

SEEDS OF INDUSTRY AND EMPIRE: ECONOMIC BOTANY COLLECTIONS BETWEEN NATURE AND CULTURE

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Machines did not merely run on coal, they consumed cotton, wool, dyes, and vegetable oils, and the strength of the peripheral populations which provided these... There was, in short, a concern with economic botany across the British Empire.

(Drayton 2000: 194–5)

Introduction

These words by imperial historian Richard Drayton aptly reflect the importance of plant raw materials to economic life in the nineteenth century. Scientists such as Kew's Sir William Hooker structured their botanical research programmes in order to satisfy the ever-increasing demand for useful plants, and thus a new discipline was born—economic botany. This paper is concerned with economic botany collections, which may not appear to be of immediate interest to the museum ethnographer. However, such biocultural collections were, and still are, very much concerned with the accumulation of ethnographic material culture and offer an alternative insight into the notion of 'nature and culture,' one in which nature and culture are juxtaposed within a single interpretative framework.

But first that term—nature and culture—requires some unpacking. Whilst a more general definition of the term is that of the 'relationships that societies, civilizations, empires, regions, nation-states have with Nature,' (Berghahn website) when used within the context of museum studies, it carries with it a set of historical and epistemological implications. It has been used in reference to the multi-disciplinarity of those universal institutions such as the original British Museum (Alberti 2009: 2), in which natural history specimens and human material culture, exhibited in discrete displays but nonetheless within the same building, formed part of a singular depiction of the world. But with the rise of anthropology in the late nineteenth century this juxtaposition became problematic, according to a number of writers (Bal 1992; Coombes 1994; Haraway 1985; Hooper-Greenhill 1992, Karp and Lavine 1991).

By this stage natural history and art collections had become separated—spatially as well as epistemologically—by the definition and reinforcement of

disciplinary boundaries. This period coincided with that of increased imperial expansion amongst European powers and of nation-building in settler territories such as the United States of America. Ethnographic artefacts from indigenous peoples at home or abroad did not find their way into the art museums; rather they were displayed in museums of natural history. According to the dominant orthodoxy in which history was viewed and displayed as an uninterrupted line of progress, culminating in ‘the contemporary triumphs of industrial capitalism,’ (Bennett 1995: 77), ‘primitive’ peoples were thus implicitly depicted at an earlier stage of development, representing ‘the point of transition between nature and culture...the point at which human history emerges from nature but has not properly begun its course’ (ibid.: 789).

Another school of thought has questioned the very possibility of natural objects within the museum context. As Susan Pearce has described the process, natural history specimens are selected according to certain museological criteria and detached from their natural context. They are preserved and mounted, or displayed in jars, before being organized into some kind of relationship with other material (Pearce 1992: 6). However, the work undertaken to render them ‘true-to-nature’ is often concealed; names of taxidermists, for example, are rarely included on museum labels (Alberti 2008). In this paper we go some way towards this viewpoint. We accept that botanical specimens, be they dried and mounted, or preserved in spirit and displayed in glass jars, are as much cultural artefacts as they are natural history data. However for the purposes of better understanding the perspective of nineteenth-century museums, we wittingly classify plant parts as ‘nature’, regardless of the preparatory practices to which they have been subjected between collection in the field and display in the museum; and we classify objects made by humans for human usage as ‘culture’.

In this paper our overarching desire is to increase awareness amongst researchers and museum practitioners of the richness of ethnographic material to be found in former and extant collections of economic botany. To this end we begin by providing the historical context for the rise and sometimes fall of such collections, a context which explains the very presence of objects of material culture in what may otherwise be deemed natural history collections. We then survey the present-day situation where we give examples of how such collections are, or are not, being used currently. And we conclude by considering the possible futures for these valuable resources. But we begin with the collection with which we are both most closely involved, the Economic Botany Collection at Kew Gardens.

The nature and purpose of economic botany collections

In 1847 Sir William Hooker opened the world’s first known Museum of Economic Botany at the Royal Botanic Gardens, Kew (Cornish 2013, 2015).



