

The nao of Mataró : a medieval ship model

Introduction

The Maritime Museum Rotterdam, the oldest museum of its kind in the Netherlands, opened the doors of its new accommodation in the heart of the city in 1986. The history of this institution, which was known as the 'Prince Hendrik' Maritime Museum until just a few years ago, goes back to 1845. In that year, a number of dignitaries of Rotterdam, acting together with Prince Hendrik, the brother of King Willem III, founded the Royal Dutch Yacht Club. Starting in 1852, ship models and other items of interest were displayed in a special gallery in the clubhouse. In 1874, the 'model room' officially became the Maritime Museum. During its long history dating back more than 125 years, the museum has built up a varied collection centred on Dutch shipping and shipbuilding.

Among the more than 1000 ship models in the collection, there is one that is truly remarkable. It is one of the oldest known ship models in the world and is of a late medieval Mediterranean trading ship. In reference to its probable origin, it is called the Mataró model.

The model was ostensibly made in the fifteenth century, but its exact age remained unknown for a long time. Wood from the keel beam was, however, recently carbon dated and it has now been established that the model was made approximately between 1456 and 1482.¹

The history of the model

In 1929, the American Henry B. Culver saw to his astonishment a ship model in the window of the Reinhardt Galleries in New York. It reminded him of one of the ships with which Columbus sailed to America. He did not for a moment doubt the authenticity of the model and, in the same year, wrote an enthusiastic article about it in the authoritative maritime history journal, the *Mariner's Mirror*. With respect to the origin of it, he reported that "it came from a little chapel in a small seaside town called Mataró on the coast of Catalonia in Spain..."² A later writer, Heinrich Winter was more precise and specified that it came from the Chapel of San Simón, situated near Mataró.³ Both Culver and Winter based their articles on information obtained from antique dealers. To date, the reliability of their sources has, however, never been ascertained. Furthermore already in 1931 it was not known if there had ever been an old ship model in the chapel near the town.⁴

It is not clear where the model was in the years before it disappeared from Spain. There are two theories as to what happened. According to one, it was put on sale by an antique dealer from Barcelona named Calavar.⁵ According to the other, it came into the possession of a wealthy Spanish family.⁶

In all likelihood, the London antique dealer, Lionel Harris, purchased the model in Spain in around 1920. Harris was the owner of a specialist antique business called "the Spanish Art Gallery". Apparently, he could not find a buyer for it in London and in 1927 he gave it in consignment to Julius Böhler, a Munich antique dealer.⁷ The company still exists today and

particularly during the inter-war period it was an important firm that had a large number of contacts in Europe and the United States. In around 1928/1929, Böhler had the Mataró model taken to New York where it was put on display in the Reinhardt Galleries.

The exotic ship model attracted a great deal of attention in the United States, but no-one was interested enough to want to buy it. Böhler decided to bring it back to Europe. In the autumn of 1929, it subsequently returned to Munich where a new chapter in its history began. Frits Lugt, a leading Dutch art collector and dealer, who became known internationally after the Second World War as the founder of the Fondation Custodia in Paris in which he housed his private collection, saw the Mataró model at Böhler's in Munich at the end of 1929.⁸ He knew he could find a buyer. Before Christmas of that year, he contacted the Netherlands Maritime Museum in Amsterdam, which desperately wanted to acquire it, but it quickly became clear that it could not afford the asking price.⁹ In Rotterdam, Lugt was more successful. D.G. van Beuningen, one of the members of the Board of Trustees of the Maritime Museum, was willing to buy the model privately and then loan it to the museum indefinitely. Besides being one of the most important entrepreneurs in Rotterdam of the time, Van Beuningen was also one of the greatest art collectors in the Netherlands. Since 1958, his name has been linked with the Museum Boijmans-Van Beuningen where a large part of his collection is housed.

He paid 18,000 guilders for the Mataró model. He could easily afford this sum, which at that time was the same as the price of a small villa, a Monet or a Picasso. In 1930, the year in which he purchased the model, he spent slightly less than half a million guilders on art.¹⁰ After his death in 1955, the loan was extended for a few decades until the museum, with the cooperation of the G. P. Verhagen Foundation, was able to acquire possession of the model.

A votive model ?

In Mediterranean countries, maritime ex-votos are fairly common. Sailors or other people who travelled by sea, vowed when they were in danger, they would dedicate a gift to the Virgin Mary or another saint if their lives would be spared. Maritime ex-votos were often made in the form of paintings, but ship models were not unusual either. This originally Roman Catholic tradition of donating ship models to churches was adopted by the congregations of protestant churches in Scandinavia, England, Germany and the Netherlands during the 16th century.

