφρα σε πέμψω  
 πατρὸς ἐμοῦ πρὸς δῶμα δαῖφρονος, ἔνθα σέ φημι  
 πάντων Φαιήκων εἰδησέμεν ὅσσοι ἄριστοι.  
 ἀλλὰ μάλ' ὕδ' ἔρδειν, δοκέεις δέ μοι οὐκ ἀπινύσσειν:  
 ὅφρ' ἀν μέν κ' ἀγροὺς ἴομεν καὶ ἔργ' ἀνθρώπων,  
 τόφρα σὺν ἀμφιπόλοισι μεθ' ἡμιόνους καὶ ἄμαξαν  
 καρπαλίμως ἔρχεσθαι: ἔγὼ δ' ὁδὸν ἡγεμονεύσω.  
 αὐτὰρ ἐπὶ τὴν πόλιος ἐπιβήμεν, ἢν πέρι πύργος  
ὑψηλός, καλὸς δὲ λιμὴν ἐκάτερθε πόληος,  
λεπτὴ δ' εἰσίθμη: νῆες δ' ὁδὸν ἀμφιέλισσαι  
εἰρύναται: πᾶσιν γὰρ ἐπίστιον ἔστιν ἐκάστῳ.  
 ἔνθα δέ τέ σφ' ἀγορὴ καλὸν Ποσιδήιον ἀμφίς,  
 ρήτοισιν λάεσσι κατωρυχέεσσ' ἀραρύνα.  
 ἔνθα δὲ νηῶν ὅπλα μελαινάων ἀλέγουσι,  
 πείσματα καὶ σπεῖρα, καὶ ἀποξύνουσιν ἐρετμά.  
 οὐ γὰρ Φαιήκεσσι μέλει βιδὸς οὐδὲ φαρέτρη,  
 ἀλλ' ιστοὶ καὶ ἐρετμὰ νεῶν καὶ νῆες ἑίσαι,  
 ἥσιν ἀγαλλόμενοι πολιὴν περόωσι θάλασσαν.

[But the white-armed Nausicaa took other counsel. She folded the raiment and put it in the fair wagon, and yoked the stout-hoofed mules, and mounted the car herself. Then she hailed Odysseus, and spoke and addressed him: “Rouse thee now, stranger, to go to the city, that I may escort thee to the house of my wise father, where, I tell thee, thou shalt come to know all the noblest of the Phaeacians. Only do thou thus, and, methinks, thou dost not lack understanding: so long as we are passing through the country and the tilled fields of men go thou quickly with the handmaids behind the mules and the wagon, and I will lead the way. But when we are about to enter the city, around which runs a lofty wall,—a fair harbor lies on either side of the city and the entrance is narrow, and curved ships are drawn up along the road, for they all have

stations for their ships, each man one for himself. There, too, is their place of assembly about the fair temple of Poseidon, fitted with huge stones set deep in the earth. Here the men are busied with the tackle of their black ships, with cables and sails, and here they shape the thin oar-blades. For the Phaeacians care not for bow or quiver, but for masts and oars of ships, and for the shapely ships, rejoicing in which they cross over the grey sea.]

Similar information is given in Hom., *Od.* 7, 78-112:

ώς ἄρα φωνήσασ' ἀπέβη γλαυκῶπις Ἀθήνη  
 πόντον ἐπ' ἀτρύγετον, λίπε δὲ Σχερίην ἐρατεινήν,  
 ἵκετο δ' ἐς Μαραθῶνα καὶ εύρυαγνιν Ἀθήνην,  
 δῦνε δ' Ἐρεχθῆς πυκινὸν δόμον. αὐτὰρ Ὁδυσσεὺς  
 Ἀλκινόου πρὸς δῶματ' ἵε κλυτά: πολλὰ δέ οἱ κῆρ  
 ὥρμαιν ἰσταμένων, πρὶν χάλκεον οὐδὸν ἱκέσθαι.  
 ὃς τε γὰρ ἡλίου αἴγλη πέλεν ἡὲ σελήνης  
 δῶμα καθ' ὑψερεφὲς μεγαλήτορος Ἀλκινόοιο.  
 χάλκεοι μὲν γὰρ τοῖχοι ἐληλέδατ' ἔνθα καὶ ἔνθα,  
 ἐς μυχὸν ἔξ οὐδοῦ, περὶ δὲ θριγκὸς κυάνοιο:  
 χρύσειαι δὲ θύραι πυκινὸν δόμον ἐντὸς ἔεργον:  
 σταθμοὶ δ' ἀργύρεοι ἐν χαλκέῳ ἐστασαν οὐδῷ,  
 ἀργύρεον δ' ἐφ' ὑπερθύριον, χρυσέῃ δὲ κορώνῃ.  
 χρύσειοι δ' ἐκάτερθε καὶ ἀργύρεοι κύνες ἥσαν,  
 οὓς Ἡφαιστος ἔτευξεν ιδινήσι πραπίδεσσι  
 δῶμα φυλασσέμεναι μεγαλήτορος Ἀλκινόοιο,  
 ἀθανάτους ὄντας καὶ ἀγήρως ἥματα πάντα.  
 ἐν δὲ θρόνοι περὶ τοῖχον ἐρηρέδατ' ἔνθα καὶ ἔνθα,  
 ἐς μυχὸν ἔξ οὐδοῦ διαμπερές, ἐνθ' ἐνὶ πέπλοι  
 λεπτοὶ ἐύννητοι βεβλήσατο, ἔργα γυναικῶν.  
 ἔνθα δὲ Φαιήκων ἡγήτορες ἐδριώσαντο  
 πίνοντες καὶ ἔδοντες: ἐπητεανὸν γὰρ ἔχεσκον.  
 χρύσειοι δ' ἄρα κοῦροι ἐνδυμήτων ἐπὶ βωμῶν  
 ἐστασαν αἰθομένας δαῖδας μετὰ χερσὶν ἔχοντες,  
 φαίνοντες νύκτας κατὰ δῶματα δαιτυμόνεσσι.  
 πεντήκοντα δέ οἱ δμωαὶ κατὰ δῶμα γυναικες  
 αἱ μὲν ἀλετρεύουσι μύλης ἐπὶ μήλοπα καρπόν,  
 αἱ δ' ιστοὺς ὑφόωσι καὶ ἡλάκατα στρωφῶσιν  
 ἥμεναι, οἴλα τε φύλλα μακεδονῆς αἰγείροιο:  
 καιρουσσέων δ' ὁδονέων ἀπολείβεται ὑγρὸν ἔλαιον.  
 ὅσσον Φαιήκες περὶ πάντων ἵδριες ἀνδρῶν  
 νῆα θοὴν ἐνὶ πόντῳ ἐλαυνέμεν, ὃς δὲ γυναικες  
 ιστῶν τεχνῆσσαι: πέρι γάρ σφισι δῶκεν Ἀθήνη  
 ἔργα τ' ἐπίστασθαι περικαλλέα καὶ φρένας ἐσθλάς.

[“There he stood, and his heart pondered much before he reached the threshold of bronze; for there was a gleam as of sun or moon over the high-roofed house of great-hearted Alcinous. Of bronze were the walls that stretched this way and that from the threshold to the innermost chamber, and around was a cornice of cyanus. Golden were the doors that shut in the well-built house, and doorposts of silver were set in a threshold of bronze. Of silver was the lintel above, and of gold the handle. On either side of the door there stood gold and silver dogs, which Hephaestus had fashioned with cunning skill to guard the palace of great-hearted Alcinous; immortal were they and ageless all their days. Within, seats were fixed along the wall on either

<sup>4</sup> They are also workers of the land, they have olive-trees, vineyards, cf. Vidal-Naquet 2002, 45.

hand, from the threshold to the innermost chamber, and on them were thrown robes of soft fabric, cunningly woven, the handiwork of women. On these the leaders of the Phaeacians were wont to sit drinking and eating, for they had unfailing store. And golden youths stood on well-built pedestals, holding lighted torches in their hands to give light by night to the banqueters in the hall. And fifty slave-women he had in the house, of whom some grind the yellow grain on the millstone, and others weave webs, or, as they sit, twirl the yarn, like unto the leaves of a tall poplar tree; and from the closely-woven linen the soft olive oil drips down. For as the Phaeacian men are skilled above all others in speeding a swift ship upon the sea, so are the women cunning workers at the loom, for Athena has given to them above all others skill in fair handiwork, and an understanding heart.”]

The settlements admired by Odysseus had been the work of the mythical Nausithoos (*Ναυσίθοος*), mentioned above, according to Homer's *Od.* 6, 9-10, where we read that Nausithoos built a wall around the city, huts, temples for the gods and distributed the earth.

ἀμφὶ δὲ τεῖχος ἔλασσε πόλει, καὶ ἐδείματο οἴκους,  
καὶ νηὸν ποίησε θεῶν, καὶ ἐδάσσατ’ ἀρούρας.

[about the city he had drawn a wall, he had built houses [10] and made temples for the gods, and divided the ploughlands]

In the Homeric Scherie/a, women are absorbed in weaving purple-dyed cloth:

Hom., *Od.* 6, 52-53

ἡ μὲν ἐπ’ ἐσχάρῃ ἥστο σὺν ἀμφιπόλοισι γυναιξὶν  
ἡλάκατα στρωφῶσ’ ἀλιπόρφυρα [...]

[The mother sat at the hearth with her handmaidens, spinning the yarn of purple dye.]

Cf. 6, 305-307

ἡ δ’ ἥσται ἐπ’ ἐσχάρῃ ἐν πυρὸς αὐγῇ,  
ἡλάκατα στρωφῶσ’ ἀλιπόρφυρα, θαῦμα ιδέσθαι,  
κίονι κεκλιμένη: δμωὰ δέ οἱ εἴατ’ ὅπισθεν.

[(my mother), who sits at the hearth in the light of the fire, spinning the purple yarn, a wonder to behold, leaning against a pillar, and her handmaids sit behind her.]

For their part, the men were expert mariners and navigators (*Od.* 6, 255-73), as mentioned above. Scherie is also present in

*Od.* 13, 160 βῆρ̄ ἵμεν ἐς Σχερίνην, ὅθι Φαίηκες γεγάασιν [he went his way to Scheria, where the Phaeacians dwell].

And the Phaeacians are mentioned as famous navigators in *Od.* 13, 166 Φαίηκες δολιχήρετμοι, ναυσίκλυτοι ἄνδρες [the Phaeacians of the long oars, men famed for their ships.].

Alcinoos himself proudly presents the Phaeacians' superiority in naval trips to Odysseus in *Od.* 7, 327-328

εἰδήσεις δὲ καὶ αὐτὸς ἐνὶ φρεσὶν ὅσσον ἄρισται  
νῆες ἔμαλι καὶ κοῦροι ἀναρρίπτειν ἄλα πηδῷ.

[So shalt thou, too, know for thyself how far my ships are the best, and my youths at tossing the brine with the oar-blade, transl. Murray], so Odysseus may be sure that he will arrive to Ithaca finally and Poseidon won't be able to disturb the tranquillity of a naval trip under the Phaeacian protection].

The Phaeacians' naval ability possesses super-natural traits, as described in *Odyssey* 8, 557-563

οὐ γὰρ Φαίηκεσσι κυβερνητῆρες ἔασιν,  
οὐδέ τι πηδάλι’ ἔστι, τά τ’ ἄλλαι νῆες ἔχουσιν:  
ἄλλ’ αὐταὶ ἵσασι νοήματα καὶ φρένας ἀνδρῶν,  
καὶ πάντων ἵσασι πόλιας καὶ πίονας ἀγροὺς  
ἀνθρώπων, καὶ λαῖτμα τάχισθ’ ἀλὸς ἐκπερόωσιν  
ἡέρι καὶ νεφέλῃ κεκαλυμμέναι: οὐδέ ποτέ σφιν  
οὔτε τι πημανθῆναι ἐπὶ δέος οὔτ’ ἀπολέσθαι.

[For the Phaeacians have no pilots, nor steering-oars such as other ships have, but their ships of themselves understand the thoughts and minds of men, and they know the cities and rich fields of all peoples, and most swiftly do they cross over the gulf of the sea, hidden in mist and cloud, nor ever have they fear of harm or ruin].

As mentioned, the Phaeacians' city is surrounded by a wall, according to Nausicaa's words to Ulysses in *Od.* 6, 262-265. It has two ports, at the two sides of an isthmus, where there are stations for the ships. In Homer these are traits of an organized state/society, but also of an ideal state. In fact, Scheria/e is presented as a perhaps mysterious and certainly happy place, and in this field naval ability is considered to be a basic facet of their prosperity and beatitude (*μακαριότης*). It is a never-never land, neither wholly a part of, nor completely removed from, ordinary humanity (Vaiopoulos 2008, 35), a paradise place (Mossé 2015, 96, 105-106) outside the borders of traditional geography; its inhabitants live in happiness, joy and beatitude. They are something between humans and gods, but live, contrary to the Cyclops and the giants, according the rules of a harmonious social organization (Cuisinier 2005, 436).

But this utopic scenery, certainly imaginary, situated basically out of place and time, could probably reflect the historical reality and certainly prosperity of the Mycenaean civilization, in combination with elements from the social life of the Ionians in the years of the poet. For instance, prosperity and acme were reflected on the racing spirit mentioned in Homer. Racing, related to the Phaeacians, was a sign of prosperity and conformity with Homeric world. The races organized by Alcinoos on the Phaeacians' Agora in honor of Odysseus confirm the reasons that contributed to the organization and conduct of such games at that time. It is about the struggle for fun but also for the recognition of the ideals of the time, by improving and demonstrating the protagonists' skills. It is indicative that Odysseus, despite his negative attitude, enters the field only when he pretends and feels the need to preserve his honor. Otherwise, we point out a systematic organization of the races with a complex set of sports (street, wrestling, jump, boxing, disc), with judges, with pride, with squabbles and anguish. Characteristics of the Phaeacians in these battles are, according to Alcinoos' confession, their superiority in the running, in dance and singing, but mainly in naval art (Pappas 2003, 9-34). After all, Phaeacia's prosperity is confirmed by the fact that Alcinoos at Odysseus' departure from Corfu, offered him generous gifts (many luxurious cloaks and a lot of gold)<sup>5</sup>.

Apart from the Homeric tradition about Scherie as a fantastic ideal place, a utopia, in Antiquity there is another learned tradition according to which Phaeacia/Scherie lay, in terms of mythical geography, near the Isles of the Blessed (Vaiopoulos 2008, 44-45). This tradition could have sprung from the account of the voyage of Rhadamanthys in Homer's *Od.* 7, 321 sq., although Homer himself says nothing about Phaeacia/Scherie being near Elysium; the ancient *Scholia* on this Homeric passage though (like the *Scholia* in Euripides' *Hippolytus*) assure the Hellenistic currency of this

<sup>5</sup> *Od.* 5, 38-40; 8, 390-3.

tradition. In *Scholia on Euripides' Hippolytus* 750 the ancient scholiast informs us about the legend that close to the fiery circle and the belt of fire there is another land in which many marvelous things grow; according to the legend in this land the Elysian Fields and the country of the Phaeacians are sited. The ancient scholiast on Homer's *Od.* 7, 153 says that the weather is always good in the land of Phaeacians, and the crops grow throughout the year, confirming the description given by Odysseus/Ulysses in the *Odyssey* itself; but he adds that this place is near to the Elysian plain; commenting v. 7, 324 the scholiast takes for granted that the Phaeacians live near the Islands of the Blessed, so proximity of the two places (the Elysian Fields and Phaeacia) is clearly stated (Cairns 1979, 44-45). Thus, lacking of specific geographical information about the location of this paradise-place, we may cite Homer's (via Alcinoos words) lines that Euboea, sited along the coasts of Attica, Boeotia, and Locris, is pretty far from Scheria/<sup>6</sup>. After all, Homer was neither a historian nor a geographer, despite the great efforts made from Antiquity to our times to recreate the Homeric universe. Reliable topographical indications are rare in the *Odyssey* (Vidal-Naquet 2002, 41).

Not only poets, but also the historian Thucydides found an explanation of the Corfiots' naval power of his times in their origin from the ancient of mythical Phaeacians, as he states in 1, 25, 4. According to the Athenian historian's narration, the famous naval tradition of the Phaeacians, the older inhabitants of the island, had also contributed to this ability and power of the Corcyreans of his time:

[...] περιφρονοῦντες δὲ αὐτοὺς καὶ χρημάτων δυνάμει ὄντες κατ' ἐκεῖνον τὸν χρόνον ὅμοια τοῖς Ἑλλήνων πλουσιωτάτοις καὶ τῇ ἐς πόλεμον παρασκευῇ δυνατώτεροι, ναυτικῷ δὲ καὶ πολὺ προύχειν ἔστιν ὅτε ἐπαιρόμενοι καὶ κατὰ τὴν Φαιάκων προενοίκησιν τῆς Κερκύρας κλέος ἔχόντων τὰ περὶ τὰς ναῦς (ἢ καὶ μᾶλλον ἔξηρτύνοντο τὸ ναυτικὸν καὶ ἡσαν οὐκ ἀδύνατοι: τριήρεις γὰρ εἴκοσι καὶ ἑκατὸν ὑπῆρχον αὐτοῖς ὅτε ἤρχοντο πολεμεῖν),

[...] but being equal to the richest Grecians of their time for store of money and strongly furnished with ammunition of war, had them in contempt. Also they stickeid not sometimes to boast how much they excelled in shipping, and that Corcyra had been once inhabited by the Phaeaces who flourished in glory of naval affairs, which was also the cause why they the rather provided themselves of a navy. And they were indeed not without power that way; for when they began this war, they had one hundred and twenty galleys".<sup>7</sup>

Reminiscence of the glorious mythological/Homeric past of Corfu connected with naval activity is reflected on the fact that even now days one of the most known natural harbours still rejoices of the name of king Alcinoos. What today is known under the name Λιμήν Αλκινού 'Alcinoos' harbour', is situated in Garitsa, in the ancient city of Palaeopolis, and was initially a military harbour, yet it refers to historical times, although the modern landscape has given popular imagination reasons to connect it with the Homeric tradition. But the connection with Homeric world is realized mostly with the second port of the area, the Hyllaic harbor (Υλλαϊκός Λιμήν), used in historical times initially for commercial purposes (now days the lagoon of Chalikiopoulos/Chalkiopoulos, where the modern airport is built)<sup>8</sup>.

According to mythical tradition, Ποντικονήσι (Pontikonisi), a small island at the entrance of the Hyllaic Harbour<sup>9</sup> was actually the rock where Ulysses' ship crashed during the heavy storm caused by the enraged Poseidon. Other arguments state that Pontikonisi is actually the Phaeacian ship turned

into stone<sup>10</sup> as an act of revenge from Poseidon who wanted to castigate the Phaeacians for having helped Odysseus, as said in Hom., *Od.* 13, 153-178

τὸν δ' ἀπαμειβόμενος προσέφη νεφεληγερέτα Ζεύς:  
 'ὦ πέπον, ως μὲν ἐμῷ θυμῷ δοκεῖ εἶναι ἄριστα,  
 ὅππότε κεν δὴ πάντες ἐλαυνομένην προΐδωνται  
 λαοὶ ἀπὸ πτόλιος, θεῖναι λίθον ἐγγύθι γαίης  
 νηὶ θοῇ ἵκελον, ἵνα θαυμάζωσιν ἄπαντες  
 ἄνθρωποι, μέγα δέ σφιν ὅρος πόλει ἀμφικαλύψαι.  
 αὐτὰρ ἐπεὶ τό γ' ἄκουσε Ποσειδάων ἐνοσίχθων,  
 βῆρ ὁ ἴμεν ἐς Σχερίην, ὅθι Φαιήκες γεγάσασιν.  
 ἐνθ' ἔμεν: ἡ δὲ μάλα σχεδὸν ἥλυθε ποντοπόρος νηῆς  
 ρίμφα διωκομένη: τῆς δὲ σχεδὸν ἥλθ' ἐνοσίχθων,  
 ὃς μιν λᾶν ἔθηκε καὶ ἐρίζωσεν ἔνερθε  
 χειρὶ καταπρηνεὶ ἐλάσας: ὁ δὲ νόσφι βεβήκει.  
 οἱ δὲ πρὸς ἀλλήλους ἔπεια πτερόεντ' ἀγόρευον  
 Φαιήκες δολιχήρετμοι, ναυσίκλυτοι ἄνδρες.  
 ὃδε δέ τις εἰπεσκεν ιδῶν ἐς πλησίον ἄλλον:  
 ὡς μοι, τίς δὴ νῆα θοὴν ἐπέδησ' ἐνὶ πόντῳ  
 οὔκαδ' ἐλαυνομένην; καὶ δὴ προύφαινετο πᾶσα.  
 ὃς ἄρα τις εἰπεσκε: τὰ δ' οὐκ ἵσαν ώς ἐτέτυκτο.  
 τοῖσιν δ' Αλκίνοος ἀγορήσατο καὶ μετέειπεν:  
 ὡς πόποι, ἡ μάλα δή με παλαίφατα θέσφαθ' ικάνει  
 πατρὸς ἐμοῦ, δς ἔφασκε Ποσειδάων' ἀγάσασθαι  
 ἡμῖν, οὐνεκα πομποὶ ἀπήμονές εἰμεν ἀπάντων.  
 φῆ ποτὲ Φαιήκων ἀνδρῶν περικαλλέα, νῆα,  
 ἐκ πομπῆς ἀνιοῦσαν, ἐν ἡεροειδεῖ πόντῳ  
 ριαισέμεναι, μέγα δ' ἡμιν ὅρος πόλει ἀμφικαλύψειν.  
 ὃς ἀγόρευεν ὁ γέρων: τὰ δὲ δὴ νῦν πάντα τελεῖται.

[Then Zeus, the cloud-gatherer, answered him and said: "Lazy one, hear what seems best in my sight. [155] When all the people are looking forth from the city upon her as she speeds on her way, then do thou turn her to stone hard by the land—a stone in the shape of a swift ship, that all men may marvel; and do thou fling a great mountain about their city." Now when Poseidon, the earth-shaker, heard this[160] he went his way to Scheria, where the Phaeacians dwell, and there he waited. And she drew close to shore, the seafaring ship, speeding swiftly on her way. Then near her came the Earth-shaker and turned her to stone, and rooted her fast beneath by a blow of the flat of his hand, and then he was gone. [165] But they spoke winged words to one another, the Phaeacians of the long oars, men famed for their ships. And thus would one speak, with a glance at his neighbor: "Ah me, who has now bound our swift ship on the sea as she sped homeward? Lo, she was in plain sight." [170] So would one of them speak, but they knew not how these things were to be. Then Alcinous addressed their company and said: "Lo now, verily the oracles of my father, uttered long ago, have come upon me. He was wont to say that Poseidon was wroth with us because we give safe convoy to all men. [175] He said that some day, as a beautiful ship of the Phaeacians was returning from a convoy over the misty deep, Poseidon would smite her, and would fling a great mountain about our town].

<sup>6</sup> *Od.* 7, 320-24.

<sup>7</sup> Transl. Thomas Hobbes.

<sup>8</sup> Topographical details and description of the two harbours will be given infra. At this point of the paper, the Homeric/mythical connotations will be examined.

<sup>9</sup> Lamberton 1905, 325, comm. ad Thuc. 3, 77.

<sup>10</sup> This same tradition applies also to other bays/naturally protected bays in Corfu (see infra).

In fact the characteristics of the ancient city of Kerkyra, once called Παλαιόπολις (Palaeopolis), could hypothetically fit to the Homeric description. Sited on a peninsula, it used to be at the place where now days Analipsis village (Ανάληψις) is built. The two sides of the peninsula correspond to the double harbours: Alcinoos' Harbour on the north-eastern part of Garitsa bay (Γαρίτσα), the Hyllaic Harbour, on the other side, where today Chalkiopoulos Lagoon (Λιμνοθάλασσα Χαλκιόπουλου) is placed. Very close to the shore, a tiny island now united to the land has a small beautiful monastery on it, Παναγία Βλαχέρνα (Panaghia Vlacherna), a touristic hotspot. A little further, there is Pontikonisi island covered by thick vegetation (Cuisinier 2005, 456), supposedly useful to Ulysses when the latter grabbed himself upon the island's rocks. Remains from Archaic period confirm the Homeric picture even more than the landscape itself. Ruins of Artemis' temple still survive in situ, foundations and columns (while statues discovered are now exhibited in the newly renovated Archaeological Museum of Kerkyra). In Mon Repos Park, where a 19<sup>th</sup> century Royal palace is placed also, there are also the remains of three temples: Apollo's, Hera's and an unknown deity's<sup>11</sup>; so the ambience encourages mythical connotations and makes the hypothesis that Ulysses first arrived at this bay look plausible.

But other bays also claim to be the gulf where Ulysses first arrived. Another version of the story about Ulysses/Odysseus claims that Παλαιοκαστρίτσα (Palaiokastritsa), a bay at the Northern part of the Island was where Ulysses was supposed to have been washed up on shore after his last and worst shipwreck described in the *Odyssey*. It is where princess Nausicaa, led by Athena, found him. The Phaeacians gave him a ship to return safely back to Ithaca, but this made Poseidon furious who then petrified the ship. This legend claims now that the petrified island is in the bay of Palaiokastitsa, where Alcinoos palace is said to have been. Local topography is easily adapted to Homeric scenery in this case too.

Another version claims that this particular bay used as an Odyssean port was the bay of Ἐρμονες/ (H)ermones, also in the North, not far from Palaiokastritsa. According to this version of the Odyssean myth, Hermones is the actual gulf where princess Nausicaa found Ulysses, because the landscape presents important similarities to the Homeric description. Especially the river where the hero fell asleep, according to a modern visitor's eyes or phantasy, reminded intensely the ancient landscape<sup>12</sup>. These two sites (Palaiokastritsa and Hermones), in short distance one from another, in combination could offer a picture of the Homeric port, as they present attractive similarities with the Homeric landscape. But the area around gives other opportunities to creative imagination too.

In fact the nearby Liapades Bay (Λιαπάδες) could offer a picture similar to the one given in the Homeric narration. The bay-natural harbour is known for its strategic location and its natural beauty that has made it a touristic destination, although not among the most known or popular. Αγγελόκαστρο (Angelocastro), a Venetian castle is built on one of the hills surrounding the bay, overlooking the naval routes from the Adriatic as also the one originating from Sicily and South Italy. Palaiokastritsa is the promontory nearby and a Byzantine Orthodox Monastery is built on one of the rocks. It is from this rock that someone could see two ports, like the ones mentioned in the *Odyssey*: Aghios Spyridon Harbour (Λιμήν Αγίου Σπυρίδωνος) and Alipa Harbour (Αλιπά), a small gulf, divided in threes sandy smaller gulfs, protected by a promontory (Costieri) (Cuisinier 2005, 450-451). Palaiokastritsa bay, although too small to be the city of the Phaeacians, Scherie, could host Alcinoos' palace, while the military harbour could be where the Port of Aghios Spyridon is today. Where Angelocastro lays today

<sup>11</sup> Cuisinier 2005, 457. Details infra.

<sup>12</sup> The site also involves another, medieval mythical narration: one of the rocks surrounding the bay of Hermones is believed to be a petrified pirate, who in his attempt to steal a picture from the church that stands atop a hill on the beach, was "petrified" after shots of the Virgin Mary. Indeed, the shape of the rock looks like a human figure.

could be the position of the city's castle, overlooking the sea and their itineraries to and from the West. The second port, now days called Alipa, could be the second one, the commercial port. The agora, the city and the temple of Poseidon mentioned could have been on the isthmus between the two ports-gulfs. Remains of a small chapel honoring the modern Orthodox protector of the sailors, Aghios Nicolaos (Άγιος Νικόλαος), brings us to a persona also protecting the sailors, like Poseidon of the Antiquity (Cuisinier 2005, 451). The landscape could fit the one in which Nausicaa had appeared with her chariot and companions, the same one walked by Ulysses on his way to Alcinoos' palace.

The river mentioned by Homer, where Nausicaa was supposed to have washed her clothing cannot be found in this particular bay of Palaiokastritsa/Liapades, but in vicinity we may see a similar landscape, 12 km from Liapades, at Hermones bay, a small gulf protected by two small rocky promontories. This particular landscape fits perfectly with the Homeric description of *Od. 5, 404-425* (see infra), as also with ἔργα ἀνδρῶν (Bérard 1971, 45-67; Cuisinier 2005, 451-452). Hermones bay corresponds to naval conditions under which a small vessel driven or rather persecuted by western wind could find a shelter. A small river flows into the sea and could have had more waters in Antiquity, before the whole area gets full of modern buildings, like today. A similar bay could have been used as a place of exchange between the native population and Greek sailors returning from a mission to the West. If this is true, Hermones bay could have been so famous that it could have inspired a poet composing a scene of meeting between Ulysses and Nausicaa (Cuisinier 2005, 455).

The location of Hermones is connected to navigation also in terms of historical -or rather pre-historical- and archaeological research. The excavations in Hermones, as also in Acharavi (Αχαράβη), in Ano Korakiana (Άνω Κορακιάνα) and elsewhere, witness multiple activities of Corcyrean inhabitants in the Era of Bronze, and in particular intense contacts with communities of the Greek mainland, from South Greece to the Adriatic Sea. It is when the art of navigation appears: people dare to go to the open sea and sail with the first vessels, the παπυρέλλα (papyrella)<sup>13</sup>, strongly reminding the Οδυσσέως σχεδίη. Archaeological finds in the area of Hermones, dated in the Mycenaean Period, are too few and are certainly not enough so that a Mycenaean tradition is certified in Korkyra, in connection with the cliché-theme of the Phaeacians' island and the passage of Ulysses from Scherie/a<sup>14</sup>.

Another small gulf, the one of Aghios Georgios (Άγιος Γεώργιος), supposedly fitting the Homeric description, presents several problems regarding its identification. A small bay, narrow though, offers a kind of shelter to ships; a river<sup>15</sup>, Megapotami (Μεγαποτάμι), could remind of the Homeric one, encouraging the identification with Alcinoos' palace, and the two ports. The two harbours could be placed in the gulf and the palace on the promontory Αφιώνας (Aphionas). Yet, the features of this site are not as satisfactory as the ones of Palaiokastritsa-Hermones-Liapades bay. Aghios Georgios gulf is overexposed to western winds, not offering satisfactory shelter to ships, while the double harbour of the Phaeacians could not easily be identified with the smallest gulf Porto Timoni (Πόρτο Τιόνι), near Aphionas Promontory (Cuisinier 2005, 449-450; Bérard 1971, 42).

The general impression is that Scherie/a was in fact an island, although Homer avoids using the term νῆσος (nesos). If we take into account that for Homer an island is easily distinguished as an island, as a small space of land surrounded by sea (Shewan 1918, 324), and that the Iliadic mention to Scherie/

<sup>13</sup> Κατερίνα Κάντα-Κίτσου, "Κοινωνικές πτυχές της αρχαϊκής Κέρκυρας", in Ι' Διεθνές Πανιόνιο Συνέδριο, Κέρκυρα, 30 Απριλίου-Μαΐου 2014, Τα Πρακτικά, Φιλοσοφία-Αρχαιολογία-Αρχαιογνωσία-Αρχιτεκτονική-Θέατρο, Γενική επιμέλεια Δημήτρης Κονιδάρης, Κέρκυραϊκά Χρονικά, Περίοδος Β', Τόμος IA', 2017, Κέρκυρα 2017, p. 403.

<sup>14</sup> Cf. Καντά-Κίτσου, op. cit., p. 404 citing K. Πρέκα-Αλεξανδρή, Οι αρχαιότητες της Κέρκυρας, Αθήνα 2010, p. 24, pic. 25.

<sup>15</sup> Cf. *Od. 5, 441-452*.

a<sup>16</sup> states that the residents of Scherie/e live "in the sea", the description of the harbours at ll. 6, 263-264 could mean a city sited on a peninsula, not necessarily an island (Jones 1988, 56). Geography seems to be in favor of the identification, since Korkyra is, exactly like Scherie, a colony and an island, although the description could also apply to a peninsula<sup>17</sup>. The two harbours on each side of the Phaeacians' city<sup>18</sup> could apply to the Hyllaic Harbour and the Alcinoos' Harbour being situated on each side of the land where the ancient city of Korkyra was built. The small island of Pontikonisi, a rock rather than an island standing at the entrance of the Hyllaic Harbour could remind the petrified ship mentioned in the *Odyssey*'s 13<sup>th</sup> book.

The island's topography<sup>19</sup> according to Homer rather insists on the rocky character of the shores:

*Od. 5, 404-425*

οὐ γὰρ ἔσαν λιμένες νηῶν ὅχοι, οὐδὲ' ἐπιωγαί.  
ἀλλ᾽ ἀκταὶ προβλήτες ἔσαν σπιλάδες τε πάγοι τε:  
καὶ τότ' Ὀδυσσῆος λύτο γούνατα καὶ φίλον ἥτορ,  
όχθησας δ' ἄρα εἴπε πρὸς δὲν μεγαλήτορα θυμόν:  
ὦ μοι, ἐπεὶ δὴ γαῖαν ἀελπέα δῶκεν ίδέσθαι  
Ζεύς, καὶ δὴ τόδε λαῖτμα διατμῆξας ἐπέρησα,  
ἐκβασις οὐ πῃ φαίνεθ' ἀλδος πολιοτὸ θύραζε:  
ἔκτοσθεν μὲν γὰρ πάγοι ὁξέες, ἀμφὶ δὲ κῦμα  
βέβρυχεν ρόθιον, λισσὴ δ' ἀναδέδρομε πέτρη,  
ἀγχιβαθῆς δὲ θάλασσα, καὶ οὐ πως ἔστι πόδεσσι  
στήμεναι ἀμφοτέροισι καὶ ἐκφυγέειν κακότητα:  
μή πώς μ' ἐκβαίνοντα βάλῃ λίθακι ποτὶ πέτρῃ  
κῦμα μέγ' ἀρπάξαν: μελέη δέ μοι ἔσσεται ὄρμή.  
εἰ δέ κ' ἔτι προτέρω παρανήξομαι, ἦν που ἐφεύρω  
ηίόνας τε παραπλῆγας λιμένας τε θαλάσσης,  
δείδω μή μ' ἔξαντις ἀναρπάξασα θύελλα  
πόντον ἐπ' ιχθυόντα φέρῃ βαρέα στενάχοντα,  
ἥτι μοι καὶ κῆτος ἐπισεύη μέγα δαίμων  
ἐξ ἀλός, οἵα τε πολλὰ τρέφει κλυτὸς Ἀμφιτρίτη:  
οἴδα γάρ, ὡς μοι ὀδώδυνται κλυτὸς ἐννοσίγαιος.  
ἥος δὲ ταῦθ' ὥρμαινε κατὰ φρένα καὶ κατὰ θυμόν,  
τόφρα δέ μιν μέγα κῦμα φέρε τρηχεῖαν ἐπ' ἀκτήν.

[for there were neither harbors where ships might ride, nor road-steeds, [405] but projecting headlands, and reefs, and cliffs—then the knees of Odysseus were loosened and his heart melted, and deeply moved he spoke to his own mighty spirit: "Ah me, when Zeus has at length granted me to see the land beyond my hopes, and lo, I have prevailed to cleave my way and to cross this gulf, [410] nowhere doth there appear a way to come forth from the grey sea. For without are sharp crags, and around them the wave roars foaming, and the rock runs up sheer, and the water is deep close in shore, so that in no wise is it possible to plant both feet firmly

<sup>16</sup> Il. 6, 204-205.

<sup>17</sup> Hom., Od. 5, 280-281; 6, 4-10.

<sup>18</sup> λιμήν ἐκάτερθε πόλης in Od. 6, 263.

<sup>19</sup> On some topographical features of Kerkyra based on ancient sources, see Παναγιώτα Μοσχονά, "Οικολογικές παρατηρήσεις για τα Ιόνια Νησιά στους αρχαίους και μεσαιωνικούς συγγραφείς", in Το Ιόνιο. Οικολογία-Οικονομία-Ρεύματα ιδεών, Πρακτικά Συμποσίου 1985, Ζάκυνθος 24-27 Οκτωβρίου, επιμέλεια Παναγιώτα Μοσχονά, Αθήνα, Κέντρο Μελετών Ιονίου, 1990, pp. 191-196, especially pp. 191-192.

and escape ruin. [415] Haply were I to seek to land, a great wave may seize me and dash me against the jagged rock, and so shall my striving be in vain. But if I swim on yet further in hope to find shelving beaches and harbors of the sea, I fear me lest the storm-wind may catch me up again, [420] and bear me, groaning heavily, over the teeming deep; or lest some god may even send forth upon me some great monster from out the sea—and many such does glorious Amphitrite breed. For I know that the glorious Earth-shaker is filled with wrath against me." While he pondered thus in mind and heart, [425] a great wave bore him against the rugged shore.<sup>20</sup>

Other information deriving from the Homeric text presents Korkyra as a place with thick woods and mountains full off trees, emphasizing on a rather natural landscape, not seriously damaged by human interventions:

*Od. 5, 475-481*

βῆ δὲ τὴν δὲ σχεδὸν ὕδατος εὐρεν  
ἐν περιφαινομένῳ: δοιοὺς δ' ἄρ' ὑπήλυνθε θάμνους,  
ἔξ οὐδόθεν πεφυῶτας: οἱ μὲν φυλίης, οἱ δὲ ἐλαίης.  
τοὺς μὲν ἄρ' οὔτ' ἀνέμων διάη μένος ὑγρὸν ἀέντων,  
οὔτε ποτ' ἡλιος φαέθων ἀκτῖσιν ἔβαλλεν,  
οὔτ' οὐρανος περάσκε διαμπερές: οὓς ἄρα πυκνοὶ  
ἀλλήλοισιν ἔψυν ἐπαμοιβαδίς [...].

[he went his way to the wood and found it near the water in a clear space; and he crept beneath two bushes that grew from the same spot, one of thorn and one of olive. Through these the strength of the wet winds could never blow, nor the rays of the bright sun beat, [480] nor could the rain pierce through them, so closely did they grow, intertwining one with the other]<sup>21</sup>.

Not only Corfu/Kerkyra but also other smaller islands near Corfu inspired modern geographers or scholars looking for identification with the Homeric universe. Ωγυγία (Ogygia), Calypso's mythical island corresponded to characteristics met in the small islands at the north of Corfu, the so-called Διαπόντιοι Νήσοι (Diapontio Nesoi), Οθωνοί (Othonoi), Μαθράκι (Mathraki) and Ερείκουσα (Ereicousa). A deserted island, inhabited by only one mythical person, full of caves, rich in waters and fountains, grasslands and flowers, various kinds of trees, a shelter for sea gulls are traits corresponding to the two-three small islands north to Corfu, Ereicousa, Mathraki and Othonoi. Other features such as a white sand beach, caves supposedly sheltering the loves of Calypso and Ulysses could encourage our imagination, but the vicinity of the islands to Corfu (about 75 miles) island does not correspond to the enormous distance and the long space of time needed by Ulysses to go from Ogygia to Scheria.

<sup>20</sup> This description is not far from the description of the Byzantine author Niketas Choniates, who in Book 2 of Βασιλεία Μανούηλ Κομνηνού, notes "Ἐστι δὲ ἡ Κερκυραίων ἄκρα αἰγαῖη πᾶσα καὶ ἀγχινεφής, ἐλικοειδῆς τὴν θέσιν καὶ ὑψικόρυμβος, προσνενευκαῖα ἐς τὸ βάθιστον τῆς θαλάσσης. πέτραι δὲ πειρρώγεσαν αὐτὴν ἀμφίκρημοι καὶ ἀπότομοι, τὸ δὲ ὑψος ὑπὲρ τὴν ἀδομένην Αօρνιν. τείχη δὲ ἀρραγῇ τὴν πόλιν πειρεῖληφε πᾶσαν καὶ πύργων πειρεστᾶσιν ὑψώματα, ἀ καὶ ποιοῦσι τὴν ταύτης παραλογωτέραν ἄλωσιν. [The citadel of Kerkyra, too sheer even for the foot of the goat, reaches into the clouds, winds with lofty peaks and drops into the deepest waters. Its cliffs are precipitous and abrupt, and it is more towering than the proverbial Aornis. 229 Impregnable walls enclose the city whose capture is made even more improbable by the height of her towers, translation Harry Magoulas].

<sup>21</sup> Cf. Od. 5, 279-280 ὥρεα σκιώντα/ γαῖς Φαιμήκων [the shadowy mountains of the land of the Phaeacians]; 6, 127-129 ὡς εἰπὼν θάμνων ὑπεδόστε δίος Ὀδυσσεύς, ἐκ πυκνῆς δὲ ὑλῆς πτόρθον κλάσε χειρὶ παχεῖῃ/ φύλλων, ὡς ὁύσαιτο περὶ χροῦ μῆδεα φωτός [So saying the goodly Odysseus came forth from beneath the bushes, and with his stout hand he broke from the thick wood a leafy branch, that he might hold it about him and hide therewith his nakedness].

The exact origin of the Phaeacians is not identified, although both modern scholars and ancient authors have attempted to identify the island with Homeric Scheria/e<sup>22</sup>. We lack irrefutable evidence for this theory, although Strabo<sup>23</sup> mentions Callimachus' identification<sup>24</sup> of the Homeric Scheria with Kerkyra (Murgatroyd 1980, 102; Putnam 1973, 74), while earlier<sup>25</sup> and later mentions confirm this connection<sup>26</sup>. Kerkyra's characterization by Callimachus as φιλοξενωτάτη ἄλλων in *Hymn. 4, 156* (Εἰς Δῆλον) reflects the Phaeacians' role in the *Odyssey*.

Moreover, although, according to Homer the Phaeacians were related to the Mycenaeans, archaeological investigations have not uncovered any link with Mycenaean remains. Despite archaeological attempts, luck did not favor archaeologists, at least until today, since they did not discover the city of Phaeacians and the mythical palace of Alcinoos, although attempts have been realized, e.g. by Dörpfeld and Bulle; they tried to imitate Schliemann, who had proved the historicity of the Homeric narration regarding Mycenae; but excavations done in various positions mainly in western Corfu did not come to serious results<sup>27</sup>. Even in Antiquity general impression is that the stations of the Odyssean voyage were mostly mythical. After all, the existence of two harbours, as also the small island of Pontikonisi reminding the petrified ship of the *Odyssey*, encouraged the identification of Scheria with Korkyra, but a double harbour is met also in other points of the Homeric narration, as in 4, 846 sq. λιμένες δ' ἔνι ναύλοχοι αὐτῇ/ἀμφίδυμοι regarding the ambush set by the suitors against Telemachus in Asteris.

Modern attempts to identify even the smallest rock met by Ulysses in his way back to Ithaca have been less than satisfactory (Vidal-Naquet 2002, 39-40). It is true though that the first findings of the Ionian prehistory, discovered at the beginning of 20<sup>th</sup> century, were connected with research and excavations regarding identification of Homeric locations. Although Homeric topography was not confirmed, those first excavations allowed the contextualization of prehistoric remains in a topographical and chronological framework communicating with the Aegean civilization territory, although marginally<sup>28</sup>. The fact that the Ionian territory was considered to be only partially, rather marginally connected with cultural developments in the prehistoric Aegean, and also the obvious differences and particularities of Ionian cultural territory, averted its inclusion to Aegean hermeneutical schemes; on the other hand Homeric reminiscences were always too strong,

<sup>22</sup> Thuc. 1, 25, 4; 3, 70, 4; Callimachus, *Aetia* fr. 12; Verg., *Aen.* 3, 289-293 *Protinus aérias Phaeacum abscondimus arces,/litoraque Epiri legimus portuque subimus/Chaonio, et celsam Butrotri accedimus urbem* [Soon sank Phaeacia's wind-swept citadels/ out of our view; we skirted the bold shores/ of proud Epirus, in Chaonian land,/ and made Butrotum's port and towering town. Transl. Theodore C. Williams]. Although there is no certainty about the existence of inhabitants on the island, scholars seem sure about this identification with Kerkyra, see Williams, 1962, Greek transl. 2003, p. 172, comm. ad loc. 3, 291; also Sidwick, 1894, p. 208. The Vergilian *synecphora aérias Phaeacum arces* reflects the Homeric *Od.* 5, 279 ὥρεα σκιόεντα γαίης Φαιάκων, according to Page 1951, 303.

<sup>23</sup> Strabo 7, 3, 6.

<sup>24</sup> See Pfeiffer on Callimachus' *Aetia* fr. 13 and 14.

<sup>25</sup> Cf. Thuc. 1, 25 cited above.

<sup>26</sup> For the general acceptance of this identification, see e.g. Plinius *Nat. Hist.* 4, 21 *insulae autem ex adverso thesprotiae a butroto, eadem ab acrocerauniis, cum urbe eiusdem nominis corcyra liberae civitatis et oppido cassiope temploque cassi iovis, in longitudinem patens, homero dicta scheria et phaeacia, callimacho etiam drepante* [Lying opposite to Thesprotia, at a distance of twelve miles from Butrotus, and of fifty from Acroceraunia, is the island of Corcyra, with a city of the same name, the citizens of which are free; also a town called Cassiope, and a temple dedicated to Jupiter Cassius. This island is ninety-seven miles in length, and in Homer has the names of Scheria and Phæacia; while Callimachus calls it Drepante, transl. John Bostock, M.D., F.R.S. H.T. Riley], also Scylax 23.

<sup>27</sup> Homer identifies six plants that adorn the garden of Alcinoos: wild olive, pear, pomegranate, apple, fig and grape vine. Of these the apple and the pear are in Corfu; the others thrive, together with all the fruit trees known in southern Europe, with addition of the kumquat, loquat and prickly pear.

<sup>28</sup> See Γαρουφαλία Μεταλληνού, “Τύμβοι της 3<sup>ης</sup> χιλιετίας στη Βόρεια Κέρκυρα”, in Ι' Διεθνές Πανιόνιο Συνέδριο, Κέρκυρα, 30 Απριλίου-Μαΐου 2014, Τα Πρακτικά, Φιλοσοφία-Αρχαιολογία-Αρχαιογνωσία-Αρχιτεκτονική-Θέατρο, Γενική επιμέλεια Δημήτρης Κονιδάρης, Κερκυραϊκά Χρονικά, Περίοδος Β', Τόμος ΙΑ', 2017, Κέρκυρα 2017, p. 201.

thus prehistoric research had steadily been the context of this investigation till today, with few exceptions<sup>29</sup>.

The mythological implications of the island do not concern only Homer, since the Hellenistic era epic poet Apollonius refers to the island as a place visited by the Argonauts. In his epic *Ἀργοναυτικά*<sup>30</sup> he states that the Argonauts, in their attempt to avoid interception by the pursuing Colchians (Κόλχοι), they arrived to the island of the Phaeacians<sup>31</sup>, further strengthening the identification with Kerkyra, at least apparently. More information is given on the name of the island: it used to be called Μάκρις (Makris<sup>32</sup>), later on called Δρεπάνη (Drepiane, meaning sickle, for the obvious resemblance of the island's shape with a sickle)<sup>33</sup>. Callimachus<sup>34</sup> also gives the origin of the alternative name of the island: the sickle-shape of the island, which forms a large natural harbour. Apart from that it was believed that the island had hidden the sickle used by Cronus used to castrate his father Ouranos/Uranus, from whose blood the Phaeacians were descended. This buried sickle could also have been a scythe belonging to goddess Demeter.

Apollonius reports that Jason and Medea were married there, in the so-called 'Medea's cave' and that it was the mythical king Alcinoos that consented to this marriage. Furthermore in 4, 1141-43 Apollonius reports that both Argonauts and Phaeacians spread a mighty couch where they placed the Golden Fleece, so that the marriage of the two fugitives, Jason and Medea, is honored and becomes the subject of songs. Apollonius' reference to Corfu/Kerkyra with regards to the Colchians' presence<sup>35</sup>, does not simplify things regarding the identification of the island/land, since according to the Homeric narration Scheria/a is placed to the east of Greek mainland, not to the west (Fraser 1929, 160-63). This observation, in combination with the Homeric narration about the women's occupation in weaving purple, the women's prominence<sup>36</sup> in this society noticed by Odysseus himself, and the men's absence in sailing away, had led scholars to speculate that Scheria and Lemnos (Λήμνος), where men's absence coincides with the women's ruling, might be one and the same place<sup>37</sup>. After all, the same uncertainty regarding the name of the (is)land of the Phaeacians characterizes also the ambiguity with regards to the origin of the Lemnians, who used to be named Τυρσηνοί and thus identified with the Etruscans, or alternatively with the Pelasgians (Πελασγοί)<sup>38</sup>.

On the other hand narrations about the *nostos* (νόστος) of the Argonauts via Corfu/Kerkyra, when Jason was believed to have carried the use of metals along with the Golden Fleece, could have been a reflection of real voyages of the third millennium B.C.E.<sup>39</sup>. As Apollonius' *Argonautica* narrate the first overseas adventure (one generation before the Trojan War), it is believed that Jason's adventures reflect the first sailors voyages. Also, as the Ionian and the Western Greek coasts are separated from

<sup>29</sup> Cf. Μεταλληνού, op. cit., p. 201 and mainly the research of the anthropologist Augustus Sordinas, the late Professor at the Department of History of the Ionian University, see Sordinas 1969, 393-424.

<sup>30</sup> Arg. 4.302.

<sup>31</sup> Alcinoos was the king again, see 4, 769, 990-92, 113ff, 120ff.

<sup>32</sup> Cf. Callim., *Hymn. 4, 20* Μάκρις=Εϋβοια.

<sup>33</sup> 4, 990, 1175; 4, 540.

<sup>34</sup> See Plin. 4, 21(12).

<sup>35</sup> 4, 1206-16.

<sup>36</sup> An interesting, though not easily documented, view would connect the notion of ἀνδροφόνων (man-killing) Λημνίων γυναικῶν, as the Lemnian women are characterized in Pind., *Pyth.* 4, 252, with that of ἀνδροφόρων (having a man's mind), see Silver, "Ancient Economies, TOPIC V: The Argonaut Epos and Bronze Age Economic History".

<sup>37</sup> Ibid.

<sup>38</sup> See Burkert 1985, 281 and for this idea also Silver.

<sup>39</sup> Cf. Μεταλληνού, op. cit., p. 210.

Central Greece because of mountains, communication with the Aegean would be realized mainly by sea, the route being Cythera (Κύθηρα), Aghios Andreas (Άγιος Ανδρέας), Ithaca (Ιθάκη), Kerkyra<sup>40</sup>.

