

Gunflints – beyond the British and French empires

Occasional newsletter from an informal working group

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EDITORIAL

The main aim of the present issue of the Newsletter is to present to you Biagi, Starnini and Beltrame's summary of their forthcoming paper on the gunflints from the *Mercurio* shipwreck in the north Adriatic (Biagi *et al.* in press), which is expected to be published in *The Antiquaries Journal* in 2016. On the background of gunflint raw material and typo-technological attributes, they discuss the likely location of gunflint workshops, the provenance of their raw material, as well as the gunflints' historical background.

The analysis of the gunflints of the *Mercurio* is highly interesting from a number of perspectives. In themselves, the gunflints provide information on the key topics listed above, but I would also like to mention the frequently overlooked issue of how these pieces were used at sea, namely as part of cannon gunlocks.

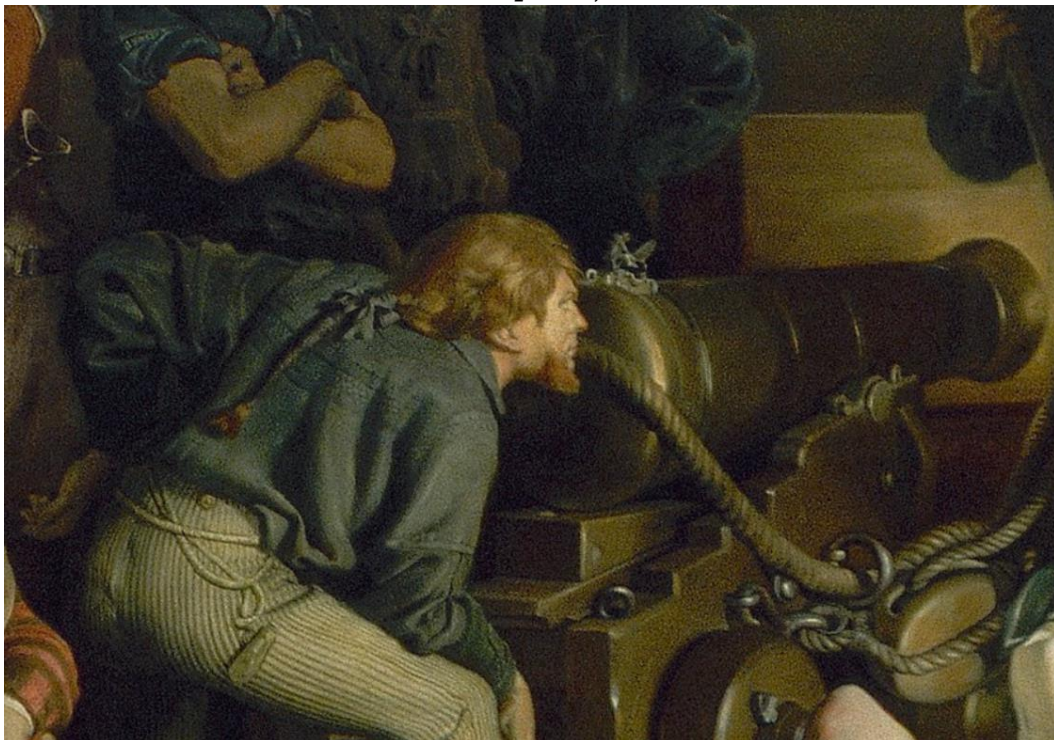
Fig. 1. Gunflints from the St. George, which sank off Jutland 1811. The two brass implements left of the gunflints are gunlocks recovered from the shipwreck (photo courtesy of Gert Normann Andersen, commercial diving company J.D. Contractor A/S).



The introduction of gunlocks into the British Royal Navy was discussed in connection with the publication of the gunflints from the wrecked *Invincible*, which sank in 1758 (Bingeman 2004), and – as demonstrated by the recovered gunlocks from the *St. George* (Fig. 1), which sank off Jutland in a storm 1811 (<http://www.strandingsmuseet.dk>) – they clearly formed part of the weaponry of Napoleonic period Royal Navy warships.

