



NATIONAL
MARITIME MUSEUM
GREENWICH

The Challenger Expedition (1872-1876)
*A guide to the collections of
Royal Museums Greenwich*

HMS Challenger being repaired in a dry dock in Yokosuka, Japan 1875 – ALB0175

Part 1: Introduction



Photograph showing the naturalists and two of their assistants – ALB0175

This guide provides an overview of items in the collection of Royal Museums Greenwich relating to the history of the *Challenger* Expedition, which circumnavigated the world between 1872 and 1876.

The *Challenger* Expedition was the first to explore the deep sea on a global scale. It took its name from the Royal Navy vessel that was specially converted for this scientific work. The expedition was integral to the advance of oceanography as a modern scientific discipline and is still influencing our understanding of the ocean as a complex ecosystem upon which all life depends today. You can read our [Challenger webpages](#) for more information about the circumnavigation and its oceanographic work. Researchers interested in understanding the *Challenger* Expedition within the broader history of the Royal Navy in the nineteenth century are also encouraged to consult our [Royal Navy research guides](#).

How is this research guide organised?

This research guide covers published primary source materials, unpublished archival documents including manuscripts, charts and maps, visual and photographic sources, and objects related to the *Challenger* Expedition held within RMG's collections. The final section summarises secondary historical research on the expedition that can be found in the Caird Library. Within each section, materials are organised alphabetically according to the author or creator of the work. An appendix at the end of this Research Guide points researchers to *Challenger*-related materials beyond Royal Museums Greenwich.

Who is represented in this research guide and why?

The *Challenger* Expedition was shaped by Britain's existing empire and its colonial ambitions. As such, the archival record of the expedition held by Royal Museums Greenwich is largely written from the viewpoint of its European crewmembers and naturalists. The crew made contact with Indigenous peoples in places including Fiji, Hawai'i, and Tonga, to name just a few examples in the Pacific Ocean. Researchers should be aware that when materials relating to these peoples feature in the archive, written descriptions and photographic representations can be outdated and offensive.

Part 2: Finding aid

Published sources (A-Z by author)

Author	Title	Call Number	Item ID	Location
Campbell, George, Lord	<i>Log-letters from the Challenger</i> (London: Macmillan, 1877). 2 copies.	910.4(100) "1872/1876"	PBB3924 OR PBF6409	Onsite storage

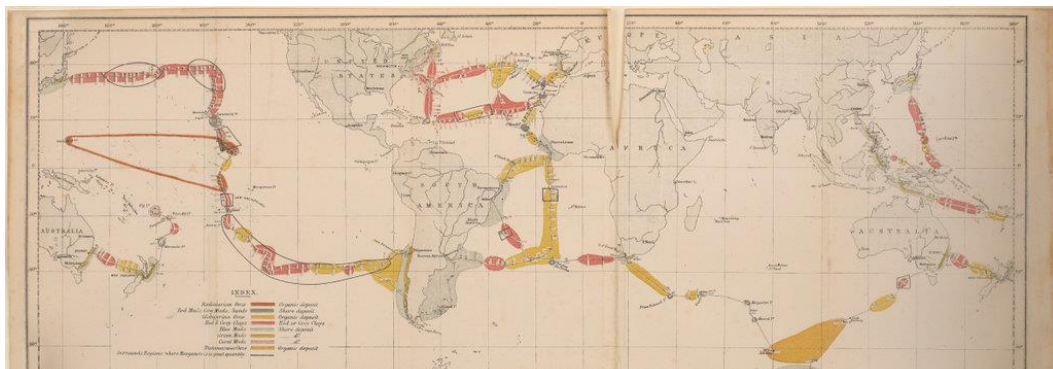


Chart showing distribution of ocean sediments, from Campbell's *Log Letters* – PBB3924

The youngest son of the 8th Duke of Argyll, **Lord George Campbell** served on the *Challenger* Expedition as Sub-lieutenant. He left the expedition in Chile, having been promoted. His letters "were written home during our cruise with no intention of publication [...] Such as they are I hope they will give the reader a general idea of the *Challenger's* cruise – a cruise which will rank as famous in the Annals of science".

Moseley, Henry Nottidge	<i>Notes by a Naturalist: An Account of Observations Made During the Voyage of HMS Challenger Round the World in the Years 1872-1876, Under the Command of Capt Sir G S Nares, and Capt F T Thomson</i> (J Murray, 1892)	910.4(100) "1872/1876"	PBB3958	Onsite storage
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Henry Nottidge Moseley served on the *Challenger* Expedition as a naturalist. He had previously studied medicine. Moseley researched botanical and animal specimens, but was also involved in acquiring Ancestral remains of Indigenous people for ethnographic study. Moseley contributed the *Report on Certain Hydroid, Alcyonarian, and Madreporarian Corals* to the final *Challenger Report*.

