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THE EXCAVATION OF THE BRIG *MERCURE* OF THE *REGNO ITALICO* (1812)

WHY TO INVESTIGATE A MILITARY VESSEL FROM THE BEGINNING OF THE 19TH CENTURY?

The wreck of the brig *Mercure* lies seven miles off the border between the Veneto and the Friuli Venezia-Giulia region in N.E. Italy (Fig. 1), at a depth of 17 m.

When, on the night of the 22nd February 1812, the ship exploded struck by the British brig *Weasel*, it was escorting the French 74 guns vessel *Rivoli* on its maiden voyage (James 1847: 64-67; Troude 1868: 155-158). The *Mercure* had been built by the French navy, following the plan of the architect Sané, in the Italian private shipyard of the *Foce* (mouth) in Genoa between 1805 and 1806 (Boudriot & Berti n.d.: 48; Bucci 1916: 14). In 1810, the brig was yielded from the French fleet to that one of the Italic Kingdom (*Regno Italico*) whose capital was Venice (Crociani, Ilari & Paoletti 2004: 441).

The *Mercure* belonged to a family of 50 brigs built between 1800 and 1813. These ships are quite well known thanks to a monographic study by Boudriot and Bertì based on the model of one, Le *Cygne*, hosted in the Naval museum of Paris (Fig. 2) (Boudriot & Berti 1981). As well as other Boudriot's excellent studies, the main source for this publication has been the model itself, plans of the architect Pestel and written documents which have been very useful to the French scholar.

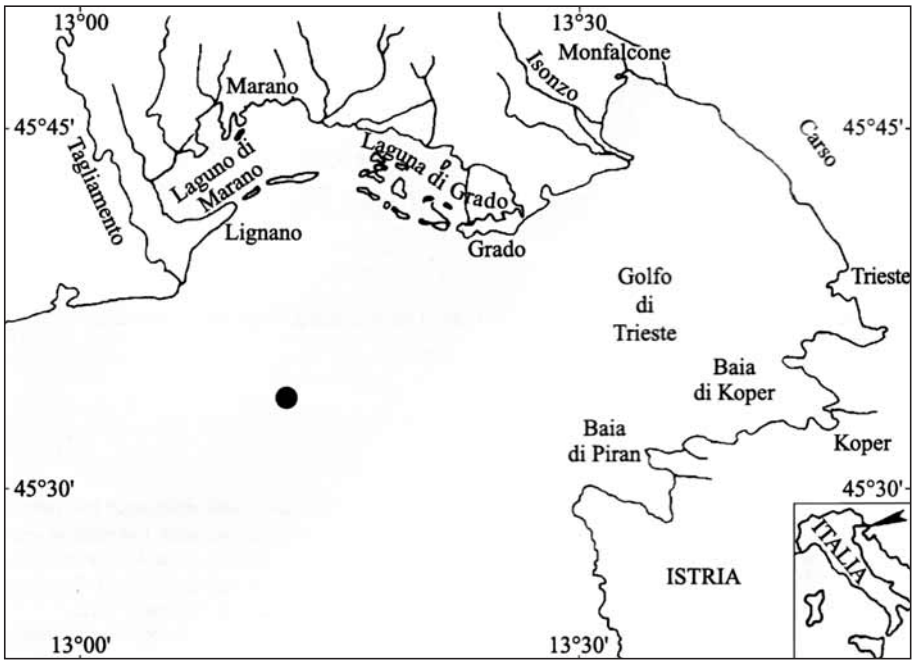

Fig. 1 Site of the wrecking of the *Mercure*.

Fig. 2 Model of the *Cygne*, twin of the *Mercure* (After Boudriot 2006: 109).

The author has directed six small seasons of excavation on the site of the shipwreck[1]. Here, students of both the Ca' Foscari University and of other athenaeums had the opportunity of practical education (Beltrame 2004; 2005; Beltrame & Gaddi 2002; 2004).

The distribution of the findings on the sea bottom shows that, after the explosion of the brig quoted by the historians, the ship lost its stern, but continued its struggle for another 70 m ending its trip at the foot of a dune. Here in fact we have found the prow, with the starboard anchor, and a part of the hull preserved for more than 16 m of the 32 m of the complete ship (Plate 2).

During the excavation, hundreds of findings were recovered: components of rigging, nails and others parts of the hull, fire and white arms, and personal belongings. The rigging is composed of fragments of blocks and a variety of pulleys which will need a long study of comparison with the archive documentation relating specifically to these objects (Beltrame 2007).