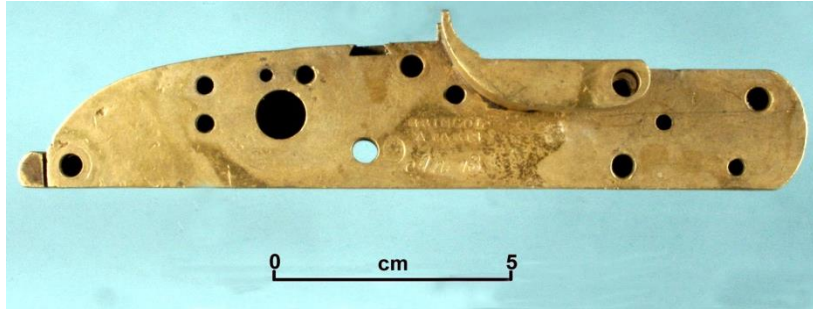
Considering that gunlocks may have been introduced into the Royal Navy as early as the mid 1700s, it is amazing (and somewhat disappointing) to find that recent TV dramatizations of the Battle of Trafalgar show gunners using a linstock or similar implement to fire the ship's cannons, whereas the painting *The Death of Nelson* by Daniel Maclise (painted 1859-64 and to be seen as a wall painting in the Royal Gallery of the Palace of Westminster), shows cannons equipped with brass gunlocks (Fig. 2). Although *The Death of Nelson* was painted well after the Battle of Trafalgar, the gunlocks recovered from the *St George* suggest that he probably got it right.

Fig. 2. Detail from The Death of Nelson (Daniel Maclise 1859-64). Copied from Wikipedia ('Horatio Nelson, 1st Viscount Nelson'; Public Domain work of art as defined by Wikipedia).



It has been claimed that the French still had not introduced gunlocks on the cannons of the French Navy (eg, Wikipedia: 'Naval Artillery in the Age of Sail'), but given the confusion regarding the gunlocks of the Royal Navy, in conjunction with the recovery of a partial French gunlock from the *Mercurio* which sank in 1812 (Fig. 3), this may not be entirely accurate. Basically, further research is needed to clarify this point.

Fig. 3. The French gunlock recovered from the *Mercurio*.



In the general picture, the paper of Biagi, Starnini and Beltrame adds to a growing number of papers on gunflints from shipwrecks (cf. Ballin 2014a; 2014b) – which we need to be able to date precisely the different national gunflint types, thus allowing gunflints to be used as part of our discussions of naval and land battles, as well as military conflicts in general.

Ballin, T.B. 2014a: Gunflints from *Drottningen af Sverige* (1745) and *Concordia* (1786). *Arms & Armour*, 11(1), 44-67.

https://www.academia.edu/10682697/2014_Gunflints_from_Drottningen_af_Sverige_1745_and_Concordia_1786

Ballin, T.B. 2014b: Identification of gunflints from shipwrecks. *Vragmus.dk* (the website of Sea War Museum Jutland).

<https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&ved=0ahUKEwjknYz8m9HJAhXE1hQKHUCkDlwQFggcMAA&url=http%3A%2F%2Fwww.seawarmuseum.dk%2Fcgi-files%2Fmdmgfx%2Ffile-1045-469778-1760.pdf&usq=AFQjCNFQoSp82meWsL2zIOlFC1bfl4i1ug&bvm=bv.109395566,d.bGg&cad=rja>

Bingeman, J.M. 2004 *Gunlocks: Their Introduction to the Navy*. The Web Site of *The Royal Navy's First Invincible*.

http://www.invincible1758.co.uk/gun_flints.htm

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Editor

Gunflints from the sea: The *Mercurio* shipwreck in the north Adriatic waters (Italy)