Murray, John and Alphonse-Françoise Renard

The voyage of HMS Challenger: Deep Sea Deposits: Report of the Voyage ... During the Years 1873-76 Under the Command of Captain George S Nares ... and the late Captain Frank Tourle Thompson ... (HMSO: 1891)

910.4(100)
"1872/1876"

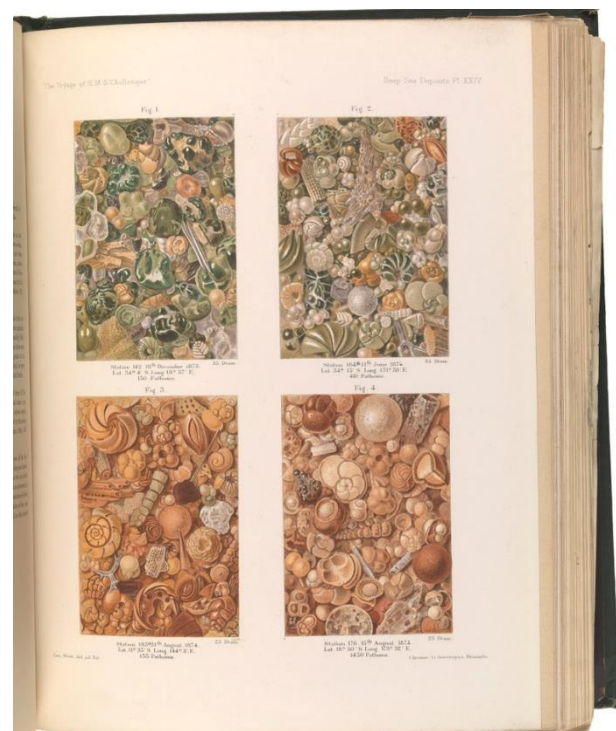
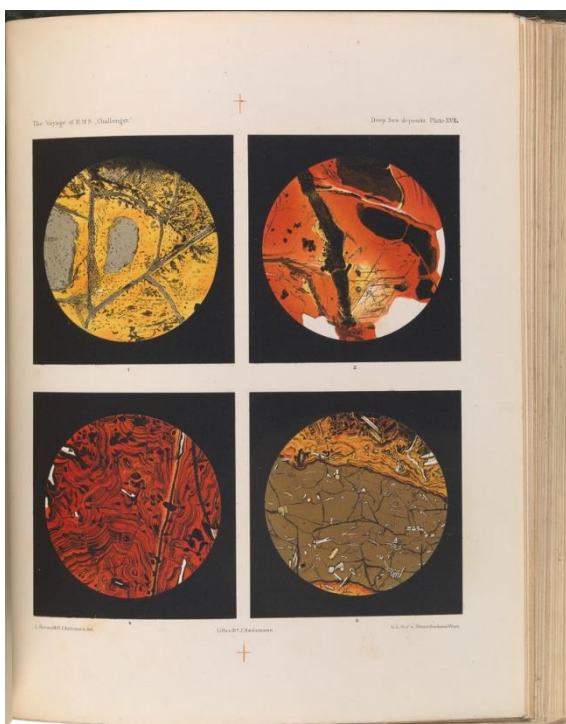
PBP7849

Onsite storage

John Murray served on the *Challenger* Expedition as a naturalist. Born in Canada in 1841 to Scottish parents, as a young man he moved to Britain to live with his grandfather and studied at the University of Edinburgh. He gained experience analysing marine specimens and ocean currents as a ship's surgeon on the whaling ship *Jan Mayen* and was later selected to work as a naturalist on board *Challenger*.

Following the death of Charles Wyville Thomson in 1882, Murray was appointed the Director of the Challenger Office and was responsible for the publication of most of the volumes of the *Challenger Report*. He co-authored the *Report on Deep-Sea Deposits* with Belgian geologist Alphonse-Françoise Renard.

The *Report on Deep-Sea Deposits* is the penultimate volume of the multi-authored *Challenger Report*, whose 50 volumes were published between 1880 and 1895. Murray and Renard's work on deep-sea deposits contains some of the most significant and enduring findings from the expedition, including a colour-coded chart that visualises the global distribution of deep-sea sediments, which combined the data collected during the *Challenger* Expedition with those gathered on later voyages. Murray continued his work as a leading international researcher in the fields of oceanography and marine biology until his death in 1914.



Spry, William
James Joseph

*The Cruise of the Challenger: Voyages
Over Many Seas, Scenes in Many Lands*
(Samson Low, Marston, Searle & Rivington,
1878)

910.4(100)
"1872/187
6"

PBB3932

Contact
staff



Map showing the track of HMS Challenger from Spry's *The Cruise of the Challenger* – PBB3932

William James Joseph Spry served on the *Challenger* Expedition as the Chief Engineer.

Herbert Swire served on the *Challenger* Expedition as Navigating Sub-Lieutenant until it reached South America in 1876. Born in Staffordshire in 1850, he entered the Royal Navy as a cadet in 1864. *Challenger's* deepest sounding, at just over 8,200m (around 27,000 feet), was originally named the Swire Deep and it was the greatest known ocean depth at the time. Swire was the last remaining survivor of the crew when he died in 1934.

Swire,
Herbert

*The Voyage of the Challenger: A Personal
Narrative of the Historic Circumnavigation
of the Globe in the Years 1872 - 1876, by
Herbert Swire, Illustrated with
Reproductions from Paintings and
Drawings in his Journals* (Golden Cockerel
Press, 1938). 2 copies

910.4(100)
"1872/187
6"

PBB3906/1
OR
PBB3906/
2

Onsite
storage

Charles Wyville Thomson led the scientific crew onboard HMS *Challenger*. Although he graduated from the University of Edinburgh with a degree in medicine, he also took classes in botany, and later worked as Professor of Botany at both the University of Aberdeen and the Royal College of Science, Dublin. Following the successes of his deep-sea dredging expeditions on HMS *Lightning* (1868) and HMS *Porcupine* (1869), which showed that marine life existed as deep as 650 fathoms (1188m), he was appointed the Director of the Scientific Civilian Staff on HMS *Challenger*.

