

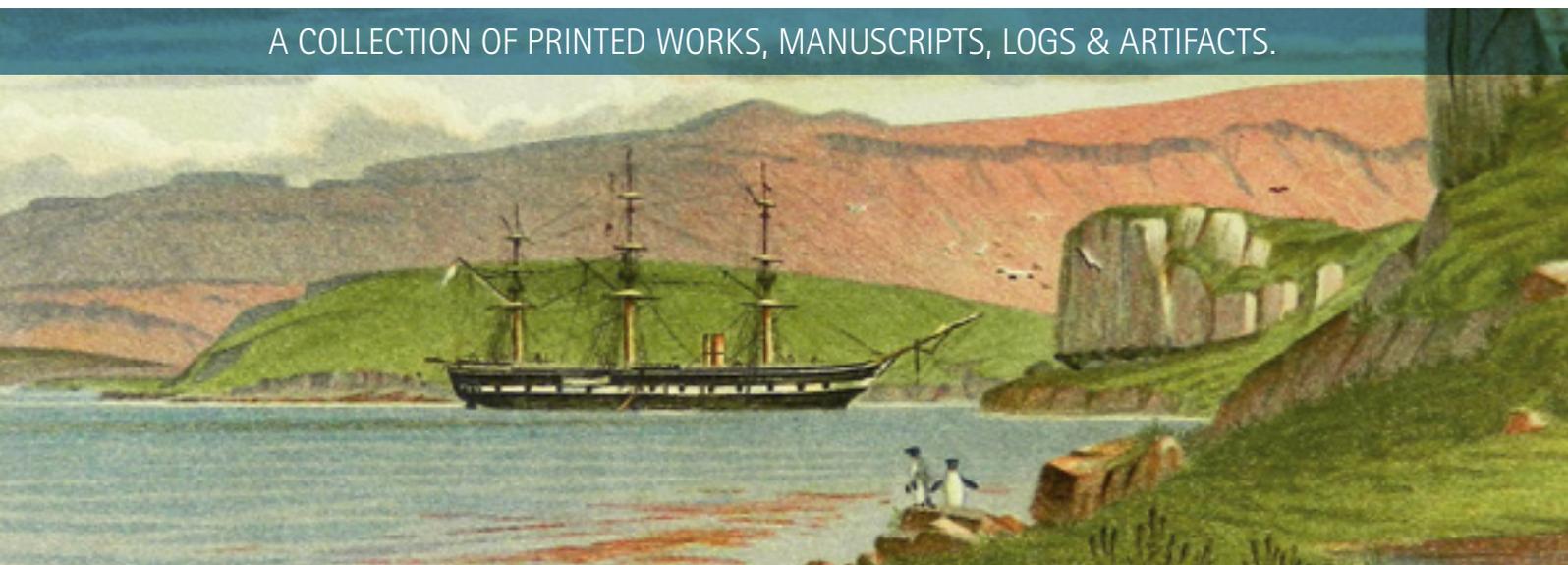
KAINBACHER RARE BOOKS
CATALOGUE XIV (N.F.)

2018

The Challenger Expedition

The most important scientific circumnavigation

A COLLECTION OF PRINTED WORKS, MANUSCRIPTS, LOGS & ARTIFACTS.



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THE BIRTH OF MODERN OCEANOGRAPHY



On December 21, 1872 the H.M.S. Challenger sailed from Portsmouth, for an epic voyage which would last almost three and a half years. It was the first expedition organized and funded for a specific scientific purpose: to examine the deep-sea floor and answer questions about the ocean environment.

The expedition covered 69,000 nautical miles and gathered data on currents, water chemistry, temperature, bottom deposits and marine life at 362 oceanographic stations. More than 4700 new species of marine animals were discovered during the course of the voyage, many of which were found on the seafloor, an environment that scientists originally believed to be too inhospitable to support life. Included in their discoveries were many of the fish and marine creatures thought at that time to be of legend and numerous specimens from this voyage are preserved and on view in one of the largest collections in the Natural History Museum, London.

The idea for the expedition began in 1868, with naturalist William B. Carpenter and Sir Charles Wyville

Thomson, Professor of Natural History at Edinburgh University. They persuaded the Royal Society of London to sponsor a prolonged voyage of exploration across the oceans of the globe. But it was not until 1872 that the Royal Society of London obtained the use of HMS Challenger from the Royal Navy. The Challenger was a three-masted square rigged wooden corvette and the first vessel specifically equipped for general oceanographic research. All but two of her 17 guns had been removed to make way for purpose-built scientific laboratories and workrooms. Storage space for all the trawls and dredges was also necessary, together with space for the anticipated sample collection.

The expedition was led by Captain George Nares and the scientific work was conducted by Wyville Thomson assisted by Sir John Murray, John Young Buchanan, Henry Nottidge Moseley, and the German naturalist Rudolf von Willemoes-Suhm among others. They were also interested in supporting the theories of Charles Darwin and disproving the azoic theory of a dead zone below 1,800 feet.

In December 1874, Nares left the Challenger at Hong Kong to assume command of the British Arctic Expedition of 1875-1876 in the search for Franklin, and Captain Frank Tourle Thomson took his place.

The first leg of the expedition took the ship from Portsmouth (December 1872) south to Lisbon (January 1873) and then on to Gibraltar. The next stops were Madeira and the Canary Islands (both February 1873). The period from February to July 1873 was spent crossing the Atlantic westwards from the Canary Islands to the Virgin Islands, then heading north to Bermuda, east to the Azores, back to Madeira, and then south to the Cape Verde Islands. During this period, there was a detour in April and May 1873, sailing from Bermuda north to Halifax and back, crossing the Gulf Stream twice with the reverse journey crossing further to the east.

After leaving the Cape Verde Islands in August 1873, the expedition initially sailed south-east and then headed west to reach St Paul's Rocks. From here, the route went south across the equator to Fernando de Noronha during September 1873, and onwards that same month to Bahia (now called Salvador) in Brazil. The period from September to October 1873 was spent crossing the Atlantic from Bahia to the Cape of Good Hope, touching at Tristan da Cunha on the way.

December 1873 to February 1874 was spent sailing on a roughly south-eastern track from the Cape of Good Hope to the parallel of 60 degrees south. The islands visited during this period were the Prince Edward Islands, the Crozet Islands, the Kerguelen Islands, and Heard Island. February 1874 was spent travelling south and then generally eastwards in the vicinity of the Antarctic Circle, with sightings of icebergs, pack ice and whales. The route then took the ship north-eastward and away from the ice regions in March 1874, with the expedition reaching Melbourne in Australia later that month.

The journey eastward along the coast from Melbourne to Sydney took place in April 1874, passing by Wilsons Promontory and Cape Howe.

When the voyage resumed in June 1874, the route went east from Sydney to Wellington in New Zealand, followed by a large loop north into the Pacific calling at Tonga and Fiji, and then back westward to Cape York in Australia by the end of August. The ship arrived in New Zealand in late June and left in early July. Before reaching Wellington (on New Zealand's North Island), brief stops were made at Port Hardy (on d'Urville Island) and Queen Charlotte Sound (on New Zealand's South Island) and Challenger passed through the Cook Strait to reach Wellington. The route from Wellington to Tonga went along the east coast of New Zealand's North Island, and then north and east into the open Pacific, passing by the Kermadec Islands en route to Tongatabu, the main island of the Tonga archipelago (then known as the Friendly Islands). The waters around the Fijian islands, a short distance to the north-west of Tonga, were surveyed during late July and early August 1874. The ship's course was then set westward, reaching Raine Island (on the outer edge of the Great Barrier Reef) at the end of August and thence arriving at Cape York, at the tip of Australia's Cape York Peninsula.

Over the following three months (September to November 1874), the expedition visited several islands and island groups while sailing from Cape York to China and Hong Kong (then a British colony). The first part of the route passed north and west over the Arafura Sea, with New Guinea to the north-east and the Australian mainland to the south-west. The first islands visited were the Aru Islands, followed by the nearby Kai Islands. The ship then crossed the Banda Sea touching at the Banda Islands, to reach Amboina (Ambon Island) in October 1874, and then continuing to Ternate Island. All these islands are now part of modern-day Indonesia. From Ternate, the route went north-westward towards the Philippines, passing east of Celebes (Sulawesi) into the Celebes Sea.



The expedition called at Samboangan (Zamboanga) on Mindanao, and then Iloilo on the island of Panay, before navigating within the interior of the archipelago en route to the bay and harbour of Manila on the island of Luzon. The crossing north-westward from Manila to Hong Kong took place in November 1874.

After several weeks in Hong Kong, the expedition departed in early January 1875 to retrace their route south-east towards New Guinea. The first stop on this outward leg of the journey was Manila. From there, they continued on to Samboangan, but took a different route through the interior of the Philippines, this time touching at the island of Zebu (Cebu). From Samboangan the ship diverged from the inward route, this time passing south of Mindanao (in early February 1875). Challenger then headed east into the open sea, before turning to the south-east and making landfall at Humboldt Bay (now Yos Sudarso Bay) on the north coast of New Guinea. By March 1875, the expedition had reached the Admiralty Islands, north-east of New Guinea. The final stage of the voyage on this side of the Pacific was a long journey across the open ocean to the north, passing mostly west of the Carolina Islands and the Mariana Islands, reaching port in Yokohama, Japan, in April 1875.

