

Slavery

and the natural world

Chapter 9: Transfer and
exploitation of knowledge

Context

This material is part of a wider project on slavery and the natural world, carried out at the Natural History Museum, 2006–08. The information is based on documents held in the Museum’s libraries, and explores the links between nature (especially the knowledge, and transfer, of plants), people with an interest in natural history (mainly European writers from the sixteenth to eighteenth centuries) and the history and legacies of the transatlantic slave trade¹.

More can be found in the original documents, written by natural historians at the time of slavery. Contact the Natural History Museum Library www.nhm.ac.uk/research-curation/library/ +44 (0) 20 7942 5000. The additional references section has other useful sources such as relevant articles, books, journals and websites.

Contents

1. Introduction	2
2. Knowledge – African rice growing	3
3. Knowledge – indigenous peoples	7
4. Exchange or exploitation?	10
5. Contribution to collecting	13
6. Alternative interpretations	17
7. Additional references	19

1 For more background information see Chapter 1: The project.

1. Introduction

The era of empire gave Europeans the opportunity to travel and explore overseas colonies. The transatlantic slave trade is defined by the enforced movement of African people to the Caribbean and the Americas where indigenous people were also being exploited. Not only was the movement of plants and animals part of this trade, but it also brought about the transfer of skills and knowledge between the people of Africa, the Americas and Europe².

‘Three continents came to be inextricably linked in the years after the European settlement of the Americas; the money, commercial expertise and migrating instincts of maritime Europe, the land and economic potential of the Americas – and the peoples of Africa.’ (Walvin, 2001, pvii)

The doctor and natural historian, Hans Sloane, described the trade between Jamaica, Europe and America:

‘From Europe come flowers [flours], bisket [biscuit], beef, pork, clothing for masters and servants, blew clothes and Liquors, Madera wine. Goods sent from Jamaica are sugars (for the most part, muscavados), indigo, cotton-wool, ginger, pimento (all spice or Jamaican pepper), fustic wood, prince-wood, lignum vitae, arnotto, log wood and the several commodities they have from the Spaniards of the west Indies such as Sarsaparilla, cacao nuts, cochineal.’ (Sloane, vol 1, 1707, plv)



▲ Cape Verde chief extracts custom dues in form of brandy from European traders, Ogilby, 1670 © The Natural History Museum, London

² The transatlantic slave trade is often referred to as the ‘triangular trade’ but this ignores the importance of the trade with Asia (the ‘East Indies’) that influenced trade across the Atlantic.

There are examples of African people being chosen for enslavement because of their specialist knowledge, not only for their physical labour. This is true of people from the rice growing regions of west Africa. Their knowledge, skills and use of technologies for growing rice helped establish it as a commercial crop in America, especially in South Carolina, and in parts of the Caribbean.

Indigenous peoples of the Americas also had knowledge and practices that Europeans sometimes benefited from, or ignored or feared.

The evidence suggests that enslaved Africans and indigenous peoples of the Americas shared knowledge and skills between each other more than with Europeans. However, enslaved people used some European goods, such as the Dutch pot for cooking, and gradually adopted other influences, including Christianity (when it was permitted).

Many enslaved Africans and indigenous peoples in the Americas helped Europeans in studying natural history (especially botany) by collecting specimens. In other cases, enslaved Africans and indigenous peoples of the Americas deliberately withheld their knowledge from Europeans. Natural historians often sent detailed instructions to their European contacts in the colonies, but they relied on local knowledge to find particular specimens and to undertake the sometimes difficult or dangerous work of collecting. Enslaved Africans and indigenous peoples were sometimes paid for this work, but rarely acknowledged³.

Through their collecting and their local knowledge, Africans and indigenous peoples in the Americas made a significant contribution to the development of science as we know it today.

2. Knowledge – African rice growing

At the time of the transatlantic slave trade many Europeans made generalisations about Africans; they were considered different from Europeans and were defined particularly by their skin colour and the fact that they were not Christians. Some Europeans also acknowledged the great variety of different cultures among the African people they enslaved and sent to their colonies in the Americas.

The differences were often described from an economic perspective. Some African people were seen as better workers and more resistant to disease or less prone to resisting enslavement than others⁴. The natural historians Hans Sloane and Griffith Hughes described preferences for different African people in Jamaica and Barbados respectively:

'The Negros are of several sorts, from the several places of Guinea, which are reckoned the best Slaves, those from the East Indies or Madagascins, are reckoned good enough, but too choice in their Diet, being accustomed in their own Countries to Flesh Meat, &c. and do not do well here, but very often die. Those who are Creolians, born in the Island, or taken from the Spaniards, are reckoned more worth than others in that they are season'd to the Island.'
(Sloane, vol 1, 1707, pxlvii)

³ See Chapter 10: Attitudes and acknowledgement.

⁴ At the time behavioural characteristics were sometimes considered as innate or biological, whereas today we acknowledge cultural and environmental variations between people.

