ROYAL MUSEUMS GREENWICH

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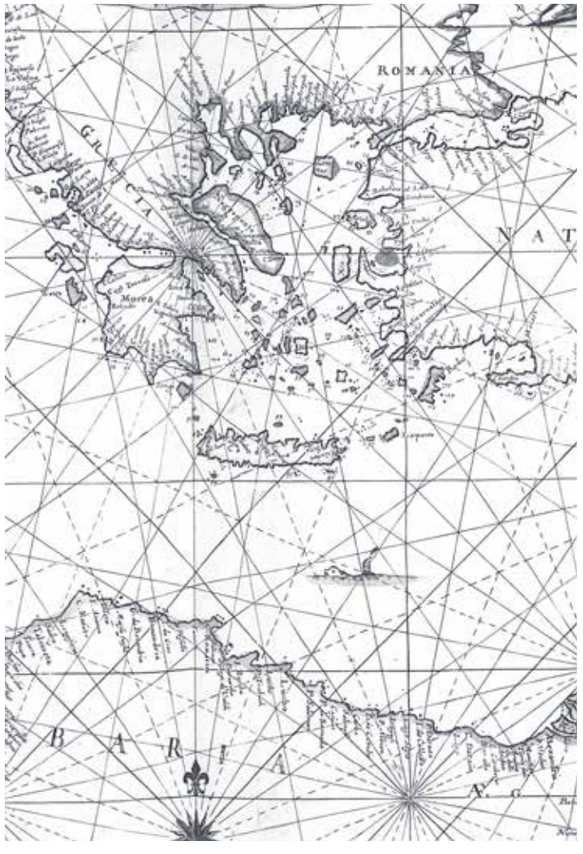
Research Report 2019



INTRODUCTION

Welcome to the annual research report for 2019. Research is at the centre of everything we do at Royal Museums Greenwich whether this is for a gallery talk, a special exhibition like The Moon, for a publication, for the work undertaken by our community researchers and volunteers or to inform cataloguing and conservation on our collections. The stories and narratives that emerge from this research are what define us as an institution and which have helped us attract record numbers of visitors to our sites over the last few years.

Key areas of work covered by this report include: reinterpretation work for *Cutty Sark* (to mark the 150th anniversary of the ship's launch), the Merchant Navy Oral History Project, the James Pollock & Sons cataloguing project, the temporary loan of the *Polly Higgins* Extinction Rebellion blue boat, the *Faces of a Queen* and *Woburn Treasures* exhibitions and the Armada National Outreach programme.

The past year has also seen the Museum working increasingly closely with UK Research and Innovation (UKRI) and the Arts and Humanities Research Council (AHRC) primarily through the Independent Research Organisation Consortium (IROC), a body that comprises many of the nation's major museums and heritage organisations. UKRI – a relatively new body with strategic responsibility for research funding – launched a new initiative during 2019 entitled 'Towards a National Collection'. Its aim is to increase access to museum collections and link them more closely via digital platforms and by doing this to facilitate knowledge-sharing and build research infrastructure.

Through these three bodies we have actively contributed to a range of ongoing discussions on the future research requirements of our sector. We have also submitted a number of major research project proposals in partnership with other IROC members. One of these initiatives has already been successful this year in securing AHRC funding and will look at the potential of citizen heritage and crowd-sourced research for the heritage sector. Led by the National Archives, it will bring us together with Royal Botanical Gardens Edinburgh, Zooniverse and the University of Oxford. These activities have built on the ambitions of the Royal Museums Greenwich 2018–22 Research Strategy and have involved colleagues and departments across the Museum.

FEATURED IN THIS REPORT

Cover: Lascar ratings on board the dismasted pilot brig *Fame*, photographed in November 1891 (P47315)

It has been a positive year for REACH (Revisiting and Enhancing Approaches to Collections and Heritage), the new AHRC-funded collaborative doctoral partnership (CDP) that we lead in partnership with Historic Royal Palaces, the National Portrait Gallery, the National Trust and the British Film Institute. REACH grew from the shared strategic research priorities of the five partner organisations and a determination to pool our collections, resources and expertise to support innovative research. Three themes, above all, linked us: the construction of identities within British and global contexts; the migration of people, objects and ideas; and a desire to promote fresh perspectives on familiar heritage narratives. The consortium's formal launch event took place at the Museum in July 2019. We have eleven fully funded doctoral studentships to award across three funding rounds, and our first four studentship projects were selected (subject to AHRC approval) in January 2020. The Museum's research proposals are strongly represented and our ambitions for a creative and collaborative cross-institutional approach have been thoroughly endorsed.

As well as leading the REACH Consortium, Royal Museums Greenwich makes a major contribution towards running the wider CDP scheme which comprises all the museums, archives and galleries that host these awards. A key part of our contribution relates to the training and development of the overall CDP student cohort, with which we have always been closely involved. This year we hosted the annual launch for new students in September and also convened a doctoral training event entitled 'Making Galleries' in the spring, which focused on The National Maritime Museum's Endeavour Galleries and the new approaches we took to create them.

The Museum's current and recently completed doctoral students from our previous consortium are also enjoying great success. Drs Catherine Beck and Anna McKay have been awarded the Pearsall Fellowship in Naval and Maritime History in successive years by the Institute of Historical Research, University of London. Jenny Bulstrode's doctoral work (supervised by Royal Museums Greenwich and the University of Cambridge) was awarded the 2018 Sarton Prize for the History of Science by the American Academy of Arts and Sciences, which recognises early-career historians of science with exceptional promise and distinguished achievement. For the second year in a row, the Royal Museums Greenwich fellowship programmes have attracted record numbers of applicants and we have continued to focus these awards more tightly on the museum's core research priorities and collections.

The Journal for Maritime Research edited by Rob Blyth (Senior Curator: World and Maritime History) has seen one issue this year and the preparation of a special issue on Joseph Banks for 2020. We are currently exploring ways in which we can enhance the journal and broaden access and contributions.

We are also working hard to deepen other research partnerships and collaborations, not least through two important maritime heritage networks coordinated through Royal Museums Greenwich's Research Group. These are the UK Maritime Heritage Forum, a successful annual conference that brings together maritime museums and historic vessels, and the International Congress of Maritime Museums. In recent years, speakers and delegates from across Museum departments have been increasingly active through these networks and the potential for research at both national and international levels is clear.

We will continue to build our research profile in 2020 and beyond, ensuring that our research programmes and projects create new and challenging narratives and content which support key outcomes and priorities for the organisation and ensure we are relevant to everyone.

Stuart Bligh
Head of Research and Information

Dr Quintin Colville
Senior Curator: Research

Selected Team Updates and Research Activities

CAIRD LIBRARY ARCHIVE COLLECTION RESEARCH PROJECT

Martin Salmon, Research Curator and Archivist

After 13 years in the Manuscripts team, I took up an exciting new post of Research Curator and Archivist with the Curatorial team. For a long time I have been fascinated by the different research uses that archival records can address and this was a great opportunity to do some sustained research into specific areas of the archive collections to support wider Museum research objectives in our new research strategy.

The first three months were spent re-evaluating our unique and popular collection of journals and diaries, comprising over 300 individual records of voyages, ranging from 1631 to 1973. While looking for stories of migration to support the new post-1850 research focus, 77 journals and diaries kept between 1850 and 1950 by officers, crew or passengers were surveyed. It quickly became evident that the richest stories were from passenger journals. Journals kept by officers and crew were usually narrower in outlook and fewer things stood out as worthy of notice, leaving a patchier record of a voyage. Passengers' expectations on the other hand were formed on land, were quickly confounded, and a long voyage left plenty of time to write about them!

Destinations were predominantly to the Caribbean, India or Australia and New Zealand. Far fewer voyages were to South Africa, Canada, the US or Europe. As well as chronicling reasons for emigration (health, work, missionary activity, sponsored emigration or a gold rush), other journals recorded the thankless task of both cable laying and cable losing!

Passengers wrote about their disappointment in customer service not as advertised, poor diet and lack of facilities, together with frequent (usually wet) mishaps and passing the time by catching fish or birds, albatross being a special favourite. Alongside tales of mutiny, fire, icebergs and stowaways, there are concerns for animal welfare, theatre at sea and many examples of tolerance and diversity.

Many journals were kept by women, including a seven-volume series kept by a 20-year-old assistant scout mistress, Winifred Lloyd, who fell in love with sail and worked her passage back from a scouting jamboree in Port Lincoln, South Australia, to Falmouth in 1935. Another journal writer Alfred Withers made his fortune in the Australian gold rush, and then returned to Liverpool to propose to his sweetheart, Margaret Buck (referred to as Madge in the diary). His journal chronicles their honeymoon voyage back to Australia. Another journal records one of the last voyages taking female convicts to Hobart in 1854.

A page from the journal of Alfred Withers describing his honeymoon voyage to Australia, 1857 [JOD/171]

Despite the opening of the Suez Canal in 1869, two thirds of the voyages were by sail. On holiday, some passengers' impressions of the noise, vibration and constant coal dust displaced appreciation for the time saving and reliable service of steam. Highlights included a vicar buying stout for unruly and superstitious seamen so he could practise sermons on them, Christmas shopping in Stockholm and Hamburg, and a previously uncatalogued return voyage from Australia on the SS *Great Britain* in 1862. Since September I have been working on a funding bid to catalogue the business archive of James Pollock and Sons Ltd of Faversham, Kent. Pollocks were an innovative builder of specialised small craft, tugs, barges and small steamers all launched 'sideways' into Faversham Creek. In 1915, Walter Pollock was approached by Jackie Fisher (First Lord of the Admiralty) to design landing craft for the Gallipoli campaign. Over 250 were built in various shipyards up and down the country, but the design of the X Lighters – known as 'Black Beetles' – was Walter Pollock's.

This project has involved a comprehensive survey of the collection across two stores, meeting with our conservation team to assess its condition and, best of all, visiting Faversham itself to meet with the Faversham Local History Society and Oare and Faversham Harbour Heritage Trust. With renewed interest in the town's maritime heritage, the bid comes at a good time and we discussed ideas for how the records could be put to use as part of this, such as a timeline or storyboards around the town or riverfront. 2020 will mark the 50th anniversary of the yard's closure, and if successful, the bid will open up the records of the Kent firm to academic research and help to reinvigorate the town of Faversham.

CAIRD LIBRARY AND ARCHIVE CATALOGUING REPORT

Gareth Bellis, Archive and Library Manager

The Caird Library and Archive's cataloguing programme continued to support research at Royal Museums Greenwich throughout 2019. By making newly acquired material available and enhancing existing records, the programme aims to enable wider access to the unique and fascinating collections held by the Museum.

During the year, we acquired diaries and supporting material relating to the service of able seaman William Redpath during the First World War. The diaries cover his naval career (December 1915 to June 1919) and were kept in defiance of a navy ban on such documents (reference: RED/1-37).

The acquisition of The Navy League and Sea Cadet Association archives from The Marine Society & Sea Cadets in August 2019 has already attracted research interest. These records cover the period 1894–1994 and include annual reports, minute books, committee papers, historical files and promotional literature. Cataloguing work will continue into 2020 to make this important collection available for research access.

Other highlights from the year include:

- A small collection of letters and other documents involving the death of Captain Edward Thornbrough Parker (1778-1801) as a result of wounds received in Nelson's attack on the French invasion flotilla, Boulogne, 4 August 1801 (reference: BGY/P/6)

- A collection of documents relating to Joseph Preston & Sons, manufacturers of watch and chronometer movements. The collection comprises correspondence between businesses involved in the manufacture of watches, clocks and chronometers (reference: PRS/1-6).

- A collection of papers of Rear-Admiral James Francis Ballard Wainwright (1820–72). These documents include letters relating to Wainwright's appointment as captain in charge of the naval establishments at Bermuda (reference: ADL/Z/63/1-4).

The Caird Library's dedicated team of archive volunteers continue to support our cataloguing enhancement work with over 9,443 records updated during the course of the year. Collections that have been enhanced include of our collection of crew lists from 1875 (reference: RSS/CL/1875) and Navy Board In Letters (reference: ADM/A).

New catalogue records were added for modern books acquired for the Library's working collection of modern reference works. Progress was also made in the cataloguing of books which came to the Museum from the Royal Greenwich Observatory Library at Cambridge. A volunteer project to catalogue and rehouse over 7,000 items of printed ephemera, which began in 2015, is now drawing to a close with final checks in progress on the records created. Once the records have been uploaded to the Museum's Collections Online catalogue, these items of printed ephemera will be available for researchers to order and view in the Caird Library, offering a great increase on the 498 items of printed ephemera currently available. This collection will be of interest to researchers exploring topics such as twentieth-century travel, food at sea, advertising or company histories, Western images of the wider world and many more.

COMMUNITY RESEARCH PROJECTS

Ros Croker, Senior Manager: Partnerships and Public Engagement

We have undertaken a number of research projects with community and special interest groups over the last couple of years building on the approach taken during the Endeavour Galleries project.

The aim has been to involve and support communities who are under-represented in our visitor demographics to find relevance in the collections through research. We structured projects around these areas, which translated to African and Caribbean histories, Islamic histories and women's histories. Staff in the Learning and Interpretation team identified research facilitators with expertise in each area and formed a research community through callouts via different organisations and individuals.

