'Know the Ropes'—Boat Representation on 17th and 18th-Century Portuguese Tin-Glaze Ware

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Abstract

Portuguese tin-glaze ware decorated in blue and/or purple on white has been made in Portugal from at least 1570 using traditional methods up until the late 18th century. During this time, these ceramics were decorated with many different motifs with boats or ships being among the less frequent representations. These are shown in many different ways, most of the time illustrated while sailing. Several types of vessels have been recorded, from the small fishing boat associated with the fisherman to large vessels believed to correspond to ships, *pataxos*, *naus* or even galleons along with other types of vessels known in the 17th and 18th centuries. The purpose of this paper is to demonstrate the importance of this iconographic source, depicting diverse types of boats and how those relate to the ships from different flags that pottery makers would observe daily entering the Portuguese ports, considering their economic, social and symbolic importance.

Keywords

Portuguese faience, ships, boats

Introduction

Portuguese faience as a plain tin-glaze ware started to be manufactured in the early 16th century though it was only around 1570/1580 that it was transformed into a highly decorated material with a varied repertoire of motifs painted over a white surface with new shapes inspired by European and Eastern, namely Chinese, objects. The decoration, although a novelty, combines Portuguese themes with different European medieval, Islamic and Renaissance values going back to classical Greek and Roman cultures. Together with these European and Near Eastern influences, the Discoveries brought a new oriental and exotic world that was to be a constant presence in these wares not only in the use of colour but above all in the decorations with the representation of different people, animals, plants, buildings and objects or phytomorphic and geometric patterns.

The iconography on 17th and 18th-century Portuguese faience can be grouped into different categories such as anthropomorphic and zoomorphic representations, phytomorphic and geometric motifs, letters, artefacts, buildings and constructions, landscapes and patterns. Boats are usually considered to belong to the class of constructions (Gomes and Casimiro 2016).

The decorations are multiple and it is possible to divide them into several categories. Ship representations are among those decorations although one has to bear in mind the presence on the pottery of human figures, buildings or even phytomorphic motifs, among many other things. Portuguese faience is a palimpsest of cultures where every representation has a specific meaning (Casimiro, Gomes and Gomes 2015; Gomes and Casimiro 2016).

Production was not consistent from the mid-16th century up to the late 18th century. These Portuguese ceramics underwent different stages of production and consumption. When they started to be produced, they seem to have supplied mostly the internal market and Portuguese colonies. They were manufactured in three production centres—Lisbon, Coimbra and Vila Nova (near Oporto), each one presenting their own style and characteristics. These ceramics are related to very wealthy archaeological contexts in the late 16th and early 17th centuries. In fact, one has to wait until the mid-1600s to see faience being used by less wealthy sections of the population in a democratisation of consumption. Despite becoming more widespread, faience was still quite frequent in aristocratic and bourgeois houses, enriched by international trade, but was also in daily use in religious houses, hospitals, military compounds and middle-class houses.

The changes in production and decoration around the late 16th century made it one of the most desirable European ceramic products and largely exported to other countries. In this sense a large majority of the ceramic objects found in archaeological excavations

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and kept in museums were in fact discovered in England, the Low Countries, Germany, Sweden, among many others (Bartels 2013, 2016; Casimiro 2011; Jaspers and Ostkamp 2016; Martens 2012). However, this was a commodity demanded by European populations across the globe making them common finds in European colonies from North America to Brazil and Argentina, Africa and even the Eastern Portuguese colonies of India and Macau, though in smaller quantities due to the massive presence of porcelain from China.

The reasons for this demand can actually be related to many different factors though the originality, novelty and exotic aspect of these ceramics contributed to the wide international distribution. Different volumes of these ceramics are found depending on the period though it is possible to state that between 1580 and 1660 this was in fact one of the most global ceramic productions (Casimiro, Gomes and Gomes 2015).

Ship and boat representations

More than two-dozen vessel representations are known in Portuguese faience, presenting a huge polymorphism, from very small fishing boats to large ships. This paper looks at 29 objects with vessel representations (16 plates, six cylindrical drug jars, five bottles, one pot and one pitcher). Many others may exist in private collections. Twenty-five of these objects are kept in museums or private collections in Portugal or abroad while four were found in archaeological excavations, one of them in Portugal (Figure 6A), two in the Low Countries (Figures 1D, 4C) and one in Brazil (Figure 3B).