Figure 1. Case 67 in the Museum of Economic Botany, demonstrates the composite approach developed in economic botany displays. Nature and culture are here juxtaposed in a single interpretative framework. On the upper shelf can be seen the large spadices of the maripa palm, as well as specimens of maripa fruits in jars. On the lower shelf are walking sticks made from palms, illustrating the potential utility of particular plants to an industrialized society. Photographer: J. Lotsy. Courtesy and copyright, Trustees of the Royal Botanic Gardens, Kew.

The display principle was one of ‘the raw material, and, to a certain extent, also the manufactured or prepared article ... correctly named, and accompanied by some account of its origin, history, native country, etc.’ (Hooker 1855: 3). This signalled a new, more composite approach to display, as can be seen in Figure 1. In this case dedicated to palms, we not only have the spadices and fruits of the *Attalea maripa* species, but also botanical illustrations emphasizing the useful features of the plant and photographs showing its biogeographical context—valuable information for potential investors in plantations in colonial territories. On the shelf immediately below the specimens can be seen a walking stick and sunshade handle made from a similar palm, and above them a ‘blank’: an uprooted palm, waiting to be polished and representing a mid-stage between plant specimen and finished goods. This display principle was known as the illustrative series and was used, not only in displays of economic botany, but also in international and national exhibitions, in schools, and even in shops. The emphasis was on process, or more accurately the processes by which plants could be transformed into objects of use to people, and they were contextualized scientifically, geographically, and economically. This, then, was not a case of nature versus culture, but a scenario in which both nature and culture formed part of a single plant-based continuum.

As well as objects manufactured in industrialized nations, like the walking sticks, the Museum also collected ethnographic material. Indeed, the first ethnographic object in the collection predated the Museum itself; it was one of ‘various specimens received from various sources & which have been collected from time to time in the Garden’, a Maori floor mat, made of *Phormium tenax* (harakeke or New Zealand flax) and donated by New Zealand missionary William Colenso in the mid-1840s (Figures 2a and 2b). It was transferred to the British Museum in 1960 where it can currently be found. The label for this object when in the Kew Museum can be seen at Figure 2b. It begins with a simple object descriptor followed by the Latin name of the plant from which it is made, then interpretative text which is concerned as much with the object’s physical properties as it is with its ethnological significance. Overall the emphasis is on science and technology—what plant the object is made from, and how it was made. Scrutinizing labels for these textual clues can enable ethnographers to ascertain the types of institution through which an object may have passed on its way to the ethnographic collection.

But how did ethnographic objects function within the displays at the Museum of Economic Botany? They were of particular use in the interpretation of plants unknown to British manufacturers. Where local usages were known for a given plant, ethnographic objects would be displayed as examples of the ‘manufactured’ or ‘prepared’ article, as demonstrated in Figure 3. Indeed what is striking about this image is the sheer preponderance of indigenous material culture. Suspended from the ceiling is an Indian dug-out canoe which was gifted to the Kew Museum after the 1886 Colonial and Indian Exhibition,

