



Trading Nature
Tuesday 4th and Wednesday 5th June 2019
The King's Manor, University of York

Abstracts

Tuesday 4th June

Simon Ville, University of Wollongong, Australia

The exchange, finance and logistics of the natural history trade in the nineteenth century

This paper will look at the challenges facing the expanding global natural history trade in the nineteenth century. It will compare the trade with other major global commodity trades of the period, such as wool, cotton, timber, rice and coffee, and argue that it faced unique challenges in three key areas – exchange, finance and logistics. Research questions of particular interest include: how did transactions occur between a diverse set of buyers and sellers, how was price/value determined for often poorly understood specimens, and how were the logistical challenges of shipping unstable items across long haul and irregular shipping routes addressed? Reference will be made to the experiences of the Australian Museum and the Macleay Museum in Sydney in the 1870s and 1880s in order to examine how they responded to these challenges to build substantial natural history collections.

Vanessa Finney, Australian Museum, Sydney, Australia

Collection building at the Australian Museum, 1860-1890

This paper is a case study of changing patterns of specimen acquisition at the Australian Museum in Sydney. Founded in 1827, the Museum did not become firmly established until the 1860s, with purpose-built galleries, secure funding, expanding collection ambitions and trained scientific staff. Through an examination of the collection practices of two Curators, Gerard Krefft (1859-1874) and Edward Ramsay (1874-1894), my paper will trace a declining reliance on personal and local networks of collectors and traders in natural history plus a few European and British museums; and the growing reliance of the Museum on distributed global networks of agents, dealers and commercial traders.

Deidre Coleman, University of Melbourne, Australia

Frederick Parkhurst Dodd: 'Butterfly Man of Kuranda', North Queensland in Mid-Nineteenth-Century Entomology

A forgotten figure now, Frederick Parkhurst Dodd (1861-1937) was an important Australian insect breeder, collector and dealer. Based on the Atherton Tableland in remote, far north Queensland, from the 1880s onwards he sold thousands of tropical specimens (mainly butterflies and moths) to private collectors and museums in Australia. He also supplied specimens to significant overseas collectors such as Walter Rothschild of Tring and Thomas

Walsingham. Cranky, obsessive, and perfectionist, Dodd's correspondence with collectors reveals the complex interdependence of the many different kinds of people involved in entomology, from proudly independent, self-taught bush collectors like himself, whose exquisite craftsmanship transformed 'natural' specimens into artful creations, to the rising class of more sedentary museum professionals. Issues for this paper include the conundrum in this period of the contested terms 'professional' and 'amateur', Dodd's eco-pedagogical tours of south-east Australia, and his uneasy attitude towards indigenous people.

Leore Joanne Green, University of Cambridge

Emily Mary Bowdler Sharpe's Entomological Work and Networks

Emily Mary Bowdler Sharpe (186?-192?), a British entomologist, sat in the crossroads of several natural history networks – the entomological press, the Natural History Museum, her ornithologist father's many connections, and her trading network of colonial specimens. While her main work was in the Natural History Museum, cataloguing and describing insect species from the colonies and publishing her findings, her work was not official and neither was her salary. In order to make ends meet she developed a career in the trade of zoological specimens by constructing a network in which she mediated between buyers, sellers, and museums, specialising in collections made by travellers and colonial officials who collected insects around the empire.

This paper will map out Sharpe's different networks and analyse the connections between them, while asking how different kinds of natural history work were gendered in Victorian and Edwardian times, how her various networks related to one another, and how specimens, collections, and information moved in them.