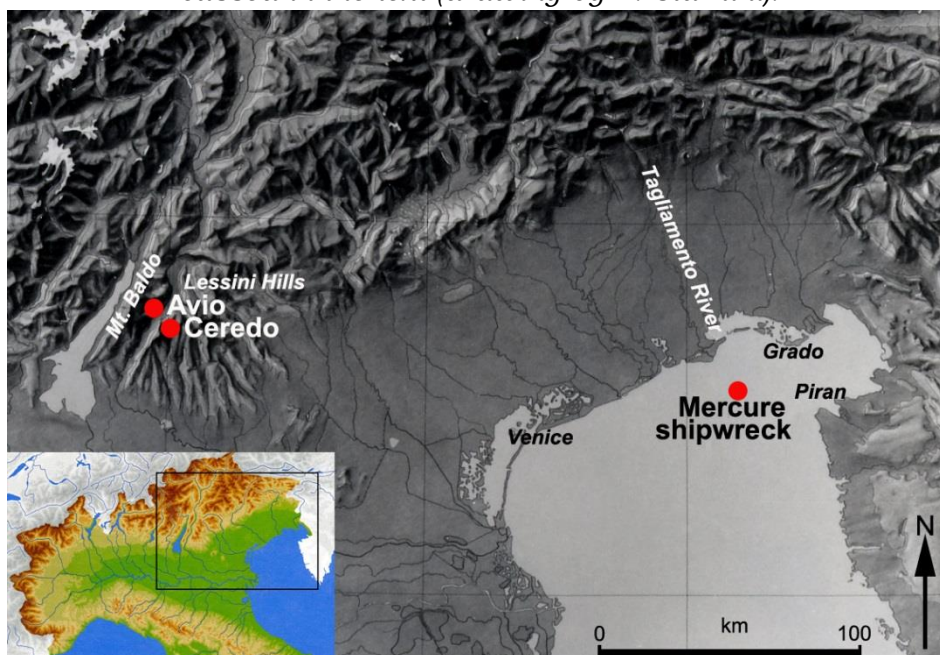
P. Biagi, E. Starnini & C. Beltrame

INTRODUCTION

The underwater excavation of the shipwrecked brig *Mercurio* (or *Mercure*), a Napoleonic Italic Kingdom vessel sunk in 1812 in the north Adriatic sea-waters during the Grado (or Piran) battle, brought to light several firearms and gunflints of different size and shape (Biagi *et al.* in press).

The shipwreck was discovered by coincidence in 2001 approximately 16-17m below sea level. It was located some seven miles off the delta of River Tagliamento (Punta Tagliamento), along the present coast of Friuli (north-east Italy), south of the city of Lignano Sabbiadoro (Beltrame & Gaddi 2002; Beltrame 2007; 2009; 2014) (Fig. 1).

Fig. 1. Location of the Mercurio shipwreck and the flint sources and workshops discussed in the text (drawing by E. Starnini).

