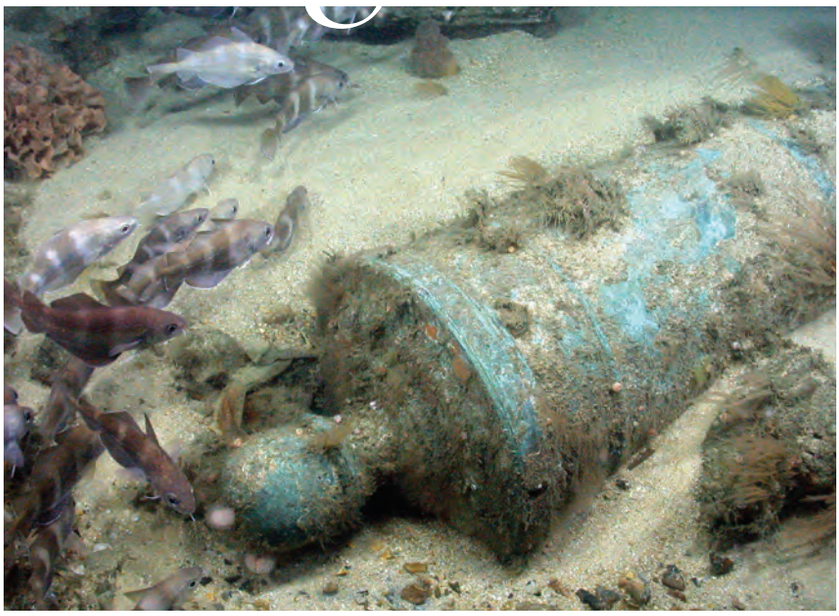
BELOW The *Victory* – precursor to Nelson's famous flagship – sinks on 4 October 1744, in a scene from the Balchen Memorial in Westminster Abbey, London.

The sinking *of the* Victory

Natural disaster or first-rate human error?



For 264 years, Britain's greatest flagship was thought to have sunk off Alderney, lured onto the Casket rocks by a negligent lighthouse keeper. New evidence presented by **Sean Kingsley** instead reveals scandals in the royal shipyards that might have made the *Victory* a disaster waiting to happen.

ALL IMAGES: Odyssey Marine Exploration, unless otherwise stated

On 12 October 1744 the waters of Spithead were littered with battered warships. Following a mission to liberate an English supplies convoy blockaded by the French at Lisbon during the War of the Austrian Succession, the squadron of Sir John Balchen, Admiral of the White, was caught homeward bound in a vicious storm in the western English Channel. All but one of the 17 English and eight Dutch warships that originally streamed out of Spithead in July limped back to port. Only the first-rate flagship *Victory*, the greatest warship of the early Georgian age of sail, failed to materialise over the horizon.

The disappearance of the fifth successive *Victory*, the precursor to Nelson's iconic warship that pounded France and Spain into submission at the Battle of Trafalgar, became one of Britain's greatest maritime mysteries. How could a 174 foot-long, 1,920-ton floating fortress with 1,100 of the land's finest officers and sailors simply vanish, along with 100 bronze cannon and the 5,500 loads of wood needed to build a first-rate battleship?

The Great Storm

The establishment needed answers, and the blame game began at once. Conveniently, the Admiralty could shrug and point to the skies. On the afternoon of 3 October 1744, the eye of a storm swept across the Isles of Scilly, scattering Balchen's fleet. What was described as a violent hurricane coincided with the highest tide in recorded history. The *London Evening Post* reported from Plymouth that the storm 'wash'd away Houses and Sea Banks... Several Ships were drove from the Posts to which they were fasten'd, and their cables broke, as if they had been Packthread. In short, the Storm was beyond any thing yet seen here: The Boats floated upon our Keys and about the Streets.'

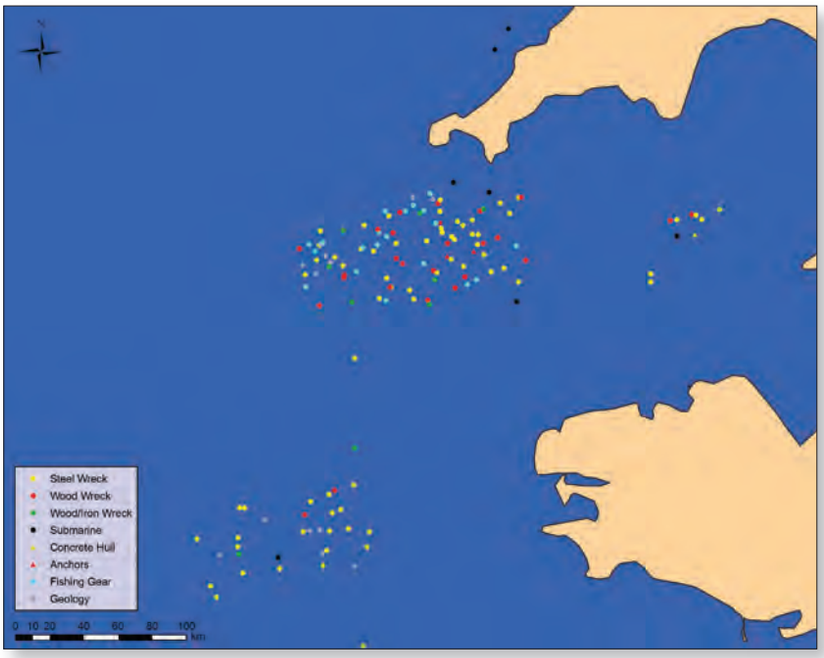
Nature's chaos was thought to have propelled the *Victory* east to the Channel Islands, where she collided with the black rocks of the Caskets. The Admiralty lost little time dispatching Captain Grenville of the 50-gun *Falkland* on a search-and-rescue mission. Riding around Guernsey on horseback, he came across masses of wreckage, including a 71-foot topmast marked 'VICT', while a 3 foot-diameter stump from the flagship's mainmast and a trunk full of rich laced clothes and letters addressed to Cottrell of Colonel Wolf's Regiment, the Captain of Marines on board the *Victory*, washed onto Jersey. The *Daily Gazetteer* of 22 October supplied the *coup de grâce*: the inhabitants of Guernsey and Alderney had heard upwards of 100 guns fired in distress. Only the *Victory* carried such heavy arsenal.

