

La Marquise de Tourny (Site 33c): A Mid-18th Century Armed Privateer of Bordeaux

Neil Cunningham Dobson

Odyssey Marine Exploration, Tampa, USA

In 2008, Odyssey Marine Exploration discovered an unknown wreck at a depth of around 80m in the western English Channel (Site 33c). A pre-disturbance survey was conducted, including the recording of surface features and the production of a photomosaic. The presence of a blue glass *flacon* bottle and *fleur de lis* decoration along an iron swivel gun recovered from the site suggested a possible French nationality for the vessel. The discovery of the ship's bronze bell, inscribed with the name *La Marquise de Tourny* and the date of 1744, confirmed that Site 33c represented a ship that had once been a Bordeaux-based privateer.

La Marquise de Tourny may have been sailing short-haul between Bordeaux and the French Channel ports when she was lost during a storm in the late 1740s or early 1750s. No cargo is evident on the site and the abundance of iron ballast may reflect the original presence of an organic consignment such as coffee or sugar, which no longer survives. Other than the dense concretions surrounding iron ballast and cannon, the wreck is poorly preserved in shallow sediments, compounded by damage caused by trawlers. Evidence suggests that Site 33c comprises the rare remains of the wreck of a French corsair. Beyond two outstandingly preserved wrecks undergoing excavation off St. Malo, France, and the comprehensive excavation of the French *Machault* by Parks Canada, Site 33c is the only other privateer of this period that has been examined archaeologically.

© Odyssey Marine Exploration, 2010

1. Introduction

During the 2008 season of Odyssey Marine Exploration's Atlas Shipwreck Survey Project in the western English Channel, the *Odyssey Explorer* located a significant and previously unknown shipwreck (Fig. 1). Initial investigation of site MUN-T1M33c-1 (henceforth Site 33c) using the Remotely-Operated Vehicle Zeus revealed a spread of over 20 cannon and several masses of amorphous, linear iron concretions. During the initial survey the ship's bell was located lying on its side just west of the wreck nucleus. The artifact was recovered and sent for conservation to the York Archaeological Trust. Initial conservation exposed various French symbols, a date of 1744, and most of the letters of the ship's name *La Marquise de Tourny*.

Although lying within the outer limits of diving range, environmental conditions such as strong currents and poor visibility made the use of an ROV a highly suitable archaeological tool for investigating this site. A photomosaic was produced and a cannon and concretion measurement survey conducted, from which a master site plan was generated. A small iron swivel gun was recovered to assist identification of this vessel. In 2009 a FADE survey (Odyssey's sub-sediment metallic detection system) was initiated to locate and plot buried features.

2. Site Characterization

Site 33c was discovered on 26 April 2008 during a program of high-resolution side-scan and cesium magnetometer survey and was investigated using an ROV. A total of 16 ROV dives were conducted during several visits in 2008. Over 2,000 still photographs were taken and 67 DVD's and 27 High-Definition tapes recorded during a total dive time of 66 hours and 36 minutes.

Conditions on the first dive (Dive 402) were extremely challenging.¹ Bottom currents and very low visibility complicated the initial non-disturbance survey. However, a spread of iron cannon was recorded exposed on the sea bottom in association with extensive spreads of large concretions (Figs. 19-21). Conditions on the site remained poor throughout the next five survey dives, when two artifacts were recovered to help date and identify the nationality of the shipwreck. The first artifact recovered was a section of lead sheet, probably a hull repair patch, located near the left hand muzzle of cannon C-21 (inv. no. MUN-A-08-0001-SF; Fig. 67). The second artifact recovered was a small shard of glass from a common form of bottle recorded close to the right-hand side of cannon C-22 (inv. no. MUN-A-08-0002-GL).

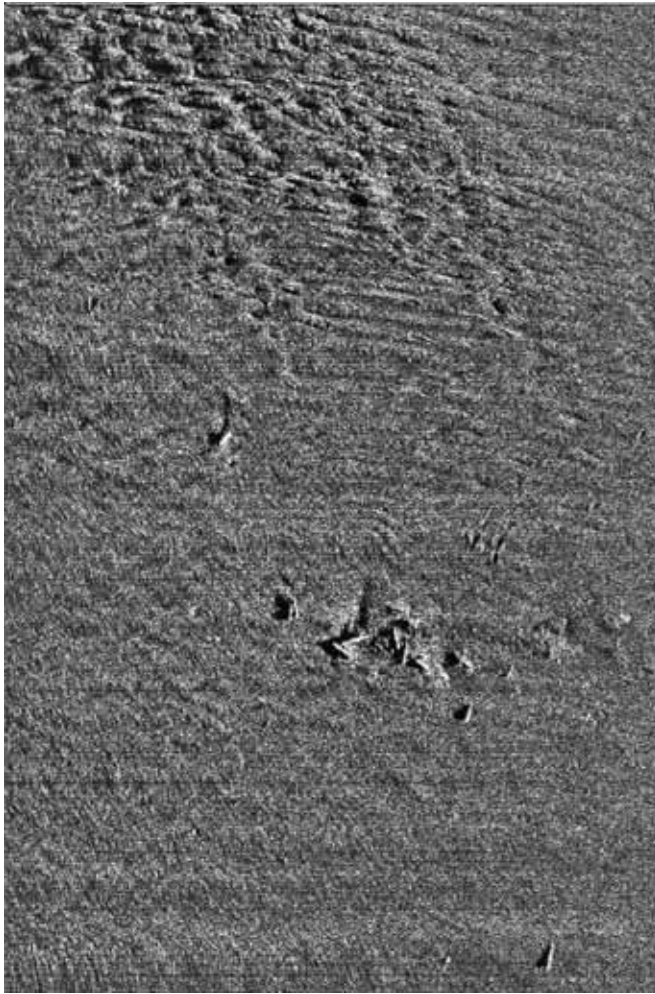


Fig. 1. A side-scan sonar image of Site 33c, which manifests as a series of linear features and anomalies at center. Sand ripples are present in the background.



Fig. 2. The Odyssey Explorer on assignment in the western English Channel.

Site 33c lies approximately 100km southeast of Plymouth, England, in the western English Channel at a depth of around 80m (Fig. 3). It lies beyond the territorial seas or contiguous zone of any country and is within an area of high commercial fishing activity. The visible extent of the site densely covers an area of 35 x 25m, oriented along a northwest to southeast axis. During spring tides a current of 0.1-1.2 knots flows across the site. The surface features consist of 25 iron cannon ranging in length from 1.05-3.17m and 13 large multi-concreted areas, each measuring up to 3.5 x 3.0m (Tables 1-2; Fig. 6). Two of the cannon, C-01 to the northeast and C-22 to the southwest, lie over 35m away from the nucleus of the site and have most probably been displaced by trawlers. Very few areas of limited ship timbers survive. Fishing net fragments and modern garbage are snagged on concretions and cannon and partially buried within the shipwreck's matrix (Figs. 12-14, 29, 32, 43, 45).

The seabed is composed of a heavily abraded, shell-rich sedimentological matrix consisting of areas of gravel, flint and small stones intermixed with coarse sands (Fig. 11). The sediments are shallow: an average depth of 15cm, and apparent 40cm maximum, covers the compact seabed. Small clusters of surface rocks and boulders are also present. The wreck site is extremely dynamic and subjected to ongoing periods of exposure, re-cover and scouring.

3. The Bell Recovery

One month after the initial discovery, the *Odyssey Explorer* returned to continue the site survey. During Dive 423, with underwater visibility at only about 2m, Zeus discovered the ship's bell lying on its side and partly buried in sand sediment (Fig. 54). Its position was approximately 8-9m from cannon C-25 on a bearing of 270° (Fig. 6). The bell seemed to be in good state of preservation, with letters present on its surfaces but unreadable due to the low underwater visibility. The decision was thus made to recover the object for purposes of site identification. The bell was recorded *in situ* and the surrounding sediments cleared to free it for recovery in a custom-fabricated box. Visibility was once again very poor during Dive 424, the result of seasonal and tidal/current conditions. The bell was lifted by the ROV manipulator arms and secured in the recovery container. Once on deck, the artifact was relocated to the *Explorer's* dedicated on-board laboratory for recording, first-aid conservation and storage.

This copper alloy bell measures 46.70cm in height, 41.07cm in width and weighs 52kg (Fig. 55). Close study confirmed its good state of preservation, with only



Fig. 3. The location of Site 33c in the western English Channel.



Fig. 4. An electronic grid with 5m spacing intervals, running northeast to southwest, was established for the ROV Zeus to survey Site 33c systematically.

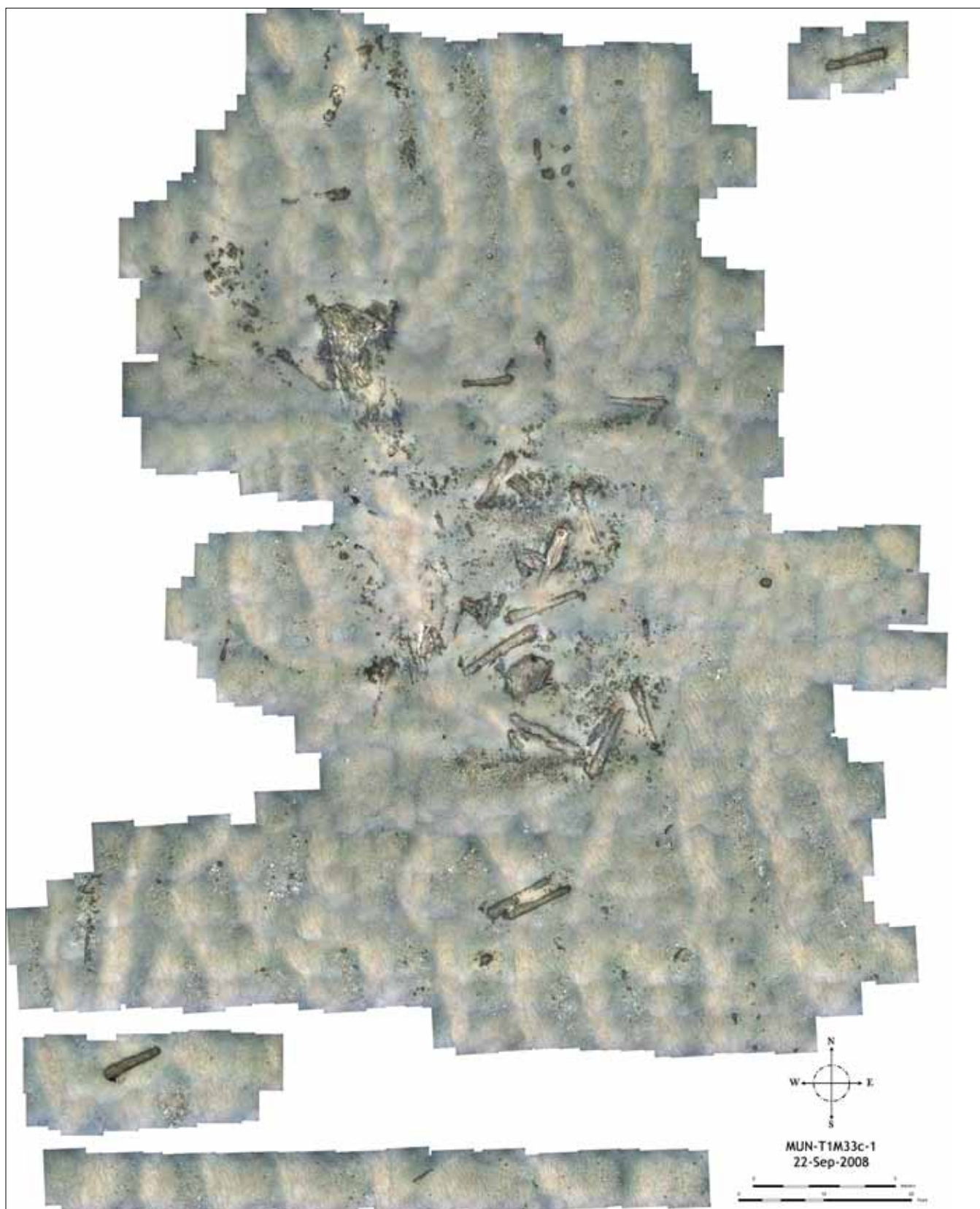


Fig. 5. Photomosaic of Site 33c, composed of 1,417 digital photographs covering an area of 1,220 square meters.