Thomson, Charles Wyville	<i>The Voyage of the Challenger: The Atlantic: a Preliminary Account of the General Results of the Exploring Voyage During the Year 1873 and the Early Part of the Year 1876</i> (London: Macmillan and Co., 1877). 2 copies	910.4(100) "1872/1876"	PBB3923/1 OR PBB3923/2	Onsite storage
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Published in 1877 and illustrated with plates and woodcuts, this text records the most significant observations made during *Challenger's* time in the Atlantic, including those around Portsmouth, Tenerife, the Caribbean, and the Gulf Stream. Royal Museums Greenwich also has a copy of Thomson's *The Depths of the Sea* (1873), which relates to his earlier work on the dredging cruises of HMS *Porcupine* and HMS *Lightning* (item ID PBG3432).

Thomson, Charles Wyville	<i>The Challenger Expedition</i> (Taylor & Francis, 1876)	910.4(9)	PBG1230	Contact staff
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John James Wild served on the *Challenger Expedition* as official artist and personal secretary to Charles Wyville Thomson. He was born in Zurich, Switzerland in 1824 and was a naturalist, linguist, and scientific illustrator. His illustrations include places and people that the expedition encountered, as well as records of the oceanographic equipment used on board and visual charts created from bathymetric data collected during the voyage.

Wild, John James	<i>Thalassa: An Essay on the Depth, Temperature and Currents of the Ocean</i> (London: Marcus Ward & Co., 1877).	551.46	PBN1563	Onsite storage
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Wild, John James	<i>At Anchor: A Narrative of Experiences Afloat and Ashore During Voyages of HMS Challenger from 1872 to 1876</i> (London: Marcus Ward & Co., 1878).	910.4(100) "1872-1876"	PBD4828	Onsite storage
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Archival documents and manuscripts

Creator	Title	Date	Item Reference
Admiralty Compass Observatory	Report on the Magnetic Results of the Voyage of HMS <i>Challenger</i> Staff Cdr. Creak	1873 – 76	ACO/4/3/2
Admiralty Compass Observatory	Addendum to the Magnetic Instructions to HMS <i>Challenger</i>	n.d.	ACO/4/3/3

John Hynes served on the *Challenger* Expedition as Assistant Paymaster. Royal Museums Greenwich holds a journal and three photograph albums made by Hynes that document the circumnavigation.

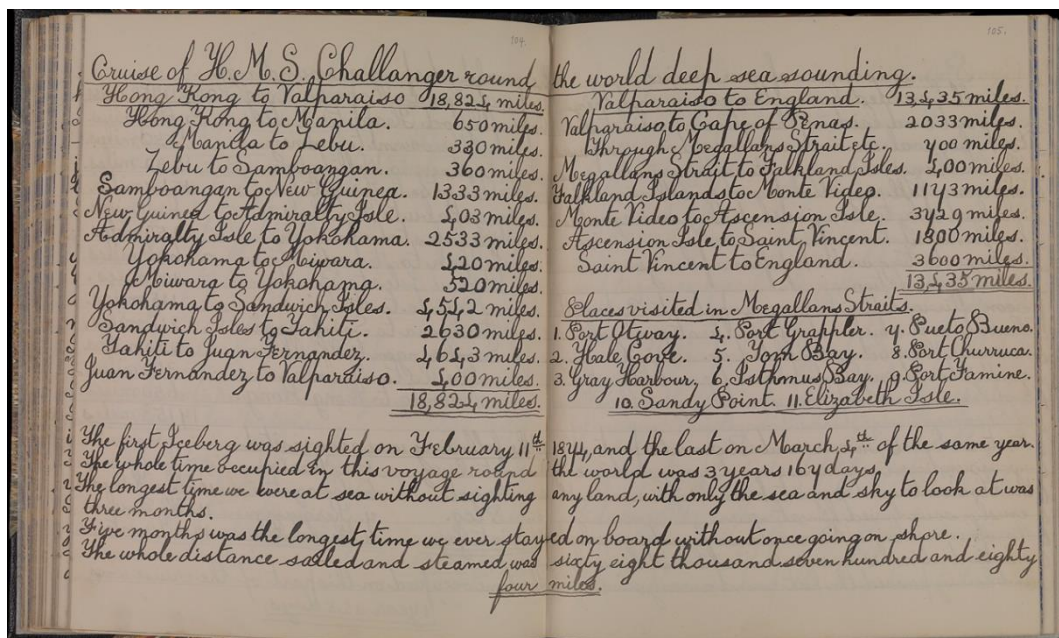
Hynes, John	Journal of HMS <i>Challenger</i> , by Assistant Paymaster John Hynes (Manuscript)	1873 – 74	JOD/15/1
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John Fiot Lee Pearse Maclear served on the *Challenger* Expedition as commander under Captain Sir George Nares. He was born in Cape Town in 1838 and entered the Navy. Maclear was promoted to captain after the completion of the expedition in 1876.

Maclear, John Fiot Lee Pearse	Magnetic journal kept in HMS <i>Challenger</i> (Manuscript)	1872 – 76	MAC/1
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Abraham Smith had an active life in the Royal Navy, seeing service both in war (on board the *Ratter* in the Anglo-Satsuma War (1863), in which he was shipwrecked) and peace time. A large part of his memoir is devoted to his service on the *Challenger* Expedition.