The project start dates were staggered so we were able to use feedback from each project to inform the next. During each project, researchers took part in an initial information session where we discussed the opportunities and limitations of the project and talked about concerns and ideas. The focus of the research was the Museum's fantastic and rich archive collections housed in the Caird Library and Archive, and library staff and curators gave advice and guidance on how to access the archive collections using the catalogue and research guides. The researchers chose one or more questions and undertook research in their own time, supported by the 'Representing Invisible Histories' facilitator. The outcomes were left open and only decided when the research was complete, guided by what had been discovered and how the group felt it was best to communicate their findings more broadly. This model was adapted with each group to suit their needs and fit their way of working and interest areas.

Projects have included working with the African Caribbean community in relation to how the Museum's archive can support African Caribbean family history research.

Working with groups that have an affinity to, and identify as being from, East Africa, North Africa, UAE and South Asia, we have carried out research into the Museum's Islamic collection. This collection is defined as items relating to culture and peoples from locations around the world where Islam is the dominant faith.

We have recently begun a new research project focussing on LGBTQ+ histories with information sessions due to be held shortly led by a research facilitator from Metro Charity. The community researchers involved in this project will be taking part in the Caird Library Open Day the theme of which will be the work being done on the collections by community researchers and volunteers.

Community researchers from the project on Women at Sea will also be presenting their findings during our Women's History Month programme of activities, and researchers from the African Caribbean project will be presenting their approaches to family history research at the Border Crossings Collections Day.

This collaborative and community-based research is increasingly important for Royal Museums Greenwich as it opens up new perspectives on our collections making them more relevant to more people. The researchers are uncovering stories and narratives in our collections that we would not have found without them and this will, we hope, make us a more welcoming, inclusive and relevant organisation. One of the researchers mentioned that 'through the project I have found a real sense of belonging'.

Partners and collaborators have included Paul Crooks, John Eversley, Swadhinata Trust, and Numbi Arts. In total there have been 55 participants so far with research carried out using over 70 archival collections and documents.

CUTTY SARK 150 RESEARCH PROJECT

Dr Hannah Stockton, Curator: *Cutty Sark* and *Cutty Sark* 150 Researcher

(Sackler Foundation funded)

The aim of this research project is to place *Cutty Sark* in its wider nineteenth-century context, within John Willis's fleet of merchant sailing ships, within the various geographical networks of London, the UK and the British Empire, and within the wider history of the shift from sailing to steamships in the so-called 'dying age of sail'.

Building a picture of John Willis & Sons shipping company involves drawing on a variety of sources. There are existing lists of the ships it is believed Willis and his father owned and the trades they participated in. However, in using Lloyd's Register lists, newspaper reports and adverts calling for cargo and passengers, it is clear that many of Willis's ships changed trades throughout their careers, as prices and fashions changed and steamships encroached. The ultimate aim is to map the voyages of each of Willis's ships to explore the global spread of just one shipping company amongst many, and to map the changing dominance of different commodities over time. This highlights the versatility of sailing ships which, more than expensive steam vessels, could switch to lower value, bulk trades if necessary.

Additionally, the recent rediscovery in the Museum's manuscript store of a deed box owned by John Willis has provided a wealth of information on both *Cutty Sark* and the other ships in the fleet that has not previously been widely explored. The contents of this deed box have provided a variety of new avenues for understanding the finances of Willis's company and individual voyages. They include accounts for individual voyages – one on *Janet Willis* which lasted for four years and visited India, China, Hong Kong and San Francisco multiple times in that period – showing the range and versatility of ships that were not reliant on coal stocks. If profits were limited, voyages could be extended and extra cargoes transported without too much additional outlay.

These accounts and bills also outline the array of expenses on a voyage that needed to be accounted for by ship owners and captains. From food and drink provisions at a variety of different ports, port fees and stevedore wages and the cost of telegrams back to the owner for instruction, to the costs of equipment and materials needed for the sailmaker and carpenter to maintain the vessel at sea and at home. There were additional fees if they carried Chinese immigrants to Canada and Australia, amongst others, known as the 'head' or 'poll' tax, and the vessels were responsible this. Wages for crews and additional recruits from other ports needed during the voyage, often paid at different rates, are all accounted for in these financial records. These can be used to build a full picture of the costs of a sailing ship voyage at a time where they were seen as increasingly unviable for commercial purposes in certain trades.

Also found through both the deed box papers and in our *Cutty Sark* crew lists, is the ability to reconstruct some of the experiences and backgrounds of the crews that made these voyages possible. These records will contribute to building a picture of the diversity of ethnicities, nationalities, languages and experiences of the crews that made up the British merchant marine of the nineteenth century, their families and backgrounds and their experiences at sea. With a combination of these records and a deeper examination of the increasingly available family history records both at the Museum and online, it may be possible to build a rich database of the lives of at least some of *Cutty Sark*'s crews, their backgrounds and what happened to these sailing ship workers in the decline of sail. This will hopefully facilitate a richer understanding of the lives led by merchant mariners and their families in the nineteenth century, and the huge diversity of backgrounds of ships' crews at this time.

The ship *Hallowe'en* (1870), another of John Willis's clipper ships, oil on canvas, British School, c.1880 [BHC3388]

It is hoped that this research will provide new perspectives on nineteenth-century merchant shipping and the business of running a sailing ship line in a time when these vessels were increasingly left behind by steamships. Information on the company, ships and crew will feed into the interpretation onboard *Cutty Sark* and into the Museum's wider project looking at the history and experience of the merchant marine.

Cutty Sark crew members on deck, photographed by Captain Richard Woodget, c.1885–95 [H5208]

FIGUREHEADS RESEARCH

Sue Prichard, Senior Curator: Arts and Jeremy Michell, Senior Curator: Maritime Technologies

Sue Prichard and Jeremy Michell have collaborated on a new publication Figureheads: On the Bow of the Ship. The book explores the history and traditions associated with figureheads and contains 60 examples from the National Maritime Museum's collection, one of the largest and most comprehensive collections in the world. It illustrates the vast array of inspirational subject matter used during the eighteenth and nineteenth centuries, from large near full-length figureheads of classical and allegorical heroes to busts of historic figures whose national importance may now be lost to a contemporary eye. For the crew, the figurehead was more than just a decorative feature, it embodied the spirit of the ship and as such was highly symbolic of personal and collective loyalty. Whilst the majority of carvers were men, there is evidence that women were also employed. Abigail and Elizabeth Chichley both worked at Chatham and Sheerness (1737–77). In 1820, Mrs Lucy Burroughs was employed by Nathaniel Keast, Deptford to supply carvings for the *Russell*, *Ariel* and *Southampton*.

The authors have undertaken a new approach to the collection, which focuses on the importance of figureheads as material culture. In addition to a general introduction, the publication includes a selection of short in-focus case studies. These provide a contextual framework which places the figureheads under a series of headings, including mythology, gender, empire, politics and literature. This small publication has offered up an opportunity for further research into one of the most popular areas of the collection.

HOUSE FLAGS RESEARCH

Sue Prichard, Senior Curator: Arts

Four Corners Books have commissioned a new publication on the National Maritime Museum's large collection of house flags. The publishers have a reputation for producing a series of books which present a new look at the history of modern British visual culture. The 'Four Corners Irregulars' focus on work produced by artists working outside the gallery context.

From the middle of the eighteenth century, thousands of shipping companies operated across the globe. House flags adorned a great variety of these sea-going vessels, from the wooden merchantmen transporting exotic goods across the Pacific to the transatlantic ocean liners operated by the Cunard Steamship Company and White Star Line. Sue Prichard has written an introduction to the publication, which explores the development of the mercantile house flag and its relationship with heraldry and flag making in general. Produced between the mid-nineteenth and early twentieth centuries, house flags have a unique visual appeal; indeed, some of the simplest designs show startling effects of bold, graphic originality. Within the maritime context, the primary function of these objects was as a highly visual means of communication at sea and in port. Nevertheless, the visual language of flags, mostly consisting of a seemingly never-ending combination of geometric shapes and bold, primary colours, have much in common with some of the most avant-garde movements of the twentieth century. It is anticipated that this innovative approach to the collection will attract and inspire a new audience with an interest in art and design.

MARITIME MEMORIALS DATABASE 2015–20

Barbara Tomlinson, Curator Emeritus

The Maritime Memorials database was started in 1978 and includes memorial records sent to the Museum from the 1960s. The initial objectives were to enable the use of memorials as a source for curators and maritime historians and to form a virtual sculpture collection, desirable given the logistical problems of collecting this material. It also provides a valuable resource for family historians. It includes grave markers, church monuments, stained glass and public sculpture, commemorating seafarers and victims of shipwreck. It does not include Commonwealth War Graves or twentieth-century war memorials which are covered by other official sites.

Although the Museum's holdings of sculpture are relatively small, there is much commemorative and memorial-related material in the decorative arts, historic photographs and manuscripts collections which the database explains and enhances.

After a change in software to WordPress, it was apparent that editing was required to make the database more user-friendly and to add data that had been scrambled or omitted. This has been carried out from the spring of 2017 by a curator emeritus and volunteers. This project has now completed stage one. It only remains to add acknowledgments and improve the attachment of photographs. Stage two should be complete by summer 2020. A new comments facility provided encouraging initial feedback from users but was eventually discontinued due to problems with 'spam'.

Data has also been added or checked using online and manuscript sources, making individual records more comprehensive and accurate. Full transcripts, bibliographical references and additional background information gives this site an edge over the rival 'Find a Grave'.

New records and photographs have been added after site visits by volunteers and this process will be ongoing. Pippa Lacey has visited and photographed memorials in Suffolk, Norfolk, Bath, Bristol, Cornwall and Stockport; Barbara Tomlinson in London, Dundee, Fareham, Lymington, the Lake District, Pembrokeshire and Staffordshire. There have also been contributions from Patricia Blackett-Barber, Julian Bates and Dr Jean Wilson among others.

The database is an excellent source of material for publications and lectures. Dr Pippa Lacey gave a talk on 'Admirals, captains and other salty sea dogs: stories from Britain's maritime history' in July 2019, at Halford Leo. Barbara Tomlinson has presented: 'Neoclassical naval monuments and the decorative arts' (based on material in the Royal Museums Greenwich collections) to the Church Monuments Society, 2015; 'Shipwrecks and lifesaving' for the Weymouth Leviathan, 2016; 'Memorials to seafarers in the City of London' to the Church Monuments Society, 2017; '18th to 19th-century memorials in Lichfield Cathedral' to the Church Monuments Society, 2017; 'Convoys and reputations' (memorials to Edward Long, d. 1808, and Captain James Newman-Newman RN, d. 1811) to the Church Monuments Society, 2018.

ORAL HISTORY

Lucy Dale, Assistant Curator

For a little over a year, members of the cross-departmental Merchant Navy Project Team have been working to enhance the understanding and representation of the Merchant Navy at Royal Museums Greenwich and to investigate relevant material already in our collection. The project is aligned to one of the Museum's strategic research priorities, specifically to explore the maritime world post-1800, with a focus on core themes of trade, migration, gender and race and diversity. In particular, we have sought to give the Merchant Navy a human face, to tell the individual stories of the men and women who have made their livelihoods at sea and of their families ashore. As a result, oral histories have been central to our approach; we have recorded a number of interviews and have begun work to digitise a much larger collection created in the 1970s.

To find interviewees for our project, we first reached out to the Old Worcesters Association when they held their reunion at *Cutty Sark* in the summer of 2018. This seemed an ideal opportunity to recruit a number of former seafarers in one place, with the added benefit that the *Worcester* training ship was closely associated with *Cutty Sark*. We conducted a number of interviews with members, allowing us to refine our approach to oral histories, define the project more clearly and collect a fantastic assortment of stories of shipboard life.

As of December 2019, we have collected ten oral histories with merchant seafarers and family members. This figure belies the richness and diversity of stories unearthed and the subjects they cover. Our interviewees have spoken about education and training, working conditions, accidents and illness, sex and sexuality, race and religion, superstition and danger, separation from family and the final decision to come ashore. As a direct result of our interviews, we have been offered a number of objects including a poignant collection relating to the rescue, by a merchant ship, of Vietnamese refugees in the 1980s.

The second strand of our project concerns approximately 500 tapes made around 40 years ago. These interviews formed the basis of the BBC Radio Four series, The British Seafarer, which aired in 1980. The collection focuses on those at sea in the early twentieth century and promises a fantastic array of stories covering the First and Second World Wars, smuggling, espionage, whaling, fishing, shipwreck, migration and even the final stages of the transition from sail to steam. A tranche of 12 has been sent to the British Film Institute for digitisation and we look forward to the results of this initial trial.

We will continue to broaden and further diversify our pool of interviewees to reflect the great variety of shipboard experience. At the same time, we will embed these narratives within the broader work of the Museum to afford our audiences a unique insight into a world which most will never know. The scope for this project is immense and, should we achieve our goal, we hope to produce a record of life at sea across the twentieth century, in the voices of those who were actually there.

HISTORY OF SCIENCE

Dr Louise Devoy, Senior Curator: Royal Observatory Greenwich

The History of Science team have had another busy year with the completion of The Moon exhibition in July 2019 after many years of research and hard work with numerous colleagues across the Museum. More generally, we have made good progress with ongoing cataloguing projects and working with volunteers and interns to digitise our historical records, with a view to making the information more accessible in future. We are also delighted to have welcomed our new Curator of Navigation, Dr Erika Jones, who is a specialist in the history of the *Challenger* oceanographic expedition of 1872–76.

