

Forgotten Wrecks
of the
First World War

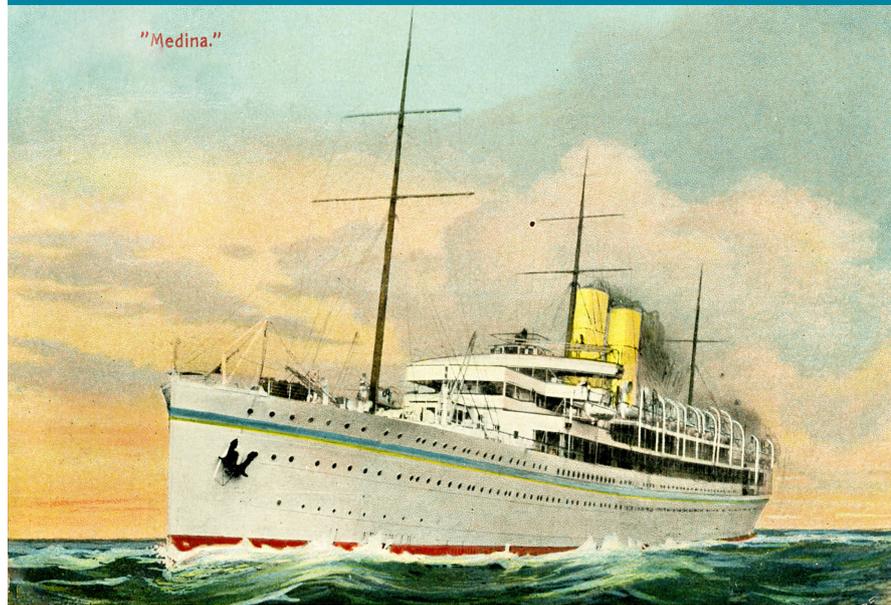
RMS *Medina*

Site Report



LED BY IWM

2018





**FORGOTTEN WRECKS
OF THE FIRST WORLD WAR**

RMS *MEDINA* SITE REPORT



LOTTERY FUNDED LED BY **IWM**

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i. Acknowledgments

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MAT would like to thank the volunteers who gave up their time to help with research on the RMS *Medina*. Authors who have contributed to this report include: Julie Satchell & Roger Burns

ii. Copyright Statement

This report has been produced by the MAT with the assistance of funding provided by the Heritage Lottery Fund through their Heritage Grants Programme. Unless otherwise stated all images are copyright of the MAT.

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1. Project Background

Forgotten Wrecks of the First World War is a Heritage Lottery Funded project which is dedicated to raising the profile of a currently under-represented aspect of the First World War. While attention is often focused on the Western Front and major naval battles like Jutland, historic remains from the war lie, largely forgotten, in and around our seas, rivers and estuaries.

With over 1,000 wartime wrecks along England's south coast alone, the conflict has left a rich heritage legacy and many associated stories of bravery and sacrifice. These underwater memorials represent the vestiges of a vital, yet little known, struggle that took place on a daily basis, just off our shores. The study and promotion of these archaeological sites presents a unique opportunity to better interpret them and improve physical and virtual access.

The project focuses on underwater and coastal sites between Kent and Cornwall, which include merchant and naval ships, passenger, troop and hospital ships, U-boats, ports, wharfs, buildings and foreshore hulks. These sites, under water and on the foreshore, have been degrading and deteriorating due to natural and human processes for approximately 100 years and, as a result, are extremely fragile. In many cases, this project represents a final opportunity to record what remains on the seabed and foreshore before it is lost forever.

The project aimed to characterise the nature and extent of the maritime First World War archaeological resource surviving on the south coast's seabed and around the coast. This provides an understanding of maritime activity just off our shores during the conflict and a window onto some of the surviving sites. While it will not be possible to visit and record all c.1,000 vessels dating to the First World War, lost off the south coast of England, a representative sample of sites have been selected for more detailed study, analysis and interpretation.

This report collates information collected during the project, relating to one of the south coast's First World War wrecks, RMS *Medina*.

2. Methodology

General detail on the methodologies employed during the project are outlined within *Forgotten Wrecks of the First World War: Project Methodology Report*, this report section concentrates on approaches and resources relating specifically to the *Medina*.

2.1 Desk Based Historic Research

A range of sources were consulted for information on the RMS *Medina*. As a P&O Liner that was used as a Royal Yacht, the ship has a significant amount of documentation available related to it, in addition to featuring in a number of publications and with artefacts having been the subject of a high-profile auction by Sotheby's. The wreck is dived, although its depth means it is an advanced dive, there are some photographs available online from diver reports. In addition to publications, the following sources were explored during research:

Online Research

The wreck of the *Medina* is listed in the National Record of the Historic Environment (NRHE), Monument Number: 832166, NMR Number: SX 93 NW1. The record was last updated in 2017 and contains brief information about the discovery and salvage operations carried out, a list of artefacts from the site reported to the Receiver of Wreck, and a text-based account of the loss of the ship (Pastscape 2018).

There is further information on Wrecksite.eu which includes a range of photographs and illustrations of the ship and artefacts recovered from it. Detail from divers visiting the site is also represented. More information about the background to the ship and its use as a Royal yacht is included within an entry on Wikipedia, while further information on the submarine UB-31 that sank the ship can be found on u-boat.net.

Information on the Great War Forum includes a number of different threads relating to the *Medina* including photographs and newspaper articles on the Royal voyage and visit to India.

The National Archives

There are a significant number of records in The National Archives related to the *Medina*, these include those compiled by the Admiralty related to its loss during the war (ADM 137/1295, ADM 137/1293), company records from P&O from its use as a Royal Yacht (P&O/65/17a-b, /95/16), a range of Board of Trade passenger lists from its general use as a passenger liner which also carried cargo (e.g BT 26/535/161, BT26/536/67), and a number of extracted logs for voyages between June 1912 and December 1916 (BT 165/ 611, BT 165/1524).

Other Board of Trade documents include the War Risk Insurance Records, and these records provide an interesting insight into the nature and insurance value of some of the cargo on board when ships were lost. The *Medina* was included within these records and detail of some of the extensive cargo is included in Section 3.

Geophysical Survey data

The site of the *Medina* is included within the Maritime and Coastguard Agency dataset 2013 HI1396 Approaches to Torbay 4m SB, a copy of which was kindly provided via the United Kingdom Hydrographic Office under the Open Government Licence v3. Interrogation of the dataset provided a high resolution bathymetric image of the site (See Section 4.1).

2.2 Associated Artefacts

While the Forgotten Wrecks project had a non-recovery policy, where possible, the project aimed to 'virtually reunite' artefacts historically recovered from the Forgotten Wrecks. One of the reasons that the *Medina* was chosen as a case study was the wealth of artefacts that have been recovered from the site through salvage. Although these are largely in private ownership, documentation and photographs particularly for the Sotheby's auction, made it possible to review recoveries in detail. Some artefacts from the wreck are on display in museums and exhibitions, these include Salcombe Maritime Museum, where artefacts were recorded as part of the Project, and the Charlestown Shipwreck and Heritage Centre. The sections below outline the basic details of reported artefacts, there is some possibility that objects included as Receiver of Wreck (RoW) reports are also those held in Museum collections, but at present it is not possible to cross reference these. Further consideration of the artefacts by class is provided in Section 5.

Sotheby's Auction Artefacts

A copy of the Sotheby's catalogue reveals details of the objects auctioned in Billingshurst in 1988. The introduction to the catalogue states "There was, as expected, a large Oriental art collection: Indian brassware and an elaborate wooden chair (lot 122); Japanese porcelain; netsuke; Chinese carving. There are readable letters from Kitchener and Lord Rosebery; watercolours; even an old Sotheby's coin catalogue. A boot, jars of scent, perfectly-sharpened pencils were brought to the surface. An Assyrian cuneiform seal and bright Ancient Egyptian beads, striped in gold, emerged from the deep. So did Lord Carmichael's masonic jewels and his KCMG order. There was also a good deal of jewellery; amethyst and diamond cufflinks; fiery Australian opals, which were just beginning

to be mined in the first decade of this century, when Lord Carmichael was Governor of Victoria” (Sotheby’s 1988: 8).

