Curious encounters: voyaging, collecting, and making knowledge in the long eighteenth century

chapter four

The World in a Nicknackatory: Encounters and Exchanges in Hans Sloane's Collection

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Among the many volumes of letters sent to Sir Hans Sloane, the renowned physician and collector, and now held among his manuscripts at the British Library, there is one that contains an object that did not make it into his extensive collection. It is the outline of a smiling face burnt onto a thin sliver of wood, probably with a piece of metal heated in a flame (Figure 4.1). The letter that came with it on 25 April 1713 was sent from someone calling himself "Tim Cockleshell." It read:

> Most Curious S^{r},
> Having, in my Travels thro' y^{e} West Indies, met with this Catoptrical Adustion I thought it might not be altogether unworthy a place in your famous Nicknackatory. 'Twas given me by a Bramine who affirm'd it to be an Original of one of the Antient Kings of Mexico. I desire, S^{r}, you wou'd please to shew it to your Fellow Naturals, especially to the learned & ingenious D^{r} Woodwd, upon whose approbation I intend to be at the Charge of having a Print taken from it. I am S^{r},
>
> *Your most humble admirer and Serv^{t}.*

Signing off, he informed Sloane that "[y]ou may direct to me at the sign of the Cham of Tartary's Slipper in York Buildings, next door to the Yorkshire Cushion, over against the Cinnamon Broom-stick."[1]

We don't know from whom it came. The sender is clearly having fun with Sloane's own past history of collecting in the Caribbean, with his collection and what he might be convinced to take into it, and, as many others had done and would do, with Sloane as a symbol of what collecting itself meant as a problematic practice.[2] "Tim Cockleshell" offers a natural philosophical curiosity from a far-off land – one that mixes the "Indies,"

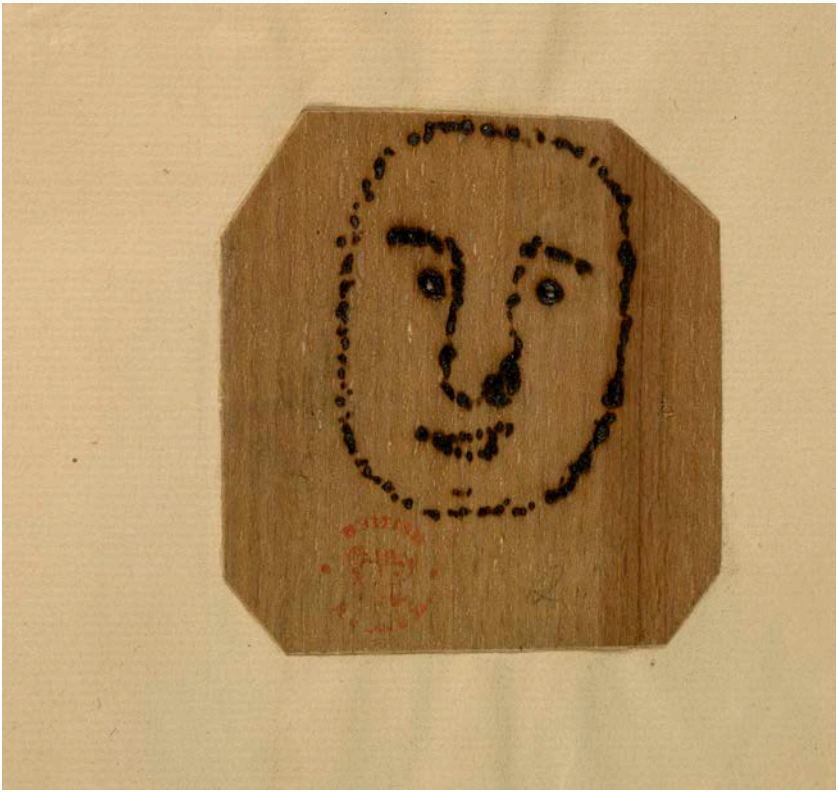

Figure 4.1 Tim Cockleshell's Catoptrical Adustion. Sloane MS 4043, f. 145. © The British Library Board.

east and west, by combining Brahmins and Aztecs – and a distant time. It is an obscurely but precisely named object, a burnt reflection, that might be circulated among learned and ingenious men, but that would show quite how easily such men would believe something so obviously made up. A joke on them.[3] Yet the question is open as to whether this was a joke that Sloane was in on, or, indeed, whether he found it funny or not.[4] The year 1713 was a high point in the controversy over the authenticity of the shield that John Woodward – a fellow member of the Royal Society and Royal College of Physicians, and erstwhile rival and enemy of Sloane's – had taken to be Roman, but which was found to be a sixteenth-century piece of French classicism. A joke on him. Yet it was also the year that Sloane resigned as secretary of the Royal Society, forced out by Isaac

Newton and Woodward, who had often criticized Sloane for his eclectic and miscellaneous approach to natural philosophy.[5] A joke on Sloane. His collection – later described as "an ornament to the nation," and providing the foundation for the British Museum – is here a "Nicknackatory": a toy shop, a horde of trinkets of no discernible value, and about as useful as a cinnamon broomstick.[6] Whether Sloane laughed (maybe knowingly) or not, we do know that he kept the letter and the object, at least among his correspondence if not in his collection.

Our aim here is to take this joke seriously and to explore how the world was encountered in the seventeenth and early eighteenth centuries through Sloane's collection, as a "Nicknackatory." We will do this by considering the implications of Sloane's collecting practices – and their global modes of exchange – for his collection, and then by interpreting how the encounters with the world that this vast and eclectic collection afforded were shaped by its management of scale, its spatial organization and modes of presentation, and its translation into being a founding collection for the British Museum after Sloane's death in 1753. Through this we argue that Sloane's collection, rather than acting as a single "centre of calculation," offered instead a multitude of locally ordered, partial, temporary, and changing ways of engaging with, and trying to know, the early modern world.

Hans Sloane: A Collector and His Collection

Across his long lifetime Hans Sloane (Figure 4.2) amassed a huge and varied collection. There were more than three hundred volumes of dried plants in his herbarium, around fifty thousand books and manuscripts, more than one hundred albums of drawings, and over thirty-two thousand coins, as well as fossils, shells, corals, and animal parts (horns, bones, and preserved specimens). While we will consider the contents of this collection in more detail later, it is important first to focus on the process, or rather processes, by which it was gathered, and on Sloane as a collector, for what that can tell us about his collection as a mode of encounter with the early modern world.

Sloane was an active collector of natural history "in the field," at least in his early years. Although this only makes up a very small part of his final collection – nine herbarium volumes out of the more than three hundred – it was a significant part of his activity, as well as an important starting point for his collecting and his collection. So while there is one volume of dried plant specimens that is identified by Sloane as "gathered in the fields and gardens about London about the year 1682 for my own and Mr [William] Courten's collections," there are only a few others that

Figure 4.2 *Sir Hans Sloane*, by Stephen Slaughter, 1736.

contain similar material.[7] More significant, however, are the eight volumes of plant specimens collected by Sloane in Jamaica in the late 1680s.

Sloane travelled to Jamaica in 1687 as physician to the new governor, the Duke of Albemarle. He later stated that he did so since he was already a fellow of the Royal Society and the Royal College of Physicians, and he wanted "to cast in my Mite towards the Advancement of Natural Knowledge, and the Faculty of Physic, and by that means endeavour to deserve a Place amongst so many Great and Worthy Persons: [so] This Voyage seem'd likewise to promise to be useful to me, as a Physician; many of the antient and best Physicians having travell'd to the Places whence their Drugs were brought, to inform themselves concerning them."[8] While in Jamaica he travelled the island, or at least those parts of it he felt he could safely visit, collecting specimens, of which he brought back around eight hundred. Some of the plants he had drawn for him in Jamaica by the Reverend Garret Moore, who also depicted fishes, birds, and insects for Sloane. Sloane noted that in order to get the best possible representations of the natural world, he "carried him [Moore] with me into several places of the Country, that he might take them on the place."[9]

This was, inevitably, an encounter with people as well as with places, plants, and animals, as Sloane and Moore explored Jamaican nature. As one of the practitioners of "colonial" natural history, Sloane was interested in the uses of nature, at home and abroad.[10] He wanted one purpose of his work to be "to teach the Inhabitants of the Parts where these Plants grow, their several Uses, which I have endeavour'd to do, by the best Informations I could get from Books, and the Inhabitants, either *Europeans, Indians* or *Blacks*."[11] So, alongside using his library, he had talked to the island's inhabitants about their plants and what they did with them. His explorations and encounters aimed to produce a coherent collection of Jamaican plants that would be of practical use, and make his reputation in natural history.

Albemarle having died, Sloane returned to London in 1689 with the duke's body preserved in a cask, and hundreds of other specimens. There he had the dried plant material drawn by Everardus Kickius, in ways that reproduced the characteristics of the particular specimens, and he published, in Latin in 1695, a concise catalogue of Jamaican plants. This worked through his specimens and his library of botanical works on the Americas to set out the details of the island's plant life and what was known of it. This was a somewhat dry, unillustrated text for botanical specialists.[12] It was followed, however, in 1707 – nearly twenty years after Sloane's return from the island – by the publication of the first volume

of his *Natural History of Jamaica*. Besides engraved images of his botanical specimens taken from the drawings by Kickius, it included engravings of insects, birds, fish, and quadrupeds, as well as some other artefacts. It gave brief, descriptive accounts, from observation and from previous authors, of all these plants and animals. It staged an encounter with Jamaican nature for its predominantly European readers.[13]

Yet this book also signals a difference in the mode of encounter with the world from Sloane's Jamaican collecting. The full title of the work gives a clearer sense of the broad frame within which Sloane's more particular collection of specimens was located. He called it *A Voyage to the Islands Madera, Barbadoes, Nieves, St Christophers, and Jamaica; with the Natural History of the Herbs and Trees, Four-Footed Beasts, Fishes, Birds, Insects, Reptiles, &c. Of the last of those islands. To which is prefix'd, An Introduction, Wherein is an Account of the Inhabitants, Air, Waters, Diseases, Trade, &c. of the Place; with some Relations concerning the Neighbouring Continent, and Islands of America. Illustrated with the Figures of the Things described, which have not been heretofore engraved. In large Copper-Plates as big as the Life.* It included a description of the island's topography, climate, and rivers; a brief account of its history; an account of Sloane's voyage to and from the island; and a whole series of medical case histories that Sloane had attended to; as well as reflections on diet and an account of life on the islands, including the punishment of the enslaved.

There was, in what was included in this first volume in 1707, a broad sense of what might be gathered together to understand Jamaica, and other such places, even if the relationships between those things were not readily specified. The book itself is, therefore, something of a collection of parts that make an unsteady whole.[14] Its version of natural history is certainly a very capacious one. Moreover, by the time it was published, Sloane had long been back in London and was very actively engaging in forms of collecting that greatly expanded his collection in both extent and scope. Jamaica certainly played a part in this via the connections he had made there. Most notably, in May 1695 he had married Elizabeth Rose, the widow of Fulke Rose of Jamaica, by which, as Thomas Birch noted, "[h]e made a very considerable Addition to his Fortune," not least by incorporating into his investment portfolio the one-third share she held in her former husband's sugar plantations.[15] It was this fortune that Sloane used to build his collection in and from London through other forms of collecting and other ways of exploring and encountering the world.

As James Delbourgo has shown, Sloane turned himself from a collector of Jamaican plant specimens into perhaps the eighteenth century's

greatest individual collector of every conceivable sort of object. He did so not by travelling further but by staying put and becoming "a collector of collectors."[16] Delbourgo then shows in great detail how Sloane's vast collection was amassed. It involved commercial transactions – especially buying the collections of others such as William Courten in 1702, Leonard Plukenet in 1714, and James Petiver in 1718 – as well as personal favours and gifts. It also involved much more mediated chains and systems of exchange, with Sloane acquiring things from distant places after they had passed through many hands.

If we look at just one part of Sloane's collection we can see some of the complexities of this process. The Vegetable Substances, for instance, which sits alongside the Sloane Herbarium in the Natural History Museum in London, originally contained more than twelve thousand botanical samples ranging from balms and oils to skeletonized leaves, as well as many fruits and seeds of various shapes and sizes. From Sloane's own catalogue of the collection we know that more than three hundred people contributed to the Vegetable Substances from around the world. These people varied in their professions, status, and relationships with Sloane, and while some items came directly to him, others passed along complex chains, giving Sloane access to many different sorts of natural history.