Matthew Wale

'Infinite Bartering': The Controversy of Specimen Exchange

The thriving community that cohered through the pages of the *Entomologist's Weekly Intelligencer* (1856-61) was largely based on the interchange of information and specimens. However, controversy developed upon the question of how such exchanges should be carried out. Gentlemanly practitioners with large collections felt it was a duty for more experienced entomologists to bestow their surplus specimens upon beginners with no expectation of receiving anything in return. Others, particularly working-class collectors, insisted that a mutually beneficial deal should be struck. Further complicating matters, unscrupulous dealers took advantage of the relative anonymity afforded by corresponding through the periodical to take advantage of their more credulous peers. The increasingly rancorous debate provoked by this system of exchange ultimately led to the periodical's demise. Through an analysis of this dispute, my paper will address key questions regarding mid-nineteenth-century natural history communities. It will demonstrate how the trade in entomological specimens allowed for the construction of a broadly-construed community of practitioners, giving agency to many who would otherwise have been precluded from such networks. Furthermore, the controversy also brings to light the role of class and social mores in shaping scientific communities during this period.

Rachel Jennings, Powell-Cotton Museum

Fred Merfield and the Powell-Cotton Museum: A trading partnership

Frederick George Merfield (1889–1960) was an English hunter and animal dealer based in Cameroon. There he met Percy Powell-Cotton (1866-1940; traveller, collector, and museum proprietor) in 1927. They formed a lifelong friendship, and a business arrangement: Powell-Cotton acted as Merfield's sole agent, selling natural history specimens in Europe and North

America using his extensive network of contacts with museums, private collectors, taxidermists, and other dealers. Merfield benefitted financially from this partnership, and Powell-Cotton received duplicate specimens, significantly expanding his own collections at the Powell-Cotton Museum (Birchington, Kent).

Percy Powell-Cotton thus played a dual role: as a museum director, and also a 'middle-man' for Fred Merfield in the animal trade. In this presentation, I will introduce the two men and the collections of the Powell-Cotton Museum, then discuss their collecting methods and network of clients. Merfield's specimens made significant contributions to the development of museum and private collections worldwide, but particularly in the UK. Specimens collected by Merfield and sold through Powell-Cotton can be found in many institutions, including the Natural History Museum, London; Royal College of Surgeons; University College London; and Museum of Comparative Zoology, Harvard University.

Elle Larsson, King's College London and the Natural History Museum

"The animals went in four by four": Collection-building at Rothschild's Zoological Museum, Tring

Showing little aptitude for the family business of banking, Walter Rothschild instead devoted himself to the creation of the largest private natural history collection the world had ever seen. Kept within his purpose-built museum at Tring, Rothschild's collection contained some 2.5 million Lepidoptera, 300,000 bird skins, 300 dried reptiles and over 1400 mammal skins and skulls; the study of which allowed Rothschild and his curators to make a substantial contribution to late-nineteenth early-twentieth century zoology. But just how did Rothschild acquire such an extensive collection?

While historians have examined collecting as a practical activity and form of scientific practice, rarely has the question of how museum collections were built been asked. This omission has led to a tendency to see collections as ready-formed entities and obscures the motivations and logics involved in their creation. In asking how Rothschild's collection was built this paper challenges this narrative. Through close examination of Rothschild's process of acquisition and of the social, material and epistemological factors which influenced him, this paper will demonstrate how zoological research and collection-building were interdependent. This could lead to highly charged and complex negotiations which show collection-building to have been a personal, commercial, social and scientific endeavour in equal measure.

Catarina Madruga, University of Lisbon

Between barter economy and gift economy. The intermediary role of traders of zoological specimens in the correspondence of Barbosa du Bocage

In Portugal, the westernmost point of Europe, a nineteenth-century naturalist could feel isolated from his central European counterparts. For Barbosa du Bocage, the director of the Lisbon zoological museum, correspondence with other naturalists was crucial for general exchanges of ideas, appeals for guidance, and the exchange of duplicate collections. Bocage relied heavily on natural history traders such as the Verreaux Brothers in Paris, from whom he bought instruments, supplies, periodicals, books, taxidermy services, and specimens. The Verreaux were not only sellers of zoological collections, but rather played an important role as friendly intermediaries with larger networks of connections. Though traders in zoological specimens had a primary interest in buying and selling collections for commercial profit, the fact remained that the perceived value of their collections derived from accurate identification and guarantee of provenance. As a consequence, the maintenance of authority, reputation, and status were as relevant as the administration of catalogues and collections.

