

“Protection, promotion, and touristic valorisation of Adriatic maritime heritage”

Priority Axis: Environment and cultural heritage

3.1 – Make natural and cultural heritage a leverage for sustainable and more balanced territorial development

D 3.1.1 – The Story on Maritime Heritage

WP3 – DEVELOPMENT OF THE CULTURAL-TOURISM DESTINATION
ACT 3.1 – STRATEGIC DOCUMENTATION FOR THE DEVELOPMENT OF THE
COMMON TOURISM DESTINATION

16/11/2020

PARTNER IN CHARGE:
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Status: final
Distribution: public document

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Stories of the Adriatic Sea

Two different coasts

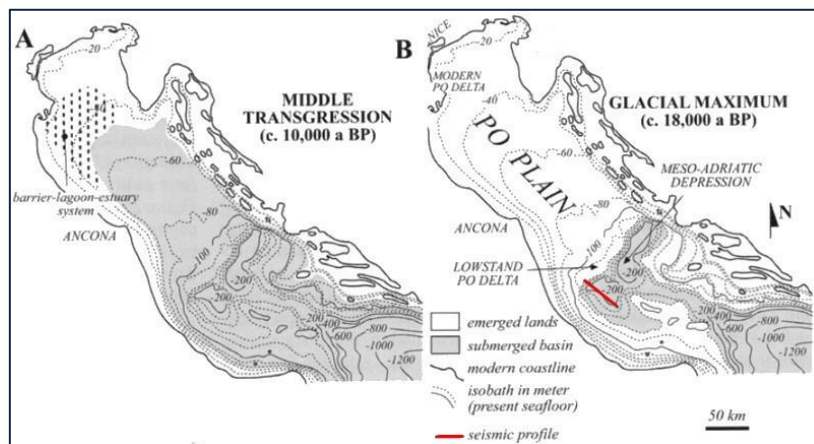
The Adriatic is a long, narrow sea with a south-east north-west orientation going from the Otranto Channel to the gulfs of Venice and Trieste. Approximately 800 kilometres in length and with a variable width of 80 to 200 kilometres, this arm of the Mediterranean penetrates the furthest towards the regions of central and eastern Europe, making it a key route for trade with this area. The eastern coast is highly indented, with numerous deep fiord-like inlets going far inland. It is preceded by countless long and narrow islands that lie more or less parallel to the coastline, forming channels. They create a kind of “Adriatic Polynesia” with superb natural ports, lees and other marine shelters useful for all kinds of weather conditions, and with broad arms of sea permitting safe navigation, making this the ideal coastline for nautical activities. The western coast is mainly straight, with beaches and low cliffs (the latter mainly in Puglia), with the exception of some stretches of high coastline in Gargano (Puglia), on the Conero promontory (Ancona), on the coast between Pesaro and Gabicce, and on the coast by Trieste. The ancients described this coastline as *importuous*, or lacking natural harbours. In fact, the only landing places were in the river mouths, in the wide Po delta and in the network of rivers and lagoons that extended between Ravenna and Aquileia in antiquity and that also offered the opportunity of inland navigation parallel to the coast, which was safer than maritime navigation. The difference in availability of ports and natural shelters on the two coasts meant that, in Antiquity, ships preferred to skirt the eastern coast, as confirmed by the Greek geographer Strabo (VII, 5, 10), when he defines the Adriatic coast of Illyria as *eulímenos*, or “well provided with ports” compared to the Italian coast on the other side of the sea, which he describes as *alímenos*, or “without ports”.



The Adriatic Sea

The Southern Adriatic Sea between Puglia, Montenegro and Albania has a maximum depth of around 1,200 metres. It becomes gradually more shallow as it goes north, reaching 80 metres between Ancona and Zara and around 30 metres between Venice and Istria. The low bathymetry in the northern basin is directly linked to the configuration of the Adriatic Sea in prehistory, when it was far smaller than it is now. During the last glacial period, known as the Würm glaciation, water was trapped in the ice caps causing a drop in sea levels, which were up to 120 metres lower compared to modern sea levels. This took place in a period around 18,000 years ago, when the northern edge of the Adriatic was approximately between Ancona and Zara/Zadar, or slightly more south of this point. At that time, the

northern Adriatic was a vast flood plain crossed by the Po, with the rivers from the Marchean Appennines flowing into it from the west and the rivers from Istria and the Dalmatian hills reaching it from the east. This vast territory (now Italy and Croatia) is where the humans of the Upper Paleolithic lived and moved around, hunting in the plains and fishing in the rivers, between what would later become the two shores of the same sea. In later millennia, marked by rapid warming and the subsequent increase in sea levels, the Adriatic gradually advanced northwards, covering the vast plain crossed by the Po and reaching more or less its modern configuration around 8,000 years ago. The low bathymetry of the northern basin was therefore caused by the accumulation of prehistoric fluvial sediments.



The Adriatic Sea basin during the glacial maximum around 18,000 years ago (right) and during the marine middle transgression (sea level rise) around 10,000 years ago (left).

The Greeks in the Adriatic. Myth, history and archaeology

In Greek mythology, the Adriatic appears as the stage for the wanderings of heroes and demigods, which conceal a gradual construction of cultural identity, even in the peripheral regions lying beyond the boundaries of Greek expansion. Thus, in the

Argonautica by Apollonius of Rhodes (IV, 563-611), we find the Argonauts wandering in Adriatic waters. The episode describes how they sail southwards along the Illyrian coast when they are driven back northwards by a storm that forces them back to the northernmost shores of the Adriatic, which are significantly associated with the myth of Phaethon and the Electrides islands. Phaethon, a son of Helios, was struck down by a thunderbolt of Zeus as he was driving his father's chariot through the sky. He plummeted down near to the mouth of the Eridanus, the mythical river identified with the Po, where his sisters, the Heliades, took his body from the water and carried out the funeral rites. As they mourned over their brother's body, they were transformed into poplar trees and their tears turned into drops of amber, called *èlektron* by the Greeks.



The fall of Phaeton. Renaissance monument, marble.

(Bode-Museum, Berlin)

In antiquity, amber, the fossilized resin of conifer trees found on the shores of the Baltic Sea, was prized for its colour and its known electrostatic properties as well as for its supposed medicinal powers, which led to its use in ornaments and precious items¹. This valuable fossilized resin travelled along an extremely long overland trade route, known as the “Amber Road”, going from the Baltic coast to the eastern Alps and from there to the northern shores of the Adriatic to be processed in major centres. From there it was transported via sea to the rest of the Mediterranean or via land through the Appennine passes to reach the Tyrrhenian regions and Rome. It is for this reason that Greek mythology chose the northern Adriatic as the location of the myth of Phaethon and of the Electrides or Amber Islands, which scholars identify either as the Kvarner Bay islands or as alluvial islands forming in the Po delta. Apollonius’ description of the island as being “rocky” lends weight to the Kvarner site while the location of the island in the Po delta is supported by his specific reference to the Eridanus, to the transformation of the Heliades into poplars, a tree widely diffused in the Po valley area, and to his allusion to the marshes into which Phaethon fell, which emitted “burning” vapours, possibly a reference to the steam released by the thermal springs near Abano and Montegrotto (Padua). Archaeological evidence is provided by the settlement of Frattesina near Fratta Polesine (Rovigo), which expanded considerably during the Late Bronze Age and Early Iron Age (12th to 10th century BC). Frattesina was a craft centre involved in international trade, with evidence of processing of Baltic amber along with the presence of materials from distant areas of the Mediterranean, like fragments of late Mycenaean pottery (possibly produced in southern Italy), glass paste items, elephant ivory and ostrich eggs. This area of the northern end of the Adriatic would continue to be involved in the trade and processing of amber from protohistory and throughout the Roman age.

¹ From the Greek name of amber (*ēlektron*) come our word “electricity” and adjective “electric”, since the Ancients had noticed that the rubbing of a piece of amber on a woolen fabric generated electrostatic energy; and thus, the amber had the power to attract small bodies to itself, like motes and filaments of fabric.



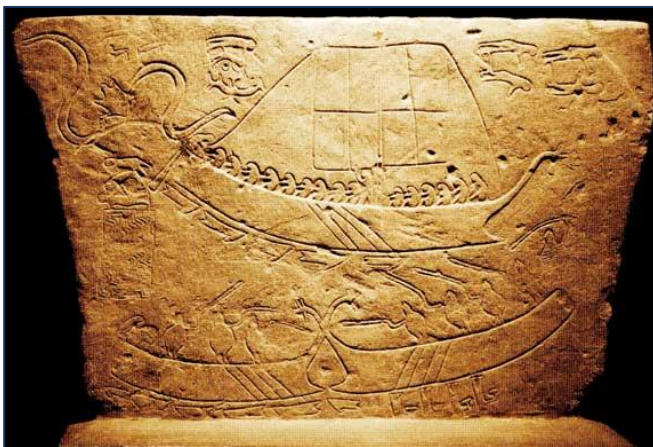
Villanovian fibulas made with amber, VII century BC.

(Museo Civico Archeologico, Verucchio)

The mythical geography of the Adriatic is also marked by the journeys of the heroes who fought in the Trojan Wars. Heroes like the Trojan Antenor, who sailed up the Illyrian coast to the land of the Veneti, where he would establish Padua. His cult was not only found in the Veneto area, but also on the island of Melaina Korkyra (now known as Korčula). The Greek Diomedes, on the other hand, landed in Puglia, where his cult is known in various sites, including the Tremiti Islands, or Islands of Diomedes, as well as in the northern Adriatic, by the Timavo River, and on the Dalmatian coast, near Sebenico/Šibenik and Capo San Nicolò/Capo Planka.

Going from myth to history, we should mention that there were Greek settlements along the Illyrian coast in the southernmost part of the Adriatic from the archaic period onwards. Colonists from Corinth and Korkyra (modern Corfu) jointly founded Epidamnus (later *Dyrrachium*, modern Durazzo/Durrës) in 626 BC,

followed by *Apollonia*, not far from modern Valona/Vlorë, in 588 BC. Greek colonization continued to proceed northwards along the eastern coast of the Adriatic, which, as we have seen, had a geography favouring coastal navigation while the discovery of Greek ceramics on the island of Pelagosa/Palagruža suggests that there was a route crossing the sea. Throughout the 6th century and the early 5th century BC, the northern basin, north of Ancona and Zara/Zadar, continued to play a secondary role for the Greeks. In fact, in the Early Iron Age, from the 9th to the 6th century BC, the entire Adriatic was a basin controlled by the local populations on the two shores: Daunians, Picenians, Villanovians, Etruscans and Veneti on the western side, Illyrians, Liburnians, Iapydes, and Istrians on the eastern side. The situation changed radically during the second half of the 6th century BC, with the rise of the presence of Greek merchants and the gradual decline of the dense inter-Adriatic trading network that had characterized the three previous centuries. The Po delta region played a key role because this was a crossroads where sea routes met traffic from Etruria, the Veneto area and from the rest of northern Italy as well as from beyond the Alps. It was here, in the Po delta, that the city of Adria and its river port were founded, a Veneto-Etruscan centre where the Greek trade became constant from the mid-6th century BC onwards. This ancient city gave the Adriatic its name, which was initially used with reference only to the northern section, which was known as the “sea of Adria”, then later extending to the entire basin, formerly called *Iónios kólpos*, or Ionian Gulf, by the Greeks.



Ships engraved on the Picene stele from Novilara, VII century BC.

(Museo Archeologico Oliveriano, Pesaro)

Pirates and their ships

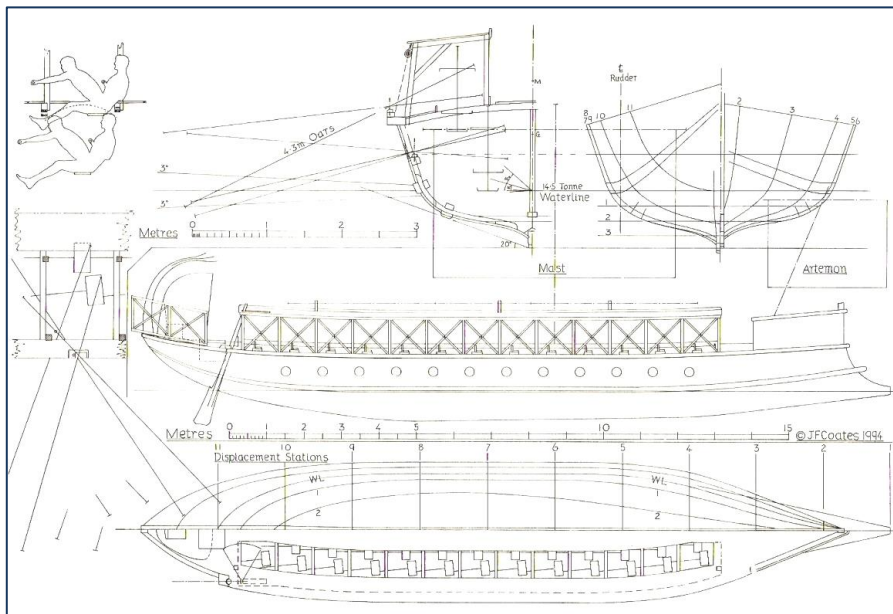
Historic sources have transmitted the image of the Adriatic as a sea that is hard to navigate, partly because of its environmental characteristics and the typical weather and sea conditions but also because of the presence of peoples living from piracy, on the east coast, in particular. The Greek orator Lysias, who lived between the 5th and 4th century BC, speaks about this as a proverbial fact, claiming that merchants from Piraeus, in Athens, would have preferred to navigate in the Adriatic rather than do business with a fraudster like Aeschines. The Roman historian Titus Livy (X, 2, 4-7) was even more explicit when he described how the Spartan prince Cleonymus was forced to sail up the Adriatic in the open sea at the end of the 4th century BC, avoiding the harbourless shores of Italy to his left and the shores on his right, which were infested by Illyrian, Liburnian and Istrian pirates.



Illyrian ship (*lémbos*?) on an Illyrian coinage of II century BC of Daorsi tribe, who lived in the Neretva valley.