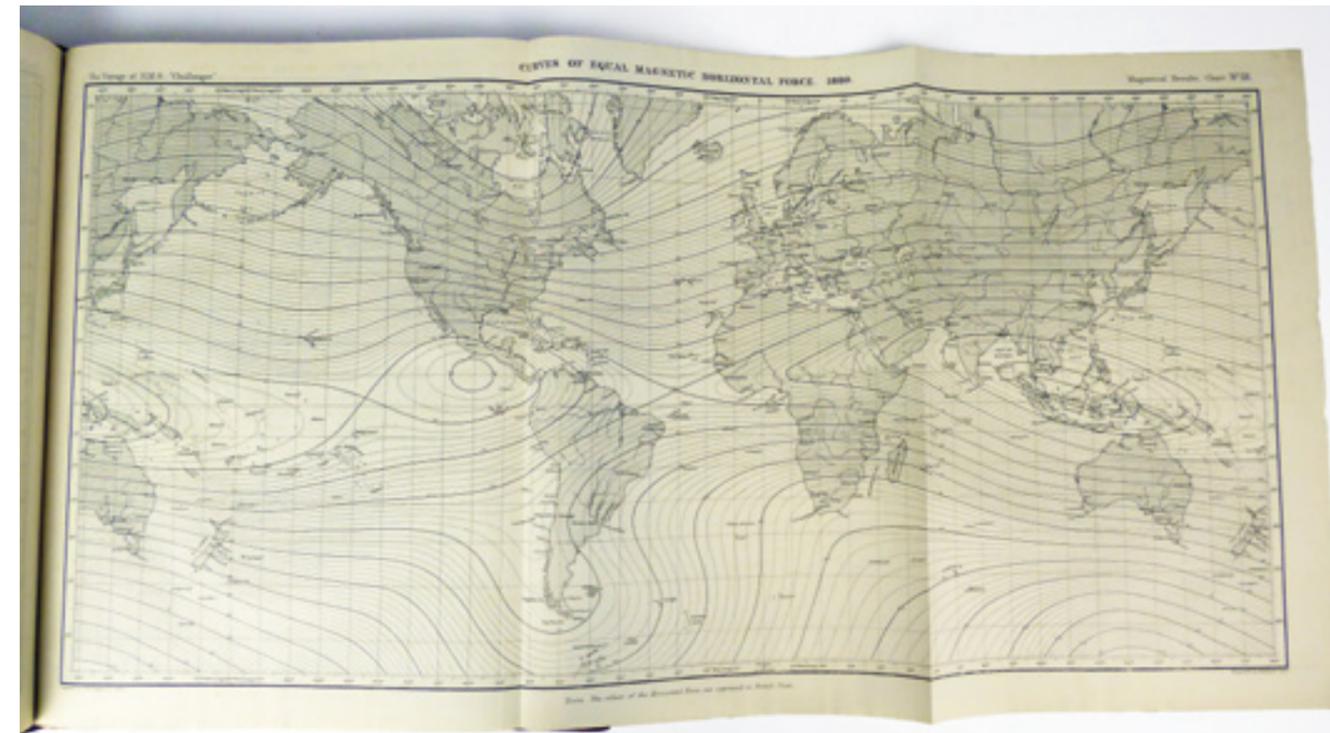
Challenger departed Japan in mid-June 1875, heading east across the Pacific to a point due north of the Sandwich Islands (Hawaii), and then turning south, making landfall at the end of July at Honolulu on the Hawaiian island of Oahu. A couple of weeks later, in mid-August, the ship departed south-eastward, anchoring at Hilo Bay off Hawaii's Big Island, before continuing to the south and reaching Tahiti in mid-September. The expedition left Tahiti in early October, swinging to the west and south of the Tubuai Islands and then heading to the south-east before turning east towards the South American coast.

The route touched at the Juan Fernández Islands in mid-November 1875, with Challenger reaching the port of Valparaiso in Chile a few days later. The next stage of the journey commenced the following month, with the route taking the ship south-westward back out into the Pacific, past the Juan Fernández Islands, before turning to the south-east and back towards South America, reaching Port Otway in the Gulf of Penas on 31 December 1875.

Most of January 1876 was spent navigating around the southern tip of South America, surveying and touching at many of the bays and islands of the Patagonian archipelago, the Strait of Magellan, and Tierra del Fuego. Locations visited here include Hale Cove, Gray Harbour, Port Grappler, Tom Bay (all in the vicinity of Wellington Island), Puerta Bueno (near Hanover Island), Isthmus Bay (near the Queen Adelaide Archipelago), and Port Churruca (near Santa Ines Island).

The final stops, before heading out into the Atlantic, were Port Famine, Sandy Point, and Elizabeth Island. Challenger reached the Falkland Islands towards the end of January, calling at Port Stanley and then continuing northward, reaching Montevideo in Uruguay in mid-February 1876. The ship left Montevideo at the end of February, heading first due east and then due north, arriving at Ascension Island at the end of March 1876. The period from early to mid-April was spent sailing from Ascension Island to the Cape Verde Islands (visited almost three years ago on the outward journey). From here, the route taken in late April and early May 1876 was a westward loop to the north out into the mid-Atlantic, eventually turning due east towards Europe to touch land at Vigo in Spain towards the end of May. The final stage of the voyage took the ship and its crew north-eastward from Vigo, skirting the Bay of Biscay to make landfall in England.

The biological findings were received with great interest. All the new species were carefully described, and were sketched by the expedition's artist, J.J. Wild, but the most famous paintings are those from Hoyle's monographic studies on cephalopods and Haeckel's series included in "Kunstformen der Natur".



When in 1895, the first reports of the Challenger's findings were published, John Murray summed up the significance of the voyage by calling it "the greatest advance in the knowledge of our planet since the celebrated discoveries of the fifteenth and sixteenth centuries".

Among the Challenger Expedition's discoveries is included the first ever rough map of the ocean floor and the finding of an enormous depression in the north-west Pacific Ocean representing the deepest places in the

Earth's crust, now called the Mariana trenches, the deepest point in it is named the 'Challenger Deep' in honour of the expedition. However, the greatest discovery of the expedition would be that of the Mid-Atlantic ridge, a mountain chain extending the entire length of the Atlantic Ocean near its centre.

When the voyage came to an end in 1876, only 144 crew remained on the ship from the original 216 members. Seven people had died, 26 were left in hospitals or were unable to continue the journey, and several had deserted at the various ports of call. After the death of Thomson in 1882, John Murray became director and along with Dr James Chumley, edited the Expedition's Reports. The result was the massive 50 volume publication that took 23 years to compile and publish.

This must be considered the first and probably the most important scientific circumnavigation in history.

Almost all of the material concerned with the expedition was reserved for scientific institutions for research, so forming any meaningful collection is quite difficult. This collection, presented in this catalogue, has some original material and artefacts collected over the last 25 years.



H.N.MOSELEY'S COPY SIGNED IN VOLUME ONE

SIR C.WYVILLE THOMSON & SIR JOHN MURRAY

Report on the Scientific Results of the Voyage of the H.M.S. Challenger during the Years 1873-76, under the command of Captain George S. Nares...and Captain Frank Tourle Thomson.

First Edition, London, Edinburgh etc.: H.M.S.O. for Longman & Co. [and others].1880-95, 4to(317 x 250mm.), 42 volumes bound in 50, original publisher's green cloth gilt, with over 3,280 plates, charts and maps, mostly lithographed, many tinted and many hand-coloured, some double-page and folding, all presented in quarter green-morocco fitted cases.

This 50 volume, 29,500 page report took 23 years to compile and publish.

At its completion, The Report discussed with full detail of text and illustrations the currents, temperatures, depths and constituents of the oceans, the topography of the sea bottom, the geology and biology of its covering and the animal life of the abyssal waters. The Challenger cruise had lain the cornerstone of scientific oceanography and begun its introduction to the wider scientific and lay community. It includes many observations of other natural history subjects including fauna of the countries visited and the following is a selection of some of the papers included in the volumes:

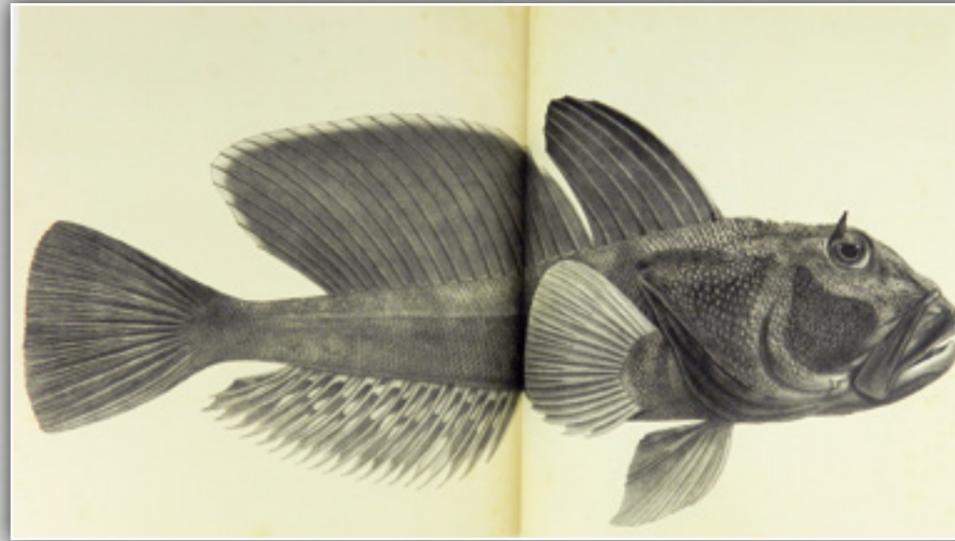
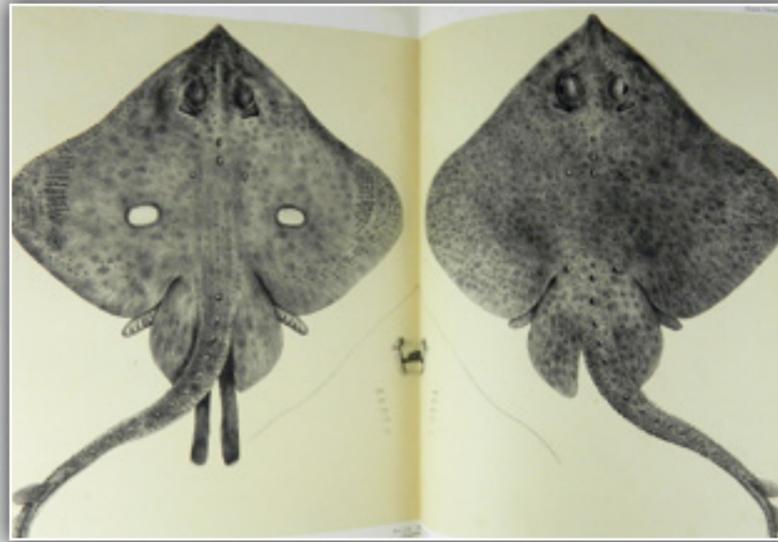
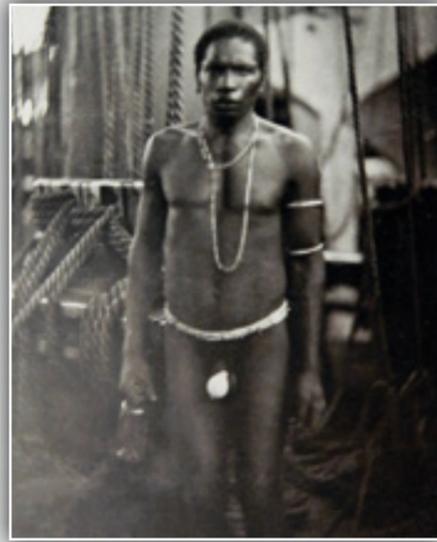
Birds, by P.L.Sclater, with 30 hand-col. plates; Bones of Cetacea, by W.Turner, with 3 plates; Collections of Eggs described by P.L.Sclater; Essay on the Green Turtle by W.K.Parker with 13 plates; Essay on Shore Fishes, with 32 plates and Deep Sea Fishes, with 73 plates, both by A.Gunther; Deep-Sea Fauna of New Zealand, by A.Hamilton.