And so a deep-rooted myth began to grow. *Victory* had fallen foul of the deadly Caskets, a series of islets 11 kilometres west of Alderney and 1.6 kilometres in circumference, rising 20 metres above sea level. The idea that the *Victory* succumbed to the malicious lure of the Caskets would have come as little surprise to the Navy. At least 392 ships were wrecked around Alderney, Guernsey, and Sark between 1278 and 1962. *Victory* had joined the graveyard of the English Channel.

IMAGE: *Illustrated London News*

ABOVE The Caskets lighthouse off Alderney, from an 1868 edition of the *Illustrated London News*. Lighthouse keeper Thomas LeCocq was maliciously blamed of luring the *Victory* to its demise on the offshore rocks by failing to keep the lights burning, but was acquitted at a Trinity House enquiry.

BELOW Odyssey Marine Exploration's 7-ton Remotely Operated Vehicle, *Zeus*, tooled for archaeological survey.



Wreck hunters: into the abyss

In 2005, the *Odyssey Explorer* – the research ship of the US-based company, Odyssey Marine Exploration (see p.36) – turned to the distant waters of the western English Channel. The *Victory* was certainly known to Odyssey, but was a long shot: the surveys focused on international waters, and Admiral Balchen's battleship was believed lost close to Alderney. As the *Explorer* towed a combination of side-scan sonar and a powerful magnetometer to overlay acoustic and metallic profiles of anomalies even as small as an oil drum, checked visually on the seabed by the Remotely Operated Vehicle (ROV) *Zeus*, the deep Channel's sunken past gave up its secrets for the first time.

Assessing Odyssey's Atlas Shipwreck Survey Project's discoveries is a bittersweet experience (see p.32). Currents, salvors, and fishing trawlers have battered the Narrow Seas. What remains has been depth-charged since World War II to prevent German U-boats and Cold War Russian submarines hiding from sonar in the shadows of sunken shipwrecks. In under a century, the hand of man has transformed the Channel into a marine scrapyard. As Project Manager Tom Dettweiler observed during the surveys, the Channel's wrecks 'look like they've been through a blender'. In recent years, both the *Victory* and the nearest two shipwrecks have been looted and impacted (see p.33).

ABOVE A map of the Western Approaches and western English Channel, showing shipwrecks discovered by Odyssey Marine Exploration between 2005 and 2011.

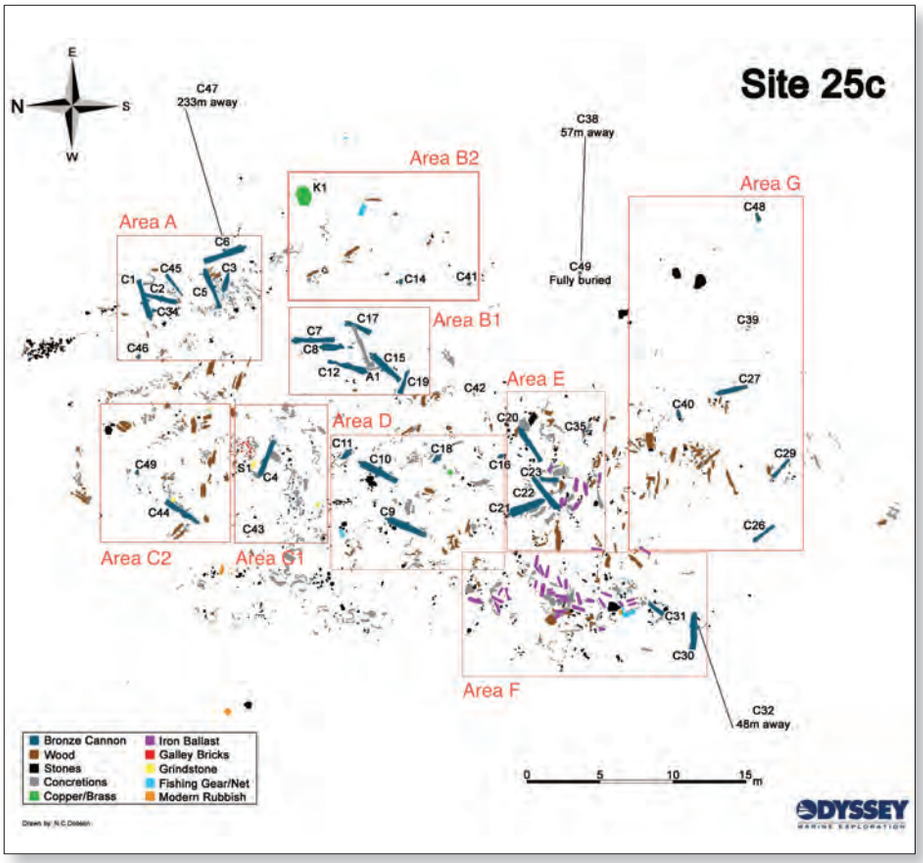
BELOW A site plan of the wreck of the *Victory*.