Much material came from the New World. Characterized as they were by settlement, agricultural colonization, and slavery, the Americas offered Sloane a diverse set of collectors and correspondents, from independent merchants and planters to surgeons, women, and permanent residents. Many of them were keen to find a place in the transatlantic republic of letters and used a variety of sources of specimens and knowledge – including indigenous and enslaved people – to do so.[17] Sloane at times engaged with and thereby influenced their natural history collecting, as was the case with the naturalist Mark Catesby, whose travels to the Carolinas in the 1720s he helped sponsor. At other times, he developed more mutually beneficial relationships – for example, with the physician Henry Barham in Jamaica, and the Pennsylvania-based Quaker John Bartram – that involved exchanging different sorts of natural knowledge.[18] Sloane did not simply accept botanical specimens from these people; rather, he engaged in years of correspondence with them, thus adding to his own medical knowledge and establishing lasting friendships.

To access natural history specimens from the "East," Sloane used a different sort of network. These vegetable substances almost always came via agents connected to established European trading companies. English

East India Company employees permanently based at settlements along the coast – including the surgeons Samuel Browne and Edward Bulkley, and the clergyman George Lewis, at Fort St George, Madras – engaged with local knowledge and gathered substantial botanical collections now found among the Vegetable Substances. Likewise, East India Company ship surgeons such as James Cuninghame and Alexander Brown viewed company voyages as ideal opportunities to collect all sorts of botanical items, including "[d]iffering gums resins or substances brought from the Nicubar Island."[19] Often, however, Sloane's access to this material was through the London apothecary James Petiver, and Petiver's own global correspondence network, rather than via direct contact with these collectors himself. Sloane also took advantage of people working beyond the English company. One specimen in the collection is described as "[t]he fruit of a small triangular coco-nut esteemed in the East Indies a great antidote" and is one of twenty-four items sent "From Dr. Kempfer."[20] The German physician Engelbert Kaempfer was based at a Dutch East India Company trading post in Japan in 1692. Kaempfer's collecting gave access to places beyond the scope of English company trade. His contributions to the Vegetable Substances are also a reminder of how Sloane added substantially to his collection through wholesale purchase. After Kaempfer died in 1716, Sloane bought his entire collection.

As a result of Sloane's curiosity and sense of wonder, and the range of his contributors, the Vegetable Substances contains a great variety of sorts of specimens. Sloane's catalogue describes objects such as "[a] snake stick being a branch of an oak tree so involuted as to imitate the coiling of a snake the ends of which are shapd to resemble the head & tail"; "A knot of an Oak from Yorkshire wherein the fibrills are turn'd very curiously into circular and other forms. The whole resembling in some manner the Head of a Dogg"; and "shoes made of … bark & straps of seals skins."[21] This variety is also true for his collection as a whole, which he greatly expanded in size and scope during the early eighteenth century by buying the collections of other collectors, Kaempfer included. The first such major purchase was William Courten's collection in 1702. Courten had been a close friend, and Sloane's purchase served to keep the collection together and to provide funds to clear debts Courten had inherited from his father. Courten's collection contained antiquities, coins, plants, and paintings, so acquiring it was an important moment in substantially broadening the remit of Sloane's own collection. It invites reflection on the point at which having things becomes having "a collection," a form of possession that means acquiring more things, as well

as decisions about what they should be. It also raises the question of the implications for the mode of encounter with the world when what John Evelyn, in 1691, called a "universal Collection of the natural productions of Jamaica" became a collection "of every conceivable kind of object."[22]

In short, this is the problem of the "Nicknackatory." The wonder of Sloane's collection was the huge variety of things it contained from all over world (or at least those parts of the world where the extended tentacles of European imperial and commercial ventures reached), as a consequence of which his collection was always challenged by questions of its coherence, its utility for making knowledge, and its meaning. Such a "universal" collection could encounter the world – it might even aspire to contain the world – but this did not necessarily render it knowable. This is the tension in early modern modes of exchange and encounter that we want to explore in what follows. Considering the organization of Sloane's "Nicknackatory" itself, those who encountered the world through it, and its translation into the founding collection of the British Museum, points to how different attempts to manage these problems of diversity, variety, and (in)coherence offered encounters with the world through the collection that were always partial, obscured, only locally ordered and temporary. We start with how Sloane brought some local order to one part of his global collection.

Making a Collection

It is not unfamiliar to think about the making of a collection as a series of processes that create and stabilize the entities that make it up, and the gathering, ordering, and managing of information about them. For a natural history collection this involves making and preserving specimens, just as Sloane did in Jamaica. It can also involve translating them into other forms, such as the images he had drawn by Moore and Kickius. It also means making objects comparable and commensurable through certain forms of classification or ordering, so that what is produced does become a collection and not just a bunch of stuff or a heap of matter. In doing so, one of the things that must be attended to is scale. Once again, this can be well illustrated through Sloane's Vegetable Substances collection.

Sloane's own three-volume handwritten catalogue for this collection lists 12,523 items, and there are more than eight thousand surviving objects. As we have seen, the collection is made up of seeds (about half the collection), roots, leaves, bark, gums, and balms, but also the curious

Figure 4.3 A selection of samples from Sloane's Vegetable Substances collection, now held in the Natural History Museum. © The Trustees of the Natural History Museum, London.

objects noted above. However, the most striking thing about the collection is how it is made or made up into a collection. Each "item" – which may in itself be multiples of the same thing – is in its own box. These have glass tops and bottoms and wooden sides and are sealed with decorative, often marbled, papers glued down to seal the edges. So there are lots and lots of boxes (Figure 4.3). They are of a range of different sizes and shapes but are at broadly the same scale: perhaps the scale of the hand.

Various sorts of managing and ordering accompany the bringing of the collection to a single scale. Most pragmatically, the boxes simply keep separate things that would be easily lost or confused: scoopfuls, or pinches, of tiny seeds or small dried fruits – often hard to differentiate one from the other – or twigs, roots, and bark. All are at risk from insects and other pests, or from damp. These vegetable substances may share a scale and object-ness with coins and medals, or gemstones, but they have a different, more fragile materiality. The boxes fix them. Doing so brings

the specimen to knowledge in particular ways. It makes them accessible to the eye, but much less so to the hand, nose, or tongue, or, indeed, to experimentation.[23] Like all forms of ordering, it opens up that which is ordered to some ways of knowing, but necessarily closes others down.

This is also true of the scale that is produced for the Vegetable Substances collection as a whole. It is a good example of the geographers' contention that scale is not something that simply exists – most of the debate being about the scales of the local, national, and global; rather, it has to be "socially constructed."[24] Here we see how scale is constructed through material practice: the practice of boxing vegetable substances. Specimens must be brought to that scale to be part of the collection. Nature is cut to fit. It also means disconnecting parts of plants and separating them from their ecologies of animals, other plants, and growing conditions. What does it mean, then, to encounter and explore the world's nature at this scale, box by box, rather than in a botanical garden, for example? The scale and materiality of the Vegetable Substances seems to suggest a focus on comparability and the visual – on placing boxes out on the tabletop or holding them up to the light, which is a three-dimensional equivalent of botanical illustration for the parts of plants that can be preserved dried.[25] There is no evidence that the boxes were made to convey specimens to others, unlike illustration and publication. Indeed, their use is difficult to assess, for no definable contributions to knowledge were made through the collection as a whole, as opposed to indications of specific work with particular plants undertaken by Sloane and his correspondents.

Sloane's catalogue provides another technology for seeing this vast collection of boxes: a paper technology.[26] Each box is identified by a number that keys it back into the catalogue, another attempt to guarantee certainty against the dangers of confusion and multiplicity. But while opening up for each item a space that can be filled with information, the catalogue often undercuts this by being unable to fulfil its promise. Entries can be so short as to be virtually meaningless – "a seed"; or highly speculative and full of question marks – "Long cocoon divided?" or "Spongia species? Insects nest?"[27] The material object has been fixed in its box, but what it is, where it is from, and what it might be used for is still in question. The collection offers the promise of identification – knowing what everything is and where it came from – but it was not, for Sloane, a step towards systematization or classification, as such collections would be for Linnaeus and his followers. Behind the uniformity and universality suggested by the scale of the boxes, and the promise of

identification given by the catalogue, the encounter with the world and its nature through the Vegetable Substances collection is one that is fundamentally shaped by the differentiated forms of encounter that brought its elements to Sloane. There are pockets of order – sub-collections with their own protocols of naming and information, such as the fifty-three entries labelled "Chinese druggs" that were contributed by James Petiver with descriptions that included Chinese names and therapeutic properties – and lines of connection between boxed specimens and other parts of the collection, such as the herbaria. But these exist within an unassimilated plethora of diversity and variety. This can also be seen when we consider the Vegetable Substances as part of the organization and display of Sloane's collection as a whole.

Presenting a Collection

It was certainly the case that visitors to Sloane's collection – and we have a number of descriptions of it, both in Bloomsbury and in Chelsea – noticed the ways in which he stored, organized, and presented it as well as the objects themselves. Per Kalm, a Finnish naturalist who worked with Linnaeus in Sweden, and who visited Sloane's collection at Chelsea, was quite taken with its boxes and described, in particular,

> [a] large collection of insects from all parts of the world, all of which were now preserved in four-sided boxes, with clear glass glued on both over and under, so that one could see them quite well, but these boxes or cases were also so well stuck together and so tight that no worms or other injurious insects could get at them, and spoil them. The sides were of wood. In some both lid and bottom, were of a very clear glass, but in most only the lid. At the joints the glass was stuck or glued fast with paper. Where the bottom was of glass, the insect was gummed on to the middle of the bottom.[28]

He also noted that the same type of boxes were used for "all kinds of seed."[29]

Kalm also described the rooms in which the collection was housed, as well as various other modes of display for Sloane's specimens, such as the glass-fronted cabinets for displaying corals and the artfully constructed wooden box that held in its various stacked layers 1,300 gemstones. As a botanist, Kalm needed to have an eye for such issues of preservation and presentation. However, what mainly comes across in his account of Sloane's collection is its extent – in both variety of categories of material

and the numbers of things contained within them (indeed, before moving it to Chelsea Sloane had bought the house next door in Bloomsbury so that he could display his collection) – and its focus on particular interesting or curious objects.

Thus, a French visitor in 1729 provided a lengthy numbered list, of which this is a part, including, at "12," what was probably the Vegetable Substances collection:

> 2. A collection of medals; there are as many ancient as modern; 23,000.
> 3. Skeletons of leaves of various trees, produced by insects.
> 4. Various birds, amongst others humming birds and "oiseaux du mogol."
> 5. Skins of all sorts of animals.
> …
> 12. A cupboard where there are 7,000 different fruits.

But he also noted, in particular, the whale skeleton that Sloane had in the courtyard and "the plant called lagetto of which the stem, the leaves and the bark provide four different kinds of fibre."[30] This plant, lace-bark (*Lagetta lagetto*), was particularly associated with Sloane, who probably brought the first scientific specimens to Britain from Jamaica.[31] It features in the portrait painted of him by Stephen Slaughter in 1736 (Figure 4.2), and in the *Natural History of Jamaica* it was discussed in terms of both its natural historical properties and its uses. Kalm, for his part, also listed the categories of objects: gemstones, shells, corals, insects, seeds, volumes of bound plants, and "an endless number of other items," while noting particular objects that were shaped by nature or human hands or both: "Egyptian pebbles shaped like a man's face"; "A polished agate which displayed in a most naturalistic manner an eclipse of the sun"; "An apparatus made of elephant bone with which the women of the East Indies scratch their backs"; and "An Indian god to be carried in the pocket." Some of the items he noted were evidently of interest to him, or to others who might read his account. Other items were also noted by fellow visitors: the lace-bark; edible birds' nests; the paintings by Maria Sybilla Merian; and "[a] *Cochlea* which laid eggs of the shape and size of swallows' eggs and white in colour, in which were found little *Cochleae*, which then grew into big ones."[32] While he was there he was under strict instructions to inspect a particular snake for Linnaeus, and had to spend much time counting its abdominal plates and scales "while the others went round and looked at everything."