The peoples living on the east coast also owed their reputation as pirates to their seafaring skills and ability to build swift, small, agile craft ideal for carrying out raids at sea. Examples of this type of vessel were the *lémbos*, mentioned in the sources between the 4th and 1st century BC, and, above all, the *liburna*, mentioned between the 1st century BC and throughout the 4th century AD, a craft whose name clearly betrays links with the Liburnian people. Piracy was also favoured by the

geography of the eastern coastline with its deep jagged inlets and dense labyrinth of islands and islets that created the ideal conditions for pirates to prepare ambushes then rapidly disappear, as well as offering them safe havens. When the Romans began to take military action in the Illyrian region, beginning with their attack against Queen Teuta in 229 BC and ending with the creation of the senatorial province of *Illyricum* around 27 BC², they would certainly have taken note of the qualities of these local craft, later including them in the Roman fleet. The *liburna*, in particular, became one of the main war and reconnaissance vessels, undergoing progressive adaptations and transformations that turned it into a different ship from the original craft, while maintaining its qualities of lightness, agility and speed.



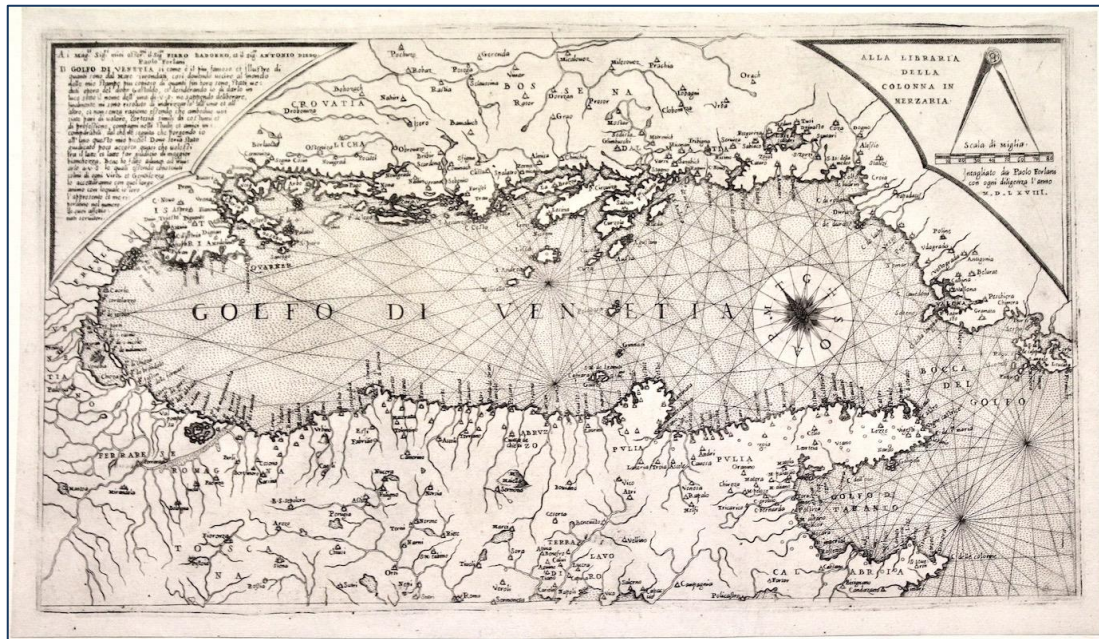
Reconstruction proposal (J.F. Coates 1994) of a I-II century AD Roman *liburna*.

² The Romans carried out three wars against the Illyrian pirates, the third of which ended with the campaign against Istrians in 178 BC and the conquest of Pola in the following year.

Venice and the Adriatic

Between the decline of the Roman city of Altinum and before the consolidation of Venice, the main trading site in the Venetian lagoon was the island of Torcello, a well-established node in the Byzantine trade network. From the 9th century onwards, after a period in which the two centres co-existed, Venice began to develop as a European gateway opening onto the East, given its position on the boundary between the two worlds, the Muslim and Byzantine East, on the one hand, and the Latin Germanic West, on the other. Quite early on in its development, the new lagoon centre turned its attentions to the Adriatic where most of the goods were still being transported on board ships from the Byzantine East while the Venetian merchants mainly shipped goods from the east and locally made products along the rivers of northern Italy. Nevertheless, when the Lombard wars caused a decline in the ports of Aquileia and Ravenna, which had been the main northern Adriatic ports throughout the Roman period and early Middle Ages, they were replaced by the intermediate lagoon cities, including Comacchio, which experienced a period of rapid growth. In 866, fearing competition from Comacchio, Venice conquered the city, taking full control of the Po river mouths, strategic entry points allowing Venetian ships to enter mainland territory and giving them access to the north Italian markets. Very soon, though, the Venetians turned their attentions increasingly to the sea, leaving the river trade to the local peoples. From the late 9th century and throughout the 10th century, in particular, they began to devote themselves to highly profitable businesses such as the trade in slaves and in timber from the north-east, which was still densely forested in that period, with oak woods in the plains, abundant ash and beech woods on the hills and foothills, and pine, fir and larch woods in the mountainous zones. The huge availability of timber – along with the hemp produced in the plains, which was used to make rope and rigging, and the iron components made in smithies in the pre-Alpine valleys – contributed to the growth

of a ship-building industry producing boats and ships with a varying tonnage both for Venetian shipowners and other clients.



The Adriatic Sea named *Golfo di Venetia* in a XVI century map.

Venice's increasing interest in shipbuilding and in the Adriatic routes coincided with the decline of the Byzantine fleet operating in the Adriatic, which had used Ravenna as its main port. The Venetian fleet also took responsibility for protecting maritime traffic in the northernmost end of the basin, which at that time was bounded by an imaginary line from Pola/Pula to Ravenna, an area of the Adriatic that rightfully became known as the *Gulf of Venice*. After taking definitive control of the north Adriatic, Venice took steps to fight piracy, which was particularly widespread along the Dalmatian coast as far as the Bay of Kotor, tackling a situation that had caused serious problems for Adriatic maritime traffic, which the Byzantine Empire was no longer capable of protecting. Between the 7th and 8th century, the Slavic populations

that had invaded the Balkans reached the Dalmatian coast, first conquering a number of ancient Roman cities then dedicating themselves to piracy, exploiting the increasing weakness of the Byzantine navy.

One of the main dangers faced by 10th-century seafarers was the Narentine pirates, who had an unassailable base hidden in a bend of the River Narenta (modern Neretva), near the site of the Roman city of *Narona*, about fifteen kilometres from the river mouth. Other pirate bases were situated on the nearby islands of Curzola/Korčula and Lagosta/Lastovo, while the main cities in Dalmatia – Zara/Zadar, first and foremost – maintained a rather ambiguous position, sometimes joining the pirates, sometimes accepting the help and alliance of Venice. At that time, it seems that the pirates from the Dalmatian coasts could put to sea fleets as big as the Venetian fleets, posing the risk that they might join together in a state and, above all, create a naval power capable of rivalling Venice in the Adriatic. It was for these reasons that, in 1000, Doge Pietro II Orseolo organized a large-scale naval expedition that managed to defeat the Narentine pirates. In 1002, the Doge himself led a Venetian fleet that sailed to the southern Adriatic to the aid of Bari, which was being threatened by the Saracens. By the early 11th century, these military interventions, combined with careful diplomacy, had allowed Venice to become the leading naval power in the Adriatic, where she would intervene as a “friendly” power in support of both the Byzantine and the German emperors to protect commercial traffic.



The Doge Pietro II Orseolo.

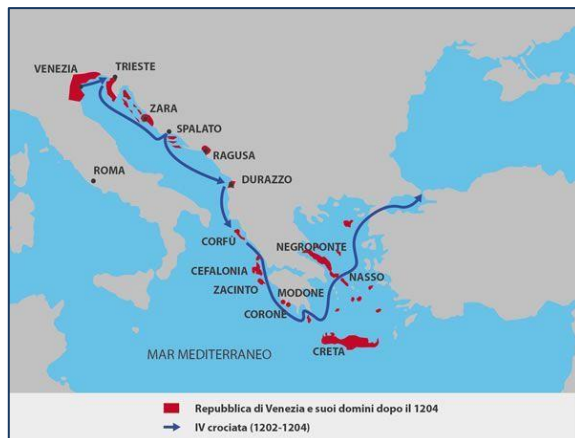
During the course of the 11th century, the lagoon city experienced a period of great development and continuous growth, managing, with the help of its fleets, to prevent Norman expansion beyond the southern Adriatic, and once again assuming the role of protector of Byzantine traffic and of the Empire itself, a role that gave Venice important trading and fiscal advantages.

The period from the 9th to 11th century was also the period of the rise of the Kingdom of Croatia, which experienced periods of contraction and expansion marked by battles with the Venetians and Bulgarians, and by alternating hostility and alliances with the Byzantines, before reaching its maximum expansion under King Petar Krešimir IV, who ruled from 1058 to 1074, reuniting the Croatian lands from Slavonia to Bosnia, from the principality of Neretva to the coastal cities and islands of Dalmatia and the Kvarner Gulf. After the death of Krešimir IV, the Kingdom of Croatia experienced a period of crisis that favoured Venetian conquests along the Istrian and Dalmatian coasts and Hungarian victories in the inland regions of Croatia. In the space of only a few years, Hungary extended its control right up to the coastal regions, rivalling Venice, while Croatia, by now no more than a Hungarian governorate, lost its sovereignty.



The King Petar Krešimir IV, in a bas-relief of the XIII century baptismal font in Split.

From the end of the 11th century onwards, the Venetian naval power experienced a new phase of further development that was accelerated by the Crusade expeditions. Between the 12th century and the early 13th century, Venetian fleets began to travel beyond the Adriatic and Ionian seas on a regular basis, imposing themselves in the Aegean and throughout the eastern Mediterranean. During the course of the Fourth Crusade (1202-1204), in particular, Doge Enrico Dandolo managed to suppress yet another rebellion by Zara/Zadar, which was always seeking independence from Venice, and with the support of the Hungarian sovereigns, had attempted to impose itself as a maritime power rivalling Venice. Now, having obtained firm control of Dalmatia, and therefore over the Adriatic, as well as power in the Aegean and in the eastern Mediterranean, Venice had created a true “empire of naval bases” (Frederic C. Lane).



The Fourth Crusade and the Venetian domains after 1204.

However, there were continuing conflicts with Hungary for the control of Dalmatia’s coastal cities and territories until 1409, when the Hungarian-Croatian King Ladislaus of Naples sold the city of Zara/Zadar and all of his territory in Dalmatia to the Venetians for 100,000 gold ducats, marking the start of definitive Venetian

dominance in Dalmatia, with the exception of the independent Republic of Ragusa, a control that would last for three and a half centuries.

During every phase of its history, thanks to its careful diplomacy and sometimes also military intervention, Venice would keep at bay competition from the Adriatic cities capable of threatening its commercial supremacy in the basin, beginning with Comacchio and Ferrara, and followed by Ancona, Bari, Zara (modern Zadar) and Ragusa (modern Dubrovnik). During the 11th century, Ragusa, which became a major trade centre in the Byzantine period, became a flourishing city which, thanks to its alliance with Ancona, managed to resist Venice's great power in the Adriatic. However, following the expedition for the Fourth Crusade and the rise of Venetian power throughout Dalmatia, Ragusa was forced to surrender, submitting to Venetian rule and remaining in Venetian hands, with the exception of the occasional brief interruption, until 1358. After regaining its independence, Ragusa experienced a new period of prosperity, only declining from the 16th century onwards, following the shift in Mediterranean trading balances that had followed in the wake of the discovery of America in 1492.



The old city of Ragusa (modern Dubrovnik) with its defensive walls sheer to the sea.

In the 16th century, the problem of piracy, which had never been completely subdued, raised its head once more. Following the gradual invasion of the Balkans

by the Turks over the previous two centuries, groups of deserters known as Uskoks³ established their base at Segna/Senj, on the coast opposite the southern tip of the island of Veglia/Krk, carrying out raids inland and acts of piracy at sea. They rowed long, swift boats ranging from 10 to 15 metres in length, with fierce crews of 15 to 23 men per craft. They would lie in wait for their prey, lurking between rocks and islands, inside channels and behind headlands. They would strike swiftly and ferociously in every season and weather condition, at any time of day or night, even when the sea was tempestuous, because in storms merchant ships would be forced to seek shelter in some makeshift haven where they were vulnerable to attack. The numbers of these pirates increased rapidly during the second half of the century, when the Uskoks were joined by outlaws banished from the Republic of Venice as well as by adventurers from Romagna and even from Lazio. In just a few years, the Uskoks were carrying out raids all over the Adriatic, attacking convoys of Turkish galleys as well as Ragusan and Venetian ships. By the end of the 16th century, the situation had become unsustainable to the point that the Venetians decided to take firm action, capturing the fortress of Segna/Senj in 1615 and putting an end to the war with Uskoks two years later.



Uskok chief portrayed in a book of the XVI century.

³ The name comes from the Croatian word *uskok*, which means “escape” and by analogy “fugitive”.

Relations and trade between the two shores

A dense network of relations between the two shores of the Adriatic had come into being long before the Venetians appeared upon the scene. In Roman times, olive oil was exported from Istria to northern Italy⁴, along with fish products like the famous sauce known as *garum* that was highly sought after on Roman tables. In fact, the Adriatic has always been rich in fish, and celebrated for both the quantity and variety of its catches⁵.

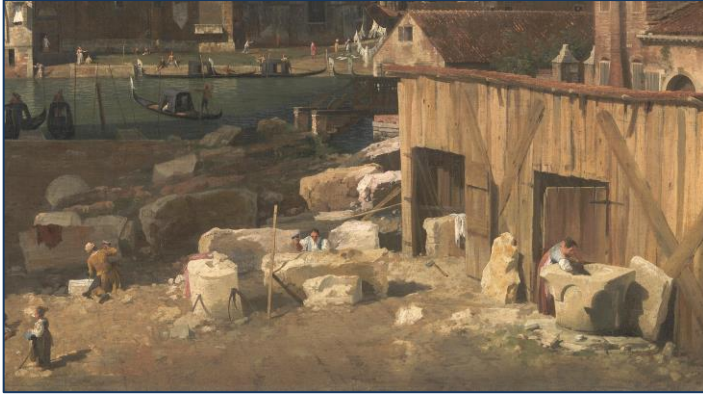
Another famous export dating to the Roman period was Istrian stone, which was used to make important monuments and infrastructures such as the Bridge of Tiberius in Rimini. This trade reached its peak in medieval and modern times. It is a well-known fact that this type of limestone, famed for its resistance to salt corrosion, played a key role in the urbanization of Venice where it has always been used to make buildings, churches and palaces, bridges and houses, as well as for sculptures, every type of architectural cladding and even for infrastructures such as wharfs and breakwaters. Following the annexation of the Istrian cities to Venice (13th century onwards), it was imported on a large scale, mainly from the quarries of Orsera/Vrsar and quarries in the Rovino/Rovinj area.