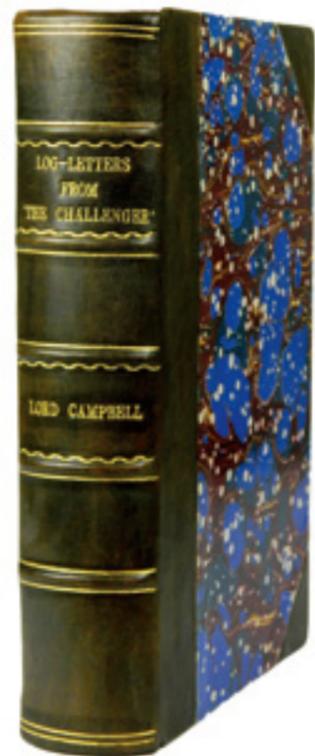
Numerous paper slips are included in the volumes requesting authors to return completed scientific reports for publication. Charles Wyville Thomson led the expedition but died of exhaustion from the journey and the preparation of the reports had to be supervised by Sir John Murray.

Many parts were published later as extracts from the original edition. A choice set of this monument to seafaring naturalists and scientists.

BM(NH) 11, p. 716; Nissen BBI 2381; Nissen ZBI 4554; Spence 1198; Wood p. 596.



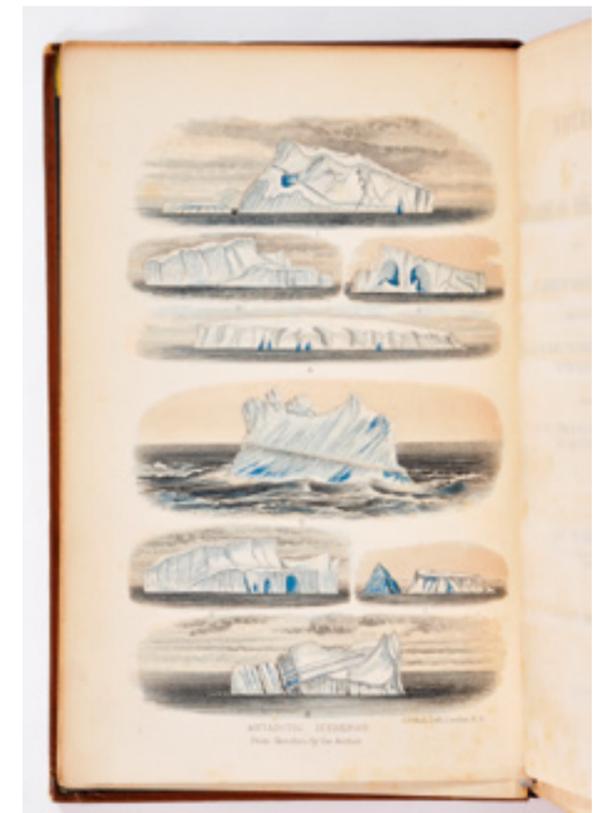
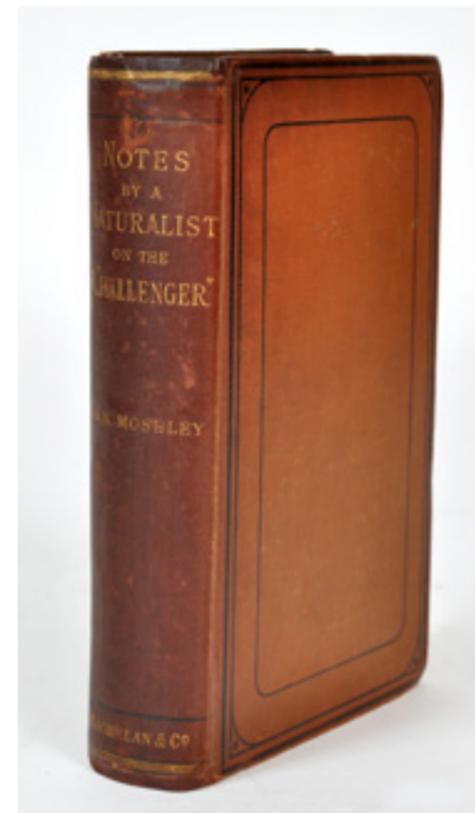




CAMPBELL, LORD GEORGE
Log Letters from "The Challenger."

First Edition. London, McMillan, 1876, 8vo, later half calf gilt, with folding map.

The author was part of the ship's crew and gives a descriptive account of life on board the Challenger and of: Australia, the Fiji Islands, Moluccas, Philippines, New Guinea, Japan, Hawaii, and Tahiti.

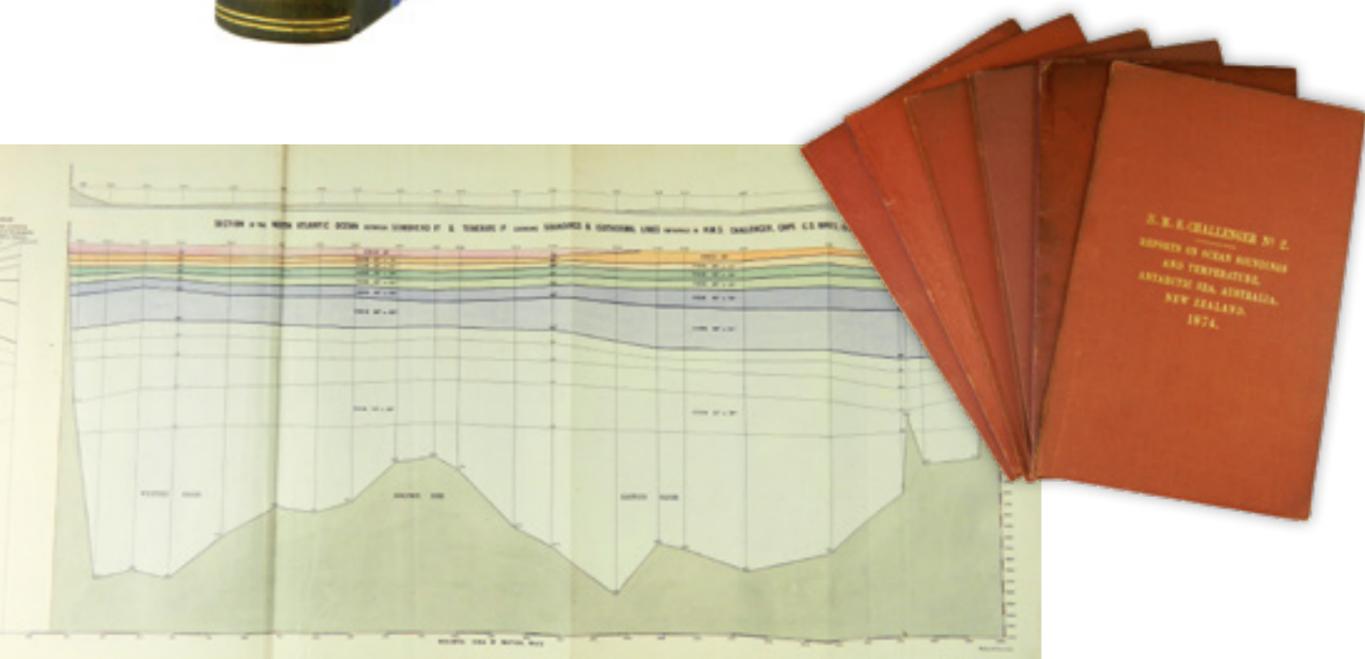


MOSELEY, H.N.

Notes by a Naturalist on the Challenger; being an Account of Observations made during the Voyage of H.M.S.Challenger round the World in the years 1872-1876. Under the Command of Capt. Sir G.S.Nares and Capt. F.T.Thomson.

First Edition. London, McMillan, 1879, 8vo, Publishers brown cloth, coloured frontispiece, col. plate and map, illustrations in text.