Odyssey nevertheless persisted to squeeze history out of what was miraculously preserved in this sunken wasteland. Between 2005 and 2011, over 4,700 square nautical miles and 270 shipwrecks were dived in the first deep-sea survey trialled off the UK – the most extensive marine archaeological search conducted worldwide. While no intact ceramic cargoes of any age survived the region's extreme climate and impacts, just occasional potsherds, the project produced an important thin slice of the maritime history of the British Isles.

Profiling the *Victory*

The *Victory*'s discovery caused head-scratching from the start. The team was stuck between absorbing the scientific evidence and making it tally with the history books. The wreck not only lay beyond the sight of the Channel Islands, but some 100 kilometres west of Alderney. How could the Admiralty and modern maritime historians have got the story so wrong?

Between 2008 and 2012, the *Victory* was monitored and surveyed extensively by Odyssey



– in collaboration, since 2011, with the Maritime Heritage Foundation and its Chairman, Lord Lingfield, a kinsman of Admiral Sir John Balchen (baptised Baltchin), who commanded the flagship during her final voyage. The Ministry of Defence gifted the wreck to the Foundation in 2012 for educational purposes. To fulfil the Project Design's requirements, an extensive non-disturbance survey scrutinised the *Victory* in 2012 from above, below, and sideways to glean as much primary data as possible.

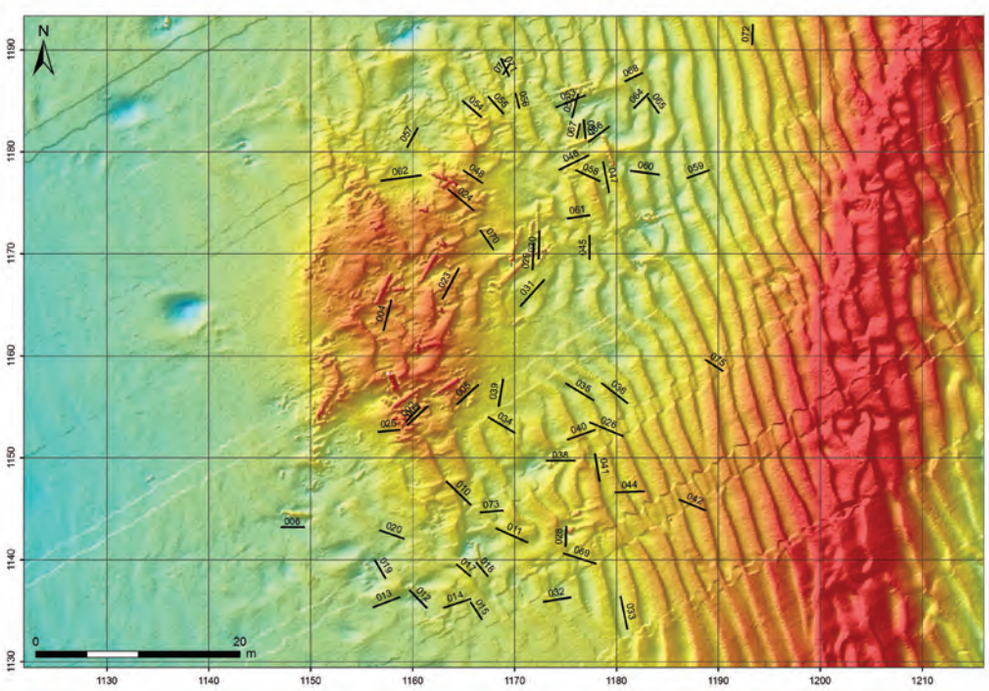
A 4 square kilometre side-scan sonar was complemented by a multibeam survey. Two photomosaics were shot across the wreck mound, with 9,245 photographs stitched together to enable every natural and cultural object on the seabed to be picked out, down to the size of individual hermit crabs. Every surface feature was recorded by video and digital photography.

To assess whether the *Victory* could be managed *in situ* 80 kilometres offshore, an environmental assessment was made in collaboration with the University of St Andrews in Scotland and the University of Huelva in Spain. The marine biological survey examined 40,000 square metres of seabed, 38 species of invertebrates, and 21 species of vertebrates. With its hard surfaces and nutrient-rich deposits attracting marine life, the central wreck mound had an average oasis effect ratio of 13:1 compared to the sandy offsite zones. No rare or endangered species were present.