Kerkyra is one of the Ionian Islands, being the northwestern edge of the Modern Greek State. If we leave for a moment the mythical tradition apart, we may be sure that it has been inhabited since the Stone Age. Evidence of Paleolithic period has been found near the village of Aghios Mattheos (Άγιος Ματθαίος)<sup>41</sup> and a Neolithic occupation lays close the village of Sidari (Σιδάρι) in the North<sup>42</sup>, where traits of inhabitation near the sea is noticed. In historical times, Corfu/Kerkyra was inhabited by immigrants coming from Illyria, Sicily, Crete, Mycenae and the Aegean islands. According to Strabo 6, 2, 4 before the first Greek colonization in Corfu inhabited the Liburnians (Λιβυρνοί), populations of Illyrian origin. In the second half of the 8th century, the first Greek colonists, the Euboeans (Ευβοείς, from the city of Eretria, Ερέτρια), appeared in Corfu. Inaugurating the great colonial movement to Italy, they settled on the island-temporarily<sup>43</sup>. For the Greeks in general the 8th century is a period of changes and moves, mainly to the west, the main reason being the control of marine routes, the metal transportation and also the need of food and raw materials supply, such as wheat, timber for ship-building, pitch, etc<sup>44</sup>. Kerkyra had been a significant case of this historical colonial expedition of the Greeks towards the west already in the 13th-12th cent. B.C.E.<sup>45</sup>. The short stay of the Eretrians (Ερετριεῖς) ended with the arrival and installation of Corinthian settlers in 734-733 B.C.E.<sup>46</sup>, who had realized the island's importance, since it was rich in wine and oil but particularly as a station, as jumping-off point for sea-voyages up the Adriatic or across to Italy (Cary 1949, 59-60). The Corinthians, headed by Χερσικράτης (Chersicrates)<sup>47</sup>, founded a new colony, Χερσούπολις (Chersoupolis)<sup>48</sup>, on the present peninsula of Palaeopolis. The new comers organize their city and protect it with walls, while extra muros they build their cemetery, in order to secure public health; all this in today's Garitsa area<sup>49</sup>. The dependence of the city on the Corinthian diocese means the transplantation of Corinthian myths on the island and the change of the name of the city. Chersoupolis-Korkyra developed very quickly thanks to the city's commercial dynamism, so gradually they contested and overpassed the Corinthians in Epirus and the Adriatic.

<sup>40</sup> Μεταλληνός, op. cit., p. 210.

<sup>41</sup> Κάντα-Κίτσου, op. cit., p. 403.

<sup>42</sup> Κάντα-Κίτσου, op. cit., p. 403.

<sup>43</sup> Plutarch refers to the founding of the colony by the Euboeans and confirms the information: Κέρκυραν τὴν νῆσον Ἐρετριεῖς κατώκων (Ethics 291e-304). Echoes of the colonization of the Euboeans were preserved in the myth. The names of Macris and Macridia, attributed to the ancient city and peninsula of Kanoni respectively, derives from the name of the daughter of Aristaeus (Αρισταῖος) and Autone (Αυτονόη) Macris (Μάκρις), who raised with her father the little Dionysus. When Hera expelled her from Euboea Macris, the latter resorted to Corfu, where she was worshiped in a cave, probably in Kardaki, in the same place where Medea was later worshiped. It had been in this cave that was used as the marriage chamber for Jason and Medea, where the marriage was consummated. It is thereafter named Medea's cave. See Apollonius of Rhodes, Argonautica 4, 540.

<sup>44</sup> The reasons vary and regard social, geopolitical and financial factors, such as the στενοχωρία, the struggle for power among powerful families (οίκοι), etc. See for instance Strabo 7, 5, 8, also Κωνσταντίνος Λιντοβόής, "Αρχαία Κέρκυρα. Ανιχνεύοντας την πολιτική και διπλωματική κτά την αρχαϊκή και κλασική εποχή", in Ι' Διεθνές Πανιόνιο Συνέδριο, Κέρκυρα, 30 Απριλίου-Μαΐου 2014, Τα Πρακτικά, Φιλοσοφία-Αρχαιολογία-Αρχαιογνωσία-Αρχιτεκτονική-Θέατρο, Γενική επιμέλεια Δημήτρης Κονιδάρης, Κερκυραϊκά Χρονικά, Περίοδος Β', Τόμος ΙΑ', 2017, Κέρκυρα 2017, p. 415.

<sup>45</sup> Γ. Σταϊνγάουερ, Ιστορική γεωγραφία των αρχαίου κόσμου, Ελλάδα-Ρώμη, Αθήνα, Παπαδήμας 2009, pp. 387, 391-392. Kerkyra must also have been a station for the Mycenaeans also, but findings are still absent.

<sup>46</sup> For different view on the chronology of this colonization, see A.J. Graham, Αποικία και μητρόπολη στην Αρχαία Ελλάδα, Αθήνα 2012, p. 180, and K. Μετέλλη, Αρχαϊκή Ελλάδα και πόλεμος, Αθήνα, Καρδαμίτσα, 2010, p. 60 with n. 125.

<sup>47</sup> Λιντοβόής, op. cit., pp. 416-417. Κάντα-Κίτσου, op. cit., p. 404.

<sup>48</sup> Strabo 6, 2, 4 πλέοντα δὲ τὸν Αρχίαν εἰς τὴν Σικελίαν καταλιπεῖν μετὰ μέρους τῆς στρατιᾶς τοῦ τῶν Ἡρακλειδῶν γένους Χερσικράτη συνοικοῦντα τὴν νῦν Κέρκυραν καλούμενην, πρότερον δὲ Σχερίαν. ἐκεῖνον μὲν οὖν ἐκβαλόντα Λιβυρνοὺς κατέχοντας οἰκίσαν τὴν νῆσον [And when Archias, the story continues, was on his voyage to Sicily, he left Chersicrates, of the race of the Heracleidae, with a part of the expedition to help colonize what is now called Corcyra, but was formerly called Scheria; Chersicrates, however, ejected the Liburnians, who held possession of the island, and colonized it with new settlers, transl. H. L. Jones].

<sup>49</sup> Κάντα-Κίτσου, op. cit., p. 404.

As a colony of the Corinthians, the people of Kerkyra could not claim direct descent from the Phaeacians<sup>50</sup>. Yet, the Homeric tradition about the Phaeacians served well verified political purposes, as the Phaeacian προενόικσις (pre-inhabitance) of Corfu offered the inhabitants of the new colony the opportunity to claim a kind of autochthony and an αἴτιον (action) of their naval power and capacity, attributing it to their mythical, almost divine past. The memory of this past was reflected on the dedication of one of the two main harbours to Alcinoos, in honor of whose a hero-cult was also established<sup>51</sup>. Hostility and competition towards the mother-city Corinth offers a supplementary explanation for the adoption of the mythical tradition about the Corcyreans' origin. In long periods of war conflicts<sup>52</sup> between the mother city and the colony, the reminiscence of the Phaeacian past accentuated on the cultural independency of Kerkyra from Corinth, the latter not being intensely present in the Homeric universe. The emphasis on a Corcyrean/Phaeacian identity diminishing the Corinthian dimension of Kerkyra's origin must have started soon after the foundation of the new colony, in the late eighth century<sup>53</sup>. Apart from that, this origin offered the Corcyreans the opportunity of a privileged position among other powerful Greek πόλεις. Needless to say that full adaptation of Kerkyra-Corinth to the Homeric mythical tradition becomes even less favorable to Corinth, since it implies that the Corinthians are similar to the Cyclops, who according to Homer compelled the Phaeacians to leave their home and be installed in Scherie<sup>54</sup>. Kerkyra's independence from the mother city could also have been based on the recurrent ancient Greek idea that a land finally shapes its inhabitants, a concept for instance expressed in Hdt. 9, 122, 3<sup>55</sup>.

Thus, this new city/colony was named Kerkyra/Korkyra, from the name of the daughter of the river Asopos and Metopi from Arcadia, as said above<sup>56</sup>. The site of the ancient Korkyra is sufficiently ascertained: it occupied the hilly peninsula now called Palaeopolis which lies to the southward of the city of Corfu, and terminates at the "One-Gun battery", called Κανόνι (Kanoni). It is a privileged location, with excellent geo-physic position, that highly contributed in the rapid growth of the state-city. The city was surrounded by sea at its most part, rejoicing of two natural harbours, while the communication with the country was possible through the narrow isthmus. At the same time, the steepness of the eastern cost offered the city extra natural protection-defence. Thucydides attributes the victory of the Democratic party against the Aristocrats mainly to the excellent location of their fortification: as they possessed the acropolis and the Hyllaic harbour, they had more advantages than the Aristocrats, possessing the lower parts in the Agora and the eastern (Alcinoos') harbour<sup>57</sup>. See for example, Thucydides' reference to the two harbours, in

3, 72, 2-3

ἐλθόντων δὲ οἱ Αθηναῖοι τούς τε πρέσβεις ως νεωτερίζοντας ξυλλαβόντες, καὶ ὅσους ἔπεισαν, κατέθεντο ἐξ Αἴγιναν. ἐν δὲ τούτῳ τῶν Κερκυραίων οἱ ἔχοντες τὰ πράγματα ἐλθούσης τριήρους

<sup>50</sup> A mixture of history and mythology in Strabo 6, 2, 4; cf. Paus. 2, 5, 2. J. Salmon, *Wealthy Corinth: A History of the City to 338 BC*, Oxford 1984, pp. 65-70 gives a historical perspective of myths regarding Kerkyra and its foundation by the Corinthians. See also <https://chs.harvard.edu/CHS/article/display/4233.2-ogygie-to-ithake#n.30>

<sup>51</sup> Cf. Thuc. 3, 70, 4, with Malkin 1998, 102, n. 47 commenting on the passage.

<sup>52</sup> Thuc. 1, 13, 4-5 for instance.

<sup>53</sup> Cf. <https://chs.harvard.edu/CHS/article/display/4233.2-ogygie-to-ithake#n.33>

<sup>54</sup> See supra Hom. Od. 6, 4-10. Also <https://chs.harvard.edu/CHS/article/display/4233.2-ogygie-to-ithake#n.33>

<sup>55</sup> Cf. <https://chs.harvard.edu/CHS/article/display/4233.2-ogygie-to-ithake#n.33>

<sup>56</sup> For other etymology see *Annotatio ad Eustathii Commentarios 19*, in *Geographi Graeci Minores*, ex recensione et cum annotatione Godofredi Bernhardy, Volumen primum, Lipsiae 1828, p. 915.

<sup>57</sup> Ελένη Βουλιγέα-Μαρία Σιταρά-Ειρήνη Κουμπούρα, "Ο οχύρωση της αρχαίας πόλης της Κέρκυρας:μια πρώτη προσέγγιση μέσα από τα μέχρι στιγμής δεδομένα", in Ι' Διεθνές Πανιόνιο Συνέδριο, Κέρκυρα, 30 Απριλίου-Μαΐου 2014, Τα Πρακτικά, Φιλοσοφία-Αρχαιολογία-Αρχαιογνωσία-Αρχιτεκτονική-Θέατρο, Γενική επιμέλεια Δημήτρης Κονιδάρης, Κερκυραϊκά Χρονικά, Περίοδος Β', Τόμος ΙΑ', 2017, Κέρκυρα 2017, p. 259.

Κορινθίας καὶ Λακεδαιμονίων πρέσβεων ἐπιτίθενται τῷ δῆμῳ, καὶ μαχόμενοι ἐνίκησαν. [3] ἀφικομένης δὲ νυκτὸς ὁ μὲν δῆμος ἐς τὴν ἀκρόπολιν καὶ τὰ μετέωρα τῆς πόλεως καταφεύγει καὶ αὐτοῦ ἔντονες ἔντονες εἰλέγεις ιδρύθη, καὶ τὸν Ὑλλαϊκὸν λιμένα εἰλέγει: οἱ δὲ τὴν τε ἀγορὰν κατέλαβον, οὐπερ οἱ πολλοὶ ὡκουν αὐτῶν, καὶ τὸν λιμένα τὸν πρὸς αὐτῇ καὶ πρὸς τὴν ἥπερον.

[When these arrived, the Athenians apprehended both the ambassadors themselves as seditious persons and also all those Corcyraeans whom they had there prevailed with and sent them to custody in Aegina. [2] In the meantime, upon the coming in of a galley of Corinth with ambassadors from Lacedaemon, those that managed the state assailed the commons, and overcame them in fight. [3] And night coming on, the commons fled into the citadel and the higher parts of the city where they rallied themselves and encamped and made themselves masters of the haven called the Hillaque haven. But the nobility seized on the market place (where also the most of them dwelt) and on the haven on the side toward the continent. Transl. Thomas Hobbes].

See also Thuc. 3, 74, 1:

διαλιπούσης δ' ἡμέρας μάχη αὖθις γίγνεται καὶ νικᾷ ὁ δῆμος χωρίων τε ἰσχύνι καὶ πλήθει προύχων: αἱ τε γυναῖκες αὐτοῖς τολμηρῶς ἔντευθεντο βάλλουσαι ἀπὸ τῶν οἰκιῶν τῷ κεράμῳ καὶ παρὰ φύσιν ὑπομένουσαι τὸν θόρυβον.

[The next day but one they fought again; and the people had the victory, having the odds both in strength of places and in number of men. And the women also manfully assisted them, throwing tiles from the houses and enduring the tumult even beyond the condition of their sex].

The same impression about the excellent location of the city derives from Xenophon's references in *Hellenika* 6, 2, 7

ἔπειτα δὲ κατεστρατοπεδεύσατο τῷ μὲν πεζῷ ἐπὶ λόφῳ ἀπέχοντι τῆς πόλεως ὡς πέντε στάδια, πρὸ τῆς χώρας ὅντι, ὅπως ἀποτέμνοιτο ἐντεῦθεν, εἴ τις ἐπὶ τὴν χώραν τῶν Κερκυραίων ἔξιοι: τὸ δὲ ναυτικὸν εἰς τὰπὶ θάτερα τῆς πόλεως κατεστρατοπέδευσεν, ἔνθεν φέτος ἀν τὰ προσπλέοντα καὶ προαισθάνεσθαι καὶ διακωλύειν. πρὸς δὲ τούτοις καὶ ἐπὶ τῷ λιμένι, ὅπότε μὴ χειμῶν κωλύοι, ἔφωρμει. 8 ἐπολιόρκει μὲν δὴ οὕτω τὴν πόλιν. ἐπεὶ δὲ οἱ Κερκυραῖοι ἐκ μὲν τῆς γῆς οὐδὲν ἐλάμβανον διὰ τὸ κρατεῖσθαι κατὰ γῆν, κατὰ θάλατταν δὲ οὐδὲν εἰσήγετο αὐτοῖς διὰ τὸ ναυκρατεῖσθαι, ἐν πολλῇ ἀπορίᾳ ἦσαν.<sup>58</sup>

[Afterwards he encamped with his land forces on a hill which was distant from the city about five stadia and situated between the city and the country, so that he might from there intercept any of the Corcyraeans who might try to go out to their lands; then he had the sailors from his ships encamp on the other side of the city, at a point from which he thought they would observe in good time any vessels that approached and prevent their coming in. In addition he also maintained a blockade at the mouth of the harbour when the weather did not interfere.

Transl. Carleton L. Brownson].

On the western side of this stretches a long shallow inlet, with a narrow entrance, which was the Hyllaic Harbour, while the second harbour, the "Harbour of Alcinoos" lay to the north of the city, facing the mainland of Epirus (Tozer 1891, 53). Kerkyra's commercial port, Alcinoos, was located closer to the agora, while the Hyllaic Harbour was at first both commercial and military, later solely military (Pope 2016, 268).

<sup>58</sup> Cf. 6, 2, 36; Thuc. 2, 72.

The level isthmus which intervenes between the innermost waters of these must have been narrower in ancient times than it is at the present day. The city developed between the Chal(i)kiopoulos lagoon (the ancient Hyllaic harbour) and the location that is now called Anemomylos, under which the ancient Alcinoos' harbour is situated. Archaeological research has uncovered in the area of Kanoni the fortifications of the Hyllaic harbour<sup>59</sup>, findings accompanied with other smaller findings, such as ceramic parts of roofs, with names of the magistrates inscribed on them. Νεώρια of the same harbour are also uncovered<sup>60</sup>. The name of the Hyllaic Harbour derives from the tribe of Hylleis ('Ὑλλεῖς), of Dorian origin, whose name in its turn comes from Hyllus ("Ὑλλος), Heracles' son<sup>61</sup>. Most probably the city was not beyond the eastern side of the Kanoni peninsula, since extra muros the small sanctuary of Artemis has been found and an ancient grave in close distance<sup>62</sup>. The entire general identification of the Hyllaic harbour with the Chalkiopoulos lagoon is doubted though. The Hyllaic Harbour could have been a closed-type harbour at the western side of the Kanoni Peninsula, in correspondence with or such as the closed-type Alcinoos harbour at the eastern shore. Apart from that, excavations in the years 1997-2004 at the installations of the N.F.A. (National Football Association, Ε.Π.Ο., Ελληνική Ποδοσφαιρική Ομοσπονδία) and the ownerships Sivera, Kapsalis, Koskinas confirm the existence of a wall along the western sea-shore<sup>63</sup>.

The superiority of the Democrats (δῆμος) possessing the acropolis regarding their defence does not necessarily mean that there were fortifications constructed on those points, but only refer to the natural fortification of the location. Korcyra's two harbours and the acropolis could have been fortified from 5<sup>th</sup> cent. BCE, but this cannot be proved for the acropolis so far<sup>64</sup>. Xenophon offers information on the city's fortification in 373 BCE, when Korkyra was besieged by the Spartans. The existence of fortification becomes probable because of the difficulty faced by (Μνάσιππος) Mnassippus and his failure to occupy the city immediately<sup>65</sup>. The probable identification of the hill where Mnassippus had camped with the modern Soterios Hill (Λόφος Σωτήρος), as also the development of the cemetery at the foot of the hill give important information on the walls-line<sup>66</sup>. The city's fortification-walls are supposedly placed around the peninsula, based on very few excavation data, which, despite its high number, are not sufficient for the formation of a clear picture about the ancient city's fortification<sup>67</sup>.

The excellent location as well as the favorable conditions for autonomous development of the colony, quickly made Corfu a great commercial and naval force.

καλῶς παράπλου κεῖται

says Thucydides in 1, 36, accentuating on this element, one of the many ancient and modern writers referring to this; the Eretrians had probably been the first to realize the island's excellent position,

<sup>59</sup> Κάντα-Κίτσου, op. cit., p. 405. For details see Αρχαιολογικόν Δελτίον 56-59 (2002-2004), B5, Χρον., pp. 219-221.

<sup>60</sup> Κατερίνα Κάντα-Κίτσου, "Ἐνας νεώσικος, τμήμα των νεωρίων του Υλλαϊκού λιμανιού της αρχαίας Κέρκυρας", in 6<sup>th</sup> international symposium on ship construction in antiquity, Lamia 1996, Athens 2001, pp. 273-304.

<sup>61</sup> The Hylleis were one of the three Dorian tribes that settled in the new colony, Chersoupolis, the other two being Dumanes and Pamphylois, see Κάντα-Κίτσου, op. cit., p. 404. See also Apollonius of Rhodes, Argonautica 4, 532 sq.

<sup>62</sup> Λιντοβόης, op. cit., p. 416. On ceramic findings in the small sanctuary of Artemis see Καλλίποτη Πρέκα-Αλεξανδρή, "Κέρκυραϊκά ειδώλια πτηνών καὶ ζώων", in Ι' Διεθνές Πανιόνιο Συνέδριο, Κέρκυρα, 30 Απριλίου-Μαΐου 2014, Τα Πρακτικά, Φιλοσοφία-Αρχαιολογία-Αρχαιογνωσία-Αρχιτεκτονική-Θέατρο, Γενική επιμέλεια Δημήτρης Κονιδάρης, Κέρκυραϊκά Χρονικά, Περίοδος Β', Τόμος ΙΑ', 2017, Κέρκυρα 2017, p. 353.

<sup>63</sup> Βουλιγέα-Σιταρά-Κονυμπούρα, op. cit., pp. 267-268.

<sup>64</sup> Βουλιγέα-Σιταρά-Κονυμπούρα, op. cit., pp. 259-260.

<sup>65</sup> Xen., Hell. 6, 2, 4-26 especially 7-8 cited supra.

<sup>66</sup> Βουλιγέα-Σιταρά-Κονυμπούρα, op. cit., p. 260.

<sup>67</sup> Βουλιγέα-Σιταρά-Κονυμπούρα, op. cit., pp. 260-261.

this is why they had been the first to colonize the island. The main advantage had been the position of the island on the sea road to Italy and Sicily, through Corfu, right to Sicily

διά τὸ τὴν Κέρκυραν εὐφυῶς κεῖσθαι πρὸς τὸν εἰς Σικελίαν πλοῦν, as Diodorus of Sicily wrote in 12, 54, 2.

Before that, circumstantial contacts along the Adriatic were probable, even from the Early Neolithic Times, as is reflected on ceramics. Differences noticed in western Greece in this period, corresponding to similar changes in Malta (Tarxien cemetery) and Apuleia (Rutigliano-Le Rene) show contacts and naval exchanges along the Adriatic. It was probably about circumstantial and peaceful commercial contacts, announcing the more systematic commercial contacts of the Late Period of Bronze (Whitehouse and Renfrew 1974, 345-390). Local contacts and commerce between Otranto and the Ionian in the years 3200-2100 BCE were also probable. Although there is no certain evidence about the continuity of these naval routes, it is maintained that they were something like local contact points along the Adriatic and the Ionian Sea<sup>68</sup>. The absence of important findings during this period witnesses that commerce is not widely realized along the Ionian and the Adriatic Sea, but this prehistoric society is aware of contacts and parameters of the Balkan and Greek territory. If and why Kerkyra had remained out of the commercial routes towards the Adriatic till the Corinthian colony is founded, is still a desideratum of historical and archaeological research<sup>69</sup>.

In fact Corfu belonged from early times to the well-established Antiquity naval routes to Eastern Mediterranean, being one of the most important harbours, used by ships or fleets for station and supplies<sup>70</sup> on the way to Adriatic Sea, South Italy and Sicily, but even further, to Marseille and the Iberian Peninsula<sup>71</sup>. It had probably been this strategic position that affected its relations with the mother city<sup>72</sup>. The Corcyreans themselves, after the naval battles of Lefkimi (Λευκίμη) and Sivota (Σύβοτα) in 435 and 433 BCE, emphatically declared that their metropolis, Corinth, does not control the route to the west, because this route was under the control of Korkyra and Athens<sup>73</sup>. The Corinthians on the other side confirm the Corcyrean thesis about the naval importance of Kerkyra, speaking in front of the assembly in Sparta<sup>74</sup>. The geopolitical importance of the island was indicated also by the fact that Kerkyra had been named as a place of meeting of the forces of the Sicilian expedition in 415 BCE<sup>75</sup>. The prosperity of the place was related to its strategic position on the way of a naval route:

Πρὸς δὲ νότον μετὰ δρυμὰ Κεραύνια νῆσοι κεν φαίνοντο περαιώθεν Ἀμπρακίων,/ καὶ λιπαρὴ Κέρκυρα, φύλον πέδον Ἀλκινόοι

[Towards the south , after the Ceraunian forests , to a passing ship there would appear from afar the islands of the Ampracians , and fruitful Cercyra , beloved land of Alcinous. Transl. Ekaterina Ilyushechkina]<sup>76</sup>.

<sup>68</sup> Μεταλληνού, op. cit., pp. 208-209.

<sup>69</sup> Μεταλληνού, op. cit., p. 211.

<sup>70</sup> On the strategic position of Corfu, generally appreciated in Antiquity already, see e.g. Thuc. 1, 36. On its ports see Scylax 30 (ex recensione B. Fabricii, Dresdae 1848) the detailed paper of Baika 2011, 319-335; Πλαναγώτα Μοσχονά, “Ο αρχαίος κόσμος περιπλέει τα Ιόνια νησιά”, Κεφαλληνιακά Χρονικά 12 (2010), pp. 561-576, citing many ancient sources, also Keith 2015, 144 with notes.

<sup>71</sup> Cf. D. Ridgway, Οι πρώτοι Ελλήνες στη Δύση, Αθήνα, MIET, 1992, pp. 19-30.

<sup>72</sup> Cf. Cuisinier, op. cit., p. 458. Also Γουλιέλμα-Κυριακή Ανγερινού, “Κερκυραϊκή νομισματοποίia”, in Ι' Διεθνές Πανιόνιο Συνέδριο, Κέρκυρα, 30 Απριλίου-Μαΐου 2014, Τα Πρακτικά, Φιλοσοφία-Αρχαιολογία-Αρχαιογνωσία-Αρχιτεκτονική-Θέατρο, Γενική επιμέλεια Δημήτρης Κονιδάρης, Κερκυραϊκά Χρονικά, Περίοδος Β', Τόμος IA', 2017, Κέρκυρα 2017, p. 307.

<sup>73</sup> Thuc. 1, 48-49.

<sup>74</sup> Thuc. 1, 68, 4.

<sup>75</sup> Thuc. 6, 30, 1.

<sup>76</sup> Dionysius Periegetes 492-494. Cf. Pausanias 10, 9, 3 speaking of iχθύων τῶν θύννων ἀτέκμαρτόν τι ἀριθμῷ πλῆθος [a countless number of tunny-fish. Transl. W.H.S. Jones, Litt.D., and H.A. Ormerod, M.A.].

The Homeric narration about the route followed by Odysseus from Phaeacia to Ithaca coincides with the one potentially followed by a Roman during the Roman period, or a Venetian in Middle Ages, if their trip had started from the Adriatic, through Otranto channel: Corfu was a station point on their way south, till they find the Aegean Sea(Cuisinier 2005, 28). Odysseus narrates that he travelled from Scherie to Ithaca during one night with a quick ship, more or less the same space of time needed by a modern vessel-yacht to cover the same distance of 85 miles. Meteorological conditions must have not seriously changed from Homeric times to our days: north-western winds are most frequent in the Ionian, while winds are usually 2-4 B in September, when ships of the Archaic period started their journey (Cuisinier 2005, 28-29).

An indication of this growing power of Korkyra in Antiquity had been the fact that Kerkyra was the first Greek city to have built a fleet of triremes in 492 B.C.E., which meant that Corfu/Kerkyra, as Thucydides states<sup>77</sup>, became one of the three Greek great naval powers of fifth century B.C.E., the other two being Athens and Corinth. In fact Corfu rejoiced of the second strongest Greek fleet (after the Athenian fleet), possessing more than 300 triremes and other vessels<sup>78</sup>; it seems that building a fleet, commercial but at the same time military, had to do mainly with the Corcyrean hostility to the metropolis<sup>79</sup>. All this growth of power was due to its strategic position that soon made Korkyra a very important commercial center in ancient times. Apart from the fertility of Corcyrean land, especially on the South, the advantages of its location concerned mainly the position of the island and its harbours on the way between Greece and Magna Graecia at the entrance of the Adriatic Sea. Trading was flourishing between Corfu and most cities of the Adriatic Sea, which lead to making Corfu an important naval town, a great Harbour-city. In particular, the harbour was strategically located for controlling the commercial sea-lanes that connected the Greek world with the Adriatic Sea and the West already since the Archaic period<sup>80</sup>.

Various literary sources speak about Corfu being a usual and well known naval station on the way to the East. An example is given by the Roman elegiac poet Tibullus, whose patron, the general Valerius Messalla Corvinus, is said to have stopped in Corfu in the framework of his campaign to the East<sup>81</sup>. His client (*cliens*) Tibullus<sup>82</sup> had followed him, but an illness and infirmity keeps him in Korkyra immobilized as he says at the beginning of elegy 1, 3<sup>83</sup>.

Ibitis Aegaeas sine me, Messalla, per undas,  
O utinam memores ipse cohorsque mei.  
Me tenet ignotis aegrum Phaeacia terris.<sup>84</sup>

[Will you cross the Aegean Sea without me, Messalla,  
oh I hope you and your company remember me!  
Phaeacia holds me, ill, in a foreign country (transl. A.S. Kline)].

<sup>77</sup> Thuc. 1, 14, 3.

<sup>78</sup> Thuc. 1, 36, 3.

<sup>79</sup> Λιντοβόης, op. cit., p. 418.

<sup>80</sup> Maltby 2002, 185, also, Baika, 319-335, Μοσχονά, op. cit., Keith, op. cit., p. 144 with notes.

<sup>81</sup> See on the poetic dimensions of this campaign in Vaiopoulos 2014, 93-96.

<sup>82</sup> Βάιος Βαϊόπουλος, “Ο Τίβουλλος στην Κέρκυρα. Διαβάζοντας την ελ. 1.3 του *Corpus Tibullianum*”, in Ι' Διεθνές Πανιόνιο Συνέδριο, Κέρκυρα, 30 Απριλίου-Μαΐου 2014, Τα Πρακτικά, IV. Φιλοσοφία-Αρχαιολογία-Αρχαιογνωσία-Αρχιτεκτονική-Θέατρο, γενική επιμέλεια Δημήτρης Κονιδάρης, Κέρκυρα 2017, pp. 485-494.

<sup>83</sup> It is about a poetic trip and stop of course, see Vaiopoulos 2017, 37-44.

<sup>84</sup> Tib. 1, 3, 1-3.

What is significant in this passage, despite multiple explanations that may exist, is that Corfu is mentioned in a poem speaking about a campaign to the East, through the Aegean Sea, which indicates the crucial position of the island in the military and commercial sea-lanes. After all, Tibullus had not been the first one to have a similar itinerary and stop in Corfu, since the epic and tragic poet Ennius was said to have had similar activity following another general one century or more before Tibullus and Messalla<sup>85</sup>.

Despite this power, however, Corfu has not always been successful in wars, as Strabo asserts in 7, fragments 7-8 (Meineke Leipzig 1877)

ὅτι ἐπὶ γέλωτι ἐν παροιμίαις μέρει γελᾶται Κέρκυρα ταπεινωθεῖσα τοῖς πολλοῖς πολέμοις. δῆτι ἡ Κόρκυρα τὸ παλαιόν εὐτυχῆς ἦν καὶ δύναμιν ναυτικὴν πλείστην εἶχεν, ἀλλ’ ὑπὸ πολέμων τινῶν καὶ τυράννων ἐφθάρη: καὶ ύστερον ὑπὸ Ῥωμαίων ἐλευθερωθεῖσα οὐκ ἐπηνέθη, ἀλλ’ ἐπὶ λοιδορίᾳ παροιμίαν ἔλαβεν ‘ἐλευθέρα Κόρκυρα, χέζ’ ὅπου θέλεις.’ Epit.<sup>86</sup>

[Corcyra is proverbially derided as a joke because it was humbled by its many wars. Corcyra in early times enjoyed a happy lot and had a very large naval force, but was ruined by certain wars and tyrants. And later on, although it was set free by the Romans, it got no commendation, but instead, as an object of reproach, got a proverb: "Corcyra is free, dung where thou wilt<sup>87</sup>].

It was especially after the death of the Corinthian tyrant Periandros (585 B.C.E.), that Corfu practically gained its independence and reached the peak of its economic growth and prosperity, allowing the city to develop its own currency and build a considerable fleet, the number of vessels growing in a few decades. Trade relations concerned first towns of the Epirus' coast and gradually most cities of the Adriatic, since the location of the island allowed it to control sea routes to Italy, as mentioned above.

So, the ancient city developed on a fortified peninsula, surrounded and served by several harbour basins, mostly natural harbours, whose evidence does not practically exist today, because they were gradually altered by both geological changes and human interventions, which resulted in being in part or completely concealed today under the urban tissue<sup>88</sup>. Yet, ruins of the ancient town still exist now days, and Corfu still contains significant remains of the ancient installations of the town. It is what is called Palaeopolis (Παλαιόπολις) today. Its ruins are opposite the Mon Repos Palace in Corfu Town, within 20 minutes walk from today city center. The site of the ancient city of Kerkyra is well ascertained, about 2 km to the south-east of Corfu, upon the narrow piece of ground between the sea-lake/lagoon of Chal(i)kiopoulos and the Bay of Καστράδες (Kastrades), in each of which it had a port. The wall of Palaeopolis crossed the peninsula and had a gate spanning what is now days Alcinoou St. (Οδός Αλκινόου), extending from the north of the ancient agora and Alcinoos Harbour on the east. There were two guard towers to protect the mouth of the harbour, the eastern of which had been discovered during the construction of the Church of Aghios Athanasios (Άγιος Αθανάσιος).

The Harbour of Alcinoos had completely silted in and is now days located under Ανεμόμυλος (Anemomylos). It stretched from the current position of Vassilis, the early Christian basilica of Aghia Kerkyra, to Dirfels and Anemomylos. The wall ran atop the ridge south of the present Chrysostomou Smyrnis St. (Οδός Χρυσοστόμου Σμύρνης) and the route to the airport westward them south past the temple of Artemis to Hyllaic harbour on Chalkiopoulos Lagoon (Lahser 2014). The wall would have surrounded public buildings, νεώρια and warehouses, till the point where it meets the north-western tower of the entrance of the closed-type Alcinoos' harbour. The north-eastern tower, that would have closed the ostium of the harbour, accessed from the north, is identified with the tower of Aghios Athanasios. The north-western and south-western angle of the tower had been founded in the sea, as shown by the decay on the stones. It is made of the same material, that is from elaborated stone-bricks, from calcareous building stones of the Sines type, and with the same system, that is isodomic (ισοδομικό), like the Nerantzha tower (Πύργος της Νεραντζίχας). Those elements show that the two towers belong to the same period, 5<sup>th</sup>-4<sup>th</sup> cent. BCE<sup>89</sup>. After Aghios Athanasios, the exact course of the wall is dubious. From the tower a part starts (3X6,5 m.), towards the east, but this course is interrupted without any signs about its direction to the east or the south. Yet, the next part, that could possibly have been a part of the interior wall, is found in front of the hill of Aghia Euphemia (Αγία Ευφημία, see infra). In the natural small gulfs, from Aghia Euphemia to the south are found anchorages built with the use of ancient material. The wall would have followed a circular course from Trimartyros (Τριμάρτυρος) to Anemomylos, protecting the closed eastern Alcinoos harbour, whose location is supposed on the basis of five harbour installations/sotres and νεώρια in its perimeter. The νεώριον of Kokotos (Κοκοτός) presents an entrance at the north, while the so-called νεώριον Δοντά (Dontas) at Trimartyros must have had its entrance at the east. The other three installations, supposedly νεώρια or stores, found at Moka, Maurogianni, Orphanos properties (οικόπεδα Μόκα, Μαυρογιάννη, Ορφανού), at the north-western side of the Harbour of Alcinoos, are oriented to the north-east-south-west; the entrance must have been from the south-western side<sup>90</sup>.

The closed-type Harbour of Alcinoos has a circular catopsis (κάτοψις), an ostium (στόμιον) at the north. It would have been protected by the tower of Aghios Athanasios at the south-eastern side. As the distance of the latter from the νεώριον of Trimartyros is at 150 m., the existence of a continuous μασοπόργιον and another identical tower at the north-western side, restricting the breadth of the ostium to the 20 m., was sufficient for the simultaneous passage of two triremes<sup>91</sup>.

Korkyra's growth, the independence and liberty based on its sea transport and navigation, were supported by a dynamic commercial fleet, and also by a powerful military fleet, using the two harbours, the Hylliac Harbour and Alcinoos' harbour<sup>92</sup>. In fact the naval home-base of Corfu's fleet was the lagoon of Chalikiopoulos/Chalkiopoulos (Hylliac Harbour)<sup>93</sup>, the ancient city of Corfu being then in the area where Garitsa and Kanoni are today. The Hylliac Port used to be the commercial port of Corcyra (later developing to a military harbor also), being one of the two ancient ports in historical times<sup>94</sup>. The site is at a short distance from the town, about 1,5 km. The lagoon has a narrow way out to the sea, 120 m. large. This exit is fenced by the bridge of the Municipal Aqueduct (Δημοτικό Υδραγωγείο) now days. At the entrance of the port stands the Island of Pontikonisi (about the legend connected with Ulysses arrival and departure, see supra, at the beginning of the chapter). This island

<sup>85</sup> Βάιος Βαϊόπουλος, “Ηρωες και ηρωίδες σε γνωστές «άγνωστες» χώρες. Με αφορμή μια «κερκυραϊκή» περιπέτεια του Τίβουλλου (1.3)”, in Αφιερωματικός τόμος για τον καθηγ. Δημ. Ράιο, Ιωάννινα 2019.

<sup>86</sup> Claude Mossé - Annie Schnapp-Gourbellion, Επίτομη Ιστορία της Αρχαίας Ελλάδας (2000-31 π.Χ.), Μετάφραση Λύντια Στεφάνου, Athens, Papadimass, 1996, pp. 63, 123, 192, particularly 272-276, 280, 319.

<sup>87</sup> Transl. H. L. Jones, *The Geography of Strabo*, Cambridge, Mass.: Harvard University Press, London: William Heinemann, Ltd, 1924. Cf. the Athenian intervention described by Thucydides in 3, 76 thanks to which the non-organized and undisciplined Corcyrean fleet had been saved from the Peloponnesian fleet. See also Διντοβόλης, op. cit., p. 421.

<sup>88</sup> See Kalliopi Baika, Diamanto Rigakou, Garoufalou Metallinou, Andreas Vött, Peter Fischer, Claudia Finkler, "Geoarchaeological Research in the Harbours of Ancient Korkyra (Corfu, Greece)", access in [https://www.ucy.ac.cy/underthemediterranean/documents/Images/Abstracts\\_of\\_papers\\_posters/Posters.pdf](https://www.ucy.ac.cy/underthemediterranean/documents/Images/Abstracts_of_papers_posters/Posters.pdf)

<sup>89</sup> Βουλιγέα-Σιταρά-Κουμπούρα, op. cit., pp. 263-264.

<sup>90</sup> Βουλιγέα-Σιταρά-Κουμπούρα, op. cit., pp. 264-265.

<sup>91</sup> Ibid.

<sup>92</sup> Διντοβόλης, op. cit., p. 425.

<sup>93</sup> See Strassler, 1998, map 376.

<sup>94</sup> Cf. Keightley and Smith 1839, 195 for its vicinity to the market.

is connected with the debatable question born by the narrative of Thucydides about the 'the island in front of the Heraeum' τὴν πρὸ τοῦ Ἡραίου νῆσον<sup>95</sup>. Against what used to be believed about this island, it is no longer supported that the narration meant the island of Ptychia (ancient Πτυχία, Vido/Βίδος now days), the obvious reason being that Thucydides gives the name Ptychia in 4, 46, and in case the same island was meant in 3, 75, the ancient historian would have given the name there too (Tozer 1891, 53).

The other one was the so-called Harbour of Alcinoos, situated where today lies the Gulf of Garitsa and the ancient city of Palaeopolis. Alcinoos harbour was initially built for military purposes, that is why it was fortified and offered a great military protection and defense, but eventually became a commercial port, so it was surrounded by both military and commercial installations. It was exactly there that the heart of the island was banging: on the city's market, in Palaeopolis.

The growth of naval power of many Greek cities, among which Corfu had a prominent position, as mentioned, led to the development of structures such as νεώσοικοι (neosoikoi), νεώρια (neoria), ἀγκυροβόλια, ship sheds, so that adverse natural conditions are faced. It concerns the creation of a new architectural type: the ship shed is a long, narrow, roofed hall, wide enough to house a ship; it looks like a stoa (στοά), yet it is accessed principally from the end rather than along the side. With a sloping slipway, its face opened to the sea to receive triremes either manually hauled into it or pulled in with the assistance of capstans, providing shelter for the ships while they were drying out, a procedure critically necessary for the maintenance of a ship (Pope 2016, 268).

Such structures as ship sheds, of which the existence in Samos is mentioned by Herodotus<sup>96</sup>, are also attested in Korkyra (6<sup>th</sup>-5<sup>th</sup> century BCE beginning)<sup>97</sup>. Both ancient harbours, the Alcinoos and the Hyllaic Harbour possessed ship sheds; in fact the first port had five ship sheds, and at the time of its military peak 120 slipways (each 5.4-5.5m wide) were used between the Alcinoos Harbour and the neighboring Hyllaic Port, which developed into the military harbor (Pope 2016, 268). An important point in the topography is the position of the station of the Corcyrean war-ships. This was generally been regarded as the head of the Hyllaic harbour, but this view seems valid for the earlier period, at the time of the Peloponnesian war they were stationed by the other harbour, and that the arsenal was also in that quarter (Tozer 1891, 53).

It had been noticed that there is strong similarity of position of the city of Korkyra and its two main harbours to that of Syracuse, which was also founded by the Corinthians in about the same period. The similarity is related to the importance of Korkyra as an intermediate station between Sicily and the mainland of Greece; it was within this framework that Strabo mentions the tradition that Archias, the founder of Syracuse, when on his way to Sicily, left behind his companion Chersicrates to occupy the island of Kolkyra (Tozer 1891, 53).

As said above, the Alcinoos harbour was the center of the public religious, social and commercial life of the city. The importance of the position of the Agora was already appreciated by the first colonists who settled near it, but also by the Romans. The Agora was the place of concentration of citizens and, at the same time, a trading venue, the commercial market. Its location should be easily accessible to the means of transport arriving from the harbor or inland, and to provide facilities

for refueling<sup>98</sup>. The Agora according to Thuc. 3, 72, 3 was placed about midway between the two harbours, on gently-sloping ground (Tozer 1891, 53).

ἀφικομένης δὲ νυκτὸς ὁ μὲν δῆμος ἐς τὴν ἀκρόπολιν καὶ τὰ μετέωρα τῆς πόλεως καταφεύγει καὶ αὐτοῦ ξυλλεγεῖς ιδρυθῇ, καὶ τὸν Ὑλλαϊκὸν λιμένα εῖχον: οἱ δὲ τὴν τε ἀγορὰν κατέλαβον, οὐπερ οἱ πολλοὶ ὕκουν αὐτῶν, καὶ τὸν λιμένα τὸν πρὸς αὐτῇ καὶ πρὸς τὴν ἥπειρον.

[And night coming on, the commons fled into the citadel and the higher parts of the city where they rallied themselves and encamped and made themselves masters of the haven called the Hillaque haven. But the nobility seized on the market place (where also the most of them dwelt) and on the haven on the side toward the continent. Trans. Hobbes].

In the Agora there was the assembly of the City, the Βουλή (senate), according to Thucydides 3, 70 (esp. 6). The assembly of the people in Corfu was not called Εκκλησία. The president of the popular assembly was the patron [protector] of the πρόβουλοι (probouloi). The probouloi, one from each race, consisted of a council which submitted proposals and draft laws to the Senate, and also co-operated with the House's executive committee, the πρυτάνεις (presidents). In the Agora the main commercial exchange took place. It was something like a commercial center with the modern meaning of the phrase. Thanks to its vicinity to the harbour, it was there that imported products were concentrated, as also other staff for sale; it was also there that the most part of the population was concentrated. Most of them were merchants, but also farmers, agriculture-producers coming to the Market in order to sell their merchandise themselves. In the Agora there were laboratories and shops, as also banks of merchants, apart from that other people exercising their professions, or their art, such as potters, metal workers, shoemakers, fish sellers, etc<sup>99</sup>.

According to the sources, the Temple of Poseidon, the sanctuaries of Zeus (Ζευς), the Dioscouroi (Διόσκουροι) and Athena (Αθηνά), public buildings, galleries and chapels must be in the Agora<sup>100</sup>. However, the Agora was not only meant for commercial transactions, it was also a meeting point for the Corcyreans. Traders were dealing with customers, while curious and leisurely people made their walk there, discussing political issues, learning the news, and forming an opinion about the things of the time<sup>101</sup>. The Agora in the Hellenistic and Roman era was covered with pavement, made of large slabs, under which there was a drainage system. Next to the Agora, the houses of rich merchants and consuls were built.

The extent of the Agora, although its plan has not yet been clearly defined, must have been quite large, if one judges from the pavement of the Hellenistic period, covering its surface and revealed outside of Mon Repos, and arriving to Palaeopolis and the Anemomilos. Among the buildings that were founded in the Agora during the Roman period, with the excavations that took place in the area, public constructions from the Roman era came to light –including a gallery, a platform, a bath complex, a semicircular building. The Roman baths cover a wide area in Palaeopolis, over the ancient Agora till the Elaia Institute. Roman baths are also found in Acharabe (northern Corfu), Benitses (Μπενίτσες, central-eastern Corfu) and in Moraitika (Μωραΐτικα, central-eastern Corfu)<sup>102</sup>. Architectural relics, coming from public buildings of older times, appear to be built in the basilica of Aghia Kerkyra, while others have been gathered, scattered in space, or even under its foundations.

<sup>95</sup> Thuc. 3, 75, 5.

<sup>96</sup> Hdt. 3, 39; 3, 44-45.

<sup>97</sup> As well as in Abdera, Thassos, and Aigina. See Pope 2016, 268.

<sup>98</sup> For the ancient city of Corfu, fortifications and harbors, the market, temples, workshops, economic life as well as art and culture, see Pappas 2000, 55-85.

<sup>99</sup> Κάντα-Κίτσου, op. cit., pp. 406-407 and Πρέκα-Αλεξανδρή, op. cit., p. 101.

<sup>100</sup> Cf. Thuc. 3, 70, 4.

<sup>101</sup> Κάντα-Κίτσου, op. cit., pp. 406-407 and Πρέκα-Αλεξανδρή, op. cit., p. 101.

<sup>102</sup> Κάντα-Κίτσου, op. cit., p. 410 and Πρέκα-Αλεξανδρή, op. cit., p. 102-106.

A third harbour which could have been of the closed type, is mentioned by Scylax, and this may have corresponded to the bight which is still in use on the northern side of the modern citadel. To the north of this lays the island of Ptychia, which is now known as Vido, deriving from the name of the Venetian Guido (Vido) Malpieri (Tozer 1891, 53).

Κατὰ δὲ Χαονίαν νῆσός ἐστι Κόρκυρα, καὶ πόλις Ἐλληνὶς ἐν αὐτῇ, λιμένας ἔχουσα τρεῖς κατὰ τὴν πόλιν· τούτων ὁ εἰς κλειστός. Ἐπιβάλλει δὲ Κόρκυρα καὶ ἐπὶ τὴν Θεσπρωτίαν πλεῖον ἢ ἐπὶ τὴν Χαονίαν<sup>103</sup>.

This third harbour is also connected to the Harbour of Alcinoos. May be the Mon Repos Baths could have been the third harbour of Korkyra. In that case its topographical vicinity to the harbour of Alcinoos could have led to its identification with the latter; they would have been considered as one, so the ancient writers would have spoken about two ports and not about three. If those ports were independent, the one having an ostium at the north and the other one at the south, they would have been separated by the discovered interior wall<sup>104</sup>.

The fast-growing power of the new colony soon made the island independent from the Corinthian influence, contrary to what usually happened with other Corinthian colonies. This caused a conflict between the ancient metropolis and Corfu. Naval battles took place as early as in 680 B.C.E., when the Corinthians attempted to occupy the island and take control over the entire region. The Corinthian attempt failed, and after that the Corcyrean ambassadors sent to Athens inaugurated a long lasting co-alliance between Korkyra and Athens against the ancient metropolis of Corinth, that continued during the Peloponnesian war<sup>105</sup>. The competition with Corinth will lead to a collision in 664 B.C.E., in the most ancient naval battle between Greeks, as Thucydides mentions, in which Corfu finally prevailed. In order to protect their trade from the Corinthian actions, Corfiots moved autonomously, founding colonies themselves, such as Epidamnus in Illyria (now Durres in modern Albania) in 626 B.C.E., expanding their dominion. The Corinthians responded to the foundation of Epidamnos with the foundation of Apollonia in 600 B.C.E.

The end of the Athenian influence<sup>106</sup> came with the domination of the Macedonians over Korkyra under King Philip II, in 338 B.C.E. From 300 B.C. Spartans, Illyrians and Romans were the successive dominators of the island (from 229 B.C.E. to 337 A.D. with short intervals<sup>107</sup>), while it became a

<sup>103</sup> Scylax 28.

<sup>104</sup> Βουλιγέα-Σιταρά-Κουμπούρα, op. cit., pp. 265-266.

<sup>105</sup> Even before the Peloponnesian War conflicts were not absent at all; for instance the Athenians' assistance was valuable for Corfiots in the case of the 435 B.C.E. attack of the Corinthian fleet. The naval battle took place in the channel between Lefkimi and Sivota, in the south of the island. The cause for the opening of the open conflict was the involvement of the Corinthians in the internal political controversy of Epidamna. The conflict between Corfu and Corinth began in 435 B.C. in the sea area of Lefkimi, where Korkyra prevailed. In fact, Korkyra will also head for a defense deal with Athens to secure itself against its rival, who had secured the Peloponnesian assistance. See Thuc. 1, 31-43; 1, 44; 1, 45.

<sup>106</sup> The conflict between Corcyreans and Corinthians caused the explosion of the Peloponnesian War, after all. The conflict between the two sides took place in the islands of Sivota of Thesprotia in the year 433 B.C.E. The result of the naval battle was controversial, since both sides considered themselves a winner and set up a trophy for victory. The next period in Corfu will be marked by a fierce civil conflict between oligarchs and Democrats. The conflict will ratify and exacerbate internal political instability, cause great disasters in the city and the countryside of the island, and will lead to the decline of the political, economic and military power of Corfu. Ultimately, the Democrats managed to prevail, having secured the support of slaves and the help of women. Immediately after the end of the civil war (427 B.C.E.), Corfu took part in the Peloponnesian War. During the second phase of the War, Korkyra served as a naval and supply base for the Athenians in the framework of the Sicilian campaign. Before the final defeat of the Athenians, Korkyra withdrew from the war in 410 B.C.E. In 375 B.C.E. Korkyra returned to the Athenian alliance.

<sup>107</sup> Although captured by the Illyrians in 229 B.C.E., Korkyra was repossessed by the Romans and worked as a Roman naval station. It was attached to the Macedonians in 148 B.C.E., before it returns to Roman domination till the middle of 4<sup>th</sup> cent. A.D.

member of the Epirotic alliance<sup>108</sup> during 3<sup>rd</sup> cent. till 255 BCE<sup>109</sup>. In 31 B.C.E., thanks to its strategic position, its natural harbours and installations, Korkyra served Octavian (the later Augustus) as a base against Mark Antony.

Around the same area, close to the two harbours, the Alcinoos' harbour and the Hyllaic Harbour, the monumental topography of the city and the island further reflects the economic acme of Corfu, along with its residential development: this is evidenced, among other things, by the temple of Artemis in the area of Aghioi Theodoroi ('Αγιοι Θεόδωροι, 580-570 B.C.E.)<sup>110</sup>, the first and second temple of Hera, the temple of Kardaki<sup>111</sup>, the stone burial monuments of Garitsa<sup>112</sup>. Burial monuments are found next to a probable ancient road parallel to the coast line<sup>113</sup>. Another remains are the tomb of Menekrates (ταφικό μνημείο Μενεκράτους), with its well-known inscription<sup>114</sup>, one of the most ancient found in Greece, informing us that Menekrates died in the sea; it is on the Bay of Castrades/Kastrades. It was a circular cenotaph (κενοτάφιον), dated in the 4<sup>th</sup> quarter of the 7<sup>th</sup> cent. BCE (Mataranga 1994 112-118); it most probably was a circular tomb, a type of burial monument popular in the area but also in prehistoric Kerkyra<sup>115</sup>. The existence of the tomb itself is an indication of the importance of Kerkyra and its activity with regards of the institution of προξενία and the city's wide range of relations<sup>116</sup>. Under the hill of Ascension (Analipsis-λόφος Αναλήψεως) are the remains of a temple, popularly called of Poseidon, a very simple dome structure, which still in its mutilated state presents some peculiarities of architecture.