In Mediterranean countries, ship models were given to churches as far back as the fifteenth century. A beautiful example of this type of ex-voto can be seen on the altarpiece in the Church of Sant Esteve in Granollers. The altarpiece depicts the shrine of Saint Stephen. Above the shrine, several objects have been placed including a leg, several plates and a ship model.¹¹ The ship model, similarly to the other objects, without doubt an ex-voto.

The Mataró model was at one time probably placed in church as well. As described above, it is presumed to have come from the Chapel of San Simón in Mataró.¹² But was it really an ex-voto? To date, no sources have been found that unequivocally verify that the model was made and offered as an ex-voto. The church records of Mataró were lost in the Spanish Civil War, but it cannot simply be assumed that all ship models in churches were given as ex-votos. Models can be placed in churches for other reasons, for example, as decoration, to commemorate an

event or in memory of a person. An example of this can perhaps be seen in a painting by Vittore Carpaccio (1472-1526) of the interior of a church in Venice. In the background of the painting, several ship models can be seen hung from the ceiling and one has also been placed on a beam. The ship on the beam even resembles the Mataró model.¹³ Nobody can tell if these models are ex-votos or not.

Coca, nao or carvel

The Mataró model is 123 cm long and ca. 56 cm wide. In the 1980's, it was used as a basis for naval architecture research. Assuming that the Mataró model is a fairly accurate representation of a late medieval Catalan trading ship, an attempt was made to determine what the cargo capacity of the actual ship would have been. Depending on the chosen scale, the length of a real ship of the type represented by the model must have been from 16 to 22 metres and its cargo capacity from 50 to 150 tonnes. In spite of the model's 'coconut' shape, it has been calculated that the actual ship must have been relatively manoeuvrable even when carrying a large cargo.¹⁴ It represents a genuine Mediterranean merchantman for transporting, for example, grain, wine, oil or salt.¹⁵

In all likelihood, the Mataró model is of a *cocche* (or *coca*), the Mediterranean adaptation of the Northwest European cog. According to the Florentine chronicler, Giovanni Villani (ca. 1277-1348), cogs first appeared in the Mediterranean in 1304: "Certain people from Bayonne in Gascony with their ships which are called *cocche*, passed through the straits of Seville (Gibraltar) and came into our sea as pirates and did a great deal of damage. Immediately afterwards the Genoese, the Venetians and the Catalans began to sail with *cocche* and left off sailing with great navi to be able to sail more safely, and less expensively, and this was a great change in our shipping..."¹⁶

Cogs were originally clinker-built, had a fairly flat bottom, a stern rudder and a single mast with a square sail. The traditional Mediterranean version carried a lateen sail, had a side rudder and was carvel-built. In the course of the fourteenth century, shipbuilders in the Mediterranean region started to integrate their own methods in the design of the Northwest European cog. This led to the development of the Mediterranean '*coca*'. In appearance, the *coca* was similar to a cog, but it was carvel-built and had two or three masts. The Mataró model is probably an example of one of the last *cocas* to be built. It is noticeable that sources in Barcelona do not contain any references to the '*cocche*' type of ship after 1437. A possible explanation for this is that the *coca* became larger and was subsequently referred to as a *nao*. The Spanish word *nao* is derived from the Latin *navis* meaning ship. The *nao* flourished in the Mediterranean in the fifteenth century.¹⁷ In some works of reference, the Mataró model is referred to as a carrack.¹⁸ It is, however, questionable if it is this type of boat. Carracks were generally larger than the type of ship the Mataró model represents.

Description of the model

The Mataró model was made by an expert, probably a shipbuilder. A large number of factors indicate that it is a scale model of an actual ship and a great deal of attention has been paid to

the details. One example of this is the real oakum that has been placed between the planks. The model is carvel-built and it has 11 strakes on either side. The shell was originally covered with a resin coating, but this has largely disappeared with the passage of time. On the starboard side of the hull, there are four and on the port side there are three (the fourth has been lost) wooden fenders, which were intended to protect the ship when mooring it against a quayside. The fore and aft of the ship have a raised section - a so-called castle. The ship has one large mast crowned with a crow's nest. Traces of a second mast - the mizzen - can be seen in the aft deck.

¹⁹ Part of the crow's nest and the blocks are painted the same colour red. The crow's nest contains openings that can be closed with wooden sliding hatches. Hatches of the same type have also been built into the aft castle. This indicates that the ship could defend itself when threatened (war, pirates). Archers could shoot arrows at the enemy from a position of relative safety in the crow's nest or on the aft deck.