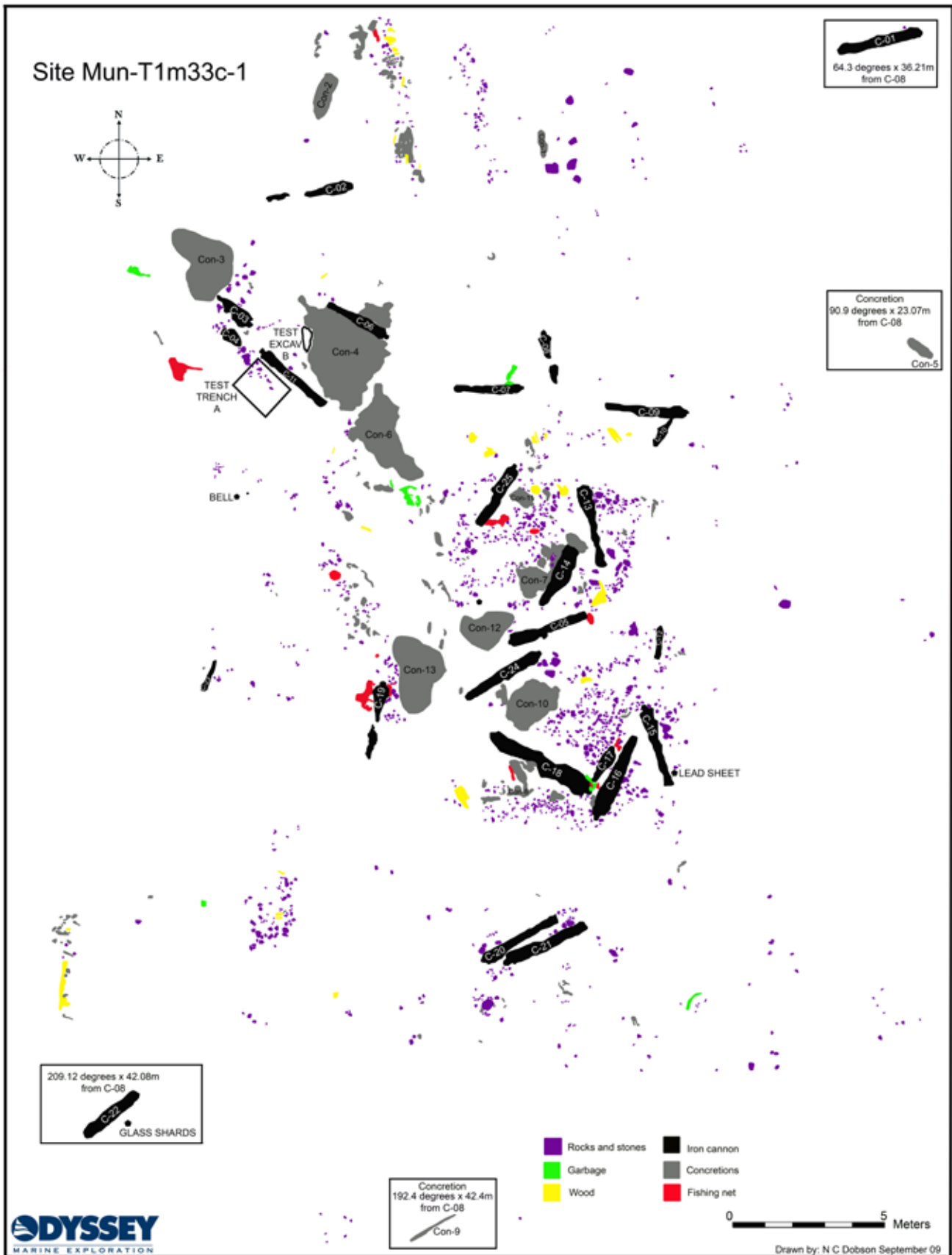
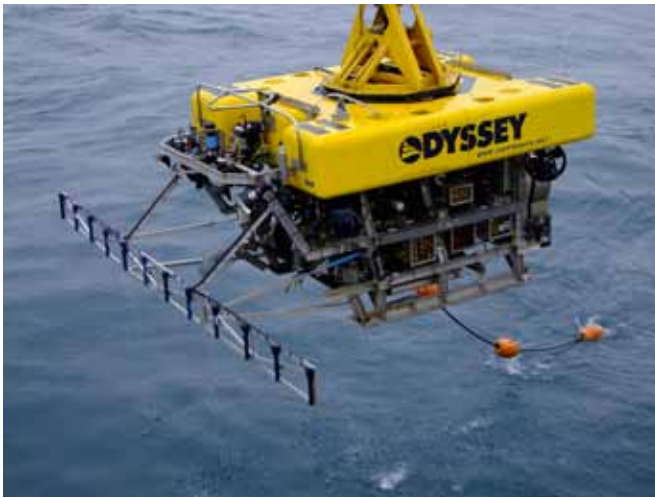


Fig. 6. Plan of shipwreck Site 33c.



Figs. 7-8. The ROV Zeus custom-tooled with the FADE system for detecting sub-bottom metallic anomalies, its wings folded (top) and expanded (below) ready for use.

a thin cover of marine growth in areas and minor damage to the lower edge. A crown-shaped suspension ring consisting of two single and two double canon rings surmounts the top of the bell (Fig. 59). The inside was in a similar condition to the exterior. Below the shoulder, between two horizontal lines, a partially identifiable inscription (2.3cm high) runs around the entire circumference of the bell. Although difficult to read due to corrosion and marine encrustation, it initially appeared to contain Latin letters, possibly the name of the ship. Light surface washing revealed the following letters:

-A M- -ISE DE - - - -A- - - - FECIT 1744

Positioned 1.4cm below this lettering are two horizontal lines set 1.2cm apart. A further 12.0cm below these two lines are six horizontal lines occupying a band width of

3.4cm. At a height of 2.8cm above the base of the bell is another horizontal line. Of particular interest is the area between the top and lower bands along the waist of the bell, where four molded symbols project beyond the surface metal. Spaced evenly around the sides were a curved fish/dolphin, a roundel, a Calvary cross, and three *fleur de lis* (Figs. 60-63).

The fish/dolphin motif is representative of the Christian faith. If a fish, it represented Christ and if a dolphin symbolized resurrection and salvation. The roundel symbol reflects the rotating force of Christian divine power. The Calvary cross symbolizes the Rock of Golgotha where Christ was crucified, while the three *fleur de lis* are representative of the Virgin Mary. Although all of these symbols are common within Christianity (Ferguson, 1961: 15, 18, 183), since 1147 it has been generally accepted that *fleur de lis* set in this configuration are indicative of the French monarchy. This tentatively suggested that the nationality of the bell was French.

Once recording and documentation of the bell were completed, the artifact was secured in a plastic container holding a solution of sodium sesquicarbonate (a corrosion inhibitor) until the *Odyssey Explorer* reached the next port of call, where it was shipped to the York Archaeological Trust conservation laboratory in north England after being declared to the UK Receiver of Wreck.

4. Phase 1 Site Survey

When the *Odyssey Explorer* returned to the site five weeks later, sea bottom conditions and visibility had improved, although a dense particulate algae layer was suspended in the water column. Project plans were designed to survey the site visually to determine its extent, main features and to conduct a photomosaic survey. A virtual grid composed of survey lines spaced at 5m intervals, and running northeast to southwest, was established and followed by the ROV Zeus (Fig. 4). Cannon and large concretions were waypointed using Winfrog (navigation survey software). Measurements of cannon were recorded and features photographed (Table 1).

The survey revealed that the site consists of a large spread of 25 iron cannon, 1.05-3.17m long, intermixed with 13 large concreted masses (0.85 x 0.25m to 3.5 x 3.0m), some of which cover areas of 2-10 square meters and appeared to consist of approximately 1m-long cylindrical iron concretions (Tables 1-2; Figs. 19-42). A minimum of 167 examples of these linear concretions are visible on the site's surface, although the merging of concretions and unseen stratigraphy severely complicates identification. The total volume of ballast ingots may be closer to

Survey Feature	Muzzle Heading	Length (meters)
Cannon C-01	255	2.90
Cannon C-02	275	2.81
Cannon C-03	310	1.54 partly buried
Cannon C-04	132	0.84 partly buried
Cannon C-05	72	2.70
Cannon C-06	300	2.33
Cannon C-07	270	2.35
Cannon C-08	171	1.94 partly buried
Cannon C-09	268	2.81
Cannon C-10	48	1.10 swivel gun
Cannon C-11	312	2.88
Cannon C-12	186	1.28 partly buried
Cannon C-13	344	2.75
Cannon C-14	210	2.22
Cannon C-15	164	2.79
Cannon C-16	22	3.17
Cannon C-17	212	1.33
Cannon C-18	306	3.00
Cannon C-19	12	2.52
Cannon C-20	61	2.93
Cannon C-21	64	3.00
Cannon C-22	50	2.25
Cannon C-23	24	1.05
Cannon C-24	239	2.83
Cannon C-25	216	2.45

Table 1. Measurements and orientations of cannon recorded on Site 33c.

500-600 individual pieces. No evidence of any other cargo was discovered and no anchors were present. Some red galley brick fragments were seen, but no potsherds recorded. No visible wooden ship structure survives, other than minor small sections of timbers (Figs. 11, 46-47).

The site offers no visible indication as to which part of the wreck signifies the bow or stern. The shipwreck measures approximately 35 x 25m and, taking into account the number of cannon, the wreck may be interpreted as the remains of a moderately armed 25-gun sailing vessel.

Survey Feature	Length (meters)	Character
Con-01 Concretion	0.85 x 0.25	1 unknown
Con-02 Concretion	1.60 x 0.50	2 ingots/cannon?
Con-03 Concretion	2.20 x 1.50	1 unknown
Con-04 Concretion	3.50 x 3.00	88 ingots & 2 cannon
Con-05 Concretion	1.00 x 0.25	6 ingots
Con-06 Concretion	2.50 x 1.80	----
Con-07 Concretion	1.20 x 0.60	20 ballast ingots
Con-08 Concretion	2.60 x 1.50	4 unknown
Con-09 Concretion	1.80 x 0.15	1 unknown
Con-10 Concretion	2.00 x 1.60	25 ingots
Con-11 Concretion	1.00 x 0.8	5 ingots
Con-12 Concretion	1.50 x 1.30	4 unknown
Con-13 Concretion	2.00 x 1.40	21 ingots
T-01 Timber Area	2.50 x 1.00	Planking

Table 2. Measurements of concretions and planking area recorded on Site 33c.

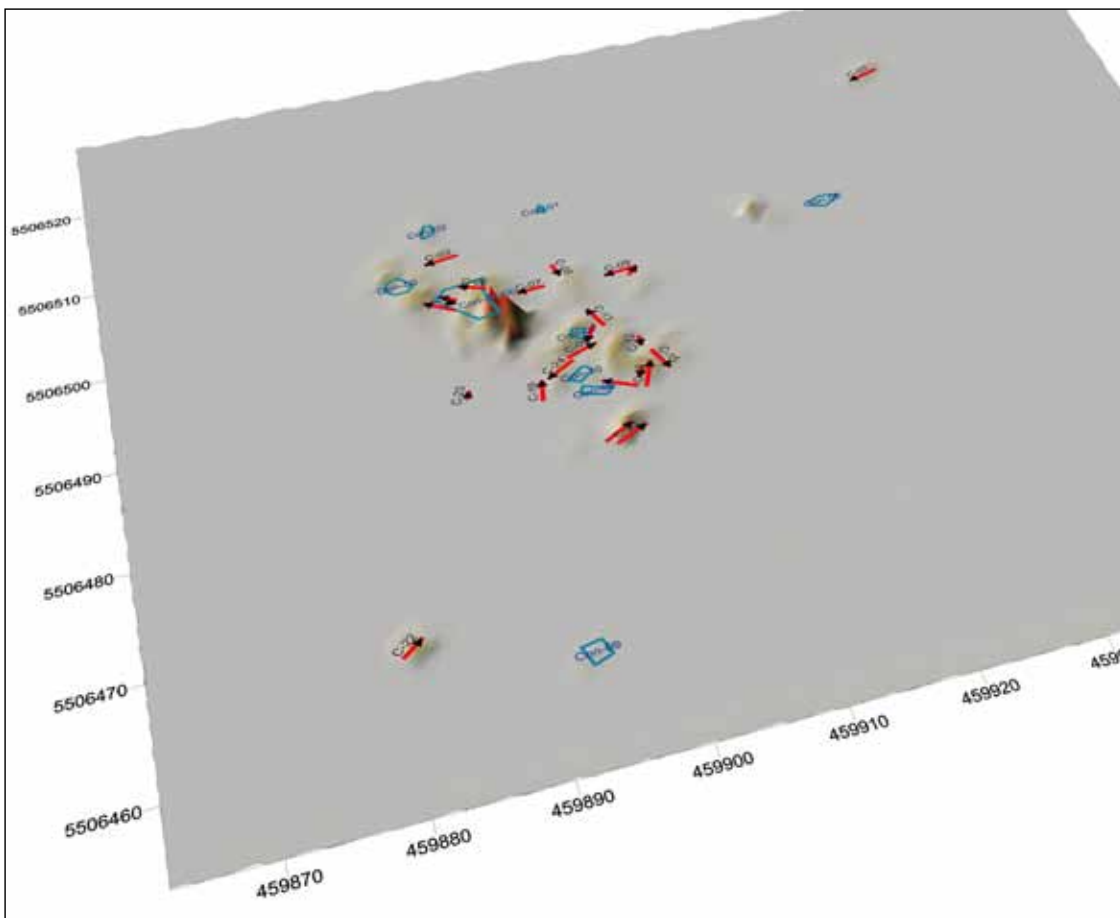
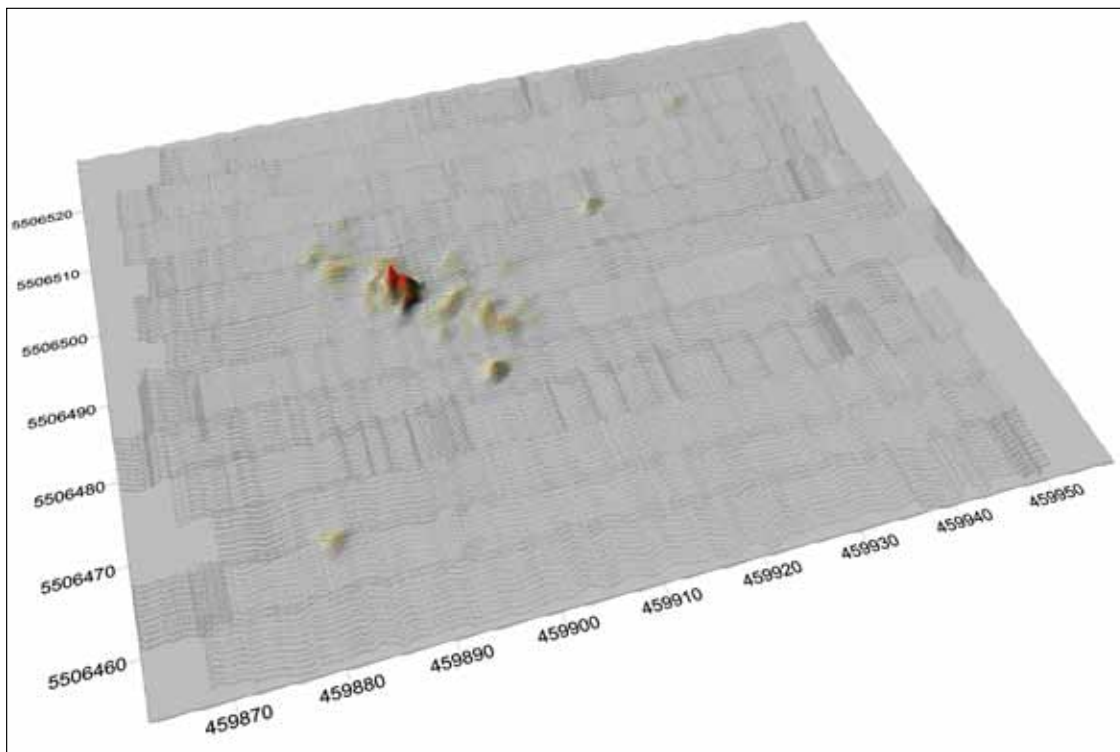
Some limited test trenching was conducted in an attempt to locate hull remains or artifacts that could support a date or nationality (Figs. 6, Figs. 42-47). Additional partly buried cannon and concretions were discovered, as well as modern rubbish in the form of parts of plastic sheet, sacking and tin cans trapped in the shipwreck's matrix.