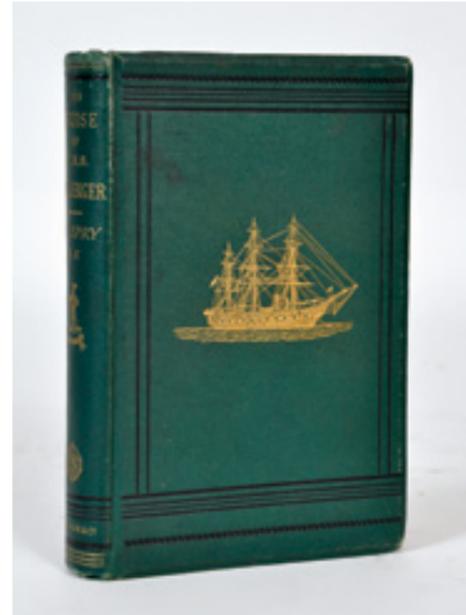
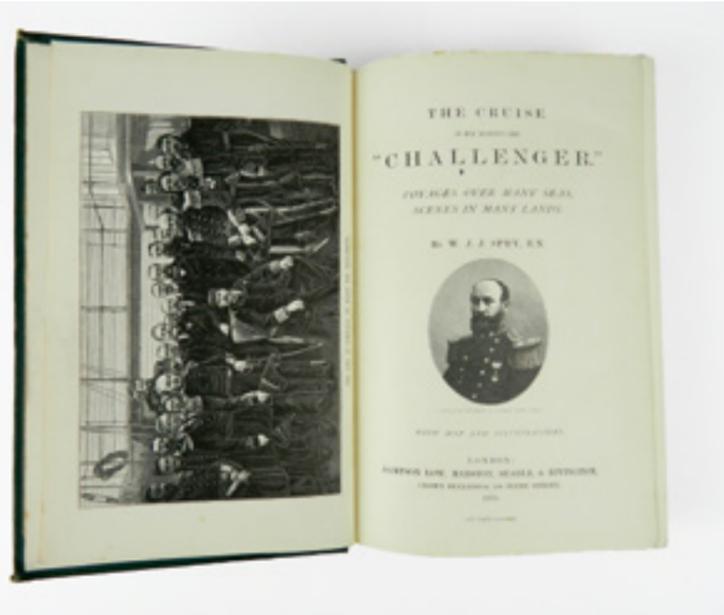
Interesting work by the leading naturalist of the voyage with descriptions of the natural history of: Teneriffe, St. Thomas, Bermuda; Azores, Madeira, Cape Verdes; St. Paul's Rocks and Fernando Do Norhona; Bahia; Tristan Da Cunha, Inaccessible Island; Nightingale Island; Cape of Good Hope; Prince Edward Island, The Crozet Islands; Kerguelen's Land; Heard Island; Amongst the Southern Ice; Victoria, New South Wales; New Zealand, The Friendly Islands, Matuku Island; Fiji Islands; New Hebrides, Cape York, Torres Straits; Aru, Ke, Banda, Amboina, Ternate; The Philippine Islands; China, New Guinea; The Admiralty Islands; Japan, The Sandwich Islands; Tahiti, Juan Fernandez; Chile, Magellan's Straits, Falkland Islands, Ascensions; Life on the Ocean Surface and in the Deep Sea. Zoology and Botany of the Ship.



NARES, CAPTAIN GEORGE & THOMSON, CAPTAIN FRANK.
Reports with Abstract of Soundings & Diagrams of Ocean Temperature etc.

1873-76, folio, 7 vols. (all published), original red cloth gilt, numerous coloured folding plates.

Ex- Meteorological Society, with cancelled stamp, very scarce, half morocco case.



SPRY, W.J.J.

The Cruise of Her Majesty's Ship Challenger. Voyages over many seas, scenes in many lands.

First Edition. London, 1876, 8vo, original decorated cloth gilt, folding map and plates, text illustrations.

'The chief interest connected with this narrative will be the vast extent traversed in the pursuit of knowledge, which admits of the combination in the volume of the general outline of the manners and customs of nations and tribes rarely visited, and descriptions of scenery under every condition of temperature, from the fiery Tropics to the ice-bound Antarctic regions.' Preface



SPRY, W.J.J.

Die Expedition der Challenger. Eine wissenschaftliche Reise um die Welt, die erste in grossartigem Massstabe ausgeführte Erforschung der Tiefen der Oeane in populärer Darstellung. Deutsch von Hugo von Wobeser.

German edition of the Cruise. Leipzig. 1877.

Bound with

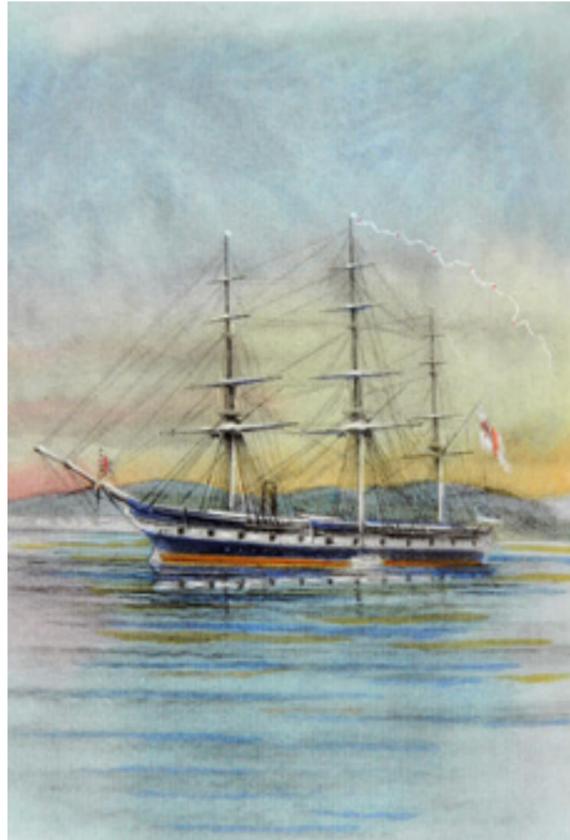


WILLEMoes-SUHM, RUDOLF V.

Challenger- Briefe von Rudolf v. Willemoes-Suhm. Dr Phil. 1872-1875.

Firste Edition. Leipzig 1877, 8vo, contemporary half morocco, with albumen photographic frontispiece and photograph of Willemoes-Suhm's memorial.

This German naturalist died during the voyage and the above work, a series of letters to his mother, was published posthumously.

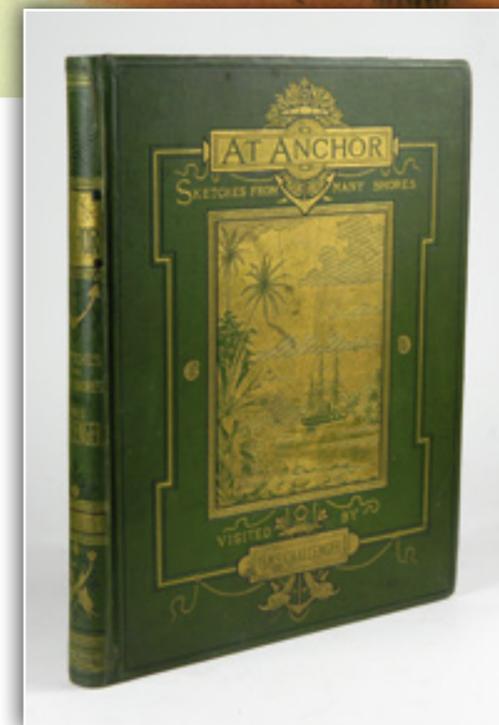


SWIRE, HERBERT

The Voyage of the Challenger. A Personal Narrative of the Historic Circumnavigation of the Globe in the years 1872-1876. Foreword by Major Roger Swire, M.C., R.E. Introduction by G.Herbert Fowler, C.B.E.

London, The Golden Cockerel Press, 1938. Ltd to 300 numbered sets, 2 vols, small folio, original buckram gilt, gilt designs of ship motifs, slip-case, with 17 coloured plates and numerous black and white, a fine set.

Herbert Swire was Sub Lieutenant and a highly skilled amateur artist. His charts were published in the Reports. This publication was produced from Swire's manuscript journals in possession of his widow. Swire Deep off the Philippines is named after him.

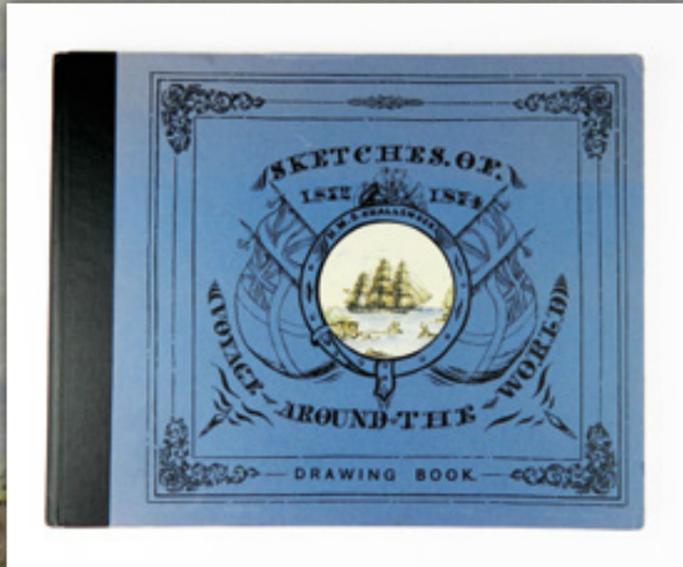


WILD, JOHN JAMES

At Anchor – A Narrative of Experiences Afloat and Ashore During the Voyage of H.M.S. "Challenger" from 1872 to 1876.

London: Marcus Ward & Co, 1878. First Edition, folio, original decorated green cloth gilt, with double-page map and 12 mounted coloured plates, numerous text engravings, a fine copy.

John James Wild (born Jean Jacques Wild), was a Swiss linguist, oceanographer and a natural history illustrator and lithographer, whose images were noted for their precision and clarity. He joined the expedition as official artist and secretary. In 1881 he emigrated to Australia, where he contributed to Frederick McCoy's Prodromus of the Zoology of Victoria.



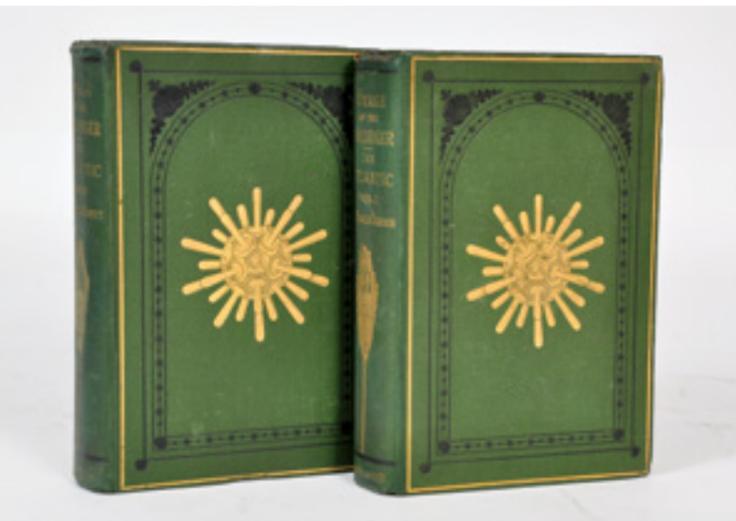
SHEPHARD, BENJAMIN

Challenger Sketchbook. B. Shephard's Sketchbook of the H.M.S. Challenger Expedition

1872-1874. Philadelphia, Maritime Museum, 1972. Compiled by Stewart, H. B. & Henderson, J.W., High Quality Facsimile of Shephard's Sketchbook, oblong folio, with introductory text, published on the centennial of the launch of the Challenger Expedition. Illustrated title-page and fine reproductions of 34 ink and watercolour illustrations, original decorated blue boards.