On the forecastle, we can see an example of medieval ship adornment. A man's head has been carved on the beam at the stem of the forecastle. Through the centuries, the man's head has largely decayed and worn away. A second figure resembling a sea monster can be seen on the actual beam. Adorning ships in this way is an age-old tradition. Carved decorations can be seen on Viking longboats and, for example, on the Norman ships portrayed in the eleventh century Bayeux Tapestry. On the counter timbers of the model (at the stern of the model at rudder height), the faded remains of an image painted on paper can still be seen. It resembles a winged female figure with a banderole and a vase with flowers. A heavy beam has been placed crosswise to the bow of the model under forecastle. This so-called strongback was used for belaying the anchor rope.

An opening has been placed amidships that is closed with a hatch. This is the only opening to the ship model's cargo hold. The model has a stern rudder. The tiller is extraordinarily long and extends quite some way under the quarter deck. The helmsman could not see the direction in which he steered and would have had to rely on commands that were called to him from the quarter deck. The scuppers for carrying water off the deck that protrude through the outer shell in places are quite remarkable.

Remains of pitch have been found on the deck. It is possible that the model was at one time placed outdoors and coated with pitch to protect it from the rain. Lastly, the poor state of some of the parts is noticeable. The model has obviously been severely gnawed at by woodworm, but it has also sustained other forms of damage.

Historical importance

In 1931, Van Nouhuys, director of the Maritime Museum Rotterdam, referred to the Mataró model as "the most interesting of all shipmodels". However, it has to be asked whether he was exaggerating. The Mataró model is probably the oldest known scale model in Western culture and as such it is a unique source for scientific research in the fields of naval architecture and maritime history. Our knowledge of ships of the late Middle Ages is mainly based on pictures. We can see ships in miniatures, handwriting, the seals and stamps of cities as well as in drawings, prints and sea charts. Some sculptors also made images of ships in stone and bronze. These are all valuable sources, but the images are mostly two dimensional. The Mataró model is

to all intensive purposes the only reliable three dimensional representation of a coca from the second half of the fifteenth century.²⁰ With the help of the Mataró model, it is therefore possible to obtain a more accurate impression of a Mediterranean ship from the second half of the fifteenth century. The model can also be used as a guide for correctly interpreting ships in paintings and drawings from the same period. For the first time since 1930, the Mataró model will be moved from the Maritime Museum Rotterdam and displayed in another museum. Over the years, the model has been studied intensively and naval architecture of the Middle Ages is once again being researched at the current time. The presence of the Mataró model at the Mediterranean Exhibition - The Splendor of the Medieval Mediterranean- will hopefully provide fresh impetus to the quest for knowledge about shipping in the Mediterranean during the late Middle Ages.

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Notes

¹ Report of a study carried out by Utrecht University, dated 11 November 2003.

² Culver (1929), p. 213.

³ Winter (1956)

⁴ In 1931, J.W. van Nieuhuys, the director of the Maritime Museum in Rotterdam travelled to Catalonia to study, among other things, the origin of the model (Van Nieuhuys, 1931, 36-38).

⁵ Martínez-Hidalgo y Terán (1986), p.17.

⁶ Van Nieuhuys (1931), p. 40-41.

⁷ Letter from the Julius Böhler firm of art dealers in Munich to the Maritime Museum Rotterdam, dated 3 September 2003.

⁸ Archive of the Fondation Custodia, Paris, draft letter from Frits Lugt to D.G. van Beuningen, 1930.

⁹ Archive of the "Vereeniging Nederlandsch Historisch Scheepvaartmuseum", Amsterdam, letters 1929-1930.

¹⁰ Nationaal Archief, The Hague, Van Beuningen Archive, inv. no. 199.

¹¹ Portrayed in the Museu Nacional d'Art de Catalunya, Gothic Art Guide (2000), p.158-162.

¹² Colomer has put forward a completely different hypothesis. He suggests that the Mataró model comes from Callela (Colomer, 1989).

¹³ Portrayed in, for example, Morton Nance, R. (1924), plate 1.

¹⁴ De Groot (1984), p.6-7.

¹⁵ The shipping of Barcelona in the fourteenth and fifteenth centuries is described by Claude Carrère: Carrère (1967), *passim*.

¹⁶ Quoted by Spufford (2002), p. 398. ; see also Carbonell (1986), who gives examples from as early as the 12th century.

¹⁷ Carrère, p.280 and p.292. ; Hutchinson (1997), p. 41.

¹⁸ Gardiner (1994), p. 81.

¹⁹ In a pre-1930 photograph of the model, it is fitted with a mizzen and foremast. These were removed before the model came to the Maritime Museum Rotterdam because they were presumed to be later additions. This was, however, perhaps only true in respect of the foremast.

²⁰ Other medieval model ships from the Mediterranean region have remained preserved. For example, the silver Venetian model ship in the Cathedral of Toledo that was made in around 1440 and the silver reliquary in the form of a carrack that is one of the treasures of the Cathedral of Padua. However, these models have hardly any details (Martin, 2001, p. 140).