This paper looks into the relationship between Bocage and several trading houses. Through his correspondence, I hope to illustrate how this trade was not developed around a straightforward barter economy but was fashioned around the gift economy that permeated natural history.

Susan Newell, University of Leeds and Oxford University Museum of Natural History
Building a teaching collection for Oxford: William Buckland's sourcing of specimens and visual materials, c. 1815-1845

William Buckland's work as a geological theorist has received much attention. This paper aims to examine his development of a body of materials and specimens for teaching during his tenure as first Reader in Geology at Oxford University. As his Oxford career spans a highly contested period for geology, Buckland's specimens, models, diagrams and views can be seen as representative building blocks on which the new discipline of geology was constructed. I will examine the use and production of these materials, including casts by the sculptor Francis Chantrey, drawings by John Ruskin and models by Thomas Sopwith. In terms of the specimens in his personal museum, the evidence suggests that Buckland preferred to source these himself in the field, but we know he also drew on dealers, quarrymen, 'fossilists', builders and networks of fellow academics, collectors and former students, as well as random individuals he met on shared coach journeys. Certain items implicate Buckland in the nation's programme of colonial expansion of the period as they reached him via travellers such as Captain Beechey's North American voyages, Captain Sykes in India, or Captain Hall in the Mediterranean.

Dean Lomax, The University of Manchester
Mary Anning - Palaeontologist Extraordinaire

Lyme Regis, a small, coastal town in Dorset, England, and a place synonymous with fossils and Mary Anning (1799–1847). Through her remarkable discoveries, from the first ichthyosaurs and plesiosaurs brought to the attention of science, to the first British pterosaur and even fossilised faeces (coprolites), Miss Anning placed Lyme Regis, and at large Britain, on the world map for palaeontology. By all accounts, we are familiar with Mary's story, that 'she sold seashells by the seashore', but how did she do this, why did she do it, and what obstacles did she overcome? It is all of these aspects of her life that are often overlooked or misconstrued. Not only was Mary a working class woman in late Georgian-early Victorian England but, among many other things, was even falsely accused of creating forgeries. Yet, even to this day, her discoveries continue to form the basis of scientific studies. I for one have spent the past decade studying ichthyosaurs, especially those collected by Mary, which have revealed a wealth of new information. Mary wasn't simply a 'fossil hunter' or 'just a dealer', she was an expert and critical thinker – a pioneering palaeontologist making waves on the southwest coast.

Peter Davidson, National Museum of Scotland
A Fair Deal: A short study on the role of dealers in the History of Mineralogy

Dealers have played an important role in the history of mineralogy providing specimens for museums, universities and private collectors, driving both the growth of collections and research. They continue to play an important role today although the nature of this has changed and relationship between museums and dealers is somewhat different.

This study will focus on two family firms that have made significant contributions in the nineteenth century.

The family firm of Krantz, one of the most famous dealerships, was founded by Adam August Krantz. He began mineral dealing in 1833 while still a student in Freiberg. As he became successful he moved first to Berlin then to Bonn where the company is still located. It remains in the family and continues to play an important role.

Then there is the Bryce Wright's (Senior and Junior). They were two of the most important British dealers of the mid to late nineteenth Century. Starting in Cumberland, they moved first to Liverpool and then London.

Although not connected, both these family firms followed similar trajectories. They began by specialising in minerals from their local areas but eventually expanded to cover the rest of the World and adding subjects like palaeontology and crystallography.