Smith, Abraham	Memoirs of Abraham Smith, RN	1859 – 80	BGR/41
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Pages from the memoirs of Abraham Smith – BGR/41

Thomas Henry Tizard served on the *Challenger* Expedition as Navigating Officer and Assistant Surveyor from 1872, and was promoted to Staff Commander in 1874. He was a surveyor and navigator in the hydrographic service of the Navy. Tizard remained on board HMS *Challenger* after Nares left from Hong Kong to take command of the Arctic Expedition in 1875. When the *Challenger* Expedition ended, Tizard, alongside John Murray, was responsible for writing the narrative of the voyage with its hydrographic and oceanographic results.

The Tizard collection consists of logbooks, diaries, official and private letters, and charts.

Title	Date	Item Reference
Letters from T.H. Tizard, Acting Master in Command in charge of China Sea Survey and Senior Officer present, Rifleman & Saracen, Singapore, and one from HMS <i>Challenger</i> (7 Feb 1864 – 5 Dec 1874)	1864 – 74	TIZ/8; MS86/072
Official letters to Tizard ... and notes on surveys re <i>Challenger</i> (1861 – c.1876)	1861 – 91	TIZ/11; MS86/072
Reports to Hydrographer by T.H. Tizard, HMS <i>Challenger</i> (1 Mar 1871 – 31 Dec 1874)	1871 – 74	TIZ/15; MS86/072
'Remark Book', giving details of the departure of HMS <i>Challenger</i> from Sheerness on 7 Dec 1872, anchoring at Spithead on 11 Dec 1872; and recordings made at Holyhead, Isle of Man and Stornaway 20 Apr – 17 Sep 1880	1872 – 80	TIZ/16; MS86/072

Statistics of the Voyage of HMS <i>Challenger</i> , 7 Dec 1872 – 26 May 1876	1872 – 76	TIZ/17; MS86/072
List of books taken on HMS <i>Challenger</i> (20 Dec 1872)	1872	TIZ/35/3; MS86/072
Incl Tizard's Commissions for Britannia, Indus & Rifleman; appointment as Staff Commander (4 Aug 1874); and letter re service on the <i>Challenger</i> Expedition (21 Apr 1879).	1860 – 79	TIZ/38/3; MS86/072
Thirteen letters to Tizard from (Sir) George Nares, Captain of HMS <i>Challenger</i> on her world oceanographic voyage, 1872-80, plus some undated	1872 – 80	TIZ/39/1; MS86/072
Two letters from (Sir) Frederick John Owen Evans, Chief Naval Assistant to the Hydrographer, addressed to Nares and Tizard, dated 6 March 1875 and 1 October 1875	1875	TIZ/39/3; MS86/072
Binder of letters to Captain Tizard from various, including the Royal Society re <i>Challenger</i> reports and the Hydrographic Dept, Admiralty (16 Nov 1873 – 6 May 1920)	1875	TIZ/39/3; MS86/072
Remarks on the navigation of Torres Strait, the Arafura, Celebes and Sula by Staff Commander Tizard, HMS <i>Challenger</i> 1874	1874 – 1907	TIZ/41/11; MS86/072
Letters to Tizard from various people including J.Y. Buchanan, Professor P.G. Trait, John Murray and Sir Wyville Thomson, 1876 – 1883	1876 – 83	TIZ/42; MS86/072
To Tizard from Sir C. Wyville Thomson re the publication of the results of the <i>Challenger</i> Expedition, the study of the Faroe Channel and the eventual delineation of the Wyville Thomson Ridge (30 Jan 1878 – 1 Dec 1881, including undated)	1878 – 81	TIZ/43/1; MS86/072
Letters from Murray re publishing the narrative of the <i>Challenger</i> voyage (12 Feb – 1 Dec 1880)	1845 – 92	TIZ/46/1; MS86/072
List of instruments transmitted from the Meteorological Office to HMS <i>Challenger</i> (18 Nov 1872), and account of stores, provisions etc received on board when fitted for service at Sheerness (7 Dec 1872)	1872	TIZ/46/2; MS86/072

Report re the Chronometers supplied to and the Meridian Distances obtained by HMS *Challenger*, 1 Dec 1872 – 12 Jun 1876, by Staff-Commander T.H. Tizard - including draft

n.d.

TIZ/62;
MS86/072



Sketches by Tizard of various characters, some from *Challenger*

n.d.

TIZ/65;
MS86/072

List of instruments supplied to Captain G.S. Nares for Scientific Expedition, HMS *Challenger*, by the Hydrographical Office, Admiralty (Nov 1872)