There are two points to make here. First, about Sloane's spatial organization of the collection; and second, about his presentation (or performance) of it for visitors. Regarding the first, we can get no clear overall picture of the collection's exact organization, and there are no images of it on which to draw. However, the rather brief descriptions given by visitors do broadly accord with Marjorie Caygill's interpretation of the pencilled numbers in the margins of some of Sloane's catalogues as indicating locations in rooms or cabinets, although she only looked in detail at the *Miscellanies* and *Antiquities* catalogues.[33] This was a matter of ordering like with like across the collections. For example, "181" seems to have coded various forms of *materia medica* but also included straps made from manatee hide used for whipping the enslaved. Indeed, of the more than 1,200 Vegetable Substances specimens given the code 181, many are not specifically designated in the catalogue as also having therapeutic properties, even though they might do.[34] There is also "245," which includes virtually all of the musical instruments, but also a considerable number of items associated with smoking; and "252," which contains weapons. However, as Caygill concludes, "while there are clusters, most of the large cabinets or spaces would have housed a wide range of objects."[35] Thus, for example, as Kalm notes, there was

> [a]nother room, with the clothes of native people in various kinds of leather and other materials. In this room were also
>
> A stuffed camel
>
> A striped donkey from the Cape of Good Hope: *Equus lineis transversis versiculor.* Linn
>
> West Indian boats made of bark.[36]

Was there a form of ordering here concerned with covering materials and their uses, or were things more haphazard than that? Clearly, the organization of the collection did not disclose a single system. Its encounter with the world was, at best, one of local pockets of order within a more indeterminate set of juxtapositions and what must at times have just been an overwhelming – but perhaps "wonderful" – sense of the extent and variety of what had been brought together as a microcosm of God's creation.[37]

Second, this organization of things into boxes, drawers, cabinets, and rooms was then actively mobilized in the performance of displaying the collection to its visitors. Sloane was a key part of this. Despite the press of other business, and later despite his old age, he was often on hand to

show people around. In 1710 the German scholar Zacharias Conrad von Uffenbach noted Sloane's "vast politeness" and "that he did us a very great honour by sparing us the time between half past two and seven o'clock" to show the collection, even though he could have been earning a guinea an hour in his doctor's practice instead. When the Prince and Princess of Wales visited in 1748, Sloane was in his nineties, but he was still there to receive them and talk to them despite "being antient and infirm."[38]

Such visitors were taken through the collection and shown its highlights. Some objects – the legatto, edible birds' nests, particular manuscripts or images – were picked out for them; others they chose themselves. It was certainly an interactive experience: handling agates, turning the pages of books and manuscripts, holding the cochlea up to the light to see the smaller ones within, even tasting the bird's nest.[39] Through such performances the meanings of objects in Sloane's collection could be, by whatever interpretative hand or eye, turned to particular ends. For example, Kalm, the naturalist, gave an account of the collection that focused on the gems insofar as they showed evidence of material transformations by or of nature; but he hardly mentioned the extensive collection of coins and medals. In contrast, the account of the royal visit that same year published in *Gentleman's Magazine* orchestrated a truly global and extensively historical encounter with questions of ethnographic difference, value, and kingly virtue and vice:

> When their Royal Highnesses had view'd one room, and went into another, the scene was shifted, for, when they returned, the same tables were covered for a second course with all sorts of *jewels*, polish'd and set after the modern fashion; or with *gems* carv'd or engraved; the stately and instructive remains of antiquity; for the third course the tables were spread with *gold* and *silver ores*, with the most precious and remarkable ornaments used in the *habits* of men, from *Siberia* to the Cape of *Good Hope*, from *Japan* to *Peru*; and with both ancient and modern *coins* and *medals* in gold and silver, the lasting monuments of historical facts …

The account took the trouble to focus on a few of these:

> … of a *Prusias*, King of *Bithynia*, who betray'd his allies; of an *Alexander*, who, mad with ambition, over-run and invaded his neighbours; of a *Caesar*, who inslaved his country to satisfy his own pride; of a *Titus*, the delight of mankind … [O]thers shewing the effects of popular rage, when overmuch

> oppressed by their superiors, as in the case of the *De Witts* in *Holland*; the happy deliverance of *Britain*, by the arrival of King *William*; the glorious exploits of a Duke of *Marlborough*, and the happy arrival of the present illustrious *royal family* amongst us.

These objects "raised the mind to praise the great creator of all things" and "ye great beauty of all parts of the creation." But in addition, there were clearly lessons – although who was delivering them was unclear – to be drawn from Sloane's collection about the value of nature and the nature of power.[40]

Visitors, then, actively worked – and were worked on and with – to make meaning in Sloane's collection. They could experience wonderment at its extent and variety, be intrigued by particular things, and find (or be guided towards) meaningful paths through its objects and categories that provided very different forms of knowledge: from the number of scales on a snake's belly to the legitimation of the Hanoverian succession. Yet the particular shape of each of these paths, their diversity, and the uncontainable variety of the collection as a whole, meant that the purpose of Sloane's collection *as a collection* was always in question. The Prince of Wales might have "expressed the great esteem and value he had for him [Sloane] personally, and how much the learned world was obliged to him for his having collected such a vast library of curious books, and such immense treasures of the valuable and instructive productions of nature and art." He might also assert that this meant "esteeming it an ornament to the nation" that should be "established for publick use to the latest posterity."[41] But for others, its rationale was less clear. It remained a "Nicknackatory," with Sloane "the foremost Toyman of his Time," and this raised a question: what could a collection of everything actually mean?[42] What was the value of encountering and exploring the world if doing so involved all possible objects? What sort of meaning and value could be derived from such a collection if anything and everything could be in it? This became part of the discussion as Sloane's collection underwent a post-mortem transformation as it was remade into the British Museum.

Transforming a Collection

Sloane, who had absorbed many other people's collections into his own, was well aware of what might happen to it after his death: that it might be broken up, dissolved into parts that would be much less than the whole.

His will, in its various versions from the late 1730s onwards, attempted to secure his collection for the future by narrating its purpose and the mechanisms for its continuation. As to its purpose, he wrote, combining the spiritual and the temporal, that

> [w]hereas from my youth I have been a great observer and admirer of the wonderful power, wisdom and contrivance of the Almighty God, appearing in the works of his Creation; and have gathered together many things in my own travels or voyages, or had them from others … Now desiring very much that these things tending many ways to the manifestation of the glory of God, the confusion of atheism and its consequences, the use and improvement of physic, and other arts and sciences, and benefit of mankind, may remain together and not be separated, and that chiefly in and about the city of London, where I have acquired most of my estates, and where they may by the great confluence of people be of most use.[43]

The mechanism was to entrust it to the care of a body of, eventually sixty, trustees – an interlinked group of men of money and learning, with significant political clout – who were charged with offering it at the bargain price of £20,000 to George II. And if the British king did not want it, it was to be offered to the academies of science at Saint Petersburg, Paris, Berlin, and Madrid, in that order. There were, as might be expected from what has already been said, different judgments of its worth. The *London Magazine* called it "the most valuable private collection (perhaps publick one) that has ever appeared on earth." Whereas Horace Walpole, one of the trustees, privately wrote to Sir Horace Mann that he had his doubts:

> You will scarce guess how I employ my time; chiefly at present in the guardianship of embryos and cockle-shells. Sir Hans Sloane is dead and has made me one of the trustees to his museum, which is to be offered for twenty thousand pounds to the King … He valued it at fourscore thousand; and so would anybody who loves hippopotamuses, sharks with one ear, and spiders as big as geese! It is a rent charge to keep the foetuses in spirit! You may believe that those who think money the most valuable of all curiosities, will not be purchasers.

Indeed, the king did turn the opportunity down, saying, as Walpole put it, that "he [George II] did not believe there are twenty thousand pounds in the Treasury."[44]

Fortunately for Sloane's legacy, his trustees were not defeated. They raised the matter in parliament, arguing successfully there that the founding of a museum with Sloane's collection at its heart could be funded by a lottery. The House of Commons recorded its view that the collection be "kept intire, and maintained for the use and Benefit of the Publick," and the act to establish the British Museum passed on 7 June 1753. The museum was to be a universal collection, as Sloane's had been, combining productions both natural and artificial, and books and manuscripts as well as objects, all designated for the "use and Benefit of the Publick." As Marjorie Caygill notes, Sloane's will served as the catalyst for the first of a new sort of collection: one that was owned publicly and was *of* and *for* the nation, instead of being the private collection of an individual or monarch.[45]

There were, of course, significant continuities with what had gone before: there was no simple shift from private to public. Sloane's collection had always been open to the learned, albeit that openness was shaped by the collector's sense of who he wanted to show it to; and as Anne Goldgar has deftly shown, the British Museum as it actually operated was marked by a restricted sense – or series of restricted senses – of the public for whom it was intended and how they would benefit from even the limited access provided.[46] So it is important to recognize that the British Museum was not simply an act of will by Hans Sloane, or an act of Hans Sloane's will. His death provided the opportunity not just to turn one man's private collection into something public, or *for* the public, but to effect a more telling transformation in the bringing together of Sloane's collection with other collections to make something new.

To understand what happened we need to return to the houses of parliament and the crucial debate of 19 March 1753.[47] There, the long-standing speaker, Arthur Onslow, gave up the chair to another Whig grandee, Philip Yorke, Lord Hardwicke, and made the case, along with Henry Pelham (the First Lord of the Treasury) that not only should the cost of purchase and management be met by a lottery, but that there were other great collections that should be part of this too. Pelham reminded the house of the Cottonian library, a great collection of works, especially its 958 volumes of manuscripts, amassed by the Cotton family and given to the nation in 1700. This had been rather neglected and had nearly been destroyed by fire in 1731. Onslow was one of the trustees of the collection, which included the Lindesfarne Gospels and two copies of the Magna Carta. Handily, it also came with a bequest of £7,000. Pelham also suggested the purchase of the Harleian manuscripts from

the Duchess of Portland. This was the collection of the first and second earls of Oxford, containing eight thousand volumes and more than fourteen thousand rolls and other documents. It was, therefore, not simply a matter of Sloane's collection becoming the British Museum; rather, the British Museum was assembled by bringing together into one collection – albeit across different spaces in Montagu House – Sloane's collection, the Cottonian library, and the Harleian collection of manuscripts.

It seems that these collections were at first kept separate. Then in 1758 they were divided into three broad categories: printed books, manuscripts, and "Natural & Artificial Productions," so that the Sloane collection was slowly transformed in its organization and display. James Empson, who had worked with Sloane for many years and who supervised the collection's move from Chelsea back to Bloomsbury, noted that it could no longer be displayed as it had been by Sloane himself:

> How much soever a private Person may be at Liberty arbitrarily to dispose and place his Curiosities; we are sensible that the British Museum being a public Institution subject to the Visits of the Judicious and Intelligent, as well as Curious, Notice will be taken, whether or no the Collection has been arranged in a methodical Manner.[48]

Again, it is unclear what this meant in the rooms of Montagu House, but the distinction between the "Curious" and the "Judicious and Intelligent" is one that Anne Goldgar has seen as a structuring principle of the new museum's different spaces. It provided a distinction between the Reading Room as a preserve of the Republic of Letters and the galleries that afforded more public access to the curious, although that was still closely circumscribed. She has argued that for many of the trustees "the Reading Room was the core of the Museum, and the research that took place there was the main point of the institution." Here, Sloane's collection of books and manuscripts was subordinated to the Cottonian and Harleian collections with their Whiggish political project to preserve English political liberties (notably those copies of the Magna Carta). Goldgar argues that in the eyes of its creators, it was the institutionalization of a political perspective that made the museum public, or for public benefit, not access for the curious to displays of "Natural & Artificial Productions."[49]

Now that it was housed – if not displayed – alongside a combined collection of manuscripts that, as their catalogue boasted, "happily secured to this Country the most compleat and extensive Fund of national

Antiquities, that any Kingdom can boast of," the meaning of Sloane's collection was altered.[50] In this new context, Sloane's items meant something different than they had in Chelsea or in his Bloomsbury townhouse. Even while Sloane's collection had always been able to tell a story of English liberties, this had only been one among many stories. The eclectic and open-ended mode of engagement and encounter with the world that Sloane's "Nicknackatory" had afforded was pushed from the centre of the museum's account of Britain's relationship with the world as a new national narrative (or Whig) history was being crafted. Sloane's objects, and his means of arranging them, were also devalued, as well as subjected to a new methodical organization, as curiosity slid down the social scale.