It is not possible to gain an accurate total of the number of artefacts from the *Medina* sold at the auction as a number of the lots were labelled as ‘Collection of.....’. However, it is estimated there were over 3,500 artefacts within the sale.

80 cases that had belonged to Lord Carmichael were salvaged along with other items, and much of the material at auction had belonged to Lord Carmichael and were part of his personal collection of antiques and local crafts.

Artefacts reported through the Receiver of Wreck

The RoW records provide detailed information for objects which were either reported during the 2000 Amnesty, or have been reported subsequently. Pastscape records include details of RoW reports and those listed as from the *Medina* included:

- Two plates with a P and O crest (Droit A/359)
- A porthole drip tray (Droit A/652)
- A porthole and three cups (Droit A/820)
- A telegraph and a chronometer (Droit A/1177)
- A porthole and 2 lamps (Droit A/1407)
- 4 bowls, 3 plates, and a light fitting (Droit A/1891)
- A porthole and a bench end. (Droit A/2378)
- 6 plates, 6 bowls and a coat hook (Droit A/2466)
- A coat hook and an item, possibly a bottle opener, (Droit A/2518)
- A porthole (Droit A/2577)
- A porthole (Droit A/2846)
- A porthole, 5 bowls, a plate, a saucer, a spoon, an inkwell, 2 jars and a shell case (Droit A/2864)
- A white ceramic tea cup with P & O motif (Droit A/3190)
- A porthole (Droit A/3610)
- 6 white plates with "P&O" on the side (Droit A/4103)
- 2 spoons, a fork, a pair of nutcrackers, and a chamber pot with the P&O logo (Droit A/4127)
- 2 portholes (Droit A/4190)
- A large porthole (Droit A/4319)
- Numerous items including tableware, fittings, personal items, baskets, clothes and figures (Droit A/4406)
- Glass jars, a wooden pen and ink stand, a badge and a brass bombardier's lapel badge, belt buckles, collar studs, cheap finger rings, fragments of ivory fans, sealing wax, a lady's lace shawl, fragments of men's ties, various parts of golf clubs, and tableware (Droit A/4507)
- A brass pot with six lips, and no markings (Droit 058/01)
- A square brass porthole (Droit 346/01)
- A paperweight marked 'Automobile Club of Western Australia' (Droit 008/02)
- 6 EPNS dessert spoons and 6 EPNS forks (Droit 119/04)
- A porthole outer ring lacking an inner ring and glass, 24" in diameter (Droit 056/05)
- A side plate and a cracked cup, both with the P&O mark, and a small glass bottle (Droit 050/06)
- A serving spoon; a nutcracker; 4 forks; 2 dessert spoons; a teaspoon; and a fish knife (Droit 155/08)

- A statue of a lady holding the *Medina* in her arms, by F Lynn Jenkins, dated 1911, in left hand side front of base, 34.5" high, hole in top of head (possibly for a mount) (Droit 463/09)

The total number of artefacts represented through RoW reports is around 180, but it isn't possible to provide a specific number as some reports state 'numerous' for quantity. These artefacts are individual diver recoveries, so will not be represented within the items auctioned by Sotheby's.

Other Auctions

Auctions of a small number of *Medina* artefacts have also been held at Christie's in 2000, and at Bonham's in 2015.

Artefacts at Museums

Salcombe Maritime Museum hold seven artefacts from the site, and they are:

- Indian brass vase (were represented within the Sotheby's sale)
- Indian brass vase (were represented within the Sotheby's sale)
- Brass Spur Rowel; double Star Shaped riding spur in good condition
- Brass Hair Fork
- Brass Ornate Pin
- Brass Container, possibly a Perfume Jar or other Precious fluid container
- Pair of good quality socks recovered from *Medina*, alleged to be Lord Carmichael's, but unproven

Charlestown Shipwreck and Heritage Centre hold hundreds of artefacts from the wreck. Viewing the museum cases reveals a wider range of items, many if not all of these items are likely to have been represented with the Sotheby's Auction lots. Photographs in Section 5 of the Museum cases present the artefacts. Further recording of this collection would provide detailed information on many of the artefact types recovered.

3. Vessel Biography: RMS *Medina*

Medina (Figures 1 & 2) was chosen as one of the Forgotten Wrecks case study sites because of having served initially as the Royal Yacht, the ship was regarded as one of the best passenger liners of its time, designed for regular return voyages providing a mail and passenger and general cargo business between London, India and Australia. Its remains, which lie off the Devon coast at over 60m depth are accessible, visited by divers, as well as having been salvaged for its cargo over the years. The archive of information on recovered artefacts from the site provide a fascinating collection related to late colonial India in addition to general cargoes during the First World War.

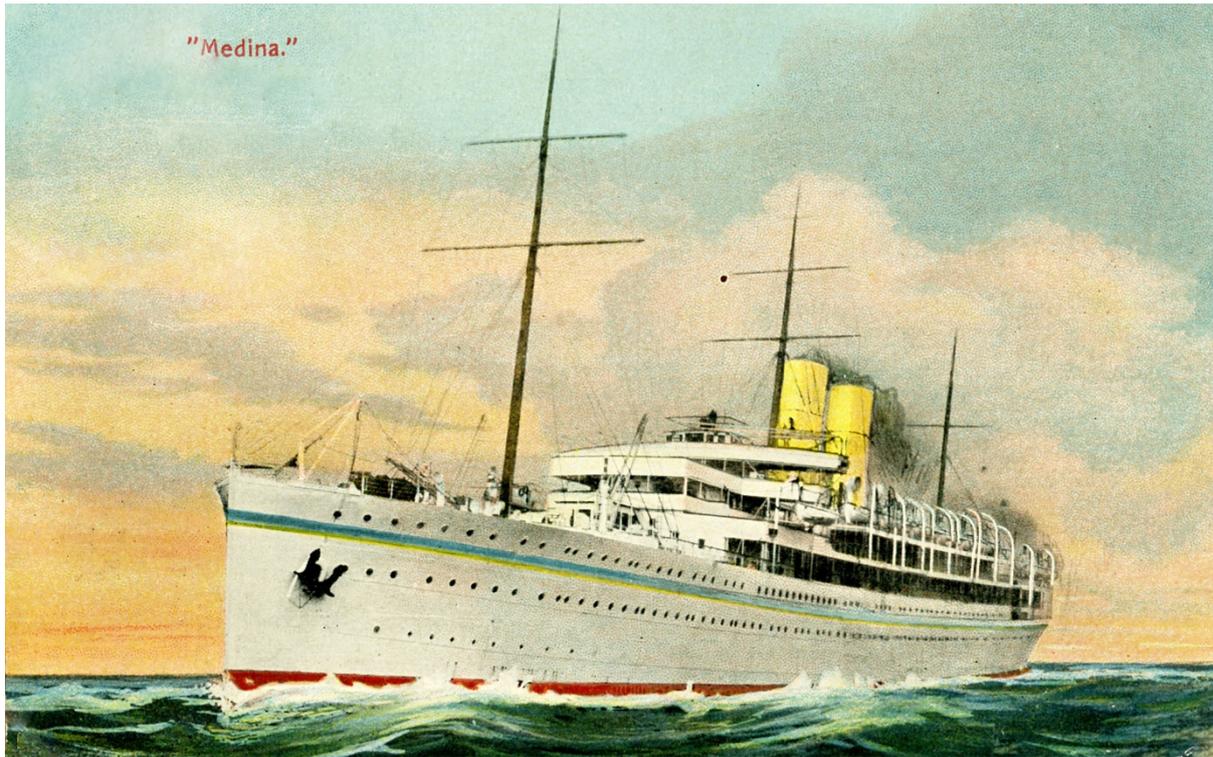


Figure 1: *Medina*. Painted for royal service (Courtesy of Simplon Postcards <http://www.simplonpc.co.uk/>)

