



**Bon Voyage? 250 Years Exploring the Natural World
SHNH summer meeting and AGM in association with the BOC
World Museum Liverpool
Thursday 14th and Friday 15th June 2018**

Abstracts

Thursday 14th June

Jordan Goodman, Department of Science and Technology Studies, University College London

In the Wake of Cook? Joseph Banks and His 'Favorite Projects'

James Cook's three Pacific voyages spanned the years from 1768 to 1780. These were the first British voyages of exploration in which natural history collecting formed an integral part. Joseph Banks and Daniel Solander were responsible for the collection on the first voyage, HMS Endeavour, between 1768 and 1771; Johann and Georg Forster, collected on the second voyage, HMS Resolution, between 1772 and 1775; and David Nelson continued the tradition on the third voyage, HMS Resolution, from 1776 to 1780.

Though Cook's first voyage brought Banks immense fame, it was the third voyage that initiated a new kind of botanical collecting which he practised for the rest of his life. He called it his 'Favorite Project', and it consisted of supplying the royal garden at Kew with living plants from across the globe, to make it the finest botanical collection in the world. Banks appointed David Nelson, a Kew gardener, to collect on Cook's third voyage.

Not only would the King's garden benefit from a supply of exotic living plants, but the gardeners Banks sent out to collect them would also learn how best to keep the plants alive at sea, for long periods of time and through many different climatic conditions. In the same way that the Admiralty circulated its personnel across its ships, Banks sent out his gardeners to ensure their experience and knowledge accumulated over time.

To illustrate my argument concerning the convergence of Admiralty and horticultural practices, I will look at three voyages of the 'Favorite Project': HMS Providence, to the Pacific and the Caribbean, 1791 to 1793; HMS Discovery, to the North and South

American Pacific coast, 1791 to 1795; and the East India Company ship, the Royal Admiral, to Calcutta and back, 1794 to 1795.

Edwin Rose, University of Cambridge

Joseph Banks, Daniel Solander and the practice of natural history on board HMS *Endeavour* (1768–71)

In 1768 Joseph Banks (1743–1820) and Daniel Solander (1733–82) accompanied James Cook on the *Endeavour* voyage to the Pacific, over the course of which they collected over 1400 plant species that were new to European natural history. In this paper, I will discuss the precise methods used by Banks and Solander to manage this vast influx of new information. In order to successfully record and classify the new species they collected according to the Linnaean system of classification, Banks and Solander employed a complex network of different paper technologies. These included annotated printed books; Solander's 'Manuscript Slip Catalogue', essentially a set of index cards which he had developed during his time working at the British Museum; systematic manuscript lists of specimens; illustrations of the living specimens; and the labels which they attached to the specimens themselves. The examination of Banks, Solander and their team of field assistants' methods of managing information during the *Endeavour* voyage adds a new dimension to the understanding of the processes behind organised natural history research expeditions during the eighteenth century.

Maureen Lazarus and Heather Pardoe, National Museum Wales

Banks' Florilegium: the first natural history artists recording the unknown

In 1768 the Royal Society, with backing from the Admiralty and a £4,000 donation from George III, proposed an expedition to Tahiti to observe the Transit of Venus, invaluable to the improvement of navigation. However, there was also a secret agenda – to explore the elusive southern continent *Terra Australis Incognita*. This paper examines how Joseph Banks, for the first time, recruited artists and scientists to record the natural history on the voyage: who he chose and why.

Banks employed three artists, Sydney Parkinson, Alexander Buchan and Herman Spöring. By referring to diaries, we can study how these men from different backgrounds and nationalities worked together. By the end of the voyage Parkinson had produced 955 drawings of flora and 377 of fauna. Tragically none of the artists survived the voyage.

On return to Britain Banks employed the finest engravers to complete the drawings and produce high quality engraved copperplates. The unique collection of 3000 specimens amassed during the journey became an important source of reference for scholars of natural history. Banks' Florilegium was finally published over 200 years later, a lasting legacy of the talents and bravery of the artists.

