



**NatSCA**

Natural Sciences Collections Association

<http://www.natsca.org>

## NatSCA News

---

Title: The Conservation of Sir Hans Sloane's Collection of Vegetables and Vegetable Substances

Author(s): Miller, Z.

Source: Miller, Z. (2004). The Conservation of Sir Hans Sloane's Collection of Vegetables and Vegetable Substances. *NatSCA News, Issue 2*, 25 - 27.

URL: <http://www.natsca.org/article/328>

---

NatSCA supports open access publication as part of its mission is to promote and support natural science collections. NatSCA uses the Creative Commons Attribution License (CCAL) <http://creativecommons.org/licenses/by/2.5/> for all works we publish. Under CCAL authors retain ownership of the copyright for their article, but authors allow anyone to download, reuse, reprint, modify, distribute, and/or copy articles in NatSCA publications, so long as the original authors and source are cited.

## **The Conservation of Sir Hans Sloane's Collection of Vegetables and Vegetable Substances**

**- Zoë Miller, MA Conservation student, Camberwell College of Arts, London**

### *Abstract*

A continuing project to assess, database and conserve Sir Hans Sloane's 'Collection of Vegetables and Vegetable Substances' is under way at the Natural History Museum. This article follows its progress and discusses the historical relevance of the collection.

### *Historical background*

The Vegetable Substances Collection consists of over 12,000 small boxes containing seeds and their pods, fruit stones and various other plant matter. The boxes have glass tops and bottoms and wooden sides with decorative, marbled and sometimes gilded paper coverings. The seeds are sealed within these and all have handwritten labels describing their contents and catalogue number in iron gall ink. They are stored side by side in wooden drawers numbered 1-90 with a four -volume register detailing the contents and origin of each specimen.

Physician and naturalist Sir Hans Sloane started the collection around 1700, but many specimens came from other notable collectors such as the Duchess of Beaufort, Mark Catesby, and James Petiver as well as objects collected on Sloane's famous trip to Jamaica. The collection also contains material from the Bahamas, Guinea, Paraguay, the East Indies and North America. Some of the specimens are more curious than botanic, such as 'mummified fingers', 'goat's blood' and 'silkworm cocoons' which, along with many Chinese herbs amassed by Sloane were believed to have medicinal properties. Many are very unspecific as to origin or contents, labelled with descriptions such as 'a pod' but are considered to be of immense historical value as they are a part of the original collection purchased from Sir Hans Sloane by the nation, forming the British Museum in 1753.

### *The collection survey and database*

Last summer, a survey of the collection began, to ascertain how much of the collection was present and in what state of repair. It had been largely left untouched since the 1940's when many broken and fragile boxes had been repaired with gummed tape and some replaced altogether with cardboard boxes after the botany department had been hit by a bomb in the Second World War. Many of the boxes are covered in heavy black soot and have become very brittle and weakened as a result.

The drawers in which they are stored are in a good condition but were also very dirty. The boxes were sometimes packed tightly into them and many labels and paper fragments vulnerable to pressure and abrasion. Some have broken glass and loose wooden sides and their contents have leaked into the drawer. Another cause of degradation was from previous insect attacks, leaving the seeds powdery and small holes in the sides of the boxes. Dead insects could even be seen amongst the pips and stones.

One of the biggest problems was that there was no digital record of the collection and its contents for use by museum staff or the general public, and as the handwritten registers are arranged numerically, locating a particular specimen is impossible unless you know the number. So the first stage was to set up a database, detailing each specimen, its contents,

the drawer number in which it could be found and a barcode number so that each specimen could be easily called up if required for research. As there were over 12,000 individual items in the collection, it was decided that a conservation project would do the most good if each object could be assessed and stabilised, leaving recommendations for further work in the future. This meant that rather than concentrating on the full treatment of a few specimens, every box in the collection could be examined. This formed the objective of the project and treatment decisions began from there.