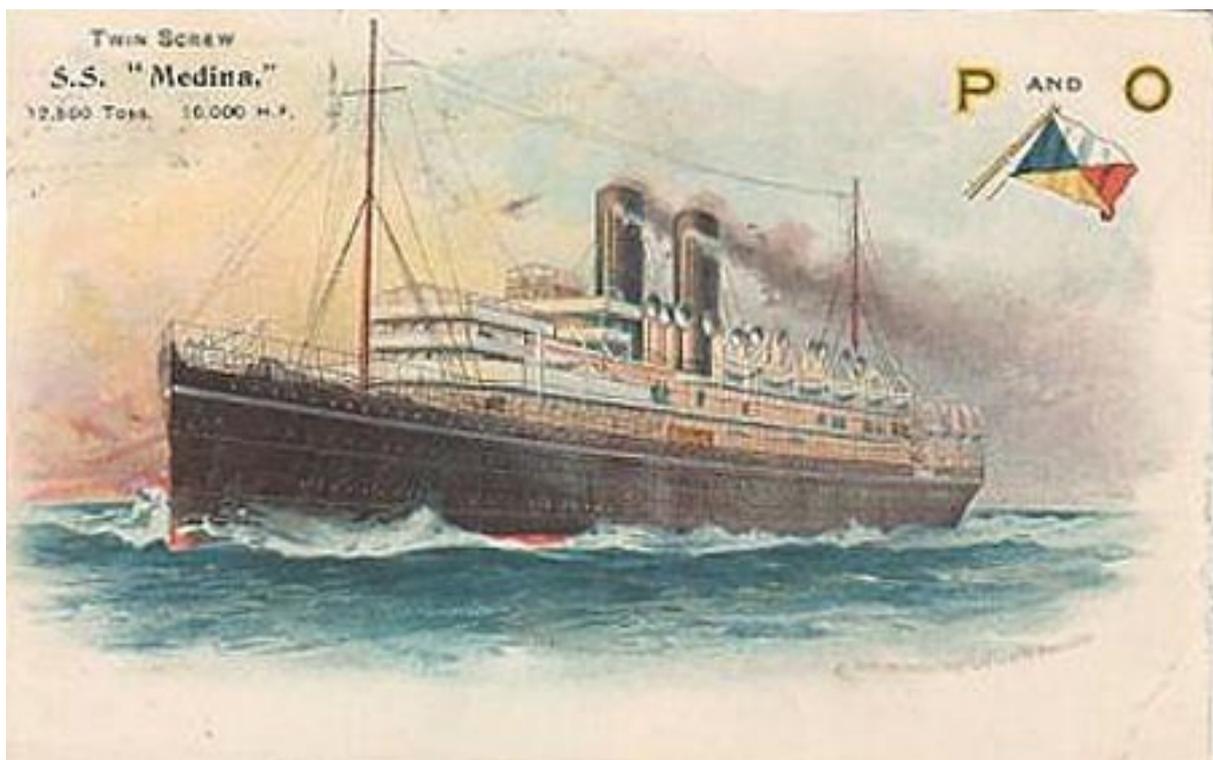


Figure 2: Official P&O Postcard of *Medina* in its service livery (Courtesy of Simplon Postcards <http://www.simplonpc.co.uk/>)

3.1 Vessel Type and Build

Launched on 14 March 1911 by Lady Alice Shaw-Stewart, the daughter of the late Marquis of Bath and wife of Sir Hugh Shaw-Stewart, a local dignitary, it was registered as *Medina* on 3 September 1911. The *Medina* (Official Number: 131849) was built by Caird & Company of Greenock in their Westburn yard, no 317 (Clydeships 2017). The ship was a passenger liner having a gross tonnage of

12,350. The 550 ft. (c. 167.58m) long ship had a beam of 62 ft. 8 ins (c. 19.13m) and a draught of 29 ft. 9^{7/8} ins (9.067m); powered by two quadruple expansion engines from Caird & Company of Greenock, giving 1164 nhp driving twin screws, the ship had a speed of 18.5 kts during trials and 16.5 kts in service. Its cargo capacity was 240,394 ft³ (6,807 m³) including 90,889 ft³ (1,975m³) insulated (P&O 2017).

Medina was the last of 10 “M” class ships built for P&O and thus had the experience gained of its predecessors incorporated into its design. Its capacity was for 450 first class passengers and 216 second class passengers, served by a crew, in 1914, comprising 347 (145 European, 202 Asian) distributed as deck 24 European, 51 Asian; engine room 16 European, 101 Asian; and purser’s department 123 European, 50 Asian (P&O 2017).

Its steam powered engines were unusual, being quadruple expansion rather than the more common triple expansion type screws. When originally ordered, there were no plans for it to have Royal Yacht status or to be used as the Royal Yacht – Royal Yacht terminology bestowed on a ship was used only if the vessel was used by Royalty regardless of whether it was registered as a yacht. The decision to use it to take King George V and Queen Mary to the Delhi Durbar was made late in its construction stage. Therefore, *Medina* underwent some refitting prior to undertaking its Royal duties. This included an extra mast, necessary to maintain Royal flag etiquette, temporarily mounted just forward of its funnels and borrowed from P&O steamer *Nankin*, and *Medina* was given a white hull with bands of royal blue and gold and buff funnels. Various large rooms intended for public use were redecorated as Royal apartments (P&O 2017; TNA P&O/65/17a-b, /95/16).

3.2 Pre-war Career

Built for the Peninsular & Oriental Steam Navigation Company, known as P&O, *Medina* was initially commissioned into the Royal Navy, thus designated HMS, and given a mostly Royal Navy crew for its maiden voyage as the Royal Yacht. On completion of this voyage, *Medina* was returned to Caird & Company for refitting back to its original intended purpose as a commercial passenger liner for P&O, also carrying mail and general cargo, between London, India and Australia (P&O 2017). A brief summary of the ship’s voyages between September 1911 and December 1914 offers an indication of the travels:

- Maiden voyage – commissioned as HMS *Medina* on 10 September 1911, the ship set sail on 11 November 1911 for Bombay as the Royal Yacht with the Royal party aboard. *Medina*, escorted by the cruisers HMS *Argyll*, *Natal*, *Cochrane* and *Defence*, arrived at Bombay on 2 December 1911 and, with the Delhi Durbar celebrations complete, departed Bombay with the Royal party on 10 January 1912 arriving back at Portsmouth on 5 February 1912. During this voyage, the Master for the Royal Voyage was Rear-Admiral Sir Colin Keppel. Admiral George Tomlin was the commander of HMS *Medina* on the Royal Voyage, he navigated on the trip to and from India, for which he received the M.V.O.
- Maiden commercial voyage for P&O – following its refit, *Medina*, now designated RMS or SS, departed on 28 June 1912 for Australia. Returning, it departed Sydney, calling at Melbourne, Fremantle, Hong Kong, Singapore, Penang, Colombo, Bombay, Port Said, Marseilles and Gibraltar disembarking at London.
- The First World War was declared by Great Britain on 4 August 1914. Between its maiden commercial voyage and the outbreak of war, *Medina* travelled to and from Australia, occasionally just to India. Australian voyages included calls at Sydney, Melbourne, Hobart, Adelaide, Fremantle, Colombo, Shanghai, Hong Kong, Singapore, Penang, Bombay, Suez, Port Said, Malta, Marseilles and Gibraltar disembarking at Plymouth and London or slight variations thereto including Littleton, Gisborne, and Tangiers. Trips from India involved Bombay, Port Said, Marseilles and Gibraltar disembarking at Plymouth and London.

The above information has been gained from a range of documents at The National Archives: BT 26/535/161, BT 26/536/67, BT 26/562/103, BT 26/565/3, BT 26/566/91, BT 26/592/5, BT 26/593/138, BT 26/595/109 – Inward passenger lists 1912 to December 1914. BT 165/611 and BT 165/938 – Extracted logs for most voyages 1912 to December 1914.

3.3 First World War Use & Loss

During the First World War, the *Medina* was not requisitioned by the Admiralty and continued with the service between London and Australia, with ports of call broadly similar to pre-war. However, the ship was armed.

On 28 April 1917, *Medina* left Plymouth on the final leg of its voyage from Australia, bound for London, via India and having also called at Alexandria. The Viceroy of India, Lord Carmichael, was returning to England and was having his personal possessions carried back on the *Medina*, having elected to take a safer path home. His possessions included his Knight Grand Commander of the Indian Empire medal, his art collection, as well as many other valuable personal artefacts.