It is not always easy to classity the type of boats especially due to their very stylised representations where sometimes only the ship's silhouette is recognisable. In this regard, the differences in the parts of the ships that actually permit defining what type of boat it is are not always easily identifiable.

All the ceramics presented in this paper were either produced in Lisbon or Coimbra, so one should assume that ceramic painters while crossing or entering the River Tagus or the river Mondego saw the majority of these ships. It is curious that the Coimbra plates only reveal small sailing vessels, possibly for fishing or river crossing, while the larger ships are represented in Lisbon productions. Every 16th–18th century representation of Lisbon, either in paintings, tiles or engravings reveals that this river and the Lisbon port were reached by hundreds of different ships, small and huge, from different nationalities.

Vessels, depending on their size and function, can be depicted while sailing, with the wind blowing their sails or with furled sails, possibly when they were anchored.

In spite of these difficulties, several types of ships were recognised, as stated below:

Very small fishing boats, without sails

With one man and moved by paddles, as can be seen in five painted decorations on the ceramics, namely on the drug jar with the Portuguese coat of arms dated 1641 (Figure 1A). The typology of these boats is difficult to define though some of them present similar characteristics and are usually defined in Portuguese as barcas or batéis. All of them are represented in perspective from the forepart where the bow is always drawn with two equidistant circles or eyes. The representation of eyes, as two circles or in a more naturalistic way in boats' bows has its beginning in Ancient Egypt (in the Horus hawk's eye) and from there reached Europe and Asia, the Pacific Ocean as well as the Canadian Coast (British Columbia). These seem to be apotropaic elements, used against the evil eye and bad luck, able to protect the famously superstitious maritime populations (Hornell 1923). The hull is always represented on the left side and in all cases one single occupant is depicted. In two examples the man is fishing and in the others propelling the boat with paddles. Almost all of these occupants are wearing wealthy noble garments. Boats such as these are frequently represented in 17th and 18th-century tiles or in book illustrations such as the boats represented in the *Livro* das Plantas da Casa de Cadaval (Arquivo Nacional da Torre do Tombo) (Lencastre and Távora 1993: 13, fig. 10).

Small fishing boats without sails

A small boat with two pairs of paddles and another with three people occupying the vessel, with three pairs of paddles, which seems to be fishing, considering the presence of a fishnet, can both be seen on a bottle (Pais 2013: 249, no. 34) (Figure 7B). In some examples the boats could be moved by only one paddle as seen for example in the drug jar kept at the Carmona and Costa Foundation (Pais and Monteiro 2003: 46-47, no. 2) (Figure 1B), or in another plate with polychromic decoration (Figure 2B). These should be one of the most frequent boats in Portugal at the time, used mainly in fishing activities, on rivers or near the coast. In one of the cases the boat occupant, also dressed as a nobleman, holds a bird on his right hand, possibly a tamed cormorant (Phalacrocorax carbo hanedae, Phalacrocorax cappilatus or Phalacrocorax carbo sinensis), used as a fishing technique in the Far East, China, Japan and India, mentioned in several texts since the 7th century (Merino 1991: 291-94). Cormorant fishing is supposed to have been introduced in Europe by the Dutch as a noble sport in the 17th century, brought from China (Beike, 2014). However, recent research indicates that a similar species already existed in Germany and Venice in the 16th century. In fact, the first description of cormorant fishing ever to reach Europe was the account of Galeote Pereira and his China travels in the mid-16th century so the practice should have been known in Portugal (Beike 2012: 13) (Figure 1D). Such boats are also frequently found in tiles, paintings and illustrations. The aforementioned *Livro das Plantas da Casa de Cadaval* (A.N.T.T.), shows a boat with three occupants and fishing nets (Lancastre and Távora 1993: 13, fig. 11).

Very small boats with one main master and a sail

The sail, when opened can be triangular or square; something we believe can be related to a traditional type of navigation. Sometimes, one single occupant was depicted. Some of these vessels are represented while sailing (Figures 3A, 3C, 4B, 4C), with the wind blowing the sails' canvas. There are only two examples where the sails are twisted to the mizzenmast. In one of these boats a man is actually holding cables or ropes that are tied to the sails (Figure 4B) though on a second one the state of fragmentation hinders understanding the activity of this individual on board (Figure 4C). On the top of the main master there are pennants, with two or three points, although in these cases it is not possible to actually recognise any nationality. These could in fact also be used as fishing boats and small coasters, though it is possible that these were also used for connecting the two sides of a river such as the Tagus or the Mondego. Since the Middle Ages, these crossing vessels have been called batéis (Bellec 1993: 34-35, 82, figs 39, 41, 86; Oliveira 1993: 97, 114, figs 98, 112).