Conclusion

One influential way to understand the modes of global encounter and exchange afforded by collections – particularly natural history collections – is through Bruno Latour's notion of "centres of calculation."[51] Here, repeated "cycles of accumulation" bring back "home" the "events, places and people" encountered by "inventing means that (a) render them *mobile* so that they can be brought back; (b) keep them *stable* so that they can be moved back and forth without additional distortion, corruption or decay, and (c) are *combinable* so that whatever stuff they are made of, they can be cumulated, aggregated, or shuffled like a pack of cards." When this practical work has been done, Latour argues, places "that were at first as weak as any other place will become centres dominating at a distance many other places." This, he argues, is "simply a question of scale," since those centres of calculation mean that scientists "in their Natural History Museums, without travelling more than a few hundred metres and opening more than a few dozen drawers, travel through all the continents, climates and periods." As a result they "*see new* things … [T]hat's all there is in this mysterious beginning of a science."[52]

It is tempting to interpret Sloane's collection in this way, but that would be to deny that its characterization as a "Nicknackatory" did get at something important about the ways in which it was formed from and, in turn, formed particular sorts and varieties of encounters and exchanges with the world beyond London. As a "universal collection" it had earlier Renaissance precedents as well as pointing towards Enlightenment forms of universalism.[53] Yet the great range of relationships with all sorts of people that brought materials together into the Vegetable Substances collection could not, despite the boxed uniformity of the collection and

the promise of the catalogue's information system, simply be productive of new forms of knowledge as a centre of calculation. Moreover, even if that inability in relation to this corner of the collection was just a matter of practical incapacity, what was brought together in the collection as a whole was gathered and displayed under quite different regimes of knowledge and value, as much produced by the visitors as by Sloane: wonder as well as systematic comparison; theology alongside utility; political lessons as much as natural philosophical ones. And when Sloane died, and the collection formed part of the British Museum, its meanings were relativized again within a new institution established for new purposes. The collection's organization was, therefore, always a matter of local forms of order, interesting juxtapositions, and an effect of abundance and particularized curiosity. Visitors to this cabinet of curiosities – from naturalists to royalty – could certainly "*see new* things," but they were each led to do so in very different ways, and in ways that differed from the forms of vision characteristic of "centres of calculation." These were also ways that were not necessarily the beginning, mysterious or not, of a new science, as critics like John Woodward had complained.

It is, therefore, important to avoid a teleological view of Hans Sloane's collection. Thinking of it as a "Nicknackatory" situates it more firmly within early modern London and the particular relationships with the world that Britain was making during that period.[54] It recognizes that the virtue and value of collecting (and of natural history) was in question. It recognizes that the multiple, partial, differently powerful, and differently productive relationships that were being forged – through commerce, enslavement, settlement, warfare, and diplomacy – with people and places across the globe did not necessarily add up, and neither did the knowledge they produced.

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NOTES

1 Tim Cockleshell to Sir Hans Sloane, London, 25 April 1713, Sloane Manuscripts 4043 ff. 144–5, British Library, London.

2 Barbara M. Benedict, "Collecting Trouble: Sir Hans Sloane's Literary Reputation in Eighteenth-Century Britain," *Eighteenth-Century Life* 36 (2012): 111–42; James Delbourgo, "'Exceeding the Age in Every Thing': Placing Sloane's Objects," *Spontaneous Generations* 3 (2009): 41–54, who quotes a satire on Sloane from 1700 that notes that for any "pebble or a cockle-shell" from the Indies or China "he would soon write a comment upon it, and perpetuate its memory upon a copper plate" (42). For the most thorough treatment, see Delbourgo, *Collecting the World: The Life and Curiosity of Hans Sloane* (London: Allen Lane, 2017).

3 This may have been a collective joke, since the letter was directed to Sloane "at the Grecian Coffeehouse in Devereaux Court" (f. 143r), a favourite spot for Royal Society fellows; see Jonathan Harris, "The Grecian Coffee House and Political Debate in London, 1688–1714," *London Journal* 25 (2000): 1–13; and Larry Stewart, "Other Centres of Calculation, or, Where the Royal Society Didn't Count: Commerce, Coffee Houses, and Natural Philosophy in Early Modern London," *British Journal for the History of Science* 32 (1999): 133–53.

4 He was, for example, "stung" by the attack on him in William King's *The Transactioneer* (1700); see Delbourgo, *Collecting the World*, 168.

5 Joseph M. Levine, *Dr. Woodward's Shield: History, Science, and Satire in Augustan England* (Berkeley: University of California Press, 1977), although by then Woodward was on Sloane's side against Isaac Newton.

6 See [Francis Grose], *A Classical Dictionary of the Vulgar Tongue* (London, 1785), 114. This letter's usage postdates Thomas Brown, *Letters from the Dead to the Living* (London, 1702), 29, in another humorous letter for a coffeehouse audience, but predates that by Sir Charles Hanbury Williams quoted in Benedict, "Collecting Trouble," 126.

7 Quoted in Charlie Jarvis, Mark Spencer, and Robert Huxley, "Sloane's Plant Specimens at the Natural History Museum," in *From Books to Bezoars: Sir Hans Sloane and His Collections*, ed. Alison Walker, Arthur MacGregor, and Michael Hunter (London: British Library, 2012), 138.

8 Hans Sloane, *A Voyage to the Islands Madera, Barbados, Nieves, S. Christophers and Jamaica*, vol. 1 (London, 1707), Sig. A1^{r}.

9 Ibid., Sig. A2^{r}.

10 Londa Schiebinger and Claudia Swan, eds., *Colonial Botany: Science, Commerce, and Politics in the Early Modern World* (Philadelphia: University of Pennsylvania Press, 2007).

11 Sloane, *A Voyage to the Islands*, vol. 1, Sig B2^{r}.
12 Hans Sloane, *Catalogus Plantarum Quæ in Insula Jamaica* (London, 1696). On Kickius, see Jarvis, Spencer, and Huxley, "Sloane's Plant Specimens."
13 Although see James Robertson, "Knowledgeable Readers: Jamaican Critiques of Sloane's Botany," in *From Books to Bezoars*, ed. Walker, MacGregor, and Hunter, 80–9; and James Delbourgo, "Sir Hans Sloane's Milk Chocolate and the Whole History of the Cacao," *Social Text* 29 (2011): 71–101.
14 Kay Dian Kriz, "Curiosities, Commodities, and Transplanted Bodies in Hans Sloane's 'Natural History of Jamaica,'" *William and Mary Quarterly* 57 (2000): 35–78; Christopher P. Ianinni, *Fatal Revolutions: Natural History, West Indian Slavery, and the Routes of American Literature* (Chapel Hill: University of North Carolina Press, 2012).
15 Thomas Birch, "Memoirs Relating to the Life of Sir Hans Sloane," Additional Manuscripts 4241 f. 5v, British Library, London. Much of Sloane's wealth came from his medical practice.
16 Delbourgo, *Collecting the World*, 202.
17 Susan Scott Parrish, *American Curiosity: Cultures of Natural History in the Colonial British Atlantic World* (Chapel Hill: University of North Carolina Press, 2006).
18 Catesby contributed 215 specimens to the Vegetable Substances collection, Barham and Bartram contributed 155 and 35 respectively.
19 Vegetable Substances Catalogue, Natural History Museum, London (hereafter VS), 586.
20 VS 8184.
21 VS 11802, 12435, and 69.
22 Arthur MacGregor, "The Life, Character and Career of Sir Hans Sloane," in *Sir Hans Sloane: Collector, Scientist, Antiquary*, ed. MacGregor (London: British Museum, 1994), 11–44 (Evelyn quote at 22).
23 Although we do know that Sloane boxed some of what he received and experimented – or had others experiment – with the rest, see Victoria R.M. Pickering, "Putting Nature in a Box: Hans Sloane's Vegetable Substances Collection" (PhD diss., Queen Mary University of London, 2017).
24 Sallie Marston, "The Social Construction of Scale," *Progress in Human Geography* 24 (2000): 219–42.
25 Daniela Bleichmar, *Visible Empire: Botanical Expeditions and Visual Culture in the Hispanic Enlightenment* (Chicago: University of Chicago Press, 2012).
26 Isabelle Charmantier and Staffan Müller-Wille, "Worlds of Paper: An Introduction," *Early Science and Medicine* 19 (2014): 379–97.
27 VS 451 and 218.

28 Per Kalm, *Kalm's Account of his Visit to England on his Way to America in 1748*, trans. Joseph Lucas (London: Macmillan, 1892), 100–1.
29 William R. Mead, *Pehr Kalm – His London Diary, 1748* (London: [the author], 2013), 53.
30 Sauveur Morand, reproduced in MacGregor, "The Life, Character, and Career of Sir Hans Sloane," 31.
31 Emily Brennan, Lori-Ann Harris, and Mark Nesbitt, "Jamaican Lace-Bark: Its History and Uncertain Future," *Textile History* 44 (2013): 235–53.
32 Mead, *Pehr Kalm*, 50–2, 54–5.
33 Marjorie Caygill, "Sloane's Catalogues and the Arrangement of His Collections," in *From Books to Bezoars*, ed. Walker, MacGregor and Hunter, 120–36.
34 On the "manati strap," see James Delbourgo, "Slavery in the Cabinet of Curiosities: Hans Sloane's Atlantic World" (2007), British Museum website, http://www.britishmuseum.org/PDF/Delbourgo%20essay.pdf, accessed 25 May 2017.
35 Caygill, "Sloane's Catalogues," 127.
36 Mead, *Pehr Kalm*, 55.
37 James Delbourgo, "Collecting Hans Sloane," in *From Books to Bezoars*, ed. Walker, MacGregor, and Hunter, 9–23.
38 Von Uffenbach, reproduced in MacGregor, "The Life, Character, and Career of Sir Hans Sloane," 30; "An Account of the Prince and Princess of Wales visiting Sir Hans Sloane," *Gentleman's Magazine* 18 (1748): 301.
39 Von Uffenbach notes its "taste, appearance and feeling"; see MacGregor, "The Life, Character, and Career of Sir Hans Sloane," 30.
40 "An Account," *Gentleman's Magazine*, 301.
41 Ibid., 301–2.
42 Quoted in Benedict, "Collecting Trouble," 128.
43 Quoted in Marjorie Caygill, "Sloane's Will and Establishment of the British Museum," in *Sir Hans Sloane*, ed. MacGregor, 46–7.
44 Quotations in Caygill, "Sloane's Will," 47–8.
45 Quoted in ibid., 50.
46 Anne Goldgar, "The British Museum and the Virtual Representation of Culture in the Eighteenth Century," *Albion* 32 (2000): 195–231.
47 See Caygill, "Sloane's Will."
48 Quoted in ibid., 55.
49 Goldgar, "The British Museum," 205.
50 Quoted in ibid., 220.
51 Bruno Latour, *Science in Action: How to Follow Scientists and Engineers through Society* (Cambridge, MA: Harvard University Press, 1988); David P. Miller

and Peter H. Reill, eds., *Visions of Empire: Voyages, Botany, and Representations of Nature* (Cambridge: Cambridge University Press, 1996).

52 Latour, *Science in Action*, 223, 225.

53 Delbourgo, *Collecting the World*. Lizzie Eger has also pointed out to us the resonances between Sloane's collection and the idea of "strange varieties" or "Order in Variety" (from Alexander Pope's *Windsor Forest*) in eighteenth-century poetry.