Most of the passengers had disembarked at Portsmouth and the remaining 53 with crew totalling 411 of mixed Royal Navy, Royal Naval Reserve, Royal Naval Volunteer Reserve and Mercantile Marine Reserve personnel were on course for London under the command of H.S. Bradshaw. The passengers included Royal Navy personnel travelling from China stations to London. The vessel was carrying, apart from passenger baggage, a cargo of Indian brasses, Australian meat, 5,733 ingots of copper, 5,200 ingots of silver lead bullion, 143 ingots of tin, 353 bags of wolframite concentrates (an ore of tungsten), 111 bags of schewelite concentrates (another important ore of tungsten) and one box of silver bullion. The gold had been offloaded at Plymouth due to the submarine threat in the Channel. Further information on the cargo on board is detailed in Table 1 which draws on Board of Trade War Risk Insurance Records.

Medina was attacked by torpedo at 5.50 pm on 28 April 1917 and sunk by Oberleutnant Bieber's UB-31. The torpedo hit the starboard side to the rear of the engine room, disabling the ship. Fortunately, the *Medina* had put most of the passengers ashore in Plymouth, and in less than an hour the ship was abandoned. Six engine room crew were killed in the initial explosion, and they were the only casualties. Of these six, five were part of the Indian Merchant Service and are commemorated on the Memorial in Mumbai, the sixth was the Fourth Engineer Officer who is recognised on the Tower Hill Memorial in London. All survivors were towed in *Medina's* lifeboats to Dartmouth and Brixham (Wrecksite.eu). In attendance were destroyers *Spitfire* and *Laurel*, the latter attempted a tow which failed.

(The following documents were researched in relation to the above text: TNA ADM 137/1295 – English Channel: German submarines, April 1917. ADM 137 1293 – English Channel: German submarines, January-June 1917. BT 26/617/76, BT 26/615/132, BT 26/630/3, BT 26/631/38, BT 26/632/54, BT 26/614/52 – Inward passenger lists 1915 to final voyage. BT 165/1255, BT 165/1524 – extracted logs 9 January 1915 to 20 December 1916).

The loss of the *Medina* was a personal blow to Lord Carmichael who lost many of his possessions, however, reviewing the Board of Trade War Risk Insurance records (Table 1) demonstrates how much cargo the ship was carrying at the time and the loss of valuable food stuffs, raw materials and manufactured goods when the country was relying on imports. Butter and eggs feature heavily in the cargo along with tea and dried fruit – commodities that would have been in increasingly short supply. The total value of the insurance claims paid out was £262,319, which in 2017 prices would be around £17.3 million.

Date of Settlement	Insurer	Claimant	Nature of goods	Value (£)
04/05/1917	G.A. Robinson Esq	G.A. Robinson Esq	Personal Effects	60
04/05/1917	John Croon England Esq	John Croon England Esq	Personal Effects	100
29/05/1917	Thos. Cook + Son	Milsted Cotton + Co.	Personal Effects	734
04/06/1917	Thos. Cook + Son	Milsted Cotton + Co.	Personal Effects	90
14/06/1917	Lyall Anderson + Co.	Dawson Bros	Rubber	1,450
15/06/1917	Mayfield (Dimbula)	Tea Co. Of Ceylon Ltd	Tea	775
15/06/1917	New Zealand Loan + Mercantile Agency Co. Ltd	New Zealand Loan + Mercantile Agency Co. Ltd	Merchandise	2,003
15/06/1917	Briseis Tin + General Mining Co. Ltd	James Robb + Co.	Tin	2,100
18/06/1917	Andrew Clement + Sons Ltd	Andrew Clement + Sons Ltd	Butter	835
18/06/1917	Ceylon Tea Plantations Co. Ltd	H. F. Devitt + Co.	Rubber	1,000
18/06/1917	W. Angliss + Co. Pty Ltd	W. Angliss + Co. Pty Ltd	Wool	8,000
19/06/1917	Frank Sangster + Co.	James Hartley Cooper + Co. Ltd	Eggs	3,000
20/06/1917	Arbuthnot Latham + Co.	Arbuthnot Latham + Co.	Tea	520
20/06/1917	S. V. Nevanas + Co. Ltd	W. + J. Biggerstaff	Provisions	7,007
20/06/1917	H. G. Feint Esq.	H. G. Feint Esq.	Eggs	1,200
20/06/1917	Rowe White + Co. Ltd	Craven + Co.	Rubber	4,125
20/06/1917	Talawakelle Estates Co. Ltd	Byas Mosley + Co.	Tea	830
21/06/1917	McMeekin + Co.	Craven + Co.	Tea	525
22/06/1917	John Haddon + Co.	John Haddon + Co.	Merchandise	2,200
22/06/1917	Kearley + Tonse Ltd	R. E. Harvey	Butter	2,890
22/06/1917	Gollin + Co. Prop. Ltd	Gollin + Co. Prop. Ltd	Lard	280
22/06/1917	E. C. De Garris	E. C. De Garris	Dried Fruits	475
22/06/1917	G. S. Yuills + Co. Ltd	G. S. Yuills + Co. Ltd	Extract	575
25/06/1917	Anglo Continental Produce Co.	Wm. Houghton + Co.	Butter	18,625
26/06/1917	Thos. C. Nelson	Lloyds Bank Ltd	#Bored Beef#	4,016
26/06/1917	Colombo Commerical Co. Ltd	Price Forbes + Co. Ltd	Produce	3,641
27/06/1917	Churchhouse + Co.	Thos. Nelson + Son	Currants	1,550
27/06/1917	R. + W. Davidson Ltd	Stafford Knight + Co.	Butter	10,747
27/06/1917	J. Kennedy Gibson	Eastern Extension Tel. Co.	Personal Effects	75
28/06/1917	M. P. Evans + Co.	M. P. Evans + Co.	Rubber	740
28/06/1917	J. Whittall + Co.	J. Whittall + Co.	Produce	1,520
28/06/1917	J. + J. Sonsdale + Co.	Burton Rowe + Uiner	Butter	2,400
29/06/1917	Mills + Sparrow	Mills + Sparrow	Butter	5,940
29/06/1917	Angliss + Co. Pty Ltd	Angliss + Co. Pty Ltd	Meat etc	2,200
29/06/1917	Dalgety + Co. Ltd	H. Chaplin + Co.	Goods	28,545
02/07/1917	Mount Lyall Mining + Pty Co.	Mount Lyall Mining + Pty Co.	Copper Bars etc	15,600
05/07/1917	A. W. Donaldson + Co.	A. W. Donaldson + Co.	Personal Effects	95
07/07/1917	Satter + Stokes Ltd	Wm. Haughton + Co.	Butter	29,558
07/07/1917	English + Australian Copper Co.	Byas Mosley + Co.	Copper Ingots	3,625