Apart from the Agora, there were sanctuaries in three other areas of the city: in Meteora (Μετέωρα), in the area of the Hyllaic Harbour and in the area of Figaretto (Φιγαρέτο). From the end of the 7<sup>th</sup> century B.C.E. in the estate known as Mon Repos, a Doric temple dedicated to Hera was built<sup>117</sup>. In Heraeon, according to Thucydides, they fled during the civil war of 427 B.C.E. as the aristocratic Corcyreans, in order to be saved by their democratic opponents, who, however, killed them<sup>118</sup>. Relics are preserved only by the imposing clay roof of the temple. The worship was probably introduced to Korkyra by the Corinthians, as the goddess was worshiped in the metropolis of Corinth. The temple was protected by a magnificent enclosure that was first built in the late 6<sup>th</sup> century B.C.E. After the

<sup>108</sup> The island was conquered by Agathocles of Syracuse (Αγαθοκλῆς) who offered Kerkyra as a dowry to his daughter Lanassa (Λάνασσα) on the occasion of her marriage to king Pyrrhus of Epirus (Πύρρος).

<sup>109</sup> The island then became a member of the Epirotic alliance. It was then perhaps that the settlement of Cassiope was founded to serve as a base for the King of Epirus' expeditions. The island remained in the Epirotic alliance until 255 B.C.E. when it became independent after the death of Alexander, last King of Epirus.

<sup>110</sup> It was built with an especially wide facade which not only expressed monumentality but also allowed for innovations in plan. This Doric Temple devoted the extra space created by its eight-column facade to its porticoes and initiated the tradition of spacious porticoes in western Greek architecture. See Barietta 2016, 33, 35, and 37, also speaking on the use of stone.

<sup>111</sup> Discovered in 1822, see Τελενα Μπονέλου – Τζόγια Προβατά, "Οι περιπέτειες των κερκυραϊκών αρχαιοτήτων, 19<sup>ο</sup>-20<sup>ός</sup> αιώνας", in Ι' Διεθνές Πανιόνιο Συνέδριο, Κέρκυρα, 30 Απριλίου-Μαΐου 2014, Τα Πρακτικά, Φιλοσοφία-Αρχαιολογία-Αρχαιογνωσία-Αρχιτεκτονική-Θέατρο, Γενική επιμέλεια Δημήτρης Κονιδάρης, Κερκυραϊκά Χρονικά, Περίοδος Β', Τόμος IA', 2017, Κέρκυρα 2017, p. 345.

<sup>112</sup> Also buildings in various areas of the island, such as the temple of Poseidon in Rhoda (Ρόδα), northern Corfu.

<sup>113</sup> Χρήστος Σπανοδήμος, "Κόρινθος-Κέρκυρα. Ανιγνενόντας τη σχέση δύο πόλεων", in Ι' Διεθνές Πανιόνιο Συνέδριο, Κέρκυρα, 30 Απριλίου-Μαΐου 2014, Τα Πρακτικά, Φιλοσοφία-Αρχαιολογία-Αρχαιογνωσία-Αρχιτεκτονική-Θέατρο, Γενική επιμέλεια Δημήτρης Κονιδάρης, Κερκυραϊκά Χρονικά, Περίοδος Β', Τόμος IA', 2017, Κέρκυρα 2017, p. 248.

<sup>114</sup> Cf. Μπονέλου-Προβατά, op. cit., pp. 345-346.

<sup>115</sup> Σπανοδήμος, op. cit., p. 248. See also p. 246 on the 328 burial monuments examined in Corfu.

<sup>116</sup> Cf. Λιντοβόης, op. cit., p. 424.

<sup>117</sup> This is representative of a new roof system developed in Kerkyra, the roof being well preserved. The quality, the painting, as also the size of the roof terracottas reflect the competition spirit characterizing the growth of the new colony, surpassing Corinthian monuments as well as those of nearby Italian colonies, a short sail from Corfu across the Adriatic. See Sapirstein 2016, 54-55, 57 [45-59], also Sapirstein, 2012 31-91.

<sup>118</sup> Cf. Lamberton, op. cit., p. 325.

destruction of the sanctuary (around the middle of the 5th century B.C.E.), a new enclosure was built, from which parts of the eastern wall are preserved. The temple of the Classical era was destroyed in the 1st century B.C.E.

Near the Heraeum there was a small archaic sanctuary devoted to Apollo the Corcyrean (Απόλλων Κορκυραῖος), while in the southeast of the temple was the Doric temple in Kardaki, which has been attributed to Apollo, Asclepius, Hippo Poseidon or to some hero<sup>119</sup>. The temple was built at the end of the 6th century B.C.E., it is a περίπτερος (peripteral temple), Doric style, but it also has several Ionic elements, since it has taken on the effects of the art of the Ionian and Achaeans settlers of southern Italy. It brought six monolithic columns to the narrow sides and 11 to the long sides. Its eastern part has been precipitated in the sea, and today the length of the surviving part is 18 m, while the width is 11.91 m. It consists of a πρόναος (pronaos, vestibule) and a tower, in the interior of which there was an altar. He did not have an opistomony. The building would have been visible for someone sailing to Corfu from the Ionian Sea, reflecting Corcyrean power<sup>120</sup>.

At the Hylliac harbour, to the west of Meteora, in the area where today is built the monastery of Aghioi Theodoroi, there was a sanctuary devoted to Artemis. Her worship in the area seems to have started in the 7th century B.C.E. From the first sanctuary there is a retaining wall part that probably surrounds the sanctuary. Subsequently, around 585-580 B.C.E., a temple of Doric order<sup>121</sup>, pseudodisphore, with a pronaos, a three-aisle and an opistodom, was built<sup>122</sup>. The temple had 17 columns on the long and eight on its narrow sides. It was made of limestone and had a clay roof, which was around 530 B.C.E. replaced by marble. A paved road to the east leads from the temple to the altar. The northern section is visible from the altar. Its base is surrounded by a parapet, consisting of trigly and uncountable metopes. From this temple comes the great stone pediment of Gorgo, which is today at the Archaeological Museum of Corfu (Cuisinier 2005, 457-458). Northeast of Artemision, and at a distance of 150 m., there were found the remains of a section of temple and altar, dating back to the 5th century B.C.E. and attributed to Pythian Apollo.

Nearby, a fourth sanctuary, probably dedicated to Dionysus, was in the present-day area of Figaretto (overlooking the Hylliac harbour), as seen thanks to the revelation of a Late Archaic pediment showing a Dionysian symposium. In the same area there were, perhaps, other sanctuaries, mainly dedicated to popular worship. The revelation of a great late archaic depositor, which contained statues depicting Artemis with symbolic objects, led to the hypothesis of the existence of a second temple of the goddess, this time in the region of Figaretto.

From the excavation finds it appears that in the city of Corfu there were some wide streets leading from the north to the south, and other straits that led from the east to the west. The private houses found in the areas of Palaeopolis and Stratia (Στρατιά) have courtyards, pergolas, baths and several rooms, while the residences in Figaretto are usually made up of simple rooms, built around a yard with a well. The city had a water supply system and a sewerage system. One of the city's aqueducts is located in the area of Kardaki's spring and others in Aghioi Theodoroi and Fosia, while there were wells and ducts in almost every residence. Below the streets, since the classical era, there has been an extensive sewerage network of built-in drains.

<sup>119</sup> Cf. Κάντα-Κίτσου, op. cit., p. 409, Cuisinier 2005, 457.

<sup>120</sup> Cf. Cuisinier, op. cit., p. 457.

<sup>121</sup> Εύα Μπουρνιά-Σημαντώνη, Αρχαιολογία των πρώιμων ελληνικών χρόνων, Αθήνα, Καρδαμίτσα, 1997, p. 224.

<sup>122</sup> See details in Γ. Κοκκόρου-Αλενρά, Η τέχνη της Αρχαίας Ελλάδας, Σύντομη ιστορία (1050-50 π.Χ.), Αθήνα 1995, p. 64.

Full of vitality and animation was the location of the workshops on the eastern side of the Hylliac harbor, at the area of the Elaia Institute and the southern tip of the Kanoni's peninsula. These laboratories in Figaretto flourished for almost three centuries, 5<sup>th</sup>-3<sup>rd</sup> cent. B.C.E. They constructed everyday pots, lamps, roof tiles, figurines, cult objects and the most famous Corcyrean amphorae<sup>123</sup>. The reputation of those amphorae as also the wide expansion of Corcyrean exports becomes obvious by the fact that the Corcyrean origin of those products is simply shown by a monogram or a small sign (such as a κυρήκειον, a leaf of kissos, etc), while pottery from other places needed to write the full name of the origin (Rhodes, Thassos, Knidos, etc)<sup>124</sup>. One of the most active ceramics workshops was located in the present Mikalev ownership (οικόπεδο Μικάλεφ) area and included ceramic furnaces and all the necessary auxiliary spaces for the production of the products<sup>125</sup>. The main type of production of the workshop was the amphorae, in which the exquisite Corcyrean wine was mainly transported<sup>126</sup>. A second product of the workshops were figurines and clay statues, matrices of which were found in depositaries. Other types of production were the ceramics, the vases of almost all types, the weaving and fishing weights. Laboratories fueled both the domestic and the foreign markets. Corfu amphorae have been excavated in many places in the Mediterranean, Thassos, Corinth, Pella, Olynthos, Athens, Serifos, Lefkada, Lower Italian regions, Spain, Alexandria and elsewhere. The continuous production and movement of Corcyrean amphorae to most of the Mediterranean commercial centers (Birch 1873, 135) testifies to the profound commercial activity and financial soundness of the city's laboratories<sup>127</sup>.

Most of these exhibits had intense activity up to the Roman era. The crucial location of the island created the conditions for a financial and political growth of the city, so a glamorous city was created with public constructions and temples on the peninsula of Kanoni. But the invasions of Vandals during early Christian times led to the progressive abandonment of Palaeopolis and devastation of the area, as the population was moved to another naturally protected peninsula, around which the Medieval town developed, named Coryfo (Κορυφώ) or Corfoi (Κορφοί) from which the name 'Corfu' derives. Yet, the Palaeopolis peninsula had never been totally abandoned, as shown by the numerous Byzantine monuments in the area<sup>128</sup> while presence of ancient remains is noticed during Middle Ages.

Political, military and diplomatic activity of Korkyra, based on its strategic position is supported by and in its turn supports its financial activity related to the local agricultural, metallurgical and ceramic production and the connection of all the above activities with the export of those products and in general with the transit trade in central and eastern Mediterranean. Apart from the characteristic Corcyrean amphorae found in this wide territory and witnessing the financial growth of Korkyra and its diplomatic relations with many cities, kingdoms and nearby and remote peoples<sup>129</sup>, the peak of Corcyrean trade is testified by the widespread circulation in almost all Mediterranean Corcyrean currencies. A sample of the island's flourishing economy is also the 484 coins that have been exhibited at the center of the Corfu Archaeological Museum, which reflect the island's contacts with other centers of the time and the great production of its mint<sup>130</sup>. Already since the second half

<sup>123</sup> Κάντα-Κίτσου, op. cit., p. 407 and Πρέκα-Αλεξανδρή, op. cit., pp. 57 and 112-120.

<sup>124</sup> Κάντα-Κίτσου, op. cit., p. 408.

<sup>125</sup> Καλλιόπη Πρέκα-Αλεξανδρή, "Κερκυραϊκά ειδώλια πτηνών και ζώων", in Ι' Διεθνές Πανιόνιο Συνέδριο, Κέρκυρα, 30 Απριλίου-Μαΐου 2014, Τα Πρακτικά, Φιλοσοφία-Αρχαιολογία-Αρχαιογνωσία-Αρχιτεκτονική-Θέατρο, Γενική επιμέλεια Δημήτρης Κονιδάρης, Κερκυραϊκά Χρονικά, Περίοδος Β', Τόμος ΙΑ', 2017, Κέρκυρα 2017, pp. 353-354.

<sup>126</sup> Cf. Πρέκα-Αλεξανδρή, "Κερκυραϊκά ειδώλια πτηνών και ζώων", pp. 353-354.

<sup>127</sup> Tiles and bricks are found stamped with the names of magistrates (those of the πρυτάνεις), showing that there existed a kind of public regulation respecting the potteries. See Birch 1873, 117.

<sup>128</sup> Μπονέλου-Προβατά, op. cit., p. 341.

<sup>129</sup> Λιντοβόης, op. cit., pp. 424-425.

<sup>130</sup> Cf. Αυγερινό, op. cit., pp. 307-313.

of the 6th c. B.C.E. Korkyra cut its own currency, which carries on the main side a cow that nurses a calf. From the 4th c. B.C.E. Corcyrean currencies continue to depict the cow or parts thereof, a goddess or amphora. The representation of amphorae on currencies documents the importance of wine trade and pottery production on the island. From the 3rd to the 1st cent. B.C.E. monetary production becomes more intense by cutting copper coins. At this time we find currency formulas with ship performances that show the importance of sea trade to Korkyra. Korkyra continued to cut its own silver coins after delivering the city to the Romans and retained the autonomy of its monetary system until the era of the Severus dynasty (3rd century A.D.). Coinage findings from Germany to Bactria and from Sicily to Syria are witnesses of the particular commercial-financial and geopolitical importance of Korkyra<sup>131</sup>, as also indicated by coinage found in Korkyra originating from Athens, Corinth, Syracuse, Croton<sup>132</sup>. On one of the sides of the Corcyrean coins the κῆποι τοῦ Αλκινόου are depicted<sup>133</sup>.

During the period of Roman domination, the mint was transferred to Cassiope and this is confirmed by the early imperial customs depicting Cassius Zeus. It was the other important city and port in the North, Cassiope, still naming a modern village, where some remains of buildings are preserved; but the temple of Zeus Cassius for which it was celebrated has totally disappeared. The location of the sanctuary has not been found. Undoubtedly, the mainly worshiped deity had been Zeus Cassius. Its worship in Cassiope had been witnessed in ancient sources and coinage from the 1<sup>st</sup> cent. AD. It is probable that it was located where the temple of Panaghia Cassopitira (Παναγία Κασσωπίτρα) was later built<sup>134</sup>. The figure of Zeus Cassius on a throne met on the coins of Kerkyra probably represents the statue of the god in the temple of Cassiope, a general practice met also in Athens and Argos. It might be the type of Zeus on a throne surviving in the coinage of the Peloponnesian cities from classical period. Zeus Cassius was a deity of eastern origin. Its worship had been introduced by Roman emperors during their voyages to the East. It had been worshiped in Mount Cassium in Syria, where a sanctuary with votives offered by sailors who escaped a sea storm<sup>135</sup>.

The Roman Cassiope is sited on the North-Western edge of the island, where the modern village of Cassiope is sited. The location is on the naval route leading from West to East and vice versa and in particular in the entrance of the Strait of Kerkyra. It is only 7 miles far from the opposite Illyrian coasts, so it was close to another important route, land-road in fact, Egnatia Road, that united all important roman cities of Greek and Albanian territory<sup>136</sup>. Apart from that, the road leading from Phoenice (Φοινίκη) to the port of Onchesmus or Onchesmos (Ογχησμός, modern Sarande, Albania), thus connecting the Strait with the mainland of ancient Epirus, must have played an important role<sup>137</sup>.

In Cassiope, there are two natural harbours on either part of the peninsula; they were harbours of the closed type, thus offering shelter from both bad weather conditions and hostile attacks to the vessels. On the contrary the harbour of Onchesmus is of the open type, and Northern Epirus coasts are without any natural port<sup>138</sup>. Cassiope is practically the first safe anchorage a ship may find after having sailed in the open Adriatic Sea<sup>139</sup>.

The two ports of Cassiope are deep enough and may host ships of big size. In addition, the plain which is in continuity of the ports, is appropriate to the storage of merchandise, and also to developing commercial-naval installations and a village. It also seems that this place, Cassiope, was considered to be more appropriate than other natural harbours of North-Western Kerkyra<sup>140</sup>.

The entire area is rich in two important materials: limestone and wood. The first is abundantly found in the western side of Mount Pantokrator, and 5 quarries are mentioned by Παρτς in 19<sup>th</sup> cent.<sup>141</sup>, so there existed materials for the construction of fortifications and the Roman buildings of the town. Wood, also abundant on the mountain, was useful both for heating and ship building<sup>142</sup>. Water supply to the town was easy, mainly based on wells, helped by the frequent rains; the area was famous for its sweet waters till now days. Stone built wells and sweet waters are noticed in the sea together with walls. This particular site is known as 'Nero's Baths'. As in other sea-side agglomerations on the Epirotic side of the Strait, in Cassiope also there are under water Roman and Byzantine antiquities, due to high constructing activity in Late Antiquity<sup>143</sup>.

The Roman agglomeration had been developed in the entire plain between the two ports; it was about 200 decares. Some of the findings are dated in 3<sup>rd</sup>-2<sup>nd</sup> cent. BCE, more are dated in 1<sup>st</sup>-5<sup>th</sup> cent. AD: it seems that the town was founded in the period of Res Publica, flourished in Imperial Period and lasted till Byzantine times<sup>144</sup>. Regarding the articulation of the town, construction is richer in the coastal zone and looser in the interior, while no construction is noticed on higher level. Parts of roads are discovered in two points: one of them is directed from North to South, it is parallel to the modern road leading to the port. There is a probable port installation at a certain position<sup>145</sup>; remainings of buildings in other places, a private domicile and a public building, a cemetery, but not undoubted activity zones, like laboratories or the market. It seems though that the cemetery was extra muros and along the central road, while the main port was the eastern one, close to which the public buildings were located, as the position of the central gate indicates, a smaller gate leading to the western port<sup>146</sup>.

The fortifications found in Cassiope are dated in the 6<sup>th</sup> century AD. But a prior constructive phase puts its beginnings to the Roman period. It presents significant similarities to the one of Onchesmus (modern Sarande) and the early-Christian castle of Nicopolis (Νικόπολις). Both military conflicts in the times of the Res Publica and Goths invasions at the end of the 3<sup>rd</sup> cent. AD are a probable action for constructing a fortification even from Roman times. It remains to be studied

<sup>131</sup> See for example Ιωνία Κατσαδήμα, "Μαρτυρίες για την παρουσία Κερκυραίων στο ιερό της Δωδώνης", in Ι' Διεθνές Πανιόνιο Συνέδριο, Κέρκυρα, 30 Απριλίου-Μαΐου 2014, Τα Πρακτικά, Φιλοσοφία-Αρχαιολογία-Αρχαιογνωσία-Αρχιτεκτονική-Θέατρο, Γενική επιμέλεια Δημήτρης Κονιδάρης, Κερκυραϊκά Χρονικά, Περίοδος Β', Τόμος ΙΑ', 2017, Κέρκυρα 2017, pp. 502-503.

<sup>132</sup> Λινοβόης, op. cit., p. 425.

<sup>133</sup> Κάντα-Κίτσου, op. cit., p. 408.

<sup>134</sup> Ελένη Μπουνιά, "Ο ρωμαϊκός οικισμός της Κασσιόπης. Μια προσέγγιση των ιστορικών και αρχαιολογικών δεομένων", in Ι' Διεθνές Πανιόνιο Συνέδριο, Κέρκυρα, 30 Απριλίου-Μαΐου 2014, Τα Πρακτικά, Φιλοσοφία-Αρχαιολογία-Αρχαιογνωσία-Αρχιτεκτονική-Θέατρο, Γενική επιμέλεια Δημήτρης Κονιδάρης, Κερκυραϊκά Χρονικά, Περίοδος Β', Τόμος ΙΑ', 2017, Κέρκυρα 2017, p. 297.

<sup>135</sup> Μπουνιά, op. cit., pp. 297-298.

<sup>136</sup> Α. Βλαχοπούλου-Οικονόμου, Επισκόπηση της Τοπογραφίας της Αρχαίας Ηπείρου, Νομοί Ιωαννίνων-Θεσπρωτίας και Νότια Αλβανία, Ιοάννινα 2003, p. 293.

<sup>137</sup> Μπουνιά, op. cit., p. 293.

<sup>138</sup> Hammond, 1967, 35-36 and Ιωσήφ Παρτς, Η Νήσος Κέρκυρα, Γεωγραφική Μονογραφή, Greek transl. Περικλής Βέγιας, Εν Κερκύρᾳ 1892, pp. 168-169.

<sup>139</sup> Μπουνιά, op. cit., pp. 293-294. Also ancient or medieval sources (Cicero, Strabo, Plinius, Suetonius, Ptolemaeus, Aulus Gellius, Ulpius, Procopius).

<sup>140</sup> Μπουνιά, op. cit., p. 294.

<sup>141</sup> Παρτς, op. cit., p. 29, cf. Μπουνιά, op. cit., p. 294.

<sup>142</sup> Μπουνιά, op. cit., pp. 294-295.

<sup>143</sup> Μπουνιά, op. cit., p. 295, also Κ. Πρέκα-Αλεξανδρή, op. cit., p. 70.

<sup>144</sup> Μπουνιά, op. cit., p. 296.

<sup>145</sup> Μπουνιά, op. cit., p. 296.

<sup>146</sup> Κάντα-Κίτσου, op. cit., p. 411, Μπουνιά, op. cit., pp. 296-297 and Πρέκα-Αλεξανδρή, op. cit., pp. 41, 52, 58.

if the castle was used exclusively as a shelter in case of danger, or if the Roman agglomeration was initially in the fortification and later expanded extra muros in the period of pax romana, as happened in the case of Buthrotum (Βουθρωτό, Butrint)<sup>147</sup>. Lamps and other findings uncover the wide commercial contacts of Cassiope: their thematology and onomatology witness their origin from laboratories in Corinth, Athens, Patras. That commerce was flourishing is witnessed by coinage, also indicating a significant financial growth and independence<sup>148</sup>. More indications are offered by parts of amphorae<sup>149</sup>. In sum, Cassiope had mainly been a religious center thanks to Zeus Cassius impact and a frequented anchorage thanks to its ports; it would also have been functioned as a commercial station for ships. Its growth from 1<sup>st</sup> to 4<sup>th</sup> cent. AD coincides with the foundation and growth of other Roman settlements in the Ionian Sea. It should probably be studied in combination with the construction and growth of Phoenice in modern Albania and the transformation of Onchesmus into a basic port for commerce from and towards the mainland, also with the expansion of Butrint and the development of a Roman settlements and activity in the coastal plains of ancient Epirus, the installation of Roman *negotiatores* in these same areas. Many analogies are noticed with the newly discovered Roman agglomerations as in Ladochori (Λαδοχώρι), Igoumenitsa (Ηγουμενίτσα), Panormos in Cephalonia (Πάνορμος στην Κεφαλονιά), Nicopolis (Νικόπολις), Dyme (Δύμη), and Patras (Πάτρα). At the end of Roman period Cassiope presents signs of decay and ruins, probably due to barbaric invasions and attacks or to the earthquakes that inflicted also Butrint, Nicopolis, Patras. Despite all this the town soon recovers and its location, mainly thanks to the fortification, is used during the entire Byzantine period<sup>150</sup>.

Due to its geographical position, Corfu/Korkyra has received the influence of other cities in the field of arts: centers of Lower Italy and Sicily, cities of the Adriatic, Athens, of Samos, so that in the course of time it would create a school of its own, which gave excellent works both in architecture and sculpture, as well as in pottery. As mentioned above, Corfu since the 7th c. B.C.E. had created a local ceramics workshop, which, although it is the earliest of the Proto-Corinthian chambers (Birch 1873, 188), is at the same time competing. Along with the economy and trade, arts and culture have developed and flourished in Corfu. Witnesses of this flowering of the arts are the findings found at the Archaeological Museum of Corfu, as well as the remains of its ancient temples. From early on, with the foundation of the Corinthian colony, Corinthian artists worked on the island and taught the locals.

The main characteristics of the workshop are the mixing of old and new elements, the extraordinary rendering of features, the embossed and polygonal face, the slanted eyes, the delicate lips, the intensely formed forms that mimic torrent patterns. Works of this workshop are now considered as the lion of Menekrates<sup>151</sup>, the Kouros of Aktio, the head of the Kouros from Mon Repos, the embossed female head from the temple of Artemis, the bronze lion of the British Museum and the gorgon of Gorgo at Figaretto. In architecture, the pseudo-dentate plan of the temple with the forehead and the addition of inset on the back, the foliar capitals and the rich decoration of the roof are considered by some Corcyrean creations. One of the most important temples of the Archaic period throughout

Greece is the pseudo-Doric Dorian temple of Artemis, mentioned above. The temple is best known for Gorgo's rich and impressive pediment, which adorns the western face<sup>152</sup>.

It is characteristic that the central element in the face of Medusa is the wide-eyed eye, which has the power to prevent every gaze of the bosom. It was such a belief in the terrible power of the eye, known to other eastern peoples, who survived to this day. For that very gruesome power of the γοργώνειον (gorgoneion), cities used to embody it in visible parts of their walls or, as in Korkyra and Selinous, Gorgo was a central form<sup>153</sup> of the pediment of a temple important to the city. The repulsive Medusa (Biers 1996, 156-157, 171) from the influx of the temple of Artemis in Korkyra prevents any harmful external influence for the city and, at the same time, conveys, excites and provokes the citizens. With the passage of time, the gorgoneion's apotropaic function (Robertson 1991, 16) will diminish and the image remains as a simple jewel and work of art<sup>154</sup>. The ancient city's walls must have been close to the temple of Artemis-Gorgo, whose obvious apotropaic character on its western αέτωμα ('aetoma'), the first one faced by anyone entering the walls gate, could be explained by the location of the temple in vicinity to the walls. Hence, a gate of the ancient walls could be placed in the area between the tower of Nerantziha and at the west side of the western façade of the temple of Artemis-Gorgo<sup>155</sup>.

In this same region of Figaretto, facing the Hyllaic port, there is a lot of interest in a second porous pediment that was recovered in 1973. It probably comes from the temple of Dionysus and dates back to 500 B.C.E. In the surviving section, a bearded man identified with Dionysus is depicted on a bed, and a teenager lying on top of it. The teenager was interpreted as oenopia or as a good of demons. The bearded god holds the horn and the teenage κύλικας (kylikas) as they watch the events on the right side of the pediment (Biers 1996, 172-173). A lion and a dog are also depicted; at the corner of the pediment there is a crater (κρατήρ)<sup>156</sup>.

The presence of the temple of Dionysus, witnessed by Thucydides<sup>157</sup>, the representation of a Dionysian symposium on the gala of Figaretto and the depiction of coins of the 4th, 3rd and 2nd centuries B.C.E. cycle confirm the presence of the Dionysian cult and the Dionysian struggle on the island, which is also mentioned by the interesting epigraphic testimony confirming the fact

<sup>152</sup> Gorgo, a colossal demonic figure, dominates the center of the performance. With one knee bent, in the way known in the archaic art, "the fury road" seems to be running to the right. The monstrous features of the figure, the face with bulging eyes, the nasal plaque, the wide-open mouth with the tongue hanging out of the teeth, the tusks and the corms ending in the heads of snakes, cause awe. Two snakes also bind the waist, while wings are spread on her back and others on her shoes. It is Medusa, the queen (from the verb μῆδω, which means to govern, reign, protect), one of the three sisters γοργόνες (gorgons), the only mortal, which, according to the myth, was stealing anyone who was looking at it. Perseus with the help of Athena was sent to kill her. Indeed, Perseus managed to cut down Medusa's head, avoiding looking at her directly, but seeing her image mirrored on the shield offered by goddess Athena. Pegasus and Chrysaor, the children of Poseidon, sprang out of the cut head of Medusa, after Gorgo had already become pregnant by the god of the sea. Medusa's head, Perseus, offered it to Athena, which placed it at the center of her shield, to cause terror to anyone standing before her. The habit of placing the gorgoneion as the auspices of the warrior shield was known all over Greece, for there was the belief that it possessed a magical power capable of preventing any evil. See also Μπονέλου-Προβατά, op. cit., pp. 345-346, also Θ. Καλπαξής, Αρχαιολογία και Πολιτική II. Η ανασκαφή του ναού της Αρτέμιδος (Κέρκυρα 1911), Ρέθυμνο 1993.

<sup>153</sup> On the style and the Corinthian influence, see Boardman 2001, 181.

<sup>154</sup> Of the other interpretations given for the pediment, the predominant one is the one according to which the tenant of the temple, Artemis-Gorgo, is depicted in the center of the pediment, as the Pontic of Thoras and not as Gorgo-Medusa of the earthly myth, since it is portrayed alive her two children, Pegasus (the winged horse, personification of thunder) and Chrysaor (the golden sword, personification of lightning). It is framed by two mythical beasts called leonopaths. On the left side, at the corner of the pediment, a demon-shaped man is lying down, while on the right a form that is seated in front of a building seems threatened by a warrior from whom only the spear tip of. On the right side, Zeus is depicted by another demon-shaped man. See Boardman, op. cit., picture 187, Κοκκόρου-Αλευρά, op. cit., p. 94.

<sup>155</sup> Βουλιγέα-Σιταρά-Κουμπούρα, op. cit., p. 263.

<sup>156</sup> The style is Corinthian, see Boardman, op. cit., p. 188.

<sup>157</sup> 3, 81, 5.

<sup>147</sup> Μπουνιά, op. cit., p. 299.

<sup>148</sup> Cf. Λιντοβόης, op. cit., p. 418.

<sup>149</sup> Μπουνιά, op. cit., pp. 300-301 with note 71.

<sup>150</sup> Μπουνιά, op. cit., pp. 301-302.

<sup>151</sup> Falsely attributed to the monument of Menekrates, Μπονέλου-Προβατά, op. cit., p. 346. Cf. Boardman, op. cit., picture 266a, also Κοκκόρου-Αλευρά, op. cit., p. 93.

of theatrical performances and musical events in ancient Korkyra (Pappas 2017, 427-452). The presence of ancient wall at the area of Figaretto, at Pouliasis ownership (οικόπεδο Πουλιάση) is doubted. Although this position would normally have been a part of the fortification, protecting the nearby νεώριον of the Giourga-Kabitis ownership, excavations have shown that the city expanded till the edge of the peninsula, so the wall would not have ended at that point<sup>158</sup>.

Other monuments of various periods in the area were the Basilica of Jobianus, bishop of Kerkyra, a work of the mid-5th century (Παλαιοχριστιανή Βασιλική Ιωβιανού, επισκόπου Κερκύρας). An inscription on the epistyle of the tribelon and on the narthex mosaic pavement gives us significant chronological information. It was built in the middle of the Roman agora, very close to the port; it was a five-aisled timber-roofed basilica with a transept, a double narthex, an atrium, adjacent structures, and lavish sculptural and mosaic decoration. It was constructed by material from the ancient pagan sanctuaries nearby, and this is still apparent in the masonry<sup>159</sup>. Another monument nearby is the temple of st. Jason and Sosipater (Άγιοι Ιάσων και Σωσίπατρος, 10<sup>th</sup> cent.), the small temple of Pantokrator (Παντοκράτωρ) on the island of Pontikonisi (11<sup>th</sup>-12<sup>th</sup> cent.), the Monastery of Aghioi Theodoroi, near the ancient temple of Artemis, built on the ruins of an early Christian Basilica of 5<sup>th</sup> cent. (15<sup>th</sup> cent.), the temple of Saint Athanasios (15<sup>th</sup> cent.), founded on a tower of the ancient wall, the monastery of Saint Euphemia (Αγία Ευφημία), close to Mon Repos (15<sup>th</sup> cent.)<sup>160</sup>, the temple of Christus Soter (Χριστός Σωτήρ), in Mon Repos (16<sup>th</sup> cent.), the small temple of Saint Paraskevi (Αγία Παρασκευή, 16<sup>th</sup> cent.), built on the remains of an older Byzantine settlement, the temple of Saint John (Άγιος Ιωάννης, near Anemomylos 17<sup>th</sup> cent.), the Monastery of Panaghia Vlacherna in Kanoni (Παναγία Βλαχερνών, 17<sup>th</sup> cent.)<sup>161</sup>.

Of particular importance is the monument of Panaghia Nerantziha (Παναγία Νεραντζίχα, 11<sup>th</sup>-12<sup>th</sup> cent.), founded on the ancient walls of the city. It is on the north-western edge of the city, on the ruins of an ancient tower; it is supported that there was a gate in combination with the burial road and the front part of the ancient necropolis. This attribution is made more probable by the fact that a part of an ancient sarcophagus is found to be built in one of the windows of the Christian temple. Yet further findings, that could possibly verify the existence of the above-mentioned gate, are absent<sup>162</sup>.

Over the centuries, the church shrank to a three-aisled basilica and then to a single-cell structure, probably during the Middle Byzantine period, and this is the form it has today. By the 15th century, it was the καθολικόν (katholikon) of a large monastic complex dedicated to the Mother of God Anaphonetria (Παναγία Αναφωνήτρια), which was the home of a number of prominent church scholars. The most important families on the island were connected with the church until the 19th century, and many of their members were buried inside it, as was the custom. Subsequently abandoned, the church was bombed during the Second World War.

The acme of the flourishing city-port is also reflected in the racing mood, the racing ideal, which was one of the dominant elements of Corcyrean civilization, as happened with all the ancient Greeks. The result of this tendency for fame and glory was the development of sport from the Mycenaean years. Gymnastics and sport, institutions of social value and educational attitude, have rejoiced of a particularly flourishing history in Corfu. This testimony leads us to witness the victories of Corcyrean athletes in the races, especially in the Olympics. We know enough names of Corcyrean

winners in the Olympics, such as Archilochos at the stadium (544 B.C.E.), Agatharchus at the stadium (536 B.C.E.), Philon in the fist and the stadium (500, 492, 488 B.C.E.) Thersilos in the grip (348 B.C.E.) and Parmeniskos at the stadium (96-88 B.C.E.). Charismatic athletic personality, among many Corcyrean athletes, is considered to be Philon, who managed to distinguish at the level of Olympic games in sports contrary to each other (stage - fist). A notable case is the frequent organization of sports matches, usually with the name ROMA, during the imperial period. We also know that rowing events were organized in Corfu. It seems, therefore, that sport had a special place in the life of the Corcyrean elite (Pappas 2003, 9-34). In this spirit of the mood of the Corcyreans, the city is organized with the help of generous benefactors, musical competitions, dance performances and theatrical performances.

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<sup>158</sup> Βουλιγέα-Σιταρά-Κουμπούρα, op. cit., p. 266.

<sup>159</sup> <http://www.corfuchurches.com/content/view/64/76/lang,en/>. See also Μπονέλου-Προβατά, op. cit., p. 341, n. 1.

<sup>160</sup> Βουλιγέα-Σιταρά-Κουμπούρα, op. cit., p. 266.

<sup>161</sup> See Μπονέλου-Προβατά, op. cit., p. 341, n. 1.

<sup>162</sup> Βουλιγέα-Σιταρά-Κουμπούρα, op. cit., p. 261. On the tower and its chronology in the 5<sup>th</sup>-th cent. BCE, see pp. 261-263.

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Figure 1.

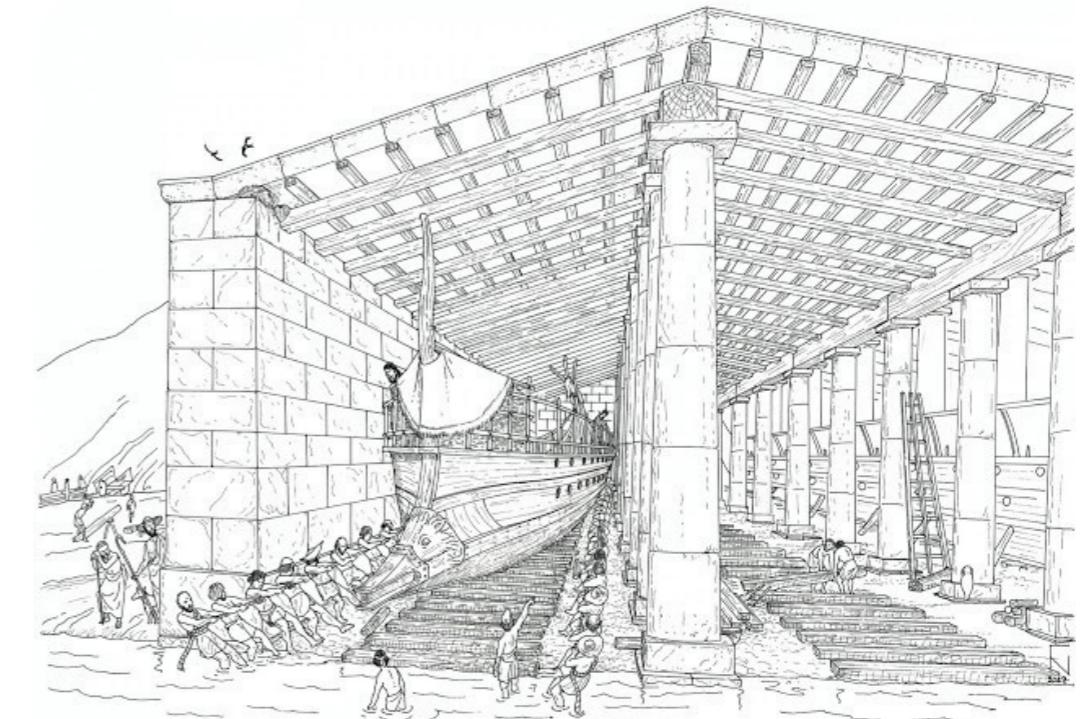


Figure 2. Νεόσουκοι in Corfu, Hom., Od. 7.251 sqq.



Figure 3. Representation of the ancient shipyard.

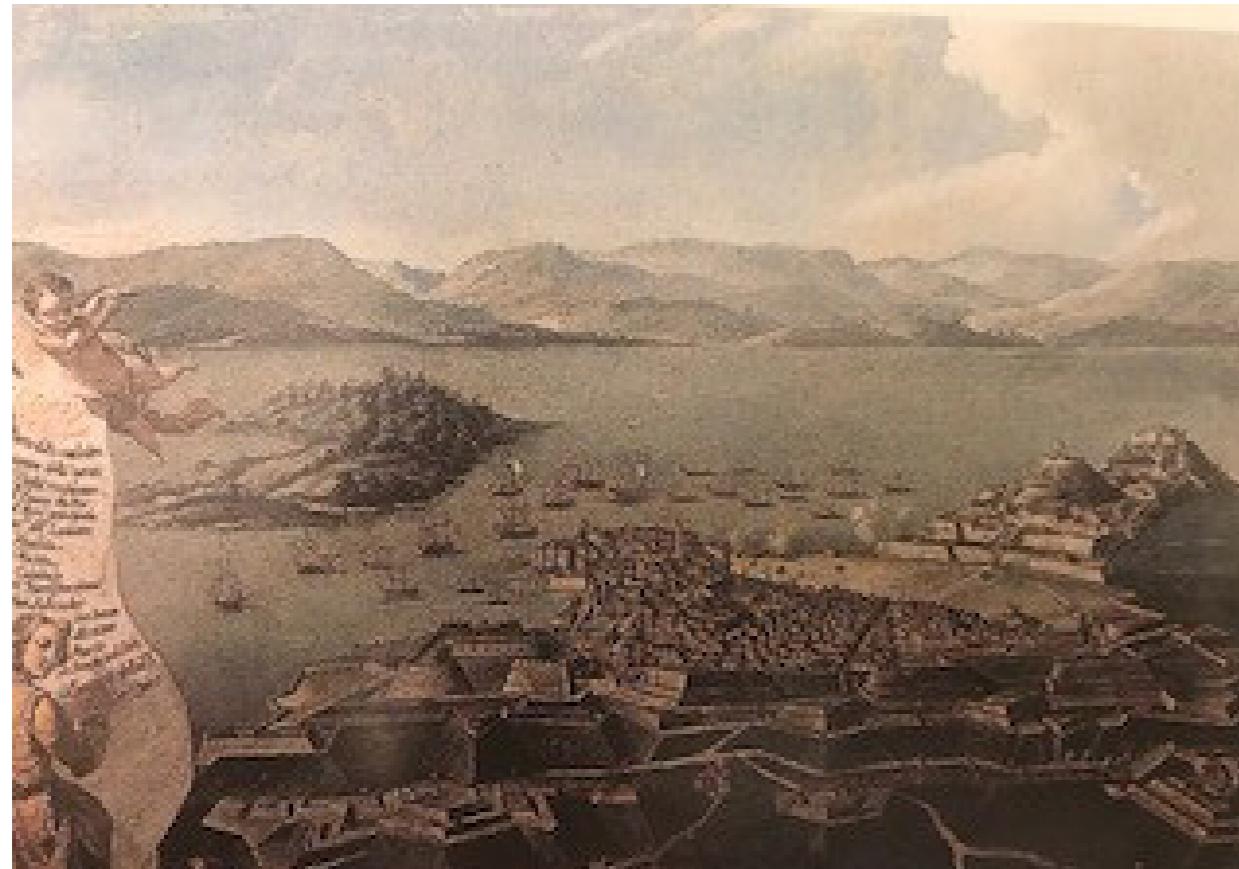


Figure 4. Gravure. Panoramic view of the old town of Corfu.



Figure 5. Gravure. Representation of the Old Fortress of Corfu.

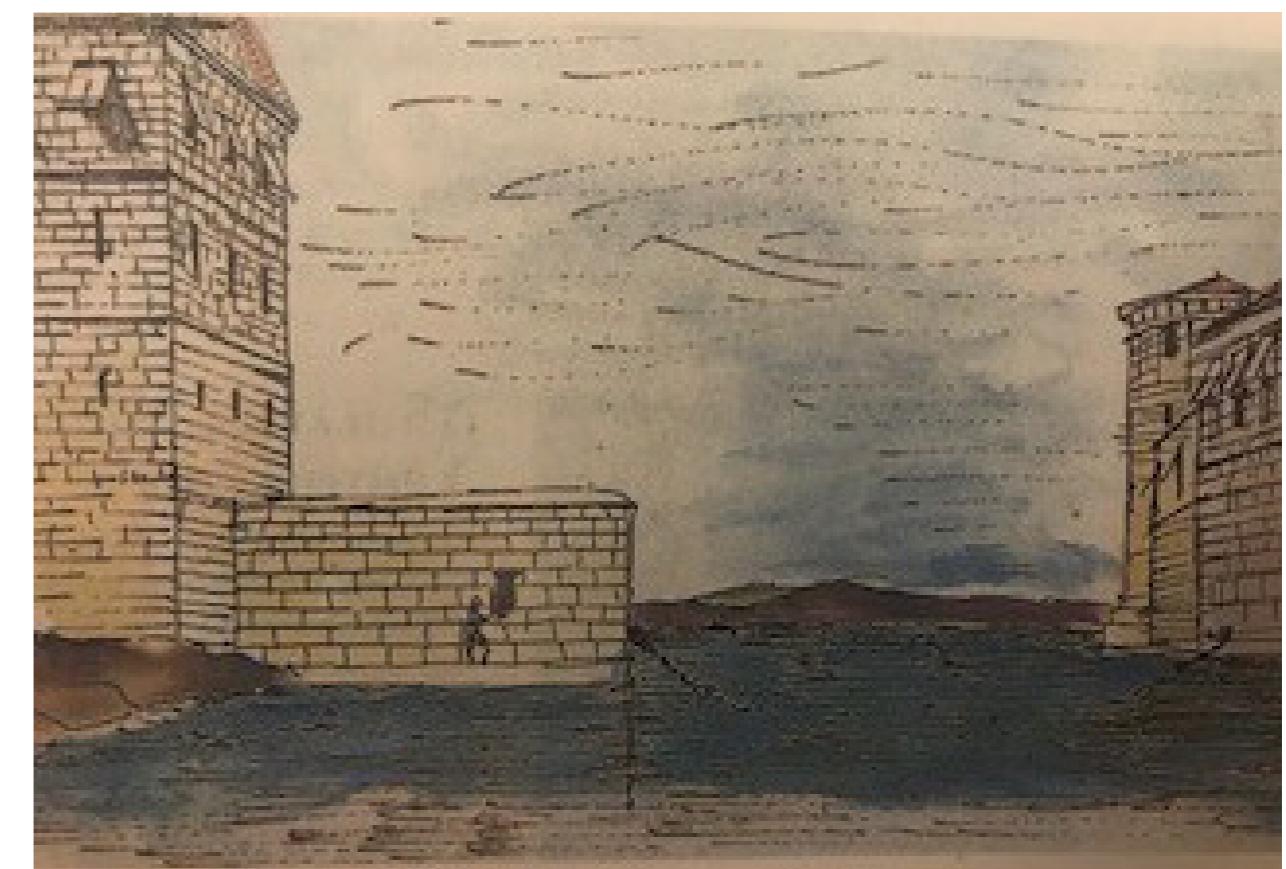


Figure 6.

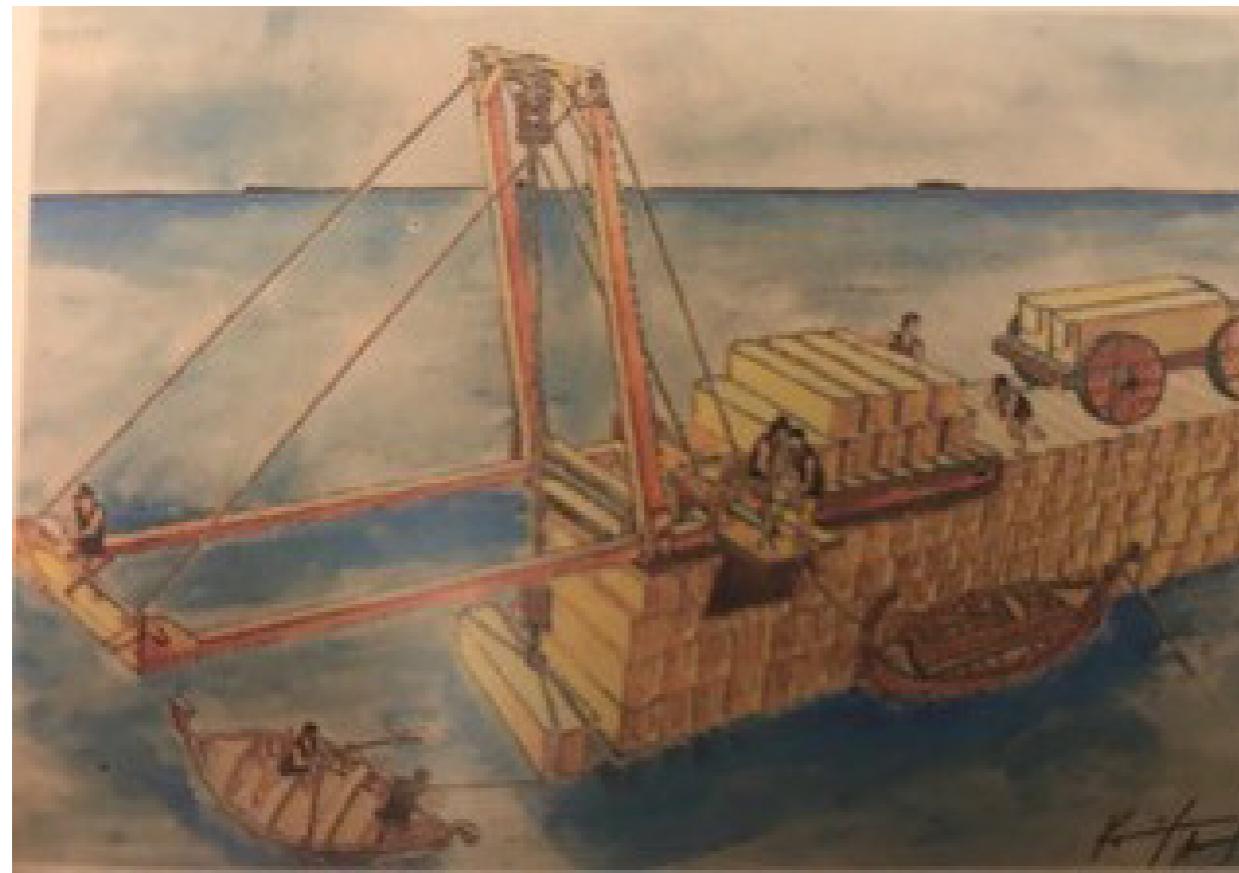


Figure 7.

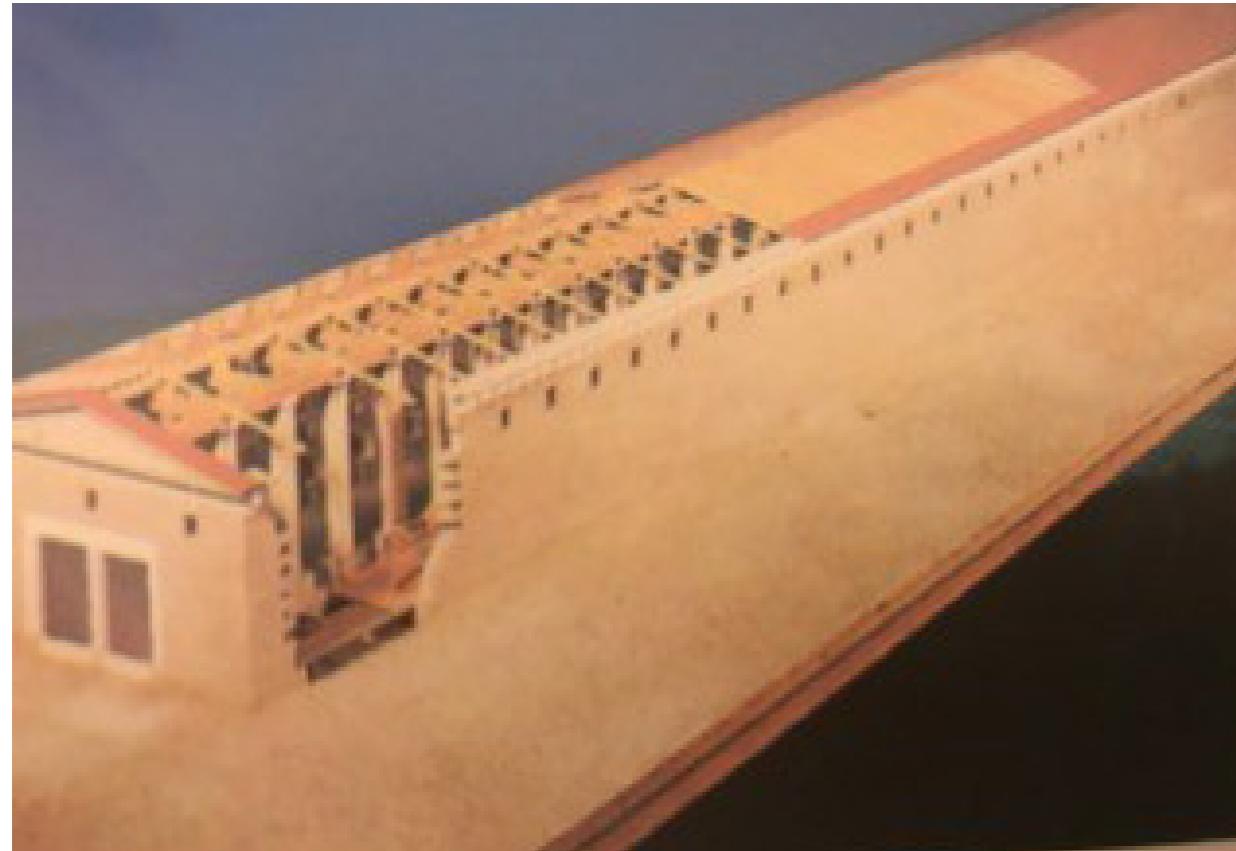


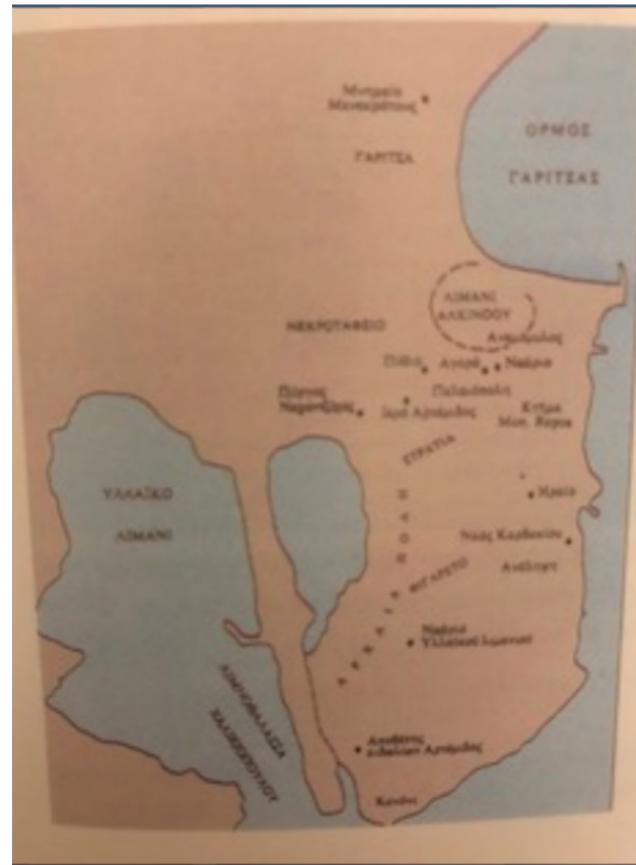
Figure 8.