54 Miles Ogborn, *Global Lives: Britain and the World, 1550–1800* (Cambridge: Cambridge University Press, 2008).

chapter five

A Slaving Surgeon's Collection: The Pursuit of Natural History through the British Slave Trade to Spanish America

KATHLEEN S. MURPHY

On the morning of 30 March 1716, a recent traveller to Buenos Aires visited James Petiver's apothecary shop on Aldersgate Street in London bearing a dead armadillo (Figure 5.1). The visitor, Dr John Burnet, had recently returned to England after spending more than a year as a slave ship surgeon in the service of the South Sea Company. His posting aboard the *Wiltshire* brought him to West Africa's Gold Coast, where Captain Digory Herle, with Burnet's assistance, purchased 298 captive Africans. After spending a few months on the West African coast, the *Wiltshire* sailed to the Rio de la Plata region, where the 247 individuals who survived the passage were disembarked in Buenos Aires and sold to Spanish American colonists. During the voyage, the ship surgeon gathered a small collection of natural curiosities. While the rest of his collection consisted of preserved specimens, Burnet managed to keep the armadillo alive during the return voyage. But a few days after arriving in England, the animal died. The physician brought it to Petiver in the hope that the avid collector could arrange for it to be properly preserved.[1]

Knowing the rarity of such animals in British collections, Petiver had more ambitious plans for the specimen. He sent the armadillo to Dr James Douglas, a fellow member of the Royal Society who was known for his anatomical work. Petiver observed to Douglas that it was likely the first armadillo to reach England's shores alive and concluded by declaring, "I doubt not but you may make some Discoveries in its Viscera for which reason I have sent it to you, but must desire you will deface it as little as possible because it must be returned to the Gentleman."[2] A week later, Douglas presented the Royal Society with the first of two descriptions of the animal. Despite Petiver's predictions, they did not include

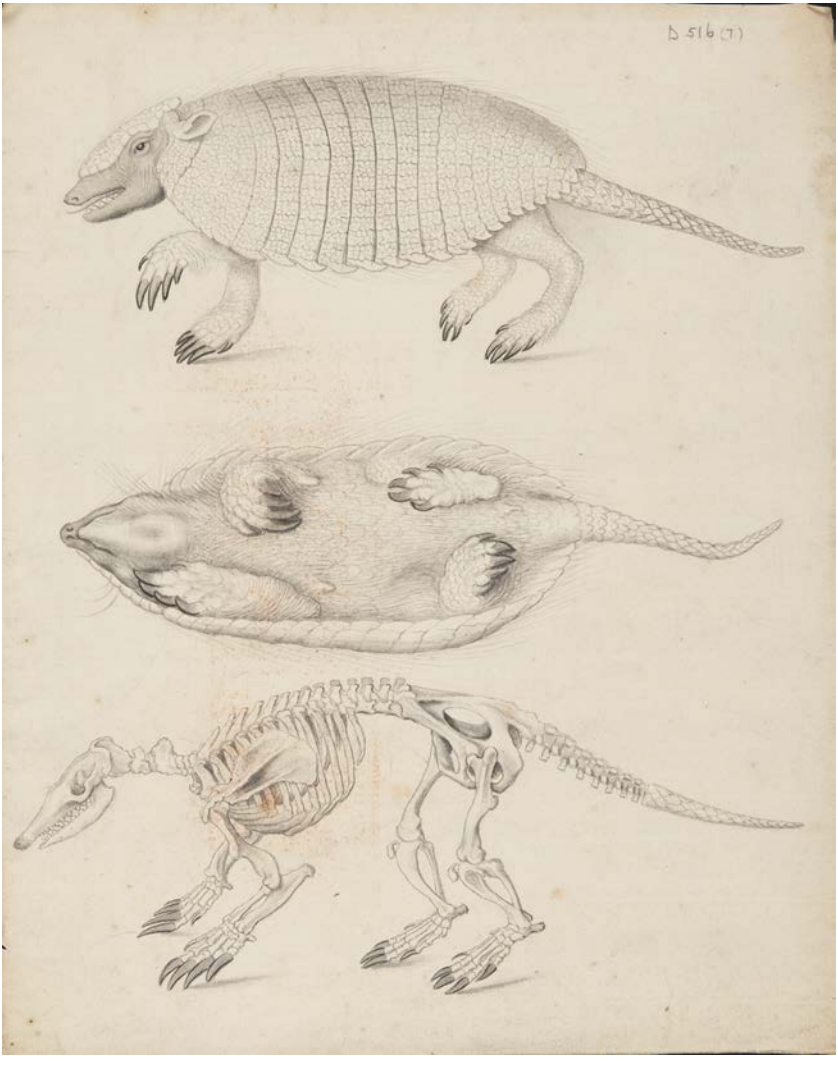

Figure 5.1 James Douglas, "The Description and Natural History of the Animal Called Armadillo or ye Hog in armour from South America by J.D." (1716). MS Hunter D516, f. 7. Special Collections, University of Glasgow.

discoveries about its viscera. When Douglas examined the animal he discovered that its owner had already removed its internal organs and filled the body cavity with salt. Douglas's paper, therefore, had to confine itself to what could be learned from the animal's external appearance and its skeleton. As he told the Royal Society, he "endeavoured to make what remains of the creature as usefull as I can." Even an incomplete specimen was worthy of study, given how rarely British naturalists had the opportunity to study the flora and fauna of Spanish America.[3]

In an era when most foreigners were forbidden entry into Spanish America, Burnet spent more than a decade in the region, working as a surgeon for the South Sea Company and quietly collecting natural curiosities on the side. He exploited the access to Spanish America provided by the slave trade in order to study the region's natural history. Burnet shared his collections with British natural historians such as Petiver and corresponded with them about his observations. Burnet, other surgeons, ship captains, and factors of the South Sea Company were among the few Britons with access to investigate Spanish America's natural wonders first-hand. Although only a handful of company servants undertook such investigations, their efforts uniquely shaped British natural history. Seeds, specimens, and observations they gathered along the routes of the slave trade to Spanish America enriched the British herbariums, botanic gardens, and cabinets of curiosities that were essential to the work of early modern naturalists. Their reliance upon the infrastructure and geography of the British slave trade to Spanish America shaped the collections they made and the natural knowledge that resulted from them.

Britons in Spanish America

John Burnet's activities in Spanish America were the reason that men like him were not supposed to be there in the first place. Like other European powers, Spain strove to restrict trade to within its imperial boundaries. Spanish officials also knew that the value of their trade depended in part upon maintaining their monopoly on natural commodities indigenous to their empire. They understood that given half a chance, their imperial rivals would smuggle the natural sources of Spanish American dyes and medicines into their own territories. Consequently, the Spanish crown strictly forbade the entry of foreigners into Spanish America and closely guarded natural knowledge about the region.

The stakes for doing so were high. Spanish America was home to some of the most valuable natural commodities known to early modern Europe.

These included cinchona, the antifebrile indigenous to the Andes that contains the natural source of quinine, and cochineal, a brilliant red dye that was more valuable by weight than silver. For more than two hundred years, Spain's policies of secrecy and exclusion of foreigners largely worked, leaving naturalists in other parts of Europe often ignorant about the flora and fauna of Spanish America. As late as 1734, European naturalists still debated the basic classification of cochineal; was it an animal, a vegetable, or a mineral? British naturalists were confident that an environment home to such natural treasures must surely contain others. The only reason they had not yet been discovered, they chauvinistically assumed, was simply that so far only the Spanish had looked.[4]

British naturalists had long been eager to learn more about the region's natural wonders. The second volume of the Royal Society of London's *Philosophical Transactions* (1667) included a series of questions the society's fellows hoped travellers could answer about distant regions, including Spanish America. These inquiries sought, in particular, to determine whether the more fantastical claims made in travel literature would stand up to eyewitness inspection. In a classic articulation of the Baconian ideals upon which the society was founded, the article's introduction explained that "'tis altogether necessary, to have confirmations of the truth of these things from several hands, before they be relyed on." The article asked, for example, whether in Panama "[t]oads are presently produced, by throwing a kind of Moorish Water found there, upon the Floors of their Houses," as the Dutch author Jan Huyghen van Linschoten had reported. The society's interest in Spanish America also led the editor of *Philosophical Transactions* to include reviews of travel narratives about the region among the journal's many descriptions of natural wonders, novel experiments, and other advances in natural knowledge. Merchants, imperial officials, and naturalists shared the conviction that Britain could only benefit if her subjects gained admittance to Spanish America.[5]

The exclusion of foreigners and foreign traders from Spanish America was never absolute, and the slave trade represented a key exception. Like colonists throughout the Atlantic World, Spanish colonials desired slaves to work in their fields, mines, and homes. Unique among European imperial powers, however, before 1800 Spain generally abstained from direct participation in the slave trade due to the Treaty of Tortesillas (1494).[6] In order to supply its colonies with slaves without participating directly in the slave trade, the Spanish crown negotiated a series of long-term contracts for foreign traders to deliver a set number of slaves to its

colonies each year. The *Asiento de Negros,* or asiento, offered its holder a monopoly on the legal trade in slaves to Spanish America.[7]

Although British merchants engaged in an extensive illicit slave trade to Spanish America for more than a century, their ability to sell slaves legally in the region was confined to a few decades in the early eighteenth century. In 1713 the British received the *asiento* for the first (and only) time as part of the peace negotiations that ended the War of the Spanish Succession. Under this agreement, the British South Sea Company was required to supply 4,800 prime slaves each year for thirty years to Spanish America. To do so, the company was granted permission to establish trading factories to house unsold slaves in a handful of Spanish American towns, including Buenos Aires, Cartagena, Havana, Portobelo, and Vera Cruz. Each factory employed British factors (agents) to oversee the sale of slaves and a factory surgeon who was responsible for their health.[8]

Like those who had held the *asiento* before them, the British hoped it might create an opening to Spanish American markets through which more than just slaves would flow. The possibility that the *asiento* would serve as the cover for a broader contraband trade was a source of tension between Spanish officials and the South Sea Company from the beginning of the contract. The Spanish crown worried that the South Sea Company would smuggle manufactured goods and provisions such as flour, as well as bribe Spanish officials to countenance the illicit trade. For British investors, this possibility was part of the trade's appeal. Merchants saw potential profits not necessarily in the slave trade itself but in the access to Spanish American markets and bullion that such a trade would make possible. Historians of the *asiento* have argued that the terms of the British contract were perfectly contrived to enable contraband trading by both the company and individuals employed in its service. The activities of a few South Sea Company men such as Burnet demonstrate that flour and manufactured goods were not the only things being smuggled onboard the company's vessels. A few also used their unusual access to Spanish territories to surreptitiously collect specimens, to record natural knowledge, and to gather seeds of desired natural commodities.[9]

A Slaving Surgeon's Collection

Burnet was among the first group of Britons to engage in the legal slave trade to Spanish America. After completing his medical degree at the University of Edinburgh, the physician entered the South Sea Company's service in 1715.[10] Burnet's first posting was as the *Wiltshire*'s ship surgeon.

After the slave ship returned to London, the physician presented most of the items he had collected to the South Sea Company's Court of Directors. The following year, the company appointed the physician as factory surgeon in Portobelo on the Isthmus of Panama. Along with the rest of the factory's employees, Burnet evacuated to Jamaica in 1718, at the beginning of the War of the Quadruple Alliance (1718–21). After peace was restored in 1721, Burnet returned to Spanish America as the South Sea Company's factory surgeon in Cartagena (in modern Columbia), where he remained until 1729. Burnet's collecting practices demonstrate the possibilities open to South Sea Company employees who were determined to use their access to Spanish America to survey the natural resources and natural curiosities of the region.[11]

Over the course of nearly fifteen years, Burnet gathered a wide-ranging collection of specimens from Spanish America, West Africa, and the Caribbean. Rather than amass his own cabinet of curiosities, Burnet gave the *naturalia* he collected to his British correspondents. Hans Sloane, James Petiver, and James Douglas, all medical men and members of the Royal Society of London, were the primary beneficiaries of the physician's efforts. Burnet's habit of referring collectively to the specimens he gathered makes it impossible to fully determine the extent of his collections. Yet his correspondence, along with manuscript catalogues to Sloane's museum, reveals the diversity of the objects he gathered.