‘... new Slaves are chiefly brought from the Kingdoms of *Coromantee*, *Angola*, *Whiddaw*, *Ebo*, and *Anamabw*. The first of these, in general, are looked upon to be the best for Labour, being, in some measure, inured to it in their own Country’. (Hughes, 1750, p14)

The amateur natural historian and Anglican priest William Smith described the preference in Nevis for Africans from the Gold Coast:

‘Our Negroes (except what are born at Nevis) are brought to us from *Guinea*; those from the Gold Coast being the most valuable and hardy, on account of the vast Heats, and of course, scarcity of Provisions there; and those of *Congo* and *Angola* are less set by, because the Plenty of Provision in their own, more temperate, and cool Countries, renders them lazy, and consequently, not so able to endure Work and Fatigue. When they first arrive, they are well rubbed over with Oil, in order to make them look sleek and handsome; and as they can, with a small Comb, curl one another’s Hair into inimitable knots, like Roses, &c. it gives a much farther addition to their Beauty; in short, it exceeds the Skill of the best *English* Barber. A Boy or Girl about sixteen years old, may be worth Twenty Pounds Sterling, a Woman Twenty-seven, and a Man Thirty.’ (Smith, 1745, p225)

A good example of how Africans were specifically selected and enslaved for their knowledge and skills relates to rice growing. Historically, rice (*Oryza sativa*) has been described as originating in Asia. More recent research has shown that another species of rice (*Oryza glaberrima*) has a long history of cultivation in Africa⁵. The Portuguese introduced Asian rice to Africa in the 1500s, and this led to the African variety being overlooked. The types of rice and the ways of growing them differ in Africa from Asia. African rice has smooth hulls and is redder in colour than Asian rice. It was only in the 1970s that it was agreed two different types of rice had originated independently in two different parts of the world⁶.

‘In an era of scientific racism and colonialism, the denial of African accomplishment in rice systems provides a stunning example of how power relations mediate the production of history. As a result, researchers ignored African rice history until well into the twentieth century.’ (Carney, 2001, p48)

Rice was cultivated by the ‘dry land’ method over a large part of northern and western Africa, especially the Upper Niger River basin since 1500 BCE⁷. African people from this area knew how to grow rice without the extensive irrigation systems used in Asia.

When rice was established in the southern states of America (especially South Carolina, which was permanently settled by Europeans from 1670) the rice-growing techniques of enslaved Africans were in demand⁸. The tools were also influenced by African technology (metal tools were not used by indigenous peoples of the Americas⁹). Women were especially valuable for their role in rice production.

5 Carney, 2001, p33-46.

6 See www.nhm.ac.uk/jdsml/nature-online/seeds-of-trade and Carney, 2001, p36.

7 BCE is ‘before the common era’ and is the same as BC.

8 See Carney, 2001, p80.

9 Carney, 2001, p108–9.

'Particular know-how, rather than lack of it, was one factor that made black labour attractive to English colonies.' (Wood, quoted in Carney, 2001, p69)



▲Rice (*Oryza sativa*), Sloane Herbarium, collected 1687–89, ID 528 © The Natural History Museum, London

The rice in the Americas and parts of the Caribbean was initially grown by African methods, but using the Asian species, *Oryza sativa*, imported by the Portuguese to the Americas in the late fifteenth century. The specimen of rice that Hans Sloane collected in Jamaica was *Oryza sativa*, and he used other writers' descriptions of Asian methods of production¹⁰.

People who had escaped enslavement often joined freedom-fighting communities called Maroons. They survived using their knowledge of natural resources, and African knowledge of rice growing helped Maroons to cultivate it as a staple part of their diet in Jamaica and Suriname¹¹.

'Rice is the commonest of all Grains, in most of the warm Countries and Islands of the *East-Indies*, from whence it has gone into some Countries and Islands of the same temperature in the *West-Indies* as may be more particularly gathered from the Writers mentioned in my Catalogue. But the Bay of *Bengale* is the place where most grows, and whence most of that used in *Goa*, *Malabar*, the *Moluccas* and *Sumatra* comes, so that if the Vessels miscarry from thence their Inhabitants suffer Famine. It is sown in Marsh Land, that is very moist or overflowed with water, or steeped eight days in the River in *Paniers*, (according to *Cauche*) and the earth is plowed or trodden with Oxen, that it appears Mud; if there be no Water in the Grounds where 'tis sown, they water it as *Albert* tells us they do, every forty hours, in *Egypt*, *Duart de Meneses* about *Sofala*, and the Writers of *China* tells us they do there by artificial Channels. When it is reap'd they put it into Stacks, and then in most places beat it out of the Husk by Pestles and Mortars, and Winnow it, or clear it in a Hand-Wood-Mill... or tread it out by Oxen in a large hard Floor by Buffaloes drove round so as they may tread on it all... It is in several Countries manag'd by a several way, sometimes if too thick in coming up 'tis planted thinner, and *Le Comte* says 'tis in China planted in Sheafs or Bundles, the better to resist the Winds. It is used for Food in most Countries where it grows, 'tis boiled in water, and so used as Bread, and is likewise mixed with Milk, Broath, &c. and made into many kinds of Messes.' (Sloane, vol 1, 1707, p103)

10 It is not clear whether Asian or African methods were used to grow rice in Jamaica at the time of the transatlantic slave trade. Rice was not a major crop like sugar. Hans Sloane may not have directly seen rice production, as it was too dangerous for him to visit areas inhabited by the Maroons where rice was most commonly grown.