Along one edge of concreted area Con-4, a small test excavation revealed 10cm below the surface a layer of stones and flint nodules overlying a dark organic layer at a total depth of 15-20cm (Fig. 44). Close by at cannon C-11 a second test trench (1.45 x 1.17m and 0.30m deep) exposed the same stratigraphy and sediment composition (Fig. 42). Excavation to a depth of 30cm revealed some small disarticulated and unidentifiable abraded ship's timbers. Both areas excavated were devoid of artifacts.

As part of Odyssey's standard site investigation procedure, a photomosaic survey was conducted (Dives 492, 493 and 498). A total of 1,417 digital photographs were

taken by the ROV Zeus across an area of 1,220 square meters during a period of 10 hours. Images were taken with a 50% overlap, with the ROV flying at an altitude of 2.7-3.2m above the seabed, with a line spacing of 0.8m, and were stitched together digitally to produce the final photomosaic (Fig. 5).

Using the site photomosaic as a reference source, a measurement survey of all visible cannon and large concreted areas was conducted (Dive 494). The ROV manipulator arms (the tips of which are geo-spatially coordinated with the ROV transponder) were placed at the end of each cannon and at selected points, enabling the maximum length and widths of the concretion features to be measured (Tables 1-2). A software program calculated the distance between the arms via the ROV's navigational system. The compass heading of each gun's muzzle was also recorded. For the concretions the ROV took positions that were later plotted in ARC GIS software.



Figs. 9-10. The positions of targets plotted by the FADE system on Site 33c (top), with visible surface metallic archaeological remains superimposed over them (bottom), demonstrating precise matches.



Fig. 11. The sea bottom matrix on Site 33c consists of very coarse sands intermixed with flint nodules and pebbles. Between 5-40cm of sediment maximum covers the archaeological remains. Disarticulated plank fragments are present at top center.



Fig. 12. A pile of fishing net and a tin can snagged on cannon C-19.

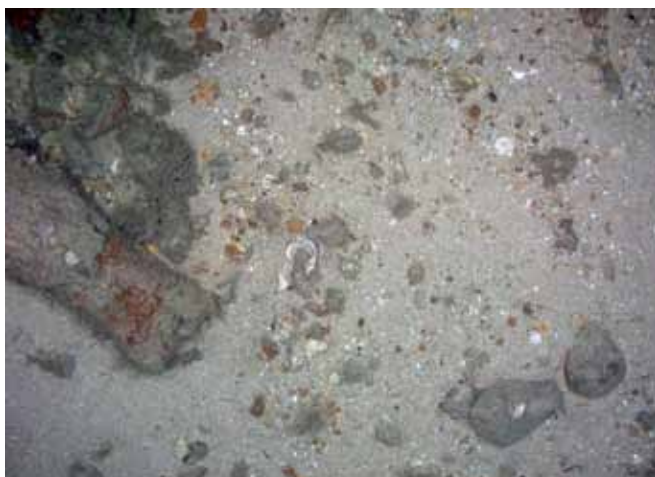


Fig. 13. A section of fishing net snagged on C-25.

5. Cannon C-10 Recovery

While the bell was undergoing conservation and its inscription remained tantalizingly undeciphered, the decision was taken to recover a cannon to examine if it bore any date, a maker's mark or decoration that might facilitate dating and identification of the ship. C-10 located to the northeast of the wreck, and believed most likely to be a swivel gun, was selected for this purpose. The gun concretion was lying on the seabed with the muzzle oriented at 48° (Figs. 48-49). It lay at an angle off the southern side of the cascabel of cannon C-09 and was completely exposed and seemingly unattached to any other structures or artifact. Using its SeRF excavation tool, the ROV carefully removed the sediment from around the base of the gun. Less than 10cm below the surface a layer of small stones and flint nodules was recorded, confirming that the object was not associated with any artifacts or structure, but lay on the compact seabed and would thus permit a straightforward recovery that would not disturb any underlying archaeological contexts.

A recovery box was placed on site, which was rubber mat-lined to protect the gun during the lifting process. The ROV was positioned at the muzzle end, while its dredge system excavated around and below the muzzle, creating space to rig up a rope-lifting strop (Fig. 50). (Rope or canvas slings/strops are the preferred lifting gear for this type of operation because wire can easily cut into the concretion and damage a cannon's surface.) Zeus then moved to the cascabel end, where a similar process was carried out (Fig. 51). The rope strops were connected to the ROV and the gun flown to the recovery basket (Figs. 52-53). With the artifact secured within the recovery basket, Zeus and the gun were winched to the surface. Placement in the recovery basket ensured that the cannon was successfully supported and protected during its lift through the water/air interface and onto the deck of the *Odyssey Explorer*.



Fig. 14. A length of fishing net cable snagged on Con-8.

On reaching the research ship's deck, the gun was removed from the recovery basket, photographed, measured and documented (Fig. 68). Prior to the removal of its concretion, the object was weighed at 82kg and measured at 1.07m in length. The concretion was carefully removed using a small chisel and hammer (Fig. 69). The cascabel button proved to be broken and part of one trunnion was missing. The exposed gun measures 1.03m and weighs 54kg. Visible on the breech is a round nipple, 1.3cm in diameter, and a 6cm long gunner's 'V' mark. On the first reinforce is an 8 x 6cm incised *fleur de lis* motif, and a similar type and size of symbol is repeated on the second reinforce (Figs. 70-71). The muzzle end is damaged, so a section of concretion was left attached for removal and conservation under laboratory conditions. No other markings were discovered and the cannon was placed in a tub of fresh water with a pH of seven pending transfer to the conservation laboratory at the York Archaeological Trust.

6. Phase 2 Site Survey

Especially interesting amongst the wreckage, as visible on the site's master photomosaic, were cannon C-01 (36.21m from C-08 muzzle at an angle of 64.3°), C-22 (42.08m from C-08 at an orientation of 209.12°) and concretion Con-5 (23.07m from C-08 at an angle of 90.9°). The off-site positions of cannon C-01 and C-22 may indicate that both have been dragged by fishing trawling activities. This scenario is in line with the degraded nature of the site and corresponds with its location within extensive European commercial fishing grounds, where displaced cannon have been observed associated with other wrecks investigated by Odyssey.

During the survey of cannon C-22 the neck of a glass bottle was observed protruding above the sediment about



Fig. 16. Lobsters are common across Site 33c, both on the open seabed and inhabiting cavities between and below concretions.



Fig. 17. A monkfish (*Lophius piscatorius* Linnaeus) on Site 33c. Note the concreted cannon in the background lying on top of parallel-set iron ballast blocks.



Fig. 15. Cavities between and below concretions are extensively inhabited by conger eels on Site 33c.



Fig. 18. A monkfish next to cannon C-19.



Fig. 19. A typical view of Site 33c (Con-4), characterized by dense concentrations of rectangular iron ballast blocks.



Fig. 20. Concreted rectangular iron ballast blocks associated with two encrusted iron cannons (center right and bottom left) within Con-4.



Fig. 21. Concreted rectangular iron ballast blocks within Con-4, with a possible cannonball in the center foreground. The site's concretions are extensively inhabited by brown crabs.

0.5m from the southeast edge of the gun (Fig. 65). Using the ROV limpet suction tool to gently dust away the surrounding sediment, it was freed from the seabed and proved to be a neck and shoulder fragment from a blue-colored square bottle. It was recovered to the surface for documentation and photography (Fig. 66) and returned to the site on the next dive.

Close study of concretion Con-5 identified what appeared to be a series of five iron cylinders (Figs. 22-23). The feature was not connected to any ship's structure or artifacts and was lying in a shallow scour pit, seemingly also dragged to this location, most likely by trawling activity.

Zeus next investigated the outer edges of concretion Con-4 between cannon C-06 and C-11 (Test Trench A: Dives 496 and 497; Figs. 25, 42) in order to establish whether any ship's hull underlay it, thus contributing to the question of whether the concreted area was cargo or ballast. Excavation demonstrated that the stratigraphy was identical to that recorded elsewhere across the site. A

strand of polypropylene fishing-net rope was again uncovered, snagged on the concretion and seabed matrix. Further abraded black disarticulated ship's timbers were uncovered at a depth of 15cm.

Some 15m west of cannon C-20 and C-21, and 12m southwest of C-19, a 3 x 1m area of hull timbers was exposed (Figs. 46-47). Zeus dusted off the light top sediment layer to expose the wood in an attempt to determine its character. Approximately 5-15cm of vertical loose mobile sediment was removed. The wood was black in color and the surfaces highly abraded. This section of timbers appeared to consist of two frames and two hull planks, otherwise disarticulated. Following photography, the area of planking was backfilled. Although small patches of disarticulated ship's timbers were discernable beneath light sediment covering other sections of the wreck site, only in this area were limited interconnected planks encountered. The hull remains are evidently badly preserved, partly due to the thin level of sediment covering the seabed.



Figs. 22-23. Con-5 consists of around five linear iron concretions and lies next to an undefined circular object.



Fig. 24. A pile of concreted rectangular iron ballast blocks within Con-13.

7. The 2009 Survey Season

In the 2009 Atlas Shipwreck Survey Project season, Site 33c was revisited. During Odyssey shipwreck search operations, side-scan targets and magnetometer hits are investigated using an ROV. In many cases no visual targets are located on the seabed, and only a magnetometer hit betrays the presence of wreckage. To examine these types of targets, it is necessary for an ROV to be fitted with metal detecting equipment.

Odyssey has custom-tooled the ROV Zeus with a 'FADE' system. This tool is capable of locating, tracking and measuring the relative positions of sub-bottom ferro-magnetic objects by means of their intrinsic magnetism and consequent distortion of the Earth's magnetic field. The FADE system consists of three major elements: a sensor array of magnetic gradiometers and fluxgate sensors, a subsea electronics package and a surface computer workstation and display.

The FADE apparatus consists of 12 sensors fitted at 63cm intervals along a frame composed of two 2.43m side wings and a 2.3m frame in front of the ROV (Fig. 7). When conducting a survey the wings are extended to create a scanning surface slightly more than 7m in length (Fig. 8). The FADE survey of and around Site 33c was undertaken following the lines of a digitally produced electronic grid survey box measuring 80 x 12m long with 6m spacing lines. The ROV was flown along these lines and the position of ferrous targets plotted (Fig. 9). After the dive a map of the FADE hits was compared with the physical positions of the cannon and concretions and was found to match directly (Fig. 10). Some of the buried FADE hits were investigated and found to consist of unidentifiable iron concretions buried at depths of 5-15cm.



Fig. 25. Cannon C-06 lying on top of concreted rectangular iron ballast blocks within Con-4.



Fig. 26. Possible broken cannon amongst concreted rectangular iron ballast blocks within Con-6.



Fig. 27. Concreted iron cannon C-15.



Fig. 28. A concreted iron cannon on Site 33c.



Fig. 29. Concreted iron cannon C-21 and C-20 with a modern tin can behind.



Fig. 30. Concreted iron cannon C-01.



Fig. 31. Concreted iron cannon C-22.



Fig. 32. Concreted iron cannon C-19, with snagged plastic and fishing net.



Fig. 33. Concreted swivel gun C-17 in situ.



Fig. 34. Detail of concreted swivel gun C-17, with its yoke still attached.

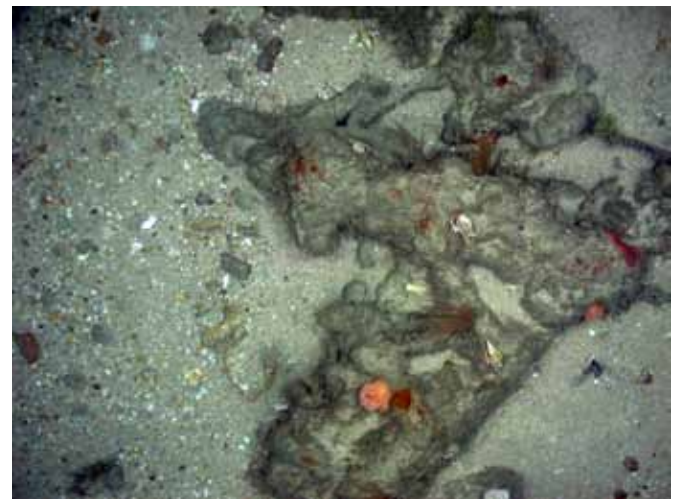


Fig. 35. A possible concreted swivel gun.



Fig. 36. Detail of the cascabel end of concreted cannon C-16.



Fig. 37. Detail of the cascabel end of concreted cannon C-04.



Fig. 38. Concreted iron cannon C-20.



Fig. 39. Detail of the cascabel end of iron cannon C-01 within very shallow sand sediments and lying directly on top of the seabed composed of flint nodules and pebbles.



Fig. 40. Detail of the cascabel end of concreted cannon C-05.

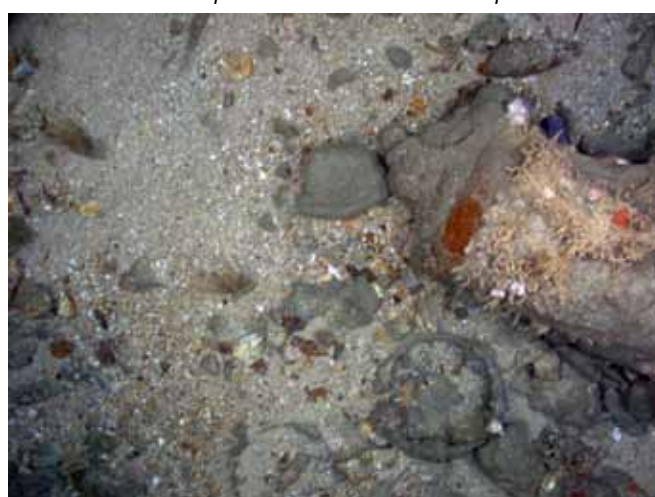


Fig. 41. Detail of the cascabel end of concreted cannon C-14.



Fig. 42. Trial Trench A exposed at a depth of 0-20cm a section of synthetic fishing net snagged on cannon C-11 alongside part of a possible wooden barrel stave.



Fig. 43. Modern rubbish/snagged fishing net exposed in Trial Trench B.



Fig. 44. Trial Trench B encountered a layer of natural flint and pebbles within 5cm of the surface.