The sixty-two specimens that can be identified included medicaments, dyes, culinary plants, shells, astronomical observations, and man-made curiosities.[12] Seventeen of the objects, or almost 30 per cent, were plants or minerals reported to have medicinal virtues, as one might expect one medical man to send to another. For example, Burnet gathered specimens of *terra macomachi*, a cure for ringworms, from Cartagena, *raiz rouge*, used to stop fluxes, from Buenos Aires, and counter-poisons from Jamaica.[13] But Burnet certainly did not confine himself to medicaments. His collection contained more than twenty animals and insects, including butterflies, a wingless cockroach, a marine caterpillar, a variety of fish, a pair of sloths, and, of course, an armadillo. The Portobellan scorpion that Burnet sent to Sloane enabled the metropolitan naturalist to compare the Jamaican insect with its Portobellan counterpart. In his natural history of Jamaica, Sloane concluded that the two were different species based on the specimens he had received from Burnet.[14]

Burnet also gathered four samples of minerals, including a large amethyst and what he believed was a type of gold. Such specimens manifested British interest in the mineral riches of Spanish America. Similarly,

the four specimens of plants renowned as dyes that Burnet collected reflected British interest in dyes indigenous to a region already famed for cochineal. And unlike the mineral wealth of Spanish territories, dyes and other types of "green gold" might easily be transported out of Spanish America and introduced into cultivation in British colonies.[15]

Like dyes, medicaments were a frequent focus of Burnet's efforts to discover green gold in Spanish America. Shortly after arriving in Cartagena, Burnet sent Sloane samples of four medicaments popular among local residents. "I should be glad to know if any of these things be Esteemed in England," he wrote, "& whither a quantity of the Earths or Balsam would sell." The South Sea Company physician frequently complained about the inadequacy of his salary and his limited opportunities to increase his income through private practice. He hoped that the minerals and balsams he sent to Sloane would solve his financial troubles if, like other medicines imported from Spanish territories, they commanded high prices in Britain. Based on the surviving correspondence, it seems that Burnet never received a response from Sloane about whether the medicaments he sent might sell.[16]

The dyes and drugs Burnet investigated would also have been of interest to the South Sea Company, given the high prices Spanish commodities commanded in British markets. Furthermore, since Spanish buyers could pay for *asiento* slaves in cochineal, cinchona, indigo, or other natural commodities, the company's profits might depend on its employees' command of natural knowledge. The directors of the South Sea Company frequently worried that their factors might unknowingly exchange slaves for inferior or even counterfeit natural commodities. They frequently berated factors who misjudged the quality of dyes and drugs exported to Britain. In 1717, concern over such issues led the directors to send John Hoskins, an expert on dyes, to Vera Cruz. They explained that he would "assist our Factory at Vera Cruz in viewing & Examining Cochineal Indico, and other Dying War[e]s & Drugs." The company's directors hoped that under Hoskins's tutelage the factors at Vera Cruz could learn to distinguish good-quality dyes and drugs from impostures. Hoskins brought with him samples of Spanish American commodities, along with strict instructions that any drugs or dyes purchased by the factory's agents needed to be of at least equal quality to the samples he carried.[17]

As the Court of Directors' instructions to Hoskins suggested, they were primarily interested in natural knowledge relating to medicines and dyes. Petiver reflected these priorities when he advised another South

Sea Company surgeon that "nothing can better or sooner recommend you to the South Sea Company's Favour or service than Communications" related to medicines and dyes. As evidence, he pointed to Burnet, whom he claimed owed his position in Portobelo to the collections he had made while a slave ship surgeon on the *Wiltshire*. According to Petiver, investigating Spanish American natural commodities could be a path to preferment and promotion within the South Sea Company. For the South Sea Company's Court of Directors, the value of natural historical investigations lay in the chance that they might discover new natural commodities and thereby improve the company's bottom line.[18]

Burnet's exchange of medicaments and natural curiosities with his British correspondents paralleled similar exchanges among medical men and naturalists throughout the early modern world. A few objects in his collection, however, were more directly tied to his role as a physician in the slave trade. Burnet's collection included human anatomical specimens, most likely from enslaved Africans for whose medical care he was responsible. While a slave ship surgeon on the *Wiltshire* in 1715, Burnet collected polyps that he removed from the hands of two Africans as well as what he described as "An Abortive Negroe." He also preserved "a worm of about 4 foot long … taken out of the leg of a person in Guinea." A few months after Burnet's return to London, the physician Douglas displayed the worm at the Royal Society's meeting of 21 June 1716. There are no further details about the individuals from whom Burnet obtained these specimens, nor is there any indication as to how he obtained them. The historical record simply describes them as having come from individuals of African descent. However, Burnet's position as a slave ship surgeon suggests that they were likely from captive Africans for whose medical care he was responsible during the months that the *Wiltshire* was in West Africa and at sea.[19]

The human specimens in Burnet's collection can, in part, be understood in the context of his personal interest in medical knowledge, as well as the interest it held for many in early-eighteenth-century Britain. Beginning in the sixteenth century, anatomical specimens and human remains were often included in European cabinets of curiosities. Understandably, such objects were particularly common in collections belonging to medical men. By 1753, Sloane's museum included more than 750 "Humana" specimens. Skeletons, anatomical specimens, and human curiosities were also frequently displayed and discussed at meetings of the Royal Society. Fascination with anatomy and anatomical specimens in the early eighteenth century transcended the august circles of the

Royal Society and the Royal College of Physicians. Anita Guerrini has documented the popularity of anatomical lectures among Londoners who had no medical training, who sought them out as a form of entertainment. The inclusion of human anatomical specimens in Burnet's collection was therefore in keeping with this more generalized interest in anatomy and medical knowledge.[20]

However, it is also important to consider the specific context in which Burnet's specimens were gathered. In recent decades, scholars of early modern science and medicine have emphasized that the contingencies of place, including its social, cultural, and geographical contexts, influence the natural and medical knowledge produced in that place.[21] So if we take the networks of the transatlantic slave trade as a space of natural history, then, like all localities of science, its material and cultural contexts shaped and were shaped by the resulting natural knowledge.

An inherent part of the context in which Burnet gathered natural historical objects was the violence, coercion, and expropriation that characterized the transatlantic slave trade.[22] The inclusion of human remains in Burnet's collection reflects, in part, this context. As scholarship on medical museums in Antebellum America has argued, human anatomical specimens of enslaved Africans reflected and reinforced the inequalities of power and the exploitation of black bodies fundamental to the chattel slave system and to the transatlantic slave trade.[23] James Delbourgo has examined similar objects in Hans Sloane's museum. These included human specimens from enslaved Africans, objects related to the violence of slavery such as nooses and whips, and other objects associated with resistance to slavery. Delbourgo urged scholars to understand these objects in their early-eighteenth-century context, and in particular to resist the urge to look to them for a coherent ideology of race or empire. He reminds us that for Sloane and his contemporaries these objects were not "self-evident horrors" but, more likely, "morally and politically indeterminate" and best understood through the idea of curiosity. By definition, curious objects were miscellaneous, so that a curious collection such as Sloane's might contain human remains alongside Roman coins, mechanical marvels, stuffed birds, and pressed plants. Curiosity placed particular value on objects that were rare, surprising, or illicit. Delbourgo suggests that many of the objects associated with slavery in Sloane's museum were in this last category. Therefore, Sloane's collection of human remains and artefacts associated with slavery did not necessarily signal a stance on slavery, the slave trade, or colonialism.[24]

Even if these objects cannot be read for a coherent ideology of race or a moral stance on slavery, their very presence in European museums does testify to the exploitation, violence, and death that characterized the slave ship and to the powerful influence of global commerce on natural history. And if the meaning of such objects for Sloane and Burnet might have been morally ambiguous, it is hard to imagine that that would have been the case for the enslaved Africans onboard the *Wiltshire*.

Collecting the *Asiento*

The specific context of Burnet's collecting practices shaped his pursuit of natural history in other ways as well. The slave trade, specifically in this case the *asiento* trade, influenced where, as well as what, he collected. While Burnet and other Britons exploited the access to Spanish America provided by the slave trade, such access had its limits. The provenance of items Burnet collected suggests that his collecting efforts were confined to the immediate vicinity of the Cartagena and Portobelo factories where he worked; none of the objects were gathered farther afield. The specimens' provenance paralleled the circumscribed geography of British trade routes to Spanish America.

Another surgeon working for the South Sea Company, William Houstoun, similarly discovered the outer limits of his access to Spanish America when he tried to investigate the medicament jalap in 1730. The jalap root had long been a popular medicine in Britain, but no one was certain from which plant it was derived. Houstoun initially thought that since jalap was exported from Vera Cruz, he could determine its botanical identity during one of his trips to the port town as ship surgeon on the company's sloop delivering slaves from Jamaica. But to his disappointment, he discovered that he "could learn nothing" there about the botanical identity of the root. Undeterred, Houstoun vowed to visit the eponymous province where the root was grown the next time the *asiento* trade brought him to New Spain. However, the governor denied him permission to travel to the province. Ultimately, the ship surgeon hired a Native American to travel to the province on his behalf and gather seedlings of the plant. Houstoun smuggled these plants out of Vera Cruz and transplanted them into a garden belonging to a friend in Jamaica. Seeds from the transplanted jalap plants were eventually grown in the Chelsea Physic Garden and other British gardens. Although Houstoun found an alternative means of acquiring jalap plants, his inability to collect them

himself reflected the geographical boundaries of British collecting in Spanish America under the cover of the slave trade.[25]

As much as on its geography, collectors such as Houstoun and Burnet relied upon the *asiento*'s commercial infrastructure to facilitate the transportation of their seeds, specimens, and observations back to Britain. They entrusted letters and specimens to various ship surgeons and captains working for the company. For example, during Burnet's first year as the factory surgeon at Cartagena, he acquired a female sloth and her offspring. Unfortunately, the animals died before the physician could arrange their transport across the Atlantic. Knowing that British naturalists would be almost as happy with a properly preserved specimen as a living one, Burnet stuffed the mother's skin and placed the juvenile sloth in a jar of spirits. He then packed the two specimens and directed the package to the attention of Daniel Westcomb, the South Sea Company's secretary in London. Burnet trusted that company agents, ship captains, and sailors who handled the package on its long journey from South America to Britain would take additional care with a package addressed to the influential company official. Burnet's faith in the infrastructure of the *asiento* trade paid off; with Westcomb acting as an intermediary, the two preserved sloths successfully reached Sloane, who added them to his growing museum.[26]

Like all of the specimens and letters Burnet sent to Britain, the sloths' travels included a stop in Jamaica. Within the commercial networks of the *asiento* trade, Jamaica played a uniquely central role. Three-quarters of the sixty thousand enslaved Africans whom the South Sea Company delivered to Spanish America were transshipped from the British Caribbean, rather than coming directly from Africa. Most of these slaves passed through the company's entrepôt in Jamaica. Jamaica's centrality to the South Sea Company's operations in the New World was also reflected in the company's internal hierarchies. The Jamaican agents were the company's top-ranking officials in the New World. Their senior position reflected the vital importance of Jamaica to the South Sea Company's operations in the Americas.[27]

Jamaica and the company's agents on the island played a similarly pivotal role facilitating the efforts of South Sea Company employees engaged in natural history. Burnet and Houstoun relied upon the company's agents in Jamaica to arrange transportation for their collections, and to forward the letters and packages sent in return by European naturalists. When his ship the *Assiento* returned to the British island, Houstoun entrusted his most recent collections to the safe keeping of

Jamaican colonists, including the South Sea Company's Jamaican agents. The ship surgeon often divided his Spanish American plants and seeds between acquaintances living in different parts of the island, hoping that the plants would thrive in at least one of Jamaica's microclimates. Burnet also relied upon the company's agents in Jamaica to arrange transportation for his collections as well as to undertake personal favours such as repairing his pistol. The agents who made such arrangements on Burnet's behalf were personal acquaintances rather than simply commercial contacts. Like most servants of the South Sea Company, the physician spent months on the island at numerous points in his career, usually waiting for the arrival of a company vessel that could convey him to Spanish America or one that would give him passage back to Britain. Burnet's collections indicate that he was not idle during such times. Over 20 per cent of his specimens came from the British Caribbean, and most of these were from Jamaica. Similarly, Jamaican plants represented a significant focus of Houstoun's botanical study. The ship surgeon observed over 40 per cent of the 661 plants described in his unpublished botanical text while in Jamaica. The South Sea Company's agents and factors, as much as its trade routes, facilitated the natural historical investigations of individuals such as Burnet and Houstoun.[28]

Conclusions

The seeds, sloths, and other specimens gathered by Britons in Spanish America bear traces of the *asiento* trade that made their collection possible. Dyes and drugs feature prominently among such collections, reflecting the shared interests of naturalists and the South Sea Company. The provenance of such specimens, collected in close proximity to South Sea Company slaving factories, and their transportation on company vessels with the assistance of company employees, reflected the geography and infrastructure of the *asiento* trade. The violence and exploitation of black bodies that lay at the heart of that trade was reflected in Burnet's collection, particularly in specimens such as the human remains he gathered while a slave ship surgeon on the *Wiltshire*.