The seabed is composed of extensively sorted and dynamic coarse to very coarse sand (68-83%), and gravel (14-31%) caused by the winnowing of finer sediments. Strong currents drive across the site at a rate of up to 2 knots, subjecting the wreck to unpredictable scouring, erosion, and re-burial. The appearance and erosion of the wreck is suspected to be a relatively modern phenomenon. Two snaking sandwaves due west, stable since 2008, are slow-migrating bedforms that may have overlain and protected the *Victory* for centuries.

Down on the seabed, not one potsherd survives on the surface, only durable artefacts: at least 50 bronze cannon, a mass of ballast on the western flank, two

TOP One of the first bronze guns to be found at the *Victory* site in 2008. It was subsequently looted by Dutch salvors in 2011.
ABOVE This photomosaic shows the remains of the vessel's rudder. Despite claims that this had washed up onto Jersey in October 1744, it was in fact found on the wreck site in 2008. The iron head lies to the right, and the main piece crossed by iron pintle braces to the left.



LEFT Analysis of sub-bottom anomalies provides clues to the *Victory*'s final moments: a cluster of perhaps 37 lightly buried cannon to the east (on the right) suggests the warship's port side collapsed to starboard.

anchors, and bronze and hardwood rigging blocks. A few patches of wood were recorded and, fortuitously, the entire rudder. The rudder's condition is poor, but important structural features include the iron head that fitted onto the tiller, the 9.4 metre-long main piece, sacrificial wooden protection, iron girdling pintle and gudgeon joints, and scores lined with lead to prevent the rudder eroding as it turned in its socket.

The vital statistics of the *Victory*'s surface are now well defined. The wreck is a discretely bounded ellipsoidal mound elevated

The top five deep-sea wrecks

The Atlas Shipwreck Survey Project, conducted by Odyssey Marine Exploration across the Western Approaches and western English Channel from 2005 to 2011, has made many major finds. The five most-important discoveries, all unique, are:

1. **The first-rate English warship the *Victory* (1744) (Site 25C)**
2. **An armed English merchantman trading with West Africa (1670s-1680s) (Site 35F)**
3. **An armed English trader carrying a cargo of Portuguese faience (Site 30E)**
4. **A cargo of Welsh iron cannon, bored while solid under Anthony Bacon MP (1774-1780) (Site 10Ef)**
5. **The Bordeaux corsair *La Marquise de Tourny* (mid-18th century) (Site 33C)**

RIGHT A fragment of a Portuguese faience plate, depicting a lady in Restoration period attire standing in a garden. Recovered in 2011, it dates from *c.*1640-1650.

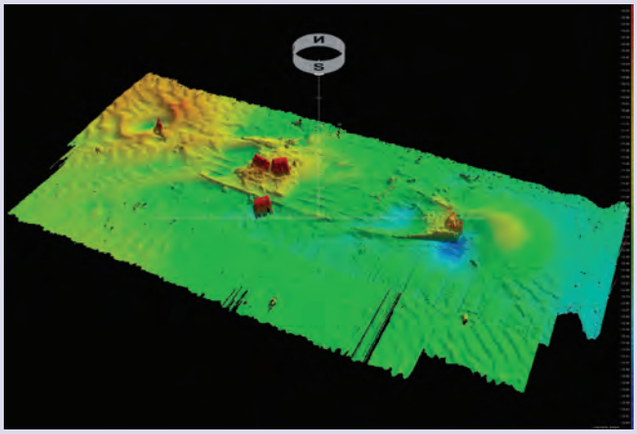
Of these, despite being badly preserved, sites 35F and 30E hold especially unusual snapshots of sunken time. Site 35F is a merchant vessel, lost at a depth of 110 metres and heavily ploughed by bottom trawlers and scallop dredges. A microcosm of the ship's original cargo and character was recorded in the form of nine elephant tusks, nine copper manilla (tribal currency bracelets), stacked copper basins, and scant hull remains, preserved alongside 36 iron cannon (12 dragged offsite). Seven cannon stored lengthways along the keel in the stern are part of a commercial consignment of ordnance. The wreck dates between *c.*1672 and 1685, and contains signature assemblages typical of later 17th-century trade with West Africa. The ship itself, including the earliest wooden folding rule found on a shipwreck, is probably English, and most likely an extremely rare Royal Africa Company merchant vessel.

Cargo from English traders: elephant tusks trapped under an iron gun (BELOW) on the late 17th-century Site 35F; and copper manilla (bracelets) recovered in 2006 (BOTTOM), probably produced in England for bartering as currency in West Africa.

Discovered in 2010 at a depth of 100 metres, Site 30E was the earliest wreck detected during the deep-sea surveys. Bottom fishing has again heavily pounded the remains of this 500-ton English armed merchant vessel, lost *c.*1640-1650: of 18 large Saker Ordinary iron cannon of probable English origin, 16 are trawl-damaged. Nevertheless, rare cultural firsts for a wreck off the UK include a remnant of a cargo of Portuguese faience and two 'murderer' swivel guns, possibly manufactured in the Low Countries, as well as a collection of unstamped pewter wares (two plates, two porringers, a desk writing set, a cup, and a spoon) and small finds, including two navigational log slates and a pair of charting dividers. The hard seabed substratum is low-lying and covered by a very thin veneer of gravelly sand. Alongside patches of hull sheathing, used to plug a leaking hull and recorded across the site, quite amazingly a gunport and the 6-metre rudder survive. As with all finds recovered by Odyssey, Site 30E's assemblage has been declared to the Receiver of Wreck.