11 See also Chapter 6: Resistance.

John Gabriel Stedman, fighting against the Maroons in Suriname in the 1770s, wrote about the cultivation of rice and the prominence that it assumed in the Maroon diet:

‘These we since learned, were transporting *rice* to another settlement for their subsistence, when they should be expelled from Gado-Saby which they daily expected, since they had been discovered by the gallant Captain Meyland. The green hampers, which they call *warimbos*, were very curiously plaited with the manicle leaves. And when our men cut them open with their sabres, there burst forth the most beautiful clean rice that I ever saw, which was scattered and trampled under foot, as we had no opportunity of carrying it along... Major Medler and myself, with a few of the van-guard, and a small party of rangers, at this time rushing forward, soon came to a fine field of rice and Indian corn...Inconceivable are the many expedients which these people employ in the woods, where in a state of tranquillity they seemed, as they boasted, to want for nothing, being plump and fat, at least such as we had an opportunity of observing. It should be noticed, that *game* and *fish* they catch in great abundance, by artificial traps and springs, and preserve them by barbacuing; while their fields are even overstocked with rice, cassava, yams, plantains, &c... And here, to our astonishment, we discovered that the reason of the rebels shouting, singing, and firing, on the night of the 20th, was not only to cover the retreat of their friends, by cutting off the pass, but by their unremitting noise to prevent us from discovering that they were employed, men, women, and children, in preparing warimboes or hampers filled with the finest rice, yams, and cassava, for subsistence during their escape, of which they had only left the chaff and refuse for our contemplation. This was certainly such a masterly trait of generalship in a savage people, whom we affected to despise, as would have done honour to any European commander, and has perhaps been seldom equalled by more civilized nations.’ (Stedman, vol 2, 1806, p108–10, 118–21)

‘Having so frequently mentioned *rice*, it may be expected that I should say something concerning its growth and cultivation. It rises to the height of four feet, with furrowed stalks, and in appearance is not unlike wheat, but the stalks are knotted by intervals, and stronger; the leaves are like those of reeds: the seeds are produced somewhat like barley, and grow on each side of the spikes or ears alternately. The *oryza* or rice is cultivated in a warm and marshy soil; the grains are oval, and if good ought to be white, hard, and transparent. As for the use of this commodity for food, it is so well known, that I shall only say, that without this grain our poor marines must long ago have all been starved, particularly in August 1775; when, for all allowance, they got per day one rusk biscuit, and three spikes of maize or Indian corm, for *five men*; rice alone supplying, as I have intimated, the rest of the allowance.’ (Stedman, vol 2, 1806, p330–2)

3. Knowledge – indigenous peoples

Europeans recognised that indigenous peoples of the Americas had knowledge of plants and their environments that were invaluable to their survival. They were the first to use tobacco (*Nicotiana tabacum*), which Europeans then adapted to grow as a valuable cash crop in the British American colonies and in the Caribbean¹².



▲ Tobacco (*Nicotiana tabacum*), a decorative ceiling panel from the roof of the Natural History Museum's Central Hall, Picture Library reference 37159 © The Natural History Museum, London



▲ Soursop (*Annona muricata*), de Tussac, 1808 © The Natural History Museum, London

Tobacco was used as a medicine, and indigenous Americans also used many other plants for herbal remedies, such as soursop (*Annona muricata*), worm-grass (*Spigelia anthelmia*) and even cotton (*Gossypium barbadense*)¹³.

Often medicinal knowledge was recognised as very effective and some plants, such as *Quassia amara* that grew in South America¹⁴, supplied important treatments in the colonies, and valuable exports to Europe.

12 See Chapter 3: Commercial plants.

13 See Chapter 8: Medicines.

14 See Chapter 2: People and the slave trade and Chapter 10: Attitudes and acknowledgement.



▲ Cotton, de Tussac, 1808 © The Natural History Museum, London



▲ *Quassia amara*, a decorative ceiling panel from the roof of the Natural History Museum's Central Hall, Picture Library reference 48863 © The Natural History Museum, London

However, Europeans did not always understand the importance of some indigenous practices. For example, maize (*Zea mays* or sweetcorn) was a major part of the diet for many indigenous peoples in the Americas. They cooked it with ashes or lime, which releases niacin, and helps prevent pellagra¹⁵. Europeans started using maize but cooked it differently and did not get the same nutritional benefits.

'It is interesting that New World natives and their forebears – the original cultivators and consumers of maize – did not suffer from pellagra, the dangerous nutritional deficiency disease