The origin of the triangular sail has been the subject of much discussion. According to L. Casson it may have originated in Ancient Egypt (1994: 97-98, 117-18, 152-53, fig. 90) spreading through the Mediterranean around the 2nd century in small boats. This idea is based on a small tombstone found in at Piraeus port, kept at the Athens National Archaeology Museum, dating from that period. However, V. Christides (1988: 88) mentions the hypothesis that triangular sails were a Chinese invention and were transmitted to the Mediterranean through the Muslim world. Several authors who believe that these sails were widely disseminated by large Byzantine boats earlier than the fifth century (Late Antiquity) contested these assumptions. Such vessels can be seen on a mosaic found in Kelenderis, in Southern Turkey (c. 500) and on a graffito in Corinth, dating from the 5th or 6th century and in another representation at the Kellia monastery (Alexandria, Egypt) (Pomey 2006: figs 1-3; Whitewright 2009: 98-99). In the High Middle Ages these boats appear in Byzantine illuminated manuscripts from the late ninth century, namely in a Greek manuscript illustrating St Gregory of Nazianzus's homilies from c. 880 AD (National Library of France

510: ff. 3, 367), or in a graffito scratched on a ninth-century wine amphora found in Theodosius Port, in Yenikapi (Turkey) (Günsenin and Rieth 2012). Some still believe that it had its origin in the Indian Ocean and it reached the Mediterranean from that part of the world by Mozambique reaching Morocco and the Iberian Peninsula through the Muslim expansion (Hourani 1995: 100–04). Nevertheless, some authors such as Campbell (1995: 4, 10, 18) believe in a simultaneous invention in the western Indian Ocean, Pacific Ocean (South-east Asia) and the Mediterranean where the Copts passed it to the Muslims.

Ships of medium-sized dimensions, with two large sails

These vessels are represented in plates produced in Lisbon and Coimbra with the ledge decorated with aranhões (a type of decoration resembling spiders), peaches and chrysanthemums. The five known examples, four from private collections (Figures 5A, 5B, 5C, 6B) and one from the archaeological site of São João de Tarouca (Sebastian 2015) (Figure 6A), all represent boats with similar hulls and with two square or two triangular sails or one triangular and the other square. It is possible that these may correspond to the traditional boats that would have been used to transport people and cargo up and down the rivers or along the seashore.

One must be aware that, for example, although Coimbra was a large city in the early modern period with several international connections, the River Mondego constitutes its main access. So large ships, destined to cross the oceans could not reach its port, and ships coming from Northern Europe or the New World would stop in Figueira da Foz, a seaport, and loaded or unloaded there (Rocha 1954). In this sense smaller ships, possibly such as the ones represented here, were sailing towards Coimbra. The Tagus estuary was also crossed by dozens of medium-sized boats, which could sail up the river all the way to Toledo accessing the Iberian hinterland. This navigation was possible in some areas due to the several changes in the riverbed from the 16th century onwards (López Gómez 1998). These ships with triangular sails are quite similar to the River Tagus frigates or muletas, or the modern river Sado galleons (Cabeçadas 2008: 91, 97).

Larger ships with two masts and two big sails

They are in fact more rarely found on the ceramics and only two examples are known with a mainmast and a foremast and their respective yards, possibly depicting a Portuguese *barinel* or *barca*, a vessel used in long-distance travelling (Oliveira 1993: 110–14). In an 18th-century Coimbra plate (Figure 8A), a man with a scourge on his right hand, is standing on top of the bowsprit, while two others take care of the sails and four other

figures are depicted inside the deck. It is the only ship representation where the rudder was in fact painted. The sea was represented with sea-birds and seaserpents and it is possible that the vessel corresponds to a slave boat. This plate was produced before 1761 when new slaves are forbidden to enter Portugal where in 1773 slavery by birth was abolished. However, slavery in African overseas Portuguese territories was only abolished in 1869.

Large ships named caravelas

A Lisbon-made plate from first half of the 17th century (Figure 8B) shows a ship close to a city where large towers and walls represent the city walls (Matos and Monteiro 1994: 63, fig. 9). Two birds fly on each side of the ship, possibly representing the Lisbon city emblem, which is a caravel, with two crows flying overhead. The word caravela can derive from the Arab of Hebrew qārib / qawārib or from carabus, the name given to some boats in Egypt, Syria, and Mesopotamia or from the Greek karabós. It was used in Portugal from the 12th century to name fishing boats using a Latin sail and, from the 15th century onwards, to designate larger vessels with two Latin sails (Barata 1987: 166–67; Barker 2001: 214,–15; Gomes 2016: 40).