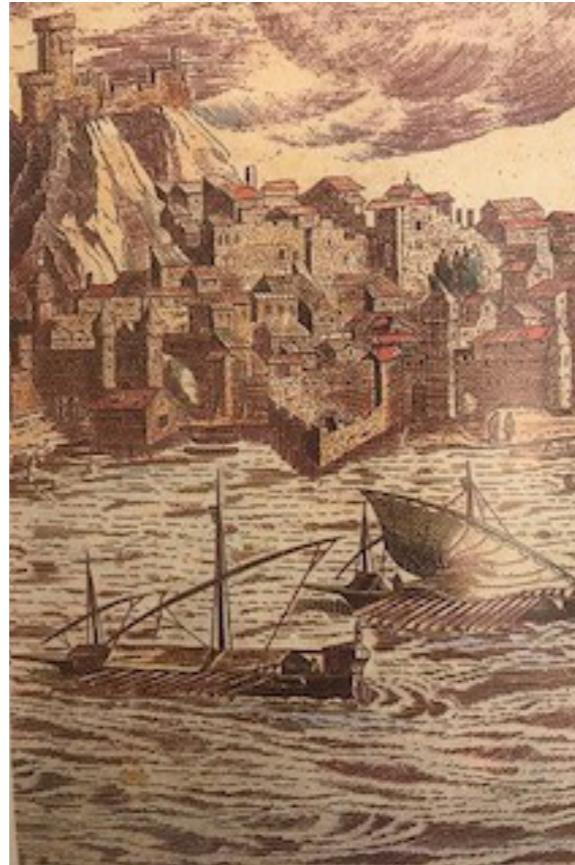
Figure 9. Επτάνικα 1 view of Corfu.



Figure 10. Corfu and its ports.



**Figure 11.** Fortress of Corfu



**Figure 12.**



**Figure 14.** Arsenal, Gouvia, Corfu



**Figure 13.** View of the port, 14th century.



**Figure 15.** The Old Fortress



**Figure 16.** Panoramic view from the Old Fortress.



**Figure 17.** Palaeopolis



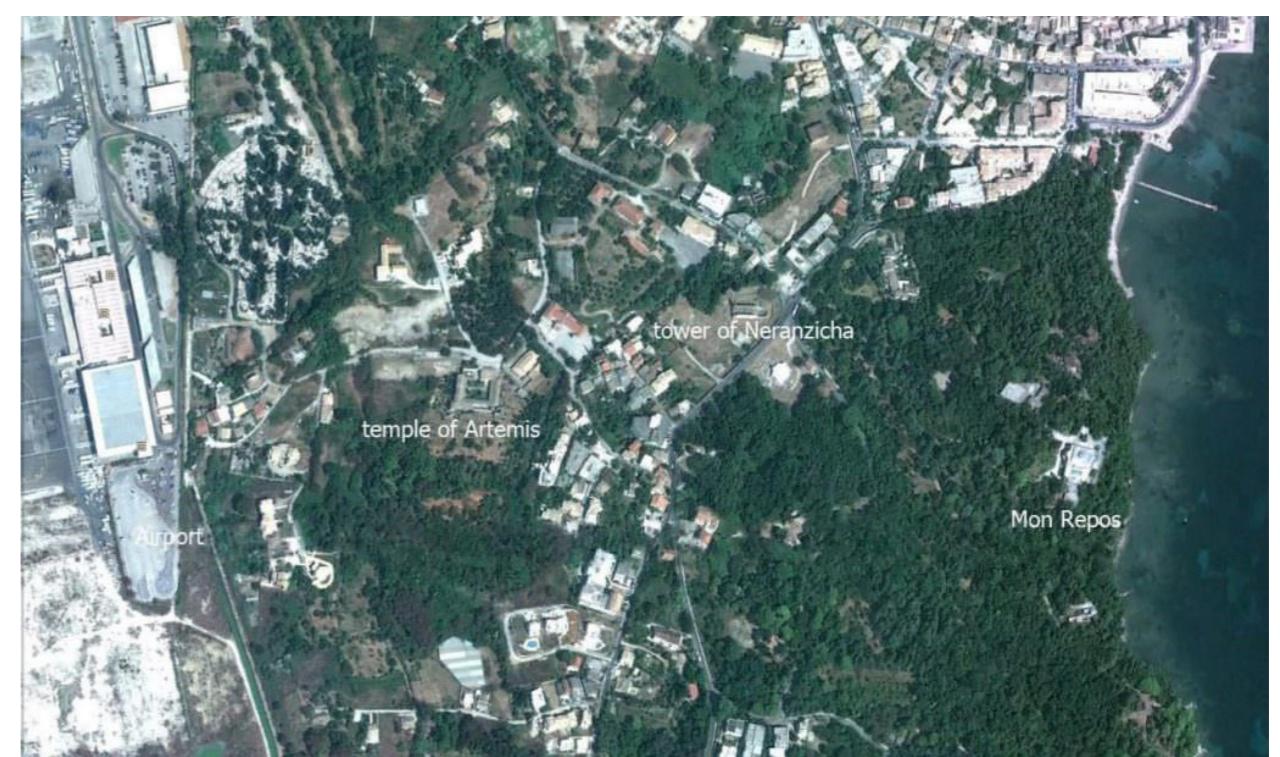
**Figure 18.** Temple of Corfu, the Artemis-Gorgo temple, see Biers, op. cit., p. 156, pict. 7.1.



**Figure 19.** Gorgo, Meduse.



**Figure 20.** Archeological findings in Paleopolis



**Figure 21.** The area of Palaeopolis (Google maps).

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## Historical, archaeological, geophysical and geological research of the Old Port of Dubrovnik, with special emphasis on the Kaše breakwater

### Abstract

The Old Port of Dubrovnik acquired its present appearance in the 15<sup>th</sup> century, when the Kaše breakwater was built. It was recently assumed that the first part was built in 1486, the second part in 1487, while the two parts were connected in 1498 and extended to the north in 1514. In addition to protecting the port from bad weather, the Kaše breakwater defended the city from enemy attacks, as chains were usually stretched from its sides, preventing access to the port. Today, the breakwater is in extremely poor condition and in need of renovation. In the framework of the APPRODI Project – *From Ancient Maritime Routes to Eco-Touristic Destinations*, funded within Interreg ADRION Programme, the Dubrovnik Development Agency DURA proposed the pilot project of Kaše breakwater research, with the aim of using it for eco-touristic purposes. This became the first-ever archaeological research performed in conjunction with geophysical and geological survey in order to attempt the reconstruction of the development of the Old Port of Dubrovnik. In support of that goal, historical research was conducted in the State Archives of Dubrovnik, which reviewed existing records and discovered new documents that illustrated the history of the breakwater, today's symbol of the Old Port. Based on the results of the archaeological, historical and iconographic research, we can propose slightly different construction phases for the Kaše breakwater.

**Keywords:** Old Port of Dubrovnik, Kaše breakwater, Renaissance, geophysics, geology, maritime history, underwater archaeology

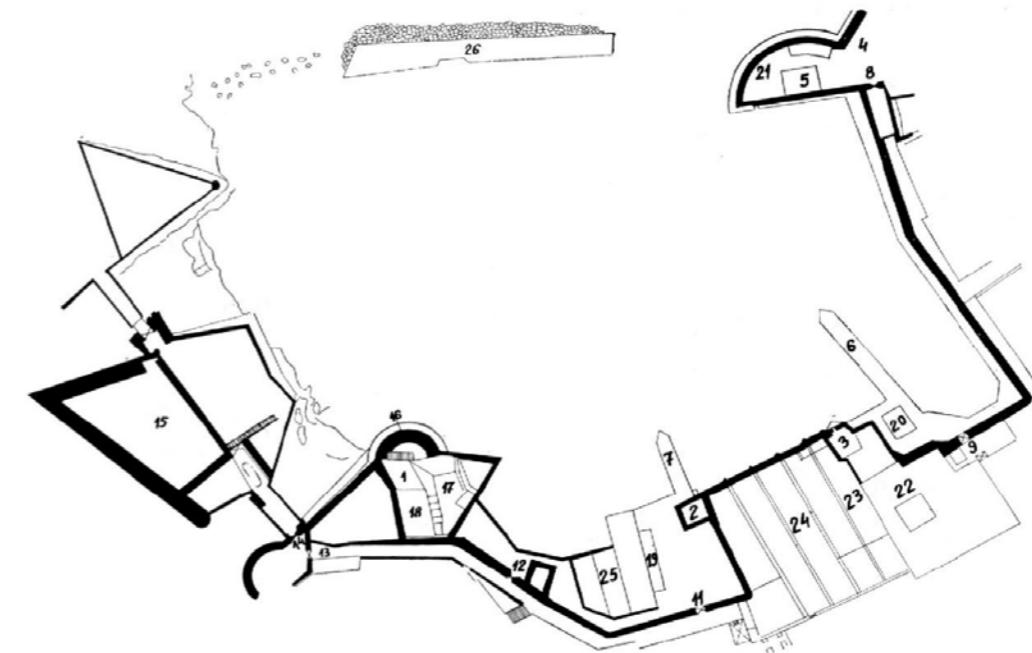
### 1. Introduction

The area of the Old Port of Dubrovnik (Fig. 1) has been used since ancient times as a safe anchorage, protected from almost all winds, except the southern winds, from which it is somewhat protected by the island of Lokrum. During rescue archeological excavations conducted in 2003, fragments of pottery from the 1<sup>st</sup> century BC were discovered, confirming that ancient sailors moved through this area (Radić Rossi 2004). In addition, a large number of pottery fragments from the late Roman and early medieval period confirmed the assumption that this was the place where the first significant city port was located (Ničetić 1996). According to tradition, permanent settlement was established in the 7<sup>th</sup> century AD by fugitives from ancient Epidaurum, today's Cavtat south of Dubrovnik. The previous theory that the first city port was located on the west side of the city, in a position called Kalarinja (cf. e.g. Beritić 1952: 285; 1962: 1383), is thus called into question (Ničetić 1986; 1986a; 1988; 1996; 2005).

During the Middle Ages, the city port largely gained its present appearance, with the exceptions of the connecting structure between today's Big and Small Pier (former Fish Market Pier and Pier of Ponta) and several interventions on existing buildings, all done by the Austrian authorities in the mid-19<sup>th</sup> century (Beritić 1952: 291). The buildings in the harbor include several towers, the Large and Small Arsenals, the dungeon, the granary, the fish market, and the slaughterhouse (Fig. 2).



**Fig. 1**  
Panoramic view of Dubrovnik (photo: M. Šperanda, courtesy of Inter-University Centre, Dubrovnik)



**Fig. 2**  
The Old Port of Dubrovnik in 1808.: 1. Tower of St. Luke, 2. Fish Market Tower, 3. Penitentiary Tower, 4. Position of Gundulić Tower, 5. Tower of Mulo, 6. Pier of Ponta, 7. Pier of Fish Market, 8. Port of Mulo, 9. Port of Ponta, 10. Port of Great Customs, 11. Port of Fish Market, 12. Port of Slaughterhouse, 13. Port of St. Luke (Port of Ploče), 14. Second Port of Ploče, 15. Revelin, 16. Toreta (bastion) under Tower of St. Luke, 17. Slaughterhouse, 18. Salt Warehouse, 19. Fish Market, 20. Lodge of Seafarers, 21. Tower of St. John, 22. Palace, 23. Granary and Dungeon, 24. Large Arsenal, 25. Small Arsenal, 26. Kaše Breakwater (after Beritić 1962)

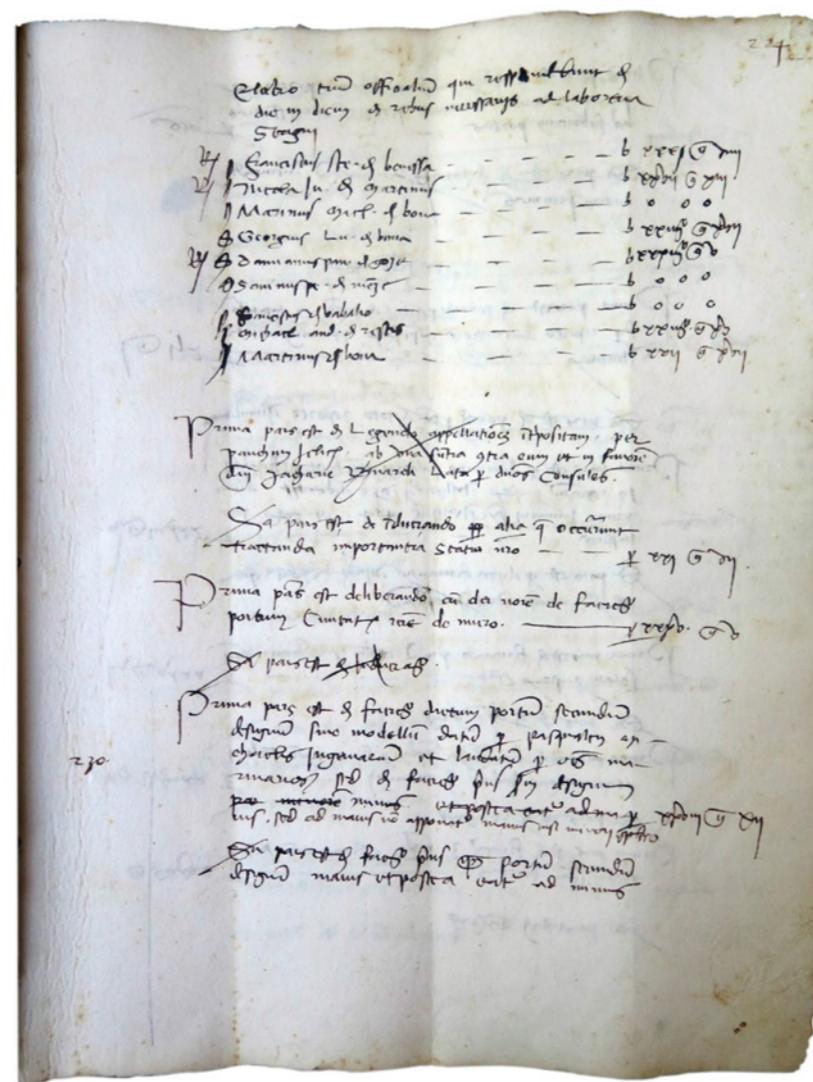
The Large Arsenal was probably built at the end of the 12<sup>th</sup> or the beginning of the 13<sup>th</sup> century, although it was first (indirectly) mentioned in documents in 1272. In 1525, it was extended towards the sea, and the arches of the façade were built where they are still located today (Beritić 1952: 286; 1962: 1386). The first two parts of the Small Arsenal were built in 1409, and in 1412 another similar space was added, which was expanded and extended during the following centuries (Beritić 1952: 287; 1962: 1386).

According to the chroniclers, in 1266 four towers were built to defend the port. Although we cannot prove this with certainty, their assumption seems very plausible. The towers they mention could refer to the Tower of St. Luke, the Fish Market Tower, the Penitentiary Tower and the Gundulić Tower (Beritić 1952: 287; 1962: 1383). At the beginning of the 16<sup>th</sup> century in the place of the so-called Gundulić Tower, which was located on the easternmost protruding cape of the city, the tower of St. John was built. Its expansion in the middle of the same century also included the nearby Tower of Mulo. The Tower of St. John thus became one of the three most important city towers (Beritić 1952: 288). In the second half of the 15<sup>th</sup> century, a smaller tower was built on the opposite side of the port, defending the city gate called Ploče. During the first half of the 16<sup>th</sup> century, a solid tower Revelin was built in its place (Beritić 1952: 290–291; 1962: 1386). Both towers, the Tower of St. John and the Revelin Tower, still bear witness to Dubrovnik's glorious past. Penitentiary Tower and the Tower of St. Luke also survived, and still exist in the port today, while the Fish Market Tower was demolished by the Austrian authorities in the middle of the 19<sup>th</sup> century (Beritić 1952: 187; 1962: 1383).

Until the end of the 15<sup>th</sup> century, a chain was stretched from the former Tower of Mulo to the Tower of St. Luke to protect Dubrovnik's "inner sea", i.e. the southwestern part of the port (Beritić 1952: 189). The decision to install the chain was made in 1346 (Beritić 1962: 1385).<sup>1</sup> In April of the following year, the Major Council of Dubrovnik appointed five supervisors to develop a new solution for a port breakwater, and charged them to locate appropriate funding.<sup>2</sup> During July of the same year, the Council issued an order to throw large rocks into the sea, in a northeasterly direction in front of the port tower (Beritić 1962: 1385) to a distance of 25 passes (about 43 m), in order to form a breakwater to protect the port, and to recover the sunken chain.<sup>3</sup> This solution did not, however, solve the problem of port protection in the long run, and large rocks, carried by sea movements, became an obstacle for seafarers (Macan 1987: 19; Peković 2017: 327).

## 2. Known facts about the Kaše breakwater<sup>4</sup>

In February 1484, the Senate of the Republic of Dubrovnik, after a long discussion on better protection of the port, approved the project of a new port, prepared by Paskoje Miličević (Paskoe Milichievich) and supported by all seafarers (Fig. 3).<sup>5</sup> Paskoje Miličević, a great builder and foundryman, was accepted into the civil service in 1465 or 1466, and remained in it for the next fifty years. It was also decided that construction would start according to the small rather than the big plan, and that the five 'guardians of justice' (It. *provveditori*, Cro. *providuri*) would suggest how to raise the necessary



**Fig. 3**  
Senate's approval of the project of a new port, prepared by Paskoje Miličević, in 1484 (DAD, Ser. III, Acta Consilii Rogatorum, vol. 24, f. 224r)

In March 1486, the same Minor Council ordered that the supervisors of the construction of the port pay Bernard Ugleković an advance of 100 ducats for wood for one caisson.<sup>6</sup> In April, it authorized the supervisors to fine all stoneworkers and send them to mine the stone for the breakwater to the islet of St. Peter (Supetar in front of Cavtat). They also had to hire paid workers for the breakwater, who were not permitted to work for anyone else while employed by the Municipality.<sup>7</sup> In May of the same year, it authorized the supervisors to force all blacksmiths to make nails for the caisson under the threat of imprisonment,<sup>8</sup> and in August it authorized the supervisors to repair the breakwater,<sup>9</sup>

<sup>1</sup> Monumenta Ragusina. *Libri reformationum*, vol. I: p. 226.

<sup>2</sup> Monumenta Ragusina. *Libri reformationum*, vol. I: p. 261.

<sup>3</sup> Monumenta Ragusina. *Libri reformationum*, vol. I: pp. 268–269.

<sup>4</sup> Data on the construction and repair of the Kaše breakwater were taken from the works of Beritić 1948; 1952; 1962 and Peković 2017, and verified by reviewing archival documents, performed by Mauro Bondioli. Therefore, the text that follows references just the archival documents.

<sup>5</sup> DAD, Ser. III, Acta Consilii Rogatorum, vol. 24, f. 224r-v.

<sup>6</sup> DAD, Ser. III, Acta Consilii Rogatorum, vol. 24, f. 229v.

<sup>7</sup> DAD, Ser. V, Acta Consilii Minoris, vol. 22, f. 150r.

<sup>8</sup> DAD, Ser. III, Acta Consilii Rogatorum, vol. 24, f. 288v.

<sup>9</sup> DAD, Ser. III, Acta Consilii Rogatorum, vol. 25, f. 14r.

<sup>10</sup> DAD, Ser. V, Acta Consilii Minoris, vol. 22, f. 261r.

<sup>11</sup> DAD, Ser. V, Acta Consilii Minoris, vol. 22, f. 277v.

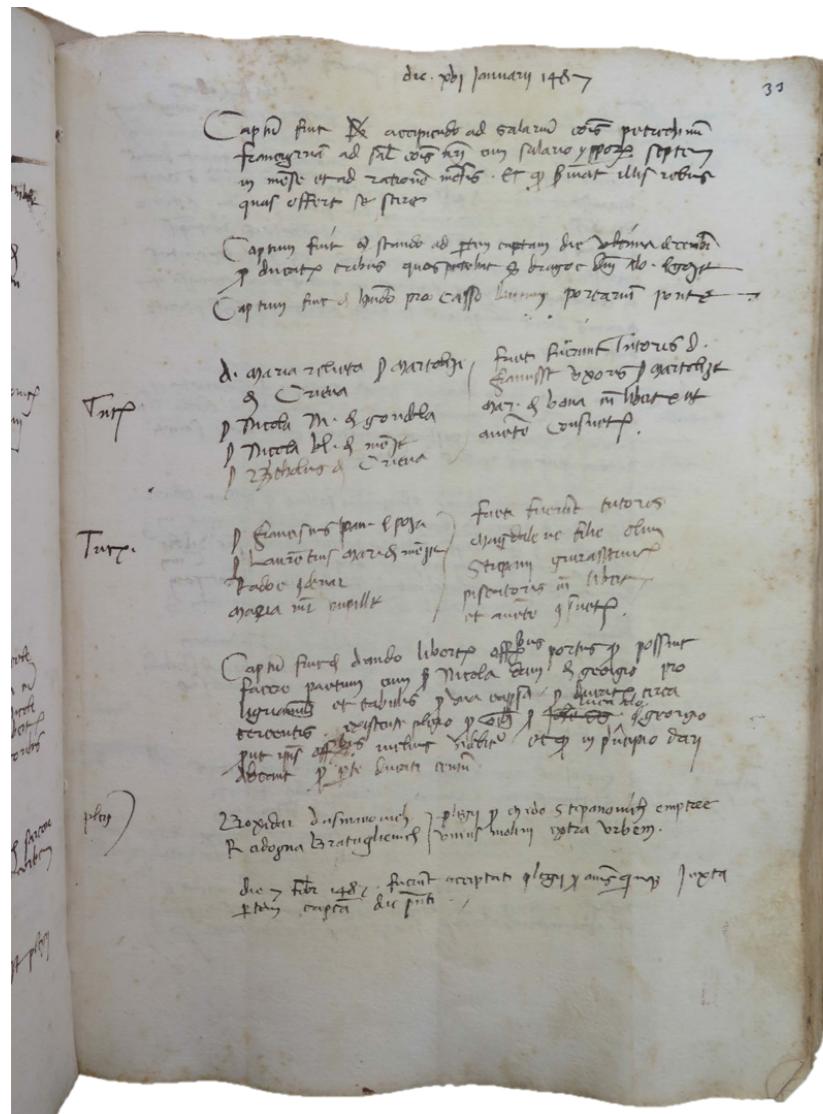
<sup>12</sup> DAD, Ser. V, Acta Consilii Minoris, vol. 22, f. 281v.

<sup>13</sup> DAD, Ser. V, Acta Consilii Minoris, vol. 22, f. 285v.

funds. The exact meaning of the small and large plan remains unknown to this day, but we tend to agree with Peković's opinion that it regards the decision to build the breakwater in stages, instead of immediately starting the construction of the entire structure (Peković 2017: 334).

In March 1484, five supervisors of works in the port (lat. *officiales supra fabrica portus*) were appointed,<sup>6</sup> and in April of the same year the Small Council decided to remove all iron from the lattice door in Ploče and use it to build caissons for the construction of the breakwater.<sup>7</sup> In December, the Senate decided to reward Paskoje Miličević for his work with silver items worth 12 ducats.<sup>8</sup> In March of the following year, the Senate decided to use money from all deposits except the Large Customs deposit for the construction of the breakwater,<sup>9</sup> and in November the Minor Council authorized the supervisors of the construction of the port to procure wood for the construction of the breakwater caisson.<sup>10</sup>

which had been damaged by bad weather.<sup>14</sup> In October, the Minor Council decided to donate the rest of the wood from the caisson to the monastery of St. Clare,<sup>15</sup> and in November pieces of wood and iron nails left over from the construction of the caisson were redirected to the repair of the harbor bridge.<sup>16</sup>

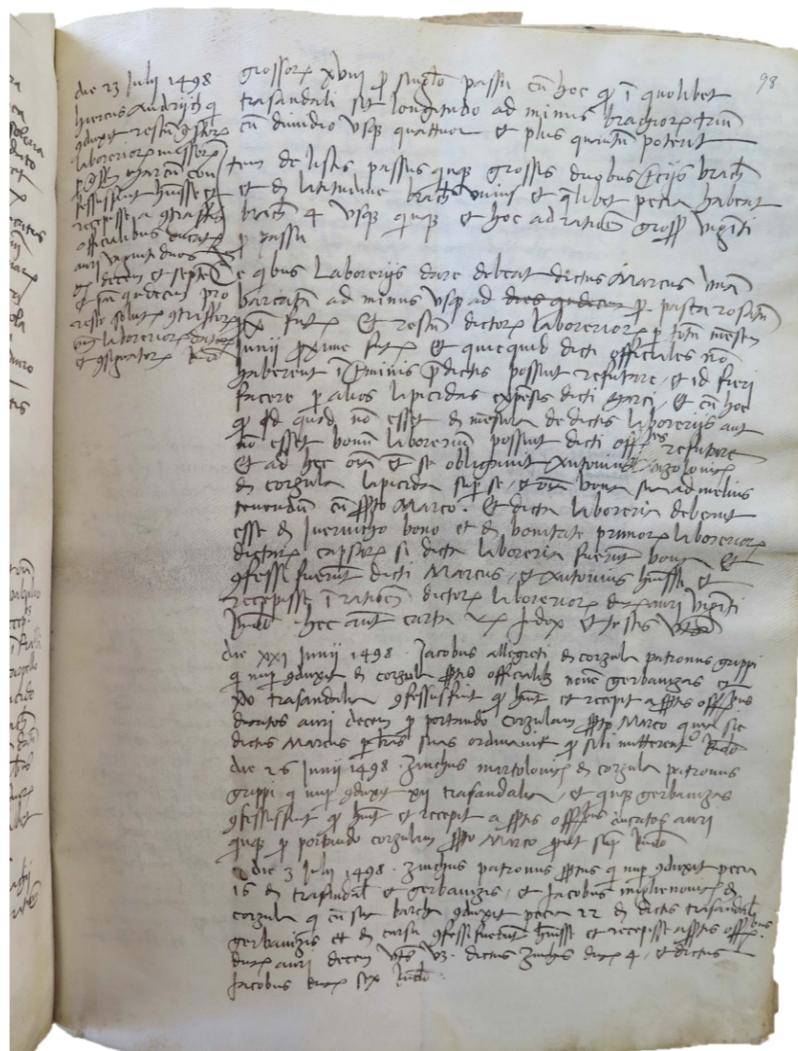


**Fig. 4**  
Document about the acquisition of wood for two caissons in 1487 (DAD, Ser. V, Acta Consilii Minoris, vol. 23, f. 33r)

In January of the following year, the Minor Council approved the supervisors to sign a contract with Nikola Đurđević for the supply of wood needed to build one caisson at a price of 300 ducats, and to pay him an advance of 100 ducats (Fig. 4).<sup>17</sup> Two days later, the Minor Council authorized the supervisors to resolve the issue of procurement of materials from Dragoje Gučetić's land, directing the supervisors to expend up to 50 perpers, and then deduct Dragoje's debt to the Republic from the estimated amount.<sup>18</sup> Later that month, a contract for the supply of timber was signed with Nikola Đurđević,<sup>19</sup> and in February the Minor Council authorized the supervisors and Paskoje Miličević to clean the port of stone and gravel.<sup>20</sup>

After an eleven year gap in the historical sources, in May 1498 the supervisors of the construction of the port agreed with Marko Kresulović from Korčula to purchase stone material for the breakwater (Fig. 5).<sup>21</sup> According to the decision of the Minor Council from January 1499,

Paskoje Miličević received 10 perpers as a reward for his supervision of the repair of the breakwater and for other municipal work.<sup>22</sup>



**Fig. 5**  
Document about the acquisition of stone from Korčula in 1498 (DAD, Ser. XXXVI/b, Debita notariae pro comuni, vol. 1, f. 97v - 98r)

In May 1501, the supervisors signed a contract with six workers for the delivery of stone for the breakwater, which they would prepare within two months at a place called Budim in Primorje.<sup>23</sup> In the same month, the Minor Council ordered the supervisors to rent a ship to go to Senj to procure logs to repair the breakwater.<sup>24</sup> At the end of March of the next year, the supervisors of the port chain were appointed, who, in agreement with Paskoje Miličević, had to make sure that the chain completely prevented entry into or exit from the port.<sup>25</sup> In December 1505, Paskoje Miličević again received a reward of 10 perpers for supervising the repair of the breakwater,<sup>26</sup> and in May of the following year the Minor Council ordered the supervisors of the Arsenal to close the harbor on both sides of the breakwater with beams and chains (Fig. 20).<sup>27</sup>

In February 1510, the Senate of the Republic of Dubrovnik authorized the rector and the Minor Council to repair the breakwater in the best possible way.<sup>28</sup> In August of that year, the Minor Council ordered the supervisors of the municipal works to throw as many rocks as possible outside the breakwater,<sup>29</sup> and in September allowed them to pay the

<sup>14</sup> DAD, Ser. V, Acta Consilii Minoris, vol. 23, f. 8v.

<sup>15</sup> DAD, Ser. V, Acta Consilii Minoris, vol. 23, f. 12r.

<sup>16</sup> DAD, Ser. V, Acta Consilii Minoris, vol. 23, f. 24r.

<sup>17</sup> DAD, Ser. V, Acta Consilii Minoris, vol. 23, f. 33r.

<sup>18</sup> DAD, Ser. V, Acta Consilii Minoris, vol. 23, f. 33v.

<sup>19</sup> DAD, Ser. XXXVI/b, Debita notariae pro comuni, vol. 1, f. 75r. It was necessary to deliver 500 pieces of beams of square section, 5 passi long and 500 pieces of beams of the same type, 4 passi long; 100 thick planks(?), 4 passi long; 400 straight planks from Žrnovnica; 2 beams of rectangular section, 26 cubits long; 2 beams of the same type, 22 cubits long and 18 beams of the same type, 17 cubits long, all of those beams  $\frac{3}{4}$  cubit thick, and  $\frac{1}{2}$  cubit large.

<sup>20</sup> DAD, Ser. V, Acta Consilii Minoris, vol. 23, f. 42r.trese

<sup>21</sup> DAD, Ser. XXXVI/b, Debita notariae pro comuni, vol. 1, f. 97v - 98r. The document mentions 40 pieces of stone called gerlavize, at least 4 cubits long, 2 cubits high, and 1 cubit wide; 60 pieces of stone called trasandali, at least 3,5-4 cubits long, 2 cubits high and 1 cubit wide; 5 passi of stone called liste, 4-5 cubits long(?), 2 cubits high and 1 cubit wide.

<sup>22</sup> DAD, Ser. V, Acta Consilii Minoris, vol. 26, f. 167v.

<sup>23</sup> DAD, Ser. XXXVI/b, Debita notariae pro comuni, vol. 1, f. 106r. The order consisted of 54 passi of pieces of stone called corso, 2-3 cubits long, 2 cubits high and 1 cubit wide; 6 passi of pieces of stone called lista, of the same size; 40 pieces of stone called trasandali, of which 25 pieces measuring 3 cubits in length and 1 cubit in width, and 15 pieces of the same length and width, and half cubit high; 6 pieces of stone called gerlaviza, 4 cubits long, and 2 cubits high.

<sup>24</sup> DAD, Ser. V, Acta Consilii Minoris, vol. 27, f. 74v.

<sup>25</sup> DAD, Ser. V, Acta Consilii Minoris, vol. 27, f. 145.

<sup>26</sup> DAD, Ser. V, Acta Consilii Minoris, vol. 28, f. 237v.

<sup>27</sup> DAD, Ser. V, Acta Consilii Minoris, vol. 29, f. 253r.

<sup>28</sup> DAD, Ser. III, Acta Consilii Rogatorum, vol. 31, f. 191v.

<sup>29</sup> DAD, Ser. V, Acta Consilii Minoris, vol. 30, f. 171v.

amount of 40 perpers for the stone delivered for the breakwater.<sup>30</sup> In May 1512, the Minor Council authorized the supervisors to take care of throwing rocks behind the breakwater by means of a scaffolding which would enable them to set up machines;<sup>31</sup> in March 1513 it authorized the supervisors to conclude a contract for the supply of processed stone for the repair of the breakwater with stoneworkers from the island of Korčula,<sup>32</sup> and a week later issued an order to appoint a supervisor of stone making and to pay 20 perpers to the workers from Korčula.<sup>33</sup>

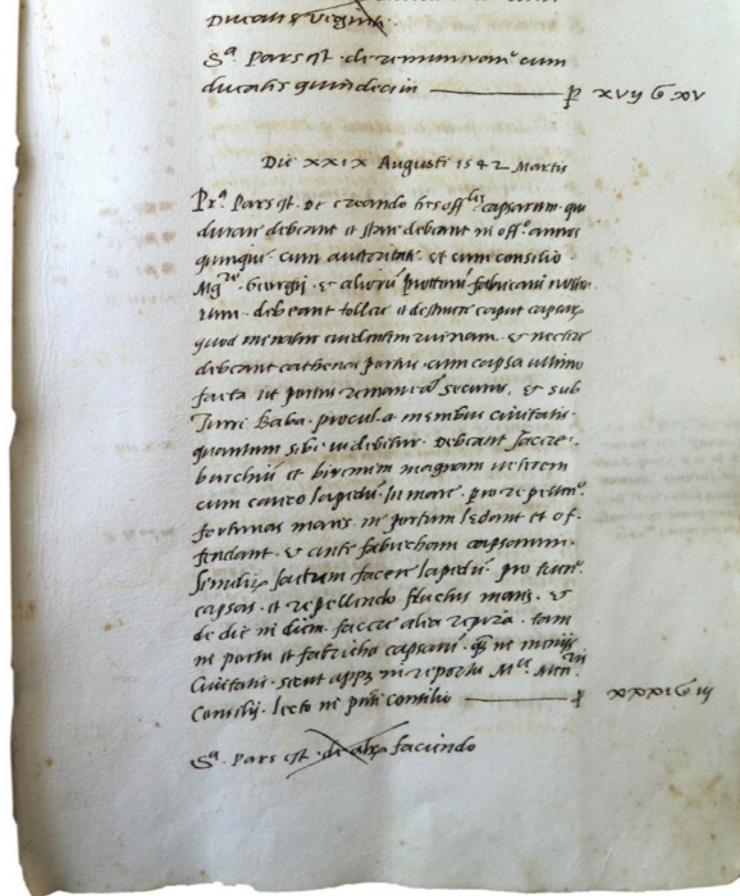
In March 1514, the Senate decided to extend the breakwater towards Ploče, i.e. in a northerly direction. The three supervisors had to take care of it, while payments were assigned to the supervisors of municipal works, and the costs were recorded in a separate book.<sup>34</sup> A contract was signed with Ludovik Šuratić, a stoneworker from the island of Korčula, for the delivery of stone for 25 ducats by the end of June.<sup>35</sup> In April the Minor Council approved the payment of 80 ducats by the supervisors of the municipal works to the supervisors of the construction of the breakwater;<sup>36</sup> in May the Senate approved the taking of 100 ducats from the reliquary for work on the extension of the breakwater;<sup>37</sup> in June it ordered the rector and the Minor Council to take care of the expenses for the construction of the breakwater, half of which was to be paid in cash and half in grain,<sup>38</sup> and in August the Minor Council granted the supervisors 50 perpers to pay for the ship that brought the rocks to throw behind the breakwater.<sup>39</sup>

In May 1518, the Senate authorized the rector and the Minor Council to take care of repairing everything that was bad on the breakwater,<sup>40</sup> and in August 1525, the supervisors were issued 50 liters of lead from the Armory for the breakwater.<sup>41</sup> In June 1529, the Senate decided that the rector and the Minor Council should start repairing the breakwater, and the work was assigned to Master Juraj from Bar.<sup>42</sup> The decision was repeated ten days later, with the addition of a port chain repair.<sup>43</sup> In August of the same year, the decision was repeated that the rector and the Minor Council would organize work on the breakwater with Master Juraj, and that the supervisors would take care of the procurement of the stone. Master Juraj was to be paid three ducats a month and six groschen for each day he worked for the Republic.<sup>44</sup> In December, the Senate appointed three five-year supervisors to take care of repairing the breakwater, cleaning and organizing everything needed in the port. The supervisors of the construction of the trireme would have taken care of the costs of their work.<sup>45</sup>

In May 1535, the Senate decided that the supervisors should take care of the repair of the central part of the breakwater, where the ships were moored.<sup>46</sup> In February 1536, it was decided that the

supervisors would remain on duty until they completed the work,<sup>47</sup> and in April that the supervisors of the arms would procure a boat, ropes, and other things needed to repair the breakwater.<sup>48</sup>

In March 1539, three supervisors of the repair of the breakwater were appointed for a period of one year,<sup>49</sup> and in May it was determined that the supervisors of the arms would give the supervisors of the breakwater a hundred planks and the necessary iron.<sup>50</sup> In June, the supervisors of the arms were ordered to give 50 liters of iron and two pieces of lead to the supervisors of the breakwater;<sup>51</sup> in July, the supervisors of the breakwater were allowed to take three pieces of lead,<sup>52</sup> and in October to take 300 liters of iron and 120 liters of lead.<sup>53</sup>



**Fig. 6**  
Order from the Senate to dismantle the head of the breakwater, and scuttle the two ships, in 1524 (DAD, Ser. III, Acta Consilii Rogatorum, vol. 46, f. 23r)

<sup>30</sup> DAD, Ser. V, Acta Consilii Minoris, vol. 30, f. 181v.

<sup>31</sup> DAD, Ser. V, Acta Consilii Minoris, vol. 31, f. 64v.

<sup>32</sup> DAD, Ser. V, Acta Consilii Minoris, vol. 31, f. 140r.

<sup>33</sup> DAD, Ser. V, Acta Consilii Minoris, vol. 31, f. 142v.

<sup>34</sup> DAD, Ser. III, Acta Consilii Rogatorum, vol. 33, f. 35r.

<sup>35</sup> DAD, Ser. XXXVI/b, Debita notariae pro comuni, vol. 1, f. 147r-v. The order consisted of 20 *passi* of pieces of stone called *trasandali*, 2 cubits wide; 11 *passi* of stone called *lista*, of the same width; 55 *passi* of pieces of stone called *corso*, of the same width; uncertain number of pieces of stone called *cantoni*, and 2 big columns, 5 cubits each, of 1 cubit in diameter.

<sup>36</sup> DAD, Ser. V, Acta Consilii Minoris, vol. 31, f. 251r.

<sup>37</sup> DAD, Ser. III, Acta Consilii Rogatorum, vol. 33, f. 53v.

<sup>38</sup> DAD, Ser. III, Acta Consilii Rogatorum, vol. 33, f. 67r.

<sup>39</sup> DAD, Ser. V, Acta Consilii Minoris, vol. 31, f. 289v.

<sup>40</sup> DAD, Ser. III, Acta Consilii Rogatorum, vol. 34, f. 256r.

<sup>41</sup> DAD, Ser. III, Acta Consilii Rogatorum, vol. 38, f. 32r.

<sup>42</sup> DAD, Ser. III, Acta Consilii Rogatorum, vol. 39, f. 220r.

<sup>43</sup> DAD, Ser. III, Acta Consilii Rogatorum, vol. 39, f. 216r.

<sup>44</sup> DAD, Ser. III, Acta Consilii Rogatorum, vol. 39, f. 252r.

<sup>45</sup> DAD, Ser. III, Acta Consilii Rogatorum, vol. 39, f. 268v.

<sup>46</sup> DAD, Ser. III, Acta Consilii Rogatorum, vol. 42, f. 175r.

<sup>47</sup> DAD, Ser. III, Acta Consilii Rogatorum, vol. 42, f. 257r.

<sup>48</sup> DAD, Ser. III, Acta Consilii Rogatorum, vol. 42, f. 279v.

<sup>49</sup> DAD, Ser. III, Acta Consilii Rogatorum, vol. 44, f. 156r.

<sup>50</sup> DAD, Ser. III, Acta Consilii Rogatorum, vol. 44, f. 179v-180r.

<sup>51</sup> DAD, Ser. III, Acta Consilii Rogatorum, vol. 44, f. 198r.

<sup>52</sup> DAD, Ser. III, Acta Consilii Rogatorum, vol. 44, f. 215r.

<sup>53</sup> DAD, Ser. III, Acta Consilii Rogatorum, vol. 44, f. 240r.

<sup>54</sup> DAD, Ser. III, Acta Consilii Rogatorum, vol. 46, f. 23r-v.

<sup>55</sup> DAD, Ser. III, Acta Consilii Rogatorum, vol. 49, f. 161v.

<sup>56</sup> DAD, Ser. V, Acta Consilii Minoris, vol. 42, f. 25r.

In August 1542, the Senate appointed three supervisors of the construction of the breakwater for a period of five years.<sup>54</sup> Together with Master Juraj and masters from the Arsenal (Ven. proti), they were to destroy the head of the breakwater and scuttle two old ships filled with rocks, a čun and a fusta (Lat. *burchium* and *biremem magnum*), in order to better protect the port from waves (Fig. 6).

In May 1550, the rector and the Minor Council were authorized by the Senate to consult with experts and commission a model for repairing the breakwater to be presented to the Senate. The supervisors were ordered to throw many rocks under the wall of Toreta as soon as possible.<sup>55</sup>

The Minor Council allocated 50 perpers to the supervisors of the municipal works for the work on the breakwater.<sup>56</sup> In May 1552, the breakwater supervisors were ordered to hire Pasquale de Nova, the Italian proto-master of the Dubrovnik water supply

and sewerage, as a foreman.<sup>57</sup> In October 1553 a piece of lead was assigned to the supervisors of the breakwater,<sup>58</sup> and in November two more pieces were issued.<sup>59</sup> In July 1554, the Minor Council warned the supervisors of the municipal works to listen to the supervisors of the breakwater when working on the breakwater, otherwise they would be forced to pay 25 perpers of fines.<sup>60</sup> In August of the same year, the Senate directed that the supervisors of the arms give the supervisors of the breakwater iron, lead, and whatever else was needed.<sup>61</sup> In February 1555, the Minor Council decided that Pasquale de Nova would be paid two ducats a month, in addition to his normal salary, while he was engaged on the breakwater.<sup>62</sup> In April, the Senate ordered the supervisors of the arms to give the supervisors of the breakwater lead and a small house to make ropes, and that the clamps on the stones should no longer be made of iron but of brass.<sup>63</sup>

In June 1595, the Senate reappointed three supervisors of the repair of the breakwater;<sup>64</sup> in January 1600 it ordered the supervisors of the arms to give the supervisors of the breakwater 50 liters of iron, 50 liters of lead, and 50 liters of copper,<sup>65</sup> and in June to give them iron, lead, and copper in the required quantities.<sup>66</sup> In February 1628, the breakwater was in poor condition, so the Senate ordered the supervisors of the Arsenal to obtain an expert opinion and submit a report on the collapsed portion of the structure.<sup>67</sup> In February 1831 the Senate took a loan of 1000 ducats with 5% interest for the restoration of the breakwater,<sup>68</sup> and we also know that in May 1724 it secured 1000 ducats for its repair.<sup>69</sup>

### 3. Historical research

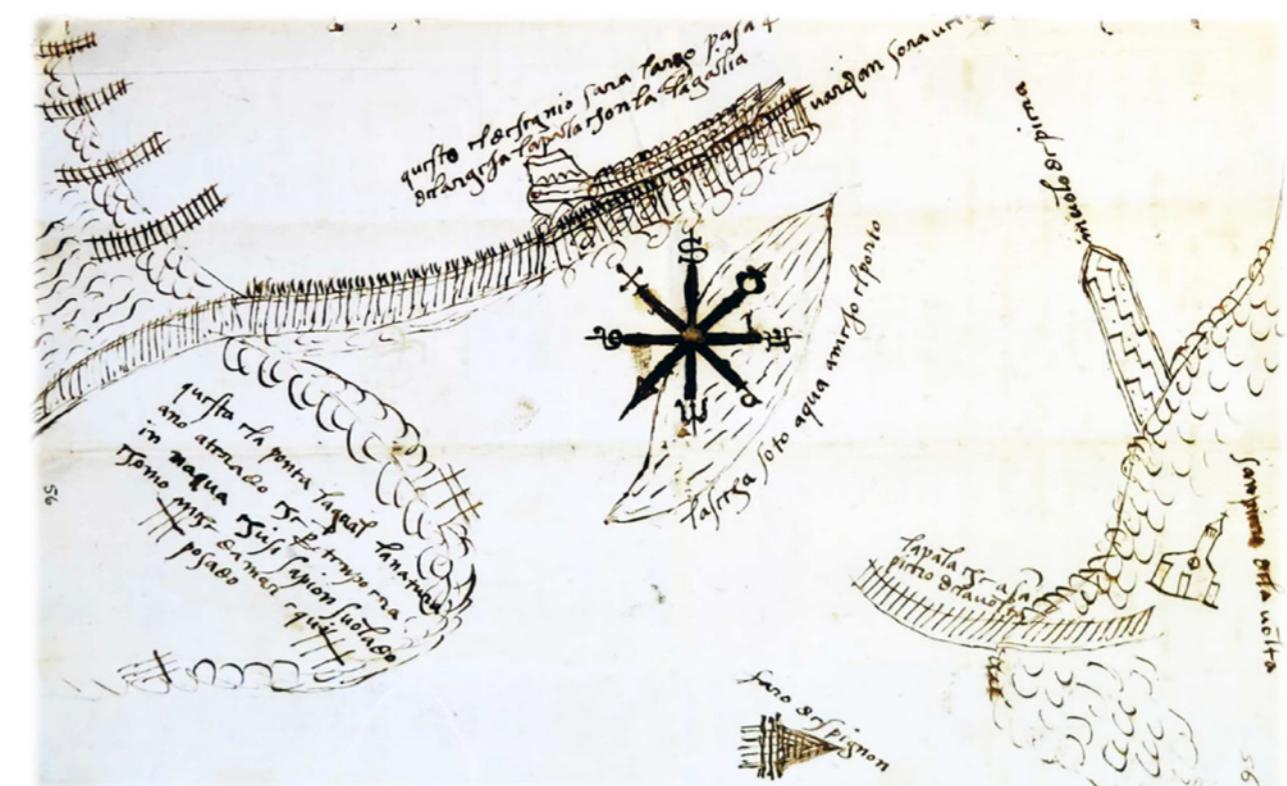
At the end of 2018, research was conducted at the State Archives in Dubrovnik, with the aim of verifying the content of documents listed in the literature so far (15<sup>th</sup>–18<sup>th</sup> century), verifying the existence of a breakwater in the port of Dubrovnik before the construction of Kaše and identifying documents that were not mentioned in the literature to date.<sup>70</sup> All the known documents were examined and photographed, and new documents were discovered, mainly related to investments in the repair of the breakwater. The newly discovered documents are dated to 1606 and 1615.

In May 1606, the Minor Council elected two clerks for the purpose of working on the breakwater,<sup>71</sup> and a week later also two supervisors.<sup>72</sup> The next day it was decided that the supervisors should spend 300 perpers to repair the breakwater,<sup>73</sup> and in July of that year it was decided to set aside 30 ducats for the supervisors' office expenses<sup>74</sup>. A week later, it was also decided to set aside another

<sup>57</sup> DAD, Ser. III, Acta Consilii Rogatorum, vol. 51, f. 64r.  
<sup>58</sup> DAD, Ser. III, Acta Consilii Rogatorum, vol. 51, f. 260v.  
<sup>59</sup> DAD, Ser. III, Acta Consilii Rogatorum, vol. 52, f. 7v.  
<sup>60</sup> DAD, Ser. V, Acta Consilii Minoris, vol. 43, f. 165r-v.  
<sup>61</sup> DAD, Ser. III, Acta Consilii Rogatorum, vol. 52, f. 127v.  
<sup>62</sup> DAD, Ser. V, Acta Consilii Minoris, vol. 43, f. 238v.  
<sup>63</sup> DAD, Ser. III, Acta Consilii Rogatorum, vol. 52, f. 254r.  
<sup>64</sup> DAD, Ser. III, Acta Consilii Rogatorum, vol. 74, f. 118v.  
<sup>65</sup> DAD, Ser. III, Acta Consilii Rogatorum, vol. 77, f. 2r.  
<sup>66</sup> DAD, Ser. III, Acta Consilii Rogatorum, vol. 77, f. 65r-v.  
<sup>67</sup> DAD, Ser. III, Acta Consilii Rogatorum, vol. 90, f. 218v.  
<sup>68</sup> DAD, Ser. III, Acta Consilii Rogatorum, vol. 92, f. 174v.  
<sup>69</sup> DAD, Ser. III, Acta Consilii Rogatorum, vol. 151, f. 205v.  
<sup>70</sup> The research, on behalf of the ARS NAUTICA Institut  
<sup>71</sup> DAD, Ser. V, Acta Consilii Minoris, vol. 67, f. 198r.  
<sup>72</sup> DAD, Ser. V, Acta Consilii Minoris, vol. 67, f. 199v.  
<sup>73</sup> DAD, Ser. V, Acta Consilii Minoris, vol. 67, f. 200v.  
<sup>74</sup> DAD, Ser. V, Acta Consilii Minoris, vol. 67, f. 218v.