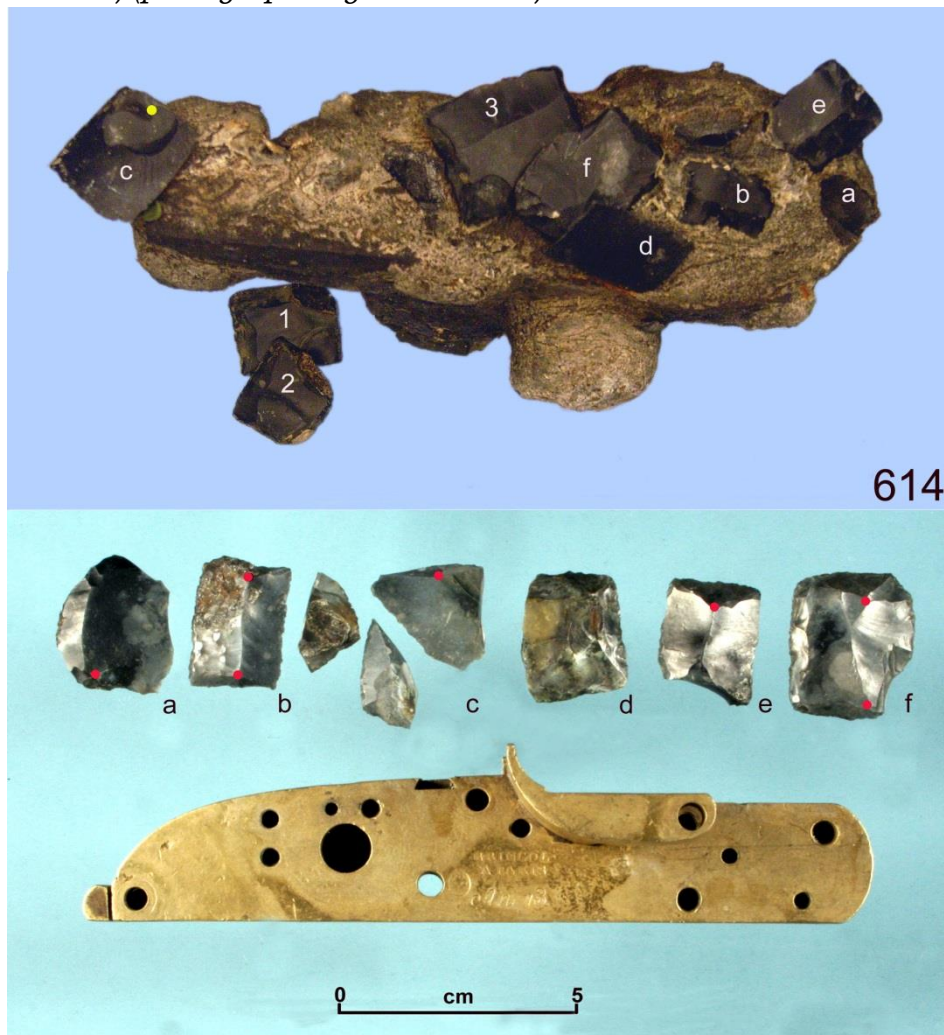


THE GUNFLINT ASSEMBLAGE

The gunflints were recovered from the bow of the wrecked ship (Zone A, squares 8 and 9), where the pistols, the musket and the human remains were also found (Beltrame 2014, 63). Altogether, they include eighty-five

specimens, which is a smaller number than expected considering the military context from which they were retrieved. However, although the gunflints could be used for artillery, aboard the *Mercurio* there were carronades of the An XIII model, as well as 1786 model cannons, which had still not been equipped with gunlocks (Boudriot & Berti 1981, 46; Boudriot 1992, 100-101). However, the brass fragment shown in Fig. 2, bottom, is clearly a piece of a gunlock produced in Paris, suggesting that there were cannons onboard the *Mercurio* which were equipped with this technological innovation. When found, this gunlock fragment formed part of a concretion which also included nine gunflints (Fig. 2) (de Vries & Martens 2007, 776-777).