PEOPLE OF COLOUR COLLECTIONS REVIEW

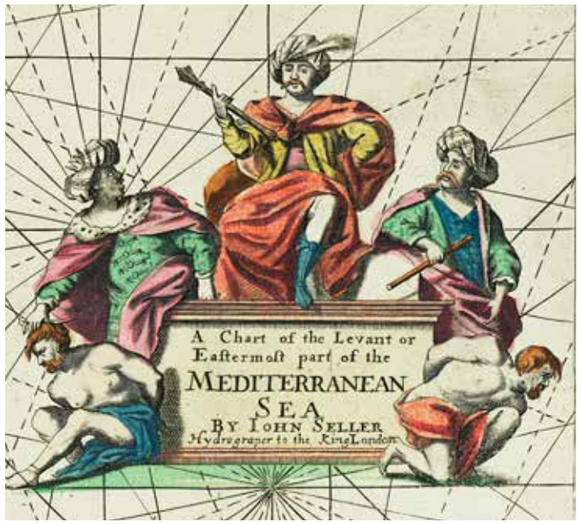
Dr Aaron Jaffer, Curator: World Cultures

Aaron Jaffer is conducting a collections review aimed at finding overlooked 'people of colour' represented in the Museum's collections. This wide-ranging project is focusing on prints, drawings, photographs, paintings and archival material but also covers other areas of the collection, such as maps, medals and decorative arts.

This includes key figures such as sailors of African and Asian descent, who already appear in the Museum's galleries, but also those more easily overlooked, who are sometimes further removed from the Museum's core subject areas. Examples of the latter include a photograph of a Malagasy jockey, sketches of Tongan school children and illustrations of Hawaiians on Christmas cards. Unsurprisingly, historic collecting and cataloguing practices have resulted in many of these people being left out of our records, making them difficult for curators and members of the public to find.

As well as providing material for a book, this research will result in the digitisation of objects, the enhancement of their records and the creation of new finding aids. We hope that these resources will provide the foundation for future fellowships, doctoral research projects, community consultation programmes and perhaps even exhibitions.

This work is drawing on the Museum's team of Collections & Archives Research Volunteers (CARVs), specially recruited for the project, who are helping to bring lesser-known aspects of the collection to light.



A chart of the Levant or Easternmost part of the Mediterranean Sea [PBE6862(14)]

Sally Rodney...Barbadoes [PAF8420]

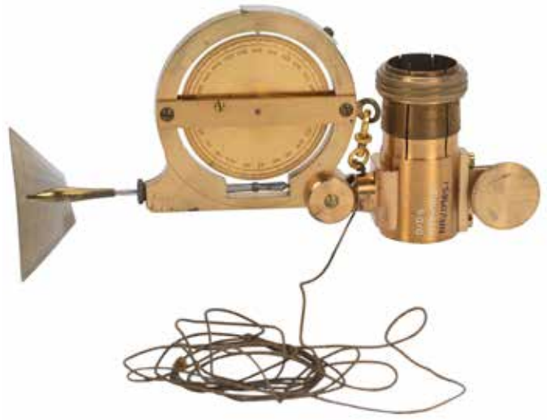
THE ROYAL MUSEUMS GREENWICH OCEANOGRAPHY COLLECTION: WHO SPEAKS FOR THE SEA?

Dr Erika Jones, Curator: Navigation

With public concern about the ocean environment at an all-time high, now is an opportune time for the Museum to reconsider how its collection tells tales of changing seas and Britain's relationship with the global ocean. As part of this larger effort, in my role as Curator of Navigation one of my first tasks was to investigate and review the Museum's oceanography collection.

The oceanography collection comprises over 100 objects, most of them instruments for obtaining information about the marine environment. How scientists have explored the deep ocean has changed dramatically over the past 150 years. The Museum holds examples of instruments used throughout this period, from a current meter made in 1832 (NAV0985) to an oceanographic data buoy made in 2002 (ZBA5141). The technological development in the study of the ocean is immense; the modern data buoy is solar-powered and transmits information on wave height, current speed and direction, water temperature, salinity and turbidity. From the nineteenth century to today, it is these types of instruments that now inform our current understanding of the ocean.

More than data and instruments, the history of oceanography incorporates histories of conflict, trade, migration and navigation. For instance, the oceanographic collection includes four bathythermographs made in the 1950s and 1960s (such as NAV1764). These devices were used by researchers at the National Institute of Oceanography to observe and record thermoclines, differences of water temperature against ocean depth and pressure. This research offered insights into ocean circulation. But this information was also valuable to the Royal Navy during the Cold War, as thermoclines deflect sonar – a strategic advantage for the navigation of submarines.



Joseph Saxton Type current meter, c.1832 [NAV0985]

Wave rider buoy [ZBA5141]

Adding to the strength of the oceanography collection, throughout its diverse collections the Museum holds a wealth of objects relating to exploring the ocean environment. Items from the navigational collection – such as depth sounders, meteorological instruments and electronic position-fixing – represent the need to understand the ocean for safe maritime travel and were used in oceanographic research. Ship plans and ship models; lieutenants' logbooks and officers' personal papers; globes and charts also illustrate various aspects of ocean science. The Museum holds a rich collection of items relating to important voyages of exploration, including Captain James Cook's eighteenth-century expeditions, Charles Darwin's voyage on HMS *Beagle* (1831–36) and logbooks from HMS *Challenger* (1872–76). Polar expeditions represented in the collection span from James Clark Ross on the *Erebus* (1839–42) to RRS *Discovery* (1925–27). All of these voyages had oceanographic elements.

Since the 1850s, knowledge of the ocean has been most often regarded from the perspective of European scientists. But sailors, whalers, fishermen, artists and coastal communities have lived with, observed and made knowledge of the ocean environment for centuries. The Museum has objects throughout its different collections that speak to this wider theme. For example, the 'Pacific Encounters' gallery explores how Polynesians used their knowledge of ocean currents, winds and the stars to navigate long distances across the open ocean. These are just a few examples of the breadth of the Museum's collection within ocean science and the quest to understand the sea.

With the environmental crisis of climate change, our relationship with the ocean has become ever more crucial. Contemporary collecting aims to explore today's concerns and responses to changing seas. This includes acquiring instruments from British oceanographic researchers, as well as objects that represent other ways of understanding the ocean and coastal environments.

BARKCLOTH RESEARCH

Daniel Martin, Head of Conservation

Textile Conservation are working with Lora Angelova and Lucia Pereira Pardo from The National Archives researching into Microfadeometry Testing (MFT) of Pacific barkcloth. Barkcloth is a non-woven cloth made from the inner bark of specific types of trees, the most common being the paper mulberry tree in the Pacific islands. The bark is stripped from the trees, soaked in water and beaten into strips, which can then be beaten or pasted together to form large sheets. The cloth is decorated by rubbing, soaking, painting or printing its surface with pigments, which are often made from natural organic materials. Light causes fading and colour changes of some natural and synthetic dyes and pigments; this is influenced by a number of factors including the nature and condition of the colourant, the intensity of the light, the amount of UV radiation and the length of exposure, and as such light damage is a major concern for textile collections. Microfadeometry Testing is a technique that applies a tiny spot (0.3 mm) of intense light on the surface of an object for a few minutes, to probe and measure any colour changes. This allows the conservator to predict how sensitive to light any dyed or coloured areas may be and to assess the risk of fading or colour change.

This type of analysis will help determine how the dyes and pigments used on barkcloth artefacts may respond to light exposure, which will then help us with making an informed decision about the length of time these objects can remain safely on display in the 'Pacific Encounters' gallery. Four different coloured areas from three barkcloth objects from the Museum's collection were tested, with the majority of the pigmented areas showing low to medium light sensitivity. However, the unpigmented areas of two of the cloths tested showed a high sensitivity to light. Working within the ethical guidelines of the conservation profession to limit any change of colour or condition of an object, we were able to gain a better understanding of the requirements when displaying the barkcloth objects in Museum's galleries. After the success of the analysis of the barkcloth objects we hope to work further with The National Archives to continue microfade testing of other objects within the Museum's collection.

CASE STUDY: THE BLUE *POLLY HIGGINS* EXTINCTION REBELLION BOAT

Laura Boon, Lloyd's Register Foundation Public Curator: Contemporary Maritime

I joined the Museum as the inaugural Lloyd's Register Foundation Public Curator: Contemporary Maritime in October 2019. The purpose of the role is to increase public understanding of, and engagement with, contemporary maritime issues. Maritime has a broad definiton inclusive of the environment, migration, technology, trade and life at sea and my research interests cover the period of 1949 to the present day. In addition to undertaking research and acquiring material, my role is also actively engaged with programming at the Museum. After a successful World Oceans Day celebration in June 2019, we are working cross-departmentally to grow the celebration and embed ocean literacy across exhibitions, programming and collecting.

One of the Museum's core goals is to explore our ever-evolving relationship with the sea. Increasingly this relationship is going to be shaped by the climate and ecological emergency. Often the ocean's role in both climate change mitigation and the impacts that climate change is having on the ocean is not understood or even discussed.

The climate and ecological emergency has led to an increased public awareness, with hundreds of thousands of people protesting in the UK and millions of school children striking worldwide. Extinction Rebellion (XR) has grown quickly and by Easter 2018, six months after its formation, the protests attracted huge numbers and there were over 1000 arrests for acts of non-violent civil disobedience. An icon of the protest was the *Berta Cáceres* boat, named in memory of the murdered environmentalist. The bright pink boat was used to block the Oxford Circus junction for five days, with a sound stage, regular speakers and protestors chained to it.

We were keen to contact Extinction Rebellion because of their strong focus on the sea. However, as the group is a volunteer-run and decentralised grassroots movement, it was at first difficult to make contact. We did though set up a meeting and had to be careful to have an honest dialogue with the XR representatives making clear the restrictions placed on a national museum and also why we wanted to engage with them and understanding their goals and requirements. At this point three London-based museums were all in discussions with XR about contemporary collecting but fortunately we all had different interests and remits. Spending time with XR was really important to better understand their message, history and what objects we may wish to collect. This conversation was also vital for learning more about the reasoning for using the boat and beginning to build trust.

Internal advocacy was also imperative as this was very new territory for the Museum; there had only been a contemporary curator post for six months, and the Museum has not traditionally engaged with the topic of protest. We agreed on an ambitious plan to try and display the *Berta Cáceres* boat and potentially also eventually acquire it. This presented a number of challenges; paradoxically for a maritime museum we no longer collect small boats and furthermore the boat was being held as evidence by the Metropolitan Police in an undisclosed location. Ultimately our bid to display the pink XR boat was unsuccessful due to police restrictions.

This unsuccessful attempt however acted as a good dress rehearsal for our eventual project. Six weeks later, the next large-scale XR protests (the 'summer uprising') began, with five colourful boats launched in cities across the UK. The blue Extinction Rebellion boat in London was named after the environmental lawyer and activist Polly Higgins who campaigned to have ecocide legally recognised.

Two days after the five new boats were revealed an XR contact emailed to see if we would be interested in hosting the blue boat. Initial discussions were focused on the principle that XR would store the boat for several weeks and we would have time to plan our display. By the next day (Thursday) we were checking with our Director and Chair of Trustees that they were supportive of us displaying the boat. However due to the Section 12 notice being issued in the early hours of Friday 19 July we had to quickly find a plan B and collect the boat to prevent it also being seized (the Section 12 notice banned the use of boats by XR for the rest of the uprising).

By 10am we had an emergency cross-departmental meeting, by noon we were in central London inspecting the boat to check it was safe to travel and negotiating with the police so that it could be transported to the Museum by an XR representative. By 2pm we were driving the boat to the museum's store with a police escort which proved very useful in London traffic! The police were very professional and great to work with, which we appreciate, but the negotiations took time and a police escort back to the Museum was a non-negotiable condition. The boat was covered with tarpaulin and hidden from view until the display was ready several days later. This was a unique project timescale for the Museum.

The boat was displayed outside the National Maritime Museum from 8 August to 8 November 2019. As the boat was only on deposit, it was returned to an XR representative. The acquisition of the boat was not pursued as it is still an active object and XR wanted to be able to use it in the future. Additionally, from a curatorial stand point, the blue boat is of less significance than the original pink boat.

The key messages for the interpretation focused on the climate crisis, especially sea level rises and included factual information about XR. Background information was especially important due to the large number of international visitors to the Museum. The interpretation style was much less formal than the Museum's usual house style, with placard style signage in the bright XR colours. Informal observations showed a higher than expected dwell time at the boat, and that it provoked discussion.

Generally, the response to the boat has been positive – even from people who are surprised to see it at the Museum. I think it challenged some people's perceptions particularly those who might assume that a maritime museum would focus on the historical navy. From our local community there was positive feedback that the Museum was engaging with the topic of climate crisis, something many of our visitors feel passionately about.

The more we engaged with XR the more we realised how central concern for the ocean is for many of their members. This is why we later chose to acquire the ten flags on the *Polly Higgins* boat, several of which have a maritime theme. We have since acquired an additional three XR Flags from their marine creatures series, and we are likely to collect any additional marine-themed flags produced. As all Extinction Rebellion objects are communally-owned,

a representative has signed the flags over to the Museum. We will also be recording an oral history with one of the main flag designers. It is unfortunately not possible to record oral histories relating to the use of the boats, as they have been used in criminal acts and, in addition, the Museum is unable to accept anonymous oral histories.

Unexpectedly the area around the boat at times became a public space. It is usually an unused piece of lawn, but we had a 'die-in' and protest from XR at the start of the summer, and a 'love-in' from XR families in October. These events were independently organised by XR but as a positive response to the display, and the Museum became a place of relevance in which XR supporters could meet. Even more surprisingly non-XR groups also held pre-arranged meet-ups at the boat, without informing the Museum. It was great that it became a community space for those wishing to discuss the climate emergency (a university group on the solidarity strike day) or air quality concerns (a group of local people campaigning against the Silvertown tunnel).