150 perpers for these costs,<sup>75</sup> and the same thing happened in August.<sup>76</sup> From May 5 to September 30, 1606, and from July 29 to September 1, 1615, the cost of repairing the breakwater was recorded in special registers.<sup>77</sup> In July 1615, the Senate decided that the supervisors of the Arsenal should devote themselves to repairing the breakwater.<sup>78</sup>

Historical research yielded the order of Alfonso V of Aragon, executed in the period from 1451 to 1458, to increase and strengthen the main pier in the port of Naples through the construction of large wooden caissons, waterproofed with pitch and oakum, launched into the sea (Colletta 2006: 157, 262).<sup>79</sup> Research at the State Archives in Venice revealed blueprints for scuttling a galley with the aim of building a pier in the Venetian lagoon in 1535 (Fig. 7), which corresponds to the plan to scuttle ships to secure the breakwater head in 1542.<sup>80</sup> In addition, an archaeological survey of a galley and a flat-bottomed cargo ship, scuttled at the site of S. Marco in Boccalama in the Venetian lagoon (D'Agostino, Medas 2003; Fozzati 2003), was carried out in 2000. The ships were probably scuttled there in 1348 with the aim of making a pier for a local monastery.<sup>81</sup> Scuttling of Venetian ships with the aim of strengthening port structures confirms that this procedure was a common practice in the Middle Ages and early New Age, so we should not be surprised by the decision of the Dubrovnik Senate in 1542 to scuttle two old ships under the breakwater.



**Fig. 7**  
Plan for scuttling a galley in the Venetian Lagoon in 1535 (ASVe, Savi ed Esecutori alle acque, b. 120, dis. I, detail)

<sup>75</sup> DAD, Ser. V, Acta Consilii Minoris, vol. 67, f. 221r.

<sup>76</sup> DAD, Ser. V, Acta Consilii Minoris, vol. 67, f. 226v.

<sup>77</sup> DAD, Ser. VII, Fabbriche, reg. 35 – Libro per la fabricha delle casse 1606; DAD, Ser. VII, Fabbriche, reg. 41 – Libro della fabricha delle casse del porto 1615.

<sup>78</sup> DAD, Ser. III, Acta Consilii Rogatorum, vol. 84, f. 250r.

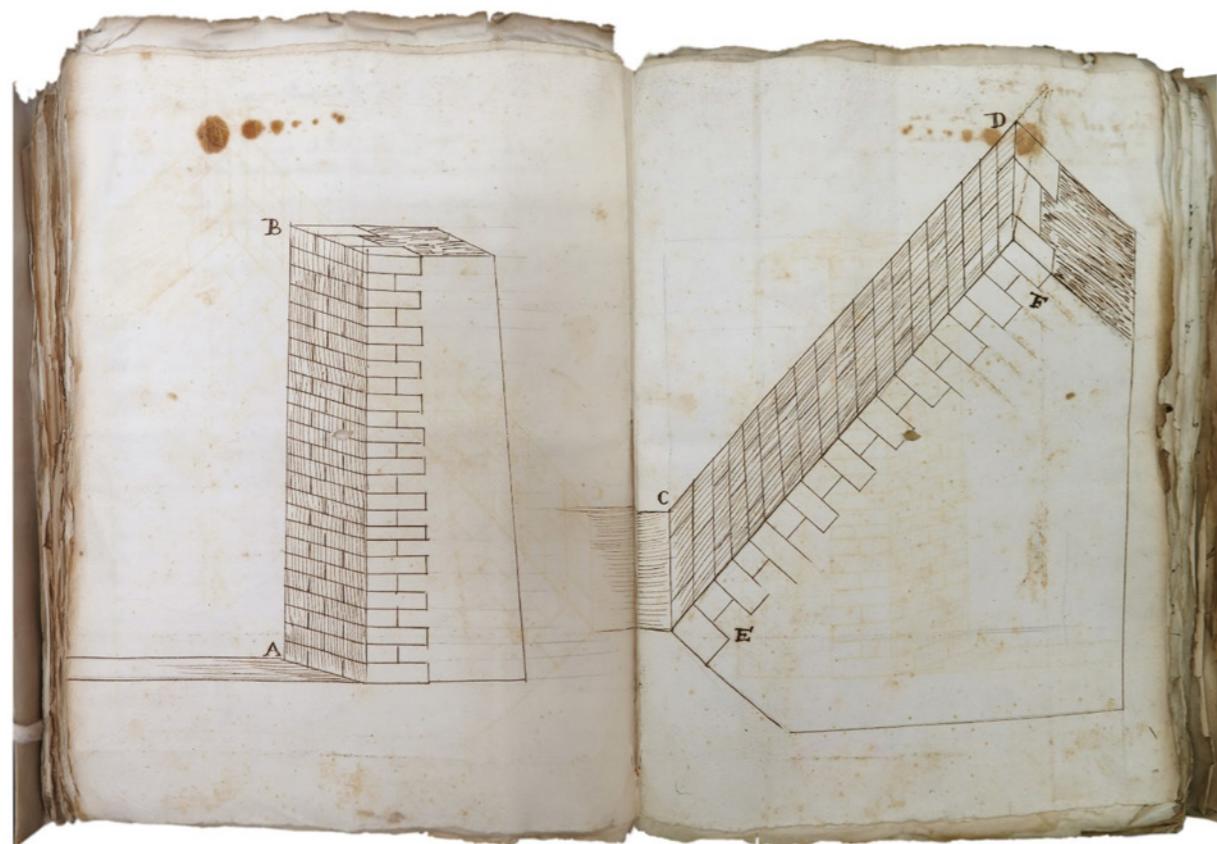
<sup>79</sup> We thank Amedeo Feniello for referring us to this source.

<sup>80</sup> ASVe, Savi ed Esecutori alle acque, b. 120, dis. I - detail.

<sup>81</sup> In 1348, a plague reigned in Venice, so in a short time it was necessary to raise piers for the docking of numerous ships that brought the deceased to this place (personal communication M. Bondioli).

Historical research also resulted in the discovery that on December 29, 1570, Dubrovnik was hit by a devastating storm, described in the manuscript of *Il Chartigatore* by Nicolò Sagri (Bondioli et al. 2020: 363–364). A similar storm Sagri did not experience during 32 years of life and 20 years of sailing. A violent tempest shattered and destroyed much of the breakwater, and sank two ships, one of which, before sinking, broke the three chains closing the entrance to the port.

A comparison with documents from the State Archives in Venice and existing literature has traced the reason why the Kaše breakwater probably suffered frequently and underwent many repairs over time. First of all, the mortar used to strengthen the breakwater was likely made with too much clay, weakening the structure. Clay was added to mortar during the Middle Ages instead of pozzolana, which was rediscovered a few centuries later.<sup>82</sup> In December 1598, the engineer Buonaiuto Lorini made a project to restore the protruding part of the fort in Candia. In the accompanying text Lorini wrote that the walls of a flat surface (Fig. 8, left), set towards the sea, could not survive even if they were beautifully executed by means of large stones, interconnected by mortar and metal clamps. First, the sea softens the mortar, and after that it is enough for one stone to fall out of place to disturb the stability of the whole structure. It would be necessary, therefore, to build sloping walls (Fig. 8, right), along which the waves will slide instead of breaking directly against them.<sup>83</sup> Apparently Renaissance Dubrovnik did not know about the destructive effect of waves on breakwaters, a subject actually studied by Leonardo da Vinci (Calvi 1909: f. 25v.).



**Fig. 8**  
Pages from the project of restoring the protruding part of the fort of Candia by Buonaiuto Lorini, 1598 (ASVe, Senato, deliberazioni, mar, f. 140)

<sup>82</sup> About the use of the pozzolana to build the "murazzi" in order to protect the shorelines of the Venetian lagoon in the 18th century see Grillo 1989.

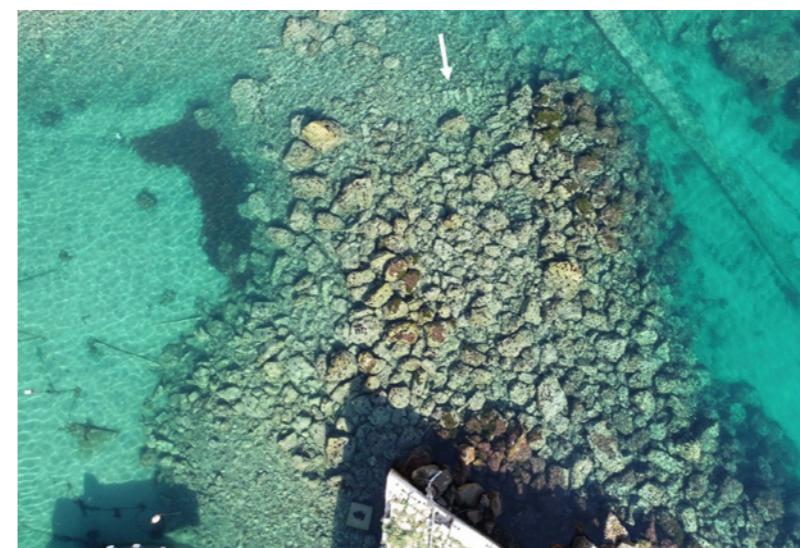
<sup>83</sup> ASVe, Senato, deliberazioni, mar, f. 140.

## 4. Archaeological research

The archaeological team of the ARS NAUTICA Institute for Maritime Heritage and the University of Zadar conducted a survey of the Kaše breakwater in October 2018. The necessary logistical support was provided by the Seafarers' Club and the Port of Posat, which in both cases offered premises for storing the necessary equipment. In addition to the daily setup of the pump, it was necessary to provide space for storing archaeological finds as well as space for preparing divers. In addition, a ship was required to serve as a support to research participants in situations when it was necessary to communicate between the coast and the breakwater.



**Fig. 9**  
Traces of the former part of the breakwater towards Ploče, in the surface layer of the seabed (photo: K. Yamafune)

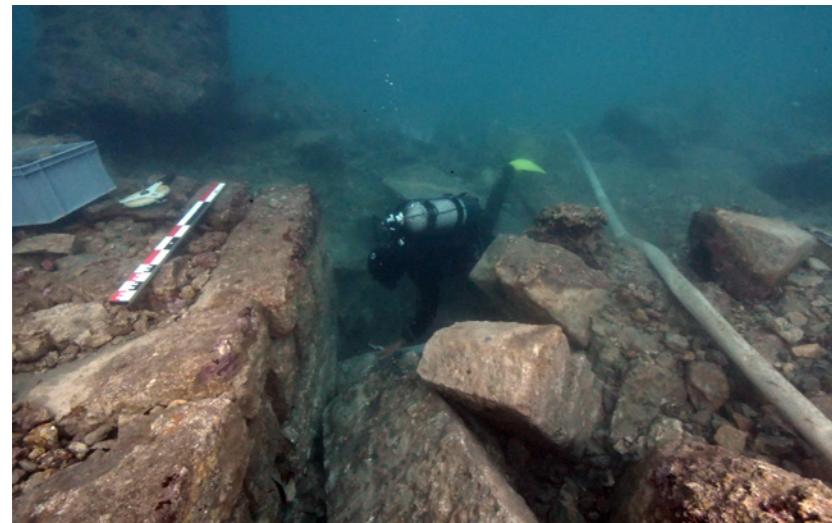


**Fig. 10**  
Aerial view of the submerged structure (photo: Geo Vrtine Ltd., Dubrovnik)

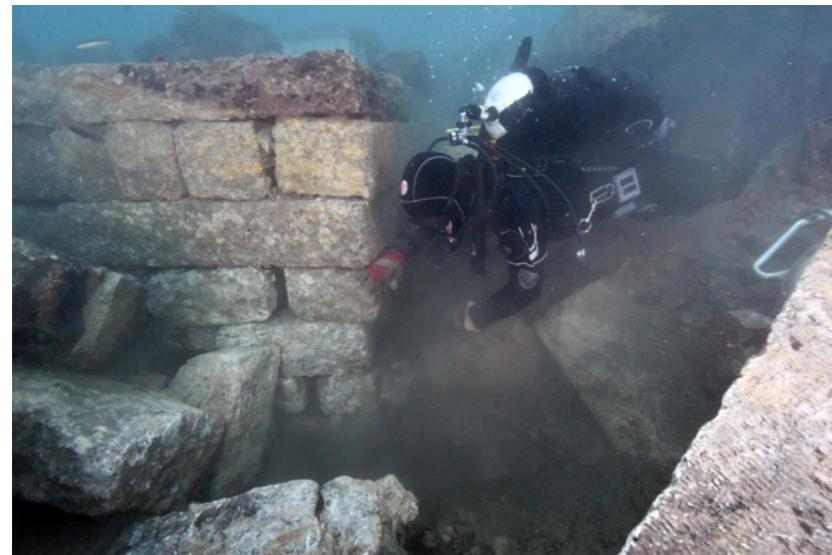
of the structure was rather slow. The presence of the large blocks resulted from the demolition of the northern part of Kaše, after which it was probably decided that the part towards Ploče would not be rebuilt. Although there is no archival evidence, it is assumed that such a decision was made during the 16<sup>th</sup> century, probably after some natural disaster (see below).

During the first inspection of the wider area of today's breakwater, anomalies were observed on the seabed which required archaeological research. Initial cleaning by hand suggested that in the area towards Posat (to the north) there was a part of the submerged structure of the breakwater that was completely unknown (Fig. 9). A later examination of aerial images revealed this part of the structure (Fig. 10), which could not be seen in the side-scan sonar images due to obstruction caused by large rocks scattered on the seabed. They were thrown on several occasions around the existing Kaše breakwater, in order to protect the structure from destruction by the action of the sea from all free sides, and also to fill in the free space towards Ploče.

The research began with the installation of water dredges, connected by hoses to the water pump. The dredges were placed on both sides of the observed structure, and the sediment cleaning began. Due to the extremely large blocks of worked stone that appeared in the trench (Fig. 11), the cleaning



**Fig. 11**  
Large stone blocks in the archaeological trench (photo: K. Yamafune)



**Fig. 12**  
North-western end of the discovered structure of the former breakwater (photo: K. Yamafune)



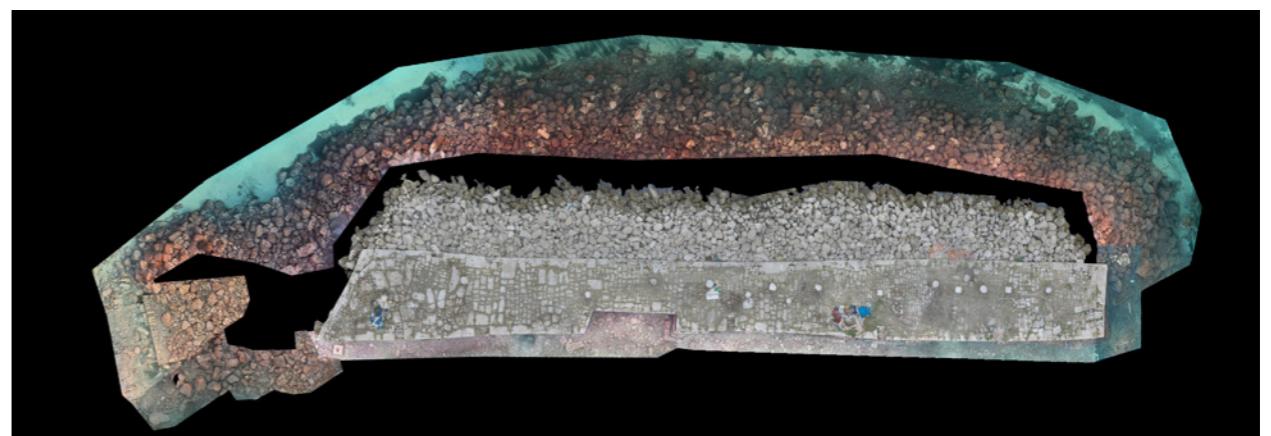
**Fig. 13**  
Extract from 3D photogrammetric model of the newly discovered structure, view from the north-west (model: K. Yamafune)

Over the next ten days, it was discovered that the unknown part of the structure was preserved to the level of eight rows of blocks to the northwest (Fig. 12, 13) and seven rows of blocks to the northeast. It extends in the direction of the visible part of Kaše, but is unfortunately inaccessible due to the large rocks that were thrown on the surface of the seabed in order to protect the existing breakwater. The whole situation was photographed, and geodetically and photogrammetrically recorded.

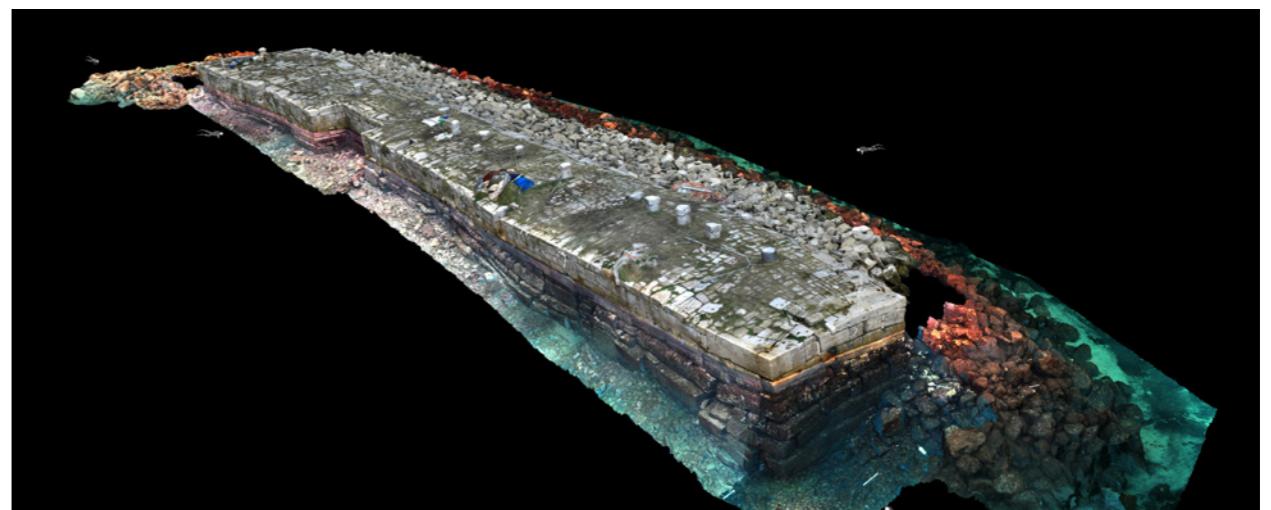
In parallel with the excavation, a detailed photogrammetric survey of the breakwater was performed (Figs. 14, 15). First, the submerged section and the part located in the tidal zone were recorded. After that, the shooting of the portion of the breakwater above the sea surface was done. By merging all the photos, a realistic 3D view of the entire breakwater was obtained. To obtain the most credible recording, cleaning of the breakwater overgrown with vegetation was attempted. The work was partly hindered by weather conditions, i.e. rainy periods that made it impossible to stay in the field.

Due to the absence of other finds and the extremely limited repertoire of pottery fragments in the trench, the wood of the original construction found in the northeastern part of the probe was used to date the structure.<sup>84</sup> The dating re-

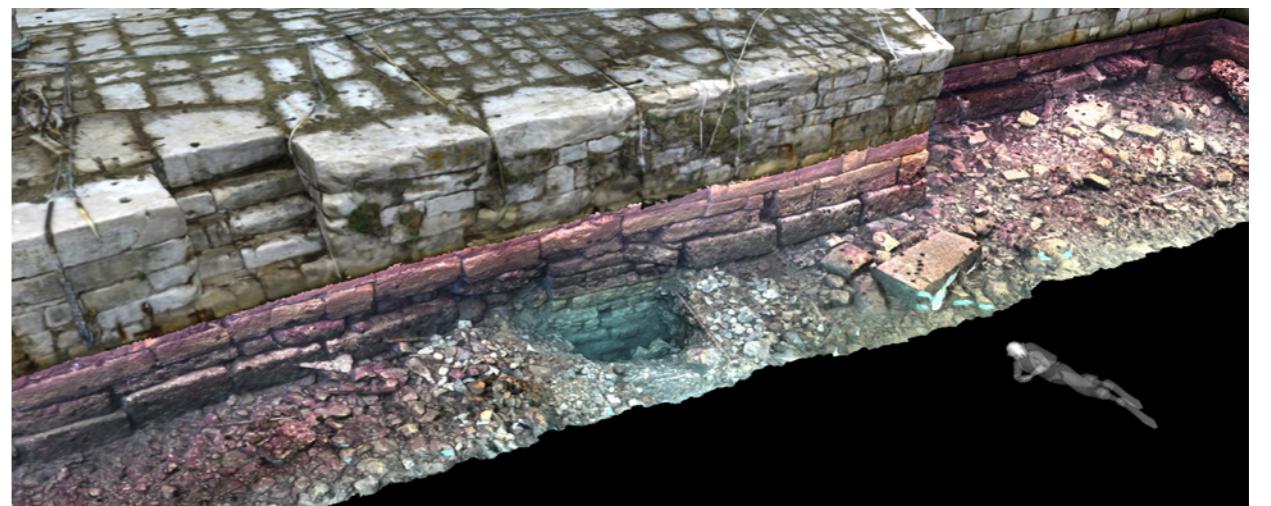
sults showed that the timber was most likely cut in the period from 1436 to 1522. During the work on the site, a probe was made at the place where the use of smaller stones could be seen (Fig. 16). At that point, the excavation reached a depth of eight layers of stone, but it is not clear whether this height represents the full height of the breakwater.



**Fig. 14**  
Extract from 3D photogrammetric model of the breakwater, top view (model: K. Yamafune)



**Fig. 15**  
Extract from 3D photogrammetric model of the breakwater, view from the south-west (model: K. Yamafune)



**Fig. 16**  
Extract from 3D photogrammetric model of the breakwater, detail of the archaeological probe (model: K. Yamafune)

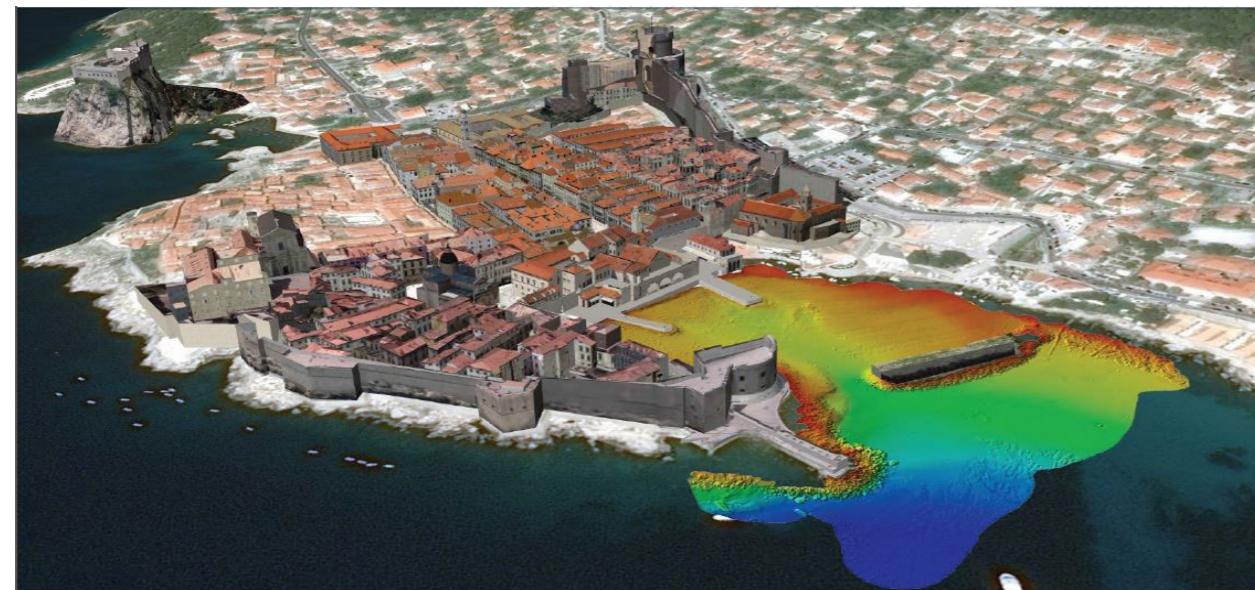
<sup>84</sup> Radiocarbon dating was performed by Beta Analytic Testing Laboratory, Miami, Florida, USA, sample Beta - 512113.

## 5. Geophysical and geological survey

The geophysical research of the Old Port of Dubrovnik was conducted by the company GEOmar Ltd. from Split.<sup>85</sup> The first step was drone-assisted aerial mapping to collect high-resolution topographic data. These data had to be collected because the coast changes over time due to sea level variations, erosion, new structures, etc. Therefore, survey began with a drone flight to obtain an aerial orthogonal photograph that was analyzed for the purpose of studying obstacles and coastal boundaries of submarine surveying.

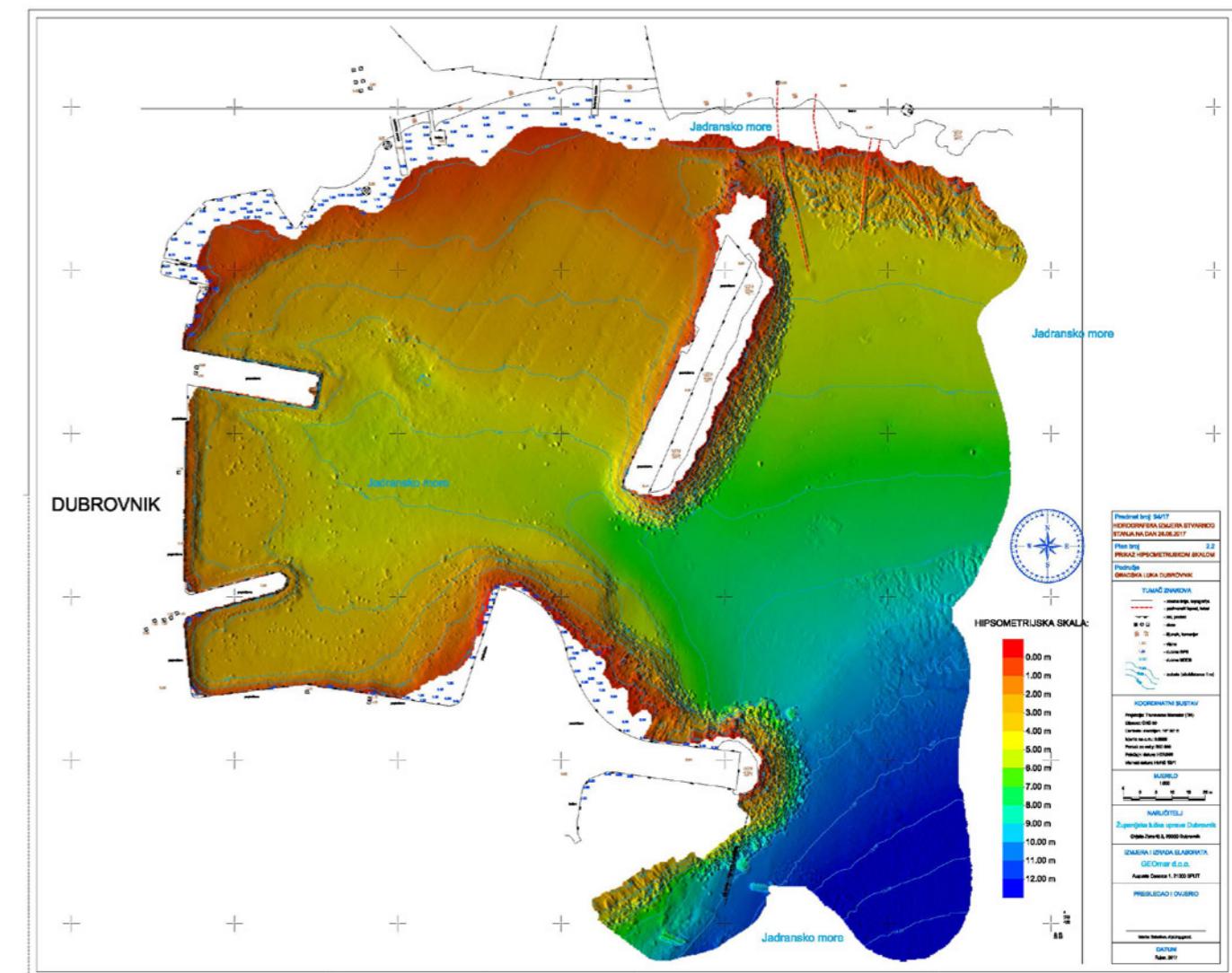
In order to conduct the port recording in ultra high resolution, the Multibeam Echosounder (MBES) Teledyne Marine RESON SeaBat T20-P was used. The sonar is adapted to collect data in shallow water. The SeaBat T20-P was used at a frequency of 400 kHz with 512 beams in each ping. The multibeam sonar of suitable dimensions was attached to the survey boat, a 7 m long, shallow draft Colnago 20 with a 100 hp engine, which enabled shooting in very shallow areas. The Applanix POS MV motion sensor was used to measure the exact height of the vessel, course, position and speed, thus providing geo-referencing of data and motion compensation. Global Navigation Satellite System (GNSS) antennas were installed on a horizontal bar above the sonar head installation. The MBES and positioning system were controlled by a PC using Sonar UI and POS View software. Teledyne PDS software was used to merge position, motion and multibeam data. In this way, a final map with depths, contours and profiles was obtained, which was printed in Teledyne PDS (Figs. 17, 18).

In the shallowest parts of the port, at depths less than 1.5 m, and on land, conventional topographic surveying techniques, such as GNSS and total station, were used. By combining the two recording modes, a digital terrain model (DTM) was produced for the port's submarine area. The standard deviation of the DTM is 0.03 m, which indicates excellent measurement quality and confidence in its results. By measuring the area of the port, the position of submarine cables and pipelines was also recorded, which could be useful when planning any future construction projects as well as archaeological or geological interventions.



**Fig. 17**  
Digital terrain model opened in Google Earth application (GEOmar Ltd.)

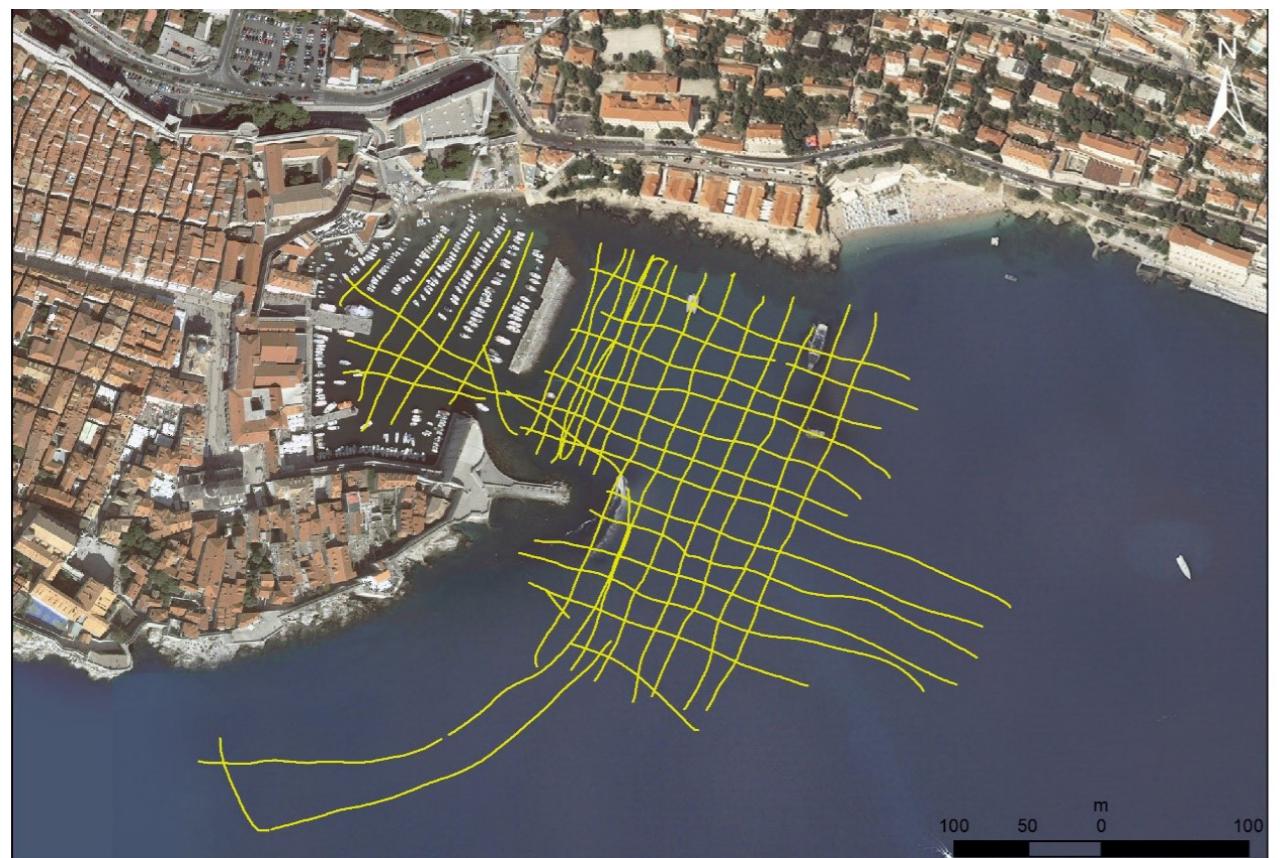
<sup>85</sup> All the data about the geophysical research are taken from GEOmar Ltd., Surveying Dubrovnik old town port, Croatia, A TELEDYNE MARINE Product Case Study, <https://twitter.com/TeledyneRESON/status/1103319338352852992>; i GEOmar Ltd., Survey operations in the historic Dubrovnik Old Town Port, UCI underwater contractor International, March/April 2019, <http://www.under-water.co.uk/port-survey/>.



**Fig. 18**  
Result of multibeam sonar survey (GEOmar Ltd.)

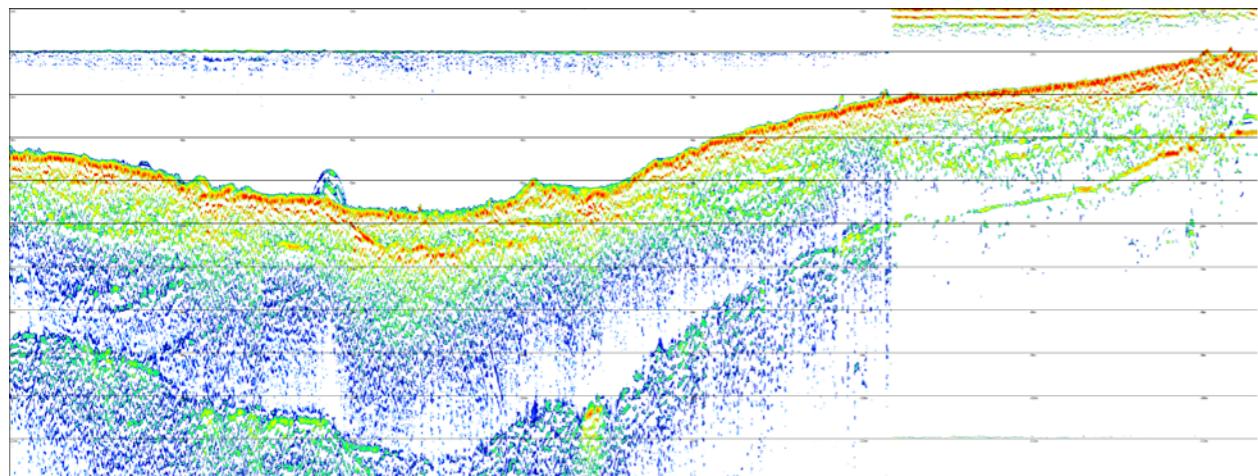
Hydrographic geological survey, i.e. shallow refractive survey of the wider area of the Old Port, was performed using an Innomar SES-2000 light, a parametric sub-bottom profiler of high resolution designed for surveying shallow waters. Thanks to the narrow beam and low frequencies, this device has a high resolution, with the possibility of penetration into the substrate up to 40 m, depending on the type of sediment. Due to these characteristics, it is also possible to detect solid objects covered with a layer of mud (e.g. archaeological remains).

In addition to geological survey data, depth and position data were obtained in real time, so bathymetric data are also the result of this geological survey. Measurement was performed along the given profiles(measurement lines) to define the entire area. Samples of seabed sediments were also collected by probing along the measurement profiles with the help of a gravity probe or a rake, which increased the quality of interpretation. By processing and interpreting the measured data, vertical cross-sections of the terrain were obtained, showing the layers of seabed sediments. A total of 41 profiles with a total length of 8260 m were recorded. The longest profile was 362 m and the shortest 24 m, while the average length of geophysical profiles was 196 m. The routes of all recorded profiles are shown in Fig. 19. Sub-bottom profiler survey was conducted as a basis for geological sounding.



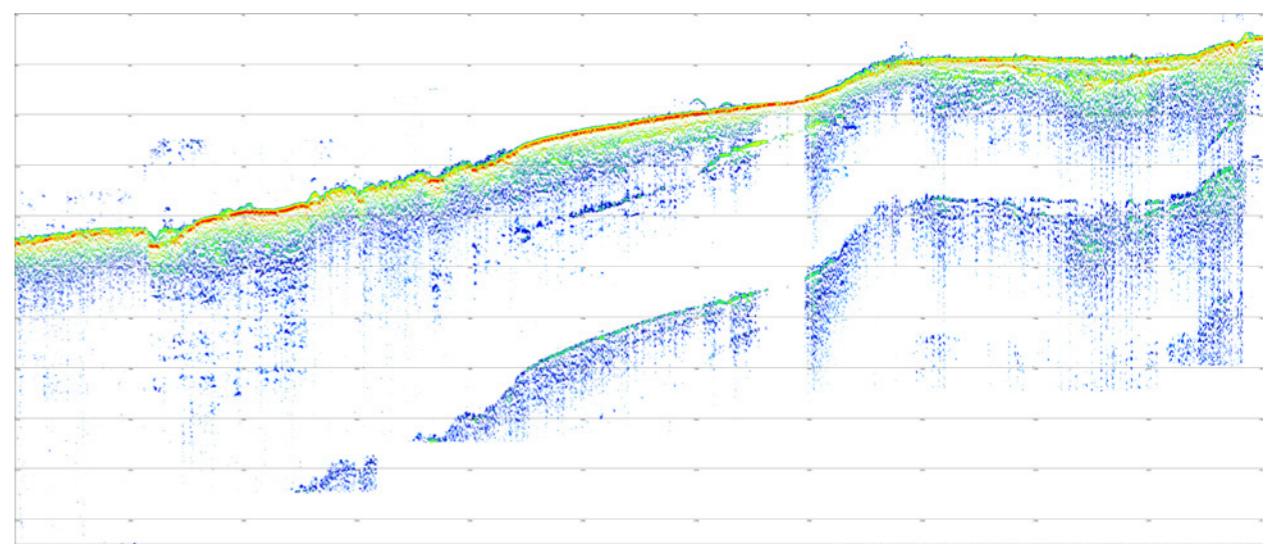
**Fig. 19**  
Routes of profiles recorded by sub-bottom profiler (GEOMar Ltd.)

The penetration of the signal into the sediment was not significant, and in most profiles it was about 3 m. Shallow penetration was due to the very small depth of water in the study area as well as the sandy sediment composition in the substrate. Due to the small depth of the water, the multiple signal was very pronounced and appeared on the second meter of geophysical profiles. Significant recent anthropogenic impact is visible on the profiles in the port, because the seabed is very uneven and mostly ditched. This is clearly visible in profile 20181123-114629 (Fig. 20), which was taken in the old port of Dubrovnik and passes from a small pier to the north - northeast. This profile also shows a slightly higher signal penetration than average.

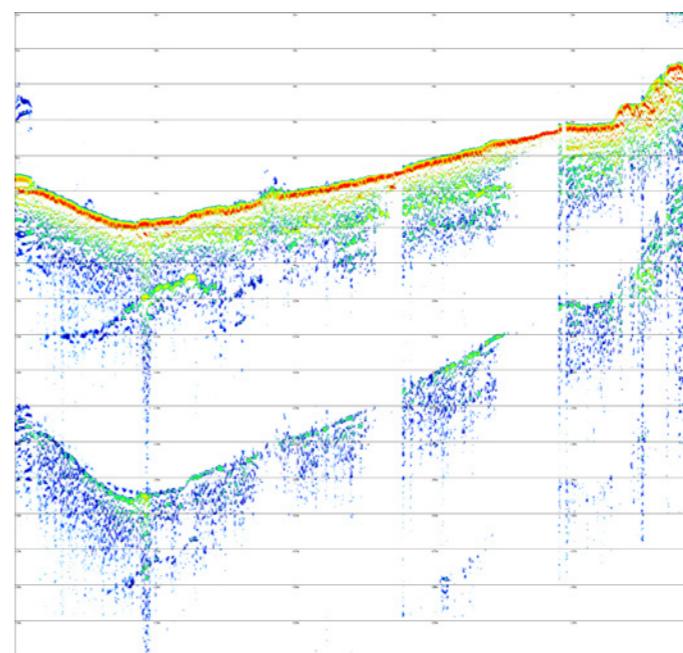


**Fig. 20**  
Profile 20181123\_114629, recorded by sub-bottom profiler (GEOMar Ltd.)

The profile 20181123-121132 (Fig. 21), which was taken from the Old Port of Dubrovnik to the east, shows a change in the depth towards the open sea. In the deeper part, seagrass can be seen, as well as a pipe that was laid from the mainland near Kaše to the south. The space inside the Old Port is of relatively uniform depth with numerous irregularities. One prominent layer of a lenticular shape is visible, about 1 m thick, which thins towards the exit from the Port. In the southern part of geophysical profile 20181123-124252 (Fig. 22) taken along the Kaše breakwater, a greater depth is visible at the exit from the Port. In this area, an acoustic base in the form of a solid rock is evident, through which the acoustic signal could not penetrate. The thickness of the sea sediment is up to 2 m, and in the northern part there is a shallower rocky area. Even at a slightly greater sea depth, the penetration of the signal did not exceed 2 m due to the coarse-grained sediment. Only the central part of the profile stands out, on which one submarine pipe with a shallower ditch is visible, and the northern rocky part.



**Fig. 21**  
Profile 20181123-121132, recorded by sub-bottom profiler (GEOMar Ltd.)



**Fig. 22**  
Profile 20181123-124252, recorded by sub-bottom profiler (GEOMar Ltd.)

During February 2019, the seabed of the old port of Dubrovnik and the Kaše breakwater were also recorded with a side-scan sonar. The images were then merged into a mosaic covering the entire study area. The mosaic of the Old Port clearly shows a large number of concrete blocks for mooring ships, as well as numerous bottom scars, probably from anchors. Around the breakwater is a mantle of loose rocks which is partially covered with sea sediment. Underwater pipes enter not far from the breakwater and are then covered with sediment. The shallow channel through which the submarine pipes lie in a south-easterly direction is quite visible, while around the canal the pronounced seagrass is evident in the entire eastern part of the mosaic. About 90 m east of the breakwater, traces of several sunken ships can be observed, which are almost completely covered with sand.



**Fig. 23**  
Preparing the floating platform with the piston core (photo: M. Martinčak)

During February 2019, sampling of marine sediment was also performed using a floating platform Q2 with a 3 m long piston core (Fig. 23).<sup>86</sup> Sediment was sampled at five locations with core lengths ranging from 88 cm to 210 cm. The sampling locations of the sedimentary cores are shown in Fig. 24. All cores are characterized by sediment rich in sand and shells. The cores sampled at a slightly greater depth (DUB-4 and DUB-5) also contain interlayers rich in seaweed-like organic matter. All cores were drilled to a solid base of limestone, except on DUB-1 where there was coarse gravel in the base.



**Fig. 24**  
Positions of geological cores (Croatian Geological Survey)

<sup>86</sup> Data on side-scan sonar survey and geological sounding were taken from O. Hasan, S. Miko, D. Brunović, *Underwater research with sub-bottom profiler, side-scan sonar and exploratory drilling to take undisturbed marine sediment cores in the Old Port of Dubrovnik – Kaše breakwater*, expert report, Croatian Geological Survey, Zagreb, April 2019 (in Croatian).

In the laboratory of the Croatian Geological Institute during April 2019, the core of sediments DUB-1, drilled with a piston core, was analyzed. The core was cut into two halves (working and archive), photographed, described and then stored in a cooling chamber at + 4°C until further analysis. Non-destructive initial methods of analyses were used, such as spectral color analysis and magnetic susceptibility (MS) measurements.

The core of DUB-1 sediments is marked by significant lithological changes. The upper part of the nucleus (interval 0-5 cm) is fine-grained and dark brown. In the interval of 5-12.5 cm, the sediment is coarser-grained (sand) and lighter brown in color with charred fragments and plant rot. The sediment in the interval of 12.5-40 cm is fine-grained and dark brown in color with a lot of plant rot and large fragments of trees. In the interval of 40-100 cm, coarse-grained, sandy sediment of light color with individual gravel predominates. A more detailed examination of the sediment also revealed plant seeds, vertebrate bones, a fragment of pottery, and shells. The interval of 100-122 cm is marked by large gravel currencies. It was not possible to perform spectral color analysis in this part of the nucleus. The lower part of the core (122-152.5 cm) is characterized by coarse-grained light sand. Further investigation of geological cores made in the area of the Old Town Port of Dubrovnik is in progress.

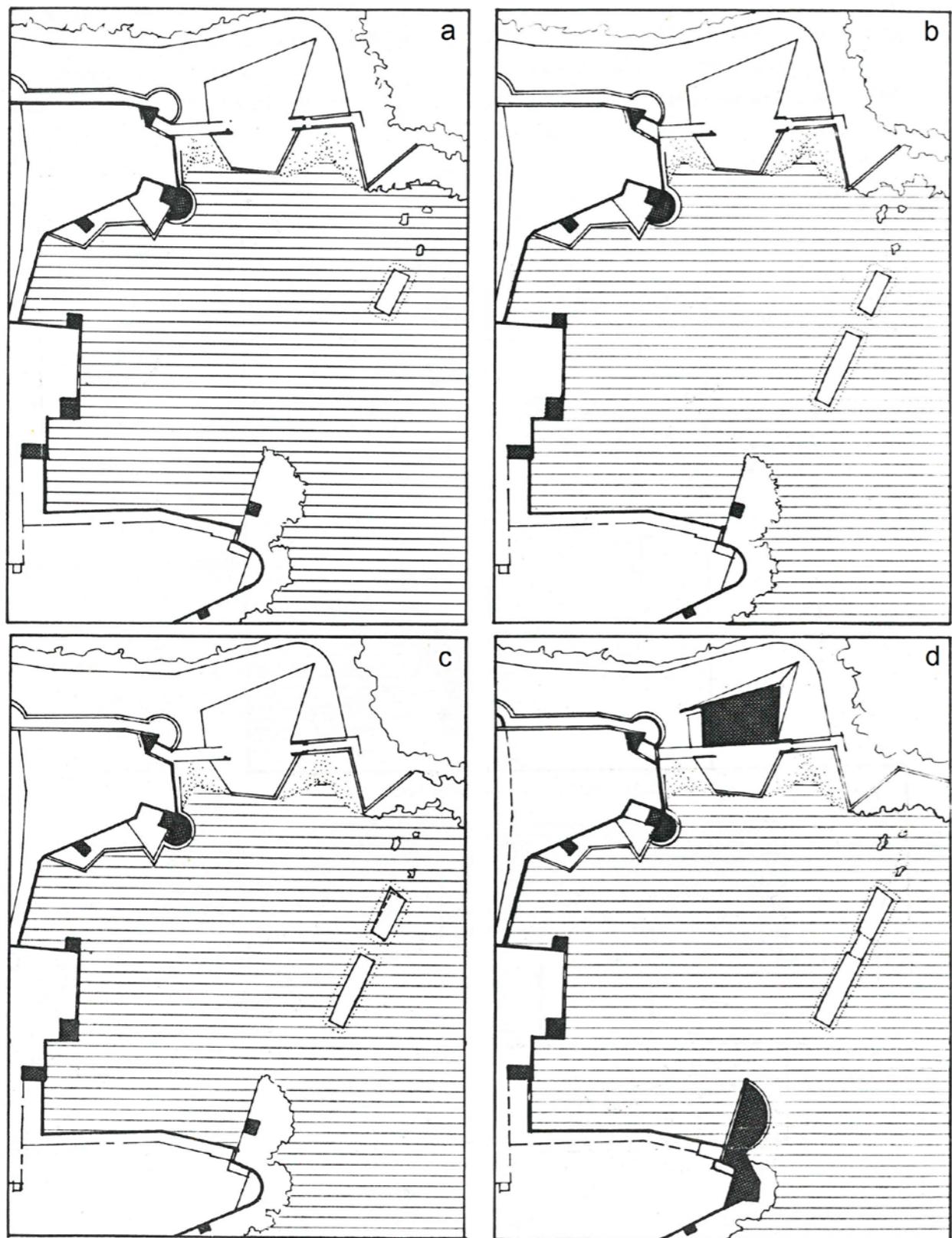
## 6. Discussion

The first scientist that wrote substantially about the Kaše breakwater was Lukša Beritić (1952; 1955; 1961). Although in his articles he presented archival data on its construction and repair, he did not provide a detailed chronology or a comprehensive discussion of breakwater construction.

In 1987, engineer Hrvoje Macan published his vision of the construction of the breakwater (Macan 1987) and presented it at the Round Table on the Kaše breakwater, held in Dubrovnik in January 1988 (Veramenta Paviša 1988: 173). He stated that in the period from 1485 to 1487, a part of the breakwater was built towards today's fortress of St. John, in the length of 45.35 m. The second part was built in 1514 towards Ploče, in the shape of an irregular rhomboid, the length of which was 28.55 m on the side of the Port and 26.75 m on the side of the open sea. The third part was built in 1631 in order to connect the two existing parts. Due to the savings on material and the reduction of the reflection of waves from the flat wall, the still-existing notch was made at that place. In that year, rocks protected the outside of the breakwater, although they may have been placed beginning as early as 1510. According to the data from Macan's article, a recording of the present state of Kaše was made in 1986 by architect Vatroslav Blajić and diver Joško Pedrini, who submitted the draft to the Institute for Restoration of Dubrovnik (Macan 1987: 21). On that occasion, the largest block in the wall was noted measuring 7 x 1.7 x 1 m, lying at a depth of 4 m.

In his work, Macan also proposed a reconstruction of the process of building the breakwater, using two ships that lifted the stone by pumping out previously loaded water from their interiors. After deballasting, the ships would bring the stone to the desired position to build the outer walls of the breakwater, while the interior was filled with small stones. The stones of the wall above sea level were connected with iron, and later with copper and bronze clamps fixed with lead. They were reinforced with lime mortar to which a special type of *terra rossa* was added. Drying of lime-clay mortar was achieved in 1487, in Macan's opinion, by use of a large caisson which surrounded and overhung the breakwater on all sides, protecting it from waves until the mortar hardened (Macan 1987: 22).