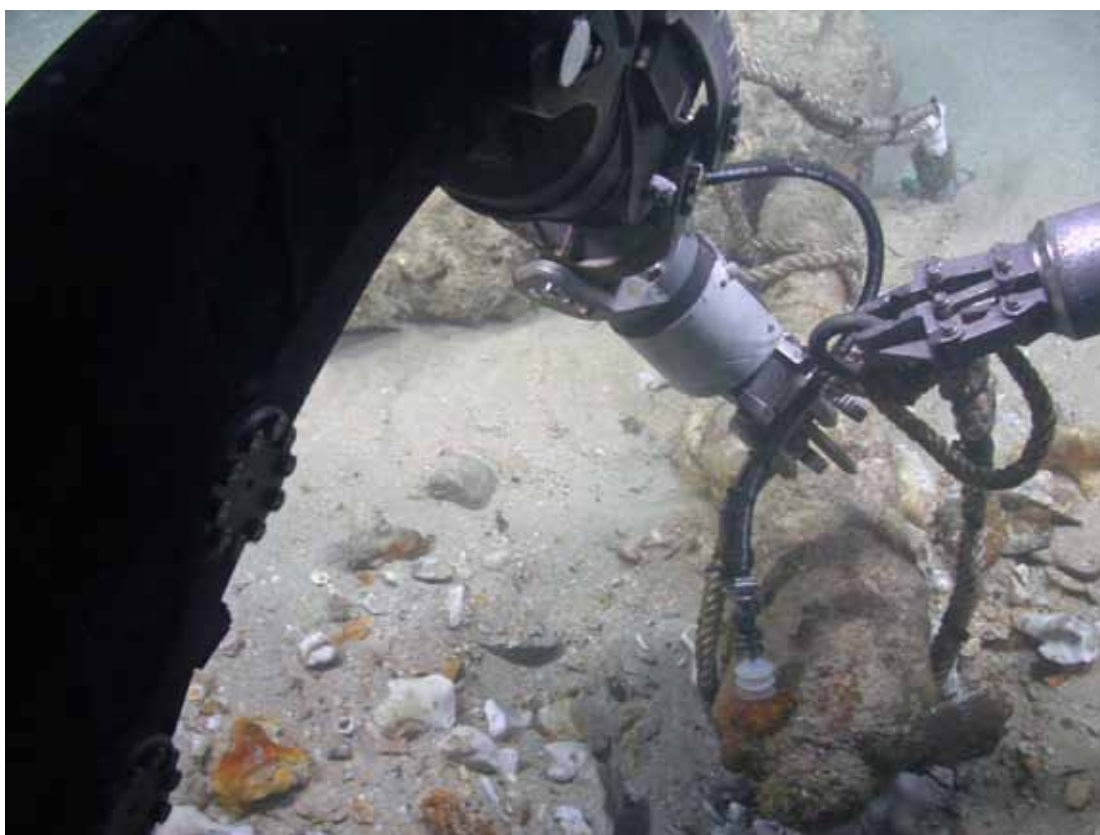
Fig. 45. A modern workman's glove encountered next to Trial Trench B.



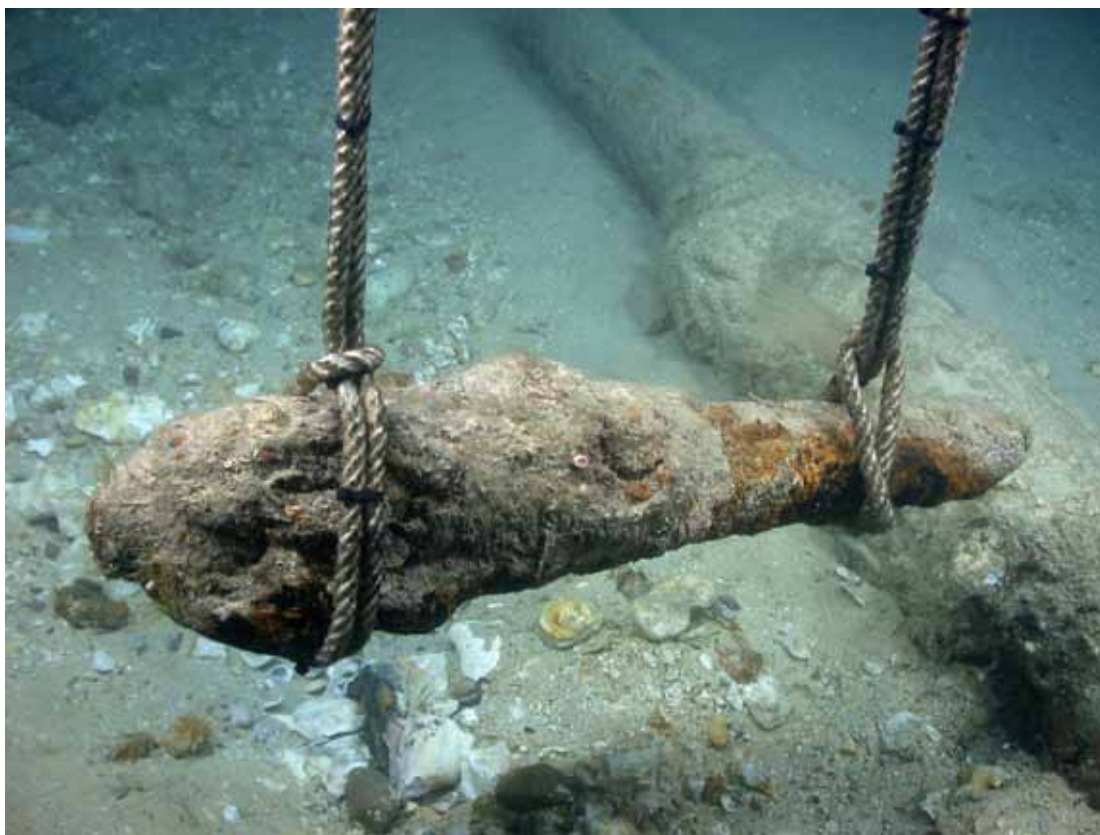
Figs. 46-47. An area of limited hull planking at the southwestern limit of Site 33c before and after trail trenching.



Figs. 48-49. Swivel gun C10 in situ prior to recovery, lying partially buried in a 10cm deep matrix of sand alongside cannon C9.



Figs. 50-51. Following excavation around and below cannon C10, ROV Zeus threaded and tied rope stops around both ends of the gun to facilitate lifting.



Figs. 52-53. ROV Zeus flies cannon C10 to the nearby recovery basket, which was lined with rubber matting to cushion the gun during its recovery.

8. Post-Survey Research

A. The Ship's Bell

One of the most crucial diagnostic artifacts recorded on Site 33c was the ship's bell, which clearly bears a date of 1744 and a partly legible name or Latin phrase (Figs. 55-57). Its dimensions are:

- H. 46.70cm
- Max W. 41.07cm
- Weight 52kg
- Inscription H. 2.3cm
- Fish symbol 4.9 x 4.8cm (Fig. 60)
- Roundel symbol 4.4 x 4.4cm (Fig. 61)
- Cross symbol 11.8 x 7.8cm (Fig. 62)
- Three *fleur de lis* symbols, each H. and W. 3.1 x 2.7cm (Fig. 63)

Sent to the York Archaeological Trust in England for conservation, the bell's copper alloy was reported to be in good condition with a thin encrustation of marine growth in some areas and a thin layer of corrosion on the surface. Minor areas of physical damage to the lower edge of the bell were also observed. Symbols and an inscription were visible but, due to the concretion and corrosion, were not readily identifiable.

The artifact was subjected to mechanical cleaning to remove the light concretion and corrosion. The bell was then desalinated by intensive washing in tap water and distilled water. Once all the salt was removed from the metal, the artifact was scheduled to be dried and coated in a protective coat of microcrystalline wax.

Mechanical cleaning of the inscription revealed the following inscription (with its translation below) (Figs. 56-58):



Fig. 54. The ship's bell in situ on Site 33c.



Fig. 55. The bell (H. 46.70cm) of La Marquise de Tourny during conservation.

LA MARQUISE DE TORN- A-DE- R- FECIT 1744

(THE MARQUISE OF TORN ??? MADE 1744)

Initial research into this name and date revealed the existence of a French corsair called *La Marquise de Tourny* (see Section 10 below). Illustrations of a French 74-gun warship's main bell and watch-bell depict objects of similar shape and design with comparable symbols. French naval bells were typically manufactured at a brass foundry in Rochefort, but in addition were supplied to the navy by private contractors (Boudriot, 1986: 115, 126). If cast at the Royal Foundry at Rochefort, records may survive. Considering the name in context with the *fleur de lis*, the working hypothesis was that Odyssey had discovered a French vessel.

The bronze bell recovered from Site 33c falls within the timeframe of the golden age of bell-founding between the third decade of the 17th century and the mid-18th century. Ship's bells were traditionally crafted of copper and tin (13 parts copper to four of tin or approximately 80/20%). Applications of higher percentages of tin improved the tone, but rendered the metal brittle. Similarly, too much copper softened the alloy (Nichols, 1928: v, 63).

Ships' bells are relatively common finds on wrecks as far afield as England, France, America, Poland, Portugal, Norway and Polynesia, and typically display a conservative design that makes the formulation of an evolutionary typology ineffective. The earliest historical reference to a ship's bell is a record of Henry VIII's *Henri Grace à Dieu* in 1485.



Figs. 56-57. The name 'DE TONY' and 'FECIT 1744' molded onto the top of the ship's bell.

Ten years later, an inventory of the warship *Regent* revealed that this ship carried two “wache bells” (Wedde, 1972: 2).

At times of crisis, the sounding of the bell warned of danger, fire, fog or an enemy ship. In his *Marine Dictionary* (Hamburg, 1793), J.H. Roeding described the use of bells on ships as primarily serving to identify the passage of time during the day (Wedde, 1972: 4):

“Since on ships the day is divided into 48 half-hours, each half hour is struck on the bell... At each change of watch, namely after four hours have elapsed and the sand in the half-hour glass has run out eight times, the bell is rung to awaken the watch below to come up. At six o'clock at night, the bell is rung for prayer, and as soon as it is over, it is sounded again for dinner. If sudden danger threatens the ship, the alarm is given by ringing the bell to call all hands on deck.”

Comparisons of Site 33c's two single and two double cannon rings can be drawn with the bells of the *Forsigtigheten* of 1784 and the Copenhagen ship the *Constantia Maria* of 1801 (Wedde, 1972: 1, 21). The closest parallel to the Site 33c suspension ring is the bell of the *Henrietta Marie*, an English merchant slave ship wrecked in the summer of 1700 some 55km off Key West, Florida. In this instance, the ship's name runs along the bell's waist. Anatomically, however, the shape of the Site 33c bell is nearest to that recovered from the wreck of the 100-gun English warship the *Royal George*, which sank with great loss of life while being heeled over for repairs at Spithead, Portsmouth, in 1782 (Kingsley, 2008).

This robust crown form, however, was a stylistic preference and by no means serves as a chronological indicator or a reliable dateable criterion for the 18th century. Thus, the 1ft-tall bronze bell from the *Concorde*, wrecked off Beaufort Inlet, North Carolina, in 1718, and believed to be of either Spanish or Portuguese origin (but crafted in the New World), displays a tall single-frame suspension ring, as does the ship's bell of 1745 found at a depth of 170m on a probable Dutch shipwreck along the Ormen Lange pipeline route off northwest Norway (Bryn *et al.*, 2007: 112, 114). Bells of 1792 from the *San Josef*, captured by Nelson at the Battle of Cape St. Vincent in 1797, the *Nostra Senora del Rosario* lost off Paignton, Devon, in 1794 (Larn and Davis, 1977), and the small watch bell from the French ship *L'Astrolabe*, which sailed c. 1778-1828, similarly incorporate single, usually plain rectangular suspension rings.



Fig. 58. A rolled-out and interpreted view of the Latin inscription on the bell of the wreck of La Marquise de Tourny.



Fig. 59. Detail of the two single and two double canon rings on the top of the ship's bell.



Fig. 60. A dolphin or fish molded onto the side of the bell.

The combination of the cross, fish and roundel are unlikely to be meaningful in combination as reflectors of a founder or patron. All three are typical symbols of Christian art. The Calvary cross symbolizes Jesus' crucifixion. The fish represents Christ himself – the five Greek letters forming the word 'fish' (ICHTHYS) being the initial letters of the Greek term 'Jesus Christ God's Son Saviour'. If this motif is actually a dolphin, this marine creature appears in Christian art more frequently than any other sea creature as the symbol of resurrection and salvation. The wheel-like roundel represents the rotating force of divine power (Ferguson, 1961: 15, 18, 183).

Given the deeply superstitious tendencies of mariners, it is most logical that these three symbols are apotropaic. Bells had a reputation in sailing folklore of safeguarding ships' crews from the dangers of the deep. A Dutch engraving by Philip Galle, published c. 1560, depicts a sea crawling with sea creatures and bells at the stern of a ship next to a Latin inscription reading, "On the ship of Erythreus that sails the sea in the prow and in the poop the greatest of bells hangs. I ring to warn of cetaceans, balenas and sea monsters which threaten the ship." In a similar vein, in his *Traites des Cloches* of 1721 Jean Baptiste Thiers wrote that "Bells are rung... to drive away the demons of the air... to dissolve thunders, storms, and tempests which is not done by their nature, but by the divine virtue given them when they are blessed" (Wede, 1972: 2).

This interpretation of the protective power of the bell's symbols leaves the *fleur de lis* motif as the only motif reflecting the owner's origins. The *fleur de lis* is common in England, France and Spain, but its form in triplicate, with two symbols above a centered one below, is recognizable in the French coat of arms. This variant is also recorded on the small watch bell of the French ship *L'Astrolabe*, which sailed c. 1778-1828 with *fleur de lis* decoration.



Fig. 61. A roundel molded onto the side of the bell.



Fig. 62. A Calvary cross molded onto the side of the bell.



Fig. 63. Three fleur de lis molded onto the side of the bell.

The botanical lily is a symbol of purity and, associated with the Trinity through its tripartite representation, originally symbolized the Virgin Mary. Following a decree of Louis VII in 1147, the *fleur de lis* became connected with the monarchy and started to appear on royal seals. However, the motif is far from exclusively connected with the French throne: 20 armorials of the 13th-15th centuries depict no fewer than 6,000 examples, with the majority concentrated in northern France, and especially Brabant (Kingsley, 2008).

B. A French Glass Flaçon

Study of the blue glass sherd and glass bottle neck fragments located adjacent to cannon C-22 has revealed another French connection for Site 33c (Figs. 64-66). The dimensions of the neck of bottle MUN-A-08-0002-GL are:

- Fragment L. 5.0cm
- Fragment W. 4.0cm
- Mouth Diam. 2.7cm
- Lip Th. 0.7cm
- Body Th. 0.3cm

Both derive from a type of glass known as '*verre bleu*' or '*verre fougère*' manufactured mainly in southern France. As the name infers, *verre fougère* glass wares were produced from a mixture of sand and potash derived from the ashes of ferns (McNally, 1979: 2). The southwestern forest regions of Gresigne in Languedoc, in particular, were important glassmaking areas between the 15th and 18th centuries (Van den Bossche, 2001: 227, 397), where wood and fern resources were abundant. Burnt fern contains high quantities of potash, which is a basic alkali ingredient

in glass making that produces a typical blue-green color, hence the term '*verre bleu*' or '*verre fougère*' for these wares (cf. Chopinet, 2004).