Very large ships named naus or galleons

They are represented with large hulls and high forecastles where one can see the main mast, the fore mast and even the mizzenmast, as well as the bowsprit (Figures 9A, 9B, 9C, 9D). Each of these ships has six sails: the main sail, the main topsail, the fore sail, the fore topsail, the flying jib and the spanker sail. The hull is bigger than the previous representations (caravelas) and allows distinction of the poop, the quarterdeck and the main deck. It is not easy to actually define what type of ship this was though if we look at some 16th and 17th-century books that were actually manuals for the constructions of ships, such as the Livro de Traças de Carpintaria, these representations are quite similar to naus or patachos that would cross the oceans. One of the pots where these ships appear has the date 1651 beneath the boat representation and it is the same where one can in fact distinguish the Portuguese nationality of the flag on top of the mainmast (Santos 1960: 90). This large boat, in this case what seems to be a galleon, is flanked by two crows, and despite not resembling a caravel, may be related to the Lisbon City coat of arms.

In one of the plates only a part of a ship is represented (Figure 9E) inside a coat of arms. Although it is not possible to determine what family it was associated with, only the top of the main master is depicted with the crow's nest and parts of the shrouds.

Discussion

Ship representations either in paintings, tiles or ceramics appear frequently in early modern Portuguese productions. The sea, as one of the main elements that connected the widespread Portuguese empire, was always an inspiration for artists. This was particularly the case for faience craftsmen since eastern porcelain models arriving daily by the waterfront in fact inspired a large portion of their pottery and a substantial portion of that production was exported.

Ship representations can inform us about the type of vessels that were crossing the waters using Portuguese flags, some of them connecting the Far East to Europe and Europe to the New World. These were described above and in fact represent several categories from small fishing boats that could not carry more than one single occupant, to large ships transporting hundreds of people and large cargos, which would connect continents. However, the attribution of a specific name to early modern vessels is quite difficult. Written evidence contains various designations for diverse types of vessels and sometimes the same name is given to different types of vessels.

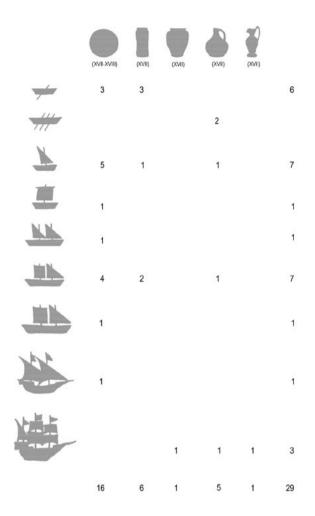
It is possible that potters used models, namely engravings, when decorating faience. This can, in fact, be observed in the representations of small boats since almost all of them are depicted the same way. Were these representations also faithful to the ships that were built or arrived in Portugal from foreign countries? We believe so, since these are quite similar to the type of ships observed in construction manuals or paintings and mainly in engravings.

Nevertheless, these representations cannot be assumed to be straightforward. They are included on objects which had specific meanings in Portuguese history. Faience is, in fact, one of the most widespread productions in Portugal at this time and recognisable around the globe (Gomes and Casimiro 2013). This pottery and its decoration were highly symbolic and cannot be separated from the social, cultural and economic environment where they were produced.

Notice for example the cylindrical drug jar that has the Royal Portuguese coat of arms on one of the sides, dated 1641, just a few months after Portuguese Independence from Spain, and a fisherman inside a boat on the other side. This is not a regular fisherman and the fact that he is dressed as a nobleman should not be interpreted as a recreational activity but rather a possible metaphor addressing the new king João IV. As a fisherman catches fishes, the king was catching people for his cause.