Emma Bernard, The Natural History Museum

The foundations of the fossil fish collection at the Natural History Museum, London and the ethics of modern collecting

The Natural History Museum, London (NHMUK) has what many researchers would describe as the best fossil fish collection in the world. This is, in part due to the large collections collected by Sir Philip Malpas de Grey Egerton and William Willoughby Cole, the 3rd Earl of Enniskillen who in the 1830's set out on a 'Grand Tour' of Europe to collect fossils. It was during this time they met Louis Agassiz who suggested they should collect fossil fish. There are many stories of the men flipping coins to see which specimen they would purchase. In the 1880's these collections, comprising nearly 17,000 specimens were offered to the British Museum. The collections were deemed so important Treasury twice found the additional money for their purchase. The collections contain several hundred type specimens important to science.

In order to remain relevant museums need to continue to acquire specimens. Recently fossils from Morocco have flooded the market and the Museum has made substantial acquisitions from here. This has resulted in discussions of the trade in fossils and the impact that has on the local environment and the ethics surrounding the purchase of fossils within the sector. From my experience of working in Morocco, liaising with collectors and dealers from across the globe I aim to discuss some of these issues in a modern environment.

John Faithfull, The Hunterian, University of Glasgow

Artisanal and Small-Scale Mining, Geological Specimens, and the Role of Specimen Preservation in Improving Lives

Although artisanal and small-scale mining (ASM) sector is often caricatured as a social, ethical and environmental problem in the popular press, it is a significant part of the mining sector in many countries. Despite the common media caricature, ASM is not necessarily problematic, and there are many historical, and contemporary examples of good practice. Examples include, the canonical ASM collector Mary Anning, and the early diggers of Cairngorm in the UK, to contemporary crystal "strahler" in the Alps, cooperatives working alluvial gemstones in Sri Lanka, and garmpeiros working Ta minerals in Mozambique. There is increasing recognition nationally, and internationally (eg UNESCO, world Bank) that ASM is a key part of community-based economic and social development for marginalised groups.

Modern, large scale, mechanised extractive industries offer no opportunities for the identification and preservation of scientifically interesting rock, mineral or fossil materials. All such extraction requires human observation, intervention and assessment, and skilled hand-collecting. Small scale, locally-managed extractive activities based around the careful collection of specimen materials have a vital role to play in the preservation of geological

materials. Such activity potentially adds more economic value to miners, while generating far less environmental impact than other kinds of mining activity. Opportunities for gemstone, ornamental stone, mineral and fossil extraction should be seen as potentially valuable and desirable forms of extractive industry with big potential to improve the lives of marginalised people, and women in particular. The extraction and preservation of specimen materials can be seen as a distinctive, skilled and empowering type of extractive industry, with significant potential social, economic and scientific benefits.

Mike Howgate

Selling Prehistory – the Vernon Edwards experience

In the early 1920's amateur sculptor Vernon Edwards was head-hunted by Dr. F.A. Bather, Keeper of Geology at the British Museum (Natural History), to make prehistoric reconstructions for the departments' public displays. The first models were two dimensional cut-outs which were marketed for a while by Bathers' daughter, Hilda, from her craft shop in Worthing. By the time this arrangement came to an end Edwards was moving on to three dimensional plaster casts firstly of dinosaurs, then Tertiary mammals and finally fossil fish. After a spell trying to market the models himself, Edwards turned to commercial dealers firstly the geological suppliers and publisher Murby and Co. and then the mineral and fossil dealership Gregory, Bottley and Co. The latter company featured the models prominently in its advertising in the *Museums Journal* and had a special display case made for them in its showroom. This ensured that the models were acquired by many museums in the U.K. and even as far away as South Africa. After a period when these models were being confined to the deepest recesses of the museum store or even disposed of they are now back on display in several museums as deservedly 'historic' restorations.