The artillery, already found, is composed of eight of the 14 original carronades, two cannons and one bronze swivel gun. The finding, on the prow, of the cannons confirms what is known historically: in 1809,

all the brigs had to substitute two carronades with two guns (Boudriot & Berti 1981: 46). The swivel gun, probably due to its small size, is neither mentioned in the archives nor represented in the *Cygne*'s model.

Personal belongings show curious presences. In fact, other than the foreseeable findings of jacket buttons, tobacco pipes and glass bottles, objects which have no bearing on the military environment, for example gold jewels, have been found. These findings propose new questions about life aboard a military vessel at the beginning of the 19th c. In 2006, at least four incomplete skeletons had been found.

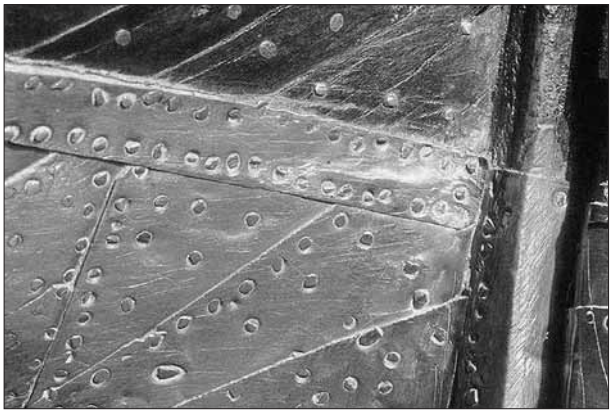

Fig. 3 Detail of the copper sheeting on the hull of the model of the *Cygne* (After Boudriot 2006: 114).

Although didactics for students is an important motivation for the continuation of the excavation, research reasons are not lacking. The quantity and variety of objects found will enable to analyze in detail many aspects of navigation at the beginning of the 19th c. Additionally, interest was dedicated to the knowledge of the construction technique of the hull. While the first motivations commonly find large acceptance, it is not the same for the latter.

Some scholars are thinking that the excavation of a military vessel of this period – especially if it is French – makes no sense in furthering the knowledge of the construction system of the hull. The justification of such a concept would be that a huge amount of non archaeological information and studies about this subject is already available and also a vast quantity of literature about this area has already been published (e.g. Pomey & Rieth 2005: 60-61; 186).

Our knowledge of 18th and 19th c. vessels derives from three major sources: written and graphical documentation and the models built in the period of the construction of the ship. The questions to be put forward here are: are these non archaeological sources completely exhaustive and absolutely reliable for the comprehension of the construction techniques of military vessels belonging to the 18th and 19th c.? Subsequently therefore, may the archaeological excavation and the documentation of a hull of this period add something more to our knowledge?

First of all, the builder drafts of the ships of this period are to be considered. The author but not only (e.g. G. Penzo, pers. comm.) is increasingly more conscious as to the fact that these plans were often not used, as is today, as detailed and executive projects which had to be faithfully followed. Actually, at the beginning of 19th c., in the shipyards, the shipwrights still followed the drafts of the architects in broad outline; often they interpreted the plan and they preferred following their »eye« rather than the drafts. It seems that only a small part of the available plans are proper projects: in fact they are to a certain extent mostly surveys made after the construction of the ship with illustrative aims in mind.

The builder drafts owned of the French brigs represent only their shape and their decorations, but they show very little detail that would be useful for the study of the ships construction. Concerning the models, it must be emphasized that, for definition, they are of a reduced scale. Obviously, this was a limit that let builders to make choices that summarized and interpreted these models often skipping details. For example, on the *Cygnes*' model, both the covering of copper sheets present on a limited area of the hull and the numbers in Latin alphabet for showing the draft marks have been omitted. Due to the great number and of the small size of the original nails used to fix the metal sheets, the model maker had to reduce their number and to make them bigger (Frölich 1985) (Fig. 3).