Jack Ashby, Grant Museum of Zoology, University College London
“Contrary to the general laws of nature”: Europe’s earliest encounters with Australian animals

It is generally held that Europe’s relationship with Australian mammals begun when James Cook landed in northeast Australia in 1770. The kangaroos he and his crew encountered inspired George Stubbs’ painting of a kangaroo, which would dominate Europe’s image of the animal for decades. However, Europeans – including another Englishman – had met marsupials several times before Cook arrived in Australia. Like his less well celebrated predecessors, Cook and his companion Joseph Banks failed to find words to adequately describe what they had seen – the comparisons they make with Old World mammals are often hard to justify. It provides a fascinating insight into the difficulties of explaining animals that were so alien to the European understanding of zoology at the time.

In this talk I will discuss Europe’s earliest encounters with Australasia’s strange creatures, as well as the scientific and political implications of the way they were described by visitors and settlers in the 17th and 18th centuries. I will argue that their words continue to impact how these species, their country and even its native people are represented today.

Stanislav Strekopytov, Natural History Museum
Instructions for preservation of natural history specimens at the time of Cook’s voyages

The three voyages of James Cook (1768–1779) and the northern expedition led by Phipps (1773) galvanised an interest in natural history in Britain and possibly catalysed the production in 1770–1790 of a number of sets of instructions for collecting and preserving natural history specimens. For example, collecting and preserving zoological specimens in spirit was described in detail by John Hunter, and his instructions were used later by Richard Owen as a basis for his “Zoology” chapter in *A manual of scientific enquiry* (1849) published by the Admiralty. For preserving dry specimens, protection against insects was a pressing issue. John Ellis published in 1770 *Directions for bringing over seeds and plants*, in which he suggested to use corrosive sublimate (mercury(II) chloride) to protect specimens during transportation. Although such use of this substance was first proposed by John Woodward in 1696, it was likely not used by naturalists until the publication by Ellis. It is likely that Ellis actively encouraged the testing of corrosive sublimate for the preservation of bird specimens reported in 1770 by Thomas Davies. Corrosive sublimate continued to be used by taxidermists in Britain well into the twentieth century.

Zoë Varley, University of Sheffield and Natural History Museum

Robert FitzRoy: Captain, Collector and Collaborator

An unexpected outcome of a curatorial project investigating and reuniting Robert FitzRoy's ornithological specimens has been to shed a new light on his role in the collecting activity during the second voyage of HMS *Beagle* (1831-1836).

Long portrayed as a shadowy character, FitzRoy's contributions to the voyage extend far beyond those of 'the man who sailed Darwin around the world', including the amassing of a distinct and largely overlooked zoological collection.

Using the surviving collection, now primarily held by the Natural History Museum (London & Tring), as an anchor for reviewing what we know of FitzRoy and his actions during the voyage, we can gain valuable insights into the collaborative nature of natural history aboard the *Beagle*.

Edward Dickinson

Alcide Dessalines D'Orbigny (1802-1857): Voyageur-Explorateur for the Paris Museum – travels in Southern South America 1826 to 1834

D'Orbigny's father introduced him to natural history. The family moved to La Rochelle in 1820 and D'Orbigny became fascinated by the foraminifera. This remained his principal fascination. Senior scientists at the Paris Museum saw he showed great promise asked if he would explore southern South America on their behalf. He sought their directions and advice and was advanced funds (which were insufficient), In 1826 he set off for a troubled continent where the colonies of Spain and of Portugal were breaking up and travel was very dangerous. Most of modern Chile, Paraguay and Bolivia were almost unknown to naturalists. D'Orbigny was some years ahead of Darwin on HMS *Beagle*.

D'Orbigny published on his travels in great depth, but only in French. He brought major collections and exquisite drawings back to France. His reports on the birds were left unfinished. Only when the King created a chair of Palaeontology and had him installed in that position was he appropriately employed at the museum. We are now (1) establishing a complete record of birds found in each country, and (2) validating his avian type material.

Robert Prys-Jones, Scientific Associate, Natural History Museum

Wallace's Sarawak bird collection and the development of his ornithological knowledge

Wallace first arrived in eastern Asia towards the middle of 1854 and would remain for the next 8 years in the Malay Archipelago. Early in this period, Wallace spent from 1 Nov 1854 until 25 Jan 1856 collecting in western Sarawak, a place whose ornithology was then very poorly known; the first sketchy Bornean bird list of under

60 species had only been produced six years earlier. Wallace himself collected *ca* 100 Sarawak bird species, and my talk will draw on information from both Wallace's field notebook "*Birds collected in Borneo*" and from his revealing annotations on the labels on his bird specimens to analyse how his ornithological knowledge and capacity to identify the birds he collected in Sarawak developed over time. Retrospectively, in his 1905 autobiography, Wallace wrote that "*I could almost always identify every bird already described [or be] pretty sure that it was an undescribed species.*" To what extent was this in fact true, and how did he approach the substantial problems involved?