Date of Settlement	Insurer	Claimant	Nature of goods	Value (£)
07/07/1917	W. Weddel + Co. Ltd	F. Green + Co.	Butter	18,080
09/07/1917	S. V. Nevanas + Co. Ltd	W. H. Cuffin	Butter	1,580
09/07/1917	Harrisons + Crosfield Ltd	Harrisons + Crosfield Ltd	Rubber	400
11/06/1917	Lovell + Christmas Ltd	H. G. Poland Ltd	Butter	385
12/07/1917	Gilbert J. McCaul + Co.	Gedge Leigh + Humphrey	Merchandise	475
14/07/1917	Foley Bros. (London) Ltd.	Harris Marrian + Co.	Butter	17,650
14/07/1917	W. Weddel + Co.	F. Green + Co.	Butter	1,490
14/07/1917	A. Gibbs + Son	P. Champion + Co.	Silverlead Bullion	10,170
14/07/1917	John Connell + Co. Ltd.	Fletcher + Smith	Sultanas	1,365
17/07/1917	Mills + Sparrow	Mills + Sparrow	Butter + Lard	13,300
18/07/1917	Haydella Tea + Rubber Estates Ltd.	Thomas Alston + Co.	Produce	2,490
19/07/1917	J. Greger + Co.	Choisy De Rougemont	Eggs	670
19/07/1917	Londsdale + Thompson	Leslie + Godwin	Eggs	5,030
23/07/1917	Marshall + Co.	A. Bilbrough Co.	Paint	120
24/07/1917	Thomas Cook + Son	Milsted Cotton + Co.	Clothing	66
30/07/1917	F. R. Smyth	Union Ins. Sty of Canton Ltd.	Personal Effects	150
30/07/1917	A. Chevresson Seduc + D. Ropiette#	A. Blackmore + Co.	Leather	850
01/08/1917	Cox's Shipping Agency	Choisy De Rougemont	Eggs	1,200
07/08/1917	Thornett + Feher	Thornett + Feher	Rubber	3,025
07/08/1917	Agent General for S. Australia	W. F. Smith + Co.	Butter Etc.	85
11/08/1917	Shand Haldane + Co.	Anderson Anderson + Co.	Tea	505
15/08/1917	Kynoch Ltd.	Benton Churchill	Copper	1,100
17/08/1917	M. Hammond Clegg	W. Haughton + Co.	Personal Effects	50
18/08/1917	William Nevete + Co.	J. Poole + Sons	Tea	1,325
22/08/1917	F. G. Hornabrook	W. Haughton	Personal Luggage	260
27/08/1917	Coxs Shipping Agency Std	P. Champion + Co.	Merchandise	500
03/09/1917	G. J. MacCaul + Co.	Laurence Phillips + Co.	Hides	1,500
05/09/1917	W. Weddel + Co.	H. G. Poland	Dairy Produce	4,385
08/09/1917	Mills + Sparrow	Wm. Haughton + Co.	Butter	142
21/09/1917	Mills + Sparrow	H. Chaplan + Co.	#Butter Merchandise#	3,930
11/10/1917	J. + J. Lonsdale + Co. Ltd	Burton Rave + Viner	Butter	159
18/01/1918	Australian States Produce Co. Pty Ltd	W. Houghton + Co.	Butter	106
4/9/1918	Thornett + Ferr	Choisy de Rougemont + Co.	Rubber	30
3/29/1921		A. W. Donaldson + Co.	Private Effects	95
			Total	262,319

Table 1: Detail of Board of Trade War Risk Insurance Records

3.4 Associated Vessels

The ships associated with the ship *Medina* on its final voyage include submarine UB-31, HMS *Spitfire* and HMS *Laurel*.

Submarine UB-31

The submarine that sank the *Medina* was UB-31, a type UBII German submarine, coastal torpedo attack boat class, equipped with six torpedoes fired through two bow tubes. It was commanded by Oberleutnant zur See Thomas Bieber, whose decorations were Iron Cross 1st and 2nd class and, from 23 December 1917, Royal House Order of Hohenzollern. Bieber lost his life on 27 July 1918 in another submarine, UB-104 with 36 all dead. UB-31 was subsequently lost after hitting a mine in the Straits of Dover on 2 May 1918 with total loss of the crew (uboa.net 2018).

HMS *Spitfire* and HMS *Laurel*

Destroyers HMS *Spitfire* and HMS *Laurel* stood by the *Medina* as it sank, HMS *Laurel* trying but failing to tow *Medina*. HMS *Spitfire* was an Acasta class destroyer built in 1912 at Wallsend. HMS *Laurel* was a Laforey class destroyer, launched in 1913 and relatively local, having been built at Cowes, Isle of Wight (Wikipedia 2018: HMS Spitfire & Laforey Class Destroyer).

3.5 Post-loss Activity

There has been considerable interest in the wreck of the *Medina*, initially for salvage reasons and more recently for sport diving.

3.5.1 Salvage Activity and Artefact Sales

Extensive salvage operations have been carried out to recover elements of the ship's cargo. The principal salvage operations were in 1932, 1971 to 1973, the mid 1980's, and in 1998. At other times, smaller artefacts have been recovered and summary details of these can be found above in Section 2.2.

The 1932 salvage is not reported in heritage database entries, but is in the Sotheby's sale catalogue where it states that the tin was recovered. The 1970's attempt was under contract held by Risdon Beazley Ulrich Harms and had limited success. They targeted twenty-five tons of tin in 1973 and 1975, and also undertook an initial search for a hundred tons of copper known to be onboard, but not in which stowage area. The operation used a grab which went through passengers' baggage to try to reach the bottom of the holds. Even after sixty years of immersion, clothes in the centre of some of the trunks were still dry, and many remarkable items were recovered, including elaborate dressing-table sets, comprising up to ten cut glass bottles and jars with metal or enamel lids matching the brushes, combs and mirrors. The price of copper was low at that time and, not finding the metal stowage quickly, Risdon Beazley stopped their operations.

The most extensive salvage operation was undertaken in the 1980s by Consortium Recovery Ltd, they were searching for the 'Viceroy's Treasure' – Lord Carmichael's personal possessions and antiques collection. They used plans of the sister ship to *Medina* to attempt to locate where the baggage was most likely to be stowed (Hinds 1995). Initial work encountered damage caused from previous salvage and poor weather, which meant the operation had to resume in 1986. A 24 hour diving operation using saturation divers was mounted. With many of the holds being found to contain butter and meat the operation was almost abandoned until a box was located marked "GCIE"(Knight Grand Commander of the Indian Empire) - proof that they had at last found Lord Carmichael's belongings (Sotheby's 1988, 8; Global Underwater Explorers 2018).

The collection of over 80 cases recovered included a large amount of Oriental art - Indian brassware and an elaborate wooden chair; Japanese porcelain; netsuke; Chinese carving. Many items were exceptionally well preserved including readable letters from Kitchener and Lord Rosebery, watercolours, and even an old Sotheby's coin catalogue. Antiques and artefacts included an Assyrian cuneiform seal and bright Ancient Egyptian beads, striped in gold. There was also a good deal of jewellery: amethyst and diamond cufflinks, and fiery Australian opals, which were just beginning to be mined in the first decade of the century, when Lord Carmichael was Governor of Victoria.

Sotheby's held an auction of the material on the 26 May 1988. Within the sale catalogue there is information on Lord Carmichael, India and the return voyage. It also highlights how the events were reported in the press in Britain at a time when morale was low during the war – papers did not mention the loss of the *Medina*, only that Lord Carmichael had returned home. The catalogue lists 194 lots with in the sale, many of which included multiple objects, a full copy of the catalogue is available from: <https://antiqueprints.wordpress.com/2013/12/13/artefacts-recovered-from-the-wreck-of-the-ss-medina-sothebys/>. There are photographs of a range of objects including some of the most ornate and unusual items. The sale raised £22,000 (worth approximately £60,000 at 2017 prices). Section 5 of this report contains further information on artefacts from the site some of which were sold through the Sotheby's auction.

3.5.2 Sport Diver Activity

Being located at 60m depth the wreck site is visited by experienced extended range divers. DiverNet has the *Medina* as number 14 in its '100 Best UK Wreck Dives' (DiverNet 2018). South Devon clubs and dive charter boats include the *Medina* on their list of wrecks of the area online (Teign Diving Centre 2018; Falcon Diving Charters 2018; Totnes Sub-Aqua Club 2018). Information on the condition of the wreck site remains has been gained from these sites and diver reports as included within Wrecksite.eu (2018).

4. Seabed Remains

4.1 Site Location and Environment

The wreck of the *Medina* lies off the South Devon coast, approximately four miles off Start Point (Figure 3). The remains lie at a maximum depth of around 68m. *Medina* sits almost upright on the seabed orientated close to north - south and listing around 10-15 degrees to port. The depth to the ship's main deck is around 55m, with some of the top decks shallower at around 38m (Figure 4).