Ancient quarry of San Damiano,
near Rovigno/Rovinj.

⁴ The farming of olive tree and the production of olive oil in Istria date back to before the Romanization of the area.

⁵ It is the case of the delicious rhombus of the Adriatic Sea, the *rhombus hadriacus* mentioned in a didactic poem on fishing attributed to Ovid (*Haliutica*).



Stonemason's yard in Campo San Vidal in Venice; detail of an oil on canvas painting by Canaletto (1727-1728).

(National Gallery, London)

Rovigno/Rovinj was one of the main ports where ships went to load up the stone that was quarried in various sites in the surrounding area. Stone quarrying continued until the 19th century and we can find an interesting passage in a portolan of the Adriatic Sea published in 1830, which contains information on the relations between the two shores in that period:

The city of Rovigno (Rovinj), which was once called Arupino, from the name of an ancient castle situated on top of a nearby hill, is situated just three miles south-southeast of the Lemo channel, 9 miles south by east from Parenzo (Poreč), and 59 miles east southeast of Venice. Part of the city lies on a strip of land jutting into the sea like a small peninsula between two ports, and the rest of the city stretches out along the adjoining coast. The city is populous and its inhabitants are very active and industrious: the traffic from the ports of Dalmatia to the ports of Venice and Trieste and to the mouths of the Po is practically all in their hands. In addition to traffic in the products of third parties, they also trade in their own commodities, which they transport to Venice and Trieste: oil, wine, which abound in the local

territory, as does salted fish and “Istrian stone” from their quarries⁶. In Rovigno, they also build boats and provide all the routine necessities required in navigation; however, they lack fresh water, and the water from the cisterns, which are present in great number, does not always suffice. Master mariners seeking pilots familiar with the ports of Venice and in the Po delta should go to Rovigno to find them⁷.

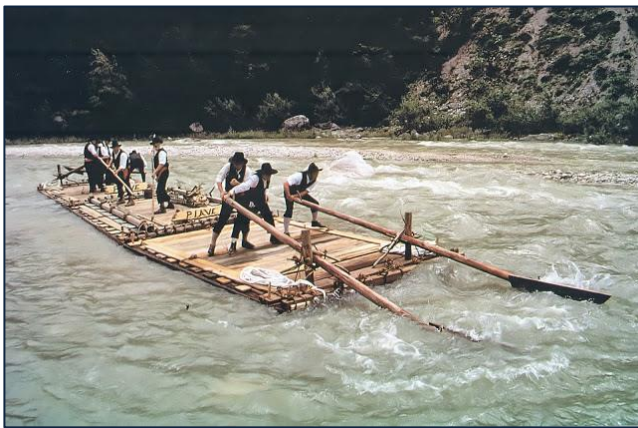
There was also a trade in stone for building between Ragusa/Dubrovnik and Puglia; the ships would set out from Ragusa with stone as ballast then return from Puglia with loads of earth, which was much needed in Ragusa. This means that it was simpler and cheaper to transport these poor materials between the coasts, on a journey of over a hundred nautical miles, rather than procuring them inland. Such examples confirm the benefits offered by transporting materials via water rather than overland, also because of the huge quantities of materials that could be transported in a ship’s hold on a single journey, compared to the limited quantities transportable by cart and to the difficulties involved in journeys inland. The relative closeness of the two shores of the Adriatic and the presence of important fishing communities on both the Italian and Croatian coasts have always favoured the development of cross-sea traffic routes, both east to west and vice versa, both for raw materials and for products of relatively little value.

Another important raw material in the trade between the two coasts was timber. Every type of timber for buildings and pilings, high quality timber for shipbuilding, and even firewood. Already by the early Middle Ages, Venice played a key role in this type of traffic because the lagoon city devoured huge quantities of timber like no other. Timber for its Arsenal and shipbuilding yards; timber for the foundations of its buildings, from simple houses to palazzi and churches, from bridges to canal

⁶ They are the same products that were exported from Istria to Italy in Roman times and afterwards in Venetian era.

⁷ G. Marieni, *Portolano del Mare Adriatico*, Imperiale Regia Stamperia, Milano 1830, pp. 55-56.

banks; timber for the façades of buildings, for roofs, cladding, and sculptures; it even required firewood to heat houses, to burn in ovens and furnaces and even for export. However, the greatest supply problems related to timber for shipbuilding given that from the 11th century onwards, Venice’s political and trade power depended upon its mercantile and military fleets. In subsequent centuries, it would prove necessary to obtain high quality timber, which needed to be carefully sourced and selected. Resinous woods, like firs and larch trees, used to make masts as well as parts of the hull like the deck, came from the piedmont and mountainous zones of the Veneto while the beeches used for the oars came from the Cansiglio Forest, Venice’s “forest of oars”, which is situated on a plateau above the Veneto-Friulan plain, on the border between the two regions. The logs were tied up together to form huge rafts that were driven in convoy by *zattieri* or raftsmen, making their way down the river Piave to the Venetian lagoon, reaching the Zattere in the Giudecca canal, which take their name from their ancient function as a landing dock for these rafts or *zattere* reaching Venice from the mountains. There were several timber warehouses (one until recently) on the other side of Venice, by the Fondamente Nove.



Timber-raft river transport to Venice: the *zattieri* (raftsmen) at work, historical re-enactment

The most durable woods, durmast oak in particular, were mostly imported from Istria and Romagna, and therefore reached Venice via the sea. For this reason, and

due to the huge quantities of timber required by the city, from the 13th century onwards, Venice introduced a protectionist policy intended to monopolize all of the timber loaded onto ships in the Adriatic ports north of Zara/Zadar and Ravenna. Later, with the growth of the city, the expansion of the fleet and rise in maritime traffic, there was such a demand for every type of timber that, in 1452, Venice instituted a state magistracy, which was not only responsible for the supply but also for the safeguarding and management of the forests, thereby guaranteeing an adequate supply through careful forestry policies. From the 17th century to the 18th century, various measures were introduced for the management of the Istrian forests, which were even divided into categories based on the quality of the wood supplied: the top quality timber was reserved for the Arsenal, while other timber was used for the general needs of the Republic, especially for use in public works by the Magistrato alle Acque (Magistrate for the Waters). Only after the needs of Venice were met were the woods left to the use of the locals.



Identification of naturally curved timbers (*stortami*) in the trees, to be used in shipbuilding

In order to improve production, it was established that all dead trees were to be chopped down and that even healthy trees were to be thinned out according to the quality of the ground, so as to improve their growth. Moreover, special techniques were introduced to force oaks to grow with bent trunks or branches (*stortami*) that could be used to produce curved pieces of wood (“storti”) needed in ship building, especially for the framework of the hulls. In fact, when these parts of the ships are

made from naturally curved sections of wood, they are far more resistant to stress because the wood fibre follows the direction of the section of wood. One forest that was famous for its *stortami* (naturally crooked timbers) was the oak forest of Montona/Motovun in the hinterland near Cittanova/Novigrad, which supplied wood until the 19th century⁸. It was established that branches would only be chopped off in the winter, between November and March, when the tree growth stopped, unless the weather was exceptionally cold. In this case, cutting was delayed to avoid the risk of the tree freezing at the point of removal of the branch and then rotting.



A *trabaccolo* fully loaded with timber, early XX century

Timber for construction and firewood were both imported from Istria until the 20th century. The main cargo vessel was the *trabaccolo*, which is even mentioned in the portolans, and could be used to ship timber even in small landing places where larger vessels could not anchor. Ships with a larger tonnage could dock at the deep-water port of Fiume (modern Rijeka), which was one of the busiest and most important ports in the entire Adriatic. Our 1830 portolan contains an interesting description of this port⁹:

⁸ In XVIII Century, the Arsenal of Venice (therefore the public shipbuilding company) disposed, in exclusively way, of the Montona/Motovun wood, since the *stortami* were fundamental in the shipbuilding of big ships.

⁹ Pages 74-75.

The city of Fiume (Rijeka) is one of the most important and busiest ports in the Adriatic, just as Trieste occupies the more Mediterranean part of our sea to the west of Istria so does Fiume occupy the east; it covers a square area that is around 12 miles on each side, with the island of Veglia to the east, Cherso to the south, and Istria to the west... The main roads leading to Fiume from Italy, Germany, Hungary and Dalmatia play no small role in increasing traffic to the port. Merchants from every nation come to this city bringing every kind of commodity and foreign good, and in exchange they take away our produce, like the timber abounding in the surrounding area, tobacco and wheat from Hungary. The city itself is well-supplied with provisions, large warehouses, shipyards where ships can be built or recaulked; in short, everything necessary for sea traffic and navigation.

The importance of Istria as a region for the supply of timber is confirmed by the local place names, which sometimes included the name of tree species both from Italian, mainly via Venetian, or from Croatian, like those recalling the elm (olmo/brest), oak (quercia/hrast), Turkey oak (cerro/cer) and holm oak (leccio)¹⁰.

The dense network of exchange extending between Istria, Quarnaro/Kvarner, Venice, the Po Delta and Romagna, concerned every type of raw material and product. One such example concerned the little crabs that were caught every summer in the Venetian lagoon – unusually, in Pellestrina, they were caught by women. Every year, thousands of barrels were filled with crabs that were sold to Istrian sardine fishermen who would crush them in a mortar to make a pulp that they would spread onto the gillnets, using it as bait to attract sardines, which love crabs. Practiced from the 18th to the 20th century, this trade in low-value produce was

¹⁰ See for example the localities of Olmeto/Brest, Olmeto di Bogliuno/Brest pod Učkom, in eastern Istria; Porto Olmo grande, Porto Olmo piccolo, Monte Cerella/Moncerel (from the name of cerro), Monte Lesso/Monteleso (from the name of leccio), in the area around Pola.

nonetheless an important source of income for the lower social classes due to the large quantities sold.

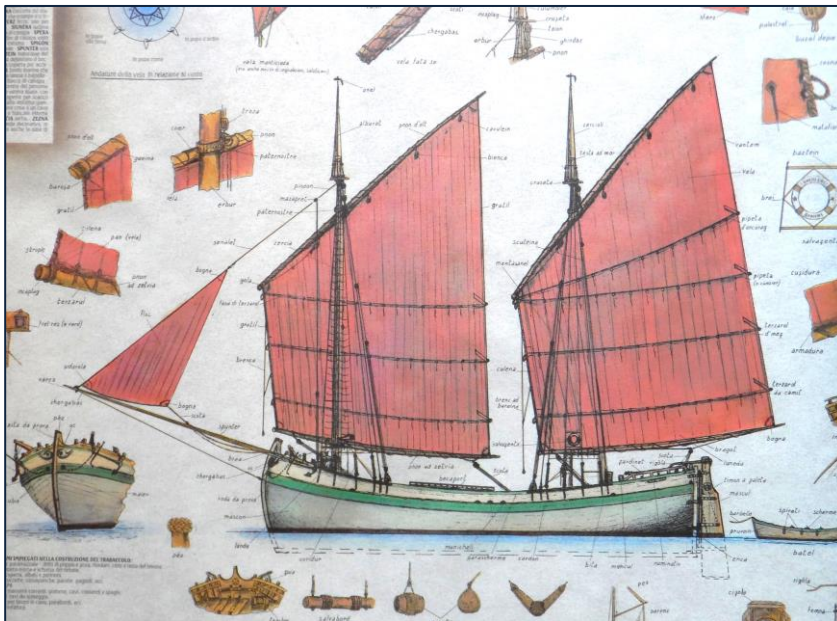


Istrian boats in Venice, loading the lagoon crabs used as bait for sardine fishing, early XX century

Traditional seafaring between the Italian and Croatian coasts: boats and sails

From the 19th century to the first half of the 20th century, one of the most popular boats in traditional seafaring in the entire Adriatic was the *trabaccolo*, both in the form of a larger cargo vessel and as a smaller fishing vessel, known as *barchèt* in Romagna (*barchetto*, which means little boat). The most commonly found version of this boat had virtually identical features from Trieste to the Otranto Channel: a vessel with a round bow and stern giving it the maximum carrying capacity with the least waste of space, with a hull that had a length to beam ratio around 3:1 (in other

words, the length was roughly three times the width), similar to that of the Roman transport ships known as *naves onerariae*, which had a reduced draft but had no problems navigating the high seas. The hull length of the various versions ranged from a minimum of 12 metres to a maximum of around 25 metres, with a capacity of up to 150 tonnes. Once the hold had been filled up via the large central hatchway, *trabaccoli* could also be loaded on the deck, causing the waterline to reach the level of the sheerstrake. The main shipyards on the Italian coast were at Trieste, Chioggia, Rimini, Cattolica, Pesaro, Civitanova Marche, Manfredonia and Molfetta; on the Slovenian coast, they were at Pirano (modern Piran); on the Croatia coast, they were found at Rovigno/Rovinj, Fiume/Rijeka, Cherso/Cres, Lussinpiccolo/Mali Losinj, Spalato/Split, Curzola/Korčula and Ragusa/Dubrovnik.



The *trabaccolo* / *trabakul*, the most representative traditional boat of the Adriatic Sea.

To ward off evil, two large eyes were painted on either side of the bow, which was full and rounded “like a woman’s breasts” (Giovanni Comisso), to help it cope with the short, rough waves of the Adriatic. Since time immemorial, such eyes have searched the horizon, protecting boats from dangers at sea and helping them find the best route, just like the ships of the Phoenicians, Greeks and Romans. And if boats have always had eyes, then they must also have had souls, because in every time and place, sailors have always believed that boats were not merely inanimate objects or instruments of work but beings imbued with a breath of life, like great marine animals, such were the ties between the seafolk and their boats.



The eyes of the *trabaccolo*

The *trabaccolo* was equipped with two masts rigged with lug sails also known as “*trabaccolo* sails”, and with a kind of mobile bowsprit called *spigone* or *spuntier* that was rigged with one or two *polacconi*, a type of triangular sail resembling the modern jib. The first mentions of *traboccoli* date to the second half of the 17th century but they were increasingly used during the following century, perfecting their form and becoming diffused during the 19th century when they became the main coasting vessel used in the Adriatic, frequently sailing as far as the Ionian and Aegean seas. The *trabaccolo* would develop into the *pièlego*, which changed the

original lines under the influence of western craft, assuming forms resembling those of a brigantine and adding a fore and aft sail to the mizzen-mast to replace the original lug sail, which remained on the main mast.