Going forward we are continuing to engage with Extinction Rebellion. After the boat was returned the group hosted a Christmas toy and book swap at the Museum and we are discussing future potential events.

FACES OF A QUEEN/ WOBURN TREASURES

Dr Allison Goudie, Curator: Art pre 1800

During 2019, as part of the Queen's House programme, the Arts team worked closely with colleagues at Woburn Abbey, the ancestral home of the Duke and Duchess of Bedford, to develop a new year-long display of artworks from the prestigious Woburn Abbey collection. This project capitalises on the acquisition of the Armada Portrait of Elizabeth I by Royal Museums Greenwich in 2016 and the closure of Woburn Abbey for a major refurbishment until Easter 2021. The result of this fruitful collaboration will be two unique and important displays in the Queen's House during 2020.

Between February and August in the Queen's Presence Chamber, *Faces of a Queen* will see the three surviving sixteenth-century versions of the Armada Portrait – in the collections of Royal Museums Greenwich, Woburn Abbey and the National Portrait Gallery – on display together for the first time in their 430-year history. These portraits represent one of the most iconic images in British history. They commemorate the pivotal moment of Elizabeth's reign, the Spanish Armada's failed attempt to invade England in 1588. This event had a profound effect on the history of England and its relationship with Europe and the rest of the world. All three are believed to have been painted shortly after the defeat of the Armada. While copies and derivatives of the portrait pattern have been made over the centuries, the three portraits that will be united at the Queen's House are the only contemporary versions and, importantly, the only featuring the seascapes that depict episodes from the Armada campaign in the background.

The composition of the Armada Portrait is a prime example of how portraiture was used to control the public image of Elizabeth I, presenting her as a powerful, authoritative and majestic figure. She gave very few portrait sittings. Instead, pre-approved patterns (or portrait designs) were circulated for reproduction by multiple studios to keep up with the demand for images of the queen. Once attributed to the queen's Sergeant-Painter, George Gower, some experts have suggested that three different artists or studios could be responsible for the three principal Armada Portraits. Originally they were all painted in a landscape format, but at some point the National Portrait Gallery version was cut down on either side, truncating the seascapes in the background. Paint analysis shows that the seascapes in the Greenwich version of the Armada Portrait were painted over in the early eighteenth century. Scans reveal that the original scenes underneath share strong similarities with those of the Woburn Abbey portrait, which remains the only version of the three with the complete sixteenth-century seascapes.

In addition, *Woburn Treasures* will take the form of a trail through the Queen's House, integrating artworks borrowed from the Woburn Abbey collection into the existing display and casting new light on the history of the Queen's House and the Museum's collection. The display will closely link to key themes, particularly royal history and female narratives. It will feature superb paintings spanning the sixteenth to the nineteenth centuries, including works by Rembrandt, Van Dyck, Canaletto and Gainsborough, as well as exquisite objects from Woburn Abbey's extraordinary decorative

Armada Portrait of Elizabeth I [ZBA7719]

arts collection. The works will be on display from February 2020 to January 2021. This is the first time since 1950 that a significant part of the Woburn Abbey collection has been on display in London. *Woburn Treasures* is generously supported by the Deborah Loeb Brice Foundation.

In the longer term, this project represents a step change in the Queen's House programme, creating a model for rotating displays. This new approach helps to secure the legacy of the 2016 refurbishment of the Queen's House and to progress the broader ambitions of the £7.4 million National Lottery Heritage Fund Armada Portrait Project. Ultimately, it will realise the potential of the Queen's House as one of the most important historic buildings in the country and a must-see arts destination.

THE ARMADA OUTREACH PROGRAMME

Matilda Pye, National Outreach Curator

SPLENDOUR

Royal Museums Greenwich, The Glasgow School of Art and Stirling Castle

Splendour was a multi-layered creative brief for first, second and third-year textiles, fashion, silversmithing and jewellery students at the Glasgow School of Art, to interpret and find inspiration from the Armada Portrait of Elizabeth I. Our focus was on adornment and fashion, as tools for expressions of love, power and politics, and the site of the Museum, as a creative opportunity for multi-disciplinary skills development. The project investigated the relevance of the early modern, the creative agency of confronting uncomfortable truths and colonial legacies, and working in the art school, Stirling Castle and the Queen's House.

I felt really empowered when wearing the garment and the workshop before really helped with confidence when modelling. The autonomy with posing and positioning that we had was such a good experience.

Jewellery student, The Glasgow School of Art

The results of this dynamic collaboration with more than 150 staff and students includes new bodies of work, an exhibition in The Glasgow School of Art, a photo shoot at Stirling Castle (in which the students were models, stylists and photographers), a catalogue, a symposium and a performance at the Queen's House. Site-specific elements of the project at Stirling Castle and the Queen's House allowed the students to work as a team, develop new networks across year groups and to think deeply about the relationship between bodies, objects, adornment, fashion and architecture. This was particularly powerful working in the neo-classical architecture of the Queen's House where students worked with a movement director and vocalist from Trinity Laban Conservatoire.

I never would have guessed at the performance element nor our involvement within it. Amazingly organised and beautifully and simply choreographed to incredible effect!

The Armada Portrait is undeniably 'splendid', commemorating the defeat of the Spanish Armada in 1588 but its constructed image of power is complex and for many uncomfortable:

As a young black Brit, it's hard to look at the Armada Portrait and not think about the human cost behind it. I was awed by the amount of pearls in the portrait, used as an obvious signifier of wealth. As slavery increasingly became a massive source of Britain's wealth during Elizabeth I's reign and beyond, I decided to research other sixteenth and seventeenth century portraits of royalty and nobility featuring another popular signifier of wealth – a young slave. My work became focused on creating a beautiful but haunting reminder of the human cost of splendour.

Textile student, The Glasgow School of Art

Both staff and students at the Glasgow School of Art were given the agency to push the boundaries of what interdisciplinary practice can be. The best creative museum practice encourages the risk 'not to impose, but to communicate values' to open up the space of the Museum as a site in which to 'practice' and experiment, encouraging dialogue between the art school, the museum and audiences:

As an educator, I'm extremely interested in the type of pedagogical journey that Splendour *exemplifies: where freedom and agency are conferred on student learners not as a test, but as an experience that they construct themselves. These affordances are inherent to art and design education, but require protection – and indeed courage – because the artfulness is not to impose, but to communicate values.*

Dr Thea Stevens Academic Coordinator, The Glasgow School of Art

THE OLD GUARD: BRITAIN'S PRE-DREADNOUGHT BATTLESHIPS, 1889–1918

Andrew Choong Han-Lin, Curator: Historic Photographs and Ship Plans

Having completed my work on the forthcoming HMS *Cressy* publication and preparations for a lecture on the ill-fated K class submarines for February 2020, I am now able to devote my attention to a very interesting area of British naval history – the battleships designed and constructed under the aegis of Sir William White. White was appointed Director of Naval Construction in 1885 and very quickly made his mark with the impressive Royal Sovereign class battleships, which entered service in the early 1890s. These vessels were so successful that, allowing for variations as technology progressed, they formed the basic template for all British battleship construction for the next decade. Given the profusion of vessel types, which had entered service with the navy over the three preceding decades, White's achievement was significant. Although he was succeeded by Philip Watts in 1902, White's influence extended up to the King Edward VII class, the penultimate group of 'pre-dreadnoughts'. With the exception of his earliest creations, the vast majority of White's battleships saw active service between 1914 and 1918 with the survivors sold for scrap between 1919 and 1921.

The London-class battleship HMS *Queen*, showing her pre-war alterations, c.1914 [N00568]

HMS *Prince of Wales* (a sister to HMS *Queen*) on the day of her launch at Chatham Dockyard, 25 March 1902 [N18718]

The aim of this research is to inform a paper I am presenting in June 2020 at the World Ship Society Conference in Bristol. My intention is to assess the importance of these vessels as milestones in British battleship design as well as their effectiveness in British naval operations up to 1918. In so doing I hope to challenge the conventional view that the advent of dreadnought battleships from 1906 onwards rendered these vessels completely obsolete. Much of the pertinent primary source material is held at the Brass Foundry which should greatly facilitate the bulk of my research, but I do anticipate a number of trips to The National Archives and Imperial College. My investigations will focus primarily on the available material in the Ships Covers and reports by serving officers in the Caird Library and other archives, but I will also be making extensive use of the Museum's photographic archive. Serendipitously, it appears that some of my research into the operational side of these ships may also benefit my colleagues in the Learning Team, as there is considerable interest in the experiences of British mariners abroad, with multi-cultural narratives a priority. The photographic research has thus far highlighted five battleships that served extensively in the Mediterranean and the Far East between 1895 and 1905, with a number of photograph albums compiled by officers pictorially documenting their encounters and experiences.

Staff Publications

Louise Devoy
On the Line: The Story of the Greenwich Meridian
(Royal Museums Greenwich, 2019)

Melanie Vandenbrouck, Megan Barford, Louise Devoy and Richard Dunn (eds)
The Moon: A celebration of our celestial neighbour
(Harper Collins, 2019)

Sue Prichard & Jeremy Michell
Figureheads: On the Bow of the Ship
(National Maritime Museum, 2020)

Figurehead HMS *Himalaya* [FHD0082]

Christine Riding & Robert Blyth
Icons: The Armada Portrait
(Royal Museums Greenwich, 2020)

Forthcoming Publications

Megan Barford
British Naval Hydrography [working title]
(Boydell and Brewer, forthcoming)

Andrew Choong
Armoured Cruiser Cressy*: Detailed in the Original Builders' Plans*
(Seaforth, March 2020)

Quintin Colville
Seafarers: Life Afloat in the British Empire, c.1870–1960
(publisher tbc)

Contributions from various staff including:
Andrew Choong, Kimberley Cumberbatch, Lucy Dale, Alex Grover, Erika Jones, Louise MacFarlane, Jerry Michell, Hannah Stockton, Victoria Syrett
Fish & Ships
(National Maritime Museum, 2020)

Sue Prichard
Icons: Nelson's Trafalgar Coat
(National Maritime Museum, forthcoming 2021)

Sue Prichard and Allison Goudie
The Queen's House
(Royal Museums Greenwich, forthcoming 2021)

Research Fellowships and Reports

Royal Museums Greenwich is fortunate to have a number of complementary fellowship programmes, some of which have been established for many years and support a wide range of research into our collections. Caird Research Fellowships are offered annually by the Trustees of Royal Museums Greenwich to support high-quality research that provides new perspectives on our collections and engages with our thematic priorities.

For further details on the range of fellowships available, and how to apply, please see our website: rmg.co.uk/fellowships or contact research@rmg.co.uk. For a full list of current Fellows, see page 36.

A MARITIME COMMODITY? CHINESE TEA, COLONIAL INDIA AND THE CANTON TEA TRADE

Professor Romita Ray, University of Syracuse and Caird Short-term Fellow

OVERVIEW

In an advertising industry awash with images of organic 'back-to-nature' products, tea is frequently marketed as a plant commodity cultivated in sylvan tea estates. But long before it shaped a new plantation economy in Victorian India, tea was a maritime commodity that travelled across the China Seas and the Indian and Atlantic Oceans through the corridors of colonial commerce. When the English East India Company came to dominate the China trade in the eighteenth century, Chinese tea emerged as the Company's most profitable import, its steady influx into British and colonial households endorsed by increasingly sophisticated technologies of porcelain production, a growing number of conversation pieces portraying tea consumers, and countless satirical prints targeting the fashionable habit of consuming a foreign beverage. But tea was an exotic product in flux, its political, economic and cultural narratives inseparable from the ebb and flow of maritime commerce – narratives that would in fact set the foundation for an empire of tea in nineteenth-century India. As such, maritime art, ships, maps, botanical specimens and illustrations, and mobile boxes of tea and porcelain are all bound up in the story of Indian tea, and it is with these visual loci that I begin my book about the visual cultures of tea in colonial and imperial India.

Tentatively titled *From Two Leaves and a Bud: Visualizing Tea in British India*, my book is the first art historical examination of botanical research on tea; Chinoiserie; material cultures related to tea; tea plantations, forestry and vernacular architecture; portraits of tea planters; and the rise of Calcutta as the nerve centre of India's tea trade, within the broader historical framework of British India. Prior to the 'discovery' of an indigenous species of tea in Assam in the 1830s, Chinese tea and porcelain made their way into India through the China trade, a subject that remains woefully understudied in comparison to the robust scholarly scrutiny of Chinese tea and Chinoiserie in Britain, Europe, and North America. Transplanted in Calcutta, Chinese tea spurred on early botanical experiments that paved the way for commercial tea cultivation in nineteenth-century India. Any analysis of Indian tea must therefore begin with the story of importing Chinese tea into British colonial India as both edible and botanical matter. And so, I turn to the sea, that vast, often contested, liquid space across which tea travelled to India from China on East Indiamen and country ships.

How then was tea visualised at sea? What visual, material and architectural histories were produced as a result of the movement of this plant product across oceans and seas? What do these histories tell us about the influx of Chinese tea into British colonial India and the colonial identities shaped by an exotic plant commodity? These are some of the key questions I investigated during the tenure of my three month-long Caird Short-term Research Fellowship award; first, for two months in July and August 2018, and next, for one month in mid-June through mid-July 2019. The end result was a draft of the first chapter of my book.