1872

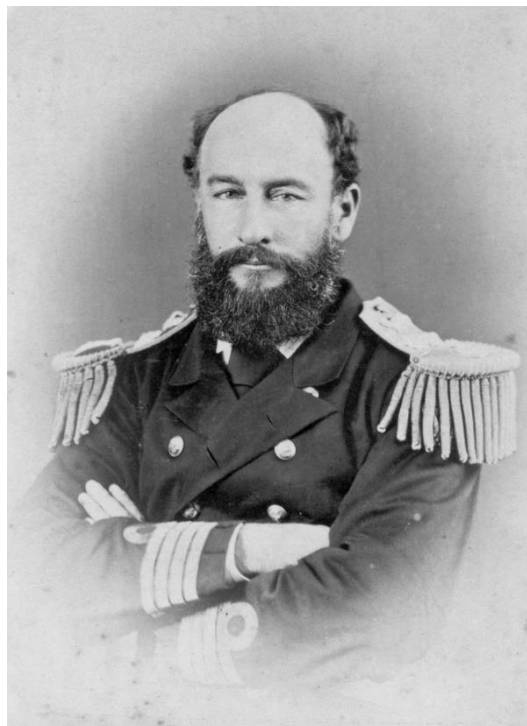
TIZ/63/1;
MS86/072

Meteorological Tables from HMS Challenger, Dec 1872 – May 1876	1872 – 76	TIZ/63/2; MS86/072
List of books supplied by the Admiralty on board HMS <i>Challenger</i>	1873	TIZ/63/3; MS86/072
Tables of Mean Ocean Temperatures deduced from observations obtained in HMS <i>Challenger</i> , N. Pacific, N. Atlantic and miscellaneous Oceans	n.d.	TIZ/63/4; MS86/072
Tables of Meridian distances round the World from St Vincent and back via Cape of Good Hope and Magellaris Straits on HMS <i>Challenger</i>	n.d.	TIZ/63/5; MS86/072
Re The <i>Challenger</i> Expedition members' commemoration of the completion by Sir John Murray of the account of the work executed	n.d.	TIZ/63/6; MS86/072
Journal of voyage on the Challenger, covering 21 Dec 1872 – 6 June 1876 (divided into chapters for publication)	1872 – 76	TIZ/67/1-21; MS86/072
Meteorological journal of the voyage of the <i>Challenger</i> , via Tahiti to Valparaiso, Falkland Islands, Monte Video, Ascension Island, St. Vincent and Portsmouth (20 Oct 1875 – 24 May 1876)	1875 – 76	TIZ/68
Report of the Circumnavigation Committee answering an Admiralty letter to the Royal Society re the <i>Challenger</i> Expedition dated 22 Aug 1872	n.d.	TIZ/73/4; MS86/072
Log of Captain Tizard while onboard the <i>Challenger</i> , covering 21 Dec 1872 – 6 April 1874	1872 – 74	TIZ/83; MS1989/042
Log of Captain Tizard while onboard the <i>Challenger</i> , covering 8 Jun 1874 – 17 Oct 1875	1874 – 75	TIZ/84; MS1989/042

Charts and maps

Creator	Title	Date	Item ID
HM Admiralty; Davies & Company United Kingdom Hydrographic Office (UKHO); Nares, George Strong	Gibraltar. New Mole. Surveyed by Captain G. S. Nares RN, HMS <i>Challenger</i> . 1873	1873 – 84	G225:6/14
HM Admiralty; Fournier, Joseph Marie; Martial Davies & Company; Nares, George Strong	Islands in the southern Indian Ocean [Section 1] Prince Edward Islands by Captain G.S. Nares RN, HMS <i>Challenger</i> [circa 1:300,000 lat]; [Section 2] Crozet Islands by Lieutt. Fournier Royal French Navy, 1838, with soundings by Capt. G.S. Nares, HMS <i>Challenger</i> , 1874. [circa 1:750,000 lat]; [Section 3] Heard & McDonald Is by Captain G.S. Nares RN, HMS <i>Challenger</i> , 1874	1874 – 80	G250:8/3

Sir George Strong Nares served on the *Challenger* Expedition as its Captain until 1875, when he was summoned to take charge of the British Arctic Expedition.



Sir George Strong Nares, Commander of 'Challenger' – ALB0175

Nares, George Strong	Reports and charts kept by Captain G S Nares HMS <i>Challenger</i> , 1873	1873 – 84	JOD/15
Nares, George Strong; United Kingdom Hydrographic Office (UKHO)	Cape Verde Islands St. Vincent Id. Porto Grande. Surveyed by Captain George Strong Nares, RN HMS <i>Challenger</i> 1873	1874 – 89	G214:11/9
Nares, George Strong; HM Admiralty, Malby & Son	Kerguelen Island Royal Sound by Captain George Strong Nares RN and the Officers of HMS <i>Challenger</i> 1874	1874	G251:14/2
Royal Geographical Society	Royal Geographical Society history of exploration 1830 – 1980	1980	G:201:1/55

Printed and coloured chart of the world, with the north and south poles inset. Scale: 1:34,500,000. Marked with the tracks of explorers by land and sea from 1830-1980, pictures of HMS *Challenger* and HMS *Beagle*, and with portraits and views around the border.

Stanford, Edward; Nares, George Strong	A chart shewing the track of H.M.S. <i>Challenger</i> , Captains G.S. Nares and F.T. Thomson. 1872 – 3 – 4 – 5 & 6	1876	G:201:1/18
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Single sheet, engraving, pasted onto a card mount. Scale: c.1:50,000000. Contains inset tables of distances sailed and steamed. Shows 0 to 8- degrees west twice, so that the voyage can be seen as a continuous line. HMS *Challenger's* position at noon each day is marked.