Jude Philp, Macleay Museum, Sydney University Museums
AS Anthony, "a man of colour"

From 1888 to early 1900 AS Anthony worked in British New Guinea as cook, collector and plantation manager. He accompanied Sir William MacGregor on the Resident Governor's successful expedition to the summit of Mount Owen Stanley and with George Bedford to Mount Yule during a time when the fauna of New Guinea was highly sought after for new discoveries and taxonomic enquiry. By the 1890s he was working for Sir Walter Rothschild, shadowing Macgregor's work in the newly opened up areas of the Protectorate to supply Rothschild with birds. This paper explores Anthony's successes and failures working between Papua New Guineans and British colonial society to establish himself as an expert field collector.

Henry McGhie, The Manchester Museum
Henry Dresser and 'self help'

Henry Dresser (1838–1915) was one of the leading ornithologists of the mid–late 19th and early 20th centuries, most famous for the great bird books that he produced, largely from his own collections. An exploration of his life illustrates a number of notable characteristics of the independent gentlemen-naturalists who dominated ornithology before the institutionalisation and professionalisation of ornithology. His life combined early adventures in Scandinavia, New Brunswick and Texas (during the American Civil War), before settling into a more sedentary life in London. His early travels, and his networks developed through business links and travels, positioned him in the centre of a great network of exchange of information and specimens. This talk will explore the concept of self help as a way of considering the activities of Dresser and many of his contemporaries, and of the 'machinery' of people, practices and conventions that involved huge numbers of people in the production of scientific knowledge.

Lee Raye, Swansea University
Urban ravens, red kites and voyages to Britain

Around 1500 an anonymous Venetian ambassador wrote of his travels in Britain. Between deploring the terrible local knowledge of geography and condemning the

poverty-causing primogeniture system, he observed with surprise that ravens and red kites were regularly seen in the cities. Writing a century later, Lupold von Wedel, a traveller from Germany, also described urban ravens, this time in Berwick-upon-Tweed. This fitted nicely in with von Wedel's exotification of Britain as a place where swans were protected under pain of death and where barnacle geese grew off underwater trees.

Of course, there are British sources on the urban scavengers too. John Taylor, the Water Poet, praised the ecosystem services provided by ravens and red kites for urban sanitation. The sixteenth and seventeenth century British naturalists were aware of ravens and red kites, although they held these unusual species in what seems to be familiar contempt. Turner describes them snatching food from children's hands and Willughby & Ray describe them as pests which commonly attacked urban chickens. This paper will discuss the history of ravens and red kites in urban Britain, and how travellers' stories about them can provide a much-needed antidote to European exceptionalism.

Friday 15th June

Mark Carine, Fred Rumsey and Malcolm Penn, Natural History Museum From Peckham to Pegu: the assembly and classification of the Sloane herbarium

Sir Hans Sloane's herbarium, housed at the Natural History Museum in London, is probably the most extensive herbarium collection dating from the Early Modern period. Assembled between the 1680s and 1750s, it comprises 337 Horti Sicci and an estimated 120,000 pressed plant specimens. More than 300 people contributed to its development and over seventy countries and dependencies across the globe are represented in it. The Sloane herbarium exemplifies the rich history of exploration and discovery in the period preceding Cook's voyages. Its importance was fully recognised by Sloane's contemporaries and it remains of considerable scientific value today. Sloane's copy of John Ray's *Historia Plantarum* provides the (pre-Linnean) taxonomic index to the collection. Marginal notes cross reference to specimens accounted for by Ray and species not found in Ray are listed in the margins. In this talk we review the geographical scope of the Sloane herbarium and consider the routes by which specimens from across the globe became incorporated into the collection. We also consider how new knowledge of plant diversity that those specimens provided was synthesised and classified. We specifically address the question, what were the sources of new species that were not enumerated by Ray?