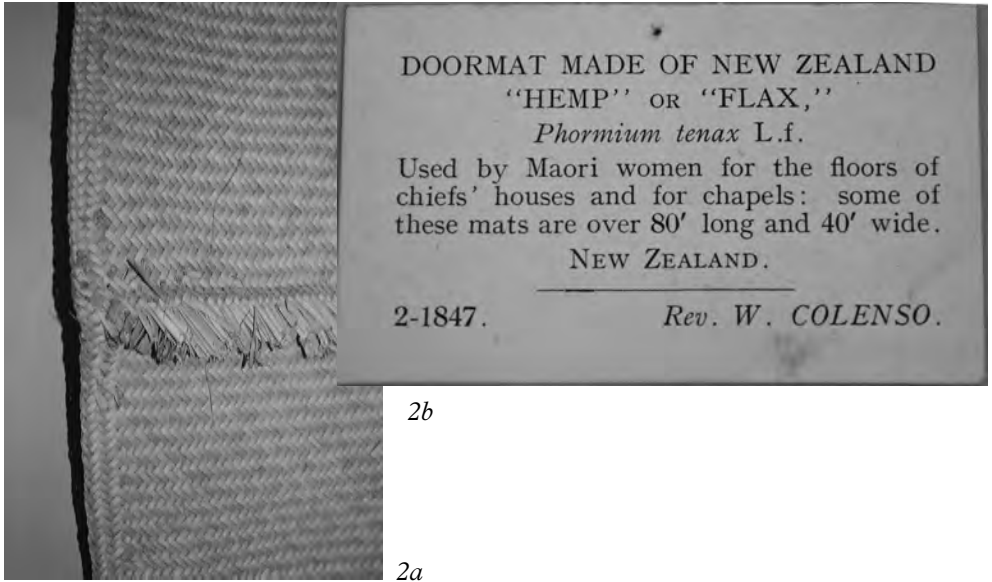


Figure 2. a: A mat donated to William Hooker at Kew Gardens by missionary William Colenso, now at the British Museum (Oc1960,11.9); b: The label used in the Kew Museum with an emphasis on materials and manufacture. Courtesy and copyright the Trustees of the British Museum. Courtesy and copyright the Trustees of the British Museum.



Figure 3. A portrait of providence: Museum No. 2 of the Museum of Economic Botany, dedicated to monocotyledonous plants and cryptogams, and rich in ethnographic objects. Courtesy and copyright, Trustees of the Royal Botanic Gardens, Kew.

‘made of a trunk of a Palmyra palm, the central part of which has been scraped out.’ (Hooker 1855: 3) Note again the emphasis on materials and methods of production. In a glass cabinet on the balcony are displayed ‘two native robes from Tahiti, made of Tapa cloth, ornamented with the cuticle of the leaves of the sugar cane.’ (RBGK 1895: 67) and in the glass table cases on the ground floor, ‘A large collection of baskets, hats, fans, &c., made from Palmyra leaves are here shown’ (RBGK 1895: 39).

Collecting and display

Donors to the Kew Museum and other economic botany collections included missionaries, colonial residents, scientists accompanying voyages of discovery, naval officers and international exhibitions. In *A Manual of Scientific Enquiry*, the Admiralty’s handbook for officers and ‘travellers in general,’ first published in 1849, Sir William Hooker provided mariners and other travellers with an extended list of desiderata for his nascent museum. They were exhorted to collect, not only plant specimens, but also plant-derived products, for example, ‘the Bucku of the South African Hottentots ... to determine the different kinds collected by the natives’ (Hooker 1849: 415). ‘Bucku’ was the indigenous name for a group of aromatic plants native to the Cape of Good Hope, used by the Khoekhoe people for cosmetic and medicinal purposes. Its inclusion in the *Manual* signifies the active interest in *materia medica* (medicinal plants and preparations) by scientists like Sir William Hooker, John Lindley and Jonathan Pereira in the pre-synthetics age, when the medical profession was heavily reliant on plants as sources of medicinal compounds.

The network of Kew and its botanical collectors around the world in the late nineteenth century has been investigated by Jim Endersby in *Imperial Nature* (2008). He draws particular attention to Sir William Hooker’s botanist son (and successor as Director of Kew), Joseph, and his relationship with collectors, many of whom were amateur botanists. These collectors had their own interests, and considerable autonomy as to what, where and how much they collected but they did keep up regular correspondence with Hooker about their activities. For his part, Hooker provided them with advice, plant names for specimens received, and practical items such as books and microscopes. The individual agency of the collectors is still apparent in the heterogeneity of the Economic Botany Collection, consisting of what we would today consider raw materials, such as wood samples and blocks of resin, as well as what we would now consider to be ethnographic artefacts, in other words, made objects.