A condition statement was drawn up to assess what the major sources of damage are and what proportion of the 12,000 boxes were stable, how many were in need of some attention and how many were highly unstable requiring immediate work. All the boxes were found to be dirty, mainly soot and loose surface dust, with only minimal staining, and dried adhesive residues could be observed on the glass tops and bottoms of each box, sometimes obscuring the specimen from view. The dirt was contributing to their continuing degradation, making their environment inside wooden drawers even more acidic. The coloured paper (red, green, black, yellow, gold) was faded with some loss of the gilding but most remains intact as an accurate record of decorative papers of the period. The labels had suffered some tearing and many were folded, particularly those which were larger than the boxes upon which they were adhered. Corners were dog-eared and some labels peeling off. The iron gall ink handwriting was in a reasonable state with some strike-through, and only a small proportion of the letters dropping out due to the gallo-tannic acid in the ink. Those boxes with broken sides or glass were classed as most in need, as the contents were leaking with one or two specimens lost altogether.

Whilst the condition of the boxes was assessed, the drawers were vacuumed using a museum vac with a thin nozzle, and lined with manila paper to buffer the acidity of the wood where it was in contact with the boxes.

### *Conservation*

Loose dirt, powdered specimen residues and insect frass were brushed off each box and then a chemical sponge used to gently pick up soot and dirt from the delicate gilded paper. An eraser worked well to remove discolouration from the labels as this paper was more robust and could withstand a rubbing motion. Dried adhesive residues were scratched off the glass (using a scalpel) of boxes that were sound in structure and then the glass was swabbed with a damp cotton bud to pick up any loosened particles.

The next stage was to re-adhere any peeling labels or dog-eared paper using a 5% solution of methyl cellulose and a fine brush, subsequently rubbed into place through bondina with a bone folder. Methyl cellulose was chosen as it is not a food source for insects or other pests found frequently in herbarium collections and it could be made quite viscose to reduce the amount of moisture introduced into the collection. It also resists becoming mouldy (as wheat starch pastes do) and could last through long periods of work.

Many of the boxes were too fragile to be repaired or cleaned as handling caused the wooden sides to crack or specimens to leak out. Some of the paper holding the glass in place had become torn and the square piece of glass could be opened like a 'lid'. These boxes were tied with library tape as a temporary measure and all boxes that were leaking due to glass or paper damage were put in small transparent bags.

The boxes were replaced in the drawers in catalogue number order for easy retrieval in the future and all treatment carried out to each box was entered in the database, and a condition rating given from 1-4. This rating gives an overview of recommendations for further treatment, 1 being stable where no further treatment is required and 4 describing those boxes which require full conservation intervention to ensure their continuing existence and enable them to continue to be consulted for research and study.

*Proposed further work*

Due to the tight storage of the Vegetable Substances collection and financial demands on the herbarium as a whole, the proposed treatments for the worst affected specimens involve individual phase boxes to be constructed out of manila, and which fold around all four sides of the paper and glass specimen boxes in a design similar to book wrappers. This would be restricted to the most damaged, as the space within the drawers does not permit for a layer of card around each box. As the botanical specimen is sealed inside each box, consultation for research purposes is expected to be minimal but their potential for display in an exhibition is great as the 300 year old, hand crafted boxes are of enormous aesthetic and historic interest.

*The value of historical collections in natural history museums*

Some of the collection can be seen currently in the Kings Library at the British Museum and a selection of boxes were on display last autumn in an exhibition marking the 250th anniversary of Sir Hans Sloane's death and his achievements as a prolific collector, at the Natural History Museum in London. They accompanied the (in)famous 'Vegetable Lamb of Tartary' a curiosity which Sloane acquired from the Royal Society, thought to be a lamb which grew on a stem from the ground, but which has now been identified as a rhizome from the fern *Cibotium barometz*.

Collections such as Sloane's 'Vegetable Substances' are of enormous value to museums in that they ground the continuing research and practices of natural history in a great scientific tradition and remind those who work with these objects of the persistence and curiosity of the greatest collectors in history. The longevity of these objects and others like them depends upon ongoing care and preservation. Their deterioration would be a great loss to the museum and the nation.

*Acknowledgements*

Full acknowledgements go to Hannah McPherson (Royal Botanic Gardens, Sydney) for her work designing and implementing the survey, to Rika Matsushima (fellow student on masters degree in conservation at Camberwell) and to curator Victoria Noble of the Botany Department at NHM.