Jeanne Robinson and Geoff Hancock, Hunterian Museum, University of Glasgow William Hunter's museum as a paradigm for 18th century collection practices

Here we will discuss the numerous expeditions represented in William Hunter's cabinet including those of Captain Cook, Joseph Banks, Pallas, Smethman and Masson.

**Jacek Wajer¹, David Mabberley and David Moore¹, Natural History Museum
Piecing together a 200 year-old botanical jigsaw: the search for the specimens of
the Australian plants collected by Robert Brown during the *Investigator* voyage
(1801-1805)**

Robert Brown (1773-1858) was perhaps the greatest British botanist of the nineteenth century, commemorated in the phenomenon of Brownian Movement, which he investigated. He was the first to run a Botanical Department at the British Museum (now part of London's Natural History Museum) and a pioneer in the study of the Australian flora. Between 1801 and 1803 Brown served as the naturalist aboard HMS *Investigator*, whose mission under the command of Captain Matthew Flinders was to survey the coast of Australia. During and after this voyage Brown made nearly four thousand gatherings of plants, a third of which he later used in describing new species in his *Prodromus Florae Novae Hollandiae* (1810) with many others in subsequent publications. His own set of these specimens is now deposited at the Natural History Museum in London, with duplicates distributed in major herbaria in Europe and Australia. In 2008 a project was launched to catalogue his plant-names which cover species from all over the world and to document their typification using largely the London specimens. After ten years of intensive study with international collaboration by specialists, this initiative is almost complete and its results, together with some of the challenges and opportunities it created, will be presented.

**Cam Sharp Jones, Joseph Hooker Correspondence Project, Royal Botanic Gardens,
Kew**

"I could not help stuffing every pocket of my shooting coat with the various treasures I encountered." Joseph Dalton Hooker's techniques of collecting and recording the natural world.

During his life, the eminent Victorian botanist Joseph Dalton Hooker (1817-1911) travelled across the world in search of botanical and natural treasures that would further his knowledge of the natural sciences. Primarily known as a botanist, Hooker also cultivated interests in geology, geography, topography, anthropology and zoology throughout his life and career.

On his first voyage of discovery, Hooker travelled to the Antarctic to explore the riches of its flora and fauna as part of the Ross Expedition of 1839-1843. He followed this with adventures in India, Morocco, Syria and America all in the name of scientific exploration whilst also holding the position of Director of the Royal Botanic Gardens, Kew (1865-1885) and the Presidency of the Royal Society (1873-1878).

This paper will explore the various techniques through which Joseph Hooker collected and recorded the botanical world during his years exploring - drawing on his extensive correspondence, notebooks, field sketches and the extant material collections as evidence of these processes. It will also examine Hooker's role in establishing

guidelines and protocols for the collection of botanical material globally and the connections between these and modern practices of collecting and recording the natural world.

Luciana Martins¹, William Milliken and Mark Nesbitt, Birkbeck, University of London¹ and Royal Botanic Gardens, Kew

An ethnobotanist *avant la lettre*: Richard Spruce collecting in South America

This paper will focus on the collecting and documenting practices of British botanist Richard Spruce (1817-1893), who spent 15 years (1849-1864) travelling in the Amazon and the Andes. After his return to Britain, Spruce lived a secluded life in Yorkshire, reworking his notes, herbarium specimens and journals. Spruce's unique collections, housed mainly at the Royal Botanic Gardens, Kew, the British Museum, and the Natural History Museum in London, incorporate indigenous plant-based artefacts, samples of useful plant products, detailed archival notes on the use of plants by local inhabitants, and accompanying herbarium voucher collections. The result of his interactions with people he encountered in the field, his observations are insightful, still relevant to 21st century research. In this paper we will examine the ways in which Spruce meticulously documented his collections, devising a system of cross-referencing data on plants and people amenable to the application of modern botanical and anthropological enquiry. In addition, we will explore the potential of using Spruce collections today to integrate indigenous and scientific knowledge successfully, translating and disseminating information about specific useful plants considering a constructive, culturally appropriate engagement with source communities.