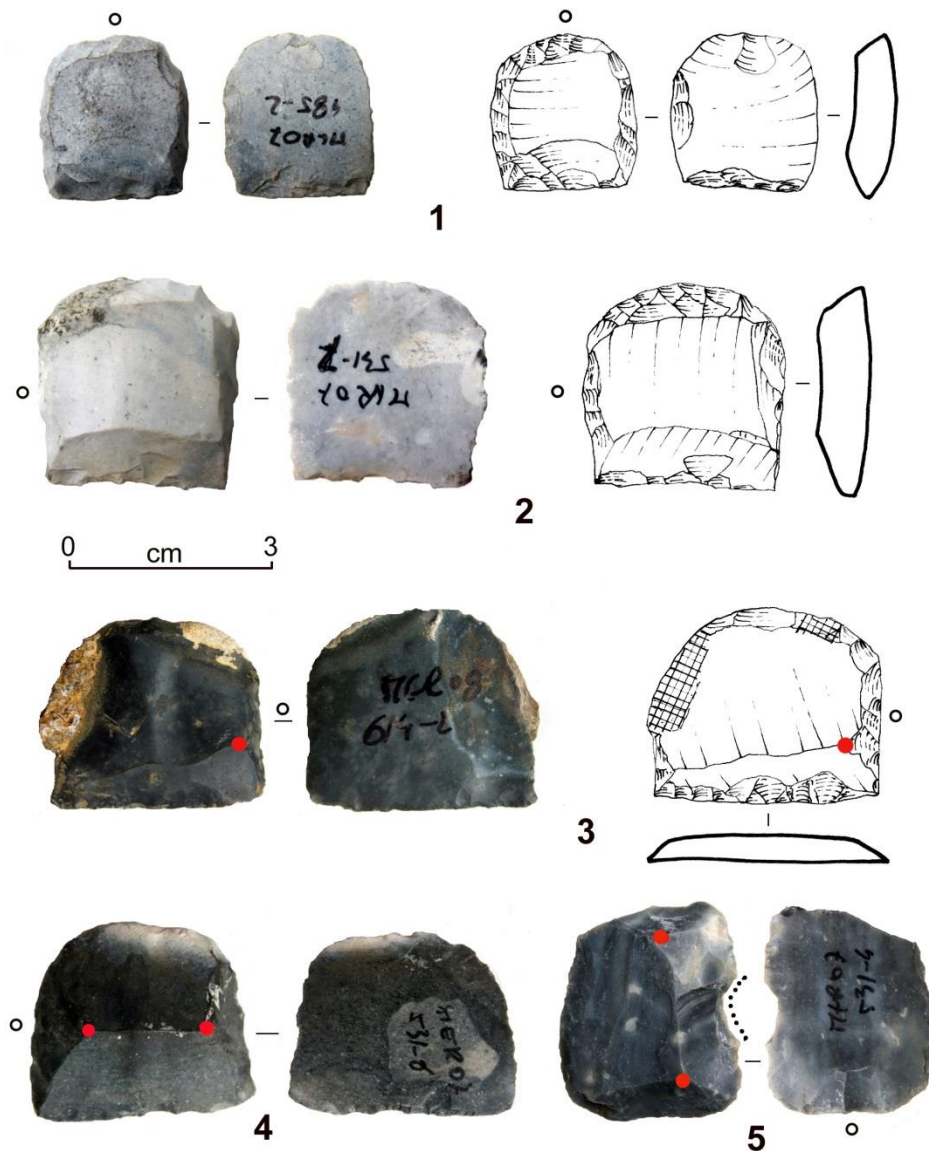
Fig. 2. Concreted block containing nine gunflints and a French cannon gunlock fragment (614) before and after restoration. Dorsal arrises (red dots), and ventral bulbar scar (yellow dots) (photographs by C. Beltrame).



According to their morphology and the typological list suggested by S. de Lotbiniere (de Lotbiniere 1984, 206), the *Mercurio* gunflints can be attributed to the following Classes: four to Class 1 (D-shaped pieces) (Fig. 3), thirteen to Class 2 (square pieces), seventeen to Class 3 (square pieces with two dor-

sal arrises) (Fig. 4) and forty-six to Class 4 (square pieces with only one ar-
 ris). Moreover, four have been assigned to Class 3/4 due to the fact that
 they were found still inserted in their lead wrap (Fig. 5), making it impossi-
 ble to study them in detail and define them precisely typologically.