50 centimetres above a largely flat seabed. It is flanked 22 metres to the east by a large sand-wave. The continuous wreck mound covers an area of 60 × 42 metres within wider site boundaries extending 84 metres north–south (from anchor A2 to the rudder), and 305 metres east–west (from offsite cannon C32 to C47). The project has also given a tantalising glimpse of what may lie below through 3D high-resolution Sub-Bottom Imaging that captured 569 gigabytes of data and thin-sliced the results into 10-centimetre deep layers.

Sites at risk



ABOVE This multibeam image of the Sopwith lead ingot wreck shows the bows to the east and stern to the west.

The western English Channel's sunken past languishes largely out of sight and out of mind. Historic England's remit is restricted to the 12 nautical mile territorial limit, which creates a legislative paradox: the UK has adopted the Annex to the UNESCO Convention on the Protection of the Underwater Cultural Heritage, but lacks the powers to enforce control beyond its territorial waters. Through the Marine & Coastal Access Act, the Marine Management Organisation (MMO) has now exerted licensing rights over international waters. How in practice the UK will police and fund monitoring of the plethora of international trawlers and salvors ploughing the Channel awaits clarity.

BELOW Depicted in the 19th century, the La Tortilla leadworks yard at Linares, Andalusia, is where the wreck's ingots were manufactured.

ABOVE Nine rows of lead ingots stowed in the after-hold of the Sopwith wreck, pictured in 2005. Spaces between the ingots have been colonised by conger eels. All 423 tons were found to have been removed in 2015.

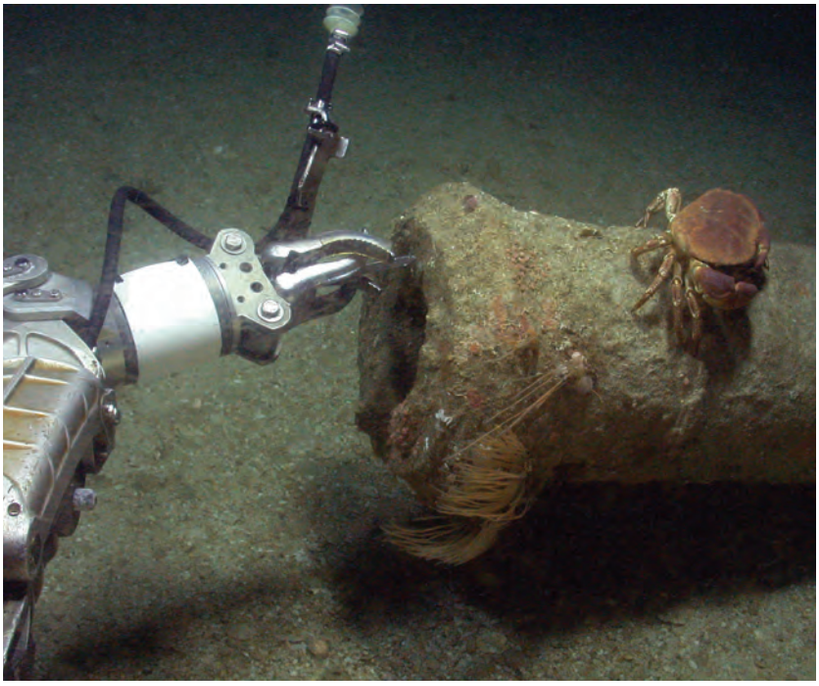
Unique wrecks – among them a late 17th-century West Africa trader – have been almost completely obliterated by scallop dredges and trawlers. Several 3.5-ton bronze guns on the *Victory* have been dragged in trawl nets up to 233 metres offsite. All the site's seven archaeological Areas (A-G) were disturbed between 2008 and 2012, and a cannon was looted in 2011. The wreck of a mid-18th-century Bordeaux corsair has also been hit, and an iron cannon dumped in a European scrapyard.

The latest casualty is an 80 metre-deep steel steamship found 70 kilometres offshore, and monitored by Odyssey since 2005. The 64 metre-long vessel was carrying Spanish lead ingots manufactured by Thomas Sopwith & Company Ltd at the La Tortilla mine at Linares in Andalusia between 1880 and 1907. The site is the only archaeological testimony of a lead cargo found underwater representing the heyday of Victorian mining in southern Spain. In the last quarter of the 19th century, Andalusia's relaxed Mining Laws attracted foreign investment, and Spain became the world's greatest producer and exporter of lead, embracing the Industrial Revolution and starting its march to modern statehood.

In May 2015, an estimated 10,149 lead ingots weighing 423 tons were found to have been removed from the forward- and after-holds. Thomas Sopwith's cargo is over 100 years old, the only example found underwater, and is defined as underwater cultural heritage according to the UNESCO Convention. In reality, sites like these are so far off the radar of UNESCO, Historic England, and the Marine Management Organisation that proactive protection is a pipe dream.