To be more specific, the fellowship enabled me to examine two broad themes:

1 Tea as a maritime commodity

Chinese tea emerged as a quintessential colonial product at sea, its commercial potential fostering some of the East India Company's key political and economic agendas in India. One of the main research goals of my Fellowship, therefore, was to investigate how the visual and material cultures of tea endorsed the plant product as a valuable maritime commodity in colonial India. Well before it was cultivated on land, tea was a foreign import whose long and arduous maritime voyages greatly enhanced its economic and cultural value. Transported to India, Britain and North America in the form of prized botanical specimens and dried tea leaves, tea crystallised into the focal point of botanical inquiry, shipping technologies, porcelain production and marine painting. Thus, my research focused on a wide array of visual representations, objects and technologies that enabled me to probe into the mobility of tea, for it is in the maritime journey of the plant that we can trace the economic, political and cultural complexities of Britain's growing empire. Moreover, these representations, objects, and technologies made me look more closely at the sea itself as the geographical space across which tea was transported, and as a liquid site where tea was also destroyed during maritime conflicts and run-ins with submerged reefs and cliffs.

2 Tea and the colonial metropolis

Be it the development of Calcutta as the centre of Company power or the notorious rejection of tea in Boston harbour, the commercial histories of tea are inextricably linked with port cities that played a key role in the evolution of Britain's global empire. The loss of its North American colonies would prompt Britain to focus its attention on India where the Company had been consolidating its presence since the 1600s. By the 1780s, tea and porcelain were shipped with growing frequency from Canton to India. Thus, I look at how the China trade shaped the geographies of the colonial metropolis together with the cultural and material realities that came to define colonial cities, specifically in places like Calcutta, which swiftly developed into the nucleus of India's tea trade, a position it still holds today. Be it a botanical garden established in Calcutta where Chinese tea was first transplanted in the 1780s, or portraits of Company officials drinking tea in Calcutta, maps used for the China trade between Calcutta and Canton, and porcelain utensils imported into the city, the architectural, material, and visual realities fostered by maritime trade with China helped define the contours of British identity in the colonial metropolis. This chapter therefore examines the ways in which exotic products like tea and porcelain – so inseparable from the cultures of politeness and sociability in eighteenth-century Britain – sharpened the contours of British identity in the colonial entrepôt where tea and tea things became material embodiments of being British, not only for British colonial residents but also for Indians for whom tea drinking came to be associated with British cultural norms.

Teapot with lid, c. 1806 [AAA4866]

RESEARCH RESOURCES

The Caird Short-term Research Fellowship enabled me to undertake research in (a) the Caird Library, the National Maritime Museum, Queen's House, and *Cutty Sark*, all part of Royal Museums Greenwich (b) the British Library (c) the Museum of London Docklands and (d) the Natural History Museum.

At the Caird Library, the National Maritime Museum, Queen's House and the Prince Philip Maritime Collections Centre (the Museum's offsite storage facility), I examined maps, drawings, prints, porcelain tea utensils, rare books, captain's journals and paintings. I also consulted with curators and research librarians who guided me to objects, books and documents that expanded my understanding of maritime art and literature. Equally important were the superb collections of secondary literature (journals, books, and magazines) available to readers in the Caird Library. Here, I immersed myself in British maritime history and the histories of shipping technologies, Company shipping, shipwrecks, maritime paintings and maritime objects.

As a result, fresh thematic directions and questions emerged for my chapter that led me to ship journals and ledgers in the India Office collections in the British Library; correspondence between Sir Joseph Banks and the Company's agent in Canton in the archives of the Natural History Museum; diagrams and ship models in the Museum of London Docklands that shed light on methods of storing and transporting tea on East Indiamen; and the restored tea clipper, *Cutty Sark*, where tea chests and storage spaces for tea enable me to envision how shipping technologies kept pace with the need to mobilise vast quantities of tea across the sea more quickly and efficiently. Moreover, the material I discovered during the course of my fellowship allowed me to connect the dots with archival documents and maps I had found in the West Bengal Archives in Kolkata in 2016, and in the maritime archives of the Kolkata Port Trust in 2018.

RESEARCH OUTCOMES

The Caird Short-term Research Fellowship resulted in four research outcomes:

Chapter: *Tea at sea*

As I have mentioned earlier, the primary outcome of the fellowship was the first chapter of my book. Titled *Tea at sea*, it sets the foundation for my subsequent analysis of the visual cultures of tea cultivation and consumption in imperial India.

Symposium

A second outcome is a symposium on tea that I am co-organising with Professor Jordan Goodman (University College London) and Professor Richard Coulton (Queen Mary University of London) at the Linnean Society in London on 25 and 26 June 2020. Dr Aaron Jaffer (Curator of World History and Cultures, Royal Museums Greenwich) very kindly introduced me to Professor Goodman who initiated the idea of the symposium. The second day of the symposium (26 June) will be devoted to immersive sessions in tea-related collections, including one at Royal Museums Greenwich for which I will be collaborating with Dr Jaffer, Dr Quintin Colville (Senior Curator: Research), and Stuart Bligh (Head of Research and Information).

Book Review

A third outcome was an invitation from Dr Jaffer to review Erica Rappaport's book, *A Thirst for Empire: How Tea Shaped the Modern World* (Princeton University Press, 2017) for the *Journal for Maritime Research*. My review is due to appear in the Journal in 2020.

REACH consortium: collaborative doctoral partnership launch workshop

Finally, the fourth outcome was my participation in a day-long workshop for the AHRC-funded REACH Consortium, which brought together five nationally significant heritage institutions to share research themes, mobilise links across their institutional resources, and maximise cross-disciplinary staff expertise for doctoral candidates. Several administrators and professors from leading universities in the UK also participated in the workshop.

Shipping off Canton, Chinese School nineteenth century [BHC1777]

PRISONERS OF WAR AT MELVILLE ISLAND, NOVA SCOTIA DURING THE WAR OF 1812

Dr Anna McKay, Institute of Historical Research and Caird Short-term Fellow

The peninsula Melville Island is located about 20 minutes' drive from Halifax, Nova Scotia. This unassuming site has a long history as a depot; it was a quarantine station for black refugees escaping slavery, a hospital for Irish immigrants fleeing the Great Famine and a training centre for soldiers during the Crimean War. Based at the Caird Library between May and August 2019, I undertook research on another fascinating aspect of the site's history: its role as a prisoner of war depot during the War of 1812.

The Admiralty formally leased Melville Island from Halifax merchant James Kavanagh during the Napoleonic War. During that time, it was used as a depot for French and Spanish captives, but the War of 1812 brought an additional influx of American prisoners, including the crew of the USS *Chesapeake* in June 1813 following its historic battle with Royal Navy frigate *Shannon*. Prisoner of war correspondence belonging to Admiral John Borlase Warren in the Caird Library (WAR series) details the comings and goings of Melville Island at micro-level, allowing for

HMS *Shannon* leading her prize the American Frigate *Chesapeake* into Halifax Harbour, on 6 June 1813 [PAH8118]

a greater understanding of how British administrative norms were implemented by Admiralty officials on a global scale. These letters reveal constant dialogues between British and American officials, formally laying out the terms of their wartime conduct. We gain insight into the efforts of agents of prisoners of war, notably William Miller, the agent for American prisoners at Halifax, who sent weekly returns of American and French prisoners at Melville Island to Warren – himself stationed at Bermuda – and arranged cartel ships returning American prisoners to the United States in exchange for British prisoners held at Boston, or Salem, Massachusetts. Within the correspondence, there are also pleas from surgeons for unwell prisoners to be sent home on compassionate grounds and noteworthy letters from morose American citizens appealing against their impressment.

Benjamin Waterhouse, captured by the British and held at Melville Island, described the site in his 1816 memoir, *A Journal of a Young Man of Massachusetts*. Waterhouse stated that the prison resembled a horse stable, with stalls erected to separate the prisoners from each other. At night, there was a 'general hum and confused noise from almost every hammock', as prisoners cursed their captors, related their adventures and worried aloud about their families at home. On 17 December 1812, the *National Intelligencer* condemned the actions of the British, stating that the jailor at Melville Island plundered 'whatever he wants of the books, quadrants, money and other articles' of American captives upon their arrival. Ultimately, what the Warren correspondence shows is that Melville Island was just one link in a larger chain of global war captivity: Halifax despatches sit alongside those to the Bahamas, Bermuda, Antigua, Newfoundland and others. My PhD compared the confinement of prisoners of war and convicts on British prison hulks in England and Bermuda. This fellowship has been an invaluable opportunity for me to undertake further study and examine the fate of those captured at sea, crossing the invisible boundary lines of contested waters.

View of the town and Harbour of Halifax [HNS47*A]

TAXING SPECIMENS: CUSTOM HOUSES AND BRITISH NAVAL COLLECTING, 1800–76

Dr Daniel Simpson, Caird Mid-term Fellow

The purpose of this six-month fellowship was to develop academic and curatorial knowledge, and appreciation, of the fact that all ethnographic and natural history specimens imported into Britain in the eighteenth and nineteenth centuries were taxed. The contemporary creation of scientific disciplines, the construction of amateur and professional societies and networks, and the building of museum collections were therefore influenced, in both subtle and overt ways, by tariff duties. Building upon my doctoral research, and a previous fellowship at the National Maritime Museum, I approached this history from the perspective of the British Royal Navy, and the efforts of its sailors to bring valuable imperial collections into Britain. The Caird Library was a natural place to base this research; its extensive primary collections, including for example the records of the Victualling Board, and the journals of particular sailors, helped me to build the first comprehensive picture of custom houses as an infrastructure for imperial collecting; a place where specimens were often first valued, documented, and made visible. The fellowship funding also allowed me to pursue this research at the National Archives, the archives of the United Kingdom Hydrographic Office and the parliamentary archives.

The Long Room of the London Customs House © British Library

Key findings from the research include the fact that, before 1823, natural history and ethnographic specimens were taxed as 'unmanufactured' and 'manufactured' articles, for which they respectively incurred substantial 'ad valorem' duties of 20% and 50%. When one naval sailor and collector, John Septimus Roe, sent a box of specimens to the London Customs House in 1821, he was therefore met with a charge in excess of almost £10; this equated to more than one hundred days' pay. Whereas it is often claimed that sailors collected 'curiosities' at a profit, many things were in fact therefore seized, and sold at regular auctions in the 'long rooms' of custom houses, the catalogues for which make for fascinating reading. The research found, however, that the creation in 1823 of a new tariff category for 'specimens illustrative of natural history', and an associated reduction of duties to five percent, soon catalysed a boom in the volume of objects entering Britain; these changes were consolidated in 1842. By identifying the relevant customs ledgers and requests for duty-free waivers, I have explored the motivations for, and consequences of, these changes. For museum curators and historians of science, the fellowship research therefore offers significant new insights into, and methodologies for researching and periodising, the many complexities of nineteenth-century imperial collecting.

The full results of this research will be shared in a series of talks and two publications, due in 2020 and 2021. In a forthcoming book chapter associated with the 'mobile museum' project at Royal Botanical Gardens, Kew, I have used the fellowship research into customs records to explain the development, after 1823, of a series of 'national' museums in Britain. Another, longer, chapter will appear in a book I am currently writing for Palgrave *Studies in Pacific History*. There, I aim to offer the first comprehensive narrative of the history of the development of specimen taxation.

'MAKING THE MERIDIAN': THE CHANGING PRESENTATIONS OF THE MERIDIAN OBSERVATORY OF THE ROYAL OBSERVATORY, GREENWICH

Dr Daniel Belteki, University of Kent

I undertook the Sackler Short-term Research Fellowship between 3 October and 31 December 2019. The focus of the research was to identify and examine the curatorial visions guiding the displays at the Meridian Building of the Royal Observatory Greenwich from 1967 onwards.

Within the larger focus of the project, my research had two additional aims. First, to identify the shared as well as the unique challenges that curators have faced since the 1960s. Second, to provide a list of suggestions for the upcoming refurbishment of the displays in relation to the Royal Observatory Greenwich 350th anniversary celebrations (ROG 350). Work was carried out through two main methods. First, by examining documents held among the institutional records of Royal Museums Greenwich. This included letters exchanged between curators, members of the Museum staff and external stakeholders, as well as photographs taken of previous displays. Second, interviews were carried out with 11 previous curators and members of the Museum staff to ask them questions about their time working for the Museum and about possible suggestions in which they would transform the Meridian Building.

Drawing upon these sources, the key underlying historical finding was the long-term (and still active) impact of the decisions made in the 1960s about the restoration of the building. It was found that the major alterations made to the Meridian Building in the 1960s (e.g. destruction of upper floors, rebuilding of Flamsteed's observing rooms) were guided by a purposeful curatorial vision. This vision dictated the presentation of the Meridian Building in a chronological order to demonstrate (1) how the Greenwich Meridian moved since the seventeenth century, (2) the history of successive meridian instruments and (3) the history of the successive Astronomer Royals. Since this design was implemented into the restored building, future curatorial teams maintained this layout, which continued until 2010s, when the Flamsteed Observatory rooms were transformed into a ticket office. The research argued that a main source of the challenges that curators faced over the years was negotiating the design of the restored building with the changing curatorial practices and visions. This posed both new possibilities (e.g. moving instruments from one room to another) and limitations (e.g. limited space) over the past 50 years.