United Kingdom Hydrographic Office (UKHO); Nares, George Strong; HM Admiralty	Canary Islands Tenerife Santa Cruz. Surveyed by Captn. G.S. Nares, RN and the Officers of HMs <i>Challenger</i> , 1873 (2 parts)	1875 – 86	G214:9/9(1); G214:9/9(2)
United Kingdom Hydrographic Office (UKHO); Nares, George Strong; Tizard, Thomas Henry; Bethell, Lieutenant G.R.; Havergal, Navigating Sub. Lieutenant A.	Cape Verde Islands St. Vincent Island Porto Granda (now known as Luiz the First Harbour) surveyed by Captain G.S. Nares RN, assisted by Navigation Lieutenant G.G. Bethell and Navigating Sub Lieutenant A. Havergal, HMS <i>Challenger</i> , 1873	1874	PIR214:11/13

A chart of Poro Grada (later Luiz the First Harbour) on St Vincent Island, Cape Verde Islands, with one view. Scale 1:18,000 [bar]. Lights coloured, soundings in fathoms. Cable routes marked in manuscript. Bar scale. Navigational information included. Manuscript annotation 'Copy of chart o/b S.S. Faraday'.

Unknown	Tracing made on board HMS <i>Challenger</i> of a sketch map of Heard Island, South Indian Ocean	1874	REC/32/2
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This tracing was deposited in the accompanying cylinder at Christmas Harbour, Kerguelen Island. It was found there by Commander T. Ring, Norwegian RNR, on 18 October 1909.

Visual and photographic sources

The sketches and photographs in the collections of Royal Museums Greenwich capture harbours, vistas, geological features, flora and fauna that the expedition's crew encountered and desired to record. The voyage is considered one of the first global scientific expeditions to embrace photography in an official capacity. In the context of British imperialism, sketching and photography recorded buildings, terrestrial features, fortifications, harbours and roads of interest to the government, its military and commerce.

The photograph albums also include images of coastal communities and Indigenous peoples, including Fiji, O'ahu (Hawai'i), and Tongatapu (Tonga) to name some examples from the Pacific. Some of these photographs were composed as part of ethnographic studies, and used to support now debunked theories of white supremacy. The photographic collection offers little information about the individuals it depicts, but it provides an insight – from the perspective of the white European scientists – into the communities with which the *Challenger* Expedition came into contact.

The photograph albums also contain images of *Challenger's* Sub-Lieutenants, the lowest-ranked commissioned officers on the ship, and groups of sailors, providing glimpses of the contribution of a group of men whose experiences have not been preserved elsewhere.

John Hynes's photographic albums follow a long tradition of naval album-making and storytelling. After the expedition, Hynes assembled 371 photographs into these three albums, which present the circumnavigation in roughly chronological order and are incorporated into a longer narrative of Hynes's life.

Creator	Title	Date	Item ID
Hynes, John	Scientific discovery expedition of HMS <i>Challenger</i> (1858) 1872 – 76, album of Assistant Paymaster John Hynes	1873	ALB0174
Hynes, John	Scientific discovery expedition of HMS <i>Challenger</i> (1858) 1872 – 76, album of Assistant Paymaster John Hynes	1873 – 75	ALB0175

Hynes, John

Scientific discovery expedition of HMS
Challenger (1858) 1872 – 76, album of Assistant
Paymaster John Hynes

1875 – 76

ALB0176



Tizard, Thomas Henry

Voyage of HMS *Challenger* 1873 – 6
(Photograph album)

1873 – 76

ALB0859

This is a brown-board-covered album containing 326 photographs (two of which are loose: one an image of a group of unidentified Indigenous people in a canoe, the other a portrait of Captain Thomas Henry Tizard). The album belonged to Tizard (1839 – 1924) who was the Navigating Officer on the voyage. It contains the same images as in ALB0174-6 (may have been copied), except for 11 photographs.



Unknown

HMS *Challenger*

1880

PAD6215

PAD6215 is a print depicting HMS *Challenger* under sail during the oceanographic expedition. The background shows the flat-topped icebergs characteristic of Antarctica and the sea-birds suggest the ship's connection to natural science. The sea is rough and all sails, except the jib, fore-course sail, fore topsail and main topsail, are reefed to cope with the windy conditions. The ship is shown with gunports open and cannon muzzles exposed, even though all but two of *Challenger's* 17 guns were removed for the expedition.

Challenger ship plans

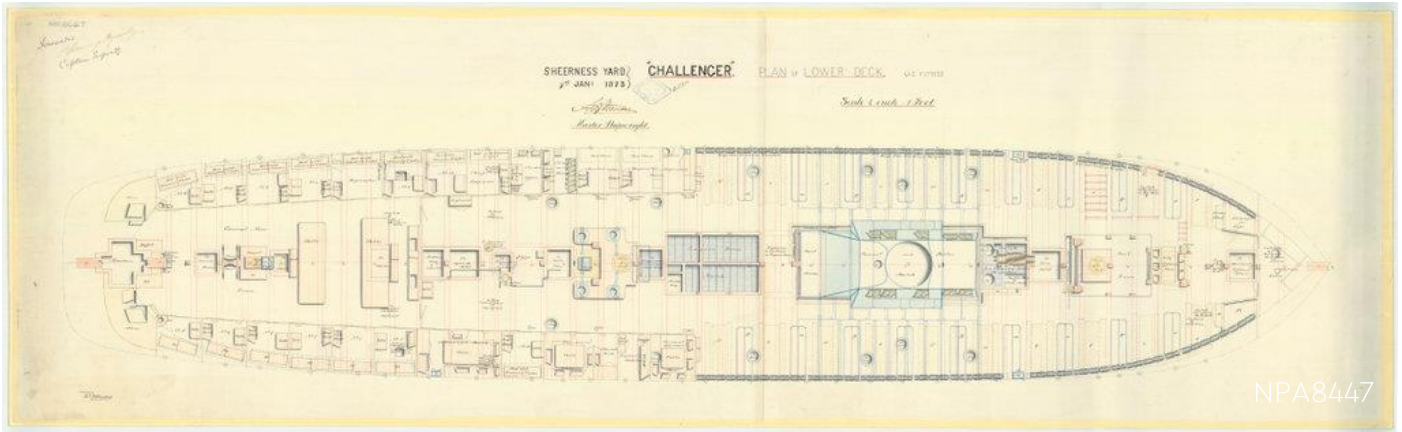
Royal Museums Greenwich holds a number of *Challenger* ship plans, which shed light on how the refit of the naval vessel worked to make space for science at sea. The ship plans collection, held at the Museum's Brass Foundry site in Woolwich, includes plans for the sails as fitted for the 'special service' (NPA8449 and NPD3895), the hold (NPA8448), the main, upper and lower decks, and the profile showing inboard details (NPC7357).