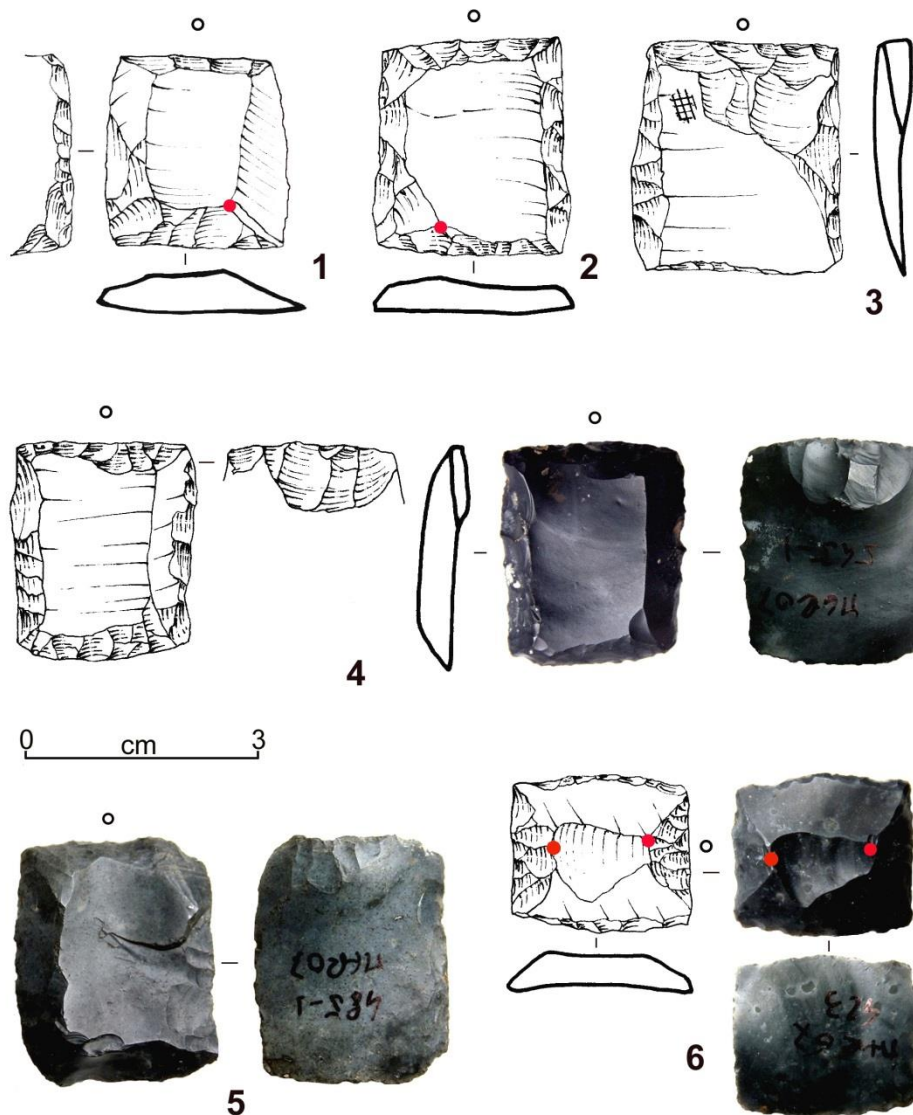
Fig. 3. D-shaped gunflints of Class 1 (1-4), and a utilised gunflint of Class 4 (5), with
 indication of the bulbs of percussion (black circles), and dorsal arrises (red dots)
 (drawings by P. Biagi and E. Starnini, photographs by E. Starnini).



The typology, number of complete tools, and high percentage of medial piec-
 es retrieved from the *Mercurio*, suggest that most specimens (85% to 92%)
 were manufactured on segments from quite long and broad, thin blades. The
 presence of one or two small dorsal scars, due to the segmentation of the
 blades by being hit by a steel hammer on a stake, is also typical for the
 manufacturing technique indicated above (Fig. 2-5: red dots) (Emy 1978,
 Plate IX; Woodall & Chelidonio 2006, 224). Three specimens, each with a

broad, ventral, lenticular bulbar scar, are also indicative of the robust segmentation of blades by hitting them with a pointed steel hammer (Emy 1978, Plate IV). Only seven to fourteen gunflints are flake-based pieces. A small number of pieces display invasive thinning retouch at the proximal end, ventral face, to remove the bulb (Fig. 4.4-5). Most of the gunflints look new, but two pieces have a notch at the centre of the leading edge (Fig. 3.5). Two butterfly-shaped specimens with evident traces of utilisation along both sides (notches) might have been re-used as fire-flints.