Another very important type of boat developed in the 19th century was the *bragozzo*, a sailing boat typical of Chioggia that was later used throughout the northern Adriatic, used for fishing, and in its larger versions, also for cargo. Typically between 9 and 16 metres in length, it had a flat bottom suited to the shallow lagoon waters that was also capable of coping with high seas. It had virtually no keel, meaning that this vessel rigged with lug sails had to compensate for leeway by heeling over, that is by tilting the chine of the boat into the water but, above all, by exploiting the lateral resistance produced by the huge rudder blade, which descended far below the bottom of the hull, extending forward with a curved profile.

Moving southwards, along the coasts from the Marches to Puglia, the most common fishing vessel was the *paranza*, documented from the 18th century onwards. It takes its name from the fact that these boats would fish together (*in paranza* or ‘in pairs’), that is, with two trawlers side by side, each dragging an end of the net. Varying between 14 and 18 metres in length, the boat’s hull is rather similar to that of the fishing *trabaccolo* (especially, the prow, which also features two large eyes), but differs in terms of its rigging because the *paranza* was a single-masted boat rigged with a large lateen sail or a lug sail with a very short fore edge.



The *bragozzo* (left) and the *paranza* (right).

One of the typical boats on the Dalmatian and Istrian coasts was the *brazzèra* / *bracera* which was used both for fishing and transport. Between 12 and 15 metres in length, it usually had a single mast positioned just fore of amidships, although there were also two-masted versions, in addition to the *spigone* for the triangular fore-sail. Although typical Dalmatian *brazzère* were usually single-masted in the 19th century, the *brazzère* from Rovigno/Rovinj had three masts, two rigged with lateen sails and a mizzen-mast with a lug sail, as well as the *spigone* with the fore-sail.



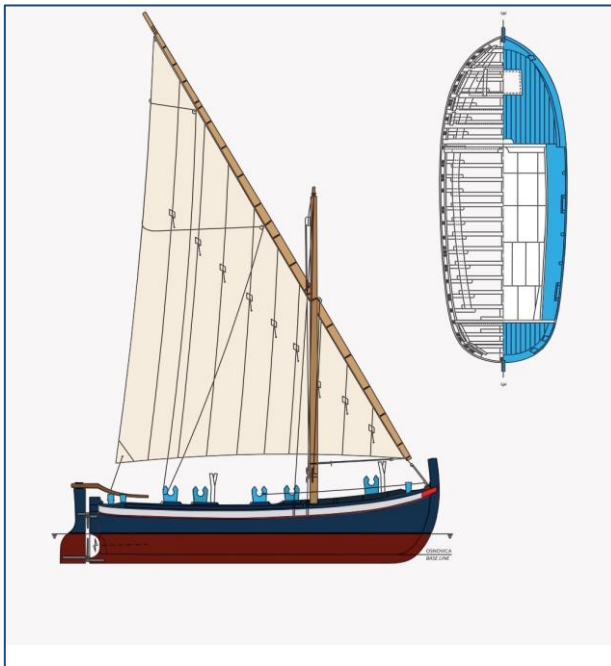
The *brazzera* / *bracera*

The transport *brazzère*, which could reach a tonnage of 20 tonnes, were used for short-sea shipping, transporting goods (both incoming and outgoing) that had crossed the Adriatic on board *trabaccoli* and *golette*, as well as linking the ports of Istria to Trieste and Venice. They were mainly used to transport the produce of the Istrian and Dalmatian countryside, like timber, wine, olive oil, livestock, salt and gravel. They may take their name from the fact that they were originally propelled by oars, “a forza di braccia” (literally, powered by arms), or from the Italian name

for the island of Brazza/Brač, in central Dalmatia. According to this second hypothesis, the island of Brazza/Brač was the place of origin of this boat, which, as mentioned, was widely diffused along the coasts of Dalmatia and Istria, to the point of developing typical local versions, as in the case of the *brazzèra* from Rovigno/Rovinj or Capodistria/Koper. Be that as it may, the strong resemblance between this boat and boats from the opposite coast, like the *paranza* or even the *trabaccolo*, once again raises the issue of relations between the two shores and reciprocal influences at the level of shipbuilding. Even the various types of rigging evoke this complex process of influences and changes, because at the end of the 19th century the *brazzère* were still rigged with a lateen sail, followed by a lug sail, and, in more recent times, by a gaff sail. On the other hand, the sea was never truly a boundary, at least with regard to social and cultural aspects, and transmission of knowledge and traditions. On the contrary, it has always represented a way to diffuse and share cultures, which are therefore continuously evolving phenomena, especially within a basin like the Adriatic Sea whose geography has favoured internal relations from the remotest times. This fusion of cultures and ideas met a need or wish to optimize a situation or resolve issues, like that of communicating when neither party speaks the language of the other. This led to the birth of a *lingua franca* that was spoken in ports, a language spoken by seafolk that was shaped by the different roots and sounds of the languages involved, by the typical gestures and recurrent expressions, in other words, by forms of living common to the people on both sides; a new language that was not official or written, but evolved spontaneously, that was shared and comprehensible to those using it and therefore effective.

One of the most special Dalmatian boats is the *gajeta*, especially, the *gajeta falkuša* from Komiža, on the island of Lissa/Vis. A relatively small boat, usually between 6 and 9 metres in length, the *gajeta* is very tapered, with a pronounced keel from bow to stern (with acute cross section or “wine shape section”), a low waterline, and a

maximum capacity of around 5 tonnes. It is a beautiful, fast boat capable of sailing in open seas. Documented from the 17th century onwards, but probably widely diffused a century earlier, the *gajeta* is the result of centuries of the technical and functional fine-tuning that gave rise to similar boats all over the Mediterranean, from southern Italy to Crete, from Sicily to Catalonia. The *gajeta* was widely diffused, disappearing from use after the 1950s until it was revived as part of a major project intended to promote Croatian maritime heritage. It had decking at the prow and stern, while the centre of the boat was open containing three benches and the *trasto* to which a removable mast was fixed in a position fore of amidships and originally rigged with a large lateen sail that was later joined by the *spigone* for the triangular fore-sail. It could therefore be propelled either by sails or oars. It therefore had a crew of five, four at the oars (when needed) and one at the rudder, always with the aim of having the maximum performance with the maximum operating economy.



The typical *gajeta* of Betina

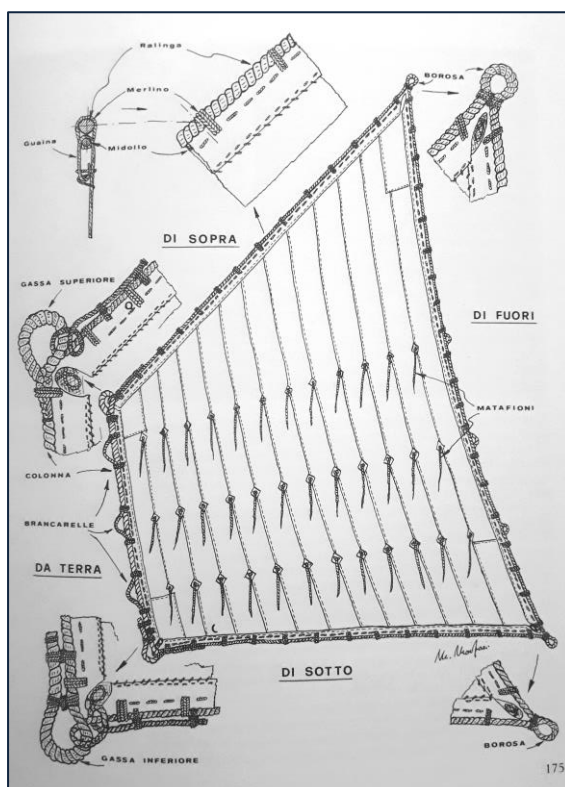
The unique feature of the Komiža *gajeta falkuša* was its removable side strakes or *falke* – hence its name – that could be attached to raise the height of the sides when the boat sailed in the open sea to prevent waves entering the boat, especially on the leeward side. The fishermen from Komiža would go to catch sardines in the small archipelago of Pelagosa/Palagruža, 40 miles south of Lissa/Vis, which they could reach in 5 or 6 hours with a good north-westerly wind, travelling at speeds around 8 knots along a trans-Adriatic route that was used in Antiquity and in the Middle Ages. Fishing expeditions to Pelagosa/Palagruža represented an epic event for the people of Komiža who would organize regattas to reach the archipelago, the earliest of which was documented in May 1593, when a fleet of no less than 73 *falkuše* set off from Komiža with 370 fishermen on board armed with arquebuses to defend themselves from pirates and escorted by a Venetian war galley. These are the reasons that made the *gajeta falkuša* an “archetypical boat” (Josko Božanić), an element of cultural identity that not only became a symbol of an entire community of fishermen but also of the seafaring profession and traditions all over Croatia.



Two *gajete falkuše* sailing at high speed.

Lug sail (vela al terzo)

Traditionally, there were two main types of sails in the Adriatic: the antique or early medieval lateen sail, which reigned supreme throughout the Mediterranean from the early Middle Ages until the present day; the other is the more recent lug sail (called “al terzo” sail in Italian, which is properly a standing and balanced lug rigging), typical of the central and northern areas of the Adriatic, which is found all along the Italian coast as far as the Marches and Abruzzo, and on the Croatian coast as far as Zara/Zadar and Betina on the island of Murter. South of this line (which starts at a slightly more northern point of the Croatian coast to reach a slightly more southern point on the Italian coast), we find the lug sail beginning to exist side by side with the lateen sail, gradually being replaced by it as one goes south, which is dominated by the traditional Mediterranean rig of the lateen sail.



The lug sail / “*vela al terzo*”

The lug sail is known as “vela al terzo” in Italian, taking its name from the fact that its suspending point is placed at about a third of the length of the upper yard, the so-called “pennone di sopravvia” in Italian. The upper yard is therefore about a third fore and about two thirds aft of the mast, although these proportions tend to vary according to the type of rigging used and the type of boat involved. Discovering the exact origins of the lug sail is no simple matter but there are two main hypotheses. The first is that it is derived from the lateen sail, in particular, a variation with the front corner cut off (the so-called sette sail), which was widely diffused in the Mediterranean and beyond. The second is that it evolved out of a series of modifications to the square sail, which was used until the 19th century on rivers and inland waters in northern Italy.

Although it is hard to establish exactly how this sail evolved and became diffused, given the driving role of the Veneto area, which had one of the most important fishing fleets in the entire Adriatic in Chioggia, we could hypothesise that the process began here, spreading along both shores of the central and northern Adriatic. Whether or not this can be borne out, it seems clear that the development of the lug sail stems from an encounter between the square sail of ancient or Roman origins and the early medieval lateen sail. This probably occurred in the Veneto area, maybe in the Venetian lagoon, the ideal place for this type of encounter, at some time between the 17th and 18th century, as the oldest documents seem to suggest. The tradition of using coloured earths to decorate the sails with geometric patterns or symbols acting like ideograms identifying the family that owned the boat also stems from the Veneto area. The practice of painting the sails also ensured that they lasted longer, protecting them from mould, as well as making them more visible at sea and favouring the recognition of the boats. This custom was probably adopted in Chioggia, which was the leading fishing centre of the northern Adriatic from the 1600s to the first half of the 20th century. The fishermen from Chioggia formed companies operating in most of the Adriatic, as far as the Albanian coasts, often

settling far from home and giving rise to small Chioggian communities in other regions such as Romagna, Istria and Quarnaro/Kvarner. Each *paròn*, or boat owner, had his own sail, which identified him, together with his family, within the community. The need to identify oneself through the symbols and colours of the sails was dictated by the need to distinguish oneself and be recognized within very crowded fleets, as was the case in Chioggia, as well as from the desire to distinguish oneself, at a personal and family level, in a society where people identified completely with their boats. In brief, we can associate this practice, at least in part, with the need to create a functional and social order in seafaring communities.



Colors and symbols of the
lug sails / “*vele al terzo*”

The promotion of traditional maritime heritage in Italy and Croatia

The cultural background of the projects of inter-regional cooperation between Croatia and Slovenia and between Croatia and Italy – “Mala Barka”¹¹ and “Arca Adriatica”¹², respectively – is linked to the revival and promotion of traditional seafaring activities that began in 1970s and 1980s. This was a period in which the world of traditional seafaring, both as a tangible and intangible cultural heritage, was rapidly disappearing. Modern trawlers were replacing the last surviving fishing boats, which had long been stripped of their sails and fitted with engines. These old boats, which were gradually being demolished, were sometimes perceived in a negative manner, as symbols of a harsh, tough life that people could now leave behind thanks to progress and technology.

At the same time, others became aware of the risk that this would lead to a serious loss with lasting consequences for the cultural identity of coastal communities. Volunteers and experts began to work together to recover what had survived, documenting material heritage and memories, as well as launching the first projects to salvage old boats, surviving fishing gear and on-board equipment. This was followed by the first institutional initiatives drawing upon a handful of pioneers of maritime ethnography. This awareness of cultural aspects was accompanied by a growing awareness of environmental aspects, linked to an intelligent use of natural resources and sustainable economy that could be transformed into a tourist resource.

¹¹ <http://www.malabarka.eu/it/il-progetto/>

¹² <https://www.italy-croatia.eu/>

The Italian coast

The conference “La marineria romagnola, l’uomo, l’ambiente” (“Romagnol seafaring, humans and environment”) held in Cesenatico in 1977¹³ represented a key moment in this journey focused on the cultural maritime heritage, which referred to the Italian coasts of the northern Adriatic, but also had wider national implications. Organized by the Azienda di Soggiorno of the Municipality of Cesenatico with the sponsorship of the Region of Emilia-Romagna, it represented both a point of arrival and a departure, laying the foundations for the first museum collection of what would become the Museo della Marineria¹⁴. Comprising both a land-based and a floating section featuring the main types of traditional boat in the central and northern Adriatic, this is now a point of reference in the field of maritime ethnography at European level¹⁵. Over the years, it was followed by further initiatives like the exhibition “Barche e gente dell’Adriatico, 1400-1900” (Boats and peoples of the Adriatic. 1400-1900), held in 1985 at the Centro Culturale Polivalente of the Municipality of Cattolica, curated by the Cattolica Culture Department and by the Emilia-Romagna Cultural Heritage Institute, which would give rise to the maritime section of the then Antiquario that was later expanded to become the seafaring section of the new Museo della Regina¹⁶. Also, worth mentioning is the exhibition “Le marinerie adriatiche tra ‘800 e ‘900” (Adriatic seafaring from the 19th to the

¹³ The publication of the proceedings followed the conference: M. Zani (ed.), *Atti del convegno “La marineria tradizionale romagnola, l’uomo, l’ambiente”*, Azienda di Soggiorno – Comune di Cesenatico, 7-8-9 ottobre 1977, second edition, Cesenatico 1983.