Creator	Title	Date	Item ID
HM Admiralty	<i>Challenger</i> (1858) (Sketch of sails as fitted for special service)	1872	NPD3895
Penney, W.H.	<i>Challenger</i> (1858) (Upper deck)	1873	NPC7358

The upper deck was fitted with immense lengths of rope, which were used to measure the depth of the ocean and to collect deep-sea deposits.

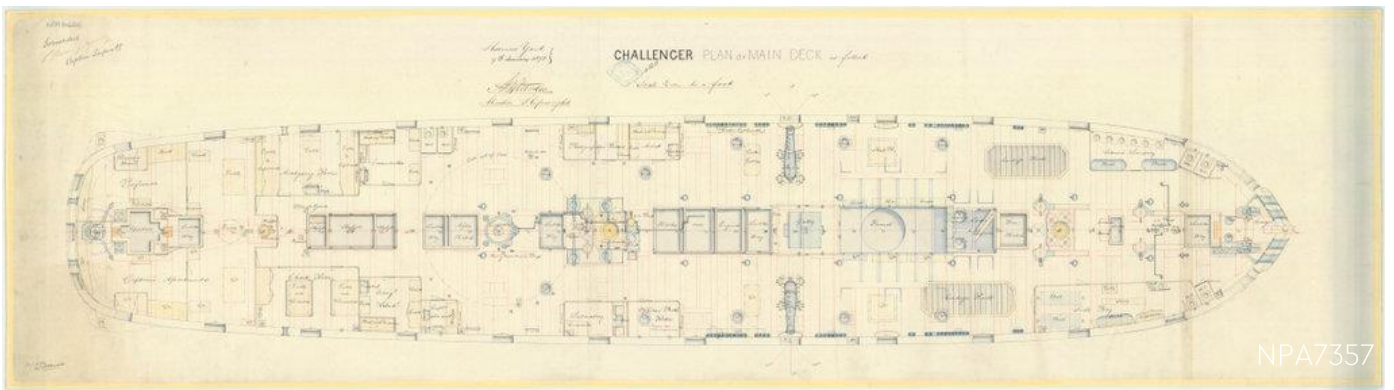
Rule, J.G.G.	<i>Challenger</i> (1858) (Hold)	1873	NPA8448
United Kingdom Hydrographic Office (UKHO)	<i>Challenger</i> (1858) (Sail profile)	1872	NPA8449
Rule, J.G.G.	<i>Challenger</i> (1858) (Lower deck)	1873	NPA8447

The plan for the lower deck shows the cabin layout for the officers and scientists, and the messing arrangement for the men. It was here that most of the men ate, slept, and socialised. As the plan shows, all the cabins on this deck were arranged around a wardroom, a space where the commissioned officers and scientists ate together.



NPA8447

Taylor, T.W.	<i>Challenger</i> (1858) (Profile)	1873	NPA7357
Unknown	<i>Challenger</i> (1858) (Main deck)	1873	NPA8446



NPA7357

The plan for the main deck shows the Captain's and Professor's cabins, the Analysing Room, Photographers' and Artists' Rooms, the laboratories and their fittings, and the Chart Room. While the captain would traditionally have had the largest cabin on a naval vessel, the plan shows that Captain Nares and Charles Wyville Thomson, the lead scientist on the circumnavigation, had cabins of equal size, pointing to the equal importance of naval and scientific objectives onboard HMS *Challenger*. The Chart Room visible on this plan was installed with a complete set of world maps, as well as drawing materials and stationery. Navigating Officer Thomas Henry Tizard used these to update Admiralty charts and to create new maps of the ocean floor, which recorded the ocean's varying depths and corresponding water temperatures.

Objects

Creator	Title	Date	Item ID
Black, William S.	Medal commemorating the voyage of HMS <i>Challenger</i> 1872 – 76	1895	MEC2807

These medals commemorating the voyage of HMS *Challenger*, were designed and executed at the expense of John Murray, who sent copies to all members of the expedition as well as those who had helped prepare the report. In total, 120 medals were issued. Obverse: a knight standing (left) points to a gauntlet he has thrown down; behind an upright trident from which unfurls a ribbon, inscription on edge: 'PELHAM ALDRICH'. Inscription on ribbon: 'REPORT ON THE SCIENTIFIC RESULTS OF THE CHALLENGER EXPEDITION 1886 - 95'. Reverse: Neptune holding a trawl net and trident beside an oval framed bust of Athena (left) and an owl; below two mermaids display ribbon. Inscribed on ribbon: 'VOYAGE OF H.M.S. CHALLENGER 1872 - 76'. In fitted box of tissue.