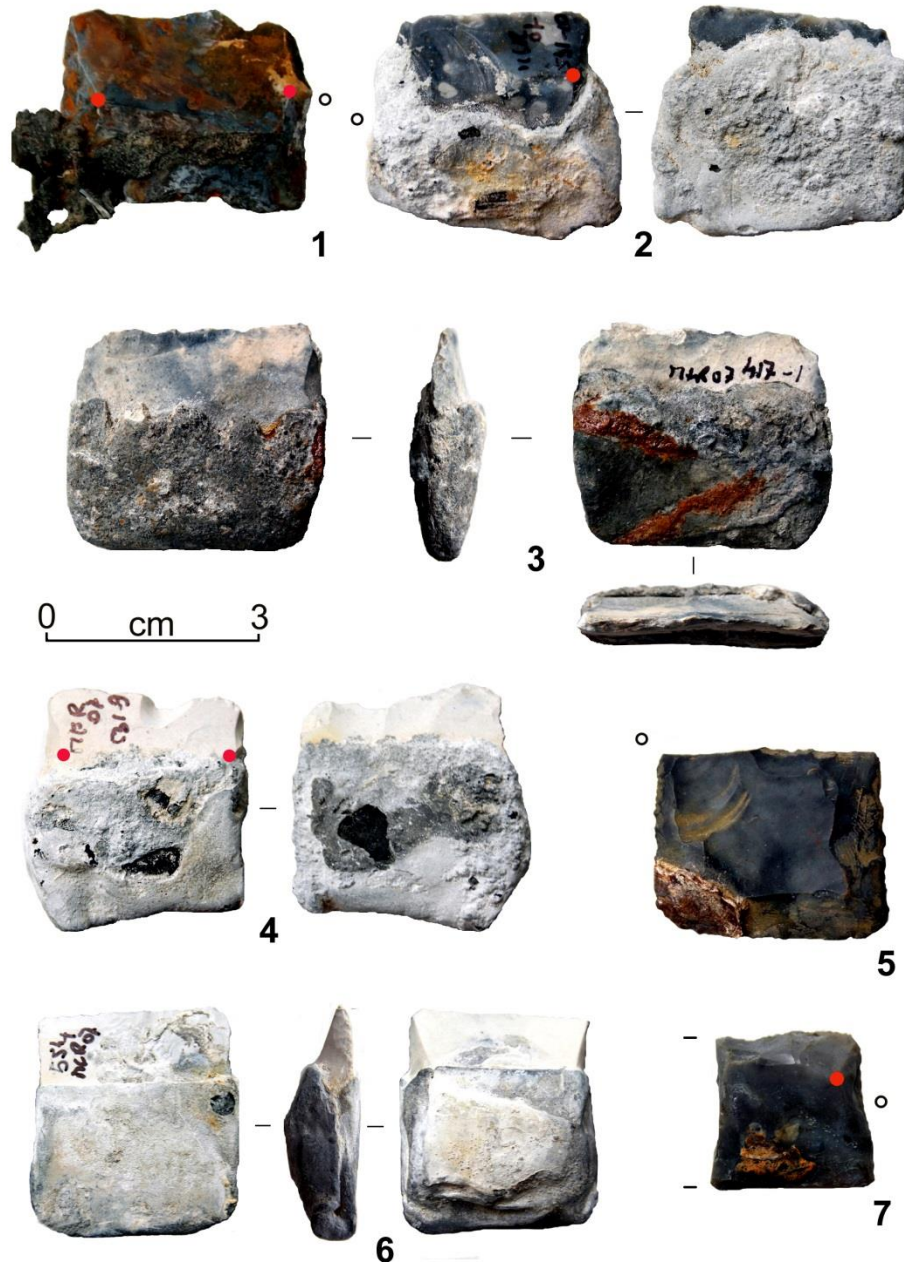
Fig. 4. Gunflints of Class 2 (1-5) and Class 3 (6), with indication of the bulbs of percussion (black circles), and dorsal arrises (red dots) (drawings by P. Biagi and E. Starnini, photographs by E. Starnini).



The analysis of the dimensions of the recovered pieces shows that the *Mercurio* gunflint assemblage includes pieces not only of different typology, but also of different size. With their length measured (in French style; see Emy 1978) along the long axis of the original blade blank, and their width at a

perpendicular angle to the length, the gunflints vary in length between 23-41mm, width 21-34mm, and thickness 4-10mm. Their average size differs from that of both French and British types (Ballin 2013, 8). They compare better, for instance, with the rectangular specimens from Andalusia (Roncal Los Arcos *et al.* 1996).