However, in reality a scientific analysis of a blue-green bottle fragment has identified glass composition relying on soda-lime. Soda was more readily available in the coastal regions of France, where it could be produced from the ash of various seaweeds. By contrast, potash was more accessible in the form of bracken and wood ash in the interior, and was more economical for the *petites verreries* (Harris, 1979: 89).

Blue-green bubbled glass *verre fougère* case bottle *flaçons*, mouth-blown into dip-molds and similar to the Site 33c fragment, reached peak popularity in the mid-18th century (Hume, 1969: 70). The base from a bottle of this form has been recovered from the wreck of La Natière 2, a French privateer lost off St. Malo in 1749 (L'Hour and Veyrat, 2002: 96), and the form traveled widely into the French provinces. Examples are common across America from Nova Scotia to Michigan and Charlotte.

This form of glass, for instance, has been excavated in a latrine pit abandoned in 1719 at the fort and chateau site of St. Louis in Canada² and, more extensively, has been documented across the Fortress of Louisbourg in two French occupation periods (1713-45 and 1749-50). The Site 33c example is identical to Louisbourg's Type 5 *flaçon* with its short tubular neck and a very gently outward-sloping neck wall. Lip diameters vary from 3.0-3.2cm (with bore diameters of 1.7-2.2cm), neck heights are 3.0-3.2cm and shoulder diameters range from 7.0-9.0cm (Harris, 1979: 100, 134). French *flaçons* also traveled inland in the Americas up the Illinois River valley.

Flaçon bottles were present amongst the galley remains excavated on the *Machault*, lost in 1760 on the Restigouche River, Canada, which interestingly was another Bordeaux privateer. An identical neck of a *flaçon* with a cork still inserted in its mouth is associated with the wreck of the *Queen Anne's Revenge*, lost in Beaufort Inlet, North Carolina, in June 1718 (Carnes-McNaughton and Wilde-Ramsing, 2008: fig. 2), amongst 402 fragments of comparable square case bottles. With a lip diameter of 2.8cm, its mouth is just 1mm smaller than the Site 33c example. Records from Louisbourg suggest that these bottles contained olive oil, while scientific studies of contents and preserved labels indicate broader contents of apothecary and household products, toilet water, perfumes and spirits.

Verre fougère tablewares were produced in small wood-burning glasshouses in France, which typically possessed just one furnace and four to six pots utilized to melt glass. These small ventures commonly employed no more than 20 people. Some *petites verreries* specialized solely in glass

bottles, while others manufactured a broader set of tablewares and window glass, where bottles were a sideline. The more ambitious *petites verreries* produced large and small bottles, bowls, condiment containers, decanters, tumblers, goblets, inkwells, lamps and lamp chimneys, pitchers, plates, urinals, and vases in both clear and blue-green glass. In the first half of the 18th century they may also have supplied the perfumeries of southern France and the growing export trade in toilet waters. Records refer to a variety of items shipped in glass to the colonies, ranging from olives to anchovies, capers, marinated tuna, olive oil, vinegar, liquors, *eau de vie* and toilet water (Harris, 1979: 87-88).

The Site 33c type of bottle was also produced in the larger *grosses verreries* of Normandy and northwestern France, but in a heavier coarser green glass (*gros verre*) favored in the mineral water, liquor and wine trades. These ventures were owned and operated by *gentilshommes verriers*, minor nobility who employed common workers. A typical Normandy *grosses verreries* of 1740 would produce 70 tons of common green glass for every 150-200 tons of window panes.

Excavations conducted at Louisbourg since 1960 have uncovered 1,200 vessels of blue-green bubbled glass, of which imported French *flaçons* comprise 70% of the glass sample and occur in at least nine different types and several sizes. A combination of the archaeological evidence and local historical sources indicate that these wares were coveted by the upper and middle classes – king’s officers, merchants, *habitant-pecheurs* and inn keepers – but were not accessible to the lower level inhabitants (Harris, 1979: 93, 100).

A curious secondary use for French *flaçons* was recorded by Lieutenant Maynard during the pirate Blackbeard’s final battle in the late 1710s (Carnes-McNaughton and Wilde-Ramsing, 2008: 16):

“When the lieutenant’s sloop boarded the other, Captain Teach’s men threw in several new-fashioned sort of grenades, viz., case bottles filled with powder and small shot, slugs, and pieces of lead or iron, with a quick match at the end of it, which, being lighted outside, presently runs into the bottle to the powder. As it is instantly thrown on board, it generally does great execution, besides putting all the crew into a confusion...”

The meager glass small finds from the wreck of *La Marquise de Tourny* complement the emerging image of French domestic wares closely reflecting the national origins of this French privateer.

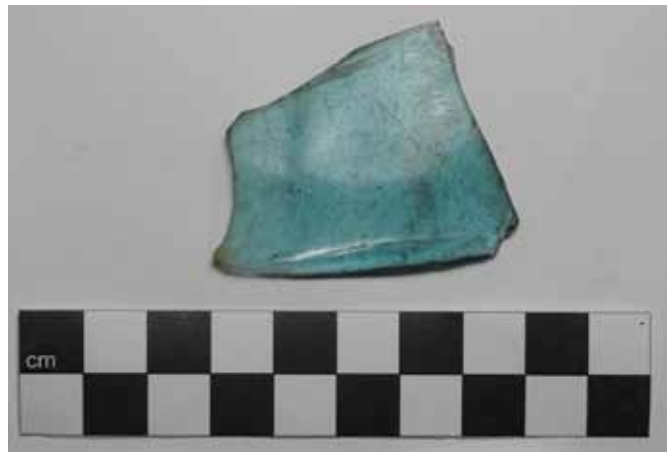


Fig. 64. A fragment of blue verre fougère glass found adjacent to cannon C22.



Figs. 65-66. The neck of a blue verre fougère glass case flaçon (MUN-A-08-0002-GL) found adjacent to cannon C22, in situ and after recovery.

C. Lead Hull Patches

One lead patch fragment was recorded on Site 33c on the edge of concretion Con-4, and a second example with two nail holes visible on the outer edge was recovered from the site (inv. no. MUN-A-08-0001-SF; Fig. 67): L. 20cm, W. 18cm and Th. 0.5cm.

Lead has long been used to protect and patch ships' hulls. The Romans, Portuguese, Spanish, and later the English all relied on this system. Lead was used to line parts of the sternpost and the rear face of the rudder and to protect parts of the anchor (Lavery, 1987: 61, 62), but more extensively to create a sealing layer between Teredo shipworms and the wooden hull below the waterline.

Both lead patches from Site 33c feature nail holes and most probably functioned as hull repair or protection patches for parts of the hull. No evidence that the hull was fully, or indeed significantly, sheathed in lead or copper has been detected. The absence of large-scale coppers on Site 33c reflects a likely pre-1779 date for the ship. Following the Royal Navy's successful experimental sheathing placed over the lower hull of the 32-gun frigate the *Alarm* in 1758, coppering became standard on British warships and across Europe in 1779. By 1782 Admiral Rodney was able to attribute much of his success over the French navy at the Battle of the Saints to the greater speed and maneuverability achieved by the Royal Navy's coppered ships (Bingeman *et al.*, 2000).

By the time *La Marquise de Tourny* was launched in 1744, the use of lead to patch leaking or vulnerable hulls was well over 1,500 years old. First used on the later 4th century BC Kyrenia shipwreck lost off northeast Cyprus,

whose entire outer hull was sheathed with lead affixed by regular rows of copper tacks (Katzev, 1970: 9), lead sheathing in various scales became common practice for all nations. Historical and archaeological data indicate that lead sheathing was commonly, if not universally, applied to Portuguese and Spanish ships voyaging to the East and West Indies during the 16th century.

The 'Angra B' Iberian 16th or 17th century wreck documented off Porto Novo in the Azores was lead lined (Crisman, 1999). Thousands of fragments of lead sheet (0.5-0.9mm thick with a weight of 6.57kg per square meter) are associated with the scattered remains of the *Santa Margarita*, a *naos* of the *Tierra Firme* fleet lost off Florida Keys in 1622. An estimated vast 2,134kg of lead, or 325 square meters, would have been required to sheathe this ship (Malcom, 2000-2001).

Due to its weight, lead became less popular in the 18th century as a means of entirely sheathing lower hulls, although patching endured, as recorded on the 1718 wreck of the *Queen Anne's Revenge* in Beaufort Inlet, North Carolina (Welsh, 2008: 2). Of comparable age and nationality to Site 33c, rolled strips of lead have been recovered from the outstandingly preserved early 18th-century corsair wrecks of La Natière off St. Malo, France, alongside 1ft-square lead sheets pre-coated with oakum in preparation for repairing hulls (L'Hour and Veyrat, 2003: 316).

D. Iron Swivel Gun

Following the recovery of the swivel gun from Site 33c, the artifact was weighed and documented, providing the following measurements (Fig. 69):

- Total L. 85.5cm
- First Reinforce L. 26.0cm
- Second Reinforce L. 18.0cm
- Chase L. 36.0cm
- Muzzle L. 5.5cm
- Bore Diam. 4.0cm
- Trunnion L. 4.0cm, Depth 3.5cm
- Breech L. 3.8cm
- Base ring L. 17.5cm, W. 1.0cm

The surface of the gun was kept wet while the concretion layer was removed mechanically on board the *Odyssey Explorer* research ship, revealing iron surfaces bearing incised symbols on the first and second reinforces. The iron surface was soft and brittle, suggesting that the cast iron had undergone graphitization. The conservation plan for the gun, which was dispatched to the York Archaeological Trust, included the removal of the remaining concretion



Fig. 67. Lead patch MUN-A-08-0001-SF (L. 20cm).



Fig. 68. Swivel gun C-10 after safe recovery onto the deck of the Odyssey Explorer.



Fig. 69. Swivel gun C-10 after preliminary cleaning.

followed by desalination using a combination of electrolytic reduction and intensive washing using caustic soda as a corrosion inhibitor. Once chloride levels had been reduced below 50ppm, the gun was to be dried and coated with a corrosion inhibitor, such as tannic acid. The fractured cascabel was to be treated in a similar manner and adhered back in place.

The muzzle was found damaged, so the concretion covering that section of the gun was left untouched to be removed under conservation laboratory conditions. To determine the caliber, the trunnions were measured at 4.0cm wide, which converts to an imperial measurement of 1.57in and equates to a half-pounder cannon, most likely a swivel gun. No evidence of any swivel mountings or tillers was observed or discovered during the excavation of this gun, but may be associated with C17 (Fig. 34).

Swivel guns are small pieces of artillery that were mounted on a swiveling stand or fork and rotated to be aimed in some cases using a tiller fitted to the cascabel end. Average lengths of such guns were 34-36in with bores of 1.5-1.75in. They were in effect a short-range anti-personnel weapon that typically fired shot weighing 0.50-0.75lbs and grapeshot (Tucker, 1989: 98).

Used as portable wall artillery in land fortifications, and as an early form of ordnance at sea, swivel guns can be traced back to the late 14th century. By the end of the 17th century thousands of naval vessels, privateers and merchant vessels were armed with this type of ordnance. On many small warships they comprised a major component of the primary armament. Privateers and pirate ships carried swivel guns as their only ordnance because their objective was to capture ships intact and to avoid sinking them (Gilkerson, 1993: 50, 58, 76).

They made versatile weapons and were mainly situated on stanchions or on the rails at the high ends of a vessel and along the main deck. On warships they were mounted on platforms between the lower mast and topmast. In these positions they could be used effectively to rain fire down on the main deck of a vessel. Steel's 1794 treatise *The Elements and Practice of Rigging and Seamanship* illustrates the only known plan of a top platform with accommodations for a swivel battery of a Royal Navy 38-gun frigate (Gilkerson, 1993: 75, 80, 82). Two swivel guns to each top platform was standard issue in the French Navy by the end of the 18th century. These locations were very effective, as exemplified by the famous rail-to-rail engagement of John



Fig. 70. Detail of a gunner's 'V' near the muzzle and a fleur de lis crudely incised onto the first reinforce of swivel gun C-10.



Fig. 71. Detail of a second fleur de lis crudely incised onto the second reinforce of swivel gun C-10.

Paul Jones's French vessel the *Bonhomme Richard* against HMS *Serapis* in 1797 off the northeast coast of England (Gilkerson, 1993: 83).

This gun type was not only a weapon of war. Swivels were used on the quarterdeck of a ship for signaling duties, for the recall of boats and shore parties, and as a signal to warn of danger, such as fog, icebergs and reefs. By 1812 their design had generally changed towards shortened, thickened and simplified forms (Gilkerson, 1993: 62).

Other than the *fleur de lis*, no further markings, names or dates were present on the Site 33c swivel gun. Full conservation may reveal more information. The most common marks recorded on these guns denoted their dead-weight. In France and the Netherlands the weight of a gun was marked in pounds. The fact that a French pound weighed more than an English pound, but not as much as a Dutch pound (Gilkerson, 1993: 63), sometimes enables gun nationalities to be determined. Makers' marks, dates and weights were often incised onto the face of a trunnion, but both these and other numbers and marks can appear elsewhere. One of the trunnions on the Site 33c swivel gun was unfortunately broken prior to the wreck's discovery, and so any associated information is lost.

The *fleur de lis* motif encountered beneath the gun's concretion displays the hallmarks of mid-18th century manufacture. The symbol was a common sign used by royal foundries before 1789, incised or cast onto the cannon or cast on one trunnion alongside two letters representing the name of the foundry (Chartrand, 2003: 39-40). By 1748 the French cannon foundries were in a bad state for a number of reasons (Pritchard, 1987b: 145). The exclusive right to supply cast-iron guns to the navy disappeared with the demise of the Landouillette de Logiviere family, whose monopoly led to the loss of skilled labor at the forges and coincided with a decline in the size and arming of the naval fleet after 1715. The War of Spanish Succession ended in 1713, and France was preoccupied with economic and naval recovery rather than manufacturing guns.

The nationality of the Site 33c gun remains an unanswered question. Rudolf Roth (pers. comm. March 2010) has suggested that it resembles a Swedish half or three-quarter pounder swivel gun of the mid-18th century. These were manufactured in large quantities for export to the Dutch and British. If the Site 33c swivel gun is a Swedish product, then its presence on *La Marquise de Tourny* would suggest that it was reused following capture from a prize of war, possibly a Dutch or British ship. The *fleur de lis* symbols on the cannon are very crudely incised and not centered. Roth suggests that their shape could have served to disguise a former VOC mark.