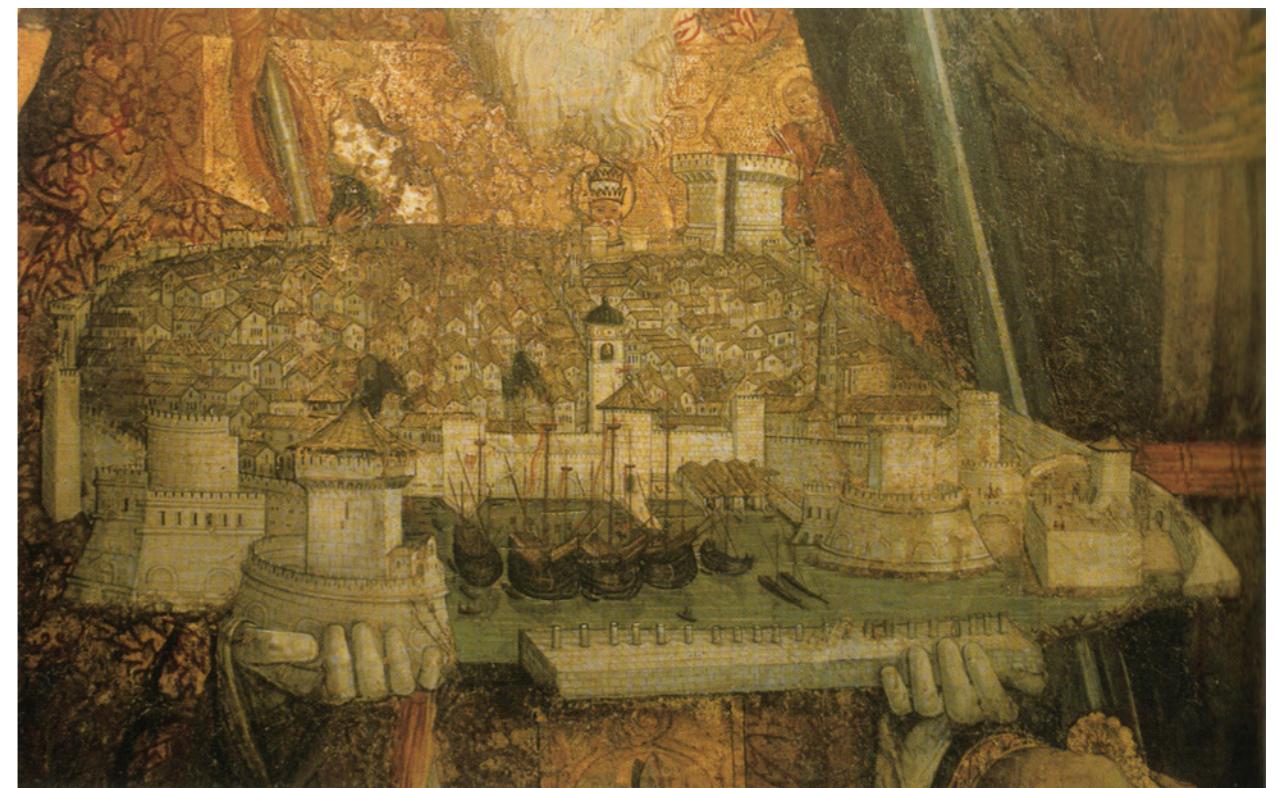
In the elaborate on the development and current state of Kaše, written in 1988 (Nađ et al. 1988), and in the text published in 1989 to prepare for the reconstruction of the breakwater (Knežević 1989: 202-204), in publication of which Macan also participated, it is said that in 1485 a smaller, northern part of



**Fig. 25a-d**  
Development of the Kaše breakwater according to historical facts: a) Beginning of construction in 1485; b) Building of the southern part in 1486; c) Correction of the northern part in 1514; d) Building of the central part in 1631 (after Nad et al. 1988)

the breakwater was built. In 1514 it was extended towards Ploče, and shaped into an irregular rhomboid. From 1486 to 1488 a larger, southern part of the breakwater was built, and in 1631 the two parts were connected (Fig. 25a-d). The texts state that the foundation of the breakwater was made using a lattice made of black pine beams, and in the discussion of the construction process, Macan's text is repeated. It seems that, based on historical studies, Macan slightly changed his opinion about the building phases of the breakwater, but remained convinced that the two parts were connected just in 1631.

In his works on the Old Port of Dubrovnik, Antun Ničetić (1988; 1996; 1998; 2005; 2006) opposed the idea that the Kaše breakwater was built in stages. In his opinion, the construction of the breakwater began in 1484 according to the 'small plan' by Paskoje Miličević. The 'large plan' meant the restructuring of the entire port (e.g. Ničetić 1996: 159). In 1514, the breakwater was extended towards Ploče, thus gaining its present appearance shown in the triptych of Nikola Božidarević (Fig. 26), dated to the beginning of the 16<sup>th</sup> century (e.g. Ničetić 2005: 110). In his reflection on Kaše, Ničetić also referred to the manuscript of Nikola Ranjina (1494–1582), almost a contemporary of these events, in which it is claimed that construction began in 1484 and lasted for three years, with a total cost of 5700 ducats (Bokarica 1988). On several occasions, Ničetić also mentioned a depiction of Dubrovnik, kept in the State Archives of Turin and dated to the end of the 16<sup>th</sup> century, which shows it closed by chains placed on both sides of the breakwater (Fig. 27).<sup>87</sup> He stated that the chains on the northern side of the breakwater were never mentioned in the previous literature (e.g. Ničetić 1996: 162). Ničetić, however, apparently overlooked the fact that in May 1506 the Small Council ordered the supervisors of the Arsenal to close the port on both sides of the breakwater with the help of beams and chains, and that some authors mentioned it in their texts.<sup>88</sup>



**Fig. 26**  
Model of Dubrovnik in the hands of St. Blaise, detail of the triptych of Nikola Božidarević, around 1500, Dominican Monastery, Dubrovnik (foto: I. Pervan)

<sup>87</sup> The depiction of Dubrovnik was published by Ilario Principe (1991). It is kept in the collection Military architecture, under the signature Corte, Biblioteca antica. C. Astengo (1983) published it under no. 180.

<sup>88</sup> See note 27.

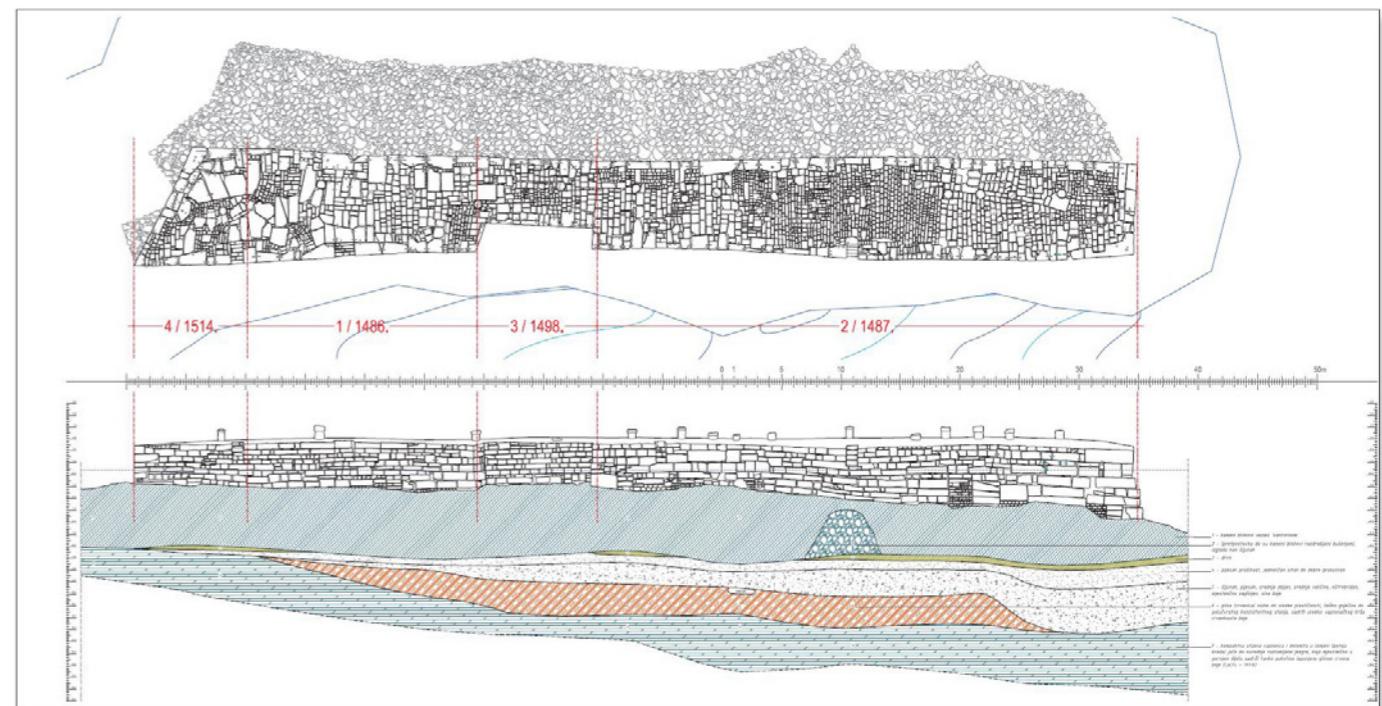


**Fig. 27**  
Planimetric view of Dubrovnik, with the port protected by chains from southern and northern side, State Archives of Turin, Military Architecture Collection, end of the 16<sup>th</sup> – beginning of the 17<sup>th</sup> century (after Principe 1991)

When thinking about the caissons used to create the breakwater, Ničetić sharply opposed to the idea of a lattice on which Kaše was laid, and concluded that the caissons must have had a solid bottom (e.g. Ničetić 2005: 104–105). He compared them to the caissons used to build the ancient port of Caesarea Marittima (e.g. Ničetić 1996: 167). In addition, he repeatedly stated that the use of Santorin earth was confirmed during soundings in 1987 (e.g. Ničetić 1996: 165; 2005: 106),<sup>89</sup> which proved that the people of Dubrovnik were familiar with this material, often used as a natural hydraulic binder. In Ničetić's opinion, the Kaše breakwater repeatedly demonstrated its quality by surviving all the great Dubrovnik earthquakes that occurred in 1504, 1506, 1520, 1638, 1667 and 1979 (Ničetić 1996: 159).

In his work published in 2017, Željko Peković presented a sequence of documents on the construction and repair of the Kaše breakwater. They were discovered by Lukša Beretić, and are presented in the second part of this article. In his work, Peković singled out four phases of construction of the breakwater (Peković 2017: 352–354), (Fig. 28). In his opinion, in 1486 its northern part was built, and a year later the southern part was constructed. Both parts were merged into one whole in 1498, and a short extension in the direction of Ploče was added in 1514. In addition, he criticized the idea of comparing the construction of Kaše with the construction of the ancient port at Caesarea Marittima, believing that the frames used to make the ancient port structure by the *opus coementitium* technique could not be compared to the caisson used as a dry dock in Dubrovnik (Peković 2017: 367–368). As proof of the use of the dry dock caisson, Peković cites the lead clamps that connected the used stones,

<sup>89</sup> This is supported by an expert report: *Probes on the Kaše breakwater*, RO Geotehnika, OO UR Geoexport Zagreb, Zagreb, 1987 (in Croatian).



**Fig. 28**  
Plan and side view of Kaše, pointing out the building phases (after Peković 2017)

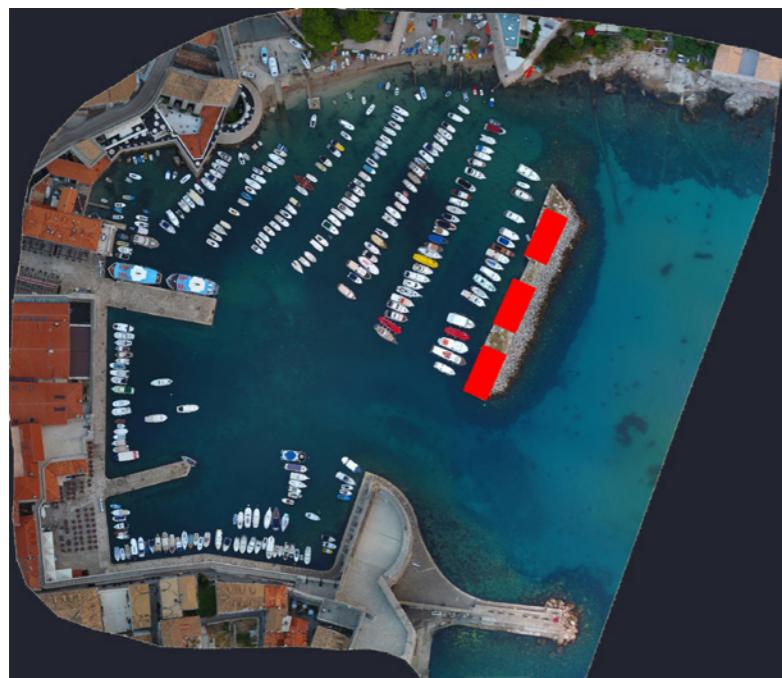
which were allegedly cast under the sea surface. As lead casting is not possible in the water, this information would support his opinion (Peković 2017: 370–371). In addition, he states that the analysis of the mortar, conducted in 2014, determined that it consists of lime, terra rossa, and sand, without any trace of hydraulic binders such as Pozzolana or Santorin earth.<sup>90</sup> Peković additionally strengthened his position with a document from 1487 on the procurement of timber for the construction of a caisson. According to his calculation, the timber was sufficient to make four sides and a double bottom of the caisson out of wooden beams, and to use the planks for its covering (Peković 2017: 336).

How the Kaše breakwater was really built remains, for the moment, an open question. The fact is that it was built using wooden caissons, as evidenced by its name, the documents on the procurement of timber for their production (listed in the second part of this article), and a note beside Dubrovnik on the map of Piri Reis, in his book *Kitab-i Bahriye* from 1526.<sup>91</sup> But whether the caissons had full or lattice bottoms, or perhaps were completely without a bottom, cannot be confirmed with certainty at the moment. Considering the beam found at the north-eastern end of the newly discovered structure, the lattice construction on which the breakwater was posed seems more probable. The discovery of ordinary mortar in the central part of the breakwater indicates masonry in a dry environment, i.e. after water had been pumped out of the box. However, it is necessary to take into account that mortar in the breakwater could be present as a result of throwing construction waste into its interior, and that it may not represent the original part of the structure. Remains of clamps made of lead

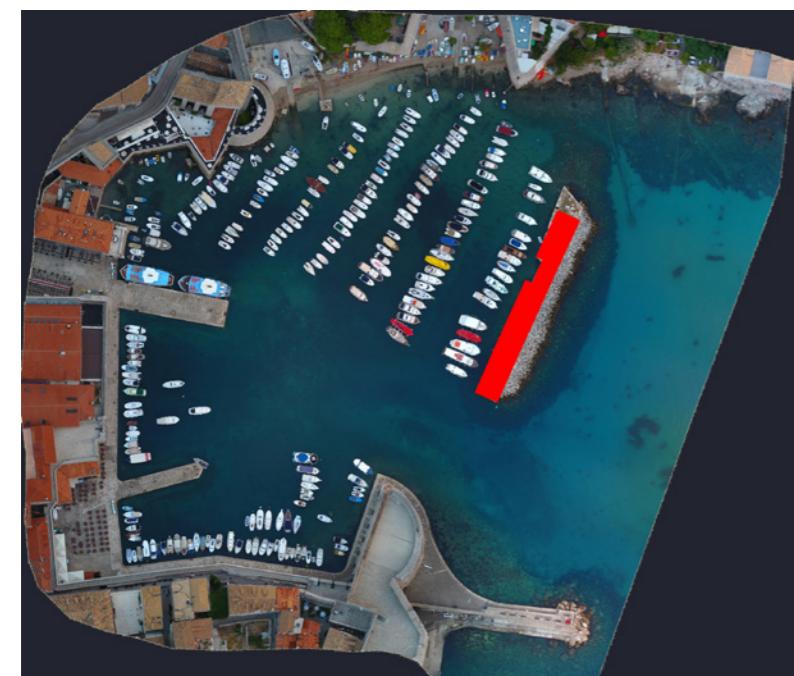
<sup>90</sup> As a source of data, Peković states: D. Jozić, Report on the testing of binder material in the breakwater of Kaše in Dubrovnik, study. Faculty of Chemistry and Technology, University of Split, Split: 1–19.

<sup>91</sup> "In front of the fortified city, a port was created with the help of submerged caissons to a depth of seven fathoms. Large cargo boats can enter and leave the port. The entrance is from the west side of the pier, between the caisson and the fort, and large ships can enter here. There is also an entrance on the east side, but it is smaller, so only small boats can enter and break through it. The port was built in such a way that a current is created that prevents the port from being silted up." Novak, Mlinarić 2005: 339.

and iron, mentioned by Peković, could also be the result of reusing construction material. This would mean that the breakwater could have been constructed in a watery or humid environment.



**Fig. 29a-d**  
Building phases of the Kaše breakwater, according to recent discoveries:  
a) Tripartite breakwater built from 1484 to 1487 (represented by Konrad von Grünenberg in 1487); b) Three parts connected in 1498 and 1501 (represented by Nikola Božidarević, around 1500); c) Breakwater extended towards Ploče in 1514 (attested by the archaeological survey); d) Breakwater reconstructed after the destruction of its northern part, certainly before 1618 (present-day situation), (I. Radić Rossi)



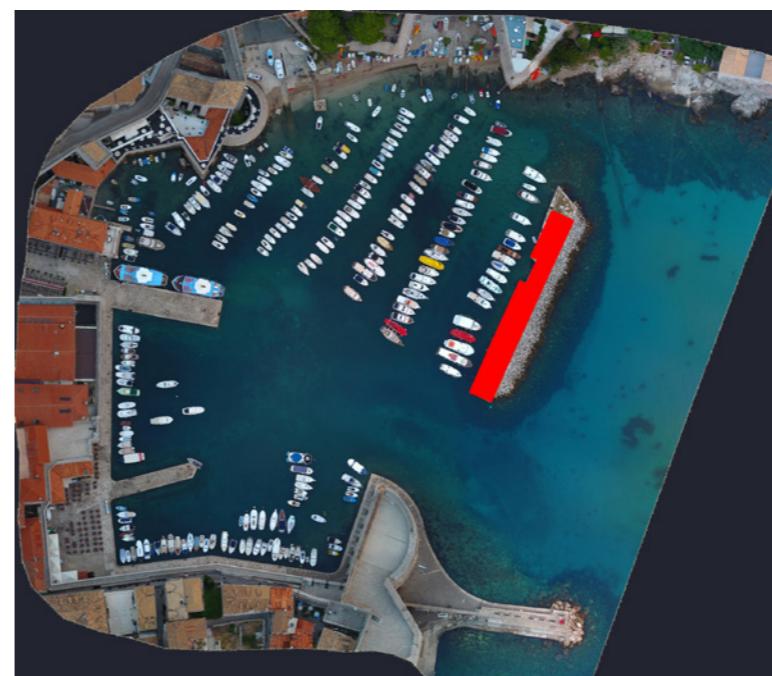
**Fig. 29b**

The idea that the breakwater was built in phases, as represented by Macan and Peković, seems very likely, although the construction phases and the evolution of the shape of the breakwater over time were probably different from those proposed. In the beginning, probably in 1484, after careful preparations, the first part of the breakwater was built, and Paskoje Miličević was awarded for his work.<sup>92</sup> The construction of the other caissons began to be considered in March 1485, but just in November it really started.<sup>93</sup> The timber was ordered in March 1486.<sup>94</sup> As in August of that same year it was already necessary to repair the damaged structure,<sup>95</sup> it referred probably to the part of the breakwater built in 1484. In January 1487, a decision was made to procure timber for another caisson,<sup>96</sup> so we can conclude that the Kaše breakwater initially consisted of three separate parts (Fig. 29a). The panoramic view of Dubrovnik (Fig. 30) in Konrad von Grünenberg's book (1487) on the pilgrimage to the Holy Land, which is supposed to have been printed that year, actually shows the tripartite waterfront. The Dubrovnik chronicler Nikola Ranjina (1494–1582) wrote that the construction of Kaše began in 1484 and lasted for the next three years (Ničetić 1996: 161; Bokarica 1988: 422), referring probably to the earliest tripartite breakwater.

<sup>92</sup> See notes 6–8.  
<sup>93</sup> See notes 9 and 10.  
<sup>94</sup> See note 11.  
<sup>95</sup> See note 14.  
<sup>96</sup> See note 17.



**Fig. 30**  
Panoramic view of Dubrovnik from Konrad von Grünenberg's *Description of the journey from Constance to Jerusalem*, 1487, Badische Landesbibliothek, Karlsruhe, Cod. St. Peter pap. 32



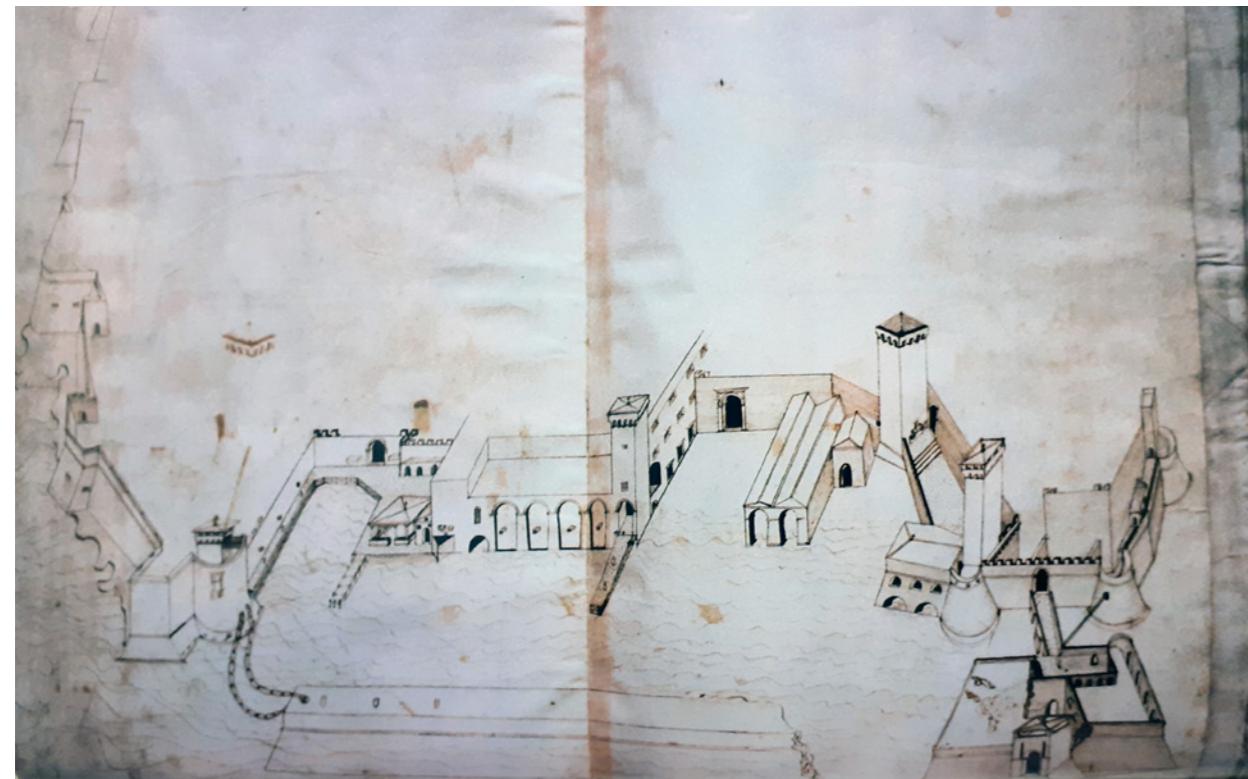
**Fig. 29c**

Considering that in May 1498 the supervisors of the construction of the port reappeared, and ordered great quantity of stone for the breakwater, and the same thing happened in May 1501,<sup>97</sup> we may postulate that in those years the three breakwater portions were merged into one whole (Fig. 29b). The complete breakwater is clearly shown on the model of the city held in the hand of St. Blaise on the triptych by Nikola Božidarević (Fig. 26), dated, as already said, at the beginning of the 16<sup>th</sup> century. This depiction was the basis of Ničetić's assumption that the breakwater was a complete structure from the very beginning, but this is opposed by the archival documents.

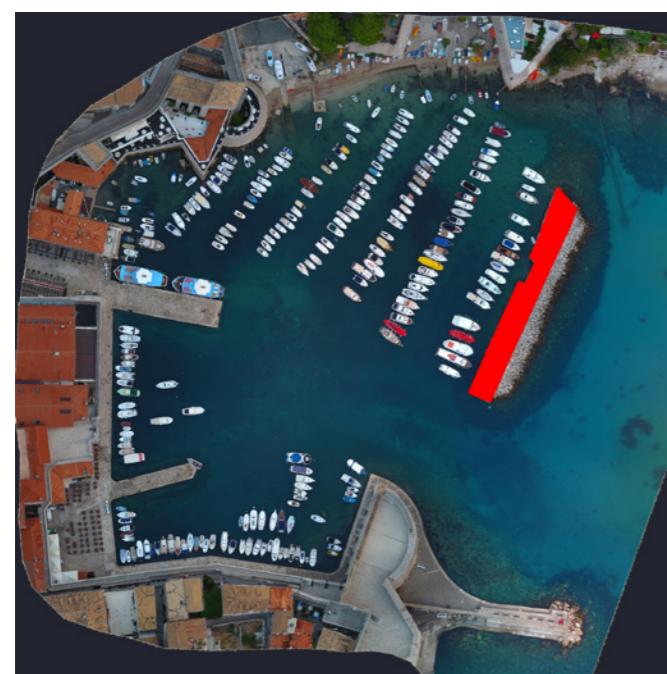
In 1514, a decision was made to extend the breakwater in a northerly direction, i.e. towards Ploče. According to Macan's, Ničetić's and

<sup>97</sup> See notes 21, 23 and 24.

Peković's proposal, the extension was a small section where today's structure trapezoidally ends. During the underwater archeological research, however, the remains of an extension of the breakwater to the north were discovered, which clearly indicate its existence (Fig. 29c), but also demonstrate destruction that could have occurred during some natural disaster, such as the violent storm in 1570, mentioned by Nicolò Sagri.<sup>98</sup>



**Fig. 31**  
Port of Dubrovnik, with the breakwater damaged from the northern side, State Archives of Turin, Military Architecture Collection, second half of 16<sup>th</sup> century (after Principe 1991)



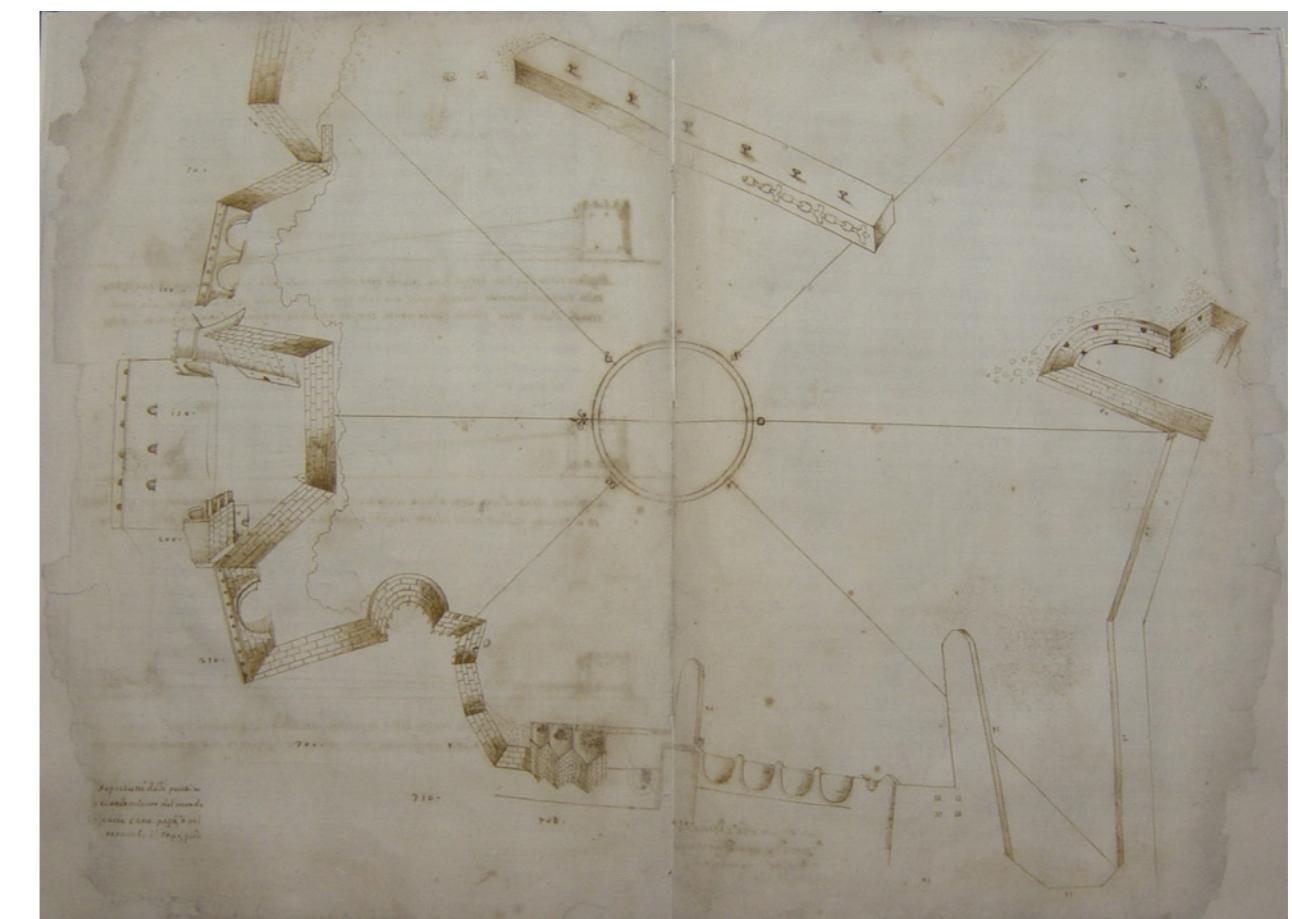
**Fig. 29d**

Smaller stones stacked in rows were laid on wooden girders, forming the foundation of the breakwater, while larger stone blocks, some of which were still connected by metal clamps, collapsed on the surrounding area. The state of the breakwater at the time could have been represented on the drawing from the State Archives in Turin, showing the port of Dubrovnik, and the breakwater damaged on its northern side (Fig. 31).<sup>99</sup> After the destruction it was probably decided that this part of the breakwater would not be rebuilt

<sup>98</sup> See note 82.

<sup>99</sup> The depiction of the port Dubrovnik was published by Ilario Principe (1991). It is kept in the collection Military architecture, under the signature Corte, *Biblioteca antica*. C. Astengo (1983) published it under no. 178.

(Fig. 29d). That this decision was made before 1618 is best illustrated by the depiction of the harbor from the manuscript of Mihajlo Hranjac (Fig. 32), whose precision should not be doubted.<sup>100</sup> The radiocarbon dating of the construction of the newly discovered structure supports the stated conclusions.



**Fig. 32**  
View of the port of Dubrovnik in a cavalier projection, Miho Hranjac, *Breue discorso, sopra la fortificatione, della Città di Ragusa suo Porto, e Sito, tanto in difesa propria quanto in offesa di qualssiuoglia nemico, in tre Capi minutamente dichiarato*, around 1618, Croatian Academy of Science and Arts, Zagreb, I. d-130

In 1542, the Senate ordered a major intervention aimed at repairing the condition of the breakwater, during which its southern end was to be dismantled and two ships scuttled (see note 54). Therefore, there is a possibility that future archaeological research will reveal traces of this intervention. A small archaeological probe made along the inner side of the breakwater (Fig. 16), north of the indented part of the structure, indicated the possibility that smaller stone blocks, stacked in eight to ten rows, were used to build the foundation along its entire length, and that the upper part of the structure consisted of stone blocks of larger dimensions. This assumption, however, needs to be verified by additional research, because the mentioned probe covered only an area about 1 m wide.

<sup>100</sup> The manuscript of Miho Hranjac, *Breue discorso, sopra la fortificatione, della Città di Ragusa suo Porto, e Sito, tanto in difesa propria quanto in offesa di qualssiuoglia nemico, in tre Capi minutamente dichiarato*, is kept in the Archives of the Croatian Academy of Science and Arts in Zagreb, under the signature I. d-130. Beritić 1953; Bruer 2005.

The protection of the outer side of the breakwater by throwing a large amount of rocks began as early as 1510, and has been repeated periodically until the 1950s. In 1873 Porporela, the breakwater in front of the Tower of St. John, was built to further protect the harbor from southerly winds (Ničetić 1996: 158; 2005: 117; 2006).

## Conclusion

Summarizing the above, we can conclude that the historical research of the Kaše breakwater was conducted in a satisfactory manner. It traced all the preserved documents that discuss construction, repairs and maintenance, although sometimes they are not clear enough for exact interpretation. On several recent occasions, proposals for projects to reconstruct the Kaše have been requested, which meant the preparation of project studies, mainly of engineering content. Underwater archaeological research, however, was first conducted in 2018 as part of the Interreg ADRION APPRODI Project – From Ancient Maritime Routes to Eco-touristic Destinations. Thanks to this research, the hitherto unknown remains of the breakwater, which once stretched further in a northerly direction, were discovered. In addition, a possible sequence of breakwater construction was determined by study of smaller stone blocks laid on a wooden base in the lower part, and significantly larger stone blocks in its upper part.

Combining the data at our disposal, we can propose the course of construction of the breakwater. The initial phase probably began in 1484 and lasted until 1487, when a tripartite structure was built. In 1498 and 1501 it was merged into one whole, and in 1514 it was extended to the north. That extension was probably short-lived, because after its collapse it was decided not to rebuild it. Although we can say with certainty that this decision was made before 1618, we can just suppose that the destruction of the northern part happened during the violent storm in 1570.

The obtained data enable a virtual reconstruction of the construction phases of the Kaše breakwater, and its touristic presentation from a safe distance, without endangering the current condition of the structure. Archaeological research should be carried out in full before any protective works on the breakwater start, in order to complete the data collection on its construction through all the phases of its existence, and possibly answer the question about how it was really built.

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## The connection between the medieval Dalmatian communes and the other side of the Adriatic on the example of Korčula

### Abstract

During the Middle Ages, every city on the East Adriatic coast, apart from their hinterland, had the strongest connection with their neighbors overseas, which is understandable given the fact that the land routes leading farther hinterland were more difficult and much less penetrable than the naval routes. The documents also support this claim. If Venice is excluded as the world's merchant center and our region's political center, and Rome is the religious center of the Medieval world, the most commonly mentioned connections are between Zadar and Ancona, Split and Pescara and between Korčula and a number of small cities along the East Apennine coast. The commerce of the city of Dubrovnik was considerably more developed so it is difficult to reach a simple conclusion, although Bari lies on the opposite coast. This paper is going to analyze the example of Korčula, which, along with Zadar, held the naval passage along the Adriatic, and on the other hand, the existence of a sufficient archival material (unlike the neighboring communes) enables us to enlighten its connections with the world overseas, particularly with South Italy and Venice, which are of the most significance.

**Key words:** Adriatic, Middle Ages, commerce, Korčula, Cross-Adriatic communication

The example of Korčula demonstrates how a single Dalmatian commune related to the opposite side of the Adriatic practically in all aspects of life during its lifetime. This island has its unique characteristics that place it into the center of the naval routes, and consequently into the center of our interest.

To primarily revise the geographical facts. The Adriatic naval routes have defined the importance of certain coastal places and islands through centuries. These naval routes can be divided into those leading along the Adriatic and those crossing the Adriatic and connecting its east and west coast. The position of Korčula must be determined accordingly.

Main naval routes along the Adriatic led along the East Adriatic coast, passing the inhospitable coasts of Albania and Dubrovnik and entering the narrow passage between the Pelješac peninsula and the island of Korčula. This fact conditioned the genesis of the city of Korčula, situated on the small peninsula arched into this narrow passage. Therefore, the city of Korčula was an important naval and strategic point as the southern gate into the Adriatic naval route.

The route guided the ships, protected from the open sea, between the islands of Central Dalmatia and the rugged East Adriatic coastline to Zadar, where the ships came out into the open sea through the city's archipelago and continued along the south side of the island of Pag. This was the most dangerous part of the route because of the peril brought by the constant threat from the strong northern wind blowing from Velebit. A far tamer part of the route around the islands of Lošinj and Cres succeeded Pag, guiding towards the coast of Istria. The route ended in Venice.

As previously mentioned, the central, and the longest part of the route, started at Korčula and ended at Zadar, therefore, who ruled those two cities could successfully control the main naval route along the Adriatic. Given the fact that Venice, as the most significant merchant force of the Middle Ages, showed the most interest, the Venetians gave special attention particularly to these two cities, and they strived to control them by all means possible.

The other previously mentioned route led across the Adriatic. This route made Korčula the last stopping point before coming out into the open sea for a ship that set off loaded with commodities from the East Adriatic coast towards the Apennine peninsula, or the first stopping point for Italian merchants coming from Apulia across the Adriatic to our coast. It was the port of the city of Korčula where merchants would anchor and rest before proceeding with their journey. This route across the Adriatic had a political significance during the Middle Ages, particularly during the rule of the Plantagenets in the Croatian - Hungarian kingdom, when this dynasty that originated from South Italy controlled both sides of the Adriatic.

To complete the geopolitical image of the island of Korčula on regional level during the observed period, the commune of Dubrovnik must be mentioned as the strongest gravitational center of this part of the Adriatic, located on the coast, it attracted the largest portion of the mentioned naval traffic, particularly the traffic across the Adriatic. The existence of the strong Dubrovnik commune in the vicinity significantly limited the development of the commerce for all surrounding centers, including Korčula.

The theories on the genesis of the city of Korčula support the importance of the geostrategic position of Korčula. Namely, the peninsula arched into the narrow passage between the Pelješac peninsula and the island of Korčula where the city is located, had to have a certain fort, station or something similar, due to its incredible ability to monitor the entire entrance into the naval route. Therefore, it is considered that castrum, the fort that existed on Korčula according to Constantine Porfirogenet, was located exactly on this spot. Also, among numerous theories on the genesis of the city, and acknowledging the importance of this entrance into the naval route for Venice, many researchers are inclined to believe the thesis that the Serrrenissima decided at some point to replace the old Byzantine fort on the mentioned peninsula with an actual city. According to the existing sources, this was most likely to have happened during the middle 13th century when the Venetian family of nobles, the Georgiis, controlled this island as their inheritance.

Certain aspects of life included contacts with strangers, and that should be particularly investigated for the evidence of connection with the opposite side of the Adriatic, or Venice. Primarily, the central point of connection between the people of Korčula and their neighbors was the port of Korčula and its dynamics. The extent of its significance through the entire Middle Ages can be assumed by examining the charted naval routes passing through this area. The frequency of the ships of different provinces in the port of the city gives a perspective on the level of connection between the Korčula commune and other parts of the region. The existing sources indicate that a certain number of ships, besides the ships from Dubrovnik, which were in the largest number, and the ships from Venice and the opposite side of the Adriatic, came from the South Italy. The existing contracts of commerce also indicate the existence of strangers because, they confirm the largest portion of commerce on Korčula involved foreign merchants.

Besides the port, ships and commerce, there is the story of the need for the basic life provision, bread grains, as a feature of life significance for this commune. Namely, the bread grains were mostly procured from the largest granaries in the Mediterranean in those times, the South Italy and Sicily.

Every mentioned topic will be analyzed, and it will be determined in what extent and in what way were the residents of the Apennine peninsula and Venice as main factors, and certain other Italian cities as side factors, connected with the people of Korčula.

## The port of Korčula as a place of meeting

Besides foreign and domestic ships, also private and communal ships could be seen in Korčula port during the Middle Ages. It is a known fact that Korčula commune had their own ship used for the defense of the island and transport of various delegations. This communal ship was first mentioned in 1273, when Venice appointed Korčula, owned by Venice at the time, a war galleass under the condition that they must not sell it, or give it away as a present, but that it must be used to monitor passing ships to guarantee safety of the island (Foretić 1940).

Therefore, the communal galleass, apart from the defense of the island, participated in all war activities in the region as a part of the fleet of Dalmatian cities, or as assistance to some of them. In the conflict between Dubrovnik and the fleet of Naples in 1409, the Korčula brigentin also fought on the side of Dubrovnik. However, the fortune of war was not in favor of the people of Korčula, and the Neapolitans captured them with their ship. They were liberated with the help of Dubrovnik (Foretić 1940, 164).

Besides for war purposes, the communal ship was also used in many delegations. When king Ladislav Plantagenet intended to go to Dalmatia in 1403, the council of Korčula decided on May 1<sup>st</sup> to prepare the communal brigentin and depart to South Italy to honor king Ladislav, accompanied by sixty people from the city and nearby villages.<sup>1</sup> Finally, the galleass of Korčula set sail to Bari on June 4<sup>th</sup> to join the royal fleet. There is evidence that the following month, a similar delegation was being prepared to see the king (Foretić 1940, 144).

The communal ship was encountered in 1405 on route across the Adriatic, but this time in service for the duke Hrvoje, who was transporting a delegation to the king in South Italy. Another visit followed the same year in October, when Hrvoje sailed the ship first to Hvar to board the bishop of Trogir and the governor of Mačva, as the ambassadors of Hrvoje, and then across the sea to Manfredonia to see king Ladislav (Foretić 1940, 159).

Smaller ships owned by Korčula were encountered mostly in trade between the Adriatic coasts, with all products usually traded in the Mediterranean, as salt, wine, wood, oil, figs, etc.

However, the foreigners, mostly from South Italy, dominate the shipping in Korčula in size and significance. The domestic fleet was too weak to accommodate all needs of the commune, therefore, the most significant affairs in terms of shipping on the island were conducted by foreigners. Especially, this refers to supplying the island with bread grain. Out of fifteen contracts for bread grain acquisition for Korčula preserved, only two times it involved domestic ships, while in all other cases, the business was delegated to foreigners. They were mostly Italian shippers from Apulia and Sicily, but also from Dubrovnik, Genova, Venice, and in one case from Cagliari in Sardinia.

Foreigners were also the owners of the largest ships to enter the port of Korčula. They were mostly owned by the most important regional center, Dubrovnik, and the Italian shippers. However, it was not simple nor harmless to sail in this region. In those times piracy was very common at sea. Sailors with all flags were involved in piracy. It is a known fact that piracy was one of the economic activities present in all seas, particularly on more significant naval routes.

According to the preserved data, piracy was significantly developed in waters surrounding Korčula. In this area, pirates were mostly people from Krajina on one side, and from Sicily on the other side of

the sea. The Sicilians were particularly active, as witnessed in many examples. They did not attack solely in the waters surrounding the Apennine peninsula, but they engaged in looting expeditions along the entire coast of East Adriatic. Therefore, in 1328, two Sicilian ships were pillaging around the Korčula islands, looting the ships that were passing by. Consequently, Dubrovnik decided to equip two ships to go after the pirates (Foretić 1940, 307).

There was even a diplomatic conflict when the Sicilian pirates captured a new argosy owned by Rafael Angelov and Marin Sasfić from Korčula. A long debate followed between the Korčula commune and South Italy regarding compensation, and the conflict was finalized with giving Korčula one ship from South Italy as compensation.<sup>2</sup>

However, the attitude toward piracy was not always simple. Once in 1395, several pirates from Bari found shelter in the port of the city of Korčula (Foretić 1940, 309). An event from 1407 confirms that this was not an exception, when the pirates from Apulia, after committing damage in the Dubrovnik area, found shelter in the port of Korčula, and the authorities did not arrest them, out of fear or some other incentive, despite the demands of Dubrovnik (Foretić 1940, 306–309).

## Trade

The trade that followed the naval routes from previously mentioned directions led many ships to Korčula. The frequency of traffic in the port of Korčula is a significant indicator for trade. According to the official papers (although they are not entirely preserved) it is evident that the trade was significant. The ratio between the number of domestic and foreign merchants and many data on foreign merchants indicate lead to the conclusion that trade was mostly conducted by the foreigners. Mostly foreigners were ship owners, and in most cases, they possessed the required capital. Merchants from all sides of the Mediterranean could be seen, from Spain, Italy and Albania to the coasts of the East Mediterranean. Ships from practically all Dalmatian cities, from many cities in South Italy, from Venice, Sardinia, Spain, Albania and Greece are mentioned in the documents. However, the merchants from Dubrovnik and Venice stand out among them, and the merchants from the other side of the Adriatic. Particularly ones from the city of Messina. They conduct various trading business in Korčula with the domestic merchants and with each other, and also participate in monetary transactions which seldom involve lending and loaning money.

Due to the fact that the port of Korčula was mostly a transit port, a large portion of the traffic was not needed to be recorded into documents. The ships that used only port services, could only be recorded if some of the merchants conducted a trade during their stay in the port of Korčula.

The question on the importance of the medieval trading routes for Korčula could be posed, which was more important, the one across the Adriatic, or the one along the Adriatic coast that ended in Venice. According to the preserved data, such grading system leads to the conclusion that the traffic across the Adriatic was significantly more frequent, thus more important for Korčula, than the one that led along the Adriatic coast. The most important port on the route across the Adriatic was Drijeva, the most significant port of the medieval Bosnian state, situated on the estuary of the river Neretva, and the entire coast of South Italy and Sicily on the other side of the Adriatic.

<sup>1</sup> Decisions of The Great Council of Korčula, 53. May 1<sup>st</sup>, 1403. The Arneri family Archive, The State Archive in Dubrovnik (hereafter: The Council).

<sup>2</sup> The State Archive in Zadar, The Archive of Korčula. (Hereafter: DAZd, KA.) box 5, bundle 5, folio 2v. (hereafter: k. sv. f.) December 4th 1419.

Korčula became a transit port on the route across the Adriatic because of the trading importance of Drijeva. It is difficult to determine the extent of the benefit from the transitional trade. A large portion of import to Bosnia from Dubrovnik and South Italy went through Drijeva.

The same route was used to transport silver ore, iron ore, wax, etc. from the Bosnian inland through Drijeva, to Dubrovnik, Venice, or through Korčula to South Italy. Therefore, Drijeva had a strong transitional role in trade between Bosnia and the Mediterannean. Apart from the most common ships from Dubrovnik, ships from Venice, Zadar, Ancona, Korčula, Barcelona, Ortona, etc. could be seen in Drijeva.

A great peril for the merchant ship on route to Drijeva were the pirates from Neretva, who often lurked the merchants on the river estuary and looted them without hesitating to kill them. Some merchants even organized protection to ensure safe passage form the pirates for ships coming from the open sea to Drijeva. There is a preserved data of such an event in the documents in Korčula. Namely, when the merchant from Messina was engaged by the mother of the protovestiaros of the Bosnian king to deliver salt to Neretva, he had doubts because of the pirates so he asked for protection through the entrance to the Neretva estuary. A noble from Korčula, Lukša Sinković, provided him protection.<sup>3</sup> However, what is more important is that a consul Sicilianorum witnessed the document, which indicates that a diplomatic institution of a Sicilian consul governed the Neretva estuary. This fact leads to the existence of the need for Sicily to appoint a person with diplomatic prerogatives in the Neretva estuary, a place without actual urban centers. However, preserved sources do not allow further research of this topic.

On the other side of this, for Korčula the most important, naval route across the Adriatic that leads from the Croatian coast through Korčula is South Italy. Merchants from South Italy were very significant in the port of Korčula regarding their number and the level of importance. They arrived at this island from all parts of South Italy. It could often be heard that a certain merchant was from Apulia or the Apulian kingdom, or from Sicily, or the names of actual cities the merchants were from could be heard. Most commonly heard were Messina and the Messina merchants, Manfredonija, Salerno, Barleta, Trano, Bari and other places. Also, when merchants from Korčula set off to trade, the name of their destination was generally Apulia, which is understandable because they visit several Apulian cities in search of bargains, and more reasonable prices of a certain product, or bread grain.

However, it is significant to mention that besides the import of bread grain as the most important product imported to Korčula in general, which will be dealt with in the further analysis, nothing else arrived from South Italy. On the other hand, the largest portion of all products exported from Bosnia through Drijeva went to South Italy, including most of the usual products exported by Korčula.

The data on this topic were only preserved in small fragments, but nevertheless, they indicate the true diversity of export from Korčula to South Italy. It is a known fact that processed stone, animal skin, cheese and wine were exported through this route. It was common for the Italian merchants to buy these commodities on the island and transport them on their ships to Italy.

Besides, merchants from South Italy were recorded on Korčula in many other different affairs, most commonly including the services of transport and trade in cooperation with the people from Korčula. Furthermore, their ships were most commonly mentioned in contracts on transport, so it is understandable that they were the main transporters of bread grain from their homeland to this

<sup>3</sup> DAZd. KA, box 3. bundle 20. f.16v.

island. Also, there is an example of Italian ships engaged for the services of transport of cheese that is to be sold in Senj by Fumatis, the vicar of Korčula, and there is also an example of Italian ships transporting wine from Korčula for Angelo Petria that is to be sold along the coast, from Boka Kotorska towards Albania.

There is a record of their trade with all the usual products from Korčula, wine, salt and fabric, and they also engaged in trade without prior definition of the commodity that was to be the subject of the trade. Sometimes the merchants from South Italy were independent, and sometimes they collaborated with other foreign merchants and with the local people. They also formed trading companies in which they participated with their ships, and sometimes with shares in commodities. It is visible in certain contracts that they traded with everything that was profitable. These trading companies of shippers from South Italy along with the people from Korčula were recorded from Kotor, Skadar, Drivast, to Senj. Also, the merchants from South Italy participate in monetary transactions in the city of Korčula: they lent and loaned money, from the local people and from other foreign merchants, especially those from Dubrovnik.

Korčula was not a significant manufacturer of salt so they partly imported it. According to some indicators, foreign merchants would transport it to the island. It is recorded in one document that salt was sold to Pribil Musbratić from Vrulje in Krajina and his countryman Bogdan Ratković in Korčula by a Sardinian merchant Antonio Canale de Cagliari.<sup>4</sup>

The other trading route on which Korčula was an important station, led longitudinally towards Venice. However, none of the preserved documents indicate that any commodity from the island was shipped towards Venice. The Venetian merchants on Korčula, as those previously mentioned, only participated in shipping and local trade, and not in the trade between their hometown and Korčula. Although it is not specified, it seems that they were not travelling through Korčula from the East towards Venice and vice versa, but that Korčula was their trading destination. However, it would be too bold to claim that no trade between Korčula and Venice took place. It is more likely that a large part of that trade was conducted without written record.