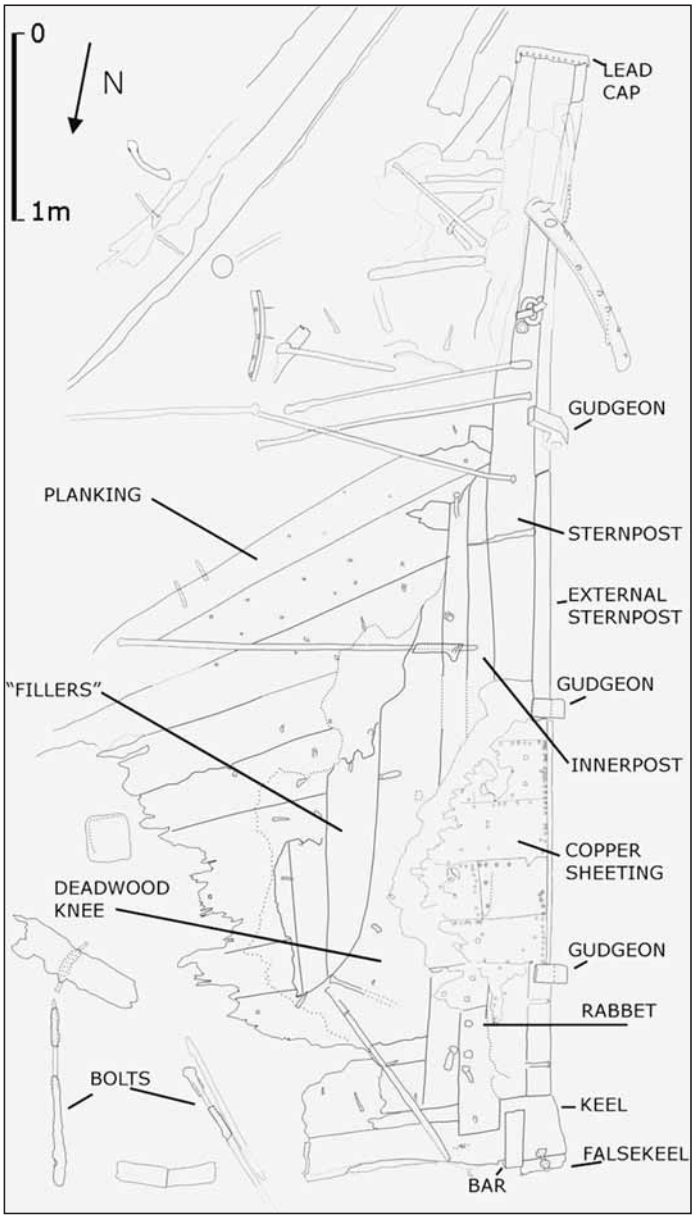

Fig. 4 *Mercure*. – Plan of the sternpost (Photogrammetry and drawing S. Caressa).

Besides, anachronisms in the models must be taken into account: in Boudriot's opinion, e.g., the kitchen on the deck of the model of the *Cygne* is a mistake of the model maker (pers. information J. Boudriot).
More than once, technical details of the hulls are omitted, both on the builder drafts and on the models, because of problems of scale and for simplification. This is evident on the *Mercure*. Although executed underwater, the analytical documentation of its stern obliged to complete and to correct the plan executed by Boudriot and Berti on the base of the *Cygne*'s model (Figs 4-5).
The stern remains indicate traces of the false keel and a section of the keel. Over these, in vertical position the external oak sternpost, the oak sternpost and the inner oak sternpost are present. On the external sternpost three bronze gudgeons are nailed (Fig. 6). Sections of eight strakes of the outboard planking are

connected to the stern where they end. Only a trace of a pair of oak strakes of the left planking are nailed to the rabbet sculptured in the middle of the sternpost. Inside the inner sternpost and between the planking of the two sides, there are many wooden elements: the first one is the deadwood knee: a piece with a curved shape. Inside its curve three »fillers« are present. Between the bottom of the deadwood knee and the keel there are some elements not clearly identifiable. All the components are connected both to each other and to the no longer preserved frames by long bronze bolts. Between these wooden elements, pieces of felt have been interposed probably to avoid wood rot. The entire stern is protected by copper sheeting.

A superficial view of this part of the hull would not bring to light any difference between the archaeological evidence and the drafts obtained by the model, but an analytical observation enables to recognize some interesting details. Over the head of the stern, that is the part of the stern inside the deck, there is a cap of lead sheeting nailed on the wood which is not documented by other sources (Fig. 7). Perhaps the metal was used as a protection. The keel has been connected to the stern by a bronze bar (Fig. 8). This solution has been noted on the model of the French vessel *Colossus* too, but it is quite rare, not being present on the plans of our family of brigs (Boudriot & Berti 1995). The elements between the deadwood knee and the keel could be the extension of the rising wood. On this wreck, unlike the drafts, the element is composed of three pieces, one of which continues till under the rising wood. Finally, the tenon of the sternpost that enters in the step over the keel, shows an asymmetrical shape different from the one documented by Boudriot's drafts.