During the fifteen years Burnet worked for the South Sea Company, he doggedly searched for ways to make his fortune. Exchanging scientific specimens and observations with prominent British naturalists can be understood as one strategy for achieving this goal. Well-connected friends in Britain such as Sloane could plead his case with the South Sea Company's Court of Directors for promotion or leniency. At multiple

points in his career, Burnet asked to be promoted to the better-paid position of factor. Even with Sloane's lobbying on his behalf, he was told each time that company policy forbade a factory surgeon from becoming a factor. In 1722, shortly after arriving in Cartagena, the physician tried a different tack. He begged Sloane "would use your Interests with the Court of Directors for the enlarging my Salary or my advancement in their service, for it is thoroughing [throwing] away my time to serve for my present salary." The South Sea Company physician argued that the job of factory surgeon, if faithfully performed, was much more work than that of factor and that it was in the company's interest to compensate him accordingly. "The diligent discharge of a Physicians duty may save the life of seven or eight slaves in each Cargo which otherways might die & that being saved or lost farr exceeds his Sallary." Like his many requests for promotion to factor, Burnet's attempt to increase his compensation by appealing to the directors' sense of enslaved Africans as commodities failed.[29]

Despite Sloane's efforts, Burnet never received the increased salary or promotion to factor that he so desired. His ultimate decision to become a Spanish agent can be understood in light of his disappointed ambitions. In 1728, when he was part of the British delegation to the Congress of Soissons called to negotiate the end of the Anglo-Spanish War, Burnet began to secretly provide the Spanish government with evidence against the South Sea Company. The documents Burnet furnished, alongside his own testimony, helped prove the truth of Spanish allegations that the South Sea Company had consistently violated the *asiento* agreement through contraband trading, by bribing Spanish officials, and by allowing its employees to engage in private trading. The physician provided information about the company's illicit trading practices in exchange for a pension and a position as *médico de cámara* from the Spanish crown. Yet his new allegiance to Spain did not preclude his participation in the networks of British science. In the 1730s, Burnet continued to correspond with Sloane and the Royal Society of London, sending natural curiosities and reports on the latest scientific activities in his new home in Madrid.[30]

The *asiento* trade enabled a few South Sea Company employees such as Burnet to investigate first-hand the storied natural wonders of Spanish America. The specimens they collected and the observations they made shaped the production of natural knowledge about the region. Specimens and observations collected by Burnet, for example, were referenced in Sloane's natural history of Jamaica and were the basis of Douglas's essays on ipecacuanha (a medicament) and armadillos that he

presented to the Royal Society. In another instance, astronomical observations made by a Spanish American colonist and sent to the Royal Society by Burnet became the basis of Edmond Halley's calculation of the longitude of Cartagena, published in *Philosophical Transactions* in 1723. However, Burnet's role as an intermediary is absent from the published record, and at least through the 1720s, he seems to have been unaware that the observations even reached the Royal Society.[31]

Similarly, observations and specimens sent by Burnet were occasionally interpreted in ways quite different from what he intended. For example, Burnet sent Sloane drawings and botanical descriptions of a Portobellan plant known locally as the blood flower to support his contention that it was the true ipecacuanha. Sloane, however, used the observations and drawings he received from Burnet to prove the opposite. Armed with Burnet's drawing, along with descriptions of ipecacuanha published in herbals and his own specimens from Jamaica, Sloane convinced the censors of the College of Physicians and the wardens of the Society of Apothecaries that the blood flower was *not* the true ipecacuanha. Based on this evidence, both groups ordered their members "to condemn and destroy such a dangerous Root" whenever it was found.[32]

Burnet's collecting practices were part of a broader pattern by which European naturalists exploited the routes and personnel of the slave trade in order to add specimens to their museums and to facilitate their studies of the natural world. They also indicate the deep connections between science and the inhuman commerce of slaving that we have only begun to explore. In the British case, specimens were gathered on slave ships, at British slaving factories in West Africa, in British American ports where slaves were disembarked, and in the parts of Spanish America where the *asiento* extended the routes of British slaving. Many of the objects collected through the routes of the British slave trade in the early eighteenth century eventually became part of Sloane's museum. They thus became part of the founding collection of the British Museum after the naturalist's death, and in the late nineteenth century became part of the collections of the Natural History Museum in South Kensington. Some of these specimens, especially the more stable herbarium specimens, can be found there today, where they remain a valuable resource for those interested in taxonomy, biodiversity, and any number of related questions. Specimens gathered by Burnet, Houstoun, and other Britons employed in the British slave trade to Spanish America also became part of the collections belonging to other British scientific institutions, including the Oxford Herbarium, the Chelsea Physic Garden, and the

Royal Society. As such, they continued to contribute to the production of natural knowledge long after the *asiento* ended. Such legacies suggest we should count dozens of Vera Cruz plants, smuggled jalap roots, and stuffed armadillos among the profits of the *asiento* trade.[33]

ACKNOWLEDGMENTS

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NOTES

1 James Petiver to James Douglas, 30 March 30, 1716, MS Hunter D513, University of Glasgow Special Collections; James Douglas, "The Description and Natural History of the Animal called Armadillo or the hog in armour from South America or the little American hog in Armour, by J.D.," MS Hunter D516, University of Glasgow Special Collections; *Voyages: The Trans-Atlantic Slave Trade Database*, http://slavevoyages.org (voyage ID 76318).

2 Petiver to Douglas, 30 March 30, 1716, MS Hunter D513, University of Glasgow Special Collections.

3 James Douglas, "The Description and Natural History of the…Armadillo"; 5 April 1716 and 21 June 1716, Journal Books of Scientific Meetings, Collections from the Royal Society, 1660–1800, vol. 11, 116, 131.

4 Jordan Kellman, "Nature, Networks, and Expert Testimony in the Colonial Atlantic: The Case of Cochineal," *Atlantic Studies* 7, no. 4 (December 2010): 383–6; Amy Butler Greenfield, *A Perfect Red: Empire, Espionage, and the Quest for the Color of Desire* (New York: Harper, 2005). Cochineal is made from the wingless females of the insect *Dactylopius coccus*.

5 "Account of Books," *Philosophical Transactions* 20, no. 240 (1698): 196–200; "Inquires for Suratte and Other Parts of the East-Indies," *Philosophical Transactions* 2, no. 23 (1666–67): 422; Phyllis Allen, "The Royal Society and Latin America as Reflected in the Philosophical Transactions, 1665–1730," *Isis* 37, nos. 3–4 (July 1947): 132–8.

6 In the Treaty of Tordesillas, Spain and Portugal, with the blessing of the papacy, drew a line dividing the world between them. Spain staked claim to the western side of the line, containing the newly discovered Americas, while Portugal claimed sovereignty over Africa and most of Asia.

7 Arthur S. Aiton, "The Asiento Treaty as Reflected in the Papers of Lord Shelburne," *Hispanic American Historical Review* 8, no. 2 (May 1928):

167–8; Colin A. Palmer, *Human Cargoes: The British Slave Trade to Spanish America, 1700–1739* (Urbana: University of Illinois Press, 1981), esp. 3–16; Nuala Zahedieh, "The Merchants of Port Royal, Jamaica, and the Spanish Contraband Trade, 1655–1692," *William and Mary Quarterly* 43, no. 4 (October 1986): 570–93.

8 Lewis Melville, *The South Sea Bubble* (1921; repr., New York, 1968), 14; Aiton, "The Asiento Treaty," 167–77; Elizabeth Donnan, "The Early Days of the South Sea Company, 1711–1718," *Journal of Economic and Business History* 2, no. 3 (May 1930): 419–50; Adrian Finucane, "The South Sea Company and Anglo-Spanish Connections, 1713–1739" (PhD diss., Harvard University, 2010); Palmer, *Human Cargoes*; Zahedieh, "The Merchants of Port Royal," 589–91; "MINUTES of the Court of Directors of the Governor and Company of Merchants of Great Britain Trading to the South Seas," 28 October 1713, South Sea Company Papers, vol. 1, Add. MS 25495, 189–90, British Library. Although the asiento was supposed to last until 1743, it ended with, and partly caused, the War of Jenkins' Ear in 1739.

9 Vera Lee Brown, "The South Sea Company and Contraband Trade," *American Historical Review* 31, no. 4 (July 1926): 662–78; Willem Klooster, "Inter-Imperial Smuggling in the Americas, 1600–1800," in *Soundings in Atlantic History: Latent Strutures and Intellectual Currents, 1500–1825*, ed. Bernard Bailyn and Patricia L. Denault (Cambridge, MA: Harvard University Press, 2009), 165–6, 169; George H. Nelson, "Contraband Trade under the Asiento, 1730–1739," *American Historical Review* 51, no. 1 (October 1945): 55–67; Gregory O'Malley, *Final Passages: The Intercolonial Slave Trade of British America, 1619–1807* (Chapel Hill: University of North Carolina Press, 2014), 240–1; Palmer, *Human Cargoes*, 9–11; Geoffrey J. Walker, *Spanish Politics and Imperial Trade, 1700–1789* (Bloomington: Indiana University Press, 1979), 68–72.

10 As a university-educated physician, Burnet had an unusually high level of education for a slave ship surgeon. Most surgeons employed in the slave trade were trained as surgeons, not physicians, and were generally considered by contemporaries to be poorly trained ones at that. Stephen D. Behrendt, "The Captains of the British Slave Trade, 1785–1807," *Transactions of the Historical Society of Lancashire and Cheshire* 40 (1991): 120n61.

11 Brown, "The South Sea Company," 670. For the impact of the War of the Quadruple Alliance on the asiento trade, see Finucane, "The South Sea Company," 95–7.

12 In cases where Burnet may have sent duplicates – for example, the "three sucking fishes" he collected in Guinea – I have counted the entire set as

one specimen. The objects collected by Burnet have been identified using the following sources: John Burnet to James Petiver, 26 December 26, 1716, Sloane MS 3322, f. 97; John Burnet to James Petiver, 16 April 1718, Sloane MS 4065, f. 285, British Library; John Burnet to Hans Sloane, 6 April 1722, Sloane MS 4046, f. 227r–228v, British Library; John Burnet to Hans Sloane, September 1722, Sloane MS 4046, f. 287–8, British Library; John Burnet to Hans Sloane, 6 August 1723, Sloane MS 4047, f. 29, British Library; John Burnet to unknown addressee, 14 May 1716, Sloane MS 4065, f.248r; Hans Sloane, *A Voyage to the Islands Madera, Barbados, Nieves, S. Christophers and JAMAICA, with the Natural History of the Herbs and Trees, Four-footed Beasts, …* vol. 2 (London, 1725); "List of plants received from John Burnett," Sloane MS 4072, f. 295r, British Library; Hans Sloane, Catalogue of Minerals, 3 vols., Palaeonotology Library, MSS SLO, Natural History Museum, London; Hans Sloane, Insects Catalogue, 2 vols., Entomology Library, Natural History Museum, London; Hans Sloane, Miscellanies Catalogue, Centre of Anthropology, Department of Africa, Oceania, and the Americas, British Museum; Hans Sloane, Vegetable and Vegetable Substances: being the original register of the plant collections of Sir Hans Sloane excluding the Herbarium, arranged in the order of their acquisition, 3 vols., Botany Library, Natural History Museum, London.

13 John Burnet to James Petiver, 26 December 1716, Sloane MS 3322, f. 97; John Burnet to Hans Sloane, 6 April 1722, Sloane MS 4046, f. 227r, British Library; Hans Sloane, Vegetable and Vegetable Substances, vol. 3, f. 797; "List of plants received from John Burnett," Sloane 4072, f. 295r, British Library.

14 For "scorpion," see Hans Sloane, "Insects Catalogue," vol. 2, 185, Entomology Library, Natural History Museum, London; Sloane, *A Voyage to the Islands,* vol. 2, 198.