Some of these vessels (Figures 4B; 8B; 9A) have two birds associated with the scene flying over the boat. The

Table 1. Main types of vessels depicted in Portuguese faience objects from the 17th and 18th centuries.



presence of birds around boats is not difficult to account for since some boats could in fact carry fresh fish, and seagulls would definitely be a frequent presence trying to get their next meal. However, one should consider different interpretations. It is possible that these birds, especially when flying over larger ships, may in fact represent albatrosses, the bird believed to carry the soul of dead sailors, but also a sign of good fortune as one can read in the late 18th-century poem by Samuel Taylor Colerige, The Rime of the Ancient Mariner (Eyres 2011). These existed in Portugal in the 17th century and had that connotation while at sea. On the other hand, one should not forget that birds, as aforementioned can, in fact, be associated with local symbols. The large pot dated 1651 where one can see a large ship with a Portuguese flag may, in fact, correspond to the arms of the city of Lisbon where a caravel is always represented with two crows. Crows have a particular meaning in the history of Lisbon since the 12th century when it is said that they protected the body of the martyr Saint Vincent the patron saint of Portugal's capital (Tavares 2001: 146). It is likely that these birds were represented in artistic productions made in the city.

Although fish are the most frequent animals associated with ships, one should not ignore the plate where several sea animals are depicted (Figure 8A). A man is standing on the bowsprit with a scourge and, as mentioned above, can be interpreted as a reference to the abolition of slavery in Portugal (1761).

Some Portuguese faience objects tell different stories. A small boat with a single occupant is represented on the ledge of a large plate (Figure 2B). At the central bottom there is the main scene where a group of Portuguese soldiers faces a group of indigenous people. This may correspond to the battle of Ambuilla where the Portuguese troops opposed D. António I (Nuita-a-Nkanga), king of Congo, supported by the Spanish and some renegades in 1665 (Cruz and Lucena 1998: 270–71; Dias 1942; Thornton 1998).

Ships are commonly depicted on other types of artefact. One of the most similar to faience was tiles (Almeida, Gomes and Castro 2017). Some of them are well known such as that of the view of Lisbon of around 1700 that were made for the palace of the Tentugal counts but are nowadays at the Museu Nacional do Azulejo. It depicts the waterfront of this city where dozens of ships of different sizes are anchored. In front of the area of Santos, where curiously the pottery kilns were located, there are several ships and boats on the Tagus River. These are actually quite similar to the ones depicted on the objects covered in this paper. One should not forget that faience painters were sometimes also tile painters since both were made in the same workshops. We know of other tiles with vessel representations especially in late 17th and 18th centuries when figurative tiles were the main product of some of the Lisbon workshops. The interesting aspect of tile representation is that they permit more detailed images than plates as there is more space to draw on. Thus, the anatomy of the vessels is easier to recognise. Single figure tiles from late 17th century and 18th-century productions have ships, which are quite similar to those depicted on faience objects (Figure 10). In the mid-18th century, large tile panels were manufactured in Portugal depicting a varied naval iconography. These represented boats and associated activities such as fishing, moored at port cities and building shipyards, naval battles and wrecks. Some of these scenes are sometimes associated with fantastic or mythological beings. These tile representations are closer in style and craft to oil paintings and are distinct from the naïf faience paintings (Câmara 2005: 175-77).

Conclusion

The 29 vessel representations presented in this paper were manufactured in the 17th and 18th centuries and are depicted on large plates (16), cylindrical drug jars (six), bottles (five), one pot and one pitcher. In these last two forms, as well as on one of the bottles,

the preference goes to representations of large ships, naus or galleons (cf. Table I). Small boats are the most commonly represented with one occupant moving the boat with paddles (six examples) or small boats with one triangular sail (seven examples) and the mediumsized boats with two sails (seven examples). Larger ships such as patachos or caravelas are only found on only one object. This last type of ship was rarely in use in the 17th century, though probably quite emblematic due to its role in the Discoveries. Three possible naus or galleons were also recorded.

This type of pottery can in fact be considered important evidence for the study of ships and sailing in Portugal's early modern age. However, one should not forget that the decorations on this pottery are always telling a story and those ships should not be disassociated from the environment where they are located. Portuguese faience is in itself the representation of something more than pots. It is the symbol of a country where coats of arms of noble Portuguese families indicate that this was a vehicle of taking the country to wealthy consumers. In this sense, these ship representations were probably kept at the homes of nobles or rich merchants themselves involved in international trading systems where ships were the transportation vehicle.

Ship representation, as a symbol of the empire and of a seafaring nation, can be considered part of political publicity. The Lisbon coat of arms has completely fulfilled that task since the 13th century.

It is interesting to note that despite frequent Eastern decorative influences, so far no Chinese vessels, such as junks, have been recognised in Portuguese faience, not even in the boat where the occupant is holding a cormorant, an activity most likely imported from that country (Figure 1D) or even when the boat is in the same scene as a Chinese man (Figures 2B, 3C, 4A, 4C).