Edward Man is an example of a collector who gave almost entirely ethnographic objects to Kew, in this case objects from the Andaman and Nicobar Islands. These range from a necklace of dugong bones (Catalogue no. EBC 64981) to a waist belt of bark (EBC 64866). At the time Man started collecting for Kew in the 1880s, he was also collecting on a large scale for



a

Figure 4. Barkcloth jacket made from *Ficus*, Great Nicobar, acquired by Kew from Edward Man in 1881 (EBC 43508). a. Prior to conservation: folded, maximum dimension c. 35cm; b. after conservation by Konstantinos Chatziantoniou in 2006, maximum dimension c. XXcm. Courtesy and copyright Centre for Textile Conservation, University of Glasgow.



b

ethnographic collections such as the British Museum and the Pitt Rivers Museum, with the aim of ‘salvaging’ a disappearing culture. The Andaman and Nicobar cultures were of key importance to the construction of evolutionary narratives which dominated scientific thought during this period (cf. Tony Bennett 1995, 2004; Annie Coombes 1994, and Donna Haraway 1985). In economic botany displays, it is striking that ethnographic objects were not appropriated for this narrative; rather, indigenous and industrial products from the same plant were displayed together as examples of the uses of particular plant species. There were other distinctive aspects of display at Kew. What we would today recognize as ethnographic objects were, in the main, displayed for their functional properties. For example, the barkcloth jacket commissioned by Man on Great Nicobar, and acquired by Kew in 1881 was displayed rolled up at a fraction of its unfolded size, as it arrived at Kew (Figure 4), and the same is true of many other textiles, such as tapa cloth. It is only now, through collaboration with museum conservation students, that many of these pieces are

being unfolded for the first time. The original importance of the bark jacket was simply to show that a textile could be made from a given plant (misidentified on the nineteenth century label as *Celtis*; in fact a fig species, *Ficus*). The arrangement of displays also differed from that in ethnographic museums, which favoured classification by use or cultural group. At Kew the Museum was originally organized according to the end uses of plants, which proved to be an inefficient use of space as so many plants had multiple applications and therefore appeared multiple times in the displays. By the time that the first guide book was published in 1855, the Museum has been reorganized into taxonomic order, in an evolutionary sequence of plant families. Organisation by family also enabled museum visitors to learn the relationship between plant families and plant properties.

So ethnographic objects were used to demonstrate the uses to which previously unknown plant species could be put. But that is not to say that there was not an imperialist meta-text at play. The presence of ethnographic objects in such collections conveyed two distinct yet interconnected ideas: that the colonies were a virtually limitless source of raw materials—both plants and humans—for British industry; and that indigenous practices provided the key to tapping such resources. To return to Richard Drayton, the Museum offered ‘a portrait of Providence’ (2000: 196). However it offered more than that: Sir William Hooker’s original definition of the Museum was as a repository for ‘all kinds of useful and curious Vegetable Products, which neither the living plants of the Garden nor the specimens in the Herbarium could exhibit.’ (Hooker 1855: 3). Alongside the useful, then, there was also the curious—the exotic, the unique, the unfamiliar. As Sadiya Qureshi argues (2011), ethnographic displays were spaces where urban Victorians could feed their fascination with, and further their interests in what was considered human natural history, allowing them to engage with a range of contemporary debates from science to slavery (Qureshi 2011: 8).

Beyond Kew

In Kew’s Museum of Economic Botany raw materials and ethnographic objects were displayed as part of a seamless series which aimed to convey the processes involved in manufacturing. However this very distinctive type of display did not originate at Kew. For instance, Charles Wilkins, an orientalist and former writer for the East India Company, submitted a written proposal for a museum at East India House in 1799. Under the heading ‘artificial productions,’ he included ‘samples...of every article in silk and cotton, in every stage from the cocoon and pod to the cloth ready for the market’ (Wilkins 1799, cited in Desmond 1982: 9). Nonetheless, it is clear that the Kew model was rapidly followed worldwide, leading to the establishment of many such galleries and museums (Cornish and Nesbitt 2014). Kew’s influence can be traced through correspondence, as,



Figure 5. Museum of Economic Botany at Adelaide Botanical Garden, renovated and reopened in 2009. Courtesy and copyright Grant Hancock.

for example in 1858 when Asa Gray wrote to Sir William Hooker, requesting duplicate specimens for the newly established Botanical Museum at Harvard University, and through Kew's extensive lists of specimens distributed to other museums. From 1881 until 1914 the Kew Museum kept comprehensive records of each specimen sent out. The numbers are remarkably high: in these thirty-four years 38,930 specimens were sent to other museums, and 36,942 to schools. The range of material sent reflects the breadth of the collection held at Kew, which also included many duplicates of ethnographic objects.