The archival research also showed that despite the vision of the curators being implemented in the restored Meridian Building, they were not the only group that influenced its design. The Museum's director, Frank Carr, put forward his own ideas about how to use the restored Meridian Building. Three of his key suggestions were the complete retainment of the upper floors, the building of an external gallery on the Meridian Courtyard and the transfer of the Northumberland Equatorial from the Cambridge University Observatory to the Meridian Building. However, almost all of his ideas were abandoned in later plans. The practicalities of the several visions were always evaluated by the District Surveyor. His reports were used by both the Museum and other entities to justify their proposals. This became an important factor when the Treasury decided on the destruction of the eastern part of the Meridian Building without it being rebuilt. Instead, the Treasury suggested building a passageway connecting the Equatorial Dome with the Meridian Building. The National Maritime Museum successfully halted this attempt, which resulted in the simple renovation of the eastern part of the Meridian Building. Such competing visions demonstrate how the curatorial team and the National Maritime Museum had to negotiate the implementation of their own plans into the restoration of the Meridian Building.

Besides archival work, interviews were carried out with previous curators of the Observatory. These interviews focused on identifying curatorial visions after the 1960s. Two curators interviewed (Jim Bennett and Carole Stott) worked as part of the very first curatorial team. They highlighted how the permanently displayed instruments on the western part of the building were thought of as the oldest members of a ship's crew who had to be given and shown special respect. This resulted in the design of these rooms being kept in the same way over more than a decade, while the Dyson Gallery (in the western part of the building) provided the function of a changing exhibition place. Stuart Malin was the next curator to be interviewed. He worked together with Carole Stott. Under their vision, the Museum established closer links with the Ordnance Survey and emphasised its connection to the work of the Observatory. During their leadership, the room below the Dyson Gallery (i.e. Pond Gallery) was transformed into a shop, which further reduced possible exhibition space.

A view of the Meridian Building during reconstruction, as viewed from the roof of Flamsteed House, 1960s [A8324-003]

Interviews were also carried out with Kristen Lippincott and Maria Blyzinsky who formed part of the curatorial team during the 1990s. During their interviews they highlighted how they focused on redesigning the display labels, which had until then remained the same as the ones implemented in the 1960s. Kristen Lippincott further characterised their curatorial vision with the terms 'beauty and simplicity'.

Gloria Clifton, Emily Winterburn, and David Rooney were interviewed from the next curatorial team. They highlighted that the Meridian Building offered very limited space for their visions to be implemented. They further discussed how the 'Time and Society' and the 'Time for the Navy' galleries were introduced to the Meridian Building. Finally, Emily Winterburn described how the restoration of the South Building divided the Observatory into three distinct spaces: a traditional museum gallery (Flamsteed House), a learning centre (South Building), and a walkway with instruments (Meridian Building). Two further interviews were carried out with Rebekah Higgitt and Richard Dunn, who were curators at the Observatory during the early 2010s. They similarly highlighted how the lack of space and the general unfamiliarity of the audience with the astronomical instruments limited the curatorial possibilities. At the same time, their major exhibition titled Ships, Clocks & Stars successfully combined the focus of previous curatorial visions.

Additionally, two more people associated with the Museum's curatorial team were interviewed: Geraldine Charles and Graham Dolan. Their accounts highlighted how the curatorial team did not work in isolation, but rather in collaboration with other departments of the Museum and external entities. One focus of the research was to highlight what ideas previous curators intended to implement (both successfully and unsuccessfully). Through this line of enquiry, the curators were asked how they would transform the Meridian Building today to fit their own visions. These answers were then used to generate a list of suggestions by previous curators as well as informed by the archival research for the upcoming ROG 350 Anniversary exhibitions. Most curators emphasised the unfamiliarity of the public with the instruments and their contribution to astronomy. Interviewees who formed part of the curatorial teams from the 2000s onward highlighted that implementing more immersive experiences would help solve this issue. Immersive experience here refers to showcasing the rooms as if they were being used by the Observatory staff at the period, or in a state that closely resembles what the room looked like at the time. One frequently mentioned example to follow was Dennis Severs's House in London. This transformation could be further supported by the trisected vision of the functions of the Observatory buildings, which was mentioned by Emily Winterburn. In this division, the immersive experience provided by the Meridian Building could complement the traditional Museum displays offered by the Flamsteed House as well as the learning centre offered in the South Building. Another common suggestion was the reversion of the Flamsteed Observatory rooms to a gallery space. As demonstrated by the archival research, these two small rooms served as important starting points in telling the history of the Meridian Building in a chronological order. One Museum document even referred to this chronological arrangement of the rooms as a 'time tunnel'. This time tunnel-vision

emphasised the contributions of John Flamsteed as essential in telling the history of the development of the site. By converting the rooms into a ticket office, this starting point has been downplayed, with only a small mark serving today as a reminder to the Meridian Line established by Flamsteed and his instruments.

A recurring obstacle during the interviews was the lack of space within the Meridian Building. The research further showed that the Building suffered from a gradual reduction in exhibition spaces. First, the Pond Gallery was transformed into a shop. Second, the Flamsteed Observatory rooms were turned into a ticket entrance. Finally, the current entrance to the Meridian Building (Bradley II Gallery), which used to showcase instruments behind a glass display, was halved and the glass display converted into a text-panel display. Thereby, over the past 50 years, out of the initial eight gallery rooms, only four remained that still display scientific instruments. This reduction can perhaps best be explained with the restoration of the South Building during the 2000s, which became a learning centre for visitors about astronomy and its history. This alleviated the need to explain the history of astronomy within the Meridian Building and Flamsteed House alone. Furthermore, the emergence of a shop and ticket offices highlights the increased need for the site to generate its own income.

The Bradley Meridian and Transit Room, as seen by visitors as they progress through the Meridian Building today [L4932-001]

However, such changes resulted in the loss of exhibition spaces that informed visitors about the usefulness of meridian astronomy for which the site was dedicated. By doing so, the significance of the Meridian Building as the site where the majority of the work of the Observatory was carried out is gradually disappearing. Thereby, suggestions for the ROG 350 Anniversary celebrations can consider how to gain new space for exhibition galleries or how to incorporate the further historical displays into the ticket office and shop areas within the Meridian Building.

Another suggestion arose from the emphasis on the association of the site with the Greenwich Meridian. Even the original curatorial vision attempted to demonstrate how the Greenwich Meridian has shifted over the years into different positions. The 'time tunnel' and the chronological walk through the Meridian Building served to demonstrate these shifts. Given that the 'time tunnel' is no longer maintained, and that the Meridian Courtyard serves as one of the main attractions, it would be useful to explore ways in which other historical Greenwich Meridians could be marked through the Meridian Courtyard. Displays placed in the courtyard are already calling attention to these, but placing further lines (similar to the one crossing through the Airy Transit Circle), would help to call better attention to these historical shifts. In addition, it would help in explaining why people standing on the marked historical Prime Meridian are not standing on the current Greenwich Meridian.

Finally, it is worth briefly mentioning ideas that are not explored in detail in this report, but were still suggested by interviewees. The Observatory has always been part of Greenwich Park, but there is very little collaboration with the Park itself. There are examples of previous collaborations, since the 1984 Centenary Celebrations of the Prime Meridian relied on taking the events to the park. In today's arrangements the pathways around the park could serve as additional sites where small text-panels/displays could be placed, or where aided by the existing pathways, the grounds could be transformed into the shape of astronomical instruments. This would help in solving the problem posed by the limited gallery space within the Meridian Building. Another suggestion mentioned was the reintroduction of longer text panels into the galleries. Since the layout of the rooms offers passages to the visitors on both sides, it would allow for the introduction of new displays that foster dialogues between different sides of the same story or as a dialogue between the maker of the displayed instrument and the Astronomer Royal who commissioned it.

The wooden Magnet House on the site now occupied by the bronze cone of the Peter Harrison Planetarium, about 1910 [P39984]

The restoration of the instruments was another recurring suggestion by the curators. Stuart Malin stated that the Airy Transit Circle was still in use during the 1980s to make observations of the Sun. Restoring this instrument in a way to transmit its view to a display either inside or outside one of the Observatory Buildings, would allow for disseminating the view through the telescope to many individuals at once. In addition, it would also partly provide a solution for visitors who come to a historical Observatory with the expectation of looking through a telescope. Based on this suggestion, even if the instruments cannot be restored, it would be useful to provide a visual comparison to people in how the precision and the vision offered by the astronomical instruments have changed over time. Another point frequently appearing in the interviews was the need to remind visitors that the work of the Observatory went beyond astronomy. Its Magnetic and Meteorological Department set up during the first half of the nineteenth century was superintended by James Glaisher, who was recently remembered in the movie The Aeronauts. Additional exhibition space would allow for telling stories about his life and the work of the Department.

Lastly, since the functions of the rooms of the Meridian Building have changed under different Astronomer Royals, it would be useful to present the rooms as sites of layered histories. This could be achieved by placing outlines of different furniture and items on the floor (colour coded to represent the different ages) or by projecting to the empty walls photographs or illustrations of how the room looked over the ages.

The findings of the research are currently being written up to be submitted to the Journal of the History of Collections. On 3 February 2020, I presented the preliminary findings of the research as part of the Royal Museums Greenwich Research Seminar Series, where I received useful feedback on how to proceed with my work. Finally, the knowledge gained about how the history of the Observatory has been displayed over the past 50 years allowed me to consider how other research projects about the history of the Observatory could be displayed in the future. These insights helped me better prepare for an interview at Royal Museums Greenwich, which resulted in a job offer for the ROG 350 Sackler Research Fellowship.

A speech by Astronomer Royal Sir Richard Woolley on the reopening of the Meridian Building as a museum space, 19 July 1967 [B1253-6]

2019–20 RESEARCH FELLOWS

Caird Short-term Fellows

Dr Catherine Beck
Institute of Historical Research
Unserviceable, being insane: sailors mental illness and disability outside the naval hospital, 1793–1815

Sara Caputo
University of Cambridge and Institute of Historical Research
Disease, health, and the medical culture of eighteenth-century naval sailors

Sylvia Cockburn
University of East Anglia
Re-evaluating the Pacific Collections at the National Maritime Museum

Dr James Davey
University of Exeter
Resistance and Reaction: Sailors and the Age of Revolution

Dr Aaron Graham
University College London
Slavery and the Royal Navy at the Jamaica Dockyard, 1800–40

Dr Daniel Simpson
Royal Holloway, University of London
Taxing Specimens: Custom Houses and British Naval Collecting, 1800–76

James Wilson
University of Cambridge
Britain, anti-slavery, and the Indian Ocean empires, 1785–1830

Sackler Short-term Fellow

Dr Daniel Belteki
University of Kent
Making the Meridian: The changing presentations of the Meridian Observatory of the Royal Observatory Greenwich

Collaborative Doctoral Partnership: REACH

(Revisiting and Enhancing Approaches to Collections and Heritage)

The P & O liner *Medina* fitted as a royal yacht to take George V to India for the Delhi Durbar, by W. L. Wyllie, c.1911 [PAE2097]

REACH is a consortium of heritage organisations led by Royal Museums Greenwich. It won funding from the Arts and Humanities Research Council (AHRC) in 2019 to provide a total of 11 doctoral studentships that will be appointed across 2020, 2021 and 2022. The consortium brings together Royal Museums Greenwich with Historic Royal Palaces, the National Portrait Gallery, the National Trust and the British Film Institute, and takes over from our previous 'Thames Consortium' partnership with the National Archives and the National Portrait Gallery. REACH grew from the shared strategic research priorities of its five partner organisations and from a desire to pool our resources and expertise to promote innovative scholarship with immediate relevance for the consortium. Above all, REACH is designed to support work focused on our collections (within or across the five institutions) through examinations of the following general themes: the construction of British and global identities; the migration of people, objects and ideas; and the nature of heritage narratives.

The consortium was formally launched at Royal Museums Greenwich in summer 2019. We received 12 expressions of interest for our first round of funding contending for the four places available to begin in September this year. These applications were evaluated in January by an independent panel comprising Professor Margot Finn (University College London), Professor Sujit Sivasundaram (University of Cambridge) and Professor Rhiannon Mason (Newcastle University), and chaired by Dr JD Hill (British Museum). Among the four successful projects that have now been put forward to AHRC is the Museum's proposal entitled: 'Floating palaces: royal yachts, maritime tours and constructions of monarchy, empire and decolonisation, 1875–1997'. This project will be co-supervised by Dr Quintin Colville (Royal Museums Greenwich), Professor Jan Rueger (Birkbeck, University of London) and Professor John Davis (Historic Royal Palaces), and will draw on the Museum's archival collections, ships' plans, photographs and uniforms. Of the remaining three proposals put forward to AHRC, a Historic Royal Palaces studentship about Mary II will be supported by Sue Prichard (Senior Curator: Arts, Royal Museums Greenwich) and a National Portrait Gallery studentship exploring legacies of the slave trade will be supported by Sarah Lockwood (Head of Learning and Interpretation, Royal Museums Greenwich). Students will be recruited to all four projects later this year.

The collaborative doctoral partnerships have always been a unique preparation for students heading towards careers in the heritage sector or academia. Indeed, three of our current curators have taken this route to postgraduate study before joining the Museum. Moreover, REACH and the other consortia that were successful in 2019 can now offer their students a fully funded fourth year. Part of this can be spent working for their host institution not on the subject of their doctorate but on projects of value to the heritage organisation that also boost the student's employability. We believe that this creative and collaborative scheme has much to offer to Royal Museums Greenwich across departments and may pave the way towards larger initiatives in the future.

Dr Quintin Colville
Senior Curator: Research

Doctoral Studentships

Doctoral research on the Museum's collections and subjects is a valued part of our research portfolio, alongside the work of curators, research fellows and interns. Royal Museums Greenwich has a strong track record in formulating and co-supervising collaborative doctoral projects with a wide range of UK HEIs. A total of 32 collaborative doctoral projects have been awarded to the Museum over the past 14 years via various schemes funded by the Arts and Humanities Research Council (AHRC), including the 'open' Collaborative Doctoral Award (CDA) scheme and the Collaborative Doctoral Partnership (CDP) scheme, which allocates CDP holders a set number of awards per annum. From 2013-2019 the Museum was a CDP holder in a consortium with the National Portrait Gallery and The National Archives and in 2019 we forged a new consortium, REACH (Revisiting and Enhancing Approaches to Collections and Research) with Historic Royal Palaces, the National Trust, the British Film Institute and the National Portrait Gallery.