Boat images were so popular in ceramic decorations that these continue to be used until the 20th century, namely in popular productions. A. R. Radcliffe-Brown (1952:129) mentions that in some ethnographic societies when an artefact has a huge economic importance it starts to distinguish itself from others and gains an ontological importance integrating symbolic systems related to social and religious activities. In this sense, the ships, able to move through agitated waters from rivers and oceans generating wealth and riches, seem to integrate such categories. However, one should not

forget that the sea and the water, whose depth and extent are unknown, create an opposition between the organised and social human world and chthonic nature or chaos.

All sea populations are aware of this and know that the use of the sea as a circulation route and the extraction of its riches do not come without sacrifice. This is why those populations are so superstitious and ships are the vehicles of the uneven match, fundamental in the quest for survival. Work at sea is always a cooperative activity, which makes the creation of bounds and symbols even more necessary, where the boat images are preponderant. In Mediterranean navigation in Antiquity, the symbolism relating to the images of vessels connects to the concepts of the passage between two worlds, namely heaven and earth or with the voyage of a civilisation agent considering the wealth and knowledge that travelling could provide. In some Mediterranean mythologies the Sun was transported in a small boat on its daily voyage from day to night. Ulysses sailed the 'Ocean currents, beyond the gates of Sun and the land of dreams', searching the souls of his war companions in the Western seas after the Trojan Wars (Odyssey XXIV, 10-20) (Lourenço 2003: 379).

Also, the Egyptian God Ra had a solar boat, both symbols of continuity and cultural reproduction. In some cultures related to the sea the dead are sent back to the underworld or to the great maternal uterus that is the Ocean on board a ship (Chevalier and Gheerbrant 1997: 80–81, 115–16, 468–69; Neumann 1963: 257–58). In many churches in Europe there are reliefs on walls and capitals or even wall paintings that depict boats, some representing Noah's ark, a safe place protected by God (Arduini and Grassi 2002, 53–63).

In the 15th–17th centuries, silver ships are incense containers used in catholic churches, a depiction of the boat of the Just and the one of the Sinners where the main mast is the cross. Also Jesus was the divine pilot of the church's boat and he and St. Peter were in fact fishermen.

In the end, ships—those large wooden buildings, which sail the surface of the oceans—touch the interface between two worlds (the deep sea and the sky) and only they permit seamen to survive, albeit facing great dangers. Therefore, ships are apotropaic elements, which create wealth but also protect people and commodities.



Figure 1. Small boats with one figure on board. A. after Pais, Fernandes and Correia, 2015, 64; B. after Pais and Monteiro, 2003, 47; C. after Calado, 1997,30; D. after Baart, 2007, 124 (Scale 1:5).



Figure 2. Small boats with one figure on board. A. after Stapf, 1997, 21; B. after Matos and Monteiro, 1994, 117 (Scale 1:5).



Figure 3. Small boats with one sail. A. after Pais, Fernandes and Correia, 2015, p. 89; B. after Etchevarne, 2007, 121; C. after Moncada, 2008, 50 (Scale 1:5).



Figure 4. Small boats with one sail and one character. A. after Pais, 2013a, pp. 276-279; B. after Matos and Monteiro, 1994, 111; C. after Ostkamp, 2010, 61 (Scale 1:5).



Figure 5. Small boats with two sails. A. after Moncada, 2008, 77; B. after Moncada 2008, 77; C. after Matos and Monteiro, 1994,143 (Scale 1:5).



Figure 6. Boats with two sails, one triangular and one rectangular. A. after Sebastian, 2015, 174; B. after Moncada, 2003, 152 (Scale 1:5).



Figure 7. Boats with two sails. A. after Pais, Fernandes and Correia, 2015, 61; B. after Pais, 2013, pp. 249-253 (Scale 1:5).



Figure 8. Small and large ships. Caravelas and naus. A. after Moncada, 2008, p. 140, fig. 164; B. after Matos and Monteiro, 1994, p. 63, fig. 9 (Scale 1:5).



Figure 9. Ships in heraldry. A. after Santos, 1960, p. 90; B. after Bauche, 1996, 29; C. after Bauche, 1996, 69; D. after Trindade, 2016, 477; E. Pais, Fernandes and Correia, 2015, 83 (Scale 1:5).







Fig.10. Single figure tiles 17th–18th centuries, after Arruda, 1998 (Scale 1:5).































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