Shephard was a cooper who served for the entirety of the voyage. His fine drawings feature a view of the ship framed in an oval at various exotic locations.



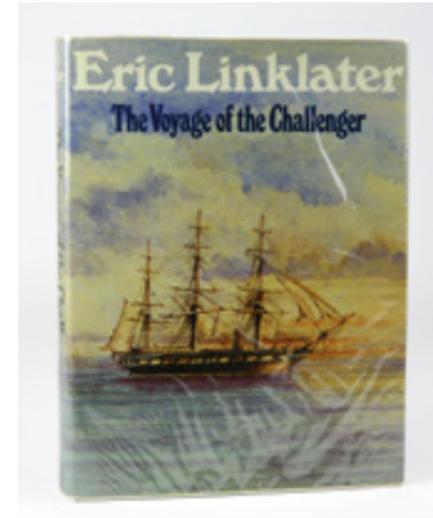


WYVILLE THOMSON, SIR CHARLES

The Voyage of the Challenger. The Atlantic:
A Preliminary Account of the General Results of the
Exploring Expedition of H.M.S. Challenger During the
Year 1873 and the early part of the Year 1876.

First Edition. London, McMillan & Co, 1877, 2 vols., large
8vo, original publishers decorated green cloth gilt, with
42 plates and maps, numerous text illustrations.

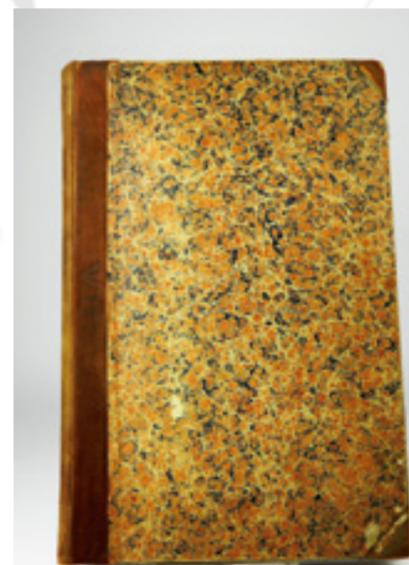
Wyville Thomson lead the team of scientists on this
expedition and here produces the results from the
Atlantic portion of the voyage. (Linklater).



LINKLATER, ERIC

The Voyage of the Challenger.

First Edition, London, Murray 1972, 4to, cloth dustwrapper,
illustrated throughout. One of the first and perhaps best
illustrated history of the voyage.



**A HIGHLY IMPORTANT MANUSCRIPT
LOGBOOK, HMS CHALLENGER EXPEDITION.**

BROMLEY, LT. ARTHUR C.B.

Compiled by Lieutenant Arthur Bromley, Assistant Surveyor,
from 15 November 1872 to 27 May 1876.

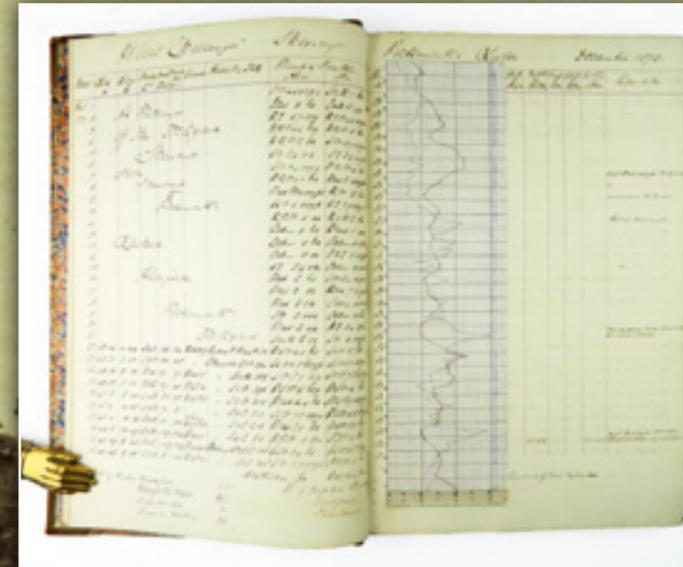
Folio, half calf gilt, half morocco case. A daily logbook, recording position, weather conditions, temperature and barometric pressure, together with details of soundings and deep sea dredging and trawling operations with observations. Pasted in each month's section is a recording barograph strip with pressure and temperature, plus notes on wind and weather. The logbook continues with a voyage on HMS Swift from 1 July 1885 to 17 February 1888 on the China Station.

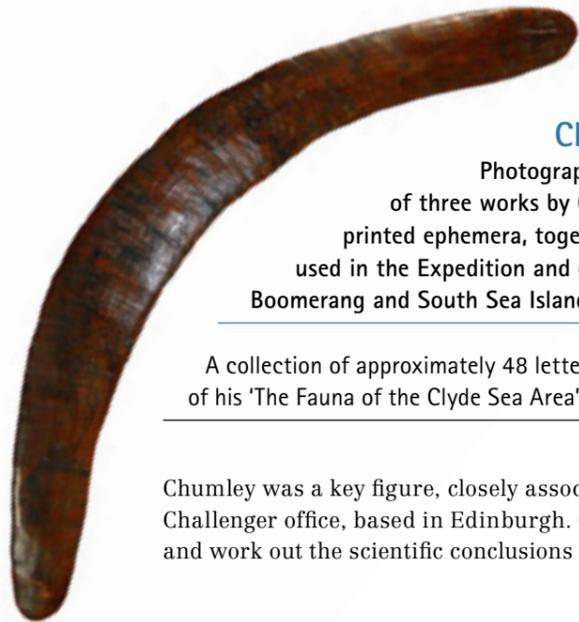
In addition, there are assorted papers, including the discharge papers of Arthur Bromley, recording his appointments from Acting Sub Lieutenant in 1867 to Commander in 1882, together with a small collection of photographs, including HMS Challenger in Dry dock in Yokohama, Japan, the main deck showing the scientific equipment, at anchor in Farm Cove, Sydney Harbour and in the Kerguelen Islands, and a portrait of Sir Thomas Maclean, Astronomer at the Cape of Good Hope Observatory.

Arthur Charles Burgoyne Bromley was born in 1848 and entered the Navy as a Midshipman. As a young Lieutenant, he was appointed to the Survey team on HMS Challenger in December 1872 at the commencement of her epic Oceanographic expedition. He was appointed Assistant Surveyor on board in 1874. Following his return to England, he was appointed Commander in 1882. Between 1885 and 1888 he was in command of the composite gunboat HMS Swift on the China Station, and was promoted to Captain on his return. He was in command of a troopship, a cruiser and finally the battleship HMS Hood in the Mediterranean before taking up the post of Inspecting Captain of Boy's Training Ships. Raised to Rear Admiral in 1901, he became Admiral Superintendent of the Dockyard at Malta, serving until promoted to Vice Admiral in 1906. He died in Service in October 1909.

Provenance: The family by direct descent





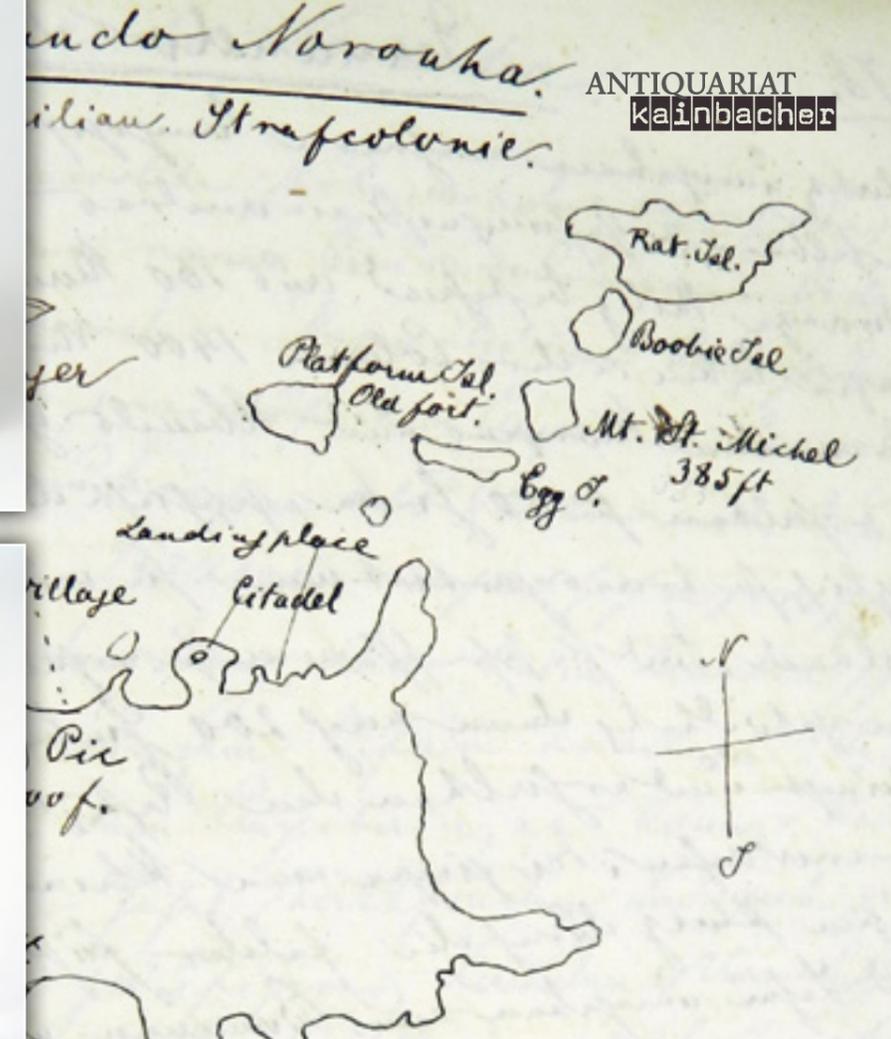


CHUMLEY, DR JAMES (1861-1948)

Photograph of Chumley; with copies, inscribed by the author, of three works by Chumley on oceanographic subjects; and related printed ephemera, together with Chumley's Burr Walnut Writing Cabinet used in the Expedition and gifted to him from the Expedition by Murray, with a Boomerang and South Sea Island Club also gifted to Chumley from Murray.