The steamship and the Bordeaux corsair are the two wrecks located closest to the *Victory*, which has created serious concerns. Two wrecks looted is disappointing; to see the unique first-rate *Victory* pillaged would be unforgivable.

IMAGE: courtesy of Robert Vernon



ABOVE The team plots the position of a cannon in Area F using the manipulator finger of ROV *Zeus*.

End of a legend

The discovery of the *Victory* so far from the Channel Islands immediately explodes the Caskets sinking theory. So was the flagship's demise just bad luck, stuck in the wrong place at the wrong time on the early morning of 4 October 1744? A Maritime Heritage Foundation forensic enquiry, in collaboration with the naval historian Trevor Newman, revealed that the highly experienced Admiral Balchen would have had two options to save Britain's flagship. To scud and run before the wind or lie to, staying as close to the wind and stationary as possible. Unlike the rest of the squadron, which chose to lie to, Balchen seems to have put his foot down and tried to outrun the storm. It was a gamble against nature, and the elements prevailed.

The wreck lies orientated with her bows to the north-east and stern to the south-west, having foundered with her port flank broadside onto the wind. Since the flagship was sailing eastwards, in the final desperate moments her stern spun 90° anticlockwise through the wind, so the *Victory* was effectively 'sailing' sideways. Horror swept the decks, dread became reality. The helmsman lost steerage as huge waves swept the ship from astern. Under such circumstances ship's tillers snapped and rudders were typically torn off.

The evidence on the seabed supports the theory that a killer wave struck the *Victory*. No archaeological remains have been identified west of Area F, where a dense cluster of rectangular ballast blocks overlies the keel line. By contrast, the sub-bottom profiles hint at a major concentration of linear cannon-shaped anomalies – potentially 37 guns – lightly buried on the east flank. The battleship had crashed onto the seabed and careened eastwards. As the first-rate rapidly broke apart, her portside cannon and decks collapsed to starboard.

Despite the Admiralty hearing that a large part of the *Victory*'s rudder washed ashore on Jersey in October 1744, these remains are actually intact on the seabed. This forensic nugget, combined with the unavoidable reality that all the other warships in Admiral Balchen's fleet safely reached Spithead, generates suspicion about what really sank Britain's greatest warship – ill winds or something more sinister?

BELOW A medal issued to commemorate Admiral Edward Vernon taking Spanish Porto Bello in modern Panama in November 1739. Its obverse bears a portrait of Admiral Vernon accompanied by the legend 'THE•BRITISH•GLORY•REVIV•D•BY•ADMIRAL•VERNON'.

Old Grog's broadside

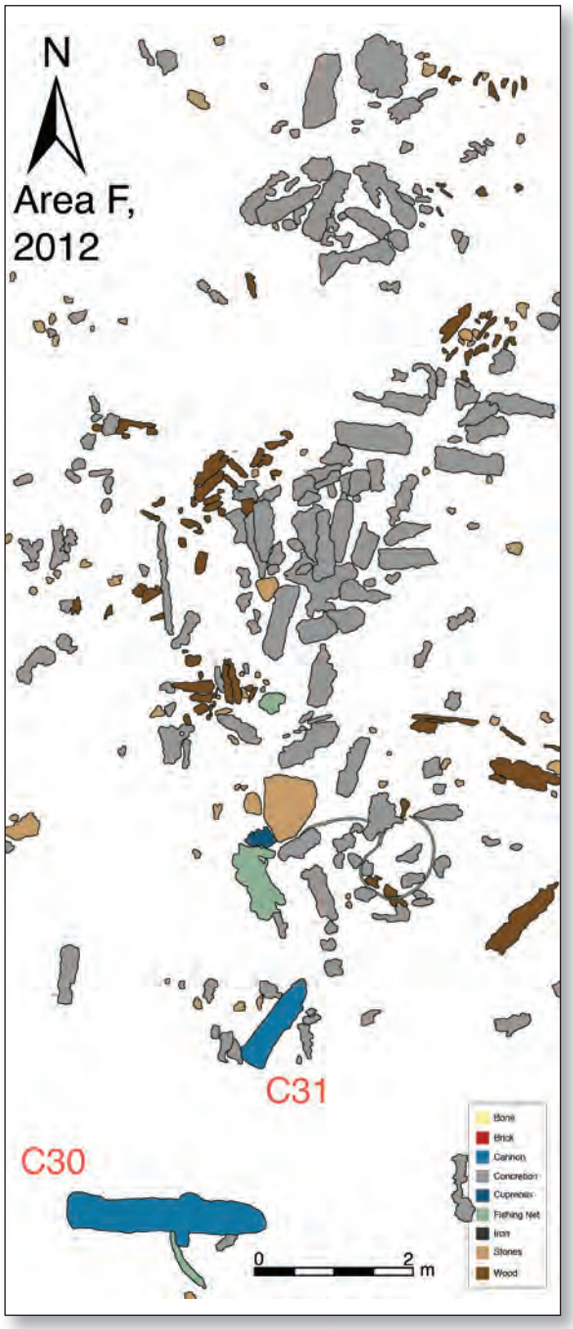
Along the corridors of power the loss of Britain's ultimate naval deterrent came as no great surprise. The Navy's highest ranked officers had been calling foul for years about the fleet's 'crank and crippled' condition. Matters came to a head in 1744, the year when the *Victory* sank, when Admiral Edward Vernon turned his guns inwards on the Admiralty. Vernon – or 'Old Grog', as he was affectionately known, a naval hero who had seized Porto Bello in Panama from Spain in 1739 and introduced rum rations to happy sailors – was convinced Britain was turning out ships too narrow compared to their lengths, whose light upper beams were structurally unsuitable for cannon complements, a combination that introduced fatal design flaws into Britain's battleships.

Under the lightly veiled pseudonym 'Nauticus', Vernon accused the Surveyor General of half-ruining the Navy. Nobody listened, and by October it was too late. Vernon zealously took to the *Westminster Journal* of 3 November to vent that 'Of the *Victory*'s misfortune it is not now likely we should have any Account... But if our Ship-building for the Royal Navy has been many Years universally bad, ought we not to fear that the Structure of this great Vessel partook of the general mistake?' What was the nature of this system failure?

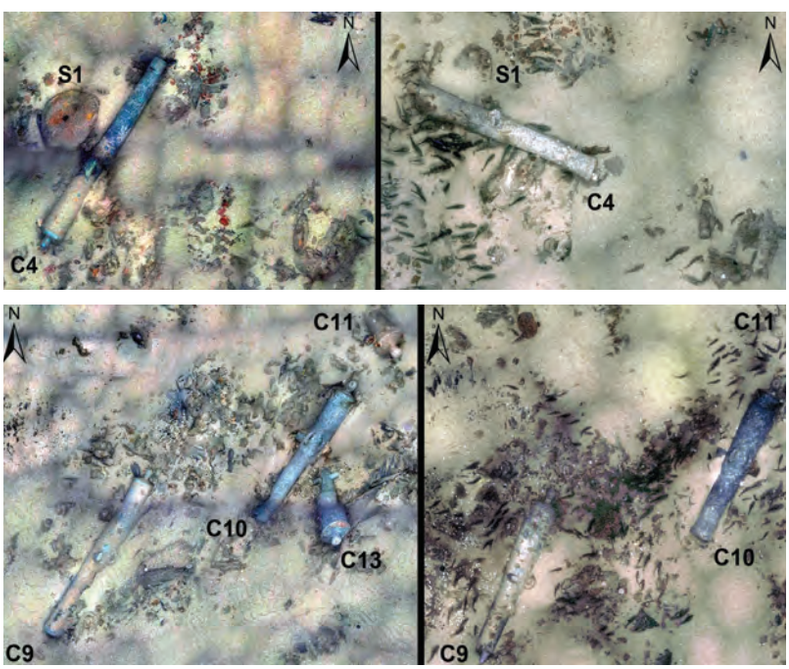
> Of the *Victory*'s misfortune... ought we not to fear that the structure of this great vessel partook of the general mistake?

When Blaise Ollivier, the Master Shipwright at France's foremost Royal Dockyard at Brest, spied on the *Victory* at Portsmouth while she was under construction in 1737, he observed that 'her capacity is very great, yet her upper works are scarce suitable for her lower body, for she is deep-waisted with much sheer'. Rather than Gallic mischief, no less a luminary than Sir John Norris, the oracle of the navy and Admiral of the Fleet, who commanded the *Victory* between 1740 and 1744, assumed her command hesitantly after complaining to the Admiralty about the warship's unsuitable height and heavy treble balconies at the stern. The *Victory* seems to have been a top-heavy drunken sailer.

Despite the mass of rectangular iron ballast stowed along the *Victory*'s keel (found on the seabed, this was preferred to gravel as a means of stiffening the hull and preventing rolling at sea), with her 100 bronze cannon and ponderous 42-pounder lower deck guns, Britain's ultimate battleship was a disaster waiting to happen. The rigging includes composite iron and copper sheave blocks, a type never previously identified. The juxtaposition of these metals stimulates galvanic coupling and destruction. It is generally understood the Navy was unaware of this problem until at least 1753, a view now confirmed on the *Victory*.



RIGHT Plan of iron ballast and cannon in Area F, overlying the keel line. The ballast marks the wreck's westernmost archaeological remains. **BELOW** All of the wreck's Areas changed between 2008 and 2012. The photographs of area C1 in 2008 (**TOP LEFT**) and 2012 (**TOP RIGHT**), show gun C4 rotated and flipped; those of Area D in 2008 (**BELOW LEFT**) and 2012 (**BELOW RIGHT**) show that gun C13 has vanished.



In a further twist of bad luck, the first 40 years of the 18th century coincided with a succession of moderate, frost-free winters, when the temperature stood 0.6°C above normal. Cut timber contained more sap than normal, making the time required for the seasoning process longer, if not impossible. Warships' wood simply rotted. Compared to the 12- to 17-year longevity of most 18th-century warships, men-of-war built between 1735 and 1742 had an average lifespan of just 8.8 years between the time of launch and docking for a major repair.

Human carelessness aggravated the environmental lottery. In 1737, the Commissioners of the Navy demanded an immediate survey

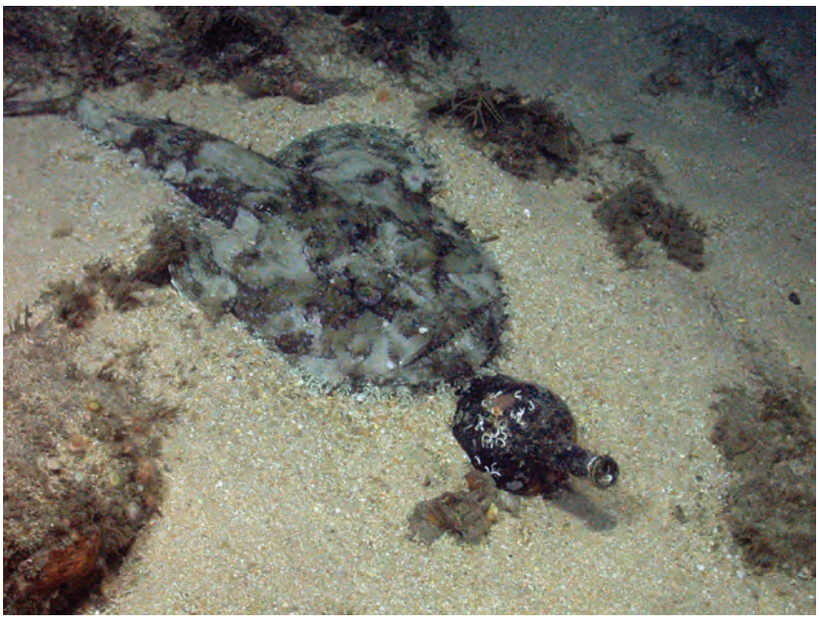


IMAGE: Science Museum Group, 1864-12/2

> The *Victory* is a work in progress... the most scrutinised wreck in English history...

ABOVE A glass wine-bottle surface-find in Area F, the first intact glass or ceramic artefact identified on the *Victory*.
ABOVE RIGHT Perspective painting of a model of the first-rate *Victory*, formerly in the collection of King George III.

of wooden stocks 'complained of to be daily Rotting and Perishing' in Portsmouth dockyard, where *Victory* was built. Quite simply, the yards were carelessly failing to rotate wood by using oldest timber first. A final aggravation was not enforcing the enclosure policy in the Dean and New Forests, which led to timber deficiencies that undermined attempts to prepare the *Victory* for sea service in 1739. When Commissioner Richard Hughes expressed a great need for large knees for the wind transom, cheeks of the head, and standards on the decks of the *St George* and the *Victory*, none were available. The new wood felled in a great hurry in the New Forest would not have had sufficient time to season.

The future

The *Victory* is a work in progress. The last set of all-brass cannon used to arm a British warship, and the largest collection surviving worldwide, needs to be recovered and safeguarded along with the flagship's other surface artefacts. The Maritime Heritage Foundation has formulated a detailed historical and archaeological research agenda to examine daily ship-borne life, defence, and the warship's technology. Admiral Balchen's flagship has become the most scrutinised wreck in English history other than the *Titanic*, subjected to Byzantine oversight.

Until her legacy can be fully realised by select excavation and recovery for public education and science, and because the *Victory* is currently a marginalised resource, the Foundation has developed England's first deep-sea virtual shipwreck dive trail, so everyone can visit and float across the lost battleship that once made Europe quake. @

SOURCE

Dr Sean Kingsley is the Director of Wreck Watch Int., London, and a specialist in marine archaeology, deep-sea shipwrecks, trade, economics, and the Byzantine world. He has been working on *Victory* since 2008, and blogs at *https://wreckwatch.wordpress.com/the-undertow*

FURTHER INFORMATION

The *Victory* virtual dive-trail and the publications page for scientific papers on the wreck are both available at *www.victory1744.org*

ODYSSEY MARINE EXPLORATION

Odyssey Marine Exploration is a deep-ocean exploration company based in Tampa, Florida, specialising in three branches of marine science: applying robotic technology to archaeological operations on hundreds of shipwrecks worldwide dating from the 5th century BC onwards in depths to 2,000m (including discovery of the *Victory*); pure salvage to depths of 5,000m; and mineral exploration. Odyssey provides contract services to clients including governments, universities, foundations, and companies, and also funds projects on its own behalf. On some Odyssey projects, multiple trade goods – but not unique cultural artefacts – have been sold to offset the costs of science. No artefacts were sold from the 270 wrecks found during the English Channel surveys. Odyssey Marine Exploration is the archaeological contractor to the Maritime Heritage Foundation.

UK MARITIME HERITAGE FOUNDATION

The UK Maritime Heritage Foundation was gifted the wreck of the *Victory* by the Ministry of Defence in 2012. With Lord Lingfield as Chairman and the late Dr Margaret Rule, OBE, as Chair of its Scientific Advisory Committee, the MHF is a charitable trust whose objectives are to locate, excavate, recover, raise, restore, and/or preserve shipwrecks for the education and benefit of the Nation.