Wednesday 5th June

Helen Cowie, University of York

Animals Wholesale and Retail: Exotic Animal Dealers in 19th-Century Britain

A thriving trade in exotic animals existed in nineteenth-century Britain. Since the late-eighteenth century foreign birds and beasts had been imported and offered for sale by animal dealers, street vendors and commercial menagerists. From the mid-nineteenth century this trade significantly expanded, facilitated by improvements in steam shipping and more extensive penetration of overseas territories. Focusing on the two most prominent Victorian animal dealers, Charles Jamrach (London) and Edward Cross (Liverpool), this paper explores how they obtained their stock, how they advertised it and who purchased it. I emphasise the huge logistical challenges of catching and transporting animals and the high mortality among the animals involved. I also highlight the crucial role played by wild animal dealers in supplying zoos and menageries, and their consequent contribution to the study of natural history. Jamrach, for example, supplied London Zoo with its first Sumatran rhinoceros in 1872 while Cross sold trained lions, hyenas and polar bears to travelling animal shows in Britain and beyond.

Mareike Vennen, Humboldt-Universität zu Berlin

“The Aquarium Complex. Trading living marine animals, 1850-1910”

In 1852, the British naturalist Philip Henry Gosse was one of the first to collect and send 'dribbling packages' with living sea anemones from the south coast to London. Only a few decades later, the London based engineer William Alford Lloyd, the first professional

aquarium dealer, had set up a commercial network of collectors and clients extending to the colonies overseas.

The paper addresses the early history of the aquarium in order to examine the processes of collecting, transporting and trading living aquatic animals as a new way of acquiring, exploring and exploiting the underwater world. The aim is to show how aquatic animals became objects of scientific and commercial trade throughout the nineteenth century.

Being an improvised, local practice of amateur naturalists at first, the network of collectors professionalized as quickly as the techniques of transportation standardized and trading reached a global scale.

Drawing on correspondences, reports, order catalogues and the material culture of aquarium keeping and trade, the paper calls attention to the roles of traders and dealers in natural history collecting networks. Taking into account local actors such as fishermen, national scientific societies as well as colonial infrastructures, it illustrates how this network contributed to the production and distribution of ecological knowledge, while at the same time causing the extermination of many local species

Paolo Viscardi, Niamh Sullivan¹ and Emmanuel G. Reynaud¹, National Museum of Ireland; University College Dublin¹

The Blaschka business network

Leopold and Rudolf Blaschka were a father and son team based in Dresden, who manufactured models of mainly marine invertebrates between the years 1863 and 1890. They created their models principally from glass using lampworking techniques, to convey the fragility and transparency of the animals for display and teaching. They sold their models in Central Europe, the British Empire and the USA through at least three different dealers, creating a wide reaching global network from their small workshop. Using online data recently made available to survey German base maps and digitized manuscripts, we have unpicked some of the details of the workshop business. We established that the workshop moved to at least four different locations over a 20 year period and we traced parts of their direct catalogue distribution network that bypassed established dealers and identified transport routes used for their incredibly fragile products. We hypothesise based on our results that the cessation production of invertebrate models in 1890 may have been driven by external factors, including business growth.

Zoe Varley, P. Evans¹ & **Douglas Russell**, Bird Group, The Natural History Museum, Tring and Army Museums Ogilby Trust, Salisbury, Wiltshire¹

The formation and dispersal of 19th century natural history specimens collected by Captain C. C. Abbott in the Falkland Islands

Captain Charles Compton Abbott (1823-1887) commanded the Falkland Islands Detachment of the British Army from March 1858 to early 1861. During his brief tenure in the South Atlantic he formed a small series of natural history material including mammal, avian and botanical specimens. He also collected birds' eggs, sending several consignments back to London: first to dealer Charles Jamrach who then sold these specimens to leading ornithologist John Gould, ultimately arriving in the Natural History Museum collections.

A review of the extant ornithological specimens with letters in the NHM alongside collaboration with The Army Museums Ogilby Trust and archives in the Falkland Islands has shed new light on this little-known collector. Most interestingly, this has also provided insights

into the wider methods, interactions between dealers and the role of army personnel in adding to our knowledge of natural history. This study also highlights how the distribution of natural history specimens amongst dealers, intermediaries or 'middlemen' can cause continuing confusion as to the true provenance of individual specimens, in this case a 'Patagonian Ostrich' egg attributed to Charles Darwin.