15 Hans Sloane, Catalogue of Minerals, vol. 1, 160, Palaeonotology Library, MSS SLO, Natural History Museum, London; Hans Sloane, Catalogue of Minerals, vol. 2, 2, Palaeonotology Library, MSS SLO, Natural History Museum, London; Hans Sloane, Catalogue of Minerals, vol. 3a [unpaginated], Palaeonotology Library, MSS SLO, Natural History Museum, London. For "green gold," see Londa Schiebinger, *Plants and Empire: Colonial Bioprospecting in the Atlantic World* (Cambridge, MA: Harvard University Press, 2004), 7.

16 John Burnet to Hans Sloane, 6 April 1722, Sloane MS 4046, f. 227v, British Library.

17 "OFFICIAL copies of letters and instructions from the Court of Directors of the South Sea Company to their Factors abroad, persons in their

employ, and various public companies and officials," 12 July 1717, South Sea Company Papers, 7 vols., Add. MS 25563, vol. 2, f. 60v–61r, ("assist our Factory," 60v), British Library.

18 James Petiver to William Toller, 19 November 1716, Sloane MS 3340, f. 275v–276r, British Library.

19 "List of plants received from John Burnett," Sloane MS 4072, f. 295, British Library; John Burnet to [unknown addressee], 14 May 1716, Sloane MS 4065, f. 248r, British Library; Hans Sloane, "Insects Catalogue," vol. 2, 180, Entomology Library, Natural History Museum, London; 21 June 1716, Journal Books of Scientific Meetings, Collections from the Royal Society, 1660–1800, vol. 11, 131 ("a worm").

20 John H. Appleby, "Human Curiosities and the Royal Society, 1699–1751," *Notes and Records of the Royal Society of London* 50, no. 1 (January 1996): 13–27; Simon Chaplin, "Dissection and Display in Eighteenth-Century London," in *Anatomical Dissection in Enlightenment England and Beyond: Autopsy, Pathology, and Display,* ed. Piers Mitchell (Ashgate, 2012), 99; Simon Chaplin, "Nature Dissected, or Dissection Naturalized? The Case of John Hunter's Museum," *Museum and Society* 6, no. 2 (July 2008): 135–51; Anita Guerrini, "Anatomists and Entrepreneurs in Early Eighteenth-Century London," *Journal of the History of Medicine and Allied Sciences* 59, no. 2 (April 2004): 219–39. "Humana" specimens were "anatomical, pathological, or curious human specimens." Sloane's collection included 275 anatomical specimens and 41 fetuses. See Michael Day, "Humana: Anatomical, Pathological and Curious Human Specimens in Sloane's Museum," in *Sir Hans Sloane: Collector, Scientist, Antiquary, Founding Father of the British Museum*, ed. Arthur MacGregor (London: British Museum Press, 1994), 69–70.

21 See, for example, Paula Findlen, *Possessing Nature: Museums, Collecting, and Scientific Culture in Early Modern Italy* (Berkeley: University of California Press, 1994); Jan Golinski, *Making Natural Knowledge: Constructivism and the History of Science* (Cambridge: Cambridge University Press, 1998); Donna Haraway, "Situated Knowledges: The Science Question in Feminism and the Privilege of Partial Perspective," *Feminist Studies* 14 (1988): 575–99; David Livingston, *Putting Science in Its Place: Geographies of Scientific Knowledge* (Chicago: University of Chicago Press, 2003); Steven Shapin, "Placing the View from Nowhere: Historical and Sociological Problems in the Location of Science," *Transactions of the Institute of British Geographers* 23 (1998): 5–12; Charles W. Withers, *Placing the Enlightenment: Thinking Geographically about the Age of Reason* (Chicago: University of Chicago Press, 2007).

22 The literature on violence, terror, and coercion on the slave ship is vast. For a start see Sowande' Mustakeem, "'She Must Go Overboard & Shall Go

Overboard': Diseased Bodies and the Spectacle of Murder at Sea," *Atlantic Studies* 8, no. 3 (2011): 301–16; Marcus Rediker, *The Slave Ship: A Human History* (New York: Penguin, 2007); Rediker, "History from Below the Water Line: Sharks and the Atlantic Slave Trade," *Atlantic Studies* 5, no. 2 (August 2008): 285–97.

23 Todd Savitt, "The Use of Blacks for Medical Experimentation and Demonstration in the Old South," *Journal of Southern History* 48, no. 3 (1982): 331–48; Ann Fabian, *The Skull Collectors: Race, Science, and America's Unburied Dead* (Chicago: University of Chicago Press, 2010); Stephen C. Kenny, "The Development of Medical Museums in the Antebellum American South: Slave Bodies in Networks of Anatomical Exchange," *Bulletin of the History of Medicine* 87, no.1 (2013): 32–62.

24 James Delbourgo, "Slavery in the Cabinet of Curiosities: Hans Sloane's Atlantic World" (2007), www.britishmuseum.org/pdf/delbourgo%20essay.pdf. See also Katie Whitaker, "The Culture of Curiosity," in *Cultures of Natural History,* ed. Lisa Jardine, J.A. Secord, and E.C. Spary (Cambridge: Cambridge University Press, 1996), 75–91.

25 William Houstoun to Hans Sloane, 9 December 1730, Sloane MS 4051, f. 141r, British Library; William Houstoun to Hans Sloane, 5 March 1731, Sloane MS 4052, f. 82r–82v, British Library; Philip Miller, *The Gardeners Dictionary; Containing the Methods of Cultivating and Improving All Sorts Of Trees, Plants, and Flowers,* 8th ed. (London, 1768), unpaginated; Bernard Romans, *A concise natural history of East and West Florida* (New York, 1775), 154. Unfortunately, the jalap plants that Houstoun introduced to Jamaica were destroyed by hogs when he was absent from the island.

26 John Burnet to Hans Sloane, 6 April 1722, Sloane MS 4046, f. 227v ("skin stuffed" f. 227v), British Library; John Burnet to Hans Sloane, September 1722, Sloane MS 4046, f. 287–8, British Library; John Burnet to Hans Sloane, 6 August 1723, Sloane MS 4047, f. 29r–29v, British Library.

27 O'Malley, *Final Passages,* 221, 232–6.

28 Ten of the forty-eight items in Burnet's collection for which the provenance is known came from the Caribbean. Seven of these came from Jamaica and three from unspecified locations in the British West Indies. Houstoun observed 293 of the 661 plants he described in his "Catalogus Plantarum" while in Jamaica. Some of these plants were likely collected between December 1732 and August 1733, when Houstoun was in the region as a traveling naturalist rather than as a slave ship surgeon. For Houstoun's collection see William Houstoun, "Catalogus Plantarum in America observatarum," in *Botanical manuscripts and drawings of plants collected in Central America, Jamaica and Cuba, c. 1730–33,* MSS Banks Coll Hou, Natural History Museum, London.

29 For "diligent discharge" see John Burnet to Hans Sloane, 6 April 1722, Sloane MS 4046, f. 228r–228v, British Library. For requests for a promotion or a raise see John Burnet to Hans Sloane, 30 November 1716, Sloane MS 4044, f. 250, British Library; "Official copies of letters and instructions from the Court of Directors of the South Sea Company to their Factors abroad," 30 April 1718, South Sea Company Papers, Add. MS 25,563, f. 164r, British Library; John Burnet to Hans Sloane, 6 August 1723, Sloane MS 4047, f. 29v, British Library; John Burnet to Hans Sloane, 24 February 1724, Sloane MS 4047, f. 323v–324r, British Library; John Burnet to Hans Sloane, 17 March 1725, Sloane MS 4047, f. 329r–330r, British Library; John Burnet to Hans Sloane, 4 February 1728, Sloane MS 4050 f. 54, British Library. For requests for leniency see "Official copies of letters and instructions from the Court of Directors of the South Sea Company to their Factors abroad," Dec. 12, 1723, South Sea Company Papers, Add. MS 25,564, f. 8v, British Library; John Burnet to Hans Sloane, 2 April [1724?], Sloane MS 4047, f. 164r, British Library; John Burnet to Hans Sloane, 7 April 1725, Sloane MS 4047, British Library, London, f. 333v; John Burnet to Hans Sloane, 5 January 1726, Sloane MS 4048, f. 120, British Library.

30 Brown, "South Sea Company," 662–78; John Burnet to Hans Sloane, 11 April 1733, Sloane MS 4052, f. 239, British Library; John Burnet to Hans Sloane, 30 October 1734, Sloane MS 4053, f. 363r–363r; John Burnet to Hans Sloane, 7 April 1736, Sloane MS 4055, f. 307, British Library; John Burnet to Hans Sloane, 10 October 1736, Sloane MS 4054, f. 314r–315v, British Library; John Burnet to Hans Sloane, 2 July 1736, Sloane MS 4054, f. 266, British Library; John Burnet to Hans Sloane, 10 October 1736, Sloane MS 4054, f. 314, British Library; John Burnet to Hans Sloane, 13 May 1737, Sloane MS 4055, f. 103, British Library; John Burnet to Hans Sloane, 8 July 1737, Sloane MS 4055, f. 129, British Library; John Burnet to Hans Sloane, 11 August 1737, Sloane MS 4055, f. 214, British Library; 8 July 1736, Journal Books of Scientific Meetings, Collections from the Royal Society, 1660–1800, vol. 15, 368.

31 Sloane, *A Voyage to the Islands*, vol. 2 (London, 1725); James Douglas, "A short account of the different kinds of Ipecacuanha," MS Hunter D422, University of Glasgow Special Collections; James Douglas, "Description and Natural History of the … Armadillo"; Edmond Halley, "The Longitude of Carthagena in America," *Philosophical Transactions* 32 (1722–23): 237–238; John Burnet to Hans Sloane, September 1722, Sloane MS 4046, f. 287–8, British Library; John Burnet to Hans Sloane, 6 August 1723, Sloane MS 4047, f. 29r–29v, British Library; John Burnet to Hans Sloane, 17 July 1725, Sloane MS 4048, f. 26, British Library; John Burnet to Hans Sloane, 5 January 1726, Sloane MS 4048, f. 120, British Library.

32 Sloane, *A Voyage to the Islands,* vol. 2, x–xii (quotation at xi). Eighteenth-century naturalists often preferred to work with images of flora and fauna rather than physical specimens. See James Delbourgo, "Sir Hans Sloane's Milk Chocolate and the Whole History of the Cacao," *Social Text* 29, no. 1 (Spring 2011): 82, 85–6.

33 C. Helen Brock, *Dr. James Douglas's Papers and Drawing in the Hunterian Collection, Glasgow University Library: A Handlist* (Glasgow, 1994); Raymond Phineas Stearns, *Science in the British Colonies* (Urbana: University of Illinois Press, 1970), 329; Miller, *The Gardeners Dictionary*; J.E. Dandy, *The Sloane Herbarium: An Annotated List of the* Horti Sicci *Composing it; with Biographical Accounts of the Principal Contributors* (London: British Museum, 1958), 88, 109–10, 139–40, 151, 165–8, 175–83, 230.

chapter six

From the Monumental to Minutiae: Serializing Polynesian Barkcloths in Eighteenth-Century Britain

BILLIE LYTHBERG

Fragile layers
so thin
the tapa is barely connected to its own self…
– Karlo Mila, "Paper Mulberry Secrets"[1]

The scholarship that maps the long eighteenth century's rich period of global maritime history is dominated by the British explorer Captain James Cook, not only because of his repeat visits to the Pacific and the publications that followed them but also because of his extensive, well-documented, and now widely dispersed collections. For many of the Pacific islands, the earliest extant examples of material culture are associated with the voyages of scientific exploration made by Cook and his crews in 1768–71 with *HMS Endeavour*; in 1772–75 with *HMS Resolution* and *HMS Adventure*; and in 1776–79 with *HMS Resolution* and *HMS Discovery*. For example, save a single barkcloth collected in Tahiti by Bougainville in 1768, Cook's are the first European voyages from which a corpus of Pacific barkcloths survive and can be identified.[2] This essay considers a series of sampler books made from Tahitian, Tongan, and Hawaiian barkcloths collected on Cook's voyages, which were first published in 1787 by a British bookseller named Alexander Shaw. Part catalogue, part collection, part technical document, Shaw's barkcloth books offer a fascinating window onto the rapid expansion of late-eighteenth-century British science to include Pacific territories, people, and "natural" and "artificial curiosities," all of which needed to be understood, categorized, and domesticated for a British (and wider European) audience. Published accounts and images made by explorers addressed this in part, drawing heavily on simile and metaphor