In total, 25 of our overall tally of 32 students have completed their PhDs and our alumni are flourishing in the museum world, academia, the arts and media. Doctoral students continue to make a great contribution to our research base, the Museum's programmes and even to our staff – three of our curators are former CDA students of ours.

THE EYE OF THE NEEDLE: MAGNETIC SURVEY AND THE COMPASS OF CAPITAL IN THE AGE OF REVOLUTION AND REFORM

Jenny Bulstrode, University of Cambridge

This thesis research and accompanying outputs were undertaken with thanks to the generosity of the AHRC and Royal Museums Greenwich.

In the 1770s Britain's infant empire of American settlement and oriental trade appeared to be in decline; by 1783 it seemed nothing short of ruined. Yet in the six decades between the end of the American Revolutionary Wars and the beginning of the First Opium War, the same French Revolutionary Wars that saw the end of the Holy Roman Empire appeared to galvanise a new kind of integration in Britain between the forces of empire, war, economy, science and industry. This thesis follows the principal commentators of the 1830s and 1840s in arguing that this alliance cannot be understood without attending to the revolutions of the black Atlantic; that geomagnetism was at the iron core of this new alignment and that the earth and nautical sciences not only charted the birth of Britain as the new dominant world power, but also the apparent reconstitution of the natural world as 'global': derivative of the globe, object and instrument of Britain's free trade imperialism.

Jean-Jacques Dessalines, first Emperor of Haiti, 1804-06 [ZBA2482]

Through the earlier decades of the nineteenth century significant fiscal-military state resources were directed toward linking three momentous magnetic enterprises: the Admiralty reform of practical magnetic navigation; novel electromagnetic research; and British engagement in an international campaign to survey the Earth's magnetism. A campaign understood by its leaders as a worldwide survey of metal economies to extend imperial networks, and to be achieved through authoritarian regulation of navigational hardware on which British maritime-power depended. Central to this reform and regulation was the 1837 Admiralty Compass Committee and 1842 surveillance department it established, the Admiralty Compass Observatory, for which the National Maritime Museum holds the substantial archives and collection.

Anchor chain [S3709]

This institution worked closely with the neighbouring Woolwich Military Academy to transform physical sciences and trading standards. Woolwich dockyards and arsenal were rebuilt as material testing centres, under the heading of magnetic research. Here, iron was remanufactured into new forms designed to depend upon extreme systems of labour extraction. The chains deployed to replace ships' cordage were reformed metal, made to link practical navigation, electromagnetic research, and magnetic survey, with political reform.

The interests of the magnetic campaign, heavily invested in iron production and material innovation, trace two connected reform movements: the overhaul of the fiscal-military state and the establishment of the new mathematical sciences in Britain, notably thermodynamics and electromagnetism. Legislation and materials were reformed to reveal apparently natural laws, while the realities of newer subtler forms of exploitation were lauded as inevitable progress. This thesis is concerned with how British geomagnetism in the age of revolution and reform charted a particular kind of extreme labour extraction embodied in a new kind of iron, a global metal in globalisation's reconstitution of the globe.

PORTRAITURE AND THE BRITISH NAVAL OFFICER, 1739–1805

Katherine Gazzard, University of East Anglia
and the National Portrait Gallery

Captain John Bentinck and his son, William Bentinck, by Mason Chamberlin, oil on canvas, 1775 [BHC2550]

In 1775, the naval officer Captain John Bentinck and his eleven-year-old son William were represented in a large portrait by the painter Mason Chamberlin. Currently on display in the 'Nelson, Navy, Nation' gallery, this picture is one of many naval officers' portraits produced during the eighteenth century, a period punctuated by a series of global conflicts from which Britain emerged as the world's leading maritime power. Against this backdrop, British naval officers became key figures in the nation's social, political and cultural affairs and their portraits have much to tell us about this context.

Completed in spring 2019, my doctoral thesis offered the first sustained study of eighteenth-century naval portraiture, concentrating on the period between Edward Vernon's capture of Porto Bello in 1739 and Horatio Nelson's death at the Battle of Trafalgar in 1805. It explored the various roles that painted and printed portraits played in the lives of British naval officers and considered how portraiture shaped public perceptions of the officer's profession at a time when naval affairs occupied an important position in the national consciousness. Encompassing the production, ownership, display and reproduction of naval portraiture, my research revealed the variety, complexity and creativity of this genre. Examples discussed within in my thesis ranged from cheap but emotionally meaningful silhouettes, which provided comfort to officers' families when their naval relatives were away at sea, to widely circulated prints, which turned naval heroes into popular celebrities. I also examined grand paintings designed to adorn the walls of country houses and town halls, through which noble families and local communities hoped to highlight their naval connections.

As an Arts and Humanities Research Council (AHRC) Collaborative Doctoral Partnership student, I was jointly based throughout my PhD at the University of East Anglia, the National Portrait Gallery and Royal Museums Greenwich. Although I investigated artworks in numerous public and private collections, Royal Museums Greenwich's vast portrait holdings were central to my research. Counting oil paintings alone, the Museum has over two hundred naval officers' portraits from the eighteenth century. Add in prints and drawings, and this figure rises to more than a thousand, making Greenwich's collection of eighteenth-century naval portraiture the largest in the world.

Chamberlin's portrait of the Bentincks is one of my favourites. It is set in the cabin of a man-of-war and celebrates the close bond between father and son, as well as highlighting the captain's naval expertise. Appearing as a respectable gentleman in his full-dress uniform, Bentinck senior is depicted instructing his son in the technicalities of seamanship with the aid of ship model. Scattered around the cabin are references to new naval technologies that the captain – an ingenuous inventor – had developed himself. I was excited to discover that the diagram of a chain pump under the books on the desk corresponds to an actual design in Bentinck's notebook, which survives in the Caird Archive. Weaving together ideas of gentility, professionalism, creativity and domestic sentiment, Chamberlin's painting highlights some of many different elements that could feature in eighteenth-century naval portraiture and that make the genre fascinating to study.

CURRENT ROYAL MUSEUMS GREENWICH STUDENTS AND DOCTORAL RESEARCH PROJECTS

Emily Akkermans, University of Edinburgh
Chronometry and Chronometers on British Voyages of Exploration, c.1815–c.1872
(Appointed as Curator: Time at Royal Museums Greenwich in 2019)

Jack Avery, The National Archives and University of Bristol
Satire, news and topical reading during the second and third Anglo-Dutch Wars, 1665–1675

Julia Binter, University of Oxford
The cultural worlds of African palm oil: trade, consumption and museum collecting in Britain and Nigeria, 1850–1900

Jenny Bulstrode, University of Cambridge
The eye of the needle: magnetic survey and the compass of capital in the age of revolution and reform
(Awarded the 2018 Sarton Prize for the History of *Science by the American Academy of Arts and Sciences)*

Callum Easton, University of Cambridge
The 1797 naval mutinies at Spithead and the Nore

Emma Hill, University of Kent
The Royal Observatory, Greenwich, and its networks of support and influence, 1675–1742

Greine Jordan, University of East Anglia
Voyagers All? The historic role of missionary societies in shaping children's understandings of Britain's place in the world

Carrie Long, The National Archives and University of Durham
'Yours Obediently, Sincerely and Humbly'? The social agency of petitioning, c.1789–1860

Maya Wassell Smith, University of Cardiff
Sailor Art: Maritime making in the long nineteenth century

Students who have been awarded doctorates in 2019:

Dr Katherine Gazzard, National Portrait Gallery and University of East Anglia
Portraiture and the British Naval Officer, c.1740–1805

Dr Anna McKay, University of Leicester
The History of British Prison Hulks, 1776–1864

Dr Erika Jones, University College London
Making the Oceans Visible: Science and technology on the Challenger Expedition (1872–1876)
(Appointed as Curator: Navigation at Royal Museums Greenwich in 2019)

Internships

Our Student Internship Programme provides access to our world-class collections and provides valuable experience in the study of material culture. During each six-week internship, participants undertake new research that furthers understanding of the collections at the Museum, and they help to increase the accessibility of our collections to audiences.

Every year we offer up to six research internships. Here are reports from two of our 2019 interns:

SMALL BOYS WORE SAILOR SUITS: BRITISH POPULAR NAVAL ENTHUSIASM, 1895–1939

Laura Burkinshaw, University of Hull

My research at the National Maritime Museum has formed part of my doctoral thesis, examining the fluctuating levels of popular naval enthusiasm between 1895 and 1939. Specifically, it examines the popular representation of and attitudes towards the Royal Navy to determine whether there was a decline in 'popular' naval enthusiasm amongst the British public in the aftermath of the First World War. The rise in grass-roots navalism in the latter decades of the nineteenth century is well documented (Conley, 2009; Johnson, 2013; Ruger, 2007). This research locates and gauges this feeling between the First and Second World Wars, to analyse popular navalism post 1918.

I have focused principally on the influence, attitudes, and activities of the Navy League (NL), the principal naval lobbyist group of the period. In doing so, I have focused on their published annual reports between 1895 and 1939, the collection of minute books of the Executive Committee as well as their publication The Navy League Journal, which was renamed The Navy in 1909.

As these records span the entire period examined, they provide a barometer of the changing popular attitudes and support for the navy, and the methods the NL employed to propagate navalist agenda and combat anti-naval or pacifistic sentiment.

The NL underwent an about-face in ideology between 1919 and 1922. The executive committee attempted to bring the NL more into line with what it perceived as wider popular opinion, namely preaching in support of the Washington Treaty and armaments control to avoid another arms race which it openly described as 'world suicide'. This is a drastic change in policy from the NL's pre-war attitudes, which voraciously campaigned for increased naval expenditure and armaments. The NL's preoccupation with internal struggles severely hampered its ability to influence government agenda towards popular opinion, as a pro-naval organisation campaigning for armaments control arguably made itself redundant. Post-1922 membership and branch subscription figures suggest that the NL never regained its pre-war popularity and the subsequence collapse in its branch structure questions how far is can be considered a truly national organisation.

This indicates a wider shift in the navy's position in the national discourse. Pre-war, the NL emphasized the supreme importance of the navy as the guarantee of national defence, highlighting threats of invasion and starvation. After the war, NL activity primarily revolved around education and the merchant marine, with the navy portrayed as the guarantor of imperial connectivity rather than defence. Whilst the experiences of the First World War naturally informed, in part, this shift, it demonstrates a change in how and where the navy was positioned in regards to national safety. This offers insights as to the attendant impact this had on the maritime aspects of British national identity.

I am grateful to the National Maritime Museum for allowing me to conduct this research.

ASTRONOMICAL GEOMETRIES IN THE OCTAGON ROOM AND ROYAL OBSERVATORY GREENWICH'S IMPACT ON SEVENTEENTH-CENTURY LONDON

Veronica Cappelli, Royal Museums Greenwich

Goals and research questions

I was keen to explore who was the real architect of Flamsteed House: Robert Hooke or Christopher Wren, and to analyse the symbolism behind the Baroque features and their links with astronomy, compared to the contemporary textual record. Using written work by figures such as Wren, Hooke, Johannes Kepler and Isaac Newton regarding geometry, music and astronomy would contribute to a more thorough understanding of the intentions behind the building's design, while reconstructing the original plans of Flamsteed House could shed light on the cultural impact the building had in materialising a conversation among natural philosophers on the structure of the universe. This will also throw into relief the wider urban context of the Royal Observatory, including its relationship to its Baroque counterparts within London.

Methodology

By looking at both the archives in the Royal Society Library and at Royal Museums Greenwich (Francis Place etchings, Hooke's diary and Flamsteed's letters) I reconstructed a close estimation of the plans, sections and elevations of the building in 1675. In addition, reading the contemporary literature, Gresham College lectures

and experiments by Hooke, Wren and other Royal Society members, gave me an understanding of the history of science and how that related with Baroque architecture sensibilities. I systematically catalogued the design features of the building and explored how they related to discussions of seventeenth-century astronomy.

Progress and final conclusions

The research made clear, from the inconclusive and differing opinions made by architectural historians, that deciding whether Hooke or Wren had the primary involvement with the design was very much a matter of individual preference. There are even suggestions, from evidence in Flamsteed's letters highlighted by historian Francis Willmoth, that the Observatory was a collaborative project between Hooke and Sir Jonas Moore, to which Wren gave formal approval. Contemporary scholarship on the early modern period finds the question of authorship redundant as architectural design and construction was such a feat of collaboration. With the individuals themselves not occupied with claiming responsibility, naming the architect becomes unclear.

Design features of the building

Hooke, Wren and other members of the Royal Society were experimenting with music and geometrical calculations in astronomy. Architecture was used as a post rationalisation of such experiments. The meaning of the symbols within the building hold greater weight, as they perhaps bring to light contemporary discourses of cosmology and astronomy. For example, the shape of the Octagon Room in relation to the rest of the building recalls Kepler's work on platonic solids in Astronomia Nova (1609). This can also be seen in Hooke's design of the Royal Court of Physicians. The ratios in the heights and lengths correlate with musical chords that were also used by Kepler in his Harmonices Mundi (1619), as each planet produced a chord derived by its weight. The Observatory's architecture is more than a frame for contemporary science and the structure of the universe, but rather a theatre of public engagement with the beliefs, investigations and history of its associated scholars.