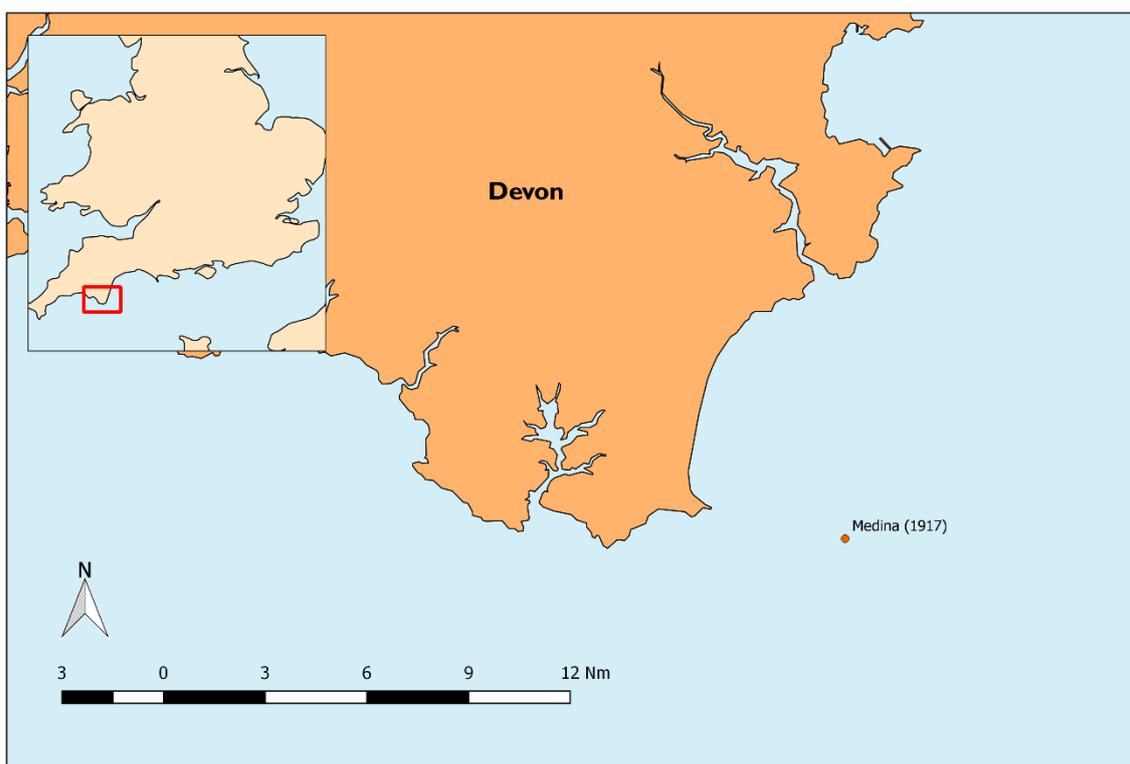


Figure 3: Location of the wreck of the *Medina*

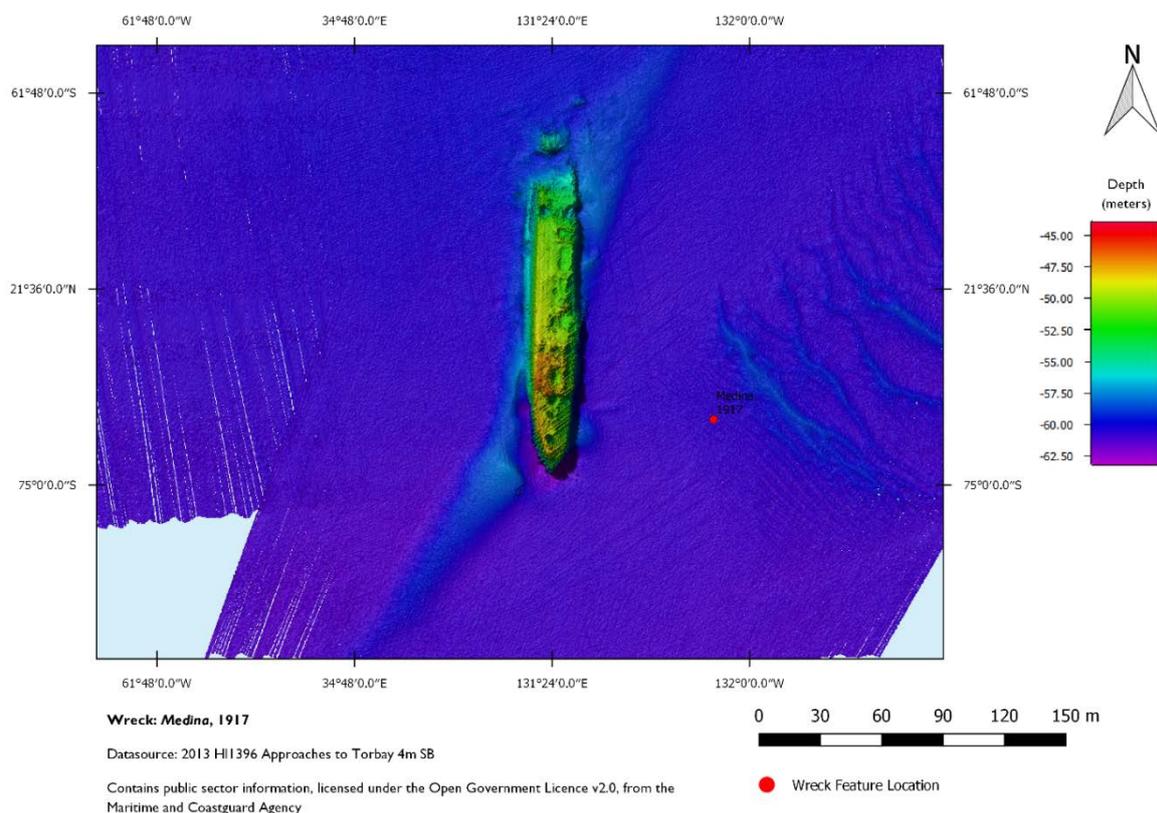


Figure 4: Geophysical survey image of the site of the *Medina* (Contains public sector information, licensed under the Open Government Licence v3.0 from the Maritime and Coastguard Agency)

4.2 Archaeological Methodology

The MAT has not undertaken any diving investigation of the site, work has been confined to the recording of artefacts and analysis of geophysical survey data and any available reports from divers and publications. The bathymetric survey by the Maritime and Coastguard Agency, which was made available via the UKHO provides the most complete image of the site (Figure 4 and 5).

4.3 Description of Surviving Vessel Remains

The survey data from 2013 demonstrates that the site is still substantially complete on the seabed (Figure 5). This image can be compared directly to a sketch plan of the forward part of the ship completed by diver Richard Wood in 2002 (Figure 6) (Totnes Sub-Aqua Club 2018). The sketch corroborates that the hatches can be seen within the geophysical survey image up to and including the bridge area. Further aft of the bridge the wreck remains are not as complete and it appears the damage from salvage operations can be seen particularly at the stern. Diver reports from 2017 indicate that a break is developing towards the bow roughly where the hold hatch is shown on Figure 6 (Dominic Walley, pers comm).

The 2013 survey indicates the site measures 180m long by 44m wide (including debris) with a height of up to 12m above the seabed. The torpedo hit the ship on the starboard side to the rear of the engine room, so damage would be expected in this area, however, it is not possible to positively identify the damage from the geophysical survey data (Figure 5).