A collection of approximately 48 letters addressed to Chumley, reacting to the publication of his 'The Fauna of the Clyde Sea Area'; folio, half morocco case.

Chumley was a key figure, closely associated with Sir John Murray as his secretary, in the Challenger office, based in Edinburgh. Over a period of twenty years, he helped compile and work out the scientific conclusions of the Challenger's pioneering discoveries.



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WILLEMoes-SUHM, RUDOLPH VON

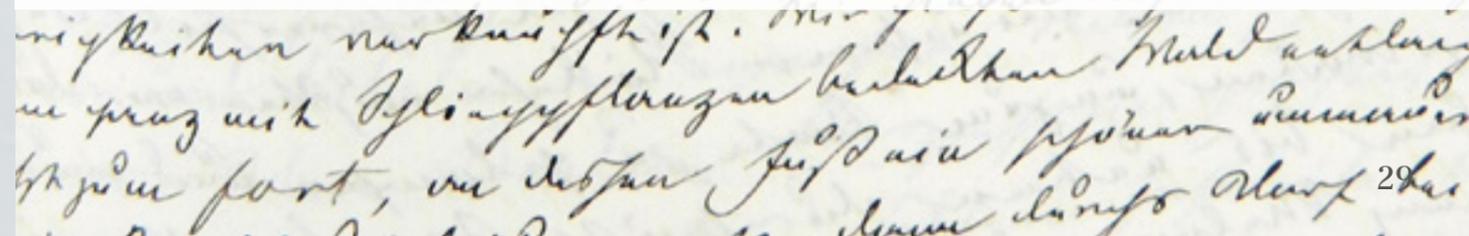
Important Original Manuscript Journal Kept at Sea During the Voyage Illustrated with Drawings, etc.

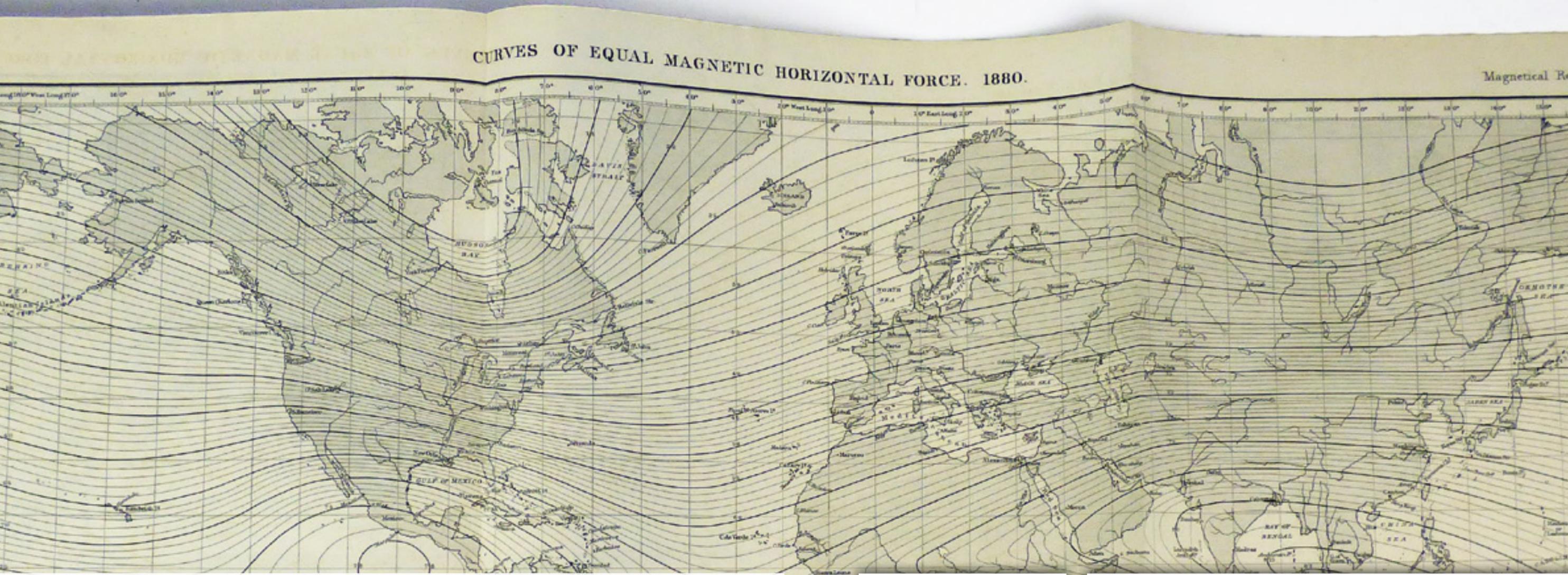
1872-1875. Important MS by one of the leading naturalists on the voyage Original scientific travel journal titled "Challenger" Rudolph von Willemoes Suhm "Journal No.." "I (& II)." Scientific Travel Journal of the German Explorer and Zoologists aboard HMS Challenger. Text in German but occasionally in English. 2 Vols. 21 Dec. 1872-6. Sept. 1875. 4to, illustrated with sketches and 1 photograph, original half calf, fitted half morocco case.

Autograph journal kept by the German naturalist Rudolf v. Willemoes-Suhm during his 3-year journey with the Challenger. Suhm was mainly concerned with Crustaceans, and several new species were named by him. His journal covers the entire voyage until his tragic death from erysipelas on 13th September, 1875, while the ship was at Tahiti in the Pacific.

His travel report remains unpublished and is a leading, yet apparently untapped source on the history of the Challenger Expedition as well as research and discovery of the sea. Suhm, born on 11. September 1847 in Glückstadt on the Elbe River studied in Bonn, Munich and Göttingen already at the age of 24 years he was a Professor of Zoology at the University of Munich. In 1872 he was appointed by Sir Charles Wyville Thomson, the Scientific Director of the Challenger Expedition as the only German on the staff of the research carried out on behalf of the Royal Society.

The posthumous journal covers the entire period from Suhms trip to a few days before his death, in which his illness forced him to stop writing. It contains a wealth of information, particularly the geographical and zoological research of the "Challenger". Suhm illustrated his records with small designs, including many maps and some small Zoological representations.





BUCHANAN, JOHN YOUNG

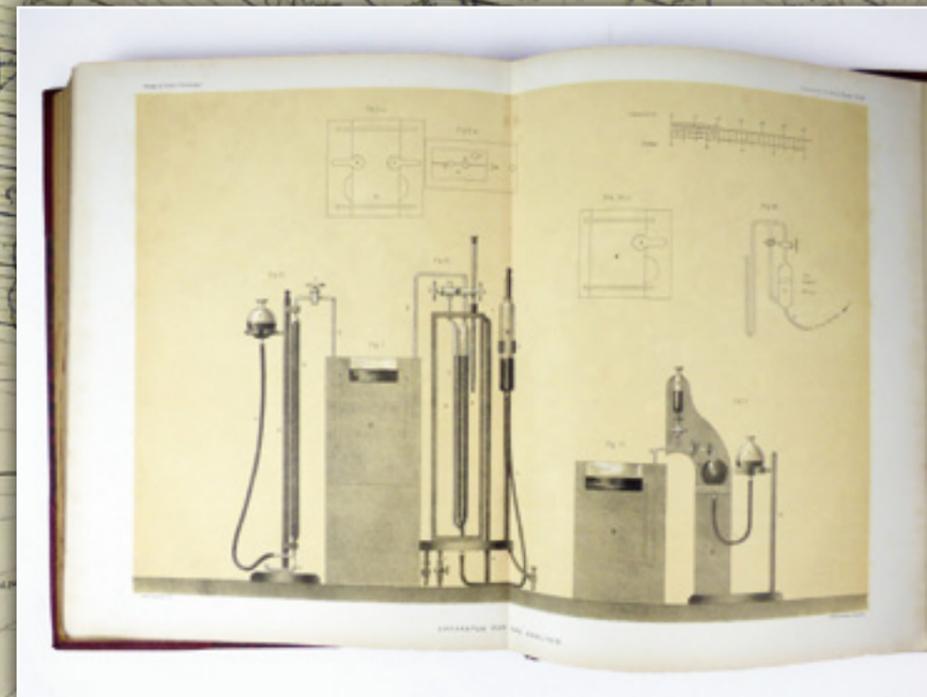
Challenger Expedition. Report on the Scientific Results of the Voyage of H.M.S. Challenger During the Years 1873-76..., Physics and Chemistry.

2 vols. in 6, 1884-89, comprising vol. I, parts I-III, vol. II, parts IV & VI-VII, numerous folding charts, some in colour, numerous other plates and illustrations, contemporary red half morocco, 4to, together with J.Y. Buchanan's Scientific Papers, vol. I (all published), 1913.

Provenance: J.Y. Buchanan, F.R.S.E., Chemist and Physicist of the Expedition, his personal copy, with loose offprints, numerous manuscript notes, sketches, albumen prints, charts, tables, sheets of calculations etc., taken during the Expedition and later.

John Young Buchanan (1844-1925) was appointed chemist and physicist for the Challenger Expedition (under Chief Scientist Sir Charles Wyville Thomson), during which Buchanan conducted important oceanographic research, with responsibility for deep-sea and surface temperature and salinity measurements. Half morocco case.

The Royal Geographic Society later published his map of the distribution of the specific gravity of the surface waters of the oceans, the first ever map of oceanic salinity. This collection also has original photographs and manuscripts.