Alternatively, the Site 33c cannon could be a French

iron swivel gun, a larger version of which is preserved at the entrance to the harbor of Bequai Island, south of St. Vincent in the West Indies (Charles Trollope, pers. comm. March 2010). Throughout the 18th century the French lost large numbers of their guns to the British, who considered them low grade and dangerous. After the War of the Austrian succession these captured French guns were sold back to the enemy, but after the Seven Years War were melted down for cannonballs and used in action against the French in later wars.

Considering that *La Marquise de Tourny* was built and based in Bordeaux (see Section 10 below), it would be reasonable to conclude that Site 33c gun may have been manufactured in one of France's royal foundries, such as Rancogne, Planchemenier or Perigord in southwestern France.

The cannon assemblage on Site 33c is of high archaeological and historical significance because few examples of French iron cannon from this period survive. Further study of the swivel gun, and the possible future recovery and identification of a larger cannon from the wreck, may add to the compelling history of French cannon manufacture and use on a mid-18th century privateer.

9. Site 33c: The Ship's Origins

The core question of the historical identity of *La Marquise de Tourny* and the background of the ship that bore her name can be traced to Bordeaux in France. In the 18th century Bordeaux was the largest and most important city in the southwest of the country. The end of the War of Spanish Succession in 1713 was a significant event that facilitated its growth, liberating its merchants who vigorously participated in the expanding trade with the French West Indies.

Bordeaux's riverine port and merchant quarters were transformed into a vast international center of trade and trans-shipment. Commodities from all over France and northern Europe streamed into town, where they were stored and eventually exported to the West Indies, including wine, olive oil, silk, wheat, machine parts and cannon made in the foundries of nearby Perigord. Bordeaux supplied the French West Indies with the majority of its vital necessities during the 18th century.

Sugar and coffee were brought back to France by the Bordeaux merchants and, along with other Colonial goods, were re-exported to England, Ireland, northern Europe and throughout France. Many other European trade goods were also imported into Bordeaux on returning vessels. No other French port city came close to matching Bordeaux's trade supremacy, and many of the merchants became wealthy from maritime commerce (Auerbach,



Fig. 72. A portrait of Louis Urbain Aubert de Tourny, royal 'intendant' to Bordeaux between 1743 and 1757. From: L'Héritier, 1920.

2000: 144, 151-57).

Under French law royal agents who served the king in each of his provinces were classified as 'intendants' and were relied on to achieve administrative unification and centralization under the French monarchy. Their authority extended over every sphere of provincial administration. Bordeaux's intendants were collectively known as '*de grands administrateurs*' and it was under their guidance and tutelage that the city was transformed into a modern com-

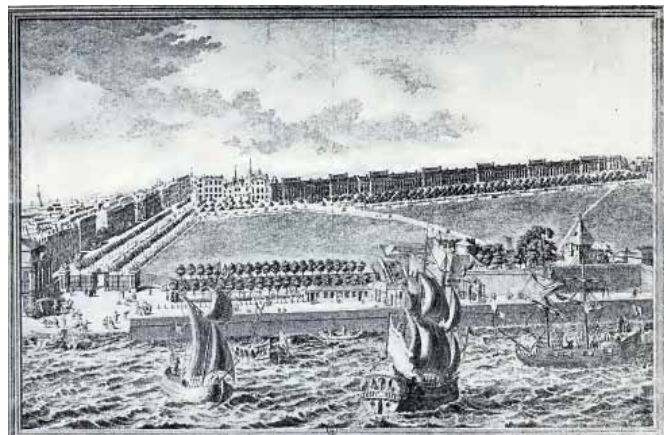


Fig. 73. View of the promenades of Bordeaux from the sea. The Marquis de Tourny developed the town into one of the finest in France. From: Binaud, 1999.

mercial hub. Directed by the province's three most famous intendants, namely Boucher (1720-1743), Tourny (1743-1757) and Dupré (1776-1785), the port city developed from a cramped medieval town into a spacious modern city (Auerbach, 2000: 140).

The second of Bordeaux's three famous intendants, Tourny (1743-1757), was the dignitary in whose honor *La Marquise de Tourny* privateer was named (Auerbach, 2000: 140). Louis Urbain Aubert de Tourny was born in Andelys in 1695 and died in Paris in 1760 (Fig. 72). Initially Master of the Requests, in 1730 he became governor of Limoges and in 1743 rose to the position of Governor of Guyenne to Bordeaux. Tourny was named as Councilor to the State in 1757. The Marquis De Tourny can largely be credited with transforming Bordeaux into the most beautiful city in France (Fig. 73), expanding the quays on the Garonne, creating wide avenues, open spaces, public gardens and building a prominent theater (Auerbach, 2000: 140).

It was customary, if not especially common, for the powerful merchants of Bordeaux to lend the name of their wives to privateers (L'Héritier, 1920: 200), such as *La Marquise Damon* mentioned in texts of 1748-50, *La Marquise de Cassigny* (1781) and *La Marquise de Lafayette* (1782) (Binaud, 1999). From the name on the bell of Odyssey's Site 33c, and from the date of 1744 molded onto it, it is reasonable to conclude that a local privateer was named after his wife, *La Marquise de Tourny*. Historical documentation to a vessel bearing this name endured into the late 18th century, when sources referred to a frigate being built in imitation of the construction plans of *La Marquise de Tourny*, which was upheld as a fine example of a corsair built for speed that later ships needed to replicate (Ducère, 1895: 301-302). This reference, although a little ambiguous, also discusses the placement of guns on the first or second deck of vessels.

10. The Life & Times of *La Marquise de Tourny*

Current information available about the frigate *La Marquise de Tourny* is vague. A published record of the ship's life (Binaud, 1999: 279-81) contains omissions for 1744, when the ship was likely built and launched, for 1748, and for the crucial date of her loss. According to the Bordeaux archives, *La Marquise de Tourny* was built by Geslain from the port of Rochefort, was owned by Dubergier and Audat (Beaurepaire, 2002: 304) and was classified as a 460-ton frigate (Archives départementales de la Gironde, 6B 98 157v). Launched during the War of the Austrian Succession, *La Marquise de Tourny* inevitably

functioned as a privateer with an official letter of marque from the war commission (as in Fig. 74), but was simultaneously on merchant service (Table 3).

Very little is known about the movements of this ship and the record is complicated further by the existence of two other contemporary privateers bearing an almost identical name. Alongside *La Marquise de Tourny* existed *Le Marquis de Tourny*, named after Louis Urbain himself and listed in 1746 as under the command of Captain Joseph Mallac and owned by Alauze & Co. Finally, *Le Grand Marquis de Tourny* is referred to in Bordeaux in 1756, owned by Pierre Baour and sailed under Captain Louis Boyries (Binaud, 1999: 280, 281). The name of this latter ship was no doubt an homage to the 'greatness' that the Marquis had brought to a now fully rebuilt Bordeaux.

To reconstruct the life and times of *La Marquise de Tourny* – the least known of the three ships bearing this general name – it is essential to examine the other two, for which far more extensive historical evidence survives. Research in the French-Canadian archives has revealed the complex history of the movements of *Le Marquis de Tourny* in 1748, which serves as a key touchstone for the life of its sister ship.

Entries for 26 January 1748 confirm that the brother ship was scheduled to sail to Quebec in Canada with a crew of 47 (Archives départementales de la Gironde 6B 309 119v). An entry dated 4 September 1748 cites a letter sent by a M. d'Ailleboust to a government minister, which detailed the loss of provisions and trouble imposed on d'Ailleboust (Archives nationales d'outre-mer, COL C11A 92/fol.331-332v). Records dating to 12 October and 27 October 1748 refer to losses incurred when the vessel was taken as a prize. Further correspondence of 29 October describes merchandise lost aboard the vessel (Archives nationales d'outre-mer, COL C11A 92/fol.137). The ship seems to have made such heavy losses that at an undated point in time between 1745 and 1749 a petition was produced in Bordeaux for the return of merchandise seized from *Le Marquis de Tourny* (Binaud, 1999: 58).

La Marquise de Tourny, by contrast, proved relatively successful as a privateer, capturing the following merchant vessels from the English and Dutch enemy:

- The *Fitney*, 1746 (Bordeaux Archives, 6B 1991)
- The *Bonne Esperance* of Amsterdam, 1746 (Bordeaux Archives, 6B 1990)
- The *Charleston* of Liverpool, 1746 (Bordeaux Archives, 6B 1989)
- The *Mortimer*, 1747 (Bordeaux Archives, 6B 1992)



Fig. 74. The letter of marque dated 26 January 1748 for the privateer Le Marquis de Tourny, the brother ship of the vessel wrecked at Site 33c, (PRO HCA 32/129).

In turn, French ships were ready prey for the enemy in the War of the Austrian Succession (cf. Kingsley, 2010) and although the avoidance rate of *La Marquise* remains unknown, certainly *Le Marquis de Tourny* ran into serious trouble. An entry of April 1748 in the *Gentleman's Magazine* (1748: 174) records that:

“The Marquis de Tournay, 500 tons, 20 guns, 180 sailors besides soldiers, from Bordeaux to Canada, with naval stores, and sale goods, taken by London privat. and brought to Portsmouth.”

The detailed itinerary of this privateer in the first quarter of 1748 is clarified by French manifests and bills of lading seized along with *Le Marquis de Tourny* and enclosed in a mail sack labeled “Messieurs Fatin & Compagnie, Notaire Royale Place STE Colombe à Bordeaux. Double Alliance.” After being taken by the *London* privateer, all of these communications were translated into English and this rich archive survives in the Public Records Office at Kew (PRO HCA 32/129). The complex web of manifests provides a fascinating possible comparative window into the otherwise unqualified movements of the ship wrecked at Site 33c.

Headed for Quebec under the command of Laurens

Domé, *Le Marquis* evidently never made it out of home waters. According to a bill of lading signed at Bordeaux on 29 January 1748, *Le Marquis de Tourny* had taken onboard a consignment of men’s shoes, boots, shirts, handkerchiefs, stockings, Sogovia caps and linen from Brittany, Ucholet and Laval. To this were added fishing lines, linen and metal wares on 2 February. By 2 April a further bill of lading signed at Rochelle reveals that the corsair was lying off L’Isle d’Aix on the west coast of France and had just loaded a further 34 barrels of shot.

The same documentation includes an invoice for Bordeaux wine, salt pork, salt and flour laden on *Le Tourny* intended to re-stock foodstuffs consumed on the king’s frigate *La Frippone* by 30 passengers during the pending 80-day voyage from France to Quebec. Captain Domé was charged with delivering the provisions upon the order of Monsieur de Tilly. The receipt for these outward goods, in a convoy in which *Le Marquis de Tourny* and the frigate *La Frippone* were presumably sailing together, was signed by Captain Domé at Rochefort on 18 March 1748.

A further bill of lading for yet more wine, brandy, salt pork, olive oil and vinegar was signed by Captain Domé at Rochefort on 22 March 1748 and seems to refer to provisions intended for the *Laurent*, which was being fitted out at Quebec and for which *Le Marquis de Tourny* was charged

Captain	Ship	Commission	Date	Ship-owner	Prizes Taken
Jean Blondel	<i>La Marquise de Tourny</i>	War	Jan 1745	Dubergier & Audat	
Louis Terie de Clermont (Prevost)	<i>La Marquise de Tourny</i>	War	1746		3
Julien Gusliez & Guillaume Masselous (Prevost)	<i>La Marquise de Tourny</i>	War	1747		1
Barthes	<i>La Marquise de Tourny</i>	War	1749		1

Table 3. History of *La Marquise de Tourny* as cited in official documentation of Bordeaux (tabulated from Binaud, 1999: 279-81).

with delivering provisions into the king's warehouse. A final consignment of linen was added on 6 April 1748 as the ship was anchored off L'Isle d'Aix.

The frigate was clearly on a war footing in this voyage, delivering staple military foodstuffs to French Quebec, as well as carrying luxury clothing. Legal oaths made by the Customs Officers Robert Knipper and Joseph Seal Tidesmen in the port of Portsmouth confirm that *Le Marquis de Tourny* was boarded there on 23 April. This outward-bound Bordeaux privateer was thus lost between the second and third week of that month.

If these largely organic commodities provide a comparative understanding of the outward-bound goods, itinerary and geography of *La Marquise de Tourny* during the War of the Austrian Succession, what consignments did the Bordeaux corsairs return home with from the French colonies? The seizure of *Le Grand Marquis de Tourny* as a prize by the *Liverpool* privateer on 18 June 1757 reveals that this ship was inward bound to Bordeaux from St. Domingo with a cargo of sugar, coffee, indigo and logwood valued at £20,000 (*Gentleman's Magazine*, July 1757: 337; Williams, 2004: 127-8). This was a typical cargo composition for incoming French merchant vessels and corsairs.

However, the final resting place of *La Marquise de Tourny* lies around 50km off the English coast and approximately 60km west-northwest of Guernsey (Fig. 3). She was evidently not outward bound to the French Colonies of the Americas, nor to the West Indies, and was too far east to have been heading directly home for Bordeaux (unless she encountered extreme storm trouble). The implication is that *La Marquise* may have been involved in a short-haul mercantile venture when disaster struck.

One conceivable explanation of what this French priva-

teer was doing in the western English Channel when she foundered may lie in the town of St. Malo on the north-western coast of France, south of the Channel Isles. St. Malo was a renowned center for merchants, sailors and privateers and, for centuries, was involved in private wars with the Channel Isles (Timewell, 1970: 205). The French privateers of St. Malo ran highly successful operations and were seen as a great threat to English and Dutch shipping. It is possible that *La Marquise de Tourny* was carrying a shipment of supplies for St. Malo or was transporting goods to the French Channel ports of Cherbourg, Dunkirk or Calais further east up the English Channel when trouble struck.