MEC2807



Unknown	Dry card compass	n.d.	ACO126
Unknown	Dry card compass	c.1839	ACO0114



ACO0114

An Arctic sledge compass with two spare cards, maker unknown, but probably Henry Barrow, about 1839. The bowl is of peculiar construction and the leather cover was intended to protect the hands of the user from contact with the metal. Diameter: 1.8 in. (4.7 cm). Researchers should note that this compass is currently on display in the 'Polar Worlds' gallery at the National Maritime Museum.

Unknown	Sea-bed samples	1872 – 76	NAV0843 ; NAV0844
Unknown	Sea-bed samples	1872 – 76	NAV0979

Secondary sources in the Caird Library

Author	Title	Call number	Item ID	Location
Brunton, Eileen V.	<i>The Challenger Expedition, 1872 – 1876: A Visual Index</i> (London: Natural History Museum, 2004)	910.4(100) "1872/1876"	PBF5511	Caird Library Open Access
Brunton, Eileen V.	<i>The Challenger Expedition, 1872 – 1876: A Visual Index</i> (London: Natural History Museum, 2004) (Folio – 3 copies)	910.4(100) "1872/1876"	PBP2955; PBP3364; PBP9577	On- and offsite storage
Jones, Erika Lynn	'Making the Oceans Visible: Science and Mobility on the <i>Challenger</i> Expedition, 1872 – 1895', <i>PhD thesis</i> (University College London, 2019)	910.4(100) "1872/1895"	PBK0697	Onsite storage
Matkin, Joseph, Philip F. Rehbock (ed.)	<i>At Sea with the Scientifics: the Challenger letters of Joseph Matkin</i> (Honolulu: University of Hawaii Press, 1992)	92MATKIN	PBP2408	Onsite storage

Joseph Matkin served as a ship's steward's assistant on the *Challenger* Expedition for the full duration of the voyage. He was born in Uppingham, Rutland in 1853. He entered the merchant marine in 1867 and the Royal Navy in 1870. Matkin sent home letters which he composed from his journal. He commented on oceanographic activities, life on board the ship and on the history, geography and people of the ports at which the ship called. The original letters are kept at the [Special Collections & Archives, UC San Diego](#).

Shephard, Benjamin	<i>Challenger sketchbook: B. Shephard's sketchbook of the H.M.S. Challenger expedition 1872-1874</i> (Philadelphia Maritime Museum, 1972)	910.4(100)"1 872/1876"	PBP5932	Onsite storage
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Challenger Expedition materials beyond RMG

Edinburgh University Library, Centre for Research Collections - The University's archive of *Challenger* materials includes lithographs, engravings, photographs, and statistical and cartographical materials. The collection also contains pencil, ink and watercolour illustrations of marine life, rock and crystal formations, and several small scenic paintings.

Museum of Comparative Zoology, Ernst Mayr Library, Cambridge, MA - The Museum of Comparative Zoology (MCZ) at Harvard University cares for 225 zoological specimens from the HMS *Challenger* voyage. The Museum's library and archive holds a number of printed published materials from the expedition, as well as annotated copies by important figures in the history of science such as Theodore Lyman and Elizabeth Hodges Clark, assistant to Alexander Agassiz.

National Library of Scotland, Archives and Manuscripts Collection, Edinburgh - As a legal deposit the National Library of Scotland has collected the majority of the published output from the *Challenger* Expedition including the extensive scientific reports series, books by individual members of the expedition, newspaper articles and letters, and even lectures. They also hold the archive of publisher John Bartholomew & Son who created the maps for the reports. Proof copies of the maps are available. The draft and notes of Erik Linklater's popular account of the expedition 'The Voyage of the Challenger', is available, as well as its numerous published editions.

National Museum of the Royal Navy, UK - The NMRN has a small but important collection relating to *Challenger*, including an album of 409 photographs taken during the expedition and a commemorative medallion awarded to Engineer Alfred J. Allen.

National Museums Scotland, Edinburgh - National Museums Scotland cares for over 1,000 specimens from the *Challenger* voyage. These include birds and bird eggs, foraminifera, diatoms, echinoderms, sponges, and even some butterflies. The majority of the specimens from the voyage were sent to the Natural History Museum but Thomson proposed that a duplicate set of specimens should be located in the Edinburgh museum. NMS also holds duplicate and original images from the voyage.

Natural History Museum, Library and Archives, London - The Natural History Museum cares for 10,000 examples of material from the voyage, including birds, worms, fish, molluscs, insects, mammals and foraminifera. The Museum's Ocean Bottom Deposit collection includes thousands of samples taken during the *Challenger* Expedition. They also hold a substantial amount of archival material, including letters and photographs from and referring to the *Challenger* Expedition.

UK Hydrographic Office Archive, Taunton, Somerset - The UKHO holds numerous observations and reports on ocean soundings and temperatures from across the globe, sailing directions, and correspondence from the *Challenger* voyage. In addition to this are other supporting records, such as letter books, minute books, files, and service records that contain information about the voyage and the Royal Navy personnel involved with it.

Researchers can find Library and Archive catalogues as well as information on visiting and ordering materials to the Caird Library on the [Caird Library and Archive website](#). The predominant source for the historical and biographical information contained within this research guide is Erika Jones's book *The Challenger Expedition: Exploring the Ocean's Depths* (2022). All images © National Maritime Museum, Greenwich, London.