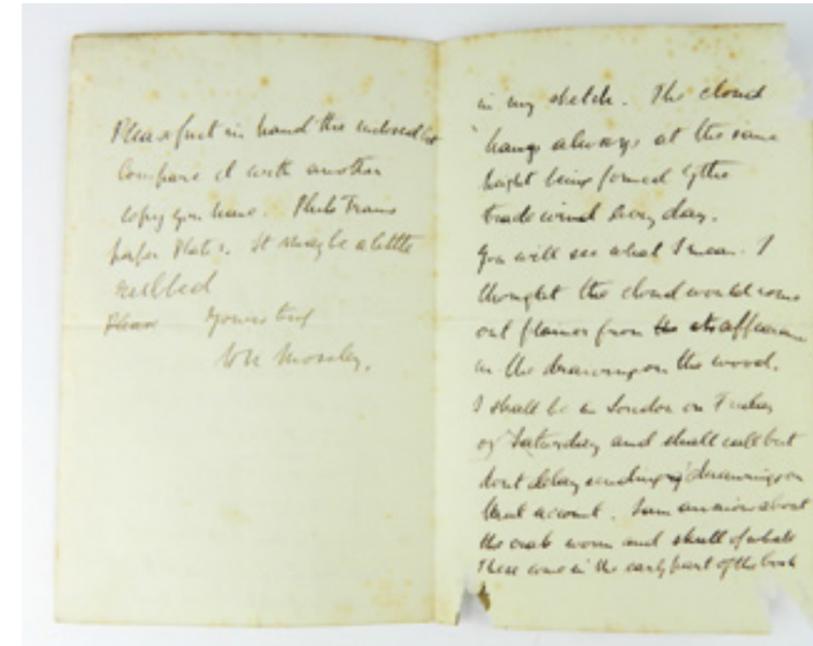
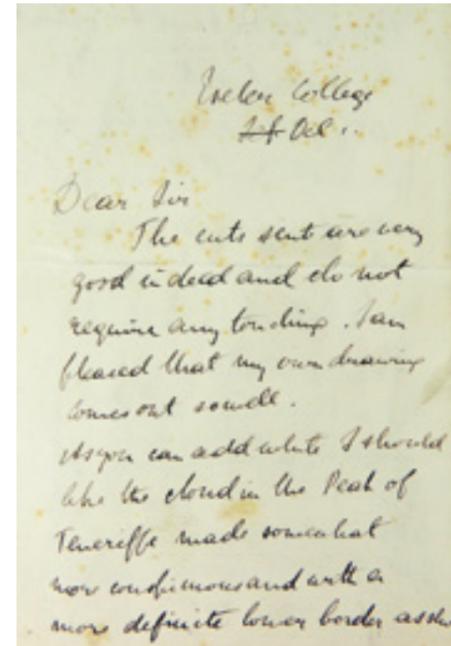


BOAKE, B.C. & BRADLEY, W.

Photograph Album. Some Photos of Challenger Crew.

[1885], quarto, original calf binding, metal clasps, worn, upper cover with crest "R.C.T.", thick card, circa 80 portraits of Naval Officers taken in a wide range of locations, Valparaiso, Sydney, Brisbane, Nova Scotia and Newfoundland, as well as Plymouth, Isle of Wight, Dublin and London.

The subjects identified with contemporary pencil captions on the album pages or on the versos. The photographs of the members of the Challenger were taken by the Sydney studios of Barcroft Capel Broake and William Bradley and include Captain Bell, Lt A. Coulson and Dr Waugh.



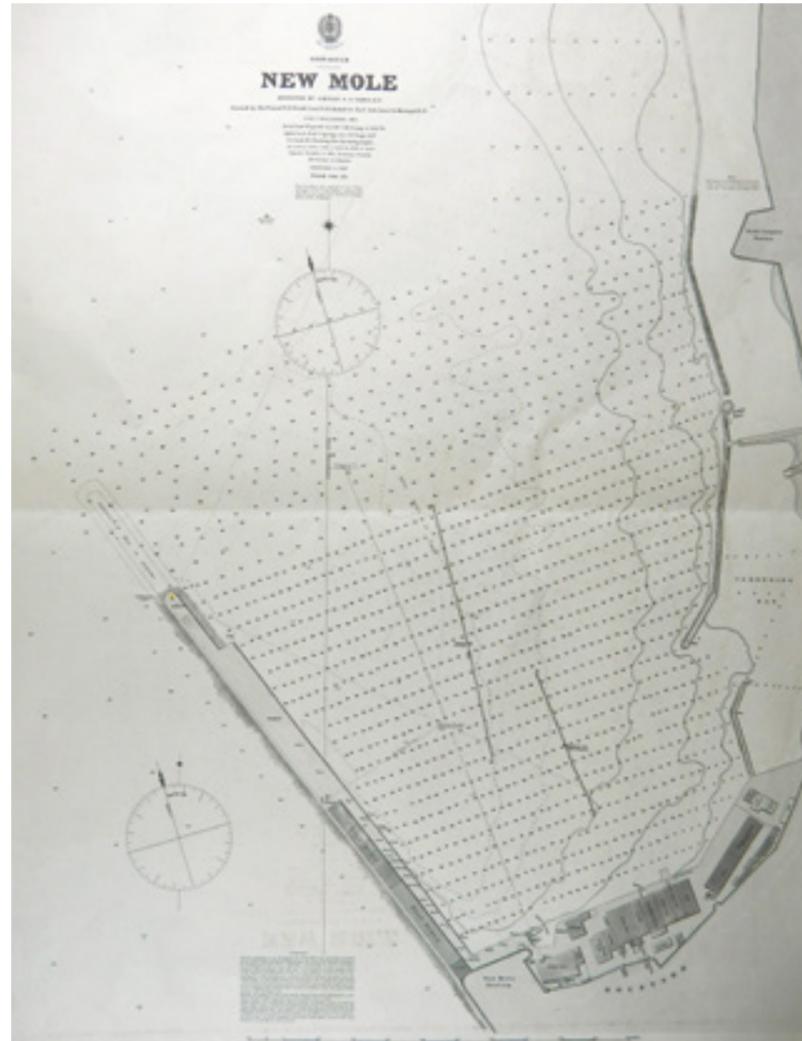
MOSELEY, HENRY N.

Autograph Letter Signed 'H.N.Moseley', about the "cuts" [prints] made from his own drawings, suggesting an alteration to the cloud on the print of the Peak of Teneriffe, adding that "I am anxious about the crab worm and skull of whale. These come in the early part of the book ..."

3 pp. 7 x 4 1/2 inches., Exeter College, October, no year given [c.1878?]. Henry Nottidge Moseley FRS (1844-1891), Moseley delivered the Royal Society Croonian Lecture in 1878 and was elected as a Fellow of the Royal Society in 1879. He participated as naturalist in expeditions to Ceylon, to California, and to Oregon, and most notably he was in the HMS Challenger expedition of 1872 through 1876.

Moseley began working at the University of London in 1879, and he was awarded the Linacre chair of human and comparative anatomy at Merton College, Oxford in 1881. His published works include: Notes by a naturalist on the "Challenger", being an account of various observations made during the voyage of H.M.S. "Challenger" around the world, in the years 1872-1876, under the commands of Capt. Sir G. S. Nares and Capt. F. T. Thomson. By H. N. Moseley [1879].

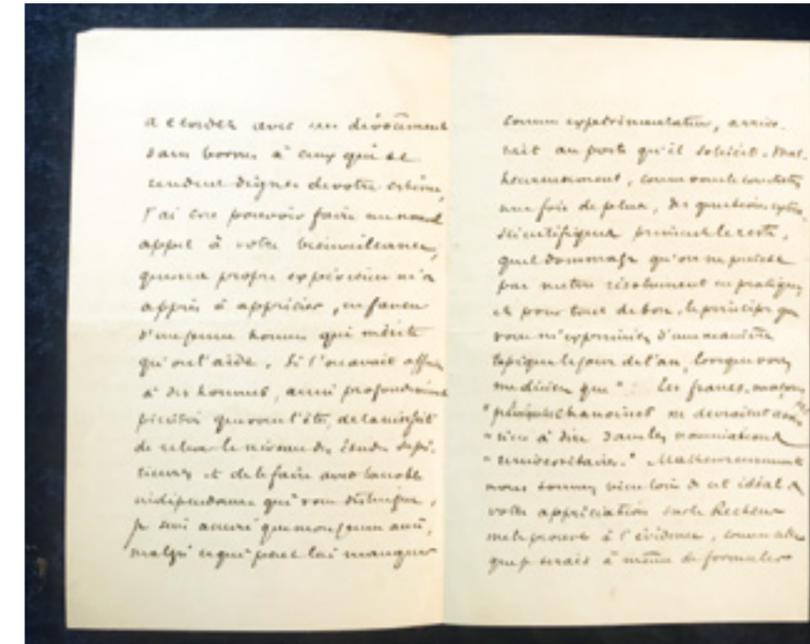
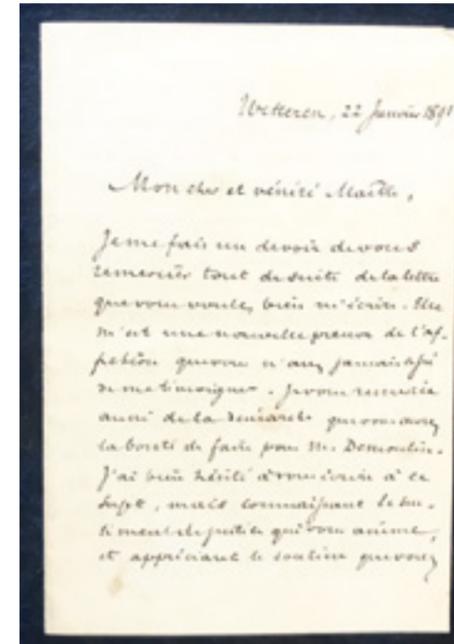
"As you can add white I should like the cloud in the Peak of Teneriffe made somewhat more conspicuous and with a more definite lower border as shown in my sketch. The cloud hangs always at the same height being formed by the trade wind every day. You will see what I mean. I thought the cloud would come out plainer from its appearance in the drawing on the wood."



NARES, CAPTAIN GEORGE.S.

Large Admiralty Chart Surveying 'NEW MOLE, GIBRALTER' HMS CHALLENGER, 28th July 1873.

Large Lithographed Chart 84 x 68 cm with a description of the Dock and Careening Bay.



RENARD, ALPHONSE FRANCOIS.