¹⁴ B. Ballerin, Il Museo della Marineria di Cesenatico. Storia di una complessa realizzazione, in S. Medas, M. D’Agostino, G. Caniato (eds.), *Navis 4. Archeologia, Storia, Etnologia Navale, Atti del I Convegno Nazionale, Cesenatico – Museo della Marineria, 4-5 aprile 2008*, Edipuglia, Bari-S.Spirito 2010, pp. 39-45.

¹⁵ <http://museomarineria.comune.cesenatico.fc.it>

¹⁶ Together with the exhibition the book edited by U. Spadoni, *Barche e gente dell’Adriatico, 1400-1900*, Grafis Edizioni, Casalecchio di Reno (BO) 1985 was published. About the Museo della Regina see: <http://www.cattolica.info/citta/museo-della-regina-cattolica>

20th century), held in Rome at the Museo Nazionale delle Arti e delle Tradizioni Popolari in 1990¹⁷.

Further museums connected to seafaring and traditional fishing activities, in addition to the two mentioned above, are the Museo Civico della Laguna Sud di Chioggia, inaugurated in 1997¹⁸; Musa (the Cervia Salt Museum), owned by the Municipality of Cervia, which is a partner in “Arca Adriatica”, which was inaugurated in 2004 after being newly refurbished in the historic salt warehouse (1691), offering a complete overview of the history of salt-making in Cervia, which has been taking place for almost two millennia¹⁹; the Museo della Marineria “Washington Patrignani”, Pesaro, which reopened in 2007 after its refurbishment²⁰; the Museo del Mare di San Benedetto del Tronto, partner of “Arca Adriatica”, which opened in several stages until its completion in 2011 as a complex made up of five museums dedicated to the seafaring civilization of the Marches, marine biology and archaeology²¹; the small but highly interesting Museo Etnografico del Mare di Molfetta (Bari), inaugurated in 2005²²; the Porto Museo di Tricase (Lecce), which is a partner of “Arca Adriatica” together with CIHEAM Bari (International Center for Advanced Mediterranean Agronomic Studies), an innovative dynamic and “diffused museum” which organizes courses and various cultural, educational, and tourist events linked to the world of traditional seafaring, overlooking the Otranto

¹⁷ Exhibition catalogue, P. Izzo (ed.), *Le marinerie adriatiche tra '800 e '900*, De Luca, Roma 1989.

¹⁸ <http://museo.chioggia.org>

¹⁹ <https://musa.comunecervia.it>

²⁰ <http://www.museomarineriapesarro.it>

²¹ <https://www.comunesbt.it/museodelmare> Very important is the collection of the Museo delle Anfore (Amphorae Museum), with numerous types of amphorae accidentally recovered by motor-tractors of San Benedetto del Tronto through the Mediterranean, in the first half of the Twentieth Century (there are Canaanite, Phoenician, Punic, Greek, Roman and Byzantine amphorae).

²² <https://www.museonavigante.it/i-musei-del-mare-e-della-marineria-ditalia/puglia>

Channel at the far end of the Adriatic²³. We must not forget to mention two major naval museums. The Museo Storico Navale di Venezia, established in 1919 in a 15th-century building that was one of the granaries of the Most Serene Republic of Venice²⁴, boasts 42 rooms containing artefacts ranging from the 15th century to the first half of the 20th century: an extraordinary collection of models of period ships, some of which extremely large in size, ship components and ornaments, a large collection of weapons (light weapons and cannons), collections of nautical instruments, ex-votos, documents and cartography, objects and models representing the history of the Italian Navy. In addition to this nucleus, there is also the “Padiglione delle Navi” containing various traditional boats as well as a variety of military and civilian boats and ships. The Civico Museo del Mare di Trieste²⁵, established in 1968, is a landmark for the history of the mechanical propulsion of ships, for nautical instruments, for the history of the port and shipyards of Trieste, as well as exhibiting interesting materials on seafaring activities and traditional fishing in the Adriatic.

From the 1990s onwards, throughout Italy, there was a gradual increase in the number of associations and initiatives linked to traditional seafaring activities. Naturally, this also the case in the northern Adriatic. In 1986, the Associazione Vela al Terzo was founded in Venice, bringing together a hundred boats and organizing an intense programme of very popular regattas²⁶. In 1992, the Associazione Arzanà was founded in Venice, soon emerging as one of the leading organizations in the recovery and promotion of traditional boats of the Venetian lagoon, initially focusing on rowing boats but later including sailing boats²⁷. In 1993, the Italian Institute of Naval Archaeology and Ethnology (Istituto Italiano di Archeologia e

²³ <http://www.portomuseotricase.org>

²⁴ <https://www.visitmuve.it/it/musei/museo-storico-navale-di-venezia>

²⁵ <http://www.museodelmaretrieste.it>

²⁶ <http://www.velaalterzo.com>

²⁷ <https://arzana.org>

Etnologia Navale) was founded in Venice with the aim of bringing together scholars working in various capacities in the fields of archaeology, history and naval ethnology. From 1995 onwards, courses of naval archaeology and ethnology were organized in Cattolica²⁸, where students could sail on traditional boats as part of a workshop of comparative studies exploring themes related to archaeology and naval history. For one week every summer, a small fleet of lug-rigged boats met to share a common experience. This particular activity ended in 2006 and was taken over by the “Scuola di Vela Storica” held from 2009 onwards at the Museo della Marineria di Cesenatico and from 2019 at the “Scuola di Marineria” organized jointly by the Department of Humanities of Ca’ Foscari University of Venice and the Museum. In 2002, “El Felze” was founded in Venice as an association of artisans involved in the construction of the gondola²⁹, a dynamic initiative that is now a point of reference for all the crafts involved in the building and decoration of this typical Venetian boat. 2004 saw the foundation of “Mariogola delle Vele al Terzo e delle Barche da Lavoro delle Romagne”, an association bringing together seafaring activities on the Romagnol coast, specifically Cervia, Cesenatico, Bellaria, Rimini, Riccione and Cattolica, organizing a variety of initiatives every summer, including a programme with 6 meets for lug-rigged craft, one in every port belonging to the association. In 2007, the “Compagnia della marineria tradizionale ‘Il Nuovo Trionfo’” was established in Venice with the aim of buying and restoring the 1926 *trabaccolo* “Il Nuovo Trionfo”³⁰. 2008 marked the start of the “Censimento delle barche tradizionali dell’Emilia-Romagna (e dintorni)”, a census of traditional boats from Emilia-Romagna and the neighbouring areas, which is carried out by the Museo della Marineria di Cesenatico with the support of the Region and of the Associazione

²⁸ S. Medas, M. L. Stoppioni, L’esperienza del Corso di Archeologia e Storia Navale, Cattolica (Rimini), 1995-2006, in A. Asta, G. Caniato, D. Gnola, S. Medas (eds.), *Navis 5. Archeologia, Storia, Etnologia Navale. Atti del III Convegno Nazionale, Cesenatico – Museo della Marineria 13-14 aprile 2012*, libreriauniversitaria.it edizioni, Padova 2014, pp. 281-288.

²⁹ <https://www.elfelze.it>

³⁰ <https://www.ilnuovotrionfo.org>

dei Musei Marittimi del Mediterraneo³¹. In 2017 “Il Museo Navigante” (The Sailing Museum)³² was set up, an original travelling initiative intended to promote museums on seafaring activities in Italy and involving 75 Italian maritime museums. The project continued with the *goletta* “Oloferne” (1944), which embarked upon its second voyage in 2019, travelling to Slovenian and Croatian museums.

The Kvarner sea: a sea of heritage

If you don't know which port you are sailing to, no wind is favourable. This is what the wise Seneca said in ancient times. In the Kvarner area, people also follow this line of thinking, and in a certain sense consider it their own – and they are not wrong.

It reached them carried by the sails of the common cultural circle to which Seneca's ancient Romans and today's inhabitants of the Kvarner area belong, that of the Mediterranean. This cultural circle quite simply could not exist without the sea, ships, ports, voyages, storms and calm, olives and wine, the sun that burns and the helm that you grip tightly. Life is the sea and the sea is life. The experience of one flows into the experience of the other. Whoever wants to separate them is foolish and does not know what they are doing.

When and how did the inhabitants of Kvarner first start sailing the sea? How far has it changed their lives? And how much does the sea flow through their veins?

They do not hide the answers to these questions. On the contrary, it is as if they are proud of them and so offer them in various forms, apparently considering them evidence of their own affiliation with the maritime culture of the Mediterranean. These answers come in the form of museums and interpretation centres dedicated to

³¹ http://www.archivimmc.eu/cbr_index.html

³² <https://www.museonavigante.it>

the sea, or as printed and e-editions on the history of seafaring, shipbuilding, fishing, diving, gastronomy, and customs, beliefs and songs related to the sea, or they take the form of festivals, regattas and similar gatherings that promote traditional maritime skills such as rowing, sailing, building wooden boats or local fishing customs. When the wonderful aroma of freshly baked sardines starts to waft through the air from the harbour at a local fisherman's festival, your nose automatically starts to sail towards it.

The organisers of these events know that everything at sea and by the sea did not start with them. We live today, but if it was not for those before us, life would look different now. We have inherited from those who have gone before us even when we are not aware of it – whatever their thoughts would be, unable to influence the development of the situation.

The roots of what has been inherited go back to times that seem distant, exotic, and even mysterious to us as modern people. The stage is the same: the Mediterranean, the Adriatic, Kvarner. However, the faces on it are different. They speak languages that are distant from ours, and their destinies are governed by other, lesser-known gods. Those faces have gone, but this has not prevented us from adopting their practical and other knowledge on a large scale, transforming it into a shared maritime experience. You could say that it is the will of heaven, and that is all there is to it.

The first of these faces are those of the ancient Liburnians and Greeks, followed by those of the Romans. Today's Kvarner Bay even owed its name to the first of these for some time, as the Romans named the bay Sinus flanicus, which means Flanates' Bay, after the Liburnian tribe of the Flanates, who lived near Flanona on the Istrian coast (today's Plomin). The Romans did this for a reason, as the Liburnians were a force to be reckoned with in the bay. This was in part because they had arrived before the Romans and were ready to defend their territory – as is always the case with conquerors – with swords, knives, spears and fire, and partly

because they were skilled seafarers and masters of the bay, and so could not be ignored.

The Romans' thoughts on this when they arrived in this foreign territory remain with them, so let us focus on that wonder of Liburnian shipbuilding: the liburna ship. Its original name is unknown, but it was known as a liburna by the conquering Romans. Long, narrow, with an armed crew, and fast as an arrow on the sea (which is why it caused lot of trouble to bulky and clumsy foreign ships), the liburna was incorporated among the standard vessels of the Roman navy because of the ease with which it could be sailed. Once the Romans had adopted the ship, they added a ram to pierce and sink enemy vessels.

The liburna marked the beginning of building wooden ships in the Kvarner area.

What about the Greeks? They did not hold back either. Together with the Liburnians, they sailed the bay, trading in amber, that hardened resin that arrived overland from the Baltic forests to be shipped by sea further south. Amber was believed to have magical powers, which was true, as the fairer sex knew best. Using amber in jewellery, they became even more, almost magically, irresistible, and such charm could only be explained by magic.

Unlike women, men preferred to adhere to a magic that had its origin in wine. There is nothing wrong with that – on the contrary. This leads us to the island of Krk. Let us travel back in time to the year 48 BC. The Romans were engaged in civil war, and a fierce battle between the leaders Gnaeus Pompey and Julius Caesar was about to be fought. The battle took place in the straits between the mainland and the island of Sveti Marko, on the site of what is today Krk Bridge. So, what happened in the battle? After destroying the enemy ships, Pompey's army blockaded the island of Krk from the sea, preventing Caesar's troops from reaching the mainland. A glimmer of hope arose for the trapped soldiers when new forces belonging to Caesar appeared

and encamped on the mainland. The soldiers on the island had an idea: why not move across to the mainland and join them by raft? Three large rafts capable of carrying 700 soldiers each were built. At dusk they put out to sea. Two of them bypassed the underwater barrier of ropes of Pompey's army and reached the mainland. The third was stopped at the barrier, which ended in disaster with no survivors.

What was so special? The rafts were made of logs placed on barrels – dozens of empty oak barrels in which the islanders had previously stored wine. The significance of the story lies in this fact: the existence of wooden wine barrels was recorded for the first time in world history in the Kvarner area.

When the wheel of history decided to stop being an ally to ancient peoples like the Liburnians, Romans and Greeks, and turned into something else, into more of a grindstone, they disappeared from the Kvarner stage. They were succeeded by the Croats, who arrived here in the 7th century from the expanses of the Eastern European mainland and met the blue Adriatic, which appeared so attractive that they decided not only to settle by it but to boldly sail it. The sea is truly a blue magnet.

The Croats sailed the Adriatic successfully, perhaps too successfully for some. As early as 642 AD, they crossed the Adriatic Sea, reaching the coast near Benevento and the town of Siponto, and attacked a Lombard fortress. The attack was repulsed, but it showed that the newcomers on the other side of the Adriatic were capable sailors. In fact, not long after some had to pay tribute at sea to the Croats, including the Venetian Republic, which had emerged in the meantime as the self-proclaimed mistress of the Adriatic. This tribute of Venice did not last long, but it clearly signalled that the maritime newcomers should not be underestimated, despite the fact that at this stage they only had ships capable of shorter voyages.

The oldest Kvarner depiction of a Croatian ship built for longer voyages was discovered on the island of Krk. It is a wall painting of a merchant sailing ship with

three masts, a shallow draft and pointed stern, which hints at a combination of an old Croatian shipbuilding tradition and Mediterranean experience. The ship is a nava, which has a round hull, similar to that of Atlantic sailing ships of the time. The fresco dates from the 12th or 13th century and was found on the remains of the church of St. George (Sveti Juraj) in Vrbnik. This type of ship was named a Krk sailing ship after the painting in Vrbnik.