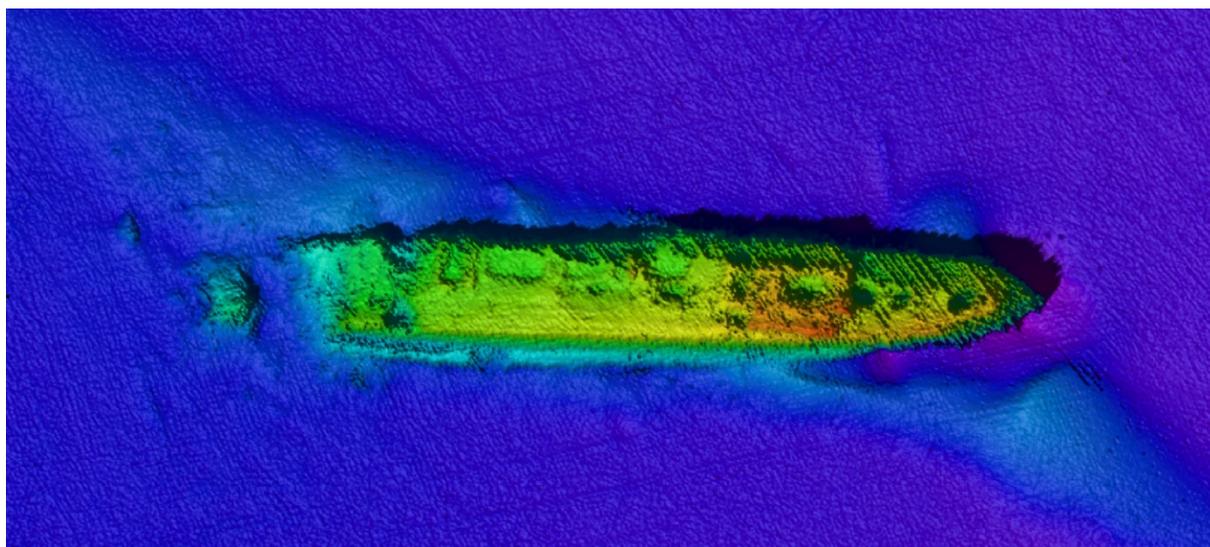


Figure 5: Close up of geophysical survey image of the *Medina*, bow to the right

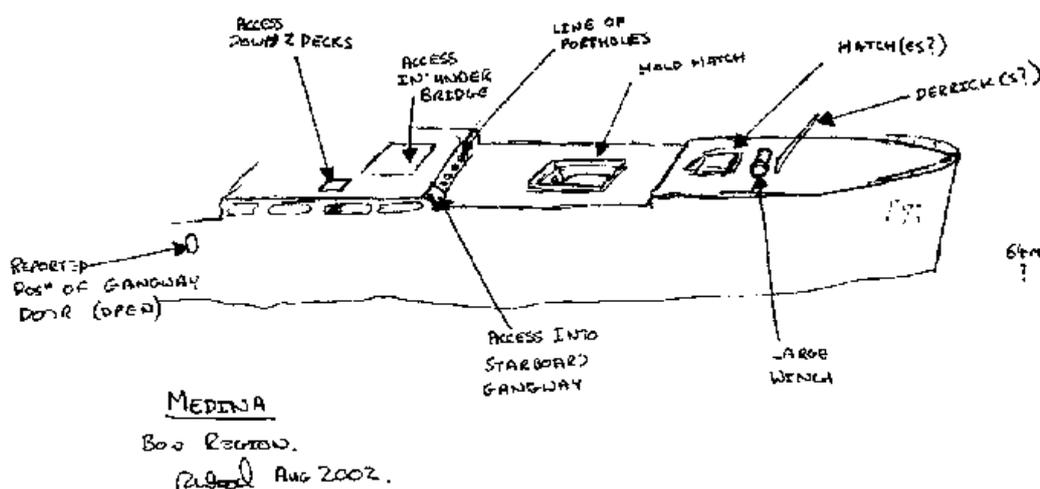


Figure 6: Sketch of the forward part of the *Medina* wreck completed in 2002 (Courtesy of Richard Wood)

A description of the seabed remains also on the Totnes Sub-Aqua Club website outlines that: "The highest part of this area of the *Medina* is the bridge. Down each side of the bridge are the passengers covered walkways all very accessible. From the starboard side walkway, there are hatches allowing access down into the wreck. Forward of the bridge is the cargo-hold. Several decks are visible going down inside the wreck here. Further forward there are winches, and derrick cranes still standing proud. At the bow, the port anchor can be seen protruding out from the hull below you. Reasonably intact despite salvage of copper and passengers' baggage from forward holds. Stern most damaged and sinking into mud of seabed. Bulkheads collapsing, compartments folding down. Divers have raised the builder's plate".

In 1982 it is reported that the wreck is still fairly intact, sunk by the stern into the seabed. There is much scrap lying either side of the wreck from previous salvage work and the metal of the hull is now getting very thin (Wrecksite.eu).

Another diver report available on Wrecksite.eu from 1995 records a dive to the site where visibility was good. They were able to pass from the superstructure to the bottom of the hold, they remarked that deck planking was in-situ and it was possible to move along the walkway between decks.

As shown by the geophysical survey, the site is still relatively intact. Despite salvage work and gradual degradation, the structure and features remain coherent. There is much potential for further detailed survey of the wreck before further deterioration occurs.

5. Recovered Artefacts

The Sotheby's auction catalogue (1988) provides a background to Lord Carmichael and his personal interests, this helps explain the wide range of art works, jewelery and artefacts found within the collection. It states that "A large quantity of twentieth-century Indian brassware was found in Lord Carmichael's *Medina* baggage (Lots 1-91). It includes religious figures; detailed studies of animals and insects; function items like candlesticks, plant containers and photograph frames, all lavishly ornamented.It is probable that he collected these items both for aesthetic and for ethnographic reasons. It is also possible, as there are so many examples of each item, that his aim was to disseminate commercial interest in Indian crafts by giving them as 'samples' to British retailers" (1988: 7).

The Sotheby's catalogue is split into sections for different types of lots, and these are presented below with a brief summary of the range of artefacts contained within each of them.

Oriental brass and other metal work: Wide range of pots, containers, rectangular caskets, vases, decorative fish, candlesticks, hand bells, photograph frames, trays, Tibetan temple dogs, god and goddess figurines, carts pulled by animals, complete tea services, napkin rings, nutcrackers, comb.

Porcelain and pottery: Japanese porcelain tea services, vases, Satsuma earthenware vases, pots with lids, Chinese blue and white pattern jars, Indian earthenware, European pottery and porcelain, Meissen 19th century tea service, Goss style commemorative ware.

Oriental works of art: late 19th century and early 20th century including ivories, lacquerwork and soapstone figures: Chinese rock crystal cat figure, Jade lotus carved finial, south-east Asian 19th century sectional ivory figures, ivory figure of Ganesha, range of ivory carvings, miniature carved ivory and wood animals, collection of earthenware fruit, soapstone pots, stone elephants, carved hardwood chair, ebony elephants, various carved wood Indian pieces, Silk embroidered cotton, socks, lacquered papier-mache boxes and bowls.

Personal effects, P&O tableware and various European artefacts: P&O Ironstone cups, glass bottles and jars, animal skulls, collection of rocks, selection of European plate, brass miniature furniture in European style, napkin rings, collection of 19 'Queen Mary' First World War tobacco boxes (stamped Christmas 1914), Eastern powder flasks, military cap badges, golf clubs, golf balls, ceramic novelty figure, coin collection, European nautical and navigation instruments, scientific equipment, sunglasses, fans, whistle, snuff boxes, glove stretchers, opium pipe, fishing reel, hip flask, whip, hot water bottles, shooting stick, walking stick.

Letters, documents and personal papers: 130 items which include personal letters, inventories, invoices and correspondence covering Lord Carmichael's collection interests and activities, Government business with Australia, Government business with India, press cuttings, postcards, documents relating to Carmichael's family history, monochrome prints and booklets.

Jewellery and objects of vertu: collection of beads, gold rings, sapphire ring, Intaglio mounted as bracelet, 19th century French gold and turquoise bracelet, amethyst dress suite, masonic signet ring, brooches, tiepin, 19th century ivory card case, pocket watch and masonic badges.

There are a large number of artefacts from the *Medina* on display at Charlestown Shipwreck and Heritage Centre (See Figures 7 – 11 below). It is believed that many, if not all, of these artefacts are likely to have come from the Sotheby's action. Some items mentioned (and pictured) in the catalogue are definitely present at Charlestown.



Figure 7: Crockery, glass and figurines from the *Medina* on display at Charlestown Shipwreck and Heritage Centre



Figure 8: Leather, wood, brass and ceramic artefacts from the *Medina* at Charlestown Shipwreck and Heritage Centre



Figure 9: Collection of artefacts from the *Medina* at Charlestown Shipwreck and Heritage Centre



Figure 10: Pipes, metalware and ceramics from the *Medina*, Charlestown Shipwreck and Heritage Centre



Figure 11: Wide range of artefacts from the *Medina* at Charlestown Shipwreck and Heritage Centre

Further examples of objects represented in the Auction catalogue are on display at the Salcombe Maritime Museum and were recorded as part of the Forgotten Wrecks project (Figure 12 below).

