chapter five

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

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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

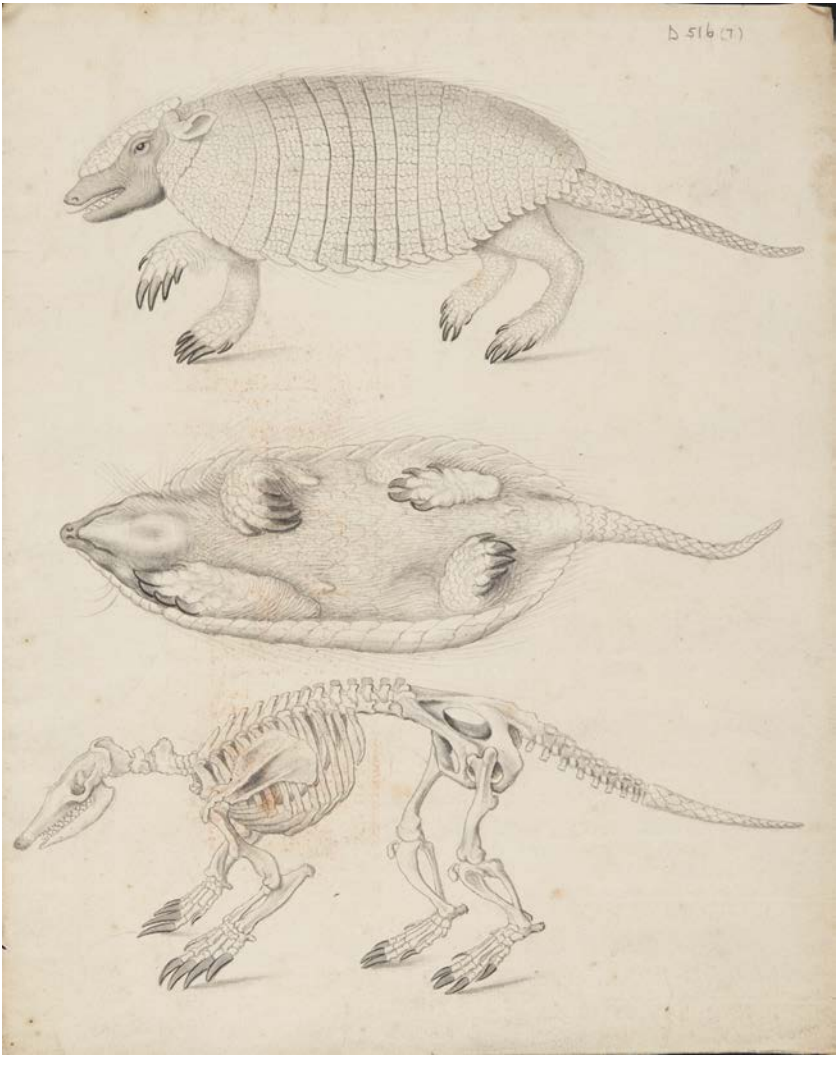

Figure 5.1 James Douglas, "The Description and Natural History of the Animal Called Armadillo or ye Hog in armour from South America by J.D." (1716). MS Hunter D516, f. 7. Special Collections, University of Glasgow.

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

This chapter is based upon work supported by the National Science Foundation under Grant Number 1455679.

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