Autograph Letter Signed, to a colleague, rejoicing in their friendship, asking for assistance in a matter relating to scientific experiment.

In French. 4 pp. 7 x 4 1/2 inches, in good condition. Wetteren, 22 January 1891.

Alphonse François Renard (1842-1903), Belgian geologist and petrographer. His first work, written in conjunction with Charles-Louis-Joseph-Xavier de la Vallée-Poussin (1827-1904), was the *Mémoire sur les caractères minéralogiques et stratigraphiques des roches dues plutoniennes de la Belgique et de l'Ardenne française* (1876).

In later essays and papers he dealt with the structure and mineral composition of many igneous and sedimentary rocks, and with the phenomena of metamorphism in Belgium and other countries. In acknowledgment of his work, the Bigsby Medal was awarded to him in 1885 by the Geological Society of London.

Still more important were his later researches connected with the Challenger Expedition. The various rock specimens and oceanic deposits were submitted to him for examination in association with Sir John Murray, and their detailed observations were embodied in the *Report on the Scientific Results of the Voyage of H.M.S. Challenger Deep Sea Deposits* (1891). The more striking additions to our knowledge included the detection and description of cosmic dust, which as fine rain slowly accumulates on the ocean floor; the development of zeolitic crystals on the sea-bottom at temperatures of 32 °F (0 °C) and under; and the distribution and mode of occurrence of manganese nodules and of phosphatic and glauconite deposits on the bed of the ocean (Geikie).



CHALLENGER BRONZE PRESENTATION MEDAL

The authors of the Challenger Reports, "...received nothing more than a copy of the publication and a small honorarium to cover their expenses. In further appreciation it was resolved that a Challenger medal be struck (sic). The Treasury refused to pay for it and John Murray had the medal designed and executed at his own expense and himself sent replicas to those who had shared in the expedition or in the preparation of the Report. He himself was honoured by the Royal Society when he was admitted Fellow in 1896. Official commendation by the Government was deferred until 1898, when the Queen conferred to John Murray the rank of KCB [Knight Commander, The Most Honourable Order of the Bath] in recognition of his outstanding contributions to science."

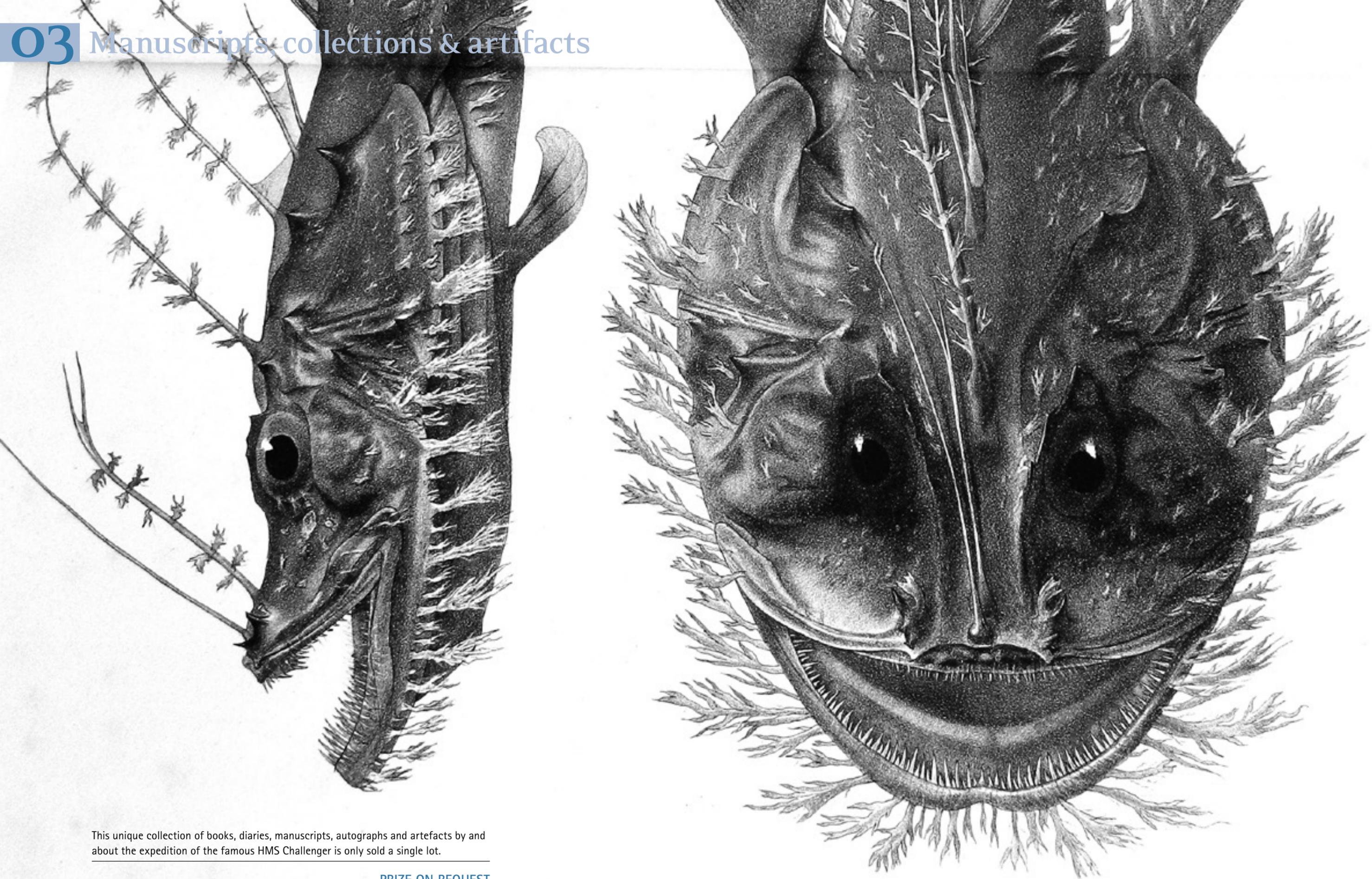
Contemporary writings in the journal *Nature* stated the medal, "...is being presented by Dr. John Murray to the naval officers of the expedition, the contributors of memoirs to the report[s] on the scientific results of the expedition, and to members of the civilian scientific staff, as a souvenir of Challenger work." There were instances where medals were issued to individuals who fell outside this scope. One person concerned was Laurence Pullar. He had an engineering and business background, was a man of wealth, and took a broad view of public service. Pullar was also a life-long friend of Murray, and a Fellow of both the Royal Society and Royal Society of Edinburgh. "Glenn M. Stein, FRGS, FRCGS"



NUMISMATIC DETAILS OF THE CHALLENGER MEDAL

Obverse: Commemorates the voyage. In the center is a head and shoulders left-facing profile of the Roman goddess of wisdom and war, Minerva (in one of her many roles). Next to her is the image of an owl, her sacred bird (which is why wisdom is associated with owls). These figures are superimosed upon a globe with lines of latitude and longitude. I know of at least one example of the medal with only the lines of longitude on the globe. Partially encircling Athena and the owl is what appears to be an evergreen laurel branch; to the Greeks and Romans the laurel symbolised acquired immortality, both in battle as well as in the arts. The whole is bordered by water, indicating the Expedition's round-the-world voyage. Figures from the sea include the Roman god of the sea, Neptune, who is grasping what appears to be a bottom sampler trawl in his right hand (disclosing treasures from the deep). He cradles his trident in the left hand. A stylized dolphin is close by, and two mermaids support a long ribbon, which carefully conceals their charms. The ribbon bears the words: VOYAGE OF H.M.S CHALLENGER/1872-76.

Reverse: Commemorates work on the Challenger Reports. The central figure is a standing armoured knight, throwing the gauntlet from his right hand into the sea (presumably to Neptune), whose trident appears above the waves - this being the crest of H.M.S. Challenger. The trident is partially wrapped in a long ribbon, which extends the entire circumference of the reverse. The ribbon bears the wording: REPORT ON THE SCIENTIFIC RESULTS OF THE CHALLENGER EXPEDITION 1886.95. "Glenn M. Stein, FRGS, FRCGS"



This unique collection of books, diaries, manuscripts, autographs and artefacts by and about the expedition of the famous HMS Challenger is only sold a single lot.

PRIZE ON REQUEST

THE CHALLENGER EXPEDITION

Ladies and gentlemen,

for me, the journey of the Challenger is one of the most important expeditions for the exploration of the oceans in the 19th century – just like the journeys of the Novara and the Valdivia. Her trip around the world led the Challenger to the tropics as well as to polar Regions. Some of these areas are very interesting destinations for me, too. Sailing Antarctica's iceberg areas or South-East Asia's islands with its tropically humid air, crossing the Pacific Ocean's vastness, weathering the storms at Cap Hoorn – beautiful memories and longings.

And then I learned of this unique collection of books, manuscripts, photos and artefacts about the journey of the famous HMS Challenger.

When my sister, Monika Kainbacher, and myself first heard of this collection, we decided to travel to England to inspect it. We were quite impressed with this collection which had been assembled over a span of 25 years, the more as it contained original diaries and logbooks as well as the complete set of the scientific issues from the H.N.Moseley family estate. The major part of these original reports is located in a few library, which made the collection, which was offered here, even more breathtaking! As we did not feel that we could make a decision on the spot, we asked for a couple of days' time for consideration and traveled to Wales.

After spending two days in Wales, driving all the way to Snowdonia and inspecting million and million of sheep we acquired the collection. The owner confirmed the purchase and mailed the collection to Austria in 14 massive boxes.

In the meantime, my sister and I had returned to Austria and waited for the collection to arrive. It didn't. It turned out that the transport company had sent the boxes to Australia instead of Austria. Have they never heard that there are no kangaroos in Austria? But we were lucky. Australian custom authorities got hold of the boxes and sent them to Austria. A week later, FedEx delivered the boxes. All of them? I counted them – there were 13. Where was number 14? A bit of research and investigation brought the result that the little rascal – box 14 – had treated himself to a short vacation in Dubai. Well, a week passed and then the box arrived and the Challenger Collection was complete! After almost 140 years the "Challenger" had once again traveled the world!

This catalogue contains a unique collection of books, diaries, manuscripts, autographs and artefacts by and about the expedition of the famous HMS Challenger.

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