Harriet Wood & **Graham Oliver**, Invertebrate Biodiversity, Amgueddfa Cymru – National Museum Wales

Trading in Conchology: The blurred distinction between dealer, collector, conchologist

Trading of shells in conchology had an intimate role in the developing of not only collections but the taxonomy of the Mollusca. From the pre-science days of collecting in the 18th century through and continuing today the sale of shells was and remains an important part of the development of collections and the taxonomy of molluscs. Rarity was highly desired and therefore novelty commanded high prices. But novelty had to be recognised and thus such shells were described as new not only by those considered expert but by the collectors themselves. Consequently in the 18th and right through the 19th century there was a frequent blurring of dealing, describing and collecting shells. In this paper we present a range of examples of this complex relationship between dealing and describing from the 18th century era of the Duchess of Portland sale to the modern practices of Poppe & Co.

Geraldine Reid, National Museums Liverpool

Diatom mounters: trade in the microscopic world

During the Victorian era the study of diatoms as a hobby was a fashionable pursuit for the wealthy. They were keen to show friends the resolving power of their optics with these beautiful intricate organisms, using both recently collected material and fossil deposits. The paper shall explore the diatom mounters whose collections made their way into the diatom collections of museums around the world. The beautiful mounts have their legacy as a wonderful modern day resource documenting biodiversity and as a source of material in the continuing discovery of new species.

Mike Buttolph, University College London

The contributions of commercial breeders to early genetics

Those who succeed in trading in animals and plants that have been bred for the purpose usually have a good understanding of the process by which their commodities are produced. This craft knowledge of propagation is quite distinct from the hunting skills and instincts deployed by those who acquire their stock in trade by collecting in the wild.

With the rise of biology in the nineteenth century breeders had opportunities to acquire and apply new scientific knowledge, and in turn to make their own contributions to the further development of the subject.

At the start of the twentieth century the new science of Genetics attracted interest in commercial circles for its great promise as the basis of a more rational approach to breeding. Commercial breeders had pedigree data that could be used to test the new theoretical framework then under construction, and they were in control of breeding populations that could be recruited to give more and better data. Some breeders acquainted themselves with the new ways of thinking, devised and carried out experiments and constructed scientific explanations for their observations.

Many practical breeders contributed to the early growth of genetics. Here I describe the scientific work of two commercial dealers in horticultural seeds and plants - Edward Ashdown Bunyard (1878-1939) at The Royal Nurseries at Maidstone, and Charles Chamberlain Hurst (1870-1947) at Burbage Nurseries, Leicester.

Poster abstracts so far submitted

Andreia Salvador, The Natural History Museum

Stevens' Auction Rooms: The Shell Sales

Molluscan shells have been offered for sale by auction since the late 17th century. Like many museums, the Natural History Museum in London, in addition to the regular donations, increased its collections through purchases from dealers and auction rooms, either buying directly from them, or later acquired by donations from previous purchasers.

One notable auction house was Stevens' Auction Rooms based at 38 King Street, in London's Covent Garden. The company was founded by the bookseller Samuel Paterson (1728-1802) in circa 1759, changing their name to J.C. Stevens in 1834 until it closed in the 1940s.

The Stevens were a family of auctioneers, which specialised in the sale of natural history specimens and ethnographic artefacts. They were John Crace Stevens (1809-1859), his brother Samuel (1817-1899) and John's son, Henry (1843-1925), who took over the business in 1859.

In this poster presentation I am going to focus on the Stevens' shell sales, where some of the most famous collections were auctioned. I will give an overview of the history and importance of the Stevens' Auction Rooms with examples of sales that contributed to the Museum's Mollusca collections.