Fig. 5. Gunflints of Class 4 (1, 5 and 7), and Class 3/4 (partly covered by a lead wrap; 2-4 and 6), with indication of the bulbs of percussion (black circles), and dorsal arrises (red dots) (drawings by P. Biagi and E. Starnini, photographs by E. Starnini).



Interestingly, two of the *Mercurio* gunflints find close parallels in both shape and raw material with some pieces from Castle Neugebäude at the outskirts of Vienna, where an impressive cache of gunflints, chronologically attributed to the siege of Vienna by Napoleon in 1805, has been recovered (Penz & Trn-

ka 2004, Fig. 11c). They were referred to the Mt. Lessini manufacturing area. The variation of size and shape suggests that the *Mercurio* gunflints may have been used as parts of a variety of firearms.

RAW MATERIALS

In terms of the raw materials, all gunflints bar one are of black/dark grey/bluish-grey flint with small whitish spots or lighter grey variegations/stripes. The precise flint source exploited for their manufacture is presently uncertain, since the gunflints colour is quite different from that of the prehistoric artefacts made of flint from the 'Biancone' and 'Scaglia Variegata' formations of the Veronese Lessini Hills, the geological locations of which are well known (Brandl 2013).

J. Emy (1978, 114) reports that the Mt. Baldo gunflints were based on a distinctive type of greyish flint, the outcrops of which might be those described by Barbieri *et al.* (2013). Furthermore, black and dark grey flint is available from the moraines of River Tagliamento and the Carnic Pre-Alps in general, in the Friuli region of north-eastern Italy, which were exploited by prehistoric people for the production of chipped stone tools at least since the beginning of the Holocene (Dal Santo 2004). According to our present knowledge, only one *Mercurio* gunflint is certainly made of brown, spotted Lessini flint, characteristic of the Veronese Scaglia Variegata deposits (Barfield 1994), as well as the Trentino area (Barbieri *et al.* 2013, Fig. 2f).

DISCUSSION AND CONCLUSION

The gunflints uncovered from the bow of the *Mercurio* represent the only assemblage of this type ever studied from a shipwreck of the Italic Kingdom Napoleonic period. They were produced mainly from blades following a technique used not only in Britain and France, but also in the Lessini Hills workshops around Ceredo (Verona, northern Italy). Given our limited knowledge of gunflint manufacture in north-eastern Italy, and the characteristics of the region's raw materials, we suggest that the *Mercurio* gunflints may have been made of flint from Mt. Baldo, in the Trentino area, and perhaps River Tagliamento Friuli flint, and that gunflints from these sources may have supplied the Italic Kingdom fleet during this complex historical period. The typological attributes of many specimens, as well as their dimensions, show that they were undoubtedly produced in the north Italian industrial centres for military weaponry, most probably located around Avio in Mt. Baldo (Trentino).

Over the last fifteen years, the study of gunflints from shipwrecks has produced some interesting results (Cumming 2002; Bingeman 2004; Ballin 2014a; 2014b). However, papers on this specific topic are still few in numbers despite their importance for the definition of gunflint production centres, gunflint raw material provenance, military supply routes, trade connec-

tions, as well as the definition of how these pieces were used by crewmembers of different nationalities. This is especially true for the *Mercurio* as we know that Italian, French, Dalmatian and Istrian sailors were on duty on the brig. The presence onboard of different types of weapons, and crew members of different nationalities, supports the idea that the *Mercurio* gunflints formed part of a wide variety of arms.

The gunflint assemblage recovered during excavation is small if compared with the likely number of gunflints needed in connection with complex war operations, and it must be assumed that one or more barrels of flints were present onboard the *Mercurio* when she sank (Emy 1978, 226). It is difficult to understand why north Italian gunflints made from lower-quality flint were used instead of the widely traded French 'du Berry' gunflints of higher quality (Emy 1978, 149).

To shed light on this issue, further investigation of historical sources on gunflint commerce, the organisation of the military supplies for the Italian Kingdom navy, and the political situation of this particular historical period is greatly needed.

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