Fig. 5 *Mercure*. – The sternpost from the bottom (Photo S. Caressa).

Portions of both the right and the left sides of the hull, not far from the stem, have been excavated and documented. On either side, external and inner planking are divided by oak frames which are in touch; that is to say that there is no space between them. This disposition could be expected in the extremity of the ship, but not at this level. It may be understood as an attempt to brace the hull protecting it from cannon shots. This constructional solution to strengthen the hull would not have come to light in any non archaeological source.

Analysis has revealed that although the left planking is made of oak wood the right one, either near the prow and on the stern, is of *Quercus cerris*/turkey oak. French specialized literature takes for granted that military vessels of this period were made of *Quercus robur* (e.g. Boudriot 1979: 50-54). In the W., *Cerris* was not considered a wood suitable for shipbuilding probably because underwater, it easily rots (Giordano 1976: 406-407): from the Middle Ages on, written sources testify its use especially as firewood and recommend not to use it for shipbuilding (information F. Ciciliot). Accordingly, the use of that wood species for the planking of the right side is certainly astonishing.

Fig. 6 *Mercure*. – The gudgeons on the sternpost (Photo S. Caressa).

Fig. 7 *Mercure*. – Cap of lead sheeting nailed on the end of the stern (Photo S. Caressa).

There are two possible explanations for this presence. As it is known, in 1811, the *Mercure* was refitted in Trieste (archive of the Musée National de la Marine). Here the shipwright could have used *Cerris*, and probably did so without the knowledge of the navy authorities. This is a reminder that the ship had been built in a private shipyard in Genoa where the shipwright could have cheated the Napoleonic Navy using a very cheap wood.

The stem is completely covered with a brass sheeting. Here one could have expected to find some numbers in Latin alphabet to show the draft-marks nailed to the sheets, as documented on the stern. Curiously here the letters have been obtained in relief on the sheeting with a technique that seems to have no parallel and that, apparently, seems illogical (Fig. 9).

If so much and such original information has been gathered during an underwater analysis, how much more data can be revealed by a study in a laboratory, where traces of tools, marks and technical details would became clearer?

All the examples presented here should demonstrate that the common assumption that military vessels, that is to say State ships, were built following standard plans and were mass-produced

Fig. 8 *Mercure*. – Bronze bar under the keel (Photo S. Caressa).

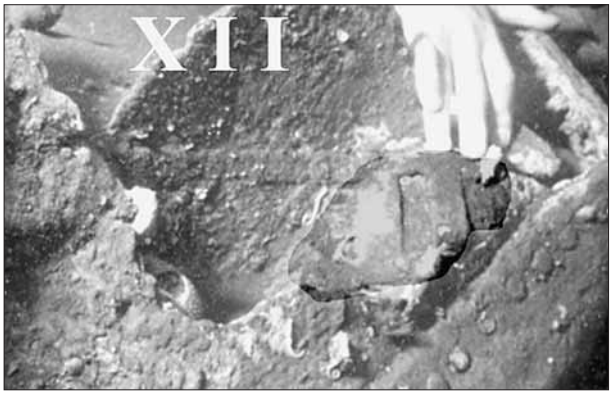

Fig. 9 *Mercure*. – Numbers in Latin on the copper sheeting of the prow (Photo S. Caressa).

meets at least two exceptions: the free interpretation of the shipwright, especially in the private shipyards, and the refitting during the life of the ship. It should be considered then that, although we know a lot about the French and the British navy of the 18th and 19th c., there is very little knowledge of the navies of the Italian pre-union states. The *Mercure*, in part, belongs to one of these navies.

In conclusion, the author wishes to emphasize archaeology can give opportunity to collect a multitude of information that could not be obtained through the study of traditional sources. In particular, archaeology permits to attain such details that non archaeological sources rarely can reach. Moreover archaeology helps to prove informations obtained by the analysis of other sources. The author is of the opinion that archaeological investigation has got great options in the field of history of military naval construction both of the 18th and 19th c. All these potentials imply that the time in which scholars are enabled to say they know everything about a particular kind of ship is still considerably far off.