The painting was a silent witness to events in the Kvarner area for seven or eight centuries, including the period when it was ruled by Venice. The republic's rule on the eastern Adriatic coast lasted, with interruptions, from the 11th to the 18th century. During this period, it was sometimes stronger, weaker or even non-existent, depending on who had managed to impose themselves in the area. The most significant interruption of Venetian rule was recorded in the time of Louis of Anjou and his successors from 1358 to 1409. Croatian sailors sailed both on Croatian ships and in the Venetian fleet.

The sculptures of the winged lions that symbolised Venetian rule sometimes angrily shook their manes like living creatures, frightening the local population with their roars from the stone portals above the entrances to Kvarner's towns. Their rulers knew that there is never enough fear. Sometimes, on the other hand, they could be like tame cats. What lay behind such changes in behaviour? One of the reasons was the attacks of Uskok ships with largely Croatian crews from the mainland. They dealt painful blows to the enemy in the 16th and 17th centuries. Because of this, Venetian forces repeatedly attacked Rijeka, Bakar, Osor, Rab, Mošćenice and other Kvarner towns, even burning down Rijeka and Lovran. The sieges of Rijeka in 1508 and 1509 were especially severe, when the city was burned to the ground, and Venice withdrew only because of the arrival of ships from Cres and help from the Habsburgs. Rijeka finally received protection from such attacks in 1515, thanks to the Emperor Maximilian.

It is true that the Venetians had some old scores with Rijeka that needed to be settled. One demand of 1388 insisted that Rijeka stop counterfeiting Venetian money. In the case of Kvarner, the culture of living by the sea and at sea sometimes took on certain less expected forms. The wise Seneca did not say anything about this, and maybe it is better that way. When money plays a key role in events, wisdom usually goes out the window.

The period that followed did not change much. On the contrary, many in the Kvarner area similarly concluded that all wisdom lay in money or, more precisely, in the material benefits with which seafaring and maritime trade were rewarded. Attractively decorated bourgeois houses in coastal towns, well-furnished parlours and eye-pleasing surrounding parks provided convincing arguments. There were many of these in those Kvarner places that functioned as harbours for sailing ships, such as Mali Lošinj, Bakar, Kostrena, Rijeka, and Cres. The surnames of the shipbuilding and sea captain families in these places are still pronounced with respect today. They grew into small local dynasties, thanks to which local perspectives expanded into global ones.

Mali Lošinj represented the very peak of such a trend. Despite the fact that mali means ‘small’ in Croatian, this town became a naval power on an almost European scale in the 19th century. This is no exaggeration, as the following data show: the Kvarner region was part of Austria-Hungary, and Mali Lošinj occupied second place in the state in terms of its number of long-distance sailing ships. Its fleet was smaller than that of Rijeka but larger than Trieste’s. In the period from 1824 to 1885, a total of 321 ships were built in Mali Lošinj. When it came to seafaring, a peak was recorded between 1855 and 1870, when 1,400 captains and sailors sailed on Lošinj’s sailing ships. The most famous Lošinj shipbuilders and shipowners included the Katarinich, Tarabochia, Martinolich and Cosulich families (later known as the founders of the shipyard in Monfalcone).

One of the most important moments in Lošinj's shipbuilding history occurred in 1885 when Nikola Martinolich built the steel sailing ship the Gange, and the following year the steel steamship the Flink. The shipyard in Mali Lošinj, which was started in 1850 by Marko Martinolich as a family business, has operated continuously up to the present day.

Cres also played its part. In the period from 1810 to 1890, about a hundred sailing ships were launched from its slipways. Data of this kind were recorded in Austrian maritime yearbooks, as well as in the registers of ships and their owners.

People living on the mainland did not want to lag behind either, believing that they too were in the fullest sense of the word maritime people. The fact that the sea did not surround them as it did the islanders, was not considered a significant factor. After all, it was only important that the sea was in front of them.

The town of Bakar was less of a shipbuilding and more of a seafaring place. Anyone who has seen Bakar Bay at least once will know why. The bay is deep and well-protected from open sea waves, so it is not surprising that Bakar became the port with the highest volume of traffic in the whole of Kvarner in the 17th century. Many of these positive trends continued into the following century. Bakar reached its maritime peak at the end of the 18th century, which could be why it was proclaimed a free port in 1778, and a year later a free royal city. Its port was a point of transportation for a variety of goods arriving from the interior of the mainland and vice versa. Grain, leather, wax, wood, honey and other goods were all brought to Bakar and shipped to destinations by sailing ship. These, of course, did not reach Bakar empty but brought oil, wine, spices, and fabrics.

Of all these goods, the inhabitants of Bakar were most interested in salt. Did you know that two types of salt used to arrive in Bakar? The white salt used in households for preparing food arrived on sailing ships from Mediterranean ports, mostly

Barletta, Malta and Augusta. Red salt came from the Adriatic salt pans on Pag and Rab, and at Piran, and was used for preserving meat and fish, as well as for tanning leather. Part of the salt ended up in Bakar for preserving tuna. Numerous shoals of tuna were caught in the bay with nets, after an observer from the top of a wooden tuna post, rising slantwise above the sea, spotted the fish and alerted local fishermen to put out to sea quickly, encircle them with nets and bring them ashore. This fishing practice in Kvarner survived for a long time, right up until the mid-20th century.

Neighbouring Kraljevica thought less of tuna and salt and more of shipbuilding, which the people of Kraljevica have long been proud of. Their key claim to fame is that today they have the longest-running Adriatic shipyard. It was founded three centuries ago, in 1729 upon a decision of the Emperor Charles VI. The Habsburg Empire needed warships and a naval port on the Adriatic, and when asked ‘Where?’ and ‘How?’, the emperor answered by placing his finger on Kraljevica on a map in his palace in Vienna. The pace of shipbuilding in Kraljevica changed through history, depending on circumstances, and even the emperor did not always have the last word. There were launches of frigates and similar warships, and the port’s most successful period was between 1833 and 1869, during the time of the Pritchard brothers and local shipbuilders such as Ignacije Arčanin.

Kostrena owes its maritime reputation primarily to the captains who commanded ships which were often owned by shipowners from Kostrena itself. One of these captains, Pavao Randić, sailed through the Suez Canal on the eve of its opening in 1869, which means he was the first person to sail through it. Among the workers who made this possible by building the Suez Canal, there were as many as three thousand Croats, including some from Praputnjak, a neighbouring village of Kostrena. In Praputnjak, there is the grave of Juraj Štiglić, a participant in the first Austro-Hungarian North Pole expedition in 1872. We can only speculate whether Randić knew how much time, sweat and hope his compatriots had invested in this giant feat of engineering. The Kostrena captain Franjo Šodić was recorded in the

ship's logs as the first commander of the Rijeka tanker the Etelka. The tanker was one of the first ships of its kind on an international scale. Šodić sailed into Rijeka's Petrolejska Luka port in 1892 with a cargo of oil from the Black Sea port of Batumi.

The crowning achievement of all these endeavours was that of Erazmo Bernard Tićac. He might not have been a captain, but he was the chief designer of the American ship the Savannah, the first nuclear-powered merchant ship to sail the world's seas in 1959. The Savannah has been retired, but on a plaque placed next to the entrance to the ship's salon, you can still read in gold letters: 'Ben Tićac, ship's designer.' He took the name Ben Erazmo on receiving American citizenship.

Surrounded by such places, Rijeka decided to flex its shipbuilding muscles. The example is a small one, but the message is great: in just ten years, from 1850 to 1861, a total of 301 sailing ships were launched from its slipways. If anyone thinks that this is just a number, they are wrong. These were ships with enviable navigation properties. One of them became the flagship of the Argentinian navy under the name the Restaurador Rosas. Captain Ivan Visin sailed around the globe on the Splendido sailing ship between 1852 and 1859, the sixth seafarer to do so. Legend has it that Visin saw the ship for the first time in the Rijeka shipyard of Andrija Zanon and was so delighted with what he saw that he exclaimed 'Splendid!', which then became the name of the ship. The work of the Rijeka sailcloth factory, the only one of its kind in Croatia, was also connected to the sea. The three most important Croatian rope factories also operated in the same city.

When the new era arrived in Kvarner in the 19th century, powerful and noisy, with tons of iron and the power of steam, Rijeka opened its doors wide, although it was not without neighbouring competition right from the start. Who could have guessed that a secret would be hidden in a woman's name and arrive from the shipyard in Kraljevica? We are talking about the ship the Maria Anna, the first vessel of the Austrian Navy powered by steam, and built by the Pritchard brothers. It was a

wooden ship, with paddle wheels on its sides, launched into the sea in 1835. To make things better, or worse for the people of Rijeka, the Maria Anna became the first steamer to sail into the port of Rijeka the following year.

The people of Rijeka accepted the appearance of the steamer as an incentive for their own technological breakthroughs. This is shown by the participation of their production facilities in the construction of the Austrian navy. This became very important at crucial moments and is best illustrated by the example of the Rijeka Technical Factory (Stabilimento tecnico fiumano), which built steam engines for the Austrian navy. The crews of the Austrian fleet experienced at first-hand the quality of steam engines from Rijeka at the Battle of Vis (Lissa) for supremacy over the Adriatic in 1866. After the impressive victory of the Austrians over the Italian fleet, Admiral Tegetthoff sent a telegram of thanks to the factory, explaining the crucial agility of the Austrian ships in the battle was due to the excellent qualities of the Rijeka steam engines installed in the ships he commanded. The admiral knew the old truth: naval victories are forged on land.

Croatian sailors under his command also took part in the Battle of Vis. In addition, they played a crucial role in other key events, including famous Austro-Hungarian naval expeditions, such as the expedition around the world on the frigate Novara (1858-1859), and the North Pole expedition from 1872 to 1874.

Once it had secured its place in history, the Rijeka Technical Factory continued with new accomplishments. For example, it was where the first Croatian steamship was built. The ship the Hrvatski was designed by the Rijeka engineer Otto Schlick and launched in 1872. The first submarines on the Croatian coast, which received the fleet designations Ub. 5 and Ub. 6 in 1910, were also built in the same production facilities.

Another technical advance in steam engines and ships in Rijeka happened in a completely unexpected and truly spectacular way. The idea for it began with Giovanni Luppis of Rijeka, who towards the end of his naval officer career began to think about a defensive weapon against enemy ships, which he called the ‘coast saviour’. Luppis started working on his idea around 1860 but without enough technical knowledge or resources to implement it. However, he managed to interest engineer Robert Whitehead, director of the Rijeka Technical Factory, in his idea. The first successful prototype developed by the two inventors was launched in 1866. In 1875, the factory was transformed into the world’s first torpedo factory, whose products were in demand from all the world’s naval powers. The torpedo was a huge technological success for Rijeka, thanks to which the city became a leader in innovative technologies at the international level. Can the torpedo be seen as a part of maritime heritage today, or is this being ironic or even cynical? Perhaps the answer lies in the fact that since this time the concepts of ship and torpedo have been as inextricably linked as the concepts of life and death.

Rijeka provided grim evidence for this, evidence that was born only a few hundred metres from the Torpedo Factory. The ship the Szent István, one of the largest European warships, was launched in 1914 from the Ganz-Danubius shipyard, which started operating in 1905, becoming one of the most important industrial production facilities in the city. The ship was completed and launched at a bad time, with a crew of 1,098 officers, NCOs and sailors. In 1918, it was struck by a torpedo in an enemy ambush near the islet of Premuda, which resulted in the pride of the Austro-Hungarian navy and Rijeka shipbuilding sinking to the seabed. A total of 90 sailors lost their lives. In a certain sense, this was the second half of the Battle of Vis, but the result this time was reversed. The shipyard continued to produce destroyers, submarines, torpedo boats, tankers and other ships, and today operates under the name 3. maj.

How did the owners of sailing ships react to the appearance of steam-powered vessels, not to mention iron ones? Did they conclude that the needle of the compass, which is crucial for life at sea, was beginning to turn in unwanted directions? They did not. A good number of them, after initial curiosity, carelessly waved their hands at the appearance of steamers. ‘You say the twilight of sailing ships is coming? Nonsense!’ And how can we blame them for their conclusion when their logic, which today we know to be the delusion of survival, had more than a rational basis? After all, who would be so crazy as to pay for fuel to run engines when the wind as a power source is completely free?

The following chapters of this story are more clear-cut. As is often the case in history, the mad had come to rule the world.

Nevertheless, the Kvarner tradition of building wooden ships was once again not impressed and proved to be more deeply rooted and tenacious than expected. Maybe sailing ships no longer ruled, but in the new age of iron this tradition retained much from the age of wood, remaining true to itself once more.

This self-awareness did not fall straight from the clouds – cirrus, stratus, cumulus or whatever clouds, it does not matter, as long as it does not signal the arrival of a storm at sea. Kvarner’s maritime tradition was firmer than these restless celestial pillows. Let us remember, tradition is just another word for the knowledge obtained by many generations. In better organised societies, this knowledge does not disperse like a cloud, no matter what kind of weather it announces.

The best way to transfer knowledge from one generation to the next is in schools, and in Kvarner they have something to say about this. The school environment emphasises knowing facts, because facts are rock solid, and every sailor knows that rocks should be taken seriously, for in the sea they can be of huge dimensions. So what do these rock facts, rooted in teachers’ thoroughness, tell us?

The first public maritime school on the eastern Adriatic coast was founded in 1849 in Bakar. For its own use, in 1894 the school obtained the ship the Margita, which thus became the first school merchant ship in the entire Mediterranean. Its successor was the ship the Vila Velebita, and today the Vila Velebita 2 is used for the same purpose. Shortly after the Bakar school, the Nautical School in Mali Lošinj was opened in 1855. The highest educational institution of this kind in the Kvarner area is the Faculty of Maritime Studies in Rijeka. Its roots go back to the Naval Academy of 1866, in which students from all over the Austro-Hungarian Monarchy were educated. An important moment in this process was the founding of the Rijeka Maritime High School in 1949. The Faculty was founded in 1978 and is today the most important higher education institution in this field in the Republic of Croatia.

Empowered by such knowledge, which took us back to our student days – which does not necessarily have to be bad, as youth has its advantages – let us walk across Kvarner in search of today's testimonies of its enduring and fated ties with the sea.

One of them is well known to young people from the abovementioned schools. It is the tide gauge station in Bakar. A tide gauge is a device for continuously measuring the change in sea level at a certain point, which is important both in practical life and in scientific research. The device was installed in Bakar in 1929 and is still operational. The tide gauge station in Bakar is not only the longest-serving in the Adriatic, it is one of the oldest in the Mediterranean.