The importance of the Observatory in reframing early modern London

As the only successful monumental building dedicated to the astronomical arts (the restoration of Old St Paul's and plans for the Monument failed), the Observatory is a reflection of the discourse of natural philosophy at the time and a testament to how empowered the Royal Society was to shape public spaces in London.

Conference Reports

Royal Museums Greenwich is a leading centre for research into maritime history; material culture studies; art history; anthropology; arts and science studies; cultural geography; conservation studies as well as international and literary studies. Conferences and seminars ensure that research of this kind, conducted by staff and external partners, is shared with diverse audiences, both specialist and the general public.

The Museum regularly hosts independent conferences and seminars or collaborates with a range of academic and cultural partners, e.g. the Institute for Historical Research, Royal Institute of Navigation, Society for Court Studies and the Naval Dockyards Society. In addition to conferences we also host a regular series of lectures and lunchtime concerts in the Queen's House, the latter in association with Trinity Laban Conservatoire of Music.

MARITIME ANIMALS: TELLING STORIES OF ANIMALS AT SEA 25–27 APRIL 2019

Dr Kaori Nagai, University of Kent

The conference – jointly organised by School of English, University of Kent, and the National Maritime Museum – was a huge success. It attracted nearly 100 participants over the two and half days including 53 speakers from 9 countries. The conference aimed to shed fresh light on maritime history by placing animals centre stage, and the papers were thereby chosen to represent a wide variety of human-animal relationships formed at sea. The maritime animals ranged from naval mascots such as Matthew Flinders's famous cat Trim, to animals brought on board to be eaten (e.g. Galapagos tortoises), and stowaways such as rats and shipworms. The question of the transportation of animals destined for, among other things, zoos, battlefields and colonies also emerged as an important area of inquiry. Professor William Clarence-Smith (SOAS) gave a brilliant historical overview of this topic in his keynote lecture 'From sail to steam: the maritime transport of equids and other animals'. Another key and recurring theme of the conference was the environmental impacts of human maritime activities, which in many parts of the world have led to the mass species extinction. We were thus delighted to welcome the Australian environmental philosopher, Thom van Dooren (University of Sydney), as another keynote speaker, whose wonderful lecture 'Voyaging with snails: stories

from Hawai'i', put maritime history into perspective, by reminding us of the fact that humans (with the aid of ships) are by no means the sole seafarers: for instance, Hawaiian snails (now endangered) have always been global seafarers who travel across the waters by other means. To coincide with the conference, I put together a small display of animal items on the theme of the conference ('Animals at sea': February to mid-May 2019) outside the Caird Library. Many thanks to Susan Gentles, the Library's Archivist, for her suggestions and the great care she put into finalising the details.

The idea of the 'Maritime Animals' conference arose while I conducted my research in the Museum as a Caird Research Fellow in the summer of 2017, on the topic of sea-faring rats. I would like to thank the National Maritime Museum for giving me the opportunity to organise this event and for supporting it from the very beginning. In particular, huge and heartfelt thanks to Lizelle de Jager, the wonderful conference coordinator, without whose support and guidance this event would not have been possible. Thanks also to Stuart Bligh, Robert Blyth, Nigel Rigby, Aaron Jaffer, Andrew Choong and Lucy Dale for supporting the conference. Lastly, I would like to thank Liza Verity for her kindness and invaluable help in finding animal materials. It was wonderful to meet her, as her book Animals at Sea (2004) – which showcases the richness of animal holding of the National Maritime Museum – was one of the reasons why I applied to do my rat research in the Museum.

The ship's mascot 'Trotsky' the bear, being hoisted out from the *Emperor of India* (1913) to return to the *Ajax* (1912) [N23193]

THE LIFE, WORK AND CONTEXT OF ALEXANDER CUMMING, 1731/2–1814 18 MAY 2019

Dr Emily Akkermans, Curator: Time

In May 2019, we welcomed members of the Antiquarian Horological Society (AHS) for their annual meeting. Six speakers delved into the interesting life of Alexander Cumming (1731/2–1814), a Scottish watchmaker and mechanic who later became Clockmaker to King George III. An exceptional barograph clock made by Cumming in 1766 was recently acquired by the Science Museum, prompting Cumming to become the sole focus of this year's meeting.

Gloria Clifton, Curator Emeritus at Royal Museums Greenwich, introduced us to the man behind a variety of instruments and inventions. Born in Scotland, Cumming gained powerful patronage, which, combined with his mechanical skills developed put him at the centre of the London scientific community. Charlotte Rostek, Head of Collections at Mount Stuart Trust, spoke about the patronage Cumming enjoyed form the Third Earl of Bute, John Stuart. Located on the Isle of Bute, Mount Stuart, houses one of four exceptional barograph clocks made by Cumming. By 1763, Cumming was established in New Bond Street, London, where he set up his business as a clock and watchmaker. Rebekah Higgitt, University of Kent, placed Cumming within the Metropolitan Science of Georgian London, examining his life within this community. His reputation was such, that he was appointed as a member of the commission set up in 1763 to judge the merits of John Harrison's marine timekeeper.

Cumming went on to make clocks and watches for George III, Sir William Hamilton in Naples and Dr Charles Blagden. It was for George III that Cumming made the first barograph clock that recorded on a chart the variations in barometer reading over the course of a year. This instrument survives within the Royal Collection. Cumming collaborated with renowned cabinet makers, and it is to the famous maker Thomas Chippendale, that the mahogany case of the Science Museum clock is attributed. It was fascinating to hear about this case from esteemed furniture restorer Peter Holmes of Arlington Conservation. An AHS annual meeting is not complete without a talk dedicated to clock making and Curator Emeritus Jonathan Betts, examined Cumming's precision timekeepers and his links with other clock makers at the time. Last, but certainly not least, Alison Boyle, Keeper of Science Collections at the Science Museum, looked at the life of the newly acquired barograph clock after it was purchased by the famous meteorologist Luke Howards on Cumming's death.

In short, a great day of interesting research and presentations, with the opportunity to network over lunch provided.

SCAPA 100: THE ORKNEY STORY, STROMNESS MUSEUM CONFERENCE 17–20 OCTOBER 2019

Andrew Choong Han-Lin, Curator: Historic Photographs & Ship Plans and Alex Grover, Assistant Curator

'Scapa 100: The Orkney Story' was organised by Stromness Museum and ran from 17 to 20 October 2019. Alex Grover and Andrew Choong attended, representing the National Maritime Museum. The conference itself comprised 25 speakers from a variety of disciplines, who collectively offered a very broad range of perspectives on the historic wrecks of Scapa Flow. The primary focus was on the seven remaining ships of the High Seas Fleet, but HMS *Hampshire* (technically she's just outside, but she still counts), HMS *Royal Oak*, HMS *Vanguard* and the smaller remnants of UB-116 and the various blockships were also covered. The papers which examined the wrecks from the historical perspective, dealt with the circumstances by which most of the ships came to grief, balancing the focus between the outlook of Orcadians, Royal Navy and Kaiserliche Marine personnel. Other presentations were delivered on the subsequent salvage of the German wrecks, and the economic, cultural and social impact on the islands up to the mid-twentieth century. The latter blended fairly seamlessly with the talks on the environmental aspects of the Scapa Flow wrecks, both in terms of their on-going importance as havens for marine life and the environmental hazard they can also represent. HMS *Royal Oak* is perhaps the best example of the tension underlying the need to preserve an important cultural monument and war grave, while at the same time managing the impact of leaking fuel oil and the significant quantity of munitions still aboard. Two of the papers on this subject touched in some detail on the great strides made in recording the wrecks visually through photogrammetry and 3D digital modelling, and there was an opportunity for delegates to 'explore' the wreck of SMS *Markgraf* with

the aid of VR headsets. Alex and I both tried these and the experience was, to say the least, extraordinary, and very enlightening as to the possibilities offered by this technology for archaeological recording and education.

Last but by no means least came a series of papers from representatives of the local diving community, on topics ranging from the importance of the role divers can play in the care of Scapa Flow as a resource to advances in diver safety. The talks were interspersed with impressive cultural offerings from the local community, particularly the 'Animating Scapa 100' screening and short vignette films, all produced through work with young people. By the conclusion of the conference I feel we all left with a strong sense of the Scapa Flow wrecks as more than just important historical artefacts, but also as a vital and living (literally, given what is growing on and/or living in them) part of the culture and economic life of the Orkney Islands.

On a personal note, I cannot commend the hospitality of our generous hosts too highly. We were made to feel most welcome and were treated to a very comprehensive tour of Orkney on our last day – a great end to a splendidly run and memorable conference.

THE ART AND SCIENCE OF THE MOON CONFERENCE 14–15 NOVEMBER 2019

Dr Melanie Vandenbrouck, Curator: Art post-1800

The Moon, by John Russell, c.1787 [PAJ3148]

To mark the 50th anniversary of humanity's first footsteps on another world, Royal Museums Greenwich hosted a major exhibition exploring our evolving relationship with the Moon across times and cultures. With 180 objects spanning 2,500 years, The Moon (19 July 2019 – 5 January 2020) presented a cultural history of our nearest celestial neighbour, through the dialogue of science and the arts, exploring its role as a mirror for humanity's dreams, obsessions and endeavours. A publication, edited by the exhibition's curators, Melanie Vandenbrouck, Megan Barford, Louise Devoy and Richard Dunn, gathered together 25 essays from cultural historians, a space law expert, a poet and a scientist. The exhibition and book investigated how the Moon's motions and phases have influenced human activities, beliefs and behaviours; how sustained scrutiny of the lunar surface have enabled us to understand more about ourselves; how attempts, imaginary and real, to reach this other world have fostered creativity and technological progress; and how in the twenty-first century we are rethinking our relationship with the Moon.

A two-day conference, 'The Art and Science of the Moon' (14–15 November 2019), further illuminated this, with contributions from academics, artists and curators. Several papers focussed on vision and perception in our scrutiny of the Moon's surface and light. Victor Dos Reis showed Galileo's Moon drawings as contributions to landscape art as much as operating a paradigm shift in our understanding of Earth's place in the cosmos. Kelley Wilder considered the Moon as a test subject for the development of photographic technology, while artists Melanie King and Paul Gaffney spoke about their attempts to capture moonlight, which can in turn be expressive of a psychological wilderness. Keynote speaker Paul Murdin considered the planetary and lunar imagery produced by space probes as awe-inspiring landscapes, often using the visual language of the sublime.

We heard how the Moon has been lent gendered character and influence, from Ancient Greek Drama, to early modern beliefs in its effects on fertility, and the gender imbalance in the field of science expressed by a male-dominated lunar nomenclature. Matilda Pye spoke of Susan Derges exploring the trans-cultural and trans-historical relationships between women and the Moon in her 'Mortal Moon' series, commissioned in response to the Armada Portrait. Reflecting on her cosmological practice, Royal Museums Greenwich artist-in-residence Katie Paterson revealed Earth's companion as a threshold object in our relationship with the wider universe, familiar and alien in equal measure.

If the 1967 Outer Space Treaty established outer space as a neutral territory, the conference ended with the consideration of the Moon as a contested terrain, suggesting that in the twenty-first century, telescopic observation, fictional and real travel to the Moon is anything but neutral. Richard Dunn spoke of lunar fictions grappling with war, colonialism and forced migration; Jake Silver showed that looking up to the Moon in the West Bank becomes a political act; and Emily Hsiang warned us the space between us and the Moon will become more and more commodified through future space exploration.

UNITED KINGDOM MARITIME HERITAGE FORUM CONFERENCE, GLASGOW 14–15 NOVEMBER 2019

Sally Archer, Research and Heritage Partnerships Manager

The UK Maritime Heritage Forum (UKMHF) is an annual conference bringing together maritime museums and historic vessels. Originally set up by Royal Museums Greenwich in 2008, it has been led by and co-organised by the Research and Curatorial team ever since, in conjunction with the Maritime Heritage Network (a Subject Specialist Network; formerly known as the Maritime Curators Group).

UKMHF visits a different host museum each year and so far has taken place in Liverpool, Portsmouth, Chatham, Bristol, Shetland, Newcastle-upon-Tyne, Jersey, Hull and in 2018 at RMG to mark its 10th anniversary. It provides a unique opportunity for the various sectors of the maritime heritage community to come together to showcase projects, share ideas and best practice. This year 90 delegates, including several members from RMG Curatorial, Conservation and Learning teams, descended on Riverside Museum and the Tall Ship Glenlee in Glasgow for the two-day conference. Participants ranged from curators and educators to conservators and directors and from the largest maritime museums in the country down to the smallest historic vessel. This year's focus was on 'museums and well-being' with thought-provoking papers from keynote Mark O'Neill, ex-Head of Glasgow Museums and Royal Museums Greenwich's Learning team, who presented the pilot work that they have undertaken with dementia sufferers and others. Other sessions included short project updates, including the rapid-response collecting of the Polly Higgins by Laura Boon, Lloyd's Register Foundation Public Curator: Contemporary Maritime, vessel conservation and breakout sessions on 'connecting through stories' and 'ship models'.

UKMHF represents a small but significant (and much appreciated) way for Royal Museums Greenwich, as the UK's largest maritime museum, to offer our support to museums and historic vessels in the wider maritime heritage sector. It also offers significant opportunities for the Museum to become involved with, or indeed to lead, research projects on common research and collection themes with other maritime museums around the country, and to this end we are currently working up proposals for a research network project which we hope to partner with several maritime museums.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