Carlo Bovolo, Fondazione Filippo Burzio, Turin

An Italian Zoologist Around the World: Filippo De Filippi and the Scientific and Diplomatic Voyage of the "Magenta"

My paper deals with the Italian zoologist Filippo De Filippi (1814-1867) and his attendance at the scientific and diplomatic mission around the world of the Italian corvette "Magenta" (1865-1868), one of the first exploration officially organised by the Kingdom of Italy, born from the unification process in 1861. De Filippi, professor of zoology and director of the Zoological Museum at University of Turin, introduced publically the Darwinism in Italy in a significant conference in 1864 and at the middle of the 19th Century was the most important Italian naturalist. After a scientific mission in Persia (1862), De Filippi was appointed scientific director in the voyage of the "Magenta". The mission departed from Montevideo (Uruguay) in 1865 and arrived in Naples in 1868, after visiting South Africa, Singapore and Southeast Asia, China, Japan, Australia and South America. The voyage was significant: beyond the diplomatic relations, the mission allowed De Filippi and his assistant, Enrico Giglioli, to make observations about the fauna and to collect many natural objects. Even if De Filippi died during the voyage (in Hong Kong in 1867) the mission represented a scientific achievement.

Andreia Salvador, Natural History Museum (tbc)

The marine mollusca collection at the Natural History Museum: an overview of the legacy of oceanographical expeditions

The Mollusca collection at the Natural History Museum, London, is one of the largest and oldest in the world, comprising an estimated 8 million specimens and around 60,000 types. This substantial number is in great part due to the specimens collected during the oceanographical expeditions from the mid-19th century. Some of these voyages are world renowned expeditions, such as the *Challenger* or the *Porcupine*; others are less known, such as the *Lightning*, *Alert* or *Mabahiss*, but all contributed to the advancement of science, the discovery of new subaquatic worlds and the description of thousands of new species.

I will present an overview of these historical expeditions and their marine mollusc collections. I will also explain why these specimens are an incredible resource for science and why they are still relevant today.

Rosi Crane, Otago Museum, Dunedin
Steamship Natural History

‘It is only very rarely that naturalists in New Zealand have the opportunity of collecting in deep waters off our coast,’ wrote the curator of the Otago University Museum in 1928. This understatement belies the ability of the first three curators to scrounge passages on both commercial and government steamships to explore New Zealand’s outlying islands.

Commercial and scientific interests were served by a series of *ad hoc* expeditions which benefitted the museum collections. Museum staff went on voyages on board the government steamship *SS Hinemoa* to the subantarctic islands in 1895 and 1903 and were able to carry out the first scientific dredging in New Zealand. The ‘spare capacity’ on the steamship fitted in well with its main role of patrolling New Zealand’s coastline, supplying lighthouses, and searching offshore islands for shipwrecked sailors.

In 1907 a major scientific expedition utilized the ship’s services setting up camp for the summer months on Auckland Island and Campbell Island. Two years later articles written by almost the entire New Zealand scientific community appeared in edited volumes.

This paper charts the voyages made by the *SS Hinemoa* and other steamships from the resulting specimens that have survived.

Geraldine Reid, National Museums Liverpool
Exploring the Oceans - Seaweed Collecting Explored

Seaweed collecting has been a popular pastime from the early 1800s, with the increasing interest during this era for exploring the natural world many descriptive

papers on algae were published. The study of algae as a profession boomed in the 1900s. With technological advancement and the availability of self-contained underwater breathing apparatus (SCUBA), the sublittoral became an area of increasing focus in the middle of the twentieth century. From the early beginnings as a side line on boats to sublittoral diving investigations, this paper will explore the changing time and innovations for the exploration of photosynthesising taxa in the sea.

Leslie Overstreet, Smithsonian Libraries
THE (MOST IMPORTANT) BOOKS ON THE *BEAGLE*

When it set sail in December 1831 on its second surveying voyage for the Royal Navy, HMS *Beagle* boasted a ship-board library of some 400 books on travel, exploration, natural history, navigation, and related subjects; most belonged to Captain Robert Fitzroy, and naturalist Charles Darwin brought some of his own as well. The Darwin Correspondence Project at the University of Cambridge and Darwin Online, based at the National University of Singapore, have attempted to document the library, listing dozens of classic works from Anson to Weddell, including a 68-volume set of the *Dictionnaire des sciences naturelles*.

The two most important titles, however, as I will hope to show, were small, obscure booklets that illuminate Darwin's work as a practicing naturalist, collecting specimens and describing them in his letters and subsequent publications: the Paris Muséum national d'histoire naturelle's *Instruction pour les voyageurs...* (1818) and Patrick Syme's *Werner's nomenclature of colors* (1821).