Economic displays were found within a number of museum types, several of which have now largely disappeared. Free-standing museums of economic botany were those most obviously modelled on Kew. In the case of Missouri Botanical Garden in St. Louis, its museum, built in 1860, was actually built to the same plan as Kew's first Museum of Economic Botany (Cornish & Nesbitt 2014: 282–3). As in St. Louis, such museums were very often associated with botanical gardens: Adelaide (1864), Buitenzorg (now Bogor, nineteenth century), Brisbane (by 1890), Dublin (1852), Edinburgh (1851), and so on. Sometimes the format was of a botanical museum, always with a substantial economic botany component, as at Berlin (1878) and Hamburg (1885).

Commercial or industrial museums are another type of lost museum. Many of these were very large, as in the Commercial Museum in Philadelphia (Conn 2010: 172–196), or the City Industrial Museum of Glasgow, which showed ‘all the useful products of the three kingdoms of nature’ (Paton 1878: 3). World’s Fairs and other exhibitions were short-lived but often featured very large displays of vegetable products, which at the end of exhibitions entered permanent collections, as in the case of many London and Paris exhibitions destined for Kew’s Museum of Economic Botany, or the substantial economic botany holdings of the Field Museum in Chicago, which derive from the 1893 World’s Columbian Exposition. And there are also what might be termed overtly colonial museums, such as the original manifestations of the Tropenmuseum (Tropical Museum) (1864) in Amsterdam, and the Royal Museum for Central Africa (1897) in Tervuren, Belgium. These museums acted both literally and metaphorically as showcases for the human and natural resources of colonized territories.

We have recently come to realize that the most hidden, forgotten category of economic botany display is that formerly present in general museums, and in particular local authority museums (Table 1). Initial enquiries (this is work in progress) have located nearly thirty such museums that had identifiable economic botany display; some of these were large, for example the galleries at Liverpool (Stansfield 1933, Bird & Hallett 1994) and Bolton museums. Economic botany was endorsed at the highest level – Prince Albert exercised an active interest in the subject through the Royal Society for the Encouragement of Arts and there were many economic botany items in the family museum at Osborne House. We estimate that perhaps a sixth of the displays there comprise economic botany.

We can see, therefore, that the category of economic botany was well understood, and prevalent in museum culture in the period 1850–1930. What has happened to this category, and these displays and collections, since then?

The fall—and rise—of economic botany collections

By the First World War the Museum of Economic Botany at Kew was at its peak, with four buildings occupied at various points between 1847 and 1910. However, in the decades following the establishment of the Imperial Institute in 1887, more and more of Kew’s responsibilities for useful plants, particularly crops and forestry, were transferred to other institutions, and Kew’s present-day focus is on wild plant biodiversity. The question of the Kew museums came to a head in 1958. In late 1956, Sir George Taylor, newly appointed Director of Kew, had received a letter highly critical of the Kew museums from Sir Sydney Cockerell, former director of the Fitzwilliam Museum, who had retired to Kew. Furthermore, Taylor wished to convert the largest museum building, the eighteenth century Orangery, back to its function as a glasshouse in time for Kew’s bicentennial events programme in 1959. In March 1957 a visiting

group, headed by Sir Eric Ashby, was organized via the Ministry of Agriculture, Fisheries and Food (MAFF), to report on Kew and its operations. Taylor ensured that the ensuing report recommended large-scale reorganization of the museums (Clark 2011; Desmond 2007: 282-3). In order to free space, staff were invited from other museums to select material. The letters from Kew specified that it was material of ‘ethnographic interest’ that was on offer (Letter from B.E. Haines to A. Digby, British Museum, 11 October 1960). Between 1960 and 1961 about 2000 objects were given to the British Museum, about 300 to the Pitt Rivers Museum, and at least 100 to the Horniman Museum. Although several thousand ethnographic objects remain at Kew, much of the material best suited to display left the Museum.