In association with the 25 cannon recorded on the wreck, Site 33c contains 13 large concreted features (Fig. 6), which appear to comprise iron ballast ingots (167 single pieces visible with a total on-site volume estimated at 500-600). These features display the following dimensions:

- Concretion-4: average ingot length 60-80cm
- Concretion-7: average ingot length 60-70cm
- Concretion-10: average ingot length 80-90cm
- Concretion-13: average ingot length 70-80cm
- Average widths of all these objects: 10-20cm

The ballasting of mid-18th century merchant vessels, frigates and warships is not a well documented subject. Certainly the Royal Navy's lack of iron ballast surprised the French master shipwright Blaise Ollivier during his trip to Britain's dockyards in 1737 (Roberts, 1992: 167-9):

"They do not use iron kentledge to ballast their ships save for long commissions, and in those ships which have insufficient space in the hold to accommodate earth ballast. I confess

that when I saw at Deptford Dockyard that great quantity of kentledge of which I spoke... I believed that the English knew how to make good use of it... I have asked the reason of several officers; they replied that iron ballast stiffens all the movements of the ship, especially the rolling. Upon receiving this reply I enquired as to how the ballast is stowed, and was shown it on either wise of the keelson to larboard and to starboard of this timber. We used to find the same inconvenience in our own ships when we stowed the ballast as the English do, but now that we lay it along the rungheds our ships have an easier motion. The English admit that if iron kentledge did not make the movement of their ships so harsh it would be more advantageous to ballast their ships with kentledge than with gravel or earth, since the weight of the iron is farther removed from the centre of motion, and because the weight of the stores stowed atop the ballast is carried lower down."

In contrast to Ollivier's dismissal of Britain's unsophisticated ballasting system, other scholars consider Britain to have exceeded France's knowledge. Franck Goddio has thus argued (1999: 95) that "the English technological advance in iron and steel compared to France, where in the middle of the 18th century, ballast comprised scrap cast iron cannons and old obsolete cannonballs, to which 50-100 lb. pigs of iron were only added around 1760".

In reality, archaeology has demonstrated a near concurrent evolution. Iron ballast pigs comparable to those highly conspicuous on Site 33c have been recorded on the 1744 and 1748 wrecks of the Royal Navy warships *Victory* and *Fowey* (Cunningham Dobson and Kingsley, 2010: 245-7; Skowronek *et al.*, 1987: fig. 3). On the wrecks of multinational long-distance merchant vessels dated very closely to *La Marquise de Tourny*, iron ballast has been recorded on the 600-ton French East Indiaman the *Prince de Conty*, lost off Brittany in 1746 (L'Hour and Richez, 1990: 75), and also on the *Sussex*, an English East Indiaman wrecked at Bassas da India in the Indian Ocean in 1738 (Bousquet *et al.*, 1990: 83).

Revealing data relating to ballasting merchant vessels with such kentledge has been recorded on the wreck of the *Griffin*, a 499-ton English East Indiaman built in the Blackwall dockyard in 1761 and sunk in the Sulu Sea, the Philippines. The ship was loaded with 30 tons of iron ballast of widely varying dimensions (set on a bed of stone ballast), with lengths of 38-101cm and weights of 23-122kg following the removal of concretion. All of the pigs bear mold marks of 'Elk Ridge', named after a foundry established by Caleb and Edward Dorsey in the county of Howard in Maryland, USA. In 1761 this colony had eight main furnaces producing 2,500 tonnes of cast iron and ten foundries casting 66 tonnes of iron bars (Goddio, 1999: 95-7).

The iron bars recorded across the surface of Site 33c are very similar to the *Griffin* site and, in conjunction with the absence of any visible cargo, are compatible with the shipment of an organic consignment such as *Le Marquis de Tourny* was transporting in 1757 and which typified those imported from the Americas and West Indies back to France. Whether or not this kentledge was of saleable or permanent form cannot be proven except perhaps with the recovery and study of select examples (cf. Kingsley, 2010 for further comparative analysis).

In conclusion, the evidence suggests that *La Marquise de Tourny* was built in 1744 and remained active until at least 1749, after the War of the Austrian Succession ended in April 1748 with the Treaty of Aix-La-Chapelle. She outlived the war, after which the letters of marque dried up. The privateers had retracted their guns. By reverting to a typical long-distance merchant vessel, uninvolved in matters of State, the unspectacular movements of *La Marquise de Tourny* are unlikely to have been chronicled beyond the ship captain's logs and customs books.

Since the economy of the privateer involved seizing enemy ships intact and forcing them into a home port, the logical explanation is that *La Marquise de Tourny* ended her life wrecked by a storm at the end of the 1740s or in the early 1750s. If she was still plying the seas in 1756, when the Seven Years War started, it seems reasonable to assume that her adventures may have appeared in contemporary literature.

11. French Frigates & Corsairs

Corsairs such as *La Marquise de Tourny* were light and nimble three-masted frigates with the majority of their armament set on a single gun deck, but with additional guns on the poop and forecastle. The number of guns carried varied between 20 and 56, but 30 to 40 was most common. The term 'frigate-built' implies the disposition of the decks of such merchant ships featuring a descent of four or five steps from the quarterdeck and forecastle into the waist of the vessel, as distinct from those whose decks were built on a continuous, uninterrupted line along the entire length of the ship, which are termed 'galley-built' (Falconer, 2006: 160).

Frigates could not compete militarily with ships of the line in naval engagements, but their design enabled them to sail at greater speed, which made them perfect scouts or escort vessels for protecting merchant convoys from other privateers. They also cruised the oceans as merchant raiders in their own right and were the choice of vessel for privateers because of their speed and maneuverability.

It was the opinion of many 18th-century naval officers

that French warships were the finest in the world (Pritchard, 1987a: 1). In general, French frigates had a reputation for being faster than British frigates in optimum sea conditions, but were usually less suited to heavy weather or long-distance cruises. British ship captains were attracted to the capture of French frigates because they brought in greater prize money than those of other nations (Saxby, 1993: 334-35). In 18th-century Britain it became common practice to convert captured prizes into naval vessels and, in some cases, these vessels were exploited as templates for the construction of English ships (Pritchard, 1987a: 1).

The following ships are examples of captured French frigates dating to the era of *La Marquise de Tourny* that became Royal Navy vessels. The *Médée* is a significant example of a prize sold on as a privateer (Boudroit and Berti, 1992). It was also the first modern single-decked frigate to mount 26 8-pounder cannon (Pritchard, 1987a: 12).

- *Médée*: a 26-gun design by Blaise Ollivier, with 26 x 8-pounder guns, launched February 1741 at Brest; captured by the Royal Navy on 4 April 1744 and sold on as the privateer *Boscawen* rather than added to the Royal Navy.
- *Panthère*: a one-off 20-gun design of 1743 by Jacques-Luc Coulomb, with 20 x 6-pounder guns, launched February 1744 at Brest; captured by the Royal Navy in 1745 and converted into HMS *Amazon*.
- *Volage*: a 24-gun design by Pierre Morineau, with 24 x 8-pounder guns, launched 1 April 1741 at Rochefort; captured by the Royal Navy on 4 April 1746, but retaken by the French the following day and deleted from record books on 1753.
- *Renommée*: launched 19 December 1744 at Brest; captured by the Royal Navy on 27 September 1747 and converted into HMS *Renown*.
- *Emeraude*: a 28-gun design by Chaillé with 24 x 8-pounder and 4 x 4-pounder guns. Launched on 10 June 1744 at Le Havre, captured by the Royal Navy on 21 September 1757 and converted into HMS *Emerald*.

The above corsairs, as well as *La Marquise de Tourny*, were operative during the War of the Austrian Succession, which began in October 1739 but was just the latest in the endemic hostility between Britain and France between 1689 and 1815. At the start of this conflict the Royal Navy was far superior in strength to the French Navy, having a force of 110 ships of the line compared to France's 35 men-of-war. The French navy was so stretched providing escorts for its convoys that its corsairs emerged as an independent tool of combat to cripple trade, just as they had done during the War of Spanish Succession of 1701-14 (Russell, 1970: 33).

Privateering can be traced back to the medieval period. Essentially it emerged as a system whereby a person from one country who had been victimized by an individual of another nationality could seek compensation for his losses. With a government license known as a 'letter of marque and reprisal' (cf. Fig. 74), ships could be armed and search out merchant ships of the offending country for seizure as 'prizes'. This entitled the 'prize takers' (privateers) to sell the captured ship and cargo at auction and pocket the proceeds, which would then be divided between captain and the crew. Initially privateering was designed for effecting private compensation on the high seas, regardless of whether or not a state of war existed between nations. However it soon evolved into an instrument of war in its own right (Sechrest, 2001: 6).

A vessel with a letter of marque could act in two ways. Firstly as a privateer whose sole purpose was to seek out and capture vessels of enemy nations or, secondly, as a merchant vessel primarily transporting cargo but which was sufficiently armed should the opportunity arise to take a prize (Sechrest, 2001: 7-8). Either way, privateering followed a strict code of rules based on naval standards (cf. Kingsley, 2010). Those who failed to adhere to these regulations, or were not in possession of a letter of marque, were branded as pirates, which was punishable by death. French privateering was so respectable and profitable that the Catholic bishops of St. Malo and Nantes retained financial interests in such enterprises (Russell, 1970: 23).

Historical records indicate that the majority of French privateers were privately owned. However, vessels and officers of the French navy were sometimes seconded to private individuals and consortiums that ran privateers. In these cases the cost of such operations was met by the State, but the wages and victualing were the responsibility of the privateer (Timewell, 1970: 200).

12. Guernsey Privateers

For many centuries the Channel Isles were a major center of smuggling. During wartime the islanders indulged in privateering and in peacetime smuggling (Saunders, 1930). Both England and France smuggled goods through the Channel Isles and through this entrepôt traded with each other, even during war.

Guernsey, the second largest of the Channel Isles, located 48km west of Normandy, lies close to the wreck site of *La Marquise de Tourny*. During the 150 years of almost unabated hostilities between the reign of King Louis XIV and the end of the Napoleonic era, the sailors of Guernsey were actively engaged in privateering and were a scourge to French trade (Timewell, 1970: 199). Their most notable

success was the seizure of *La Vierge du Bon Port*, an East Indiaman lost off St. Malo in 1666.

The Guernsey corsair came into prominence during the War of Spanish Succession (1701-14), when their main role was preventing French privateers from disrupting England and Holland's maritime trade. During this war the Guernsey privateers took 608 French prizes and their neighbor, the island of Jersey, seized a further 152 (Russell, 1970: 30). In most cases the firing of cannon warning shots was sufficient to induce the surrender of a potential prize.

What made the Guernsey privateers so successful was their geography: located close to the French coast, they had an intimate knowledge of local waters. With small and fast vessels at times acting in threes, they were expert at forcing the chase aground and then hauling her off with the tide (Timewell, 1970: 205). For the Guernsey privateers, ships carrying naval stores destined for Calais, Dunkirk, St. Malo and other French ports were common prizes, but the most sought after and lucrative prey were inward bound European craft making for Bordeaux, Nantes and Rochelle – precisely the route sailed by *Le Marquis de Tourny* and likely its sister ship wrecked at Site 33c. The captain of *La Marquise de Tourny* would have been wary of the threat of the Channel Isles as a natural and, at times, human hazard as he navigated these waters during what would turn out to be the ship's final voyage.

13. Privateering Engagements

Privateers operated under a code of rules. Their main aim was capture and not destruction. Such an approach transferred ownership, but left the property intact. Privateers used various methods to range alongside their targets (sailing close to another vessel on her beam whilst both were underway). An unsuspecting French vessel would be hailed by a French-speaking Guernsey privateer crew, for instance, only to find out too late that an enemy lurked in its shadow (Timewell, 1970: 199).

Deception was a valuable weapon and privateers usually carried various national flags and false sets of papers. When sighting a target they would fly the flag of the same nation or an ally to enable them to approach by stealth. Warning shots would then be fired and the privateer crew would board and take the ship. It was advantageous for corsairs to have large crews, 20-30 to man the sails and cannon and a large number to comprise the boarding party. It was not uncommon for privateers to sail with crews of 120 or more (Sechrest, 2001: 15).

Such underhand masquerading using foreign flags was exactly how the Bordeaux-based *Le Grand Marquis de Tourny* was captured by the British *Liverpool* privateer on 10 June 1757 (Williams, 2004: 127-8):



Fig. 75. An 18th-century three-masted, 30-gun French frigate, which would have resembled the corsair *La Marquise de Tourny*.



Fig. 76. The possible route of the final voyage of *La Marquise de Tourny* from Bordeaux up the Channel towards the ports of northern France.

“in lat. 48°O 18 mins. long., from London, made a sail from the masthead bearing S. from us, called all hands to quarters, and gave chase with all sails set. At 8, the ship hauled up her courses, and my appearance seemed to prepare for action. At 10, they threw out a French ensign and fired a gun. We answered them only with French colours, but they, not trusting us, began to fire their stern chase pretty briskly, upon which we gave them two of our bow chase. The ship yawed and gave

us her larboard broadside. Several of their shot went through our sails, and one of the crossbar shots (a six-pounder) struck the fore topmast and fell upon our deck. We immediately gave her both our broadsides, upon which she struck. Sent our boats on board the prize for the prisoners. On examination she appears to be the *Grand Marquis de Tourny*, Francis Dellmar, commander, from St. Domingo for Bordeaux; is pierced for 24 guns (20 upon the upper deck and 4 upon the lower deck), but has only 12 six-pounder mounted. She came out of St. Domingo with 31 sail, under convoy of six men-of-war, one of 80 guns, four of 74 guns, and a frigate of 36 guns, who saw them through the windward passage and then left them. Found on board the prize, Captain John Mackay, and his crew, of the *Sarah*, brig, bound from Bristol for Boston, whom they had taken on the 3rd ult...”

What could a merchant vessel do when attacked by a privateer? The answer is very little. It was not part of a merchant vessel or crew's duty to defend itself. The best they could hope for was to escape without engaging in a skirmish. Avoidance tactics included sail quartering (the wind more or less on the quarter) with the sails drawn (inflated by the wind to advance the vessel on her course). This offered the best and swiftest course for a merchant vessel to flee. Another method when under fire was to lead the braces (ropes attached to the end of a yard to haul it aft, rotating the sail) and other necessary ropes below deck and through the gratings. This would keep all the crew below deck and allow them to have some control of the sails until the ship was safely out of cannon and musket range (Leyland, 1911: 272, 274).

If a merchant vessel could not escape and boarding was imminent, then the best tactic was to force the privateer to board the vessel over the quarter (Leyland, 1911: 275). This allowed the incoming privateers less area of a ship to attack and gave the merchant vessel time to work the sails, defend the main deck and hopefully escape. In reality, the majority of attacks ended with the merchant vessel giving itself up without sustaining any damage or loss of men.

14. Conclusion

Site 33c was discovered by Odyssey Marine Exploration in 2008 in the Western English Channel and is a previously unreported shipwreck. A pre-disturbance survey program and very limited trial trenching identified the site as the final resting place of the Bordeaux-based *La Marquise de Tourny*, a merchant vessel and privateer. The 25 iron cannon recorded on the wreck's surface confirms that it was armed very similarly to *Le Grand Marquis de Tourny*, which records confirm carried 24 guns. Like *Le Marquis de Tourny*, it probably also had an approximate 460-ton burden.

