

NatSCA News

Title: The Natural History Museum, London's Entomology Collections: The Origin or What has been

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Source: P. A. Brown (2009). The Natural History Museum, London's Entomology Collections: The Origin or What has been. *NatSCA News, Issue 17*, 29 - 33.

URL: http://www.natsca.org/article/142

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<u>The Natural History Museum, London's Entomology Collections:</u> <u>The Origin or What has been.</u>

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Picture a snowy London town on Christmas Eve and we are at the NHM at South Kensington. We, the audience have just had a visitation from a spectre of a long dead Entomology curator (maybe the ghost of W. N. P. Barbellion, the disappointed diarist who worked on Lice at the NHM 1912 - 1917) who tells us that we are to be visited by three apparitions who will represent the past, present and future of the National Entomological Collections. I am the first, the ghost of Museum past and the morale of my tale, for your improvement and edification, is what has been and what not to do!

The National Collection started as part of a cabinet of curiosities by Sir Hans Sloane who lived from 1660 to 1753, who was a physician with a great curiosity for natural science. He started collecting specimens when working for the Governor of Jamaica and John Ray reported in 1704 that Sloane had a particular knowledge of flies. He housed his collections at Bloomsbury, then in Chelsea where it became the largest

and most famous collection made by a private individual and was described as a 'Knick Knackery' by Thomas Hearn, including circa 5400 insects.

The earliest constituent and intact collection from the early years is that made by Leonard Plukenet who was the Queen's gardener at Hampton Court and who lived from 1642 to 1706. He collected insects from the London area and pressed them within the pages of a book in the same manner as his botany specimens. This was kept in the Library for many years by librarians with little knowledge of insects but is now held within the Entomology Historic collection. Our colleague Les Jessop embarked on conservation work on these specimens, reaffixing the somewhat fragmented specimens with reversible glue (Fig 1).

Sloane purchased the James Petiver collection after his death in 1700, which consisted of more pressed insects in bound volumes. This is the frontispiece of the second of two Volumes. Note the name Cromwell Mortimer who was Sloane's curator. Within these volumes are specimens pressed between sheets of mica and sealed with paper strips. The Insect Room set up at the Montagu House in 1753 where the collections were described as "mouldering and blackening in the tombe or charnel house of unknown treasures". Between 1813 & 1835, the



Fig. 1. Conserving the Plukenet specimens.

contents of much of Sloane's collections were periodically 'cleansed' of pests by annual cremations of infested specimens by William Elford Leach, so this book and mica pressed specimens may only have survived because of this method of preservation. These lunar moths survived because they were pest proof within these mica sheets and held in the Museum Library during the period of burnings. 770 Sloane specimens are known to have survived.

Seventeen 18th century drawers of Petiver specimens survive and the insects are housed in small glass boxes (Fig.2). Some of the specimens have pin holes so they were once mounted in cork bottomed boxes or drawers. These specimens have catalogue numbers written by Cromwell Mortimer, which can be traced to an incomplete catalogue held in our library. Carolus Linnaeus inspected some of this collection in 1736 and mentioned such in his 10th edition of Systema Naturae of 1758, Systema Entomologica 1775 & Species Insectorum of 1781.



Fig. 2. Petiver collection drawer.

Petiver was a London Apothecary who did business with passing ship's captains government officials and he handed out this sheet of his 'brief directions for the ease of making and preserving collections of all natural Curiosities' (including insects) of 1700, hoping that these volunteers on their world travels would collect and bring back specimens to his shop, which many of them did. He asked for insects to be preserved in spirit or if mealy to be pressed in books but he does not mention pinning specimens.

One such government official was John Lawson who was a land surveyor in the North American colonies who collected this dragonfly (Fig.3) for Petiver and who was killed whilst on duty by natives in Carolina in 1711. Lawson is now considered the founding father of Entomology in North Carolina.