The only data on the Venetian trade in Korčula regard the sales of ships that are mentioned in several documents. The most common reason is that a Venetian merchant would need money to complete a trade and would either sell his ship<sup>5</sup> or lease it for a certain period to gain the required sum of money, which he would give back.<sup>6</sup>

Their most important role in Korčula, the role of shippers, is evident in many contracts on transport of the products from Korčula to the markets. After the completion of the sale, the profit was shared with the owner.<sup>7</sup> Like other merchants who visited the port of Korčula, the Venetian merchants participated in monetary transactions along with shipping.<sup>8</sup>

<sup>4</sup> DAZd. KA, kut. 4. sv. 8. f. 4v. 1402.

<sup>5</sup> The Venetian merchant sold his boat to a man from Korčula (DAZd. KA, box. 4. bundle 8.f.30v.); Stipe and Marin de Cherchian bought a ship from the Venetian merchant. (DAZd. KA, box 3. bundle 14. f.21r.)

<sup>6</sup> Marin de Cherchia gave the Venetian merchant 5 ducats and leased his ship. On the same day, the same Venetian merchant sells him his ship for 17 ducats (DAZd. KA, box. 3.bundle 14. f.21r.)

<sup>7</sup> The Venetian merchant Dulcino received small cattle and other commodities in value of 56 ducats from Ivan Ziković. After that a *societas* was formed on the trade with Dulcino's ship (DAZd. KA, box 4. bundle 2. f.27v./28r.); The Venetian merchants loaned 58 ducats from Fumatis. After that they made a business deal to transport cheese to Apulia (DAZd. KA, box 3. bundle 14. f.8r.); Johannis Fumatis and two Venetian merchants formed societies for cheese trade (DAZd. KA, box 3. bundle 14. f.8v.)

<sup>8</sup> The Venetian merchants loaned 58 ducats from Fumatis (DAZd. KA, box 3. bundle 14. f.8r.); a man from Korčula returned the debt to a man from Venice (DAZd. KA, box 3. bundle 1. f.3r.)

Besides merchants from South Italy and Venice, the documents indicate that in medieval Korčula merchants from other parts of Italy, like Florence and Ancona, could be seen. Merchants from the Italian province Marca and the city of Ancona had a specific status in trading business in Korčula. There are several recorded cases on export of rock and less expensive fabric to Ancona (Foretić 1940, 300). In 1440 there is a record of the Venetian ban of export of shovels, nails and ploughs among other small iron commodities from Rijeka and Senj to Marca and Apulia, which is an evidence that up to that point the export was allowed (Foretić 1940, 300). The people from Korčula formed trading companies for the purpose of trade in Marca and Ancona with all the commodities that could be sold,<sup>9</sup> and there are records of ships from Ancona in Korčula.<sup>10</sup>

There is an impression that Ancona had a specially privileged status in Korčula, for no reason known today. Therefore, in the chapter 105 of a more recent version of the Constitution, which bans the transport of wine on ships from Korčula, only transport of wine from Marca was allowed (Foretić 1940, 300).

A contract on trading company was formed on Korčula between two men from Dubrovnik, a ship owner and an investor, which stated that they would go to Krajina, stock the ship with all the commodities that could be sold and sail to Ancona to sell.<sup>11</sup> However, it seems that the connection with Ancona extended beyond trade. In 1403, a man from Ancona, named Antun, a citizen of Korčula, was mentioned as a teacher in the city of Korčula.<sup>12</sup>

During the Plantagenet rule, the economic development that affected the entire Dalmatian region, also brought foreign capital into this area. It is evident that the development was strong and significant because Florentines, the strongest European bankers at the time, appear in Croatian-Hungarian kingdom. The reach of their financial operations extended as far as the Plantagenet court in Hungary. The appearance of their fresh capital in our coastal cities is a definite indicator of the economic development. The Florentines, among other, positioned a royal network of tax clerks in Dalmatia. The most important tax was the tax on salt, which was a very lucrative product of the time. The most famous Florentine was Peter (Petrus monetarius), the money dealer delegated to raise royal taxes of one thirtieth and on salt. During the 90s in 14<sup>th</sup> century, another Florentine was mentioned, Lucas del Pechi, who collected taxes for the Croatian and the Dalmatian governor Vuk Vukčić, and after king Ludovik died, he continued to conduct the same business for the king of Bosnia, which was evidenced in the documents found in Korčula.<sup>13</sup>

Besides from collecting the royal taxes, the Florentines invested their capital into large trading businesses in Dalmatia, and they also provided loans for the local business men. During the 90s, the people from Korčula used loans in their business ventures provided by the representatives of the Florentine bankers in this region. Therefore, Stanoj Jurgević from Korčula loaned three ducats, 35 groats and 15 libars from Matej, the son of Henrik, dec..<sup>14</sup>

The communal authorities of Korčula also used Florentine capital, and it is a known fact that they loaned money from a certain Florentine noble Juraj de Georgia (ser Georgius de Georgio de Florentina).<sup>15</sup>

<sup>9</sup> DAZd. KA, box. 4. bundle 6. 9v. 1400.; DAZd. KA, box 4. bundle 6. f.26r. 1400. October 30th

<sup>10</sup> DAZd. KA, box 4. bundle7. f.45v. 1400.

<sup>11</sup> DAZd. KA, box 3. bundle 21. f.26r. October 30th1400

<sup>12</sup> DAZd. KA, box 4. bundle 8. f.46r. 1403

<sup>13</sup> DAZd. KA, box. 4. bundle 1. f.1r. September16<sup>th</sup>1394

<sup>14</sup> DAZd. KA, box 4. bundle 1. f.1r. September16<sup>th</sup>1394.

<sup>15</sup> DAZd. KA,box. 5. bundle 4. f.3r.

As previously mentioned, apart from the merchants from the Apennine peninsula, merchants of Sardinia from Cagliari and from Pyrenean peninsula, from Katalonia also reached the waters around Korčula. Shippers from Sardinia, particularly from Cagliari, which was their strongest center, were noted in supply and transport of bread grain for Korčula, which gained them the privilege of slave purchase. Anyway, they were one of the most significant slave buyers in medieval Korčula.

A previously described case of merchants from Cagliari selling salt to merchants from Vrulje in Krajina on debt indicates a level of trust, and a certain domestication of Sardinian merchants on this island. The merchants from Katalonia were exclusively involved in slave trade, therefore, along with the merchants from Sicily, they were the most important buyers of slaves (Foretić 1940, 164). A certain merchant from Saragosa was recorded, who sold his ship to a certain captain from Messina in Korčula, and merchants from Crimea were also recorded in transit.

The manner of conduct in business and the level of trust evident between foreign merchants who visit Korčula lead us to believe that it was usual in Korčula, and that the city was a significant merchant center for many shippers in this part of the Adriatic.

Foreigners developed a live activity in the port of Korčula, as well as within the city itself. The atmosphere acquired from numerous merchant documents is more similar to the atmosphere of a large world port, than to the atmosphere of a far less developed island commune in the South Dalmatia, as Korčula was.

A good perspective into this activity can be acquired through several examples preserved in documents. The largest number of foreign business people refers to merchants from Dubrovnik.<sup>16</sup> Along with them, merchants from Messina were also largely represented as intensive participants in trade and transport, often with other foreigners.<sup>17</sup> Also, merchants from Venice, Bari, Cagliari and other places were recorded.

The most diverse sorts of people from the most diverse parts of the Mediterranean world met, traded, owed money, and most likely returned their debts without no risk to be deceived, as nicely described in scriptures of the notaries in Korčula. The preserved court scriptures in Korčula indicate the same fact, because there is no mention of litigation due to unresolved debt between domestic and foreign merchants. The impression of a rather close relationship and mutual trust between the domestic and the foreign merchants is gained. Therefore, a merchant from a remote city of Cagliari in Sardinia, loaned without doubt 300 ducats, which presented a large sum of money, to a local nobleman Vidoši Radoslavić. Also, merchants from Vrulje in Krajina owed a considerable sum of money to a certain merchant from Cagliari in Sardinia.

<sup>16</sup> A man from Dubrovnik sold a ship on Korčula to a certain resident of Pelješac (DAZd. KA, box 4. bundle 2. f.16r.). Another merchant from Dubrovnik sold a ship on Korčula to his countryman (DAZd. KA, box 3. bundle 23. f.7r.). Sailors from Dubrovnik were also recorded to board ships in Korčula. Therefore, one of them was employed on the ship owned by a merchant from Cagliari(Sardinia)(DAZd. KA, box. 4. bundle 5. f.11r.), and another one boarded a ship owned by his countryman both as a sailor and as a participant in the trade of commodities from Krajina to Ancona (DAZd. KA, box 4. bundle 6. f.26r.)

<sup>17</sup> A merchant from Messina gave rights to a merchant from Bari to 288 star of wheat (DAZd. KA, box 3. bundle 22. f.22r.); A merchant from Messina receives money from the Hvar commune as a return of debt (DAZd. KA, box 4. bundle 7. f.29r.); Two merchants from Vrulje in Krajina buy salt from a merchant from Cagliari and the ended up owing him money (DAZd. KA, kut. 3. sv. 23. f.4v.); Merchants from Saragosa engage a shipper from Messina to take them to Venice to return a debt (DAZd. KA, box 3. bundle 23. 21v.); A man from Venice sells a half of a marciliiana to a merchant from Apulia (DAZd. KA, box 3. bundle 23. f.23r.); A man from Brač boarded as a sailor on a ship owned by a shipper from Messina (DAZd. KA, kut. 4. sv. 10. f.8v.); A merchant from Messina loans money (70 ducats) from a merchant from Bari in Korčula. (DAZd. KA, box 4. bundle 7. f.19r.)

A similar behavior was recorded in merchants from Florence, Venice, Bari and other Italian cities. Loaning money was apparently a common and well-trained practice in Korčula which involved merchants in general.<sup>18</sup>

However, people from Korčula also loaned money to foreigners, although less frequently. Two thirds out of 15 preserved contracts on loans between Italian merchants and local people refer to foreign merchants loaning money to local people, and only one third of the contract refers to local people loaning money to foreign merchants. Merchants who loaned money from local people came from various places like Drač, Dubrovnik, Krajina, Venice and Chioggia.

Among mentioned contracts on trade, only several refer to the payment of transport. Regardless of the whether the profit was shared equally or differently, one third of the preserved contracts demands that the owner of the commodities pays the shipper for the transport, and the rest of the profit was to be shared as agreed. Therefore, the contract on cheese sale in Apulia states that Ivan Fumatis had to pay 9 ducats for the transport, and upon the completion of the business the profit was to be shared equally. This meant that shippers were to get one half of the profit only for their efforts in cheese sale in the markets of South Italy, and this did not include the cost of transport. In another example a wine owner who sold his wine in Albania had to pay 15 perpers per centenar for transport, and the profit was also shared equally. Both contracts are interesting examples of the diversity of conditions upon which trading contracts were made.

## Slave trade

Regarding the trade with South Italy, the most significant portion of export from our coast that passed through this island, thus Korčula being a transit port, refers to slave trade. It is a known fact that slave trade was organized in medieval Dalmatia. One of the most significant routes in slave trade led from Bosnia to the Neretva estuary, to the previously mentioned trading post Drijeva. From Drijeva, one part of the trade led through Korčula to the Apennine peninsula, or to Venice. Consequently, there are records of slave trade in written documents from Korčula, and we will attempt to reconstruct them. This was most likely a special market visited by slave buyers from South Italy, Sicily and Catalonia, and from Venice. The people from Korčula did not significantly participate in this trade.

The largest number of ships from Bosnia ended up in the markets of the Italian cities like Messina, Florence, Ancona and Venice, or even in Catalonia. Generally, female slaves were more often sold than male slaves. They were mostly girls between 10 and 30 years of age. They had Slavic names, and they priced ranged, depending on age, physical appearance and market demand, from 25 to 30 ducats (Tošić 1987, 101). The authorities in Korčula profited from these ventures because taxes had to be even for this sort of trade (one thirtieth and daciun).

Around 1396, the Bosnian king Dabiša and the people of Dubrovnik decided to ban slave trade. It is safe to say that this marked the beginning for the implementation of standards that did not allow slave trade, not only in Dubrovnik, but in other Dalmatian communes. Therefore, after Trogir and Split, in 1397, Korčula reached a decision to prohibit the people of Korčula buying slaves in the square in Drijeva. However, there was a *salvo pro uso suo* clause, which means only for personal use, and the fine for disobedience was 50 ducats.<sup>19</sup> It must be noted that this prohibition referred only to Christian slaves. The Bosnian pagans, also known as pataren, were not a part of this prohibition and they were free to be traded with. Therefore, the merchants had to have buying contracts for every person sold so it could be determined if they were Non-Christian slaves, that is, the contract had to clearly contain the information on whether a man or a woman sold was a pataren (de fide patarenica or non baptisata) (Tošić 1987, 100).

The ban on slave trade was implemented into the Reformation of The Statute in Korčula. There is a record of two such decisions. According to the first decision in 1399,<sup>20</sup> the slavery was not entirely abolished, but it restricted the slave trade, which apparently did not have any restrictions prior to this decision. This prohibited the people of Korčula to participate in slave trade, while it was still legal to purchase a slave for personal use. Also, the mentioned restriction was repeated regarding age and more commonly the fact that slaves, who were more commonly female, could not be baptized, a Christian. Therefore, from that point on, every document in Korčula regularly consists the fact that a slave was a pataren or pagan, along with his or her name, regardless of whether the fact was true or not (Foretić 1940, 265).

However, it seems that the prohibition was not commonly honored. The merchants from Dubrovnik were still most common in slave trade in Drijeva. Therefore, the Bosnian king Ostojah had to warn the merchants from Dubrovnik that the prohibition on slave trade was in effect (Tošić 1987, 101).

It is interesting to note that people from Dubrovnik were not recorded in any slave trade in Korčula. Apparently, those very important slave merchants did not sail their ships to Korčula from Drijeva, but more likely they went straight to their home town. There was another branch of the slave trade that led from Drijeva to Korčula and was conducted by the Italians and not slave merchants from Dubrovnik.

The decision of The Council of Korčula in 1399 that allows slave trade to Italian merchants who brought bread grain to the island supports the previously mentioned fact.<sup>21</sup> This decision of The Council allowed slave trade even though the prohibition of this trade was in effect in the entire region. Since then, the bread grain merchants were allowed to buy slaves, often with significant tax deductions.<sup>22</sup> Therefore, the need for bread grain superseded the morality of the ban of the slave trade. According to the preserved documents, the Italian merchants used this statutory regulation excessively, so there were cases when more than ten slaves were bought in one purchase.

One case demonstrates the extent to which the Italian merchants were indulged. Namely, an Italian merchant who was allowed to export eight slaves without paying 24 perpers for tax, was advised if he wanted to export more slaves, which was obviously against the mentioned regulation, could do so, but he had to keep them hidden in the city before boarding them (*obligavit dare de dono eidem Aloixio tributum octo servarum videlicet yperperis vigintiquatuor si ipsas emet, et si plus emet*

<sup>18</sup> Sir Pelegrin from Drač loaned 26 ducats and 19 groats from sir Branko Zubacij (DAZd. KA, box 3. bundle 17. f.3r.); Stojko Scepronić from Korčula loaned 31 ducats to Juraj from Koločep (DAZd. KA, box 3. bundle 20. f.17r.); Stanoje Jurgević from Korčula loaned 3 ducats 25 groats and 50 libars from Matej, the son of Henrik, dec. from Florence (DAZd. KA, box 3. bundle 21. f.7r.); Ivan de Fumatis loaned 40 ducats to merchants from Venice and Chioggia (DAZd. KA, box 3. bundle 14. f.8r.); Vidošije Radoslavović loaned 11 perpers from Marinac Mirošević from Bar (DAZd. KA, box 4. bundle 7. f.24r.); Vidošije Radoslavović loaned 300 ducats from Antonio Canal from Cagliari (DAZd. KA, box 4. bundle 8. f.33r.); Vlakuša Milković from Ston loaned 34 perpers to Stanoje Jurgević (DAZd. KA, box 4. bundle 10. f.8v.); Ivan Zilković loaned 20 perpers to a merchant from Krajina (DAZd. KA, box 4. bundle 2. f.25r.).

<sup>19</sup> The year 1397 was mentioned by Tošić, while the documents from Korčula hold no record of this fact (Tošić 1987, 100)

<sup>20</sup> The Statute of The City of Korčula, Split 1395 (hereafter The Statute), Reformation, Gl. 36; and The Great Council in 1399, made the decision to ban slave trade (The Council, November 12th 1399).

<sup>21</sup> The Council, 12, November 11th 1399.

<sup>22</sup> The Council, 12, November 11th 1399.

*teneatur solvere modo solito et tenere in civitate oculte).*<sup>23</sup> However, it is likely that this example was an exception. The purchase of slaves was commonly allowed to a merchant who delivered bread grain with paying one half of the export taxes.<sup>24</sup>

This decision of The Council<sup>25</sup> that allowed slave trade to every merchant who delivered bread grain to the island, leads us to believe that there were slaves to be sold on Korčula through the entire year. It was the only way for a merchant to claim his right to purchase a certain number of slaves upon his arrival to the island with a ship full of bread grain.

The second statutory ban on slave trade in the Reformation, number 141, intensified the penalty for the people of Korčula who were involved in this activity. This directive was focused on a complete termination of the slave trade. According to Foretić, it is probable that it was formed before December 1412 (Foretić 1940, 265). The directive number 142 that banned the people from Catalonia and Sicily residence on the island is obviously connected to the previous directive.<sup>26</sup> However, several court processes against slave merchants during the following years indicates that his activity was not simple to terminate.<sup>27</sup>

A prerequisite to slave trade was the possession of a large capital. The price of slaves in Bosnia was not known, but in Drijeva, the first place of resale, the price was known, and it was 25 to 30 ducats for a single slave, which was a large sum of money. Considering the fact that not one, but several slaves were bought at a time, the capital was a true necessity. It is interesting to mention that the same price was recorded in Korčula. Tonko, the son of a presbyter Marin Mihovilov, was recorded as one among few slave merchants from Korčula. He was mentioned in two contracts on slave trade as a merchant of Bosnian slaves in business with merchants from Venice.<sup>28</sup> There was one case in which a shipper from Korčula was mentioned in terms of transport of a merchant from Neretva and his slaves to Ancona, so he was not a direct participant in slave trade.<sup>29</sup>

There is an evident, let us name it intervariable, in this trade, when is difficult to determine whether the trade refers to slaves or servants. Namely, a certain number of contracts refer to young men and women from Bosnia who offer themselves as servants for certain period to Italian merchants in Korčula. It is interesting to note that all parts of the mentioned contracts are identical to the contracts on slave trade, except there was no price mentioned, unlike for slaves, but instead the duration of the service was noted.<sup>30</sup> There was even a case of a father from Bosnia who offered his two sons as servants to a merchant from Calabria.<sup>31</sup> It can be assumed that the difficult conditions in Bosnia forced those young people to take such actions to escape poverty and famine.

<sup>23</sup> DAZd. KA, box 4, bundle 5, f.3v, November 9th 1398.

<sup>24</sup> The case in which the payment of one thirtieth in slave trade was mentioned (DAZd. KA, box 4. bundle 2, f.12v. February 9th 1395.) was analyzed in the revenue system.

<sup>25</sup> The Council, 12.

<sup>26</sup> The Statute, Reformation 142

<sup>27</sup> Foretić provided an example of a man from Korčula who kept two female slaves hidden, as an example of persecution of slave merchants. However, this is not an adequate example because the mentioned man was brought to court and was punished because he stole those slaves from a merchant from Catalonia (DAZd. KA, box. 2. bundle 6. f.10v. 1400.). Therefore, this example is a better indicator of the fact that slaves owned by foreign merchants but situated at a certain location existed in the city of Korčula

<sup>28</sup> Both documents were recorded on the same page (DAZd. KA, box 4. bundle 2. f.4r. 1394).

<sup>29</sup> DAZd. KA, box 4. bundle 6. f.9v. 1400

<sup>30</sup> DAZd. KA, box 4. bundle 10. f.5v. 1412

<sup>31</sup> DAZd. KA, box. 4. bundle 10. f.10v. 1412

In an attempt to assess the trade development of the people of Korčula, we conclude that its significance was strictly regional. The export was most commonly reduced to the neighboring coast of Krajina and the Neretva estuary, to Dubrovnik, and its longest reach extends across the Adriatic, to the Italian coast and its centers in the Apulian kingdom and in Sicily.

As previously determined, was not a significant participant in such trade. The orientation on farming on this island formed its export, and the need for bread grain, which was produced in an insufficient quantity, formed its import. Therefore, it was not the desire to acquire capital, but the lack of the primary life provision and the excess of certain agricultural products that determined the position of Korčula in trade.

Also, concluding on the amount of capital invested by the domestic merchants, the role of Korčula in the trade that took place in the port of the city was insignificant. The trade contracts on the export of certain agricultural or cattle products and the contracts on the import of bread grain from South Italy best support this claim, because there was often no mention of money, but goods, while the portion of the contracts involving money were extremely rare. That is an imminent indicator of the lack of capital.

As previously mentioned, the route along the Adriatic coast is less important form Korčula, which can be concluded from the fact that neither Venice, or any other Dalmatian city are significantly represented in the trade in Korčula. Therefore, the area of South Adriatic, along with its coastal region, forms a regional border in which the trade of Korčula was mostly conducted.

The most common commodities exported from Korčula were wine, wood and stone, and the most important imported commodity was bread grain from South Italy. There are records on the export of wine from Korčula to South Italy and Venice. Usually, the Italian merchants came to the island and bought wine, but there are different cases. Trade companies, so called *societas*, were formed for wine trade. There were two parties involved, one was the wine owner from Korčula, and the other was the foreign shipper, mostly from the Apennine peninsula. The foreign shipper provided transport, and the owner provided the wine for sale. The destinations of the wine from Korčula were primarily the port of Drijeva, where the wine sale for Bosnia was organized, then Venice and South Italy. According to the number of statutory regulations, the wood trade was the second most important activity after wine trade. Wood was mostly exported to Dubrovnik.

The third, and a very significant export commodity was stone from Korčula. Apart from Dubrovnik and other Dalmatian cities, the stone was exported, although in smaller quantities, to the other side of the Adriatic. There are records on stone export to Apulia and Ancona.

Braudel determined that Venice was supplied with cheese from Dalmatia (Braudel 1992, 219). However, the data preserved from Korčula witness a somewhat different cheese trade. The merchants from Venice did actually buy cheese in Korčula, but they did not transport it to their hometown, but to Apulia.<sup>32</sup> However, due to the insufficient data on cheese trade, it is not advisable to generalize the topic.

Regarding the salt trade in Korčula, most of the salt that arrived to Korčula was only in transit to other places, which made Korčula a transit port for this commodity. The salt mostly originated from Italy and Greece, and its destination was the Bosnian market, so it was delivered to the Neretva estuary, to Drijeva. Foreign salt merchants arrived from various places, mostly from Venice, then from Messina, Crimea and Cagliari.

<sup>32</sup> DAZd, KA, box 3, bundle 14, f. 8v

However, there were exceptions when the people from Korčula sold salt on the Italian coast of the Adriatic. In 1400, two men from Korčula agreed to export salt to Marca. One invested his ship and the other invested 24 ducats.<sup>33</sup> Unfortunately, this is the only example of such trade.

## Bread grain trade

As other Dalmatian communes, Korčula was a representative of a world on the edge of poverty, that largely relied on bread grain import. It was a great disaster if bread grain delivery was late or the supplies in storage were exhausted (Braudel 1997, 158). The domestic production could only cover a small portion of the island needs.

Therefore, nutrition was one of the main problems for all communal authorities during the Middle Ages. There was one fortunate circumstance for Korčula regarding this matter that largely profiled its economy. Namely, across the Adriatic from Korčula were Apulia and Sicily, which were traditionally rich granaries, where the people of Korčula could rather simply buy and transport the sufficient amount of bread grain to the island. The vicinity of the rich granaries and relatively simple transport, allowed the economy of Korčula to focus on growing vine, which was much more lucrative, so there were sufficient funds for bread grain purchase. It is probable that without the vicinity of granaries such as Apulia and Sicily, the prospect of the economy of Korčula would be significantly different. The bread grain policy on the island developed in two directions. On one hand, people were encouraged to grow bread grain on the island (at least that was the case for the communal land), and on the other hand, the transport of bread grain from the other side of the Adriatic was organized regularly. However, as previously mentioned, the domestic bread grain production was never sufficient, and the import was the main source of supply of bread grain for the island and no obstacle regarding this matter could be tolerated. Therefore, the supply of bread grain for the island was the main preoccupation for the communal authorities.

The most important bread grain for the nutrition of common people at the time was barley. According to Braudel, wheat was reserved for the people of higher classes and children. The downside in wheat cultivation was poor harvest and the need for proper fertilization, which was not required in the cultivation of lower-range bread grain (Braudel 1992, 114-120). Therefore, barley was the most frequently cultivated and imported bread grain. The ratio between the orders for import of wheat and barley from South Italy was generally 1:3.

It should be noted that the bread grain market operated exclusively in cash, which meant that smaller agricultural areas that had difficulties in producing money had significant problems with providing their communes with basic life commodity, bread grain (Braudel 1992, 125).

Unlike the provision of bread grain for Dubrovnik, where, along with foreign merchants, the domestic merchants also participated significantly, according to the preserved data, the largest portion of bread grain was brought to Korčula by foreign merchants, while domestic merchants rarely participated in such trade. Foreign merchants bought barley with their own money in South Italy, and then they would sell it in Korčula.

A series of clauses were aimed to hasten the merchant to return the bought barley as soon as possible, and there were clauses in the preserved contracts that demanded the merchant to deliver bread grain in the maximum quantity possible. Upon return, the merchants sold the bread grain

in retail on the island, and if they could not sell the entire shipment successfully, the authorities guaranteed to purchase.<sup>34</sup>

The authorities strived to oblige certain merchants to become their regular provider of bread grain. When Philiporus de Franciscis (*nobilis civitatis Janue*), a merchant from Genova, required permission for the import of bread grain, it was granted with the offer to import all sorts of bread grain in unlimited quantity in the future.<sup>35</sup> The commune of Dubrovnik practiced the same method, obliging the bankers from Florence to produce the arranged quantity of bread grain in the arranged port in South Italy at the arranged date (Dinić-Knežević 1967, 92).

The merchants from the Apennine peninsula who produced revenue from supplying the Dalmatian communes with bread grain most frequently mentioned were mostly from Messina, Salerno, Trano and Manfredonia. Merchants from Dubrovnik and Venice were also often mentioned, while the merchants from the remote area like Cagliari in Sardinia or Genova were less common.

After closing the contract, the merchant, foreign or domestic, would leave to procure bread grain, most frequently to Apulia to the cities of Manfredonia, Barulum<sup>36</sup> Trano, Messina and Cefalù (*Cufalatum*). Apart from the communal authorities as an institution, who were responsible for providing the nutrition for the island, merchants, who acquired bread grain and sold it on the island over the authorities, also gained from the provision of the island with bread grain.

The following example describes the process of acquisition of bread grain from Apulia. Ivan Piruzović, a noble from Korčula, who acquired bread grain for the communal authorities in several occasions, acted independently. On November 4<sup>th</sup> 1401, along with Mikša Pervošević, another noble from Korčula, contracted a departure to Apulia with Živko Radoanić, a ship owner (type *barcusium*) from Dubrovnik. Their destinations were the Italian cities of Barulum<sup>37</sup> and Trano in South Italy. According to the contract, they were to arrive to one of the mentioned cities, anchor, extend the ladder (*facere scalum*), and wait eight days for the bread grain to be embarked. If they were unsuccessful in eight days, they were to transfer to Manfredonija and wait three business days. If this venture was also unsuccessful, they were to return to Korčula.

This example demonstrates that it was not simple for small merchants to gain bread grain in Apulia, considering that large merchants from Venice and Florence controlled the entire purchase with their large capital.

Among other Italians who acquired bread grain over the authorities, a merchant Angelo Petri from Monte Nigro, near Genova is mentioned in numerous contracts on bread grain trade. There is an example of a document from November 18<sup>th</sup> 1400, when, in accordance with two other merchants from Messina, he departed on their ship type *argosy* across the Adriatic to Manfredonia to collect bread grain.<sup>38</sup>

Bread grain was occasionally bought along the way, while conducting other trade business. It was a well-known fact that bread grain was in such high demand that any ship, regardless of the reason for his trip to Italy or any other grain wealthy region, would stock up with bread grain upon return to the island because the profit was guaranteed.

<sup>34</sup> DAZd. KA, box 4, bundle 5, f.3v, November 6th 1398.

<sup>35</sup> The Council, 66, April 1st 1404

<sup>36</sup> I was not able to successfully investigate this toponyme. This could possibly be the present Barleta.

<sup>37</sup> I was not able to determine which city this name refers to.

<sup>38</sup> The preserved document is rather vague with numerous clauses for the diversity of possible events (DAZd. KA, box 4, bundle 6, f.27v, November 18th 1400)

There was a case when a man from Venice, named Lazarin Blancus, employed the previously mentioned Angelino Petri from Monte Nigro to transport wine and a processed stone beam purchased in Korčula to Lesio. He advised him to stop to Cefalù (*Cufalatum*) in Sicily to buy bread grain and ship it to Korčula.<sup>39</sup>

The produced facts evidently demonstrate the natural and necessary connection between the two coasts of the Adriatic. There is no doubt that the analysis of other communes in Dalmatia would produce a rather different result, marked with the unique individual features. But only a collection of individual analysis of the connections between the Dalmatian communes and the Italian regions would produce a complete image of the complexity of the relations between the two coasts of the Adriatic during the Middle Ages.

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## The southern Adriatic Sea and the Ionian Sea: Corfu in the crossroads between the Orient and the Occident

### Abstract

The Mediterranean Sea in the pre-industrial age was an immensity of water: man's efforts had only conquered a few coastal margins, direct routes, and tiny ports of call. Therefore, shipping was active only along the coastline, and navigation in those days was a matter of following the shore line, from coast to coast, from promontories to islands and from islands to promontories. As such, seafaring constituted the formula of success for the control over the Mediterranean, playing a key role in communication, military activities and economic exchange. However, it is often overlooked that the meeting point and main gate for commercial, political as well as cultural and social interactions and connection formed the harbour. By examining any archaeological evidence of harbours and coastal facilities that have been published in the last century, and contextualising the archaeological evidence with historical data and information from primary sources between the 5<sup>th</sup> and the 12<sup>th</sup> centuries, we aim to bring to the forefront of historical research the specific aspects of settlement of the Early and Middle Byzantine Corfu Island (5<sup>th</sup>-12<sup>th</sup> centuries), the commercial and economic activity in this region, and its links with the wider networks in the eastern Mediterranean.

**Keywords:** The Mediterranean Sea, Corfu, Orient, Adriatic Sea, Ionian Sea, Venetia

The Mediterranean Sea in the pre-industrial age was an immensity of water: man's efforts had only conquered a few coastal margins, direct routes, and tiny ports of call. Therefore, shipping was active only along the coastline, and navigation in those days was a matter of following the shore line, from coast to coast, from promontories to islands and from islands to promontories. For Rome and Byzantium, the real crux and enabler of power in an empire which combined the occident with the orient was the control over the seas. As such, seafaring constituted the formula of success for the control over the Mediterranean, playing a key role in communication, military activities and economic exchange. However, it is often overlooked that the meeting point and main gate for commercial, political as well as cultural and social interactions and connection formed the harbour.

### Methodological problems - Previous research

Unfortunately, the study of harbour sites constitutes a relatively new field in archaeology, both the terminology used in their descriptions and the scientific approach in their investigation still lack fundamental knowledge and methodological groundwork, such as a clear definition of different infrastructures and their facilities and how they are used and interconnected with each other. Therefore scholarly interpretations of harbour sites often face the problem of diversity and inconsistency. This makes it difficult to investigate the coastal sites of late antique and medieval Byzantium, which are characterized by their historiographical complexity. Experts in the field have

<sup>39</sup> DAZd. KA, box 4, bundle8, f.33v, November 21st 1402

underlined the limited interest that has been paid to the archaeological investigation of harbour facilities (Ginalis, 2014, 1-4; Veikou, 2012, 103). Furthermore, wherever Byzantium's coast and its infrastructures were subject of investigation, any conclusions were mainly based on historical and textual sources. Sadly, these provide only general and inconclusive information. Therefore, Early and Middle Byzantine Corfu (5<sup>th</sup>-12<sup>th</sup> centuries) has as yet been very much a 'grey area' in research.

## Research Aims and Methodologies

The research would focus around two main axes:

- I. examining any archaeological evidence of harbours and coastal facilities that have been published in the last century, or any evidence of commercial activity between Corfu and the Balkan and Italian coasts like coins, seals, pottery or metalwork, that put the island firmly in the epicentre of economic activity in the Ionian and Adriatic Seas
- II. Contextualising the archaeological evidence with historical data and information from primary sources between the 5<sup>th</sup> and the 12<sup>th</sup> centuries

The general aims of the project relate mainly to specific aspects of settlement within the period in question, the Early and Middle Byzantine Corfu Island (5<sup>th</sup>-12<sup>th</sup> centuries), and it would potentially include:

- a) What can the current finds in archaeology reveal about the commercial and economic activity in this region, and its links with the wider networks in the eastern Mediterranean?
- b) Which sites were used for that purpose and how did they develop over time?
- c) What data do we have about Corfu Town (*Korυφώ*) and Cassiope, and what are their attributes?
- d) What was the significance of their location in the wider geo-political and economic context of the eastern Mediterranean?
- e) What links can we discern from the archaeological and historical evidence? Are they inter-dependent?

## Methodological framework

Of special significance is the long-term project "Tabula Imperii Byzantini" of the Austrian Academy of Sciences ([www.oewa.ac.at/historische-geographie](http://www.oewa.ac.at/historische-geographie)) which unites history, economy and trade, transportation and demographics, settlements and other documented or rediscovered monuments and infrastructure for an overall picture of a region - volume 3 covers Western Greece and the Ionian Islands. This material will be used to establish a documentation of ports and harbour facilities in Corfu in the period in question.

Archaeological excavations of the medieval harbour facilities have been meagre, or non-existent, and further research would have to be conducted in this respect.

Medieval chroniclers and historians provide information about the state of harbour facilities in Corfu island, although they are also not plentiful. The sixth century Byzantine civil servant and historian, Procopius, could provide some clues as to the port facilities in Corfu Town. But there is gap in the bibliography between the 6<sup>th</sup> and the 9<sup>th</sup> centuries, and we find no mention of Corfu or Cassiope before the end of the 9<sup>th</sup> century, in a hagiographies of St. Helias the Younger (written c. 900) and

St. Arsenios (written c. 950). The most well-known descriptions of the island and its towns comes from the chroniclers of the Norman campaigns in Illyria, in 1081 and 1107. Both the Byzantine Princess Anna Comnena and the Italo-Norman chroniclers of the period refer to the harbour facilities both in Corfu Town and Cassiope, describing two crucial naval battles between the Byzantino-Venetian and Norman fleets that took place off the aforementioned towns. The last mentioning of the island and its towns comes during the second period of Norman campaigns in Greece, between 1147-48, which involved the Norman conquest and defence of Corfu Town from the Byzantine fleet which arrived to reclaim it.

## The *Korυφώ* - Corfu Town

As the early Christian Palaeopoli declined and was abandoned at a period that it is difficult to determine precisely by historians and archaeologists, gradually the population moved to the naturally fortified position of the Old Fortress around the end of the 4<sup>th</sup> century. It is likely that this move took place gradually and did not come as a result of a particular event (war, raid, natural disaster etc.). The newest coins from the Palaeopoli that have been brought to light by the excavations in the area can be dated in the early 5th century, thus serving as a *terminus post quem* for the abandonment of the town. On top of that, the Roman bath (or one of the baths) of the town, which is one of the fundamental elements of urban life, seems to have been abandoned around the same period (late 4<sup>th</sup> / early 5<sup>th</sup> century). Excavations, especially of the paleo-Christian basilica of Palaeopolis, have also revealed a very early layer of destruction, perhaps in the 5th century, but thereafter the basilica is rebuilt in a more limited form and continues to be in use (Paleopolis). It goes without saying that the relocation of the settlement must have been followed by some fortification works on the (eastern) acropolis and / or the entire peninsula. However, there is not the slightest mention on the literary sources about the possible dating of some of these constructions.

Describing the raid of the Goths of Totilla in the Ionian Sea in AD551, the prominent late antique Greek historian Procopius (AD500-564) states that: "When the Gothic fleet reached Kerkyra, they plundered it thoroughly in a sudden raid, and also the other islands called Sybotai that lie near it," without mentioning any specific disaster, or clarifying the port of disembarkation of the Gothic warriors (Prokopios 2014, 513). Then Procopius writes that the Gothic fleet crossed over to the Epirotic mainland, thus confirming the transit route from Corfu to the opposite coast of mainland Greece and the key geographical role of the island in the northern Ionian Sea. Following the Gothic raids of the 6<sup>th</sup> century, the only mention of Corfu in the primary sources dates back to the end of the 9th century. In the Life of St. Elias the Young, as it was put down by one of the saint's disciples, around 882 Saint Elias left Bouthroto, on the opposite Epirotic coast, and disembarked somewhere close to the in the Corfiot Palaeopolis, taking quarters in the local bishop's palace, a fact suggesting the significant size of the town by that time (Rossi Taibbi 1962).

The well-known archbishop of Corfu, Saint Arsenios, who preached in the island for 20 years after AD933, offers us the first direct information on the layout of the city in the 10th century. It is the first time that Corfu is referred to in the Byzantine sources as a "city" [πόλις], and it is also the first time where explicit reference is made on its walls-fortifications, its many churches and gardens within its walls. No mention, however, is made of any port facilities (Γαστεράτος 2011, 44-46).

Helene Ahrweiler has pointed to the strategic importance of Corfu for the defences of the empire's western naval approaches in the 11<sup>th</sup> century, highlighting the existence of a substantial naval base on the island: "Durazzo, Corfou, Céphalonie et Naupacte contrôlent la frontière occidentale ... nous avons là les bases de la frontière maritime pendant la seconde moitié du XIe siècle." (Ahrweiler 1966, 160-61). This period succeeded what Ahrweiler has also pointed as a period of prosperity during the

9<sup>th</sup> and 10<sup>th</sup> centuries, experienced by certain ports and islands such as Corfu, Patras, Naupactus, Cephalonia, and Durazzo on the west coast of the Balkans, when the Arabs of Crete had made the sea route around the Peloponnesus unsafe (Ahrweiler 1982, 255). The west coast of the Balkans, including Corfu, became the jumping-off point for traffic with Byzantine South Italy, and there can be little doubt that some of that traffic was carried in ships from the ports and islands in question. It would be the same bases that would be left deserted a few decades later, around the third quarter of the 11<sup>th</sup> century, following the dramatic decline of the Byzantine navy in that period, although Corfu remained the capital of the administrative office of the *duke-katépanô* - the island kept its strategic importance throughout the Comnenian period (1081-1180).

The most well-known descriptions of Corfu and its towns comes from the chroniclers of the Norman campaigns in Illyria, in 1081 and 1107. During those years, three political powers clashed in the waters north of Corfu, in order to dominate the sea-routes of the southern Adriatic and northern Ionian Seas - Byzantium, Venice and the Normans of Italy. As the Normans' initial target in the summer of 1081 was the port-city of Dyrrachium (modern Durrës) in the Albanian coast, the port of entry for the Via Egnatia that led through Thessalonica and Adrianople to Constantinople, the Norman Duke Robert Guiscard had already considered it vital to take the capital city of Corfu - along with the port on the opposite Epirotic coast, Bouthroto - probably intending to have it as a forward supply base, while another side-expedition occupied the port of Vonitsa (Bundicia), further south into the Amvrakikos Gulf. And to secure the island of Corfu, he first sent a reconnaissance fleet to Cassiope, as we read in contemporary primary sources:

"He [Robert Guiscard] captured by storm a fortress called Cassopoli on the island of Corfu, and another fortress [castrum] which took its name, Corfu, from the island itself, and he made them and the whole island subject to him. Then he set out and immediately went to besiege a city called Avlona, near the Campi Emazi, since it lay very close to the coast where he had landed." [Malaterra, Gesta, 3. 24]

Corfu's fortifications must have been considerable, and the castles [castra] well-fortified and maintained, because the same author - Malaterra - reported that: "The advance party [of the Norman invasion of 1081] set sail and reached Corfu during the night. The island was reconnoitred from some distance away at sea but, not liking the look of the considerable number of the enemy whom they saw there, they did not dare to disembark from the ships." [Malaterra, Gesta, 3. 24] No mention, however, exists about the port facilities either of Cassopoli-Cassiopi, or of Corfu Town.

For the Norman second expedition in Illyria, in 1084, Anna Comnena writes: "When Robert heard of the arrival of the fleets he, as was his nature, wanted to force on an engagement, so loosed cable and entered the port [*λιμένα*] of Cassiope with his whole fleet. The Venetians had anchored in the harbour [*λιμένα*] of Pasaron and stayed there a little and on hearing of Robert's arrival, they too quickly made for the port of Cassiope. A fierce engagement ensued and a fight at close quarters in which Robert was defeated." [Anna Comnena, Alexiad, VI. 5] Therefore, the Byzantine Princess Anna reports that there was, indeed, some port-facilities in Cassiope, although the general term *λιμένα* leaves much to speculation. However, the fact that an entire fleet was able to lay in anchor and disembark troops there, both in 1084 and in 1081, is significant evidence.

Further down her work, Anna Comnena describes another engagement on the waters outside Corfu Town: "These [Byzantine-Venetian ships] were panic-stricken by his [Guiscard's] unexpected arrival; they at once bound together their larger vessels with ropes in the neighbourhood of the harbour [*λιμένα*] of Corfu, and having thus constructed what is called an 'open-sea harbour' [*πελαγολιμένα*] they drove the smaller vessels into it; then armed and awaited his coming." Again, the general term *λιμένα* is much too vague.

There are no diaries or log-books of sea captains from the 12<sup>th</sup> century, but there are vivid accounts of crossing the Mediterranean written by Jewish and Muslim pilgrims journeying from Spain to the East. Benjamin of Tudela was a rabbi from a town in Navarre, and he set out on his travels around AD1160. The aim of his diary was to describe the lands of the Mediterranean, large areas of Europe, and Asia as far as China, in Hebrew for a Jewish audience, and he carefully noted the number of Jews in each town he visited. His book reports genuine travels across the Mediterranean, through Constantinople and down the coast of Syria, though his descriptions of more remote areas beyond the Mediterranean are clearly based on report and rumour, which became more fantastic the further his imagination ventured. Benjamin's route took him down from Navarre through the kingdom of Aragon and along the river Ebro to Tarragona, where the massive ancient fortifications built by 'giants and Greeks' impressed him. From there he moved to Barcelona, 'a small city and beautiful', full of wise rabbis and of merchants from every land, including Greece, Pisa, Genoa, Sicily, Alexandria, the Holy Land and Africa.

The *Travels of Benjamin* is an important work not only as a description of the Jewish communities, but also as a reliable source about the geography and ethnography of the Middle Ages (Benjamin of Tudela, 1993). His journey began in Zaragoza, further down the valley of the Ebro to Tarragona, Barcelona, and Girona, whence he proceeded north to France, then set sail from Marseilles. After visiting Genoa, Lucca, Pisa, and Rome, he went to Greece where he crossed to Corfu from Bari, then following an inland route to Thebes and Salonika, before reaching Constantinople, then set off across Asia. He visited Syria, Lebanon, the Land of Israel, and northern Mesopotamia (which he called Shinar) before reaching Baghdad. From there he went to Persia, then cut back across the Arabian Peninsula to Egypt and North Africa, returning to the Iberian Peninsula in 1173.

Italian pirates acquired bases in the Aegean; Corfu fell into the hands of a Genoese pirate who was now free to raid Venetian shipping as it passed through the Adriatic exit

The last relatively extensive reference to the island of Corfu that we have in Byzantine primary sources is made on the occasion of its occupation by the Normans of Roger II of Sicily in 1147-1149.<sup>1</sup> The seizure of Corypho by Roger was, according to Nikitas Choniatis, due to treason from within. Choniatis makes a clear distinction between "the city", which is the whole settlement, and the "fortress" or "extreme" with the acropolis. In the famous description of the city and acropolis of Corfu, given by the historian, one is left to admire the height of its acropolis, with the walls that surround the entire city. Furthermore, the acropolis has its own separate fortifications and curtain wall, which, combined with its height and the precipice of the place, make it literally impenetrable. Sadly, neither Choniates or Kinnamos, both our best sources for 12<sup>th</sup> century, make any mention of port-facilities on the island.

Yet, although a 'castle' without great prospects of turning into an economically developed city within the framework of the Byzantine Empire and its economy, the Middle Byzantine Coryfo can be found on the top of the list of the famous commercial privileges granted to the Venetians by the Byzantine Emperor Alexios I Komnenos in 1082, and it continued to be included in all the occasional renewal of these privileges in the following century (12<sup>th</sup> c.). That would not have been the case unless one party to these agreements had not recognized the geo-political and strategic significance of the island for its rising empire - Venice. What made Coryfo a real city, and indeed a city very similar to the European cities of the Late Middle Ages, was its conquest by the Venetians.

<sup>1</sup> O'city of Byzantium, Annals of Niketas Choniatis. 1984. pp. 43-8. Deeds of John and Manuel Comnenus by John Kinnamos. 1976. pp. 73-80.

## The Venetian Corfu

It was the changing geo-political circumstances in the eastern Mediterranean that transformed Corfu into a strategic economic outpost, after its conquest by the French aristocratic house of Anjou (1267) and, especially, by the Venetians (1386). The transit routes along the Ionian and southern Adriatic Seas may have been under the control of a prosperous Byzantine Empire until the first half of the 11<sup>th</sup> century, but as the Normans of Italy successfully expelled the Byzantines from southern Italy in the 1060s-70s, the power of the Venetians also saw a boost in that period. Then, under Alexios I Komnenos (1081-1118), the former western boundary of the Empire was moved closer to the capital, that is to the Adriatic coast of the Balkans, while the total domination on the entire Adriatic Sea belonged now to the Venetians (Lounghis 2010, 68-9). In a sense, the island of Corfu found itself in the 11<sup>th</sup> century in the geo-political and economic margins of the Byzantine Empire. But that was about to change, following the rapid rise of the Serenissima!

To and from Venice, voyages both up and down the Adriatic were made invariably along the Balkan coast, unless a ship had business in one of the Italian ports. The prevailing winds generally make the Italian coast an unwelcoming one, and there are few natural safe refuges, like offshore islands to provide shelter in bad weather. The Balkan coast, by contrast, has a large number of islands and ports for refuge and supplies, all of them situated on the eastern shores of the islands facing the Balkan mainland. In January 1571, when a Venetian galleon, *Foscarini e Panighetto*, coming from Candia in Crete, ran into fog on the western side of Corfu, the captain was obliged to advance blind with no land in sight, the crew was seized with despair.<sup>2</sup>

For the Venetians the many islands and ports possessed or dominated by the city in the lagoons on the Balkan coast from the 11<sup>th</sup> century provided secure shelter and logistical facilities for their shipping. In 1228 for example, the Holy Roman Emperor Frederick II took his fleet from Brindisi to Acre via Corfu, Cephalonia, Crete, Rhodes, and Limassol.<sup>3</sup> By the late Middle Ages they operated systems of pilots from Venice to Parenza and from Parenza to Modon. As far south as Dubrovnik, the route lay amongst the islands and channels very close in to the mainland, often in extremely confined waters. South of the Straits of Otranto, it lay inshore of Corfu, Cephalonia, and Zante, all of which had their main medieval harbours on their east coasts.

To enter or leave the Adriatic usually meant sailing past Corfu, and this island, as a sententious text of the Senate (17th March, 1550) says, was the 'heart' of the Venetian State 'regarding shipping as much as any other aspect'.<sup>4</sup> In the Swiss Dominican theologian Felix Fabri's (1441 - 1502) account of his pilgrimage voyages from Venice to Jaffa in 1480 and 1483, he referred constantly to the need to provision and water the transport-galley.<sup>5</sup> On the first voyage the captain put in to Parenza (Piran), Zara (Zadar), Lesina (Hvar), Curzola, Ragusa (Dubrovnik), Corfu, Modon, Limassol, and Larnaca. On 15th July 1519, Venetian galleys were ordered to leave Corfu and fetch from Tunis to Zara 'li ori de li mercadanti de le galie nostre de Barberia et altro haver sottile', both gold and expensive merchandise; many other examples exist in the Archives in Venice.<sup>6</sup>

Concern in the West grew in 1537 when Sultan Süleyman (1520-1566) sent 25,000 men under admiral Hayrettin against Corfu. A Turkish siege of Corfu was an obvious threat to the West: the Ottomans would acquire a launch-pad for attacks on Italy, and would be able to control traffic into the Adriatic. A Holy League was formed at Nice under papal patronage, bringing together Doria, the Spaniards and Venice, which was traditionally so cautious in its dealings with the Sublime Porte. Early in 1538, Hayrettin responded with a series of assaults on the Venetian bases in the eastern Mediterranean, which included Corfu, Nafplion and Monemvasia in the Peloponnese. This was not simply tit-for-tat warfare: taken together, the Venetian islands and coastal stations -including Corfu- offered supply lines and protection to western shipping, thus they were vital for Venetian and Italian interests.

This geographical 'accident' propelled Corfu as a major stopping point that provided refuge for shipping in bad weather, facilities for repairs, and trading opportunities, in a chain of other islands of the Mediterranean: the Balearics, Corsica, Sardinia, Sicily, the Ionian islands, Crete, Negropont (Evoia), Naxos and the Aegean islands, Rhodes, and Cyprus. Therefore, for any city that had geo-political aspirations to dominate the Adriatic and the Ionian Seas, either politically and/or economically, controlling these island harbours was absolutely paramount. Venice, therefore, devoted much attention to Corfu, sparing no expense in fortifying the island, bringing up-to-date the existing fortifications and building new ones in strategic sites around the island.

There were three castles that formed a defensive triangle in the island of Corfu, with Gardiki guarding the island's south, Cassiope the northeast and Angelokastro the northwest. The exact origins of Cassiope castle appear to be Byzantine, as the castle was probably built in the 6<sup>th</sup> century. In 1081, Count Bohemund of Taranto conquered the castle at the start of the first Norman invasion of Byzantine Balkans. Later, in 1084 the fortress fell into the hands of Alexios I Komnenos after he defeated the Norman fleet following three naval battles in the Corfu. In 1267 the Angevins took over the castle, and in 1386 the castle fell to the Venetians after some initial resistance. The Venetians ordered the destruction of the castle because its defenders resisted their takeover of Corfu in 1386. After the 1669 Ottoman conquest of Venetian-held Crete, the Venetians redoubled their efforts at strengthening the defences of the island of Corfu. Following the second siege of Corfu by the Ottomans in 1716, the Venetians finally decided to rebuild the castle of Cassiope, although the local population had already moved to other places including villages on the highlands of Mount Pantokrator (Freely 2008, 72-73).