In the town of Cres, your attention is attracted by floating dry dock no. 9, the oldest of its kind in the Adriatic. This venerable structure probably dates back to 1905. It is assumed that it was originally used for military purposes, such as repairing torpedo and similar ships. Today, it is a heritage facility that still serves its purpose in Cres shipyard. Due to its size, it acts like a municipal maritime monument.

Other examples of Kvarner's links with the sea do not address us from below at sea level but from above. Maybe we can say that they even look down on us. They rise above the surrounding shore, standing alone and avoiding mixing with their surroundings, as if they were something totally different. In a way, they are. They are lighthouses. Every now and then, they wink their light at passing ships, showing how much they care for them. The question is: is this love still reciprocal today? Ships are equipped with GPS systems and other miracles of modern technology, which makes them increasingly independent in choosing their sailing course, and thus more unfaithful. 'Ships are the same as people,' sang singer-songwriter Toma Bebić, probably unaware of just how right he was.

What could a whole series of mostly stone-built Kvarner lighthouses, whose construction was witnessed by our great-grandparents in the 19th century, possibly tell us about this? Let us leave the answer to the imagination. Such are the old lighthouses: Galiola near the island of Unije, the one on Susak, on Oštro promontory near Kraljevica, on Prestenica promontory and Zaglav on the island of Cres, Tranjevo on the island of Krk, Stražica on the island of Prvić, and also the lighthouse at Mlaka in Rijeka.

The inhabitants of the places where or next to which these lighthouses rise are emotionally attached to them. The Lanterna in Kraljevica, as the locals call it, was erected in 1872 and stopped working in the late 1960s, when its light was replaced by a floating sign on the sea near Oštro promontory. The people of Kraljevica were never reconciled to this, considering their Lanterna one of the town's landmarks. Their pleas to the authorities bore fruit, and the lighthouse, after several decades, started signalling again on St. Nicholas Day, 6 December 2006.

Lighthouse stories can be eventful, which is confirmed by that of Rijeka Lighthouse. Initially, it did not stand on its present spot at Mlaka but in the main port at the end of the breakwater. It was built there of cast iron and steel in 1884, at the time that

the port of Rijeka experienced its greatest building and traffic expansion. This part of the breakwater soon began to sink, so the lighthouse was dismantled and stored. It was re-erected in 1894 in its present position. It was moved once more in 1933. This was done by dismantling it, erecting it on a newly-built lighthouse building, and assembling and strengthening it with reinforced concrete ribs. One could say that this lighthouse traveller has a restless nature, just like the ships to which it has been sending signals for many years. The lighthouse is also a historical curiosity, as it had its own replica built hundreds of kilometres away from the sea. In 1937, the Monument to the Naval Heroes of World War One was erected in Budapest, an iron copy of the Rijeka lighthouse on a high stone pedestal. The monument was destroyed in World War Two.

In 2001, the Coastal Radio Station was moved to Mlaka Lighthouse. It is the only lighthouse in Croatia with such a station. It sends seafarers safety messages, advertisements and weather reports. Not far from this location, there are numerous Rijeka port warehouses, built at the turn of the 19th and 20th centuries, including one called the Metropolis because of its distinctive appearance. There are no warehouses without cranes, and a number of these can be seen gliding along the quayside of the port of Rijeka.

Mlaka Lighthouse is also interesting because of its unusual, silent hotel neighbour, which is rather unexpected in this kind of story. Of course, hotels and the sea are no strangers to each other, but this hotel is really something different from what we would initially think from our modern tourist perspective. The building is known as the Emigrants Hotel. The riddle of the name dates back to the early 20th century, when a special purpose hotel operated in the building, providing services to those who were about to emigrate to the United States. Back then, Rijeka was a port from which long lines of the poor left Austro-Hungary for the New World, believing that they would find a happier life there. In the period from 1903 to 1914, a total of 333,000 emigrants went to New York via Rijeka. Most were from the Hungarian

part of the Monarchy. Where did the city put up its travellers? In order to provide adequate temporary accommodation, and prevent uncontrolled crowding on the streets, disorderly behaviour (fights, theft, people trafficking, prostitution) and the spread of disease, from 1908 they were all directed to the newly-built Emigrants Hotel. The hotel had this role until the beginning of World War One.

The lives of economic migrants were difficult on land and even more so at sea. The Carpathia was one of the many Cunard ocean-going ships that operated the line for transporting emigrants on the Rijeka-New York route. It is the same ship that on its return from New York to Rijeka on 15 April 1912 picked up survivors from the Titanic. The Titanic struck an iceberg at 23:40. Upon receiving the SOS message, the Carpathia interrupted its journey to Rijeka and hurried to the place of the accident. On a night that took about 1,500 souls, one of the Carpathia's crew members, 18-year-old Josip Car from Crikvenica, helped pull survivors from the water. A life jacket from an unknown passenger remained in his hands. The Carpathia turned with the survivors towards New York, where it arrived on 18 April. The following day, it continued its interrupted voyage to Rijeka, where it received a hero's welcome.

Josip Car brought the Titanic life jacket home. In 1935, it was donated to Sušak Municipal Museum. Today, it is kept in the Maritime and History Museum of the Croatian Littoral as a world rarity: only four surviving life jackets are reliably known to be from the Titanic, and the Rijeka vest is the only one kept in Europe.

It is no coincidence that the life jacket is kept there. The Maritime and History Museum of the Croatian Littoral is an important place for professional documentation relating to Kvarner's past. Its Department of Maritime History houses a wide variety of items, including nautical instruments, parts of ships and boats, models of vessels, as well as documents, medallions, paintings and photographs of maritime life. The material is organised into collections for clarity,

and a look at the items arouses a desire to sit in a time machine and experience a way of life that is so distant and yet so near to us today. An encounter in the museum with a figurehead in the shape of a dragon's head from the bow of a 16th-century sailing ship is a scene almost worthy of a film. There is a collection of model sailboats, sailing ships and steamships, another one of navigation instruments and ship's equipment, a collection of logbooks, drawings and documents, one of model ships from the Kraljevica shipyard, and also a collection relating to the Croatia Line company.

Of course, the museums in other Kvarner places include local maritime history in their collections. A good example is the Town Museum of Bakar, located in the 300-year-old Marocchino Palace, established to show the maritime history of the town, especially the experiences of Bakar captains. The Lošinj Museum features the Kula museum and gallery in Veli Lošinj, with two permanent exhibitions dedicated to Veli Lošinj's seafaring tradition and a collection of model sailing ships.

The young Josip Car not only brought a Titanic life jacket back to Rijeka. With thoughts of the tragedy in which he had become a participant, he donated an unusual painting to the Chapel of Votive Gifts at Trsat. It is a picture of the Titanic composed of a collage of newspaper depictions of the ship and its tragedy. Car did what Rijeka's sailors have often done from the 19th century onwards. The chapel is a place for their donated votive paintings, often with depictions of ships in storms – moments of mortal danger for seafarers, when help can probably only come from heaven, and it is heaven we thank, and to heaven we pray. There is a similar collection of votive paintings, from the Chapel of the Annunciation in Mali Lošinj. For seafarers, there can never be enough heavenly protection, which is shown by the chapel of St. Nicholas on the Sorinj promontory on the island of Rab near Lopar, and the statue of the same saint in Kraljevica. In Bakar, there is the Church of Our Holy Lady of Port, in Kostrena a votive chapel, and in Kraj the Church of the Blessed Virgin Mary. On Cres, there is the Church of Our Lady of Salvation, popularly

known as San Salvador, the votive church of seafarers, and also the Church of St. Nicholas at the entrance to the port of Cres.

Unfortunately, heaven does not always hear what is whispered or asked or begged for in moments of trouble. Evidence of this lies in rather large amounts on the seabed of Kvarner. Shipwrecks are today's reminders of yesterday's dramas. They have lain at the bottom of the sea in solitude but are not always alone, as local diving centres organise diving excursions to them for tourists.

The story of the Titanic has a third chapter in Kvarner. It is in the State Archives in Rijeka, which keeps a list of Austro-Hungarian citizens who bought a passenger ticket for the Titanic from a Swiss emigration agency, as well as many other interesting documents related to Kvarner's maritime history.

A different, brighter testimony of the links between the sea and Kvarner can be found on its shores. These are the restored tunere, high wooden sloping ladders that in the past served as observation posts for tuna fishing. A person at the top of the ladder observed the sea's surface, looking for signs of tuna shoals in the shape of disturbances on the sea's surface. In bad weather, such as strong wind, the appearance of a shoal of tuna was announced by a bell. Such tuna observation posts were present throughout Kvarner from the Middle Ages onwards. Their locations include Preluk, Sršćica, Bakar, Bakarac, Grabrova, Bok-Šmrika, Jadranovo, Klenovica, Peškera and Vela Luka on the island of Krk, Supetarska Draga on the island of Rab, Merag, Martinšćica and Ustrine on the island of Cres.

Their importance can be seen in information regarding the tuna lookout post in Preluk Bay, where tuna fishing started as early as the 15th century and continued until the 1950s. In the 17th century, tuna fishing was in ecclesiastical, Jesuit hands. However, you should not imagine priests at the top of the ladders (there were probably three of them back then), as the sea was observed, and the fish caught for

them, by local fishermen. Although Sunday was considered the ‘Lord’s Day’, tuna fishing was so important to the Jesuits that they even allowed fishing on Sundays.

The appearance of tuna fishing ships, built in Kvarner shipyards in the 1950s and equipped with modern detection and fishing devices, brought an end to the former way of tuna fishing. The last wooden ladders ceased to be used in the 1960s. After that, the ravages of time took their toll, and the ladders one by one became history. Irrevocably? Only until Kvarner heritage enthusiasts started renovating at least some of them in the 2000s. Today, the restored tuna fishing ladders are a reward for the curious eye in Bakarac, Selce, Jadranovo, Uvala Scott Bay near Kraljevica, and in Vela Luka Bay near Baška.

They are also the pride of their communities, who know how many fishing elements are built into the mosaic of their identity. These include fishermen’s houses (such as those in Jadranovo and Podbeli), fishermen’s collections (the Buymer collection in Baška, and Fishermen’s House in Jadranovo), monuments to fishermen (in Crikvenica, Novi Vinodolski and Bakar), and family houses important in the history of fishing in the area. Such is the house of the innovative Skomerža family of Crikvenica. The most important family member was Ivan Skomerža. In 1910, he introduced the kerosene lantern into fishing, the first to do so in the Mediterranean, followed in 1908 by the first engine-powered fishing boats, in 1909 the purse seine net, and in 1912 he founded the first fishing company in Rijeka, with 22 boats.

Other heritage enthusiasts have set out to preserve surviving traditional vessels and revive traditional boatbuilding, especially involving wooden boats. Indeed, they have an enduring inspirational example of trusting in wood before their own eyes: the shipyard for wooden ships in Punat on the island of Krk, which has viewed the sea and wood as an ideal combination since its establishment. It was founded by Nikola Zorić in 1922. The Kraljić shipyard in Malinska, which has operated for even longer, since 1893, has recently returned to the art of wooden shipbuilding. The list

does not end there. Such shipyards are also located or were located in Krk, Cres, Mali Lošinj, Nerezine, Rab, Kostrena, Rijeka (Kantrida), etc.

Many traditional wooden boats have been preserved in the Kvarner area. These are mostly small boats, usually up to six metres long. A trained eye will recognise and admire the skilful construction of old boat types such as the pasara, guc, gajeta, batana, and leut, and sometimes larger vessels such as the bracera and trabakul. The art of their construction has not changed significantly for centuries. Even certain tools have remained identical to those used in history when these boats were first constructed.

Is the oldest of these boats the Opatija guc of 1895? Who sailed in it and how? Was it connected with the early days of tourism in the Opatija area, transporting the first guests? These are questions that only this boat can answer. However, it remains silent – at least in the company of people. Maybe it is more talkative in the company of other boats, but we shall never know.

Some of these boats can be seen in the interpretation centres dedicated to traditional seafaring, along with equipment, construction tools and the like. Such museums are located in Mošćenička Draga (the Interpretation Centre for Fishing and Maritime Heritage of the Mošćenička Draga ‘House of the Sea’ Eco-museum) and Krk (the Maritime Interpretation Centre of the Island of Krk), while another is to be opened in Malinska. In Lovran, there is the ‘House of the Lovran Guč’. The floating Maritime Interpretation Centre of the island of Lošinj is located in Mali Lošinj on a restored 19th-century Lošinj Loger sailing ship moored at the Riva lošinjskih kapetana (Lošinj Captains’ Waterfront). The people of Rab have joined this trend in their own way: they have reconstructed the Rab lađa, a rowing boat that disappeared in the mid-20th century.

A way of life on the sea and by the sea is shown by the people of Rab at the Rapska Fjera medieval summer festival, where visitors can experience all the essential aspects of life in the Mediterranean: boat building, mending nets, grilled fish, a glass of wine, singing and talking. The wind in the sails of the same Mediterranean type blows in other Kvarner places that organise regattas of traditional boats: Krk, Lovran, Nerezine, Cres, Crikvenica, Ika, Martinšćica, Punat, Selce, etc. Every September, Mali Lošinj hosts an event called ‘Lošinj Sails Around the World’, while Mošćenička Draga is home to a sea festival with a regatta of traditional vessels called ‘Mala Barka’. The largest such event is the Fiumare – the Kvarner Festival of the Sea and Maritime Tradition in Rijeka.

Everything has now been connected in a network, resulting in the establishment of the Coordination of Associations for the Preservation and Improvement of the Maritime, Fishing and Shipbuilding Heritage of Kvarner and Istria. Together we are stronger, which is a saying that is also true at sea.

The Mala Barka 1 and Mala Barka 2 projects, initiated through the cooperation of Croatia and Slovenia, are on the same page. They have a broader outlook and include a wide range of activities related to the sea, from the restoration of wooden vessels as authentic exhibits to the education of children and young people through the Academy of Traditional Maritime Knowledge and Skills, etc. The Arca Adriatica project today follows the same goal.

This is a lot of work, and so much work can be tiring, even for old, experienced sea dogs. It is no secret that you cannot build ships and boats, or sail on them, or maintain lighthouses, or instruct young people in the knowledge of their ancestors, or sing songs about the sea without food and drink.