These events were part of much more widespread pattern of economic botany collections being taken off display during the 1960s. Documentation of this process is often scanty; even in the case of Kew, it is only recently that the full nature of reorganisation and partial deaccessioning has become clear. Some collections elsewhere were destroyed—it would appear that both the building and the contents of the Museum at the Royal Botanic Garden, Edinburgh met this fate in 1960; more often, galleries were closed and material moved into storage. Today, only a handful of museums can demonstrate continuity in the presence of large economic botany displays, notably the Museum of Economic Botany in Adelaide (Emmett & Kanellos 2010), and the Economic Botany gallery at the Indian Museum, Kolkata.

We suspect that the factors apparent at Kew operated elsewhere; in the post-war period, economic botany collections doubtless appeared old-fashioned, particularly as specimens were often housed in glass jars or glass-topped boxes of antique appearance; industrial and public interest in natural products was on the wane, in an era when oil-based products appeared more modern. A further factor, and one highly germane to the subject of this paper, is the change in classification of economic botany specimens first remarked on by Alison Clark (2011). When objects, such as the mat discussed above, left the Kew Museum, they entered ethnographic departments and became ethnographic objects. And as galleries of economic botany were closed in museums throughout the industrialized world, their contents were very often divided between departments of botany, on the one hand, and world culture/ethnography on the other, with the raw materials reclassified as natural history specimens, and certain man-made objects as ethnographia. We are still at the early stages of tracking what happened to specimens, but can point to botanical museums at Kew, Adelaide, Brisbane and Stockholm, as definite examples of this division and reclassification of objects, and expect the same to be true of the larger general museums, such as Manchester. Another example is the Tropenmuseum in Amsterdam, a colonial museum which has retained its ethnographic collections, but passed on its raw materials to the Netherlands’ main natural history museum, Naturalis, in Leiden. Thus, over three decades from the 1960s to 1980s, a long-established

and recognizable category of collection disappeared, one which offered a unified view of nature and culture, and was replaced with one that forced the classification of objects into the one or the other.

Conclusions: opportunities for research and display

In part triggered by the Earth Summit of 1992, there has been a revival of interest in sustainability, and thus in natural products. A corresponding interest in reviving old economic botany collections, and starting new ones, is reflected in the recent publication of a major reference work on their curation and use: *Curating biocultural collections: a handbook* (Salick et al. 2014). One major aim of this book is to introduce the curators of both natural history and ethnographic collections to the techniques used by the other. We believe museum anthropologists will find it worthwhile to be more aware of economic botany collections for three reasons:

1. *Reservoirs of ethnographic objects.*

Depending on the period in which they were formed, the institutional context, and subsequent history of disposals, economic botany collections may be rich in underexplored objects. This is certainly true of Kew, Dublin (National Botanic Gardens, Glasnevin) and Harvard, for example. Very few economic botany collections have online databases,¹ although many have been catalogued on stand-alone databases or spreadsheets. Table 1 in this paper, and the more international list in Cornish & Nesbitt (2014: 272) are good starting points for the location of such collections. A promising topic for further investigation is the overlap in collectors and collecting between ethnographic and economic botany collections. The differences may be greater than we expect: Wayne Modest (2012: 90–92) draws attention to the unusually rich ethnographic holdings from the Caribbean at Kew, perhaps reflecting the fact that the collecting policies of economic botanists were not susceptible to the same progressivist biases that affected other museum curators.

When economic botany collections fragment, this can lead to loss of knowledge about documentation relating to specimens. Awareness of the history of economic botany collections is important in tracking down documentation; for example, Kew now has much clearer lines of communication with other museums holding former Kew material, ensuring that researchers can learn about the original documentation which is still held at Kew. Recent work on objects from Australia, originally at Kew and now at the British Museum, demonstrate the value of this approach (Clark 2011; Cornish 2012).

2. *New research perspectives.*

It is our view that economic botany collections offer a new perspective on the history of collecting and display of ethnographic material in the age of empire,

one which did not rely on an evolutionary hierarchy model. Such displays were distinct spaces where nature and culture were juxtaposed within a single interpretative framework, one which told a story of process and progress, of the transformation from plant raw materials to finished goods. The histories embodied in these collections make them worthy objects of study to researchers from a diverse range of fields, indeed, they represent a means by which arts, humanities and sciences can converge in valuable interdisciplinary studies.