The presence of extensive iron ingot ballast defining the site's surface, in conjunction with an absence of other obviously identifiable cargo, suggests that *La Marquise de Tourny* was likely transporting an organic cargo when she foundered, which has now deteriorated. The *Liverpool* privateer's seizure in 1757 of another Bordeaux privateer, *Le Grand Marquis de Tourny*, reflects the common import of sugar, coffee, indigo and logwood, of which the first two products would certainly not remain preserved within the environment where Site 33c lies. Potential storm activity aside, the location of Site 33c well within the English Channel is incompatible with an outward-bound vessel sailing to the Americas or West Indies. Similarly, this route is eastward of a return trip directly into the port of Bordeaux.

The absence of official Admiralty documentation or reports in British newspaper related to this ship suggests that she may well have managed to escape being taken as a prize during her lifetime. Amongst the prize papers for the Austrian War of Succession, there are no entries for *La Marquise de Tourny* (*High Court of Admiralty Index to Prize Papers 1739-1748*, London, 1973). The geography of the ship's final resting place suggests she was heading up or out of the Narrow Seas on the French side of the Channel when she was lost. The presence of a French glass *flacon* and the *fleur de lis* decoration on the recovered swivel gun supports a French pattern of ownership. The most likely hypothesis based on current evidence is that *La Marquise de Tourny* was undertaking a short-haul voyage with re-exported organic produce to the French coastal towns of St. Malo, Cherbourg, Dunkirk or Calais, further east up the English Channel, when she was lost.

Historical sources from Bordeaux reveal that *La Marquise de Tourny* was still in operation in 1749, when she took a prize of war (Binaud, 1999: 279-81). The naval circumstances of this seizure are obscure, especially since this year post-dates the end of the War of the Austrian Succession. Currently, it seems reasonable to propose that *La Marquise de Tourny* was lost in the late 1740s or in the early 1750s. She is not listed in known historical documentation for the Seven Years War, which started in 1756 and thus may provide a *terminus ante quem* for her loss. Technically, it seems more probable that she was conducting a merchant venture when she sank rather than privateering – although this cannot be ruled out categorically.

Archaeologically, Site 33c is extremely sparse. The most common features on the wreck's surface are the iron concretions. No pottery is present, nor was any identified during select trial trenching. Hull remains are almost non-existent. The site formation is consistent with a poorly preserved wreck that has been extensively dragged out by trawlers, which are common in the area. Many of the

artifacts from the site may be in the collections of fishermen who dragged them up from the deep.

The wreck of *La Marquise de Tourny* is an echo of a long-forgotten time and place, the glory years of Bordeaux, which was extensively rebuilt in the style of Paris under the ambitious eye and direction of Louis Urbain Aubert de Tourny, the town's royal 'intendant' between 1743 and 1757. Within one year of taking office, one of Bordeaux's new corsairs was christened in his wife's honor. In a cruel twist of fate the new ship would outlive the intendant's wife. Within two years of the privateer's launch, the Marquise herself died suddenly aged 50 on 17 March 1746 and her body was interred in the Church of Notre-Dame de Puypaulin (L'Héritier, 1920: 319). The name of that lady, whose formal title alone was found molded onto a bronze bell at the bottom of the western English Channel, was Jeanne-Claude Cherouvrier des Grassieres.

Acknowledgements

The contents of this paper would not have been possible without the assistance and professionalism of many of my workmates and colleagues. Dr. Sean Kingsley for his editorial wisdom and additions to the research. *Odyssey Explorer* captains Keith Herron and Michael Wainman and their officers and crew, who always make my stay on the ship a safe and pleasurable one. Senior Project Manager Tom Dettweiler and Project Managers Andrew Craig and Mark Martin for their continuing support and for making it all happen out on site. ROV supervisors Ewan Bason, Eric Peterson and Gary Peterson, and ROV Technicians David Dettweiler, Jeff Thomas, Olaf Dieckhoff, Roberto Blach, Jesus Vasques Perez, Jose Rodriguez, and Paul Money, whose skill and professionalism never fail to amaze me.

For collecting and managing the data and images a big thanks goes to Data Manager Gerhard Seiffert and his team of Data Loggers: Dave Kamm, Tom Money, Frederick Fretzdorff, James McIsaac and James Hagen. Where would we be without our surveyors Kris Allen, Jim Gibeaut, Chris Heke, Ryan Wells and Mike Matthews, who constantly maintained accurate positioning of the ship and the ROV. Special thanks to Project Manager Ernie Tapanes and his side-scan technicians, Brett Hood and Zach Antonissen, for their great diligence in locating targets and producing amazing side-scan images.

I wish to extend my sincere gratitude to the vision and support of Greg Stemm, co-founder and Chief Executive Officer of Odyssey Marine Exploration. To Mark Gordon, Laura Barton and John Oppermann for their ongoing support and energetic encouragement. I would like

to acknowledge the archival research conducted by Mark Musset, Simon Davidson and Patrick Lize. Much appreciation to Alice Copeland for her proofreading prowess. A big thank you to Melissa Dolce for the layout of this paper. A special thank goes to Ian Panter and Mags Felter at York Archaeological Trust for their conservation of the bell and swivel gun and their hospitality when I visited their lab. Thanks are also extended to Jason Williams, President of JWM Productions, and the Discovery Channel.

Notes

1. Odyssey's ROV dive log system is consecutively numbered and on this site Dive 402 is in effect Dive 1.
2. See: Verre Fougere in Canada, <http://www.pc.gc.ca/eng/lhn-nhs/qc/saintlouisforts/natcul/arch1a/arch1e.aspx>.

Bibliography

- Auerbach, S., *“Encourager le Commerce et Répandre les Lumières”: the Press, the Provinces and the Origins of the Revolution in France: 1750-1789* (Doctor of Philosophy Dissertation, Louisiana State University, 2000).
- Beaurepaire, P.-Y., 'L'Europe des lumières maçonniques: construction, réseaux et représentations'. In C. Villain-Gandoski (ed.), *L'Europe à la recherche de son identité. Actes du 125e Congrès national des sociétés historiques et scientifiques, Lille, 10-15 avril 2000* (Paris, éditions du CTHS, 2002), 305-16.
- Binaud, D., *Les corsaires de Bordeaux et de l'estuaire: 120 ans de guerres sur mer* (Atlantica, Biarritz, 1999).
- Bingeman, J.M., Bethell, J.P., Goodwin, P. and Mack, A.T., 'Copper and Other Sheathing in the Royal Navy', *International Journal of Nautical Archaeology* 29.2 (2000), 218-29.
- Boudroit, J., *The Seventy-Four Gun Ship. Vol. 2* (Collection Archéologie Navale Française, Paris, 1986).
- Boudroit, J. and Berti, H., *Frégate de 18. La Venus, 1782* (Collection Archéologie Navale Française, Paris, 1979).
- Bousquet, G., L'Hour, M. and Richez, F., 'The Discovery of an English East Indiaman at Bassas da India, a French Atoll in the Indian Ocean: the *Sussex* (1738)', *International Journal of Nautical Archaeology* 19.1 (1990), 81-85.
- Bryn, P., Jasinski, M.E. and Soreide, F., *Ormen lange. Pipelines and Shipwrecks* (Oslo, 2007).
- Carnes-McNaughton, L. and Wilde-Ramsing, M.U., *Queen Anne's Revenge Shipwreck Project. Preliminary Glassware and Bottle Analysis from Shipwreck 31CR314, Queen Anne's Revenge Site* (Underwater Archaeology Branch Office of State Archaeology Department of

- Cultural Resources, State of North Carolina, 2008).
- Chartrand, R., *Napoleon's Guns, 1792-1815: Heavy and Siege Artillery* (London, 2003).
- Chopinot, M.H., 'Evolution des alcalins dans les mélanges vitrifiables depuis le 18e siècle', *Verre* 9.6 (2004), 38-45.
- Crisman, K., 'Angra B: the Lead-sheathed Wreck at Porto Novo (Angra do Heroísmo, Terceira Island, Azores-Portugal)', *Revista Portuguesa de Arqueologia* 2.1 (1999), 255-62.
- Cunningham Dobson, N. and Kingsley, S., 'HMS Victory, a First-Rate Royal Navy warship Lost in the English Channel, 1744. Preliminary Survey & Identification'. In G. Stemm and S. Kingsley (eds.), *Oceans Odyssey. Deep-Sea Shipwrecks in the English Channel, Straits of Gibraltar & Atlantic Ocean* (Oxbow Books, Oxford, 2010), 235-81.
- Ducère, E., *Les corsaires sous L'ancien regime* (Bayonne, 1895).
- Falconer's New Universal Dictionary of the Marine, 1815 Edition* (London, 2006).
- Ferguson, G., *Signs & Symbols in Christian Art* (Oxford University Press, 1961).
- Gilkerson, W., *Boarders Away II: Firearms of the Age of Fighting Sail* (Lincoln, RI, 1993).
- Goddio, F., 'The Wreck, from Reality to the Documents'. In F. Goddio and E.J. Guyot de Saint Michel, *Griffin. On the Route of an Indiaman* (London, 1999), 57-115.
- Harris, J.E., *Eighteenth-Century French Blue-Green Bottles from the Fortress of Louisbourg, Nova Scotia* (National Historic Parks and Sites Branch, Parks Canada, 1979).
- Hume, I.N., *Glass in Colonial Williamsburg's Archaeological Collections* (Colonial Williamsburg Archaeological Series, 1969).
- Katzev, M.L., 'Kyrenia 1969: A Greek Ship is Raised', *Expedition* 12.4 (1970), 6-14.
- Kingsley, S.A., *The Ship's Bell from Odyssey Marine Exploration's Site 33C: Preliminary Considerations* (Unpublished Odyssey Marine Exploration Report, 2008).
- Kingsley, S.A., *The Art & Archaeology of Privateering: British Fortunes & Failures in 1744* (OME Papers, 18, 2010).
- Krisman, K., 'Angra B: the Lead-sheathed Wreck at Porto Novo (Angra do Heroísmo, Terceira Island, Azores-Portugal)', *Revista Portuguesa de Arqueologia* 2.1 (1999), 255-62.
- Larn, R. and Davis, R., 'Ships Bell found at Paignton, Devon', *International Journal of Nautical Archaeology* 6.1 (1977), 71-2.
- Lavery, B., *The Arming and Fitting of English Ships of War 1600-1815* (London, 1987).
- Leyland, J., 'Fighting Instructions for 'Merchantmen', 1706. "An Old Fighting Merchant Seaman", *Mariner's Mirror* 1.4 (1911), 271-75.
- L'Héritier, M., *L'Intendant Tourny (1695-1760), Vols. 1 et 2* (Bordeaux, 1920).
- L'Hour, M. and Richez, F., 'An 18th century French East Indiaman: the Prince de Conty (1746)', *International Journal of Nautical Archaeology* 19.1 (1990), 75-9.
- L'Hour, M. and Veyrat, E., *Un corsaire sous la mer. Les épaves de la Natière, archéologie sous-marine à Saint-Malo. Volume 3. Campagne de fouille 2001, l'épave Natière 2* (Edition Adramar, 2002).
- L'Hour and Veyrat, E., 'Ships and Private Shipyards through the Archaeological Evidence of the Wreck off La Natière (Saint-Malo, Brittany, France)'. In C. Beltrame (ed.), *Boats, Ships and Shipyards. Proceedings of the Ninth International Symposium on Boat and Ship Archaeology Venice 2000* (Oxford, 2003), 314-19.
- Malcom, C., 'Lead Hull-Sheathing of the Santa Margarita', *The Navigator: Newsletter of the Mel Fisher Maritime Heritage Society* 16.1 (December, 2000/January, 2001).
- McNally, P., *French Table Glass from the Fortress of Louisbourg, Nova Scotia* (National Historic Parks and Sites Branch, Parks Canada, 1979).
- Nichols, J.R., *Bells Thro' the Ages; the Founders' Craft and Ringers' Art* (London, 1928).
- Pritchard, J., 'From Shipwright to Naval Constructor: The Professionalization of 18th-Century French Naval Shipbuilders', *Technology and Culture* 28 (1987a), 1-25.
- Pritchard, J.S., *The Ordnance Problem From Louis XV's Navy, 1748 -1762: A Study of Organization and Administration* (McGill-Queens University Press, 1987b).
- Roberts, D.H. (ed.), *18th Century Shipbuilding. Remarks on the Navies of the English & the Dutch from Observations Made at their Dockyards in 1737 by Blaise Ollivier, Master Shipwright to the King of France* (Jean Boudriot Publications, Rotherfield, 1992).
- Russell of Liverpool, Lord, *The French Corsairs* (London, 1970).
- Saunders, A.C., *Jersey in the 18th and 19th Centuries* (Jersey, 1930).
- Saxby, R., 'British & French Watercraft – Comparison of the British 'Frigate' and the French 'Frégate' of the 18th Century', *Mariner's Mirror* 79.3 (1993), 334-35.
- Sechrest, L.J., 'Privateering and National Defense: Naval Warfare for Private Profit', *Independent Institute Working Paper* 41 (2001), 1-39.
- Skowronek, R.K., Johnson, R.E., Vernon, R.H. and Fischer, G.R., 'The Legare Anchorage Shipwreck Site – Grave of HMS Fowey, Biscayne National Park,

- Florida', *International Journal of Nautical Archaeology* 16 (1987), 313-24.
- Spencer, S., *Arming the Fleet, US Navy Ordinance in the Muzzle Loading Era* (Annapolis, 1989).
- Timewell, H.C., 'British watercraft – Guernsey, Channel Islands, 'Privateers', 1665-1815', *The Mariner's Mirror* 56.2 (1970), 199-218.
- Tucker, S., *Arming the Fleet, US Navy Ordinance in the Muzzle Loading Era* (Annapolis, Maryland, US Naval Institute Press, 1989).
- Van den Bossche, W., *Antique Glass Bottles, Their History and Evolution (1500-1850)* (Woodbridge, 2001).
- Wedde, K., *The Ship's Bell. Its History and Romance* (New York, 1972).
- Welsh, W.M., *Queen Anne's Revenge Shipwreck Project. Lead Studs from Shipwreck 31CR314: Queen Anne's Revenge Site* (Underwater Archaeology Branch Office of State Archaeology, State of North Carolina, 2008).
- Williams, G., *History of the Liverpool Privateers and Letters of Marque with an Account of the Liverpool Slave Trade, 1744-1812* (McGill-Queen's University Press, 2004).