Methods of preserving and transporting specimens (dead or alive) were a crucial and sometimes controversial interest for naturalists through the centuries. This is reflected in the incredible number of such publications, particularly in the 19th century as these activities became more "institutionalized." Through much the same period, in their correspondence and publications naturalists had begun trying to define the color terms used to identify and distinguish species, as well as the pigments used to illustrate them, initially by incorporating color charts in their own books and eventually by setting forth standards intended for wide-spread adoption.

My talk will examine the Paris and Syme titles that Darwin had access to and place them in the historical continuum of literature on collecting, preserving, and transporting specimens from the 1600s to Darwin's day and beyond, and the separate stream of publications on the names of colors for describing them.

Peter Davidson, National Museums Scotland

What colour is that? Werner's Nomenclature of Colours and Exploration in the First half of the Nineteenth Century

In 1814, a remarkable book was published in Edinburgh that provided a new standard in chromo-nomenclature for natural scientists and explorers in the first half of the nineteenth Century.

In 1774, the German mineralogist Abraham Gottlob Werner, published his seminal work entitled "*On the External Characteristics of Fossils*", including an early attempt at a standard colour nomenclature.

In 1800, Robert Jameson travelled to Freiberg to study under Werner. He returned to Edinburgh and was appointed Professor of Natural History becoming the principal British spokesperson of Werner's Neptunist school.

Patrick Syme was an established Edinburgh artist and teacher. Appointed the official artist of the Caledonian Horticultural Society and the Wernerian Society and, noting the lack of a systematic nomenclature of colours for describing natural science objects, he compiled a book entitled "*Werner's Nomenclature of Colours with Additions, arranged so as to render it highly useful to the Arts and Science*". Based on the Werner's system, Syme worked with Jameson using specimens from the museum's collections, to create a new nomenclature of colours.

It was this book that Charles Darwin took on his famous voyage on HMS Beagle to help describe the many new sights he saw on that momentous trip.

Mark Graham, Natural History Museum

The early Fossil Preparators at the British Museum of Natural History and their sons: familial contributions to the field of Earth Sciences

Since the inception of the British Museum of Natural History (BMNH) in 1881 (now the Natural History Museum (NHM)), the collecting, development and mounting of fossils for scientific study and public exhibition has been undertaken by fossil preparators. Originally known as 'masons', because of their geology based, rock-working skills, their roles expanded in the late 19th and early 20th centuries, when, at the forefront of the developing science of Palaeontology, the museum was actively obtaining fossil material from the UK and abroad to build the collections. As more of the most impressive specimens were put on public display, the preparators developed better techniques to recover and transport fossils from the field and technical improvements in the form of powered tools enabled more detailed mechanical preparation to be undertaken. Here, some of the many significant contributions made by these skilled people, which are recorded in disparate records throughout the museum archives, scientific publications and books are brought together.

Deborah Wace, Churchill Fellow 2018

Art and History in the French Garden at Recherche Bay; Labillardiere's collections explored in contemporary art.

The French D'Entrecasteaux Scientific Expedition to Recherche Bay, Tasmania in 1792-3 resulted in a historical collection containing significant botanical, zoological, cartographic, geo-magnetic and ethnographic/linguistic material. Expedition scientists included naturalist Labillardiere who authored *Novae Hollandiae Plantarum Specimen*, extensively documenting the flora and Felix La Haye, who planted a French Garden at Recherche Bay.

La Haye's French garden was re-discovered in 2003, invigorating a local grassroots community campaign to protect this site from the predations of industrial logging. The campaign was successful in highlighting the global value and important historical legacy of this expedition and location. My artistic involvement as a printmaker and singer/songwriter in the campaign built renewed interest in the early collections of the naturalists, advocating for the respect and protection of these valuable Type Localities. Through printmaking, specimen collection/arrangement, my ongoing practice currently involves digitising these for print onto fabric to showcase this historical legacy in a contemporary context.

The presentation will draw on the story of the expedition and my artwork developed in response, outlining how an artistic lens can highlight the conservation values of this threatened locality. Art and music is a powerful tool for educating the public about important cross cultural, historical and conservation issues.