After Byzantium lost its territories in southern Italy in AD1071, it paid a lot of attention to the castle of Angelokastro, since Corfu by default became the western frontier of the Byzantine Empire between the 11th and 12th centuries, serving to defend Byzantium from its dangerous foes to the west. At the same time the windswept fortifications of Angelokastro helped safeguard Corfu from the Normans of Sicily, whose constant incursions had turned the island into a theatre of military confrontations. The castle enjoyed considerable prominence during the period of Venetian rule (1386 - 1797), and from 1387 until late in the sixteenth century, Angelokastro was the capital of Corfu and, in early sixteenth century, became the seat of the *Provveditore Generale del Levante*, who was the commander of the Venetian fleet stationed in Corfu and governor of the Ionian islands. Angelokastro was instrumental in repulsing the Ottomans in three sieges of Corfu; in the first great siege of Corfu in 1537, in the Siege of 1571 and the second great siege of Corfu in 1716 (Tataki 1983, 78-79; Hirst, Sammon 2014, 233).

Sadly, much less is known about Gardiki (Stamatopoulos 1993, 166-67; Tataki 1983, 68-69; Freely 2008, 82-83). It was probably a 13<sup>th</sup> century Byzantine castle on the southwestern coast of Corfu and the only surviving medieval fortress on the southern part of the island. It was built by a ruler of the Despotate of Epirus, either by Michael I Komnenos Doukas (reigned, c. 1205 - 1214/15) or his son Michael II Komnenos Doukas (reigned, c. 1230-1266/68). It also played a key role in defending the island from pirates and other threats during the Venetian era on the island (1386-1797).

<sup>2</sup> Simancas Eº 1392, Figueroa to the King, Genoa, 30th April, 1563.

<sup>3</sup> "Breve Chronicon de rebus Siculis a Roberli Guiseardi temporibus ad annum 1250," in Philip de Novare, *The wars of Frederick II against the Ibelins in Syria and Cyprus*, trans. J. L. La Monte (New York, 1936), pp. 201-3.

<sup>4</sup> A.d.S. Venice, Senato Mar, IS, fº 2.

<sup>5</sup> Felix Fabri, *Wanderings*, vol. I(7), pp. 13-23.

<sup>6</sup> A.d.S. Venice, Senato Mar 19, fº 101.

Part of the defensive chain of fortresses around the island of Corfu and the Ionian Sea was Gaios, the main port and the capital of Paxoi to the south of Corfu. The bay is protected by a small island where the ruins of a Venetian castle. Paxoi became a Venetian occupation in 1381. Until then, it belonged to the Kingdom of Napoli. In 1423 the local Venetian lord Adam II San Ippolito asked the permission of the Venetian Senate to build a castle there, on his own expenses, in order to protect the little island complex from piracy. The Venetians remained until 1797 and were replaced by the French. After some troubled decades, Paxoi were occupied by the British in 1814. The castle of Agios Nicolaos was captured without a battle.

Almost nothing is known about the Venetian castle in the island of Othonoi. The Diapontia Islands (Greek: Διαπόντια νησιά) are located in the northwest of Corfu, (6 km away) and about 40 km away from Italian coasts, and played a key role in the strategic chain of fortifications in the region. Hence the Venetian-era castle foundations that can be discerned next to a modern light-house, at the north-eastern tip of the island.

Butrint, ancient Buthrotum, situated 3 kms from the Straits of Corfu on the Vivari Channel at the south end of Lake Butrint in south-west Albania, is a typical illustration of an ancient city that declined in late antiquity before experiencing a Mid-Byzantine revival that endured until the later Middle Ages. With its fertile coastal niche extending 10 kms into a mountainous valley and with access to celebrated amounts of fish in Lake Butrint, it appears to fit the stereotype of a key Mediterranean coastal location, connected to one of the main arteries of the Mediterranean. After a major revival in Late Antiquity, Butrint like many long-established ancient cities in the region was largely deserted during the later 6th century, showing a major contraction of settlement that lasted until the 10th century, on which period (in the later 9th or early 10th century) the subsequent revival of the old fortified town involved the refurbishment (Hodges, Bowden and Lako 2004; Hodges and Logue 2007, 41-43).

To the aforementioned fortified site, we have to add the castle of Lékurës, built in 1537 by Sultan Suleiman who had attacked Corfu and needed to control the harbor of Agioi Saranda and the road that connected it with Butrint. At the end of the 18th century the castle was attacked by Ali Pasha of Ioannina. The castle used to withhold the old Lékurës village. It has a square shape with two round towers on its north-western and south-eastern corners.

Finally, as part of their defence plans in the Ionian Sea, the Venetians stationed two squadrons in Corfu, one of twenty five galleys, the other of twelve heavy sailing ships under two Vice Admirals (Giles, Flamburiari and Schulenburg 1994, 40-41). Following the second great siege of Corfu by the Ottomans in 1716, the Venetians further reinforced the strategic importance of the island of Corfu for their naval empire, and built an arsenal to service their ships at Gouvia Bay (Pratt 1978, 36-37). The shipyard at Gouvia was part of an expanded network of Venetian arsenals and naval stations in Greece, including Methoni, Koroni, Chalkis, Preveza, Chania and Heraklion (Damianides 1997, 26).

## After Venice

Following Admiral Nelson's great victory over Napoleon's fleet at Aboukir Bay, close to Alexandria, in summer 1799 (the Battle of the Nile), the British were able to expel French armies from Egypt. The Sublime Porte had remained broadly content with its French alliance since the sixteenth century. A French landing in Ottoman Egypt could not, however, be tolerated. It was time for the sultan to turn against a France which had shown itself more ambitious in the Levant than the Ottomans could allow. The most important feature of the Russo-Turkish alliance that followed Aboukir Bay was the preliminary agreement, signed only a few weeks after the naval battle, which permitted the Russian

navy to sail through the Bosphorus into the Mediterranean. Fortunately, the Turks and the Russians could agree on a common objective: the Ionian isles, which Napoleon had seized shortly before, while he was sweeping up the remnants of the Venetian empire following his capture of Venice in May 1797. The Turks suspected that Ancona was to be used as a base for a French invasion of the Balkans, and saw control of Corfu and its neighbours as a necessary step towards a blockade of the Adriatic.

By 1808, Napoleon seemed to be clawing back his control of the Mediterranean, the French had re-established their fleet at Toulon, and there were fears of a naval attack on Naples and Sicily. The British government wondered whether there was any point pursuing war in the Mediterranean. How difficult conditions were can be seen from the size of the British fleet, which had plenty of other duties to perform close to England, in the Caribbean and elsewhere. Corfu's strategic importance for the British in the eastern Mediterranean and the Adriatic Seas can be discerned by the fact that on 8 March 1808 fifteen ships of the line lay under the control of Admiral Collingwood, Nelson's capable successor: one at Syracuse, one at Messina and one off Corfu, while twelve stood guard at Cádiz. Following the end of the Napoleonic Wars, Great Britain would gain the prizes of Malta, Corfu, and Sicily.

In the second half of the 19<sup>th</sup> century, it became obvious that steamships would be most useful for transporting merchandise and mail, including bank transfers, via the sea. In other words, steamships could play a vital ancillary role in trade, accelerating the speed of payments and the spread of commercial information, as well as providing space for passengers who found steam packet ships more comfortable. The French government was planning steam packet routes as early as 1831, when steamships opened a route from Marseilles to southern Italy. Timetables could be constructed: in 1837 the Austrian government entered into a contract with the Austrian Lloyd Company, based in Trieste, for two voyages a month from Trieste to Constantinople and Alexandria, visiting Corfu, Patras, Athens, Crete and Smyrna, and carrying coin, mail and passengers (Abulafia 2011, 556).

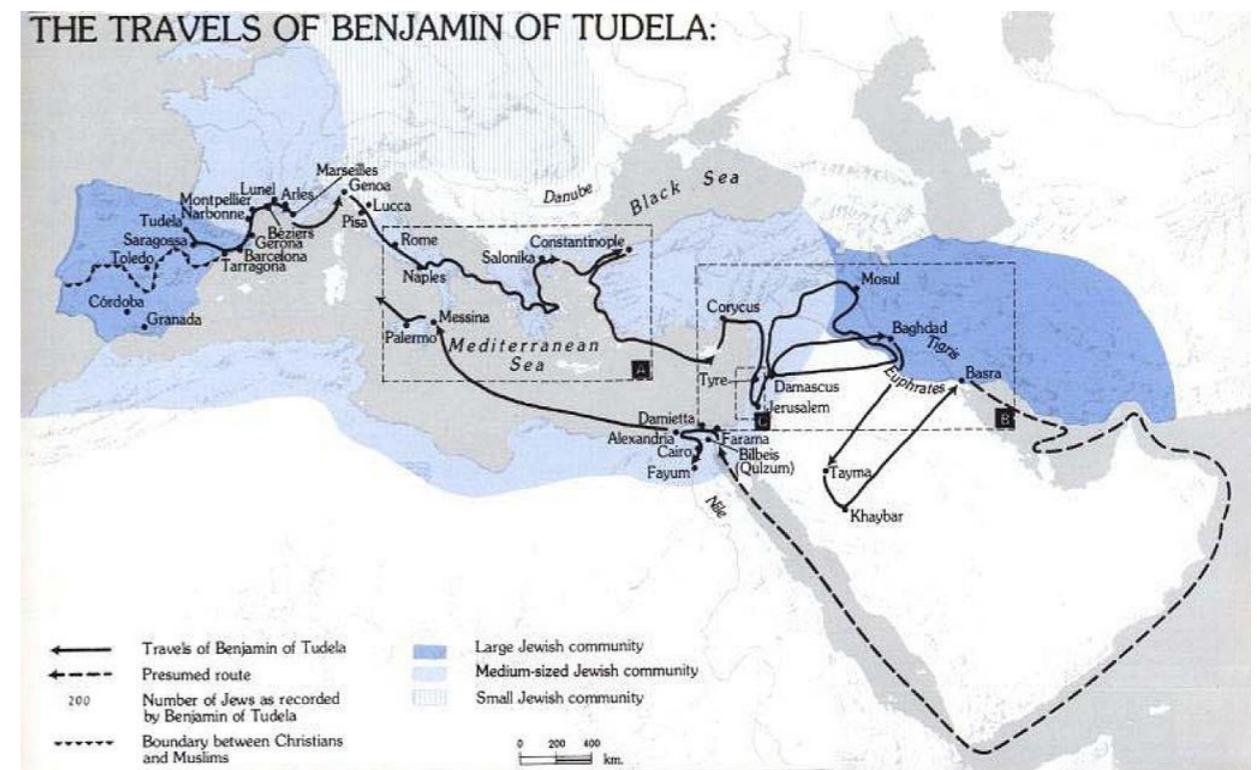


Fig. 1. The geographical location of Corfu II

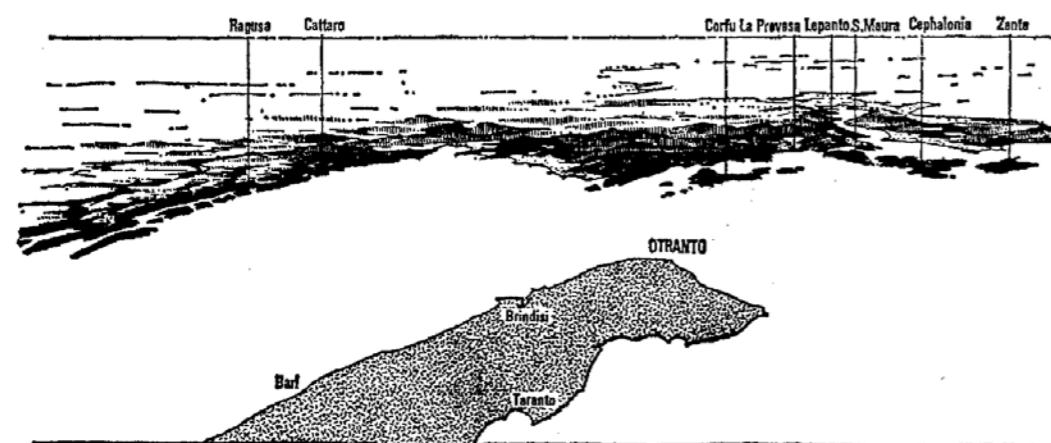


Fig. 11: Corfu, lying opposite Otranto, commands the entrance to the Adriatic  
Note the positions of the great naval encounters: La Previsa, 1538; Lepanto, 1571. Sketch by J. Bertin.

Fig. 2. The geographical location of Corfu

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## From heritage places to ecotourist destinations: processes and strategy to manage social change

### Abstract

This paper is based on the notion of tourism as an important driver of change and it analyses some socio-cultural processes behind the implementation, organization and management of an ecotourist destination in relation to the enhancement of its place-based resources and identity. This has to do mainly with cultural and historical heritage and its "translation" into an element of the tourist attractiveness of a place. Is there a border between the sense of a place and its enhancement in commercial terms that needs to be paid attention to in order to avoid an unsustainable transformation of place identity? This study is aimed at addressing this issue on the base of a theoretical overview of the possible strategies a local community could take on to manage social change and territorial organization within the framework of ecotourism. These strategies are thought as a containment of the risks related to the social conflict arising from the transformation of a heritage place into a popular tourist destination. In analysing social change, the theoretical concept of cultural sustainability is taken into particular account as to propose an ideal-typical process of a "sustainable staging of place identity".

**Key words:** heritage; ecotourism; place identity; social change; tourism transition

### 1. Place identity and tourism: challenges and risks

As widely shared in literature (Dredge, Jenkin 2003; Ginting, Nasution and Rahman 2017) tourism is fundamentally a place-based phenomenon, but the definition and attractiveness of a destination happens at different scales. The identity of a place and its distinctiveness within the global tourist market is the result of the interactions between the extra local flows (related to political economy and global consumptions styles) and the historical layers of locally based relationships. For this reason, a destination can be considered as the product of a negotiation process between local stakeholders' economic needs and the place representation related to the tourist gaze (Urry 1990).

To become attractive in tourist terms, places are highly encouraged to differentiate from one another, which means to emphasize the peculiarity of their local assets (both tangible and intangible objects) and to embed place identity. This last concept is certainly regarded as the individual's emotional attachment to an environmental setting, notwithstanding its making is a social and dynamic process based on social memory, cultural awareness and organized construals. In particular, when applied to tourism, place identity would be set upon four principles to guide action, such as distinctiveness, continuity, self-esteem and self-efficacy (Wang, Chen 2015; Ginting, Nasution and Rahman 2017, 410-411). Among these principles, distinctiveness is taken into particular account, indicating the positive perception towards the uniqueness or particular character of an environmental setting. It can be made visible and clear through material landmarks (i.e. local architecture, archeological remains, landscape peculiarities, natural environment and wildlife) as well as cultural activities and regional products. Once a place has gained its embedded identity through distinctiveness it will be easier to

be remembered and described. «A unique place can help people to orient and give a convenience so that people feel connected to the place» (Ginting, Nasution and Rahman 2017, 414).

Further, place identity determination and definition can highly influence residents' attitude toward local tourism development and the overall predisposition in hosting (Wang, Chen 2015; Wang 2016). Attitudes and behavior of residents may change according to the different developmental stages of tourism. Embeddedness and sense of place as a resource can become fundamental elements of the whole entrepreneurial process, motivating the wish to respond to specific contextual needs and enabling (or constraining) both private and communitarian possibilities (McKeever, Jack and Anderson 2015).

For example, when the number of tourists becomes excessive or grows in an unpredicted speed, tourism might become an undesired source of income. The risks and implications related to the so-called overtourism in terms of local conflict and antagonistic encounters between residents and tourists have been recently highlighted (Dodds, Butler 2019; Seraphin, Gladkikh and Thanh 2020). However, this phenomenon is not only related to the large amounts of tourists visiting urban contexts and it can be referred to also in its relative terms. In some local contexts - like for example rural areas or small municipalities which are not used to experience hospitality at all - also small numbers of visitors may cause concerns if their arrivals are unexpected (Butler 2020, 27-43). Paradoxically, what at first is considered as an important driver of change and as a way to requalify locally-based economy in a qualitative appreciable way may turn eventually in a field of social conflict. The increase in the number of visitors as well as the growing diversification of motivations from different types of tourists may bring to a rapid spread of the commercial aspects and to the replacement of some elements related to social identity in favour of what the customers requires. All these may hit heritage landscape, causing some undesirable changes which the social psychology has described in terms of loss of perceived control over place identity and the gradual loss of sense of place (Gössling, McCabed and Chene 2020). Eventually, this loss might weaken both attachment to place (as residents' sense of belonging) and place experience (as tourists' emotional satisfaction).

### 2. Heritage and eco-tourism

In order to be socially and culturally sustainable, beside its economic benefits, tourism development has to take into adequate consideration also the enhancement of symbolic capital, the triggering of social capital and the safeguard of cultural one (Maretti, Salvatore 2012). This is particularly true when the transition toward a tourist economy is based upon the idea of local heritage and even more when this transition happens within the framework of eco-tourism. Even if the eco prefix soon recalls the "green" vocation of these leisure practices, eco-tourism is closely related also to the categories of culture and social impact. According to the definition suggested by The International Ecotourism Society ([www.ecotourism.org](http://www.ecotourism.org)):

Ecotourism is responsible travel to natural areas that conserves the environment and improves the well-being of local people [...] [It] is about uniting conservation, communities, and sustainable travel. This means that those who implement and participate in ecotourism activities should follow the following ecotourism principles:

- ▶ Minimize impact.
- ▶ Build environmental and cultural awareness and respect.
- ▶ Provide positive experiences for both visitors and hosts.
- ▶ Provide direct financial benefits for conservation.
- ▶ Provide financial benefits and empowerment for local people.
- ▶ Raise sensitivity to host countries' political, environmental, and social climate

This definition has been chosen among others because it integrates the so-called demand-side variables (tourists needs and wants) with aspects related to the supply side (community awareness and social empowerment). Unlike the first definition of eco-tourism (Ceballos-Lascurain 1996), from here on the environmental sustainability, the care and responsibility towards nature, the concept of conservation itself have been often matched with socio-cultural aspects, related on the one side to the involvement of local communities on the other to the minimization of the impact from tourists on the environment (Jones 2005). Due to these peculiarities, ecotourism has been considered as a means to equally rebalance nature and wildlife protection with economic growth. Hence, the considerations here presented can be referred to eco-tourism in general and in particular to those tourist practices that look to both natural and cultural patrimonies (that is to local heritages), in order to experiment with new models of sustainable tourism.

As we all know, the search for emotional experience and for territorial peculiarity (Jepson and Sharpley 2015), as well as the possibilities offered by the green economy (Reddy and Wilkes 2015), have widely broaden the range of tourist choices. At the same time, these aspects have given all places the chance to "go tourist", that is to look for new possibilities of development related to tourism, facing the challenge to enhance place-based resources as a possible way to innovate their local economies and to foster virtuous processes of socio-economic transformation (Moriggi 2020).

In fact, tourists' new demands and interest in living an experience of alternative travelling, particularly focused on the distinctiveness of local cultures and on its environmental respect, are more likely to be satisfied in areas that have somehow safeguarded their natural and cultural heritages, often away from the more conspicuous flows related to mainstream tourism. For these new tourism experiences, good services and wild natural landscapes are no longer sufficient elements to implement a local tourist supply. Contemporary tourists are more and more demanding and well prepared about the tourist experience they are going to live. That is why their demand requires a whole quality cultural program, widely integrated and able to go the monothematic perspective over (Jelinčić 2009).

### 3. Heritage between place identity and change

As the phenomenon of overtourism and the related risks have pointed out, commercial landscape may cause a loss of place identity in favour of the economic exploitation of the local resources. So, how can a local heritage become the focus of a tourist transition? Is the concept of heritage itself somehow incoherent with that idea of change implicit in the tourist phenomena? These short reflections are aimed at assessing a possible way out from this old apparent paradox.

As stated above, all the processes related to tourist enhancement have to do with the necessity of translating one community culture and its assets into a specific code that acquires its tourist gist when it comes to show a trans-cultural and dialogical character. Despite the awareness of cultural identity both guests' communities and visitors might have been elaborating on their own, tourist encounter inevitably brings to the creation of a new identitarian sense, even if a momentary one, as the product of that encounter itself (Crouch 2007). That generates a cultural transfer, a reflexive process which makes the signification and the image of a territory considered as co-constructed.

The perspective of the co-construction may be of help in eliciting the communication of local cultures. Even if at different levels and giving it a different value, all the members of a small society, since belonging to the same social circle, can recognize the meaning and the value of the heritage that have been accumulated and elaborated along local history. So to speak in simmelian terms, the sense of belonging to a specific place is also based on the mutual sharing of several «assumptions» through which «one can look at another as through a veil» (Simmel 1998). In other words, when

a subject's identity is in front of another subject belonging to the same social circle, it does not need to be so explicit and dialogical because much part of it is understandable just because those two identities «are part of the same particular world». They interpret their culture using the same symbols and those symbols do not need to be translated for them.

The assumptions Simmel refers to certainly relate to rules, values, languages, but we could also consider the making of heritage as part of the same process. If contemporary tourists increasingly require experiencing local universes in their authentic happening as an ecotourism practice, then local cultures need to remove "their veil" and to work out how to make those patrimonies less inevitable and automatic, that is more evident and clearer for the people outside the circle.

Which resources are worth turning into tourist goods? Whose responsibility is for those actions? Sooner or later, if they want to challenge tourism opportunities, local actors will have to address these issues and others too. According to the perspective here proposed, rather than being an ascriptive quality of the tourist offer, heritage is instead a pure convention related to the circumstances and to relations making.

When we speak about the transformation of local cultures and their tourist redefinition, here the debate becomes very vivid. As to say that when a local culture meets the tourist needs, it risks to become less "authentic" and to go through an identity loss. The translation of culture in fact would cause a shift from what Lindholm (2008) calls the «really real» to what Mac Cannel has defined the «staged authenticity» (1973). But if we go back to Simmel once again, and to the importance he gives to representations in the relation "me-other" within the shaping of sociality, then we have to assume that the re-coding should not necessarily be meant as a demystification. The tourist copies of the reality, when rightly interpreted, could communicate much clearer messages than the reality itself can do. Trying to explain how to intend the concept of "staged authenticity", even MacCannell (1973, 591) tells the reader that sometimes «mystification is required to create a sense of "real reality".

Is there a possible way out from this inevitable ambiguity? A first step toward the resolution of this equivocality could be to look at authenticity and heritage in their symbolic meanings rather than in their objective connotation. That is, in the emotions they could generate in terms of place identity, in the relation they can show with the place, where the place itself is meant as an anchor for social interaction. Within the frame of some contemporary trends in leisure consumption, micro-local "vital world" wield a particular appeal and express their highest potentiality when they become like a symbolic unit, able to represent specific social relations and to activate experiences of encounter and dialogue among residents and visitors on a shared idea of place.

Hence, we propose that a dialogical translation of local heritage can be possible avoiding the risk of appearing as faked when it responds to two main conditions:

1. appropriate hermeneutics which are aimed at re-interpreting and telling a certain patrimony or a cultural deposit philologically, that is according to its original sense, even if through a re-elaboration;
2. the insert of this heritage in a human and social contemporary scenario. This means imbuing tradition with innovation, that is referring to historical identity to looks for solutions related to contemporary problems.

In this way, the concepts of authenticity and heritage can set free from that crystallising and monolithic dimension and get to represent the result of a reflexive graft of the respect for historical social memory on alive and contemporary human and social stances.

Therefore, heritage, sustainable social change and the respect of place identity might match at some point, getting to the proposal of a path of "sustainable staging of place identity". It could be said

that heritage could avoid to fall into the risk of demystification when its tourist staging is the result of a symmetric relation between local stances and tourist desires, between traditional meaning and innovation needs. That is, when tourists' demands and communities' socio-cultural-economic needs are set on the same level. When both hosts' and guests' requests can be mediated. In other words, when tourist translation is not subjected to the pure economical and instrumental goal.

Trying to think about what an ideal typical process could be, it could be said that a sustainable path of tourist staging of heritage can be reached and obtained when several conditions are respected. That is:

1. when the functionalization of a heritage keeps on having part of its original sense and when its reason for being does not depend only on the market's sake nor on the mere conservation of the past;
2. when the economical aspect represents only a "natural" fall on of a path which is primarily oriented towards an active and fluid safeguard of historical and social memory;
3. when the enhancement acquires a value in terms of re-embeddedness of the identitarian processes and of the distinctiveness principle, in the way these concepts have been declined above.

Furthermore, it should be clear that such a path cannot be left to the case, that is, it cannot be totally spontaneous nor a top-directed and top-managed one. Instead it is closely linked to its organizational dimension, in terms of social co-construction and participation. To organize a territory and its tourist enhancement in a socially sustainable way means to mediate the different actions brought up by different social groups, from civil society to policy makers, from private entrepreneurs to producers, from institutions to cultural operators (Maretti, Salvatore 2012). In this sense, place identity configures itself as the product of a symmetrical relation between citizens and institutions, between single actors and the system.

This organizational level should find its pivot in some adequate cultural policies and could come to work as social mediation when it is able to regulate single subjects' actions with the functions of systemic mechanisms. On the other hand, the miss of this organizational dimension can bring to two opposed risks. The first one can happen when the process is merely spontaneous, that is only represented in the grassroots and limited to private initiative. This can bring to localism, that is to the closure of a local society to global stances and to intercultural dialogue. The second one can happen when, on the contrary, the process is only left to institutional initiatives. In this case a patrimony risks to lose its being reason and its social sense.

#### 4. Eco-tourism, social change and transition management

The turning point of this contribution is focused on local communities' response to such new scenarios and on the way they manage the transition towards tourism development, through social organization. If nowadays the input to move people around the world is not only represented by the location itself but also by the tangible and intangible heritage they can find in a place, people living/investing in that place need eventually to transform those goods into tourist assets, endowing them with distinctiveness elements. As a matter of fact, the pure availability of heritage it is not enough for a place to become a tourist destination (Savoja 2009). Otherwise, each place would be a tourist one. Instead, we assume that even if each place could be a tourist one, only those who get to this voluntary choice can actually "go tourist" in a sustainable way.

Environmental landscape, urban settlements, historical heritage, local culture, regional productions can all become important sources for tourist development as far as they are elements of

distinctiveness representing the value upon which tourist experience gains its deep sense (Jepson and Sharpley 2015). Therefore, in sociological terms, these material and immaterial capitals can be translated into new processes of the "destination making". When a local community plans to turn into a tourist place it opens the scene to new and different social forces. Some of those are already within the system. They may be active, but they may also be latent ones (i.e. locally based resources and local enterprises). Some others, instead, are completely external and may become part of the environment (i.e. T.O, guides, private investors). In any case, the territory becomes a "transition social arena" (Kemp, Loorbach and Rotmans 2007, 82) where different influences play an important role. The ways the system metabolises these forces is a central issue for a sociological theory of tourism more and more oriented in analysing development and wider societal change, because tourism positions itself as a condition for local societies to re-elaborate their own identities, also in relation with their social sense of place and belonging (Alleyne 2002; Cocco, Salvatore and Mines 2020).

If adequately planned, changes related to tourism may be considered as a possibility to redirect local development in a sustainable way, with sustainability meant as an ongoing process rather than a clear end state. These processes are to be interpreted as co-evolutionary dynamics, including different subsystems shaping each other in interaction and involving changes in institutions, values, culture and practices (Kemp, Loorbach and Rotmans 2007). From this standpoint, the social change may be managed through an accurate "transition management", which is a multilevel model of governance helping societies «to transform themselves in a gradual, reflexive way» (p. 78) and to determine to what extend their development objectives are desirable in terms of environmental, socio-economic and cultural change. Therefore, it includes the interaction among all relevant social actors on different levels and is aimed at bridging the gap between pure top-down strategies and bottom-up ones. It does so by promoting an innovative idea of bottom-up model which includes a wider coordination from the higher levels of the governance while fostering self-organization through cycles of mutual learning and action. Managers actions are led by a scenario about where they wish the community to be in a certain time and try to move towards those goals on the base of a flexible and mutual building of the experience. (Kemp, Loorbach and Rotmans 2007).

Against this theoretical background, also the social identity of a territory is not to be considered as a starting point, but rather as an integrated part of the ongoing process tourism may trigger. That is, the possibilities and the chances tourist market can offer are the basis from which a local community begins to re-think its social and cultural identity "touristically" in a gradual way and according to an accurate transition management.

Therefore, the essential requirement for tourist development is represented from a focused revision of the social organization of a region, which is firstly aimed at mobilizing the latent resources. About that, some interesting food for thought closely related to the methodology of the "transition management" comes from an action-research Angela Moriggi (2020) conducted in Finland within the framework of Green Care practices. As this author has highlighted, the potential of place-based entrepreneurship committed with sustainability is not only to provide services and products, but also to contribute to socio-economic change by shifting from systems of knowing to acting upon specific challenges. A lot of strategies and methods can be applied to these aims but the participatory approaches remain paramount to ensure co-evolution and interactive reflexive learning since relations and contexts are crucial to success. «A relational approach highlights the intricate web of connections and processes that enmesh people and places, actors and their context: entities do not exist on their own, but are co-constructed and co-evolving» (Moriggi 2020, 439). Of particular interest in this sense, it could be the phase concerning the mapping of the place-based resources in which all the local stakeholders could be involved through a collaborative process aiming at the co-production of knowledge. Starting from its own experiences and relations, each social actor

could share with others its array of resources worth enabling, both on an immaterial level (i.e. social relations, values, rules, beliefs, local novels) and on a material one (i.e. physical infrastructures, architectural landmarks, nature and landscape markers). Then, from this starting point on, step by step they will move forward in implementing a proper integrated tourist supply and towards a path of self-sustainability. Clearly, this is a slow process but definitively a more affordable one in social terms and a more enduring in the medium and long duration.

## Conclusions

Through the analysis of some key concepts such as place-identity, distinctiveness and social change, this paper proposes a reading of the processes behind the transition of no-popular places into ecotourist destinations on the base of their heritage. Given that tourism is fundamentally a place-based phenomenon, its organization shows a clear social dimension which happens at different scales. On one level the active participation of local stakeholders to these processes of change according to a co-evolutionary principle helps confirming their attachment, sense of belonging and self-esteem on the other the social construction of distinctiveness can contribute in building attractiveness and in satisfying tourists' search for unique emotional experiences.

A central role is played by place with both its material and immaterial arrays or resources as anchors to ensure the respect of uniqueness, despite change. Against this background, ecotourism represents an interesting field of experimentation in its capability of equally balance nature and wildlife protection with culture enhancement and economical growth.

A special concern is dedicated to the concept of heritage, and in particular to its translation into touristic assets. Although in the first instance the idea of heritage itself appears as not matchable with that of change, the theoretical reflection offers interesting insights that make this paradox an only outward one. The apparent ambiguity can be overcome if we look at these concepts in their symbolic meaning, that is as symbolic units able to generate emotions in terms of place identity. Hence, heritage, social change and place identity might find a match through the proposal of a path of "sustainable staging of place identity". This happens when the tourist staging (that is the social organization of the ecotourist supply) is the result of a symmetric relation between local stances and tourist desires, between traditional meaning and innovation needs.

However, to be affordable along time, these processes cannot be left to the case nor thought as merely spontaneous. Instead, they need a focused coordination and management. At this purpose the application of a "transition management" is suggested, as a multilevel model of governance helping societies to transform themselves in a gradual way and according to a coevolutionary idea of change. By implying the interaction among all relevant social actors on different levels, this model of management is aimed at bridging the gap between pure top-down strategies and bottom-up ones. In fact, it promotes an innovative idea of bottom-up model which includes a wider coordination from the higher levels of the governance while fostering self-organization through cycles of mutual learning and action.

The empirical application of this theoretical framework to a case study would certainly help to improve the reasoning, to test the model and eventually to let the research related to ecotourism studies move a step forward.

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## Towards an open, relational and community based regeneration of the waterfront: turning the ancient harbors of the Adriatic into eco-tourist destinations.

### Ancient harbours, new destinations

Ancient harbours are charming places and certainly attractive to the ones with a passion for archaeology and maritime history. However, nothing suggests that these sites could also become new and innovative eco-tourist destinations. As a matter of fact, the high cultural value of archaeological sites does not always match the search for an environment friendly vacation. Strangely, lavish cultural heritage and rich-in-nature vacation sites are rarely on the same list, as though they belong to two very separate worlds. On the contrary, we believe that archaeology and ecology could optimally work together and be a perfect match for new type of holiday offers, with special regards to a region both rich in history and nature, such as the Adriatic-Ionian sea basin.

Accordingly, the aim of the APPRODI project has been to identify pilot sites in Durres (Albania), Dubrovnik (Croatia), in Ortona and in the lagoon archaeological park of Torcello, Venice (Italy) as ecotourism destinations. A set of activities has been dedicated to geo-archaeological investigations and excavations, with awareness raising actions and thematic events involving local communities implemented together with commercial operators and key stakeholders, who were actively included in existing tourist circuits.

It comes from the above that the inspiration behind "APPRODI" and, possibly, its major point of charm is that the project deals with the harbours of the Adriatic. As a matter of fact, harbours are indisputably very attractive places. The reasons for such a seducing and intriguing feature of the port identity are many and involve, first of all, the anthropological sphere. Specifically, the port represents the most paradigmatic place of encounter and separation between the terrestrial society of the city, on one hand, and the radical otherness of the sea, on the other one. In the harbor, the *nomos* of the humans meets the non-human rules of the ocean and give birth to ambivalent results: it could bring about positive outcomes such as adventure, richness, trades, discoveries but also negative ones like invasions, plagues, immorality and frightening stories of monsters and storms (Cocco, 2020).

The ocean, is by definition untamable and continuously challenges the ability of any terrestrial entity (a city, a state or an empire) to govern and to shape it like a garden or a field to cultivate. As Alain Corbin brilliantly put it (Corbin 1994), the lure of the sea comes from its ambiguity, which entails both control and chaos, domestication and wilderness. For its vibrant nature, its pure otherness, the marine element can't be ultimately redeemed and put under the law of terrestrial society. Thus, the sea threatens the reassuring stability of the society ashore by breaching through specific borders such as the beach, the island and the ships, where people are in between the sea and the land. In this perspective, the littoral space as a whole is a place of social exchange and it is crossed in both direction by things, people, ideas, diseases and fantasies. Accordingly, terrestrial society have created specific borders right at the shoreline to rule and manage seaborne messages politically and culturally.

And the port is one of the most important border: a veritable threshold to cross from the land to the sea and the other way around. In this process, the port is a liminal place (Van Gennep 1909), crucial to the social construction of a maritime civilization, because people, things and ideas, while in the port, are literally in between: neither there nor here. And it takes a border-crossing from sea to land or from land to sea to transform things into maritime or terrestrial elements. Therefore, thanks to the social institution of the port, the distinction between the land and the sea becomes a culturally productive one as it changes historically and can be negotiated in the social realm.

From this standpoint, talking about the sense of place connected with British "seaside-ness", David Jarrat points out that since industrialization, the seaside has been both represented as a healthy location and repulsive one (Jarrat 2015). Thus, although many contemporary media-fueled narratives back a simplistic and melancholic seaside nostalgia, the idea of seaside also contains some dark sides, which were extremely popular in pre-renaissance view of the shoreline as a disgusting boundary and best avoided. It took natural theology, romanticism and modern urbanization to get over the medieval view of the sea as a dangerous and repelling place to be. Now, after going through the process of modernization and experiencing a progressive physical disengagement from the natural realm, contemporary man: "*seeks to reconnect to an idealized version of the coast from which he has become increasingly isolated over the last two-hundred years or so*" (Jarrat 2015, 353).

And what better place to reconnect with such an idealized version of the seashore than the harbor? That is to say, a social and material construction where favorable geographical conditions and technological skills are combined to connect land-based society and the sea. In other words, in the identity of the harbor, elements such as the formation of maritime trade networks, the political projections and the evolution of navigation technology merge with the environmental possibilities given by a specific place and the ever-changing historical conditions. In this perspective, ports are not eternal and their story is always characterized by growth, decay and, sometimes, regeneration, along uncertain and unpredictable phases (Josephs, Ikink, O'Leary, 2012).

Accordingly, the regeneration of a port - through tourism, for instance - it is a fantastic project on paper but one fraught with uncertainty. Ports are border sites, where things mix up and identities are blurred. Thus, it might be hard to give new life to such a place like a port that does not always reflect the contemporary standards of the nation it belongs to because of its more hybrid identity. This is even more true in the Mediterranean world and in the Adriatic basin particularly, where even recent history is populated with conflicts, forced migrations and cultural erasures. The risk, from this standpoint, is to badly translate the cultural memory and the legacy of the old harbor into a new dissonant version of it, where even the soundscape is altered like in a movie with a new soundtrack or in a dubbed version where the visuals and the sound are partially disconnected. We borrow this audio-visual metaphor from Sherry Simon, who observes and interestingly describes this same phenomenon of dissonance in some "translational" cities of Central and Eastern Europe. Particularly, in these former Imperial and multinational cities, the post-cosmopolitan remakes are a sentence to a perpetual state of dissonance, with the harmony of the original forever lost (Simon 2015, 405). Therefore, these once polyglot cities have been literally translated out of their cosmopolitanism into one-language speaking environment, which is in its turn realigned with a "normalized" built heritage. A radical change of city identities and a simplified version of them, which could well be the fate of ancient harbors of the Adriatic when brought to new life. However, there might be some alternative path and one can revive the past without too many simplifications, going beyond the mon-linguistic and mono-ethnic versions of place identities. For instance, according to Maura Hametz, this is what some local elite has been trying to do in the Northern Adriatic port city of Trieste with reference to its "Habsburg legacy":

*Invoking the Habsburg past, Trieste avoids the dangers associated with contested nation-oriented sentiments and territorial claims invested with contemporary biases and prejudices. The Habsburgs offer no competing political claimants in the twenty-first century. Recognition of*

*the importance of nostalgia and of the study of its contours and implications offers a means to explore links to a mythologized past and to a real role in commercial Europe.* (Hametz 2014, 139)

Accordingly, part of the city political class tried for decades to push for a strategic renovation of buildings and monuments of the Habsburg past in order to bring them back to splendor and, possibly, to trigger economic revitalization of the former Imperial harbor. Certainly, such an investment conceals a mythological inspiration and a somewhat unrealistic expectation to bring the city back to a golden age that is forever gone. However, Hametz reminds us how the renovation plan investing the waterfront, the old port spaces and the neighboring urban assets are consistent with international refurbishment trends that aims to "gentrify" centrally located properties not anymore functional to contemporary port services but extremely interesting for other public use. (Minca 225-226).

Eventually, Hametz calls on anthropologist Massey to restate how the social identities of places are inevitably unfixed exactly as the social relations out of which they are constructed: they are both dynamic and changing (Hametz 2014, 151). Thus, at every moment in time, the identity of a place is produced to the advantage of one of the many groups that are struggling to claim the hegemony over the same place. Hence, that same identity could be quite different from the one revived in contemporary time and for contemporary purposes. This is true for all places and it is especially true for a promiscuous and liminal site like the harbor.

## How to regenerate the Adriatic harbours?

Archeologic excavations and ancient sites in general, are quite attractive to an important segment of tourist market. However, their promotion is often disconnected from the more developed tourist strategies that aim to bring together natural and cultural heritage under the common umbrella of sustainability and responsibility. Also, such strategies rarely refer to a regional or transnational approach, because what used to be a pre-national cultural heritage or a landscape of identity (the Roman or Venetian ones, for instance, in the Adriatic basin) is nowadays divided and contested by different political and administrative entities. Conversely, there is a growing market of highly mobile and curious tourists that are willing to explore culturally plural territories and their diverse heritage. Also, these tourists are likely to move beyond stereotypical vacation centred on the mass consumption of urban centres and beach sites. From this perspective, the rediscovery of some marginal ancient sites such as old harbours of the Adriatic could be a way to reconnect the shared maritime heritage of the Adriatic Ionian region in a transnational perspective. Moreover, such a discovery can also reconnect the often dispersed and marginalized inner areas that lay far away from the usual tourist circuits to a growing network of sustainable tourist initiatives.

From this point of view, the cultural and natural heritage can be mobilized together using the common brand of eco-tourism and following the principles of sustainability and environmental awareness. However, it takes a good degree of innovation to make this brand properly work as well as a good display of creative attitude. And creativity has become a sort of "mantra" and a normative model for development, thus acting as the driver for investment and urban regeneration (Gilmore 2012, 1). In this perspective, Gilmore emphasizes how this model became a global one, especially after the famous theorization of Richard Florida about the spill-over and agglomeration effects of the clustering "creative classes" (Florida 2002):

*Propagating a received understanding of where this regeneration-leading creativity takes place and the kinds of material conditions needed for its production: an urban milieu, which offers suitable space for creative practices, whether heritage spaces afforded by de-industrialisation or purpose-built clean spaces for graphic and digital design, with 'third spaces' and 'cool places' for frequent meetings, hanging out and sharing knowledge capital.*

Interestingly, the features required to the urban milieu are identical to the effects that creativity should produce on it, thus giving a somehow puzzling sense of self-fulfillment to the thesis of the "creative" development. In fact, to produce new social relations and cultural formations, even when the goal is to regenerate the archeological sites of old harbors, one should already have those creative places that could attract the creative people.

Nonetheless, when it comes to the development of ports - not just the ancient harbors but any kind of port - the "magical" narrative of creativity seems to pervade the majority of initiatives at international level. For instance, in their comparative analysis of the international regeneration projects of "liquid cities", Lino and Moscato claim that the development of the harbor should not be limited to its internal area but it shall expand beyond the boundaries of the port, thus bringing important benefits to the surrounding neighborhoods and to the society as a whole (Lino, Moscato 2007, 71-73). Hence, regenerating the "waterfront" would mean to search for successful approaches and strategies to revitalize the "watery city", that is to say to increase the city propension to relational density through the connecting element of water. Precisely, it is the symbolic element of water that plays a pivotal role to join and interconnect places with intense social, cultural and economic activities, but sometimes set apart within the urban texture, and that within the waterfront frame might get new functional roles and become more attractive to international investments. In this big, overarching and unitary water-based narrative of development, globally oriented needs such as the modernization of infrastructures and the technological innovation go hand in hand with a rediscovery of habits and valorization of idiosyncrasies such as pattern of local identities and cultural memories. As a result, in contemporary times the urban waterfront is a mixture of local and global patterns, an intertwined process of urban and maritime inputs that ought to be organized in a specific place to merge two diverse and apparently contrasting dimensions in a "creative city in action".

From this standpoint, the role of tourism as a catalyst for urban regeneration makes of the port a strategic tool for a successful transition towards a post-industrial economy where the local patterns - here included the cultural heritage and the environmental richness - play a strategic role for development. Thus, in the Adriatic basin, both the sites of ancient harbors and the new, modern port structures can enter the waterfront narrative of regeneration because they both can bring renewal and growth to the entire city (Millspaugh, 2001). From this viewpoint, Torbianelli and Frausin remind us that since the beginning of the century there is an ongoing process of relocation of several functions such as trade, leisure, culture (and tourism!) in dismissed waterfront sites, usually born for industrial and port services (Torianelli, Frausin 2009). As a result, the entire urban structure benefits of the revaluation of previously marginalized areas, which is a process that also helps to decongest more densely lived neighborhoods. This is especially clear for the cruising business, which besides adequate port structures to dock and maintain the mega-cruisers requires a number of other tourist-oriented services such as mobility, cultural heritage, street life (bars, restaurants, etc.), information technology, natural resources and leisure activities. Moreover, the complete package of the "urban offer" should be eco-friendly and sustainable, as the quality making of the urban experience requires a special attention to environmental awareness in order to comply with the expectations of residents, tourists and the international investors.

The lesson to be learned from the comparative reading of different case studies, is that size does not matter in maritime based regeneration perspective. So, even small size localities (as the ones considered in the APPRODI project), which neither do have a mega-dock areas nor a metropolitan space beyond it can invest in urban regeneration through harbor development. Moreover, the lack of typical metropolitan problems, which are detrimental to the quality of life (traffic congestion, pollution, criminality, etc.) could be a positive asset for small but rich in history and environmentally friendly places to discover thorough tourism. In this context, to relaunch the local economy passing through the water, that is to say by investing in the waterfront, could be a quite promising way to

regenerate the urban setting in the small or marginal localities of the Adriatic. Also, it is a main way to protect the environment and to revive strategic sites on the shoreline, here included ancient harbors. The latter, are usually located in extremely interesting areas, both from environmental and cultural viewpoints. Therefore, they are often the perfect candidates to pilot-projects of eco-tourism promotion of cultural heritage that aim to regenerate the city with positive impacts on the local system.

Exploring the features of urban regeneration of the waterfront in Cape Town, South Africa, Ferreira and De Villiers (2014, 63) consider that in the past decades one can count many successful stories of transformation of places where shipping and heavy industry dominated into spaces for residential, commercial and leisure activities (Gospodini, 2006; O'Callaghan & Linehan, 2007; Casellas, Dot & Pallares-Barbera, 2012). Usually, the key-points of these success stories were the ability to create a social mix, the regeneration of cultural heritage, the construction of open spaces, the promotion of social housing and shared mobility and the support to local entrepreneurship, especially the one combining innovation and rediscovery of tradition. Moreover, if one wants to find an additional common feature, the common goal in all these development projects was to give back to local communities some public, open spaces where public health and the environment could go together with economic growth in areas that once were dedicated to shipping and industries. In the case of ancient harbors, the leap is even bigger as the place to revive is one coming straight from the antiquity and does not share an industrial history. However, this could be an additional strong point to achieve both environmental and cultural quality, especially if ancient harbors could be turned into space for day-to-day socialization and face-to-face interactions, where tourists and residents meet and partake open air street life and informal settings. In this perspective, the ability to reach a quality of life in the restored ancient harbors is a way to spread quality of life on the larger all urban texture. Public spaces as such can be of many kinds: informal settings, open to all and without discrimination contexts and areas where to cooperate across ethnic, religious and economic distinctions in eco-friendly sites. These scenarios obviously represent an extremely positive outcome for the local communities and their social development. However, sometimes the perspective of the residents and the local communities on the waterfront development projects are different from those of both public and private expert developers. The profit-oriented logic of real estate development and the gentrification could easily endanger the public nature of the waterfront and dispossess residents of their power of choice by promoting more inequality and discrimination.

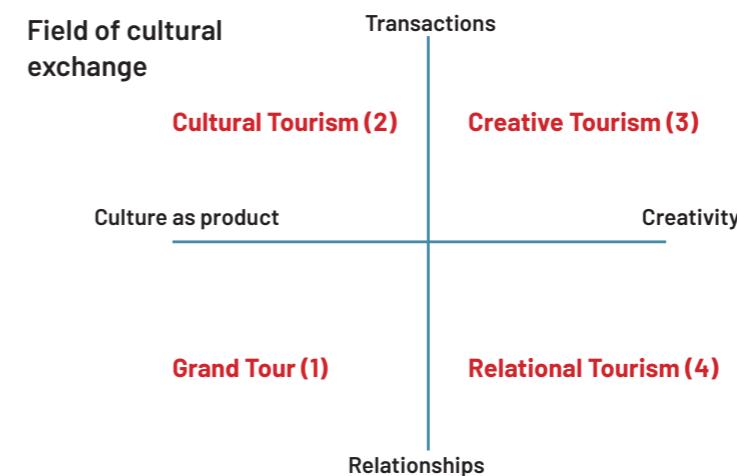
## What is the role of local communities for the regeneration of Adriatic ancient harbors?

Promoting cultural heritage in a sustainable way should be everybody's business. However, development is quite often a matter of experts and local communities could be easily cut off. This is certainly an unwelcomed outcome that could eventually be detrimental to the same investors, who could face social unrest, public disaffection and the failure of the regeneration process. In this regard, even the famous urban studies scholar, Richard Florida, author of "The rise of the creative class" (2002), 15 years after his fortunate book has partially changed idea over the emancipatory power of creative development. The contours of this new urban crisis (Florida 2017) are given by more cleavages, frictions and inequalities in the gentrified and regenerated urban environment, with bigger distances separating centers and peripheries. But the picture is not completely dark as possible solutions can come from a renewed alliance between enterprises, public administrations and citizens.

So, going back to the ancient harbors of the Adriatic and their urban surroundings, the fundamental questions to answer for a sustainable development of the waterfront in maritime oriented local

communities are basically two. Firstly, what are the possible measures to raise awareness and participation among the local communities and, secondly, how to bring investors and experts to listen to communities. A possible, double answer, as Richards put it, is to transform the passive reception of culture into active engagement, so that culture could become a pervasive and essential element of everyday life (Richards, 2011). As a matter of fact, if on one hand culture and creativity have appeared almost as a mantra in urban development worldwide in the last decades (Lysgård, 2012: 1284), on the other one the notion of culture evolved and its evolution could be the best correction to the biases of the magical, self-fulfilling narrative of creativity. In other words, following Richards, culture moves from a simple concept of patronage, the so called culture 1.0, to a form of economic activity (2.0) and eventually, in more recent times, to a co-created good, produced by a networked audience actively manipulating contents (3.0). In this perspective, tourism becomes a sector full of opportunities that are connected to a "3.0 culture approach" to revive cultural heritage in eco-friendly ways. Particularly, tourism could offer the possibility to develop a creative potential both to residents and visitors, which can actively take part to courses, informal situations and learning experiences embedded in places (Richards 2020). Creative people could come in and participate in the local community life not like clustered and self-isolated elites but as fully involved "creative tourists" that produce and consume creative products such as movies, theatre plays, concerts and architecture. In this context, products are not just goods to be exchanged but the result of a networked co-production that both attracts creative visitors and makes them the co-owners of improved atmospheres and scenarios, to the benefit of residents too.

A further step, to be considered for a successful move out of the trap of the urban crisis, is the ability to shift the attention to the relational capital of places. In other words, the move from a simple version of creative tourism, where individual abilities and symbolic capital play the main role, to a relational tourism, where social networking and collective learning become central to the making of the sense of place in a 3.0 culture perspective (see the graph)



(Richards, 2020)

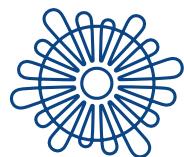
It comes from the above that local communities are the most important stakeholders in the process of promotion of cultural heritage. Therefore, their role is pivotal for projects implementation. It is simply impossible to envisage a successful strategy that brings together cultural heritage and environmental sustainability without embedding it into the social dynamics of the local communities. However, we need to move beyond a traditional and simplistic notion of community as a territorially

bounded locality that is completely shaped by tradition. From this standpoint, we believe that a both a top-down approach (experts telling what to do) and a naïve bottom-up one (communities "romantically" evocating unrealistic scenarios) are to be avoided. Conversely, like we tried to do in the APPRODI project, the attempt is to find a sort of common field of understanding, a middle-ground where to co-create meaningful practices and sense-making process based on the dialogue and mutual revisions between scientific experts, public bodies, private actors and civil society.

If the strategy is successful, the result is a process of open-source place-making that publicly articulates different perspectives and meanings in a non-hierarchical way to reach a shared understanding of what should change in a place starting from "what is already happening" and not just "what need to happen" (Ghilardi 2016, 4-6). Ultimately, this would mean to give power and legitimacy back to the ones who live there and, at the same time, not to exclude visitors, newcomers and investors from the general picture. As a result, place-based cultural identities and local instances could merge with the interest of developers the frame of a new type o non-traditional community where the pursue of social justice stays at the centre of the stage.

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