The British Museum (BM) in Bloomsbury opened in January 1759 in Montague House from the bequest of Hans Sloane. The insect room in the North west corner of the ground floor of the British Museum was initially described by Alfred Russell Wallace & Henry Walter Bates when they visited in 1848 as in utmost confusion, scarcely a genus in proper order and duly named and of little aid to any one wishing to work out any scientific problem in which insects supply the facts! But by 1858, Bates concluded that the collection had become excellent with specimens ticketed with determination and provenance.

Another discrete collection we hold is that made by Sir Joseph Banks who was not only a great botanist. He started his collection when as a boy in Lincolnshire and it holds many specimens collected on Captain

James Cook's World voyage on the Endeavour. This is the first collection which developed beyond the cabinet of curiosities to a fully taxonomic state. He used pins and shallow glass topped drawers which became the norm for insect collections by the end of the 18th Century. This collection is very primary type rich, designated by Linnaeus's student Johann Christian Fabricius and also contains specimens from the Matthew Flinders and William Bligh expeditions (Fig 4). On Banks' death the collection came to Banks' archivist Brown who presented it to the Linnaean Society who not wanting a non-Linnaeus collection passed it to the British Museum in 1860. These specimens were transferred from the original drawers & cabinets into new cork lined Hill drawers after donation in which they still reside. Most of our historic collections have been subsumed into the modern taxonomically arranged collections so are mostly no longer associated such as with Darwin specimens. Such drawers fitted into the figured cabinet (Fig 5) which is an original from Bloomsbury and the drawer became the standard dimension for our present Hill drawers.



Fig. 3. Lawson's dragonfly



Fig. 4. Banks' specimens with later Type designations.



Fig. 5. An original Bloomsbury insect cabinet.

The origin of The Natural History Museum (South Kensington) was brought about by, amongst other things, the congestion of specimens at the BM. Several people, including the notable Richard Owen, argued that the natural history collections needed their own building.

One has to ask the question as to whether we leave the specimens in their historic cabinets on brass pins in cork as a historic document in its own right or do we scrape the cork out and replace with plastazote and re-house them into new pest proof cabinets as we have done here. The old brass pins which have in the past had their heads snipped off to fit the new shallow drawers have also caused verdigris deterioration in the specimens which have been replaced where necessary.

Exhibitions of our specimens have not been a priority in our museum. Wax Models of small insects have been made at different times as this is the best way of exhibiting such to the public. We still have a few models which we hope to display in DC2.

The National repository attracted bequeathed legacies, donations and purchases with the collecting activities of gentlemen collectors in the UK and throughout the growing British Empire. Further specimens collected by Sir Alfred Russell Wallace and Charles Darwin's Beagle voyage were added and in 1939, we acquired the immense collection of Lepidoptera from Baron Lionel Walter Rothschild and his Museum at Tring and which are now part of our holdings at Wandsworth and shortly to be returned to our new Darwin Centre.



Fig. 6. The Type cabinet used to evacuate Types during WW2.

The early collection consisted of a great variety of cabinet sizes, shapes and condition and often separate collections as opposed to the single main collection series of today.

A slow improvement in the accessibility of the specimens and data has occurred over the decades with the development of acquisition registers and species level and typed species & type specimen card indexes as here. Staff levels rose to over 100 with the addition of the symbiotic Imperial later to become the Common-wealth Institute of Entomology staff and such a staffing level continued until recently.

The entomology collections were moved larger accommodation to our new Museum in South Kensington in 1882-83 into the south west corridor now occupied by Molluscs the responsibility of the Zoology Department until 1913 when The Entomology Department came into being with it's own Keeper. With the growth of our collections by up to half a million specimens per year with the collections generated by professional research scientists and from the donations from increasing numbers of able amateurs we soon outgrew this space and the purpose designed Entom block was built in two halves between 1936 and 1952. Variable cabinet and drawer quality and inaccessible dust pockets meant that endemic pest problems continued in the Entomology Building but which were lessened with the use of insecticides until the recent demolition of the Entomology Building. (Fig 7).



Fig. 7. The Old Entomology Block (centre) behind the Zoology Spirit building, r.i.p!

Acknowledgements

I wish to particularly thank Dave & Kim Goodger for supplying information and papers.

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