NOTE

1) The first season of excavations was organized in 2001 by the Soprintendenza per i Beni Archeologici del Veneto. – From 2004 to 2008, the project continued thanks to a collaboration between the Ca' Foscari University and the Soprintendenza. – The final sponsors have been the Veneto Region and the Friuli Venezia Giulia Region. – The author is indebted to dott. Luigi Fozzati who assigned the project to him, to Mauro Bondioli for scientific informations, and to Mrs. V. Odogwu for proof-reading the English manuscript.

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PLATE 2

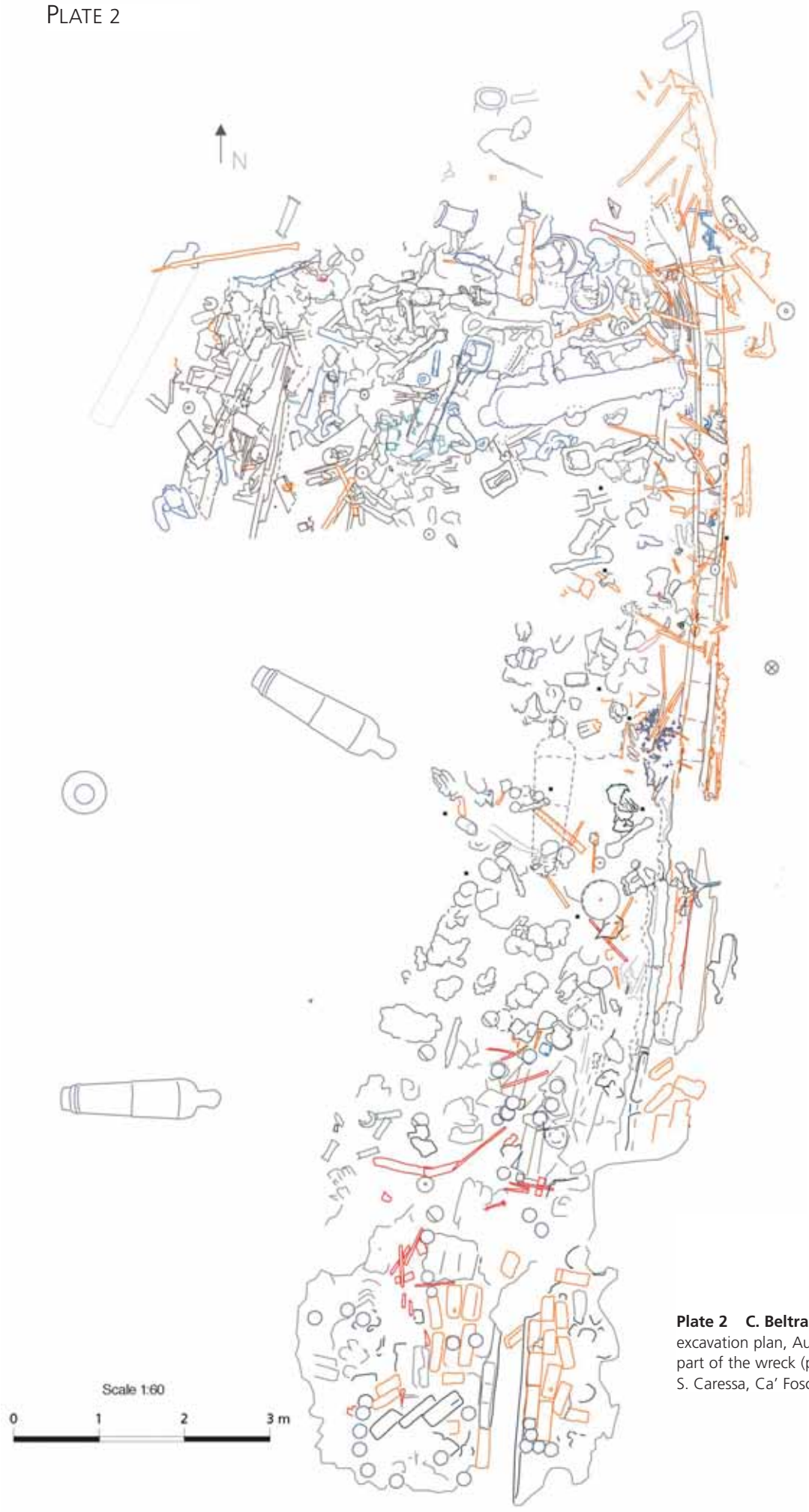

Plate 2 **C. Beltrame:** Relics of *Mercure*, excavation plan, August 2006. – The prow part of the wreck (part A) (Drawing S. Caressa, Ca' Foscari University).