The cuisine of the Kvarner sea is Mediterranean, based mostly on fish and vegetables. Fish is always tasty, regardless of whether it is oily (arriving on the table

from a purse seine net) or white (from a trawling net). Gilthead sea bream, sea bass and dentex, the aristocracy of fish – who would not bow to them when their aroma wafts from the kitchen, guided by the hand of a skilled chef? The same is true of squid, cuttlefish and other seafood which does not hide its culinary charms.

The question of how the work required to maintain and restore Kvarner's maritime heritage could be done without a diet rich in energy is a good one. And yet, the ancestors of Kvarner's people provide the best proof of how everything is possible here. Cereals have always been scarce in Kvarner because there is little arable land in the rocky landscape. Dishes such as maneštra, a thick vegetable soup, are a favourite, as are simple dishes like polenta, cabbage, beans, barley, pasta (with goulash or tomato sauce) and kalandraka (potato goulash). Food was eaten five times a day in the past, so it seems that our Kvarner ancestors were in direct agreement with modern recommendations. On holidays, richer dishes were served, such as a quality piece of meat, while on fasting days it was cod. More calorific food was eaten at times of hard work. Wine was part of the standard diet and a daily habit, in contrast with dishes such as Kvarner scampi, which were a delicacy to be earned.

When life becomes hard, is there anything better than sweet relief in the form of fritule and kroštule fritters, smokvenjak fig cake, bodulski presnac, or Rab Cake? Compared to desserts from the interior and their generous fillings, Kvarner desserts are made from more modest ingredients but have very aromatic flavours.

But what do you do if you find yourself on a ship and food is scarce, just as used to happen to sailors throughout history? In that case, reach for the Bakar baškot, that hard roll of pastry that was kept on board instead of bread. The baškot appeared in Kvarner in the 15th century as part of the common Mediterranean culinary maritime heritage. The name comes from the Latin bis coctus, which translates as 'baked twice', which makes it ideal food at sea due to its dryness and the fact it would last. The ring shape of the baškot allowed it to be tied to a rope and hung from the ship's

equipment. They say that it tastes best when dipped in red wine, which is advisable to check out in person.

What would the Liburnians, the founders of life by the sea and on the sea in Kvarner, say to all this? Maybe they would just look at us grimly, thinking that we had not understood anything, because we have completely missed a central, if not the most important component of the story of the sea and seafaring. The one that is constantly present, imperceptibly, and without which there would be nothing. We are talking about women.

Women at sea? There is no need for surprise. Women have always been present in Kvarner seafaring. When the fishermen returned to the shore with their catch, women helped to sort the fish, sold it in the markets, and also maintained the fishing nets by mending them. After all, who has traditionally, through the years, decades, and centuries, waited for husbands, fathers, brothers and sons, in fact all their men, to return home from long voyages at sea – praying to see them again, knowing about the different, sad and painful possible endings to their absence. How many women’s heavy thoughts are woven into the story of the Kvarner sea? There is no paper on which all of them could be written down.

Municipality of Tkon: Kunjkas have nourished Kunjans

The municipality of Tkon consists of two settlements - Tkon and Ugrinić, and the islets of Gnalić, Žižanj, Orlić, Veli Ošljak, Mali Ošljak, Vela Kotula, Mala Kotula, Runjava Kotula, Gangarol, Košara, Maslinjak or Košarica, Planac and Čavatul.

Tkon locals call themselves *Kunjani* and *Kunjke*, and *kunjka* is the name of a shellfish characteristic for this area that was particularly important in locals' diet through history.

The island of Pasman has been inhabited since prehistoric times due to its closeness to the mainland and favourable living conditions. It was a suitable place for Liburnians forts, monachs buildings, an asylum for refugees that were running from Turkish and Venetian attacks.

It is 2-5 km away from the mainland, separated by a wide and relatively shallow channel. The island was part of the mainland up until the Younger Stone Age.

Fresh water near the surface at the North-Eastern part of the island, many caves and grottos, fertile land and mild climate have offered conditions for living and agriculture. Additional potential is the many bigger and smaller islets around the island. Until the Middle Ages, islands of Pasman and Ugljan were connected. Today, those two islands are bridged.

Tkon and Ugrinic are oriented towards the mainland across the Pasman Channel. Roman architecture remains and undersea discoveries testify of antic navigations along the channel that has protected boats of strong winds, connected very populated cities Jadera and Enona (Zadar and Nin), and offered many harbours as shelters. That was the most significant passage from North to South Adriatic in times of coast navigations, when one could sail only along the coast and during the daylight.



Fortress remains are witnesses of inhabitation throughout history. The Čokovac Fort near Tkon is the only fort that has been inhabited since prehistory until today.

That is the only male Benedictine Monastery in Croatia today. Kunjani still remember days of taking part in reconstructing the Monastery during the 1950s, and it is still an important gathering point of the local community, especially during Easter days.

Benedictines and local priests have had a major impact on the local community. They taught the locals to read and write Glagolitic script which enabled them to read books from Venice and share knowledge among themselves, as well as to write down records of local contracts and agreements.

In Rogovska Abbey in Čokovac, one of the oldest Croatian written monuments in Glagolitic script was created– Saint Benedict Rules translated to Croatian language, written in the 14th century.



Saint Kuzma and Damjan Monastery on Čokovac.

Living in Tkon was frugal. People cultivated the land, grew grapes, olives and figs, kept sheep, fished and hunted for shellfish. One of the main chores was sand extraction, which was very exhausting physical work, but traditional in Tkon's families because of sand market.

Sea sand is an excellent construction material and there has always been great demand for it. Construction material was mainly rocks, and sea sand was used as a cohesive material.

The excavation technology was similar all around the area: the sand was grabbed by "a spoon" – "*badiljun*" from the bottom of a pit and using a winch, or sometimes by hand, lifted to the boat. The weight of one "*badiljun*" full of wet sand could reach 300 kg.



The *badiljun*.



Sabunjer, Family Ugrinić (Bukalovi)

The shell *kunjka* was hunted by boats *gajete* and special nets *kunjkare* and other tools that are still present in Tkon.



Wooden boats were constructed in the settlement, and special tools one can find nowadays as well. In the period between the two wars, the island of Pasma stationed good 200 *gajete* and some fifty other boats of various types, of which the smallest ones like *leut*, *kaić* and *gajeta* themselves were used by local families to cross over to the mainland to sell their farming products to the nearby places, but also for hunting sea shells “*kunjke*”, whose trading provided income to many families in those times. During the WWII, half of the vessels were destroyed and the remaining ones got other purposes, like mine sweeping, transportation of sand, fishing and tourist services.



On *kaić*, around the year 1945, photo collected by the Municipality of Tkon.

The port of Tkon, constructed in 1890 and later enlarged to its present size, is presently harbouring some fifty wooden boats, mainly between 6 and 8 metres long (although there are both bigger and smaller ones), of which twenty registered fishing boats for commercial purposes (the biggest boats are used for fishing of small blue fish). Represented are the types of *gajeta*, *leut*, *kaić*, *pasara* and *guc*. In the fleet of traditional boats of Tkon, only a few *gajeta* and some *leut* is still geared with sails. Traditional gear is essentially represented by Latin sail and the sail called ‘*treva*’, ‘*al terzo*’, typical of the Pasman Channel, a type in transition between the Latin sail and the sail ‘*al terzo*’, armed with two pennons like the classical ‘*al terzo*’ sail, but with a very short frontal part, like a truncate Latin sail. A small boat building entrepreneurship is active in Tkon for reparation of wooden boats and for building on commission. There is also a tradition of knitting fishing tackle tool – ‘*vrša*’ (kiddle) and many people are able to make and repair fishing nets.

The local association Frkata is engaged in promotion of sailing and traditional rowing by organising events aimed to valorise the maritime traditions, to upkeep the crafts and to transfer the experience to new generations. Since 2007, in collaboration with the local Tourist Board of Tkon, Frkata has been organising a regatta of Latin

sail called ‘A Stroll around the Channel’, also including other promotional activities and events. There is also the Ivan Longin family business that produces hand-made items of knotted and braided ropes, like the traditional fenders for boats.

On the mainland opposite Tkon, only 15 minutes away by ferry boat, worth mentioning is equally the little historic city of Biograd na Moru, with a small but interesting City Museum which holds not only collections of archaeological and ethnographic finds, but also displays an astonishing quantity of finds from a wreckage of a Venetian boat that sunk near the close-by islet of Gnalic (area of Tkon Municipality) at the end of the 16th century.

<https://www.tzo-tkon.hr>

<https://www.tzo-tkon.hr/vodi%C4%8D/manifestacije/regata-%C4%91ir-po-kanalu>



The little port of Tkon with its fleet of fishing boats (left) and a wonderful view on the Pasman Channel enjoyed from the Ćokovac Monastery (below).



This area is specific for the social position of women. They were legally and socially more independent than in Italy at that time, for example. They used to be equal members of brotherhoods (except for the ruling positions), sometimes including the priests' brotherhood. At the same time women in Italy need their father or husband's approval for that. They used to be fisherwomen as well. According to customary law from the “Novigrad book” daughters in this area had the right to inherit from their parents, meaning they were allowed to own property. This was not the case in Venice of the time. In addition, there was a Net and Packaging Factory that settled in Zadar in 1927 and later moved to Biograd. Many women from Tkon have worked there and thus earned themselves financial security.

That is why it is important to emphasise the role of Kunjkas, carriers of family life and great responsibility. Coincidentally, the main food of the island, the shell kunjka, typical for that area, carries the same name as the local women. Therefore, the sentence Kunjkas have nourished Kunjans is a good reflection of the specific traditions and life values that form the identity of Tkon.

Association and Ecomuseum “House of Batana”: the story of Rovinj shipyards

Rovinj has always been oriented towards the sea. The town-island was annexed to the mainland only in 1763. In order to live, communicate, defend and rejoice, the people of Rovinj had to master the sea.

Although shipbuilding as an industrial branch was mentioned only during the Venetian domination, with a constant upward development trajectory until the appearance of steamships in the 19th century, it can be assumed that the inhabitants of Rovinj built ships much before, since ancient times.

Probably these were smaller, simple vessels of the wooden monoxyl type, which could be built in the cramped space of the old town core. The continuity of the connection between man and the sea, enriched by industrial shipbuilding during Venice and later Yugoslavia, is witnessed today by the batana, a simple flat-bottomed boat suitable for coastal fishing, transport, communication and leisure.

Batanas were built in the basements of family houses. The dimensions of the basement also determined the dimensions of the boats. Only later, with the development of shipyards on land, larger batanas were built, as well as other ships.

Geomorphological and urban characteristics have conditioned the location of newly established shipyards, which, along with other “industrial” plants, contribute to the changed vision of the town.

Namely, there was no more space on the island for the growing number of inhabitants and their entrepreneurial spirit, so industrial plants, and at the same time the inhabitants, moved to the mainland, in the new parts of the town that are being created by filling the canal, today Marshal Tito Square.

“The old town was once surrounded by ramparts and before the inhabitants decided to go beyond the solid protection of the stone and expand into a new settlement, they built, out of necessity and out of inertia, as much as they could inside the ramparts. Thus was created this dense, indivisible tangle of houses in narrow streets full of vaults. The houses crossed into each other, widening and narrowing, entering adjacent foundations and overlapping adjacent roofs, adapting to the available space that grew smaller with age. Houses crossed the streets with vaults, leaning back, crawling into the smallest empty space. And when all the land was utilized, the houses grew on other houses without touching the ground, intertwining with high chimneys and wavy surfaces of roofs and the sky itself. The whole town turned into

a whole, and it was difficult to determine the boundaries between the houses. The whole town was one indivisible house” (Antun Šoljan, poet).

Until then, known for its developed seafaring, quarrying, fishing, trade, smuggling, olive growing and viticulture, Rovinj began to develop shipbuilding. Numerous shipyards were established on the outskirts of the town, intended for the construction of larger batanas and other boats. In the drawing of the public expert Iseppo Campitelli dated in 1749, which shows the coast to Cape St. Nicholas, two shipyards were created in previous years, which, with the development of Sottolatina Street, completely surrounded the houses. These two shipyards, one of which was owned by the Bori family, were probably the first buildings of an economic nature to be built on the other side of the canal.

There were numerous initiatives to open shipyards. In this regard, it should be emphasized that in 1749 the mayor answered the question of the said Magistrate about the number of existing shipyards in Rovinj that this industry, very important for the town, has six shipyards and five “tesa” (barracks), but did not mention their positions, nor the owners. In the 19th century, Rovinj also had a good number of small shipyards along the entire coast of Aldo Negri, from the Cape of St. Nicholas to the tobacco factory. The importance of seafaring, together with shipbuilding, for Rovinj, is evidenced by the recently mentioned church of St. Nicholas dated in 1364, dedicated precisely to the patron saint of sailors and fishermen, to whom it was customary to pay homage before going to sea.

Until the middle of the 19th century, Rovinj was the most important Istrian maritime town. In that period, the strength of Rovinj was manifested through 200 merchant ships (it accounted for 80% of the total Istrian fleet), 860 sailors, 930 fishermen and accounted for 70% of the total Istrian production of salted fish. Ships were built in the shipyards for their own numerous fleet that cruised the entire Adriatic and

beyond. These ships were the original batanas, batàì, batièle, gaete, but also tartane, bracere, trabakuli and pelizi.

The story of Pasha Giorgio is the best evidence of the fame of Rovinj sailors. Giorgio Privileggio, was born in 1841. In 1862, he became the captain of a long voyage, enriching the ranks of numerous naval commanders that Rovinj had given over the centuries. After commanding various merchant ships, including the yacht Udine of the Austrian Emperor Maximilian and serving in the shipping company of the Austrian Lloyd, in 1871 he entered the Egyptian Navy with the rank of corvette captain. He was then commander of the port of Port Said at the time of the construction and opening of the Suez Canal. For his services within the Egyptian Navy he was awarded the rank of Rear Admiral, but the years he spent in Egypt, then under Turkish rule and influence, earned him the nickname Pasha.

The only remaining Rovinj shipyard today is only reminiscent of the glorious shipbuilding days.

In the 1920s and 1930s, medium-sized boats were built in this shipyard, including many batanas used by Rovinj fishermen. After the Second World War, with the arrival of Yugoslavia, two shipyards were nationalized under the name Mirna, and mostly fishing boats were built and maintained, forming a strong Mirna fleet.

Today, the tradition is maintained by eco-museological activities of building a batana, and in the shipyard itself, which serves to repair and maintain the still numerous various boats.

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