3. *Public engagement.*

Museums are rediscovering economic botany collections for new displays that cross the boundaries of nature and culture, very much as practised in the nineteenth century. The Santos Museum of Economic Botany at the Adelaide Botanic Garden is an example of a museum of economic botany that has been re-imagined for a twenty-first century audience (Figure 6). Its mission—and the mission of the botanic garden within which it sits—is to display the interplay between nature and culture. The long cabinets feature displays of plant uses arranged by family—as in the original museum at Kew—but the twenty-first century has added an artistic intervention in the form of a cabinet by Fiona Hall and a temporary exhibition space for related art. Closer to home, Manchester Museum has re-displayed some of its economic botany objects in its ‘Nature’s Library’ gallery, which opened in 2013. In the Manchester Gallery it has re-purposed its economic botany objects, such as cotton specimens, in a reflexive display which tells of the shared history of the city and the museum. Economic Botany collections have been used very successfully in public engagement events. For example, in October 2011 for London Open House weekend, we set up a temporary exhibition and ‘meet the researchers’ event in the building at Kew which once housed the Museum of Economic Botany. It attracted over 1000 highly engaged visitors over two days.

Economic botany objects can work well in engaging with hard-to-reach groups, including various ethnic and migrant communities, and they are also of value in reminiscence work. Manchester has used objects from its collection in health and well-being art classes with a range of groups including young people and adults accessing mental health services, looked-after children, older people, and young families.

Economic botany collections have attracted diverse audiences since the Victorian era when they first went on display in museums and exhibitions—‘from the prince to the peasant’ in the words of Sir William Hooker (Hooker 1857: 3)—and our enquiries have shown that biocultural objects can still be used to engage and delight a broad museum constituency, from the visitor to the researcher. From our experience, recognising the complex histories of such objects and their previous contexts of display is key to providing



Figure 6. Economic botany items used in the Nature's Library gallery, opened 2013 at Manchester Museum. Courtesy and copyright Gina Allnatt.

fresh insights into nineteenth-century attitudes towards the material culture of world cultures; and bringing them back to public scrutiny has provided valuable lessons in how best to re-connect nature and culture within the museum space.

Table 1. List of past economic botany displays recorded in general museums in the United Kingdom.

Current institution	Collection and original institution	Date founded
University of Aberdeen	Marischal Museum of Natural History	1860
Herbarium of the National Museum and Galleries of Northern Ireland (Ulster Museum)	Belfast Museum of Natural History	1833
Birmingham Museum and Art Gallery		1885
Bolton Museum	Chadwick Museum, Bolton	1884
Bristol City Museum	Economic Botany Collections	1872
Canterbury Museum		1825
National Museum Wales, Cardiff	Economic Botany Collection	1905
McManus Museum and Art Gallery, Dundee		1867
National Museums Scotland	Museum of Science and Art Edinburgh	1866
Royal Albert Memorial Museum, Exeter		1870
Glasgow Museums	City Industrial Museum Kelvingrove	1870 1901
Ipswich Museum	Henslow Collection	1846
Leeds City Museum	Leeds Philosophical and Literary Society	1819
Liverpool Public Museums, Liverpool	Economic Botany Gallery	1932–1941
Llandudno		1927
South Kensington Museum	Food Collection	By 1860
Bethnal Green Museum, London		1872
Horniman Museum		1890
Manchester Museum	Economic Botany Collection	1890
Gallery Oldham		1883
The Royal Collections, Osborne House, Isle of Wight	Swiss Cottage Museum	c. 1853
Plymouth City Museum and Art Gallery		1907–10
Reading Museum	Economic Botany Collection	1883
Weston Park Museum, Sheffield		1875
Tunbridge Wells Museum and Art Gallery		1885
Warrington Museum and Art Gallery	Economic Botany Collection	1848

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Notes

1. The complete collections of Kew (c. 95,000 specimens) are online at <<http://apps.kew.org/ecbot/search>>, and the Field Museum (12,000) at <<https://www.fieldmuseum.org/node/5211>>.

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