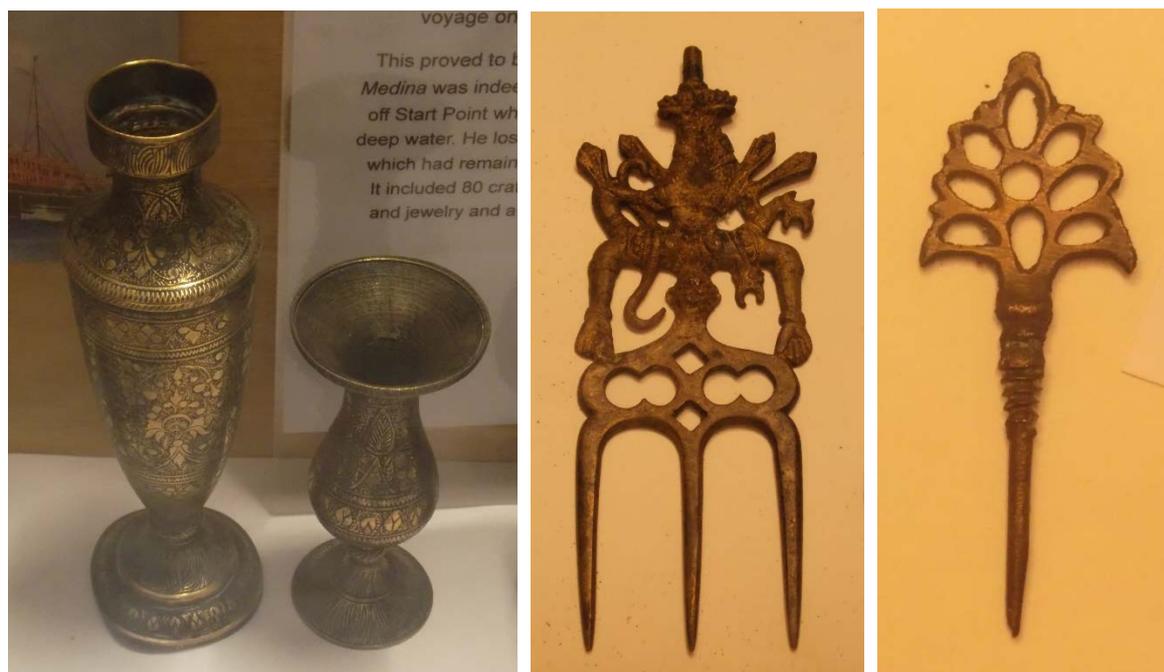


Figure 12: Artefacts from the *Medina* on display at Salcombe Maritime Museum: Brass vases (FW 1070 & 1071), decorative hair fork (FW 1073) and decorative pin (FW1074)

The items reported to the Receiver of Wreck, as detailed in Section 2.2, provide examples of a wider range of artefacts from the site as they are not confined to material that made attractive lots for auction. Without further information on where on the vessel artefacts were recovered from it can be difficult to distinguish between items that were in everyday use on the ship and those that were represented within the cargo or stored possessions. This is made particularly difficult due to the diverse nature of the cargo on the ship. The following sections review the artefacts reported to the RoW by class:

Eating, drinking and life on board

Ceramics: Plates - 19 a number with P&O crest on them; Bowls - 15; Cups - 5, 2 with P&O Mark; Saucer - 1.

Cutlery: Spoons - 13 ranging in size from serving spoon to teaspoon, 6 are indicated as being EPNS; Knives - 11 including a fish knife and 6 indicated as EPNS.

2 pairs of nutcrackers

A bottle opener

A chamber pot with the P&O logo

Cargo items

The insurance records for the ship (See Section 3.3) indicate that 'merchandise' and 'personal effects' were among the 'cargo' being carried. As outlined above the personal effects of Lord Carmichael are a particular feature of the wreck, and it is likely that some of the items recovered by divers, such as 'parts of golf clubs' are further examples of these. Other items thought to have been carried as cargo include: a wooden pen and ink stand, a badge and a brass bombardier's lapel badge, belt buckles, collar studs, cheap finger rings, fragments of ivory fans, sealing wax, a lady's lace shawl, fragments of men's ties, various parts of golf clubs, a brass pot with six lips and a paperweight marked 'Automobile Club of Western Australia'.

Items which may have been carried as 'merchandise' include an inkwell, four jars and a glass bottle.

Fixtures and Fittings

A telegraph and a chronometer

10 portholes (one large, one square), a porthole outer ring 24" diameter and a drip tray.

2 lamps and a light fitting

A bench end

2 coat hooks

Possible decorative mount: A statue of a lady holding the *Medina* in her arms, by F Lynn Jenkins, dated 1911, in left hand side front of base, 34.5" high, hole in top of head (possibly for a fixture).

Armament: There is a single shell case within the RoW reports, a reminder that the ship was armed with a deck gun at the time of loss and would have been carrying ammunition to use.

The collection of artefacts from the *Medina* is one of the largest from a First World War shipwreck. Despite many of the objects being in private ownership the available information on the collection from the auction catalogue and other RoW reports, in addition to items held by museums, means there is great potential for further work to record and research the material to understand its full significance. Attempts to access photographs held by Sotheby's were not successful, but there are likely to be more records within their collections to assist with the study of the artefacts.

6. Site Significance & Potential Further Research

The *Medina* is a very significant site for a number of reasons. These include the relatively intact condition of the seabed remains, the large collection of recovered artefacts, the ship type, propulsion, its role as a Royal Yacht, its association with Lord Carmichael and its loss within the period of unrestricted submarine warfare during the First World War.

Ship Type: Quadruple expansion engines are relatively rare in the archaeological record, making those fitted on *Medina* of particular interest. A study of ship losses from 1914 – 1938 (Wessex Archaeology 2011: 32) identified only five examples of ships powered by quadruple expansion engines in the whole of English territorial waters, with the *Medina* being one example.

The same study (Wessex Archaeology 2011: 39) reviewed the numbers of wrecks of passenger liners of the period within English territorial waters and concluded "Comprising only 2% (27 records) of the total number of records of wrecks for this period, passenger vessels may be regarded to be of special interest on the basis of their rarity..... Passenger liners in particular are likely to be regarded as being of special interest because in this period they represent the 'Golden Age of the Ocean Liner'. Vessels equipped with methods of propulsion that enabled them to attain greater speeds, such as turbine, diesel or oil engines, would further be regarded of special interest, representing the strong competitive market that existed between shipping lines whose emphasis was on speed".

Ship Role: The *Medina* played a highly significant role as the Royal Yacht which transported King George V and Queen Mary for the visit to India for the Delhi Durbar. This impacted on the final fitting and finishes installed on the ship. Further refitting was undertaken prior to the ship entering service carrying passengers, mail and cargo between Britain, India and Australia. During these voyages the ship called at a range of ports in a range of countries including: Sydney, Melbourne, Hobart, Adelaide, Fremantle, Colombo, Shanghai, Hong Kong, Singapore, Penang, Bombay, Suez, Port Said, Malta, Marseilles, Gibraltar, Plymouth, London, Littleton, Gisborne and Tangiers.

The *Medina* played a role in this late 'colonial' period which is reflected by those that travelled onboard and particularly within the cargo on its final voyage which includes the personal collection of Lord Carmichael which was amassed during his time as Viceroy of India. The research potential of this collection is yet to be fully assessed.

Although the ship was not on formal war service at the time of loss it has an association with the wider group of losses due to U-boat activity in this time of unrestricted submarine warfare.

Archaeological Remains: The physical remains on the seabed remain relatively intact and upright with salvage targeting the cargo holds having had the largest impact. The depth of the site means it is only within reach of technical divers which is likely to have protected more portable objects, fixtures and fittings from large scale recovery (although reports to the RoW clearly demonstrate some removal of material by divers). The cargo that was on board relating to Lord Carmichael may not all have been salvaged leaving the potential for more remaining. There is a need for archaeological recording of the site remains to gain a full analysis of the structure, fixtures and fittings, in particular whether the quadruple expansion engines are still in-situ.

In terms of the recovered archive there is recording and research to be undertaken on material residing within museums, particularly the collection at Charlestown Shipwreck and Heritage Centre. The collection is highly significant due to the range of objects it includes from India which is yet to be understood within its historical context.

Historical Documentation: There is a highly significant amount of historical documentation available related to the *Medina* – this includes photographs, newspaper reports and documents from its use as a Royal Yacht; P&O paintings, postcards, photographs and documentation; the War Risk Insurance Records and Sotheby's photographs of recovered artefacts. Study of this material alongside the artefacts and physical remains would enable the full assessment of the significance of the vessel in the context of the global movement of people, goods and material in the late colonial period.

Work on the *Medina* as part of the Forgotten Wrecks Project has begun to address the lack of archaeological and historical consideration of this site. There is work to be done to ensure the seabed remains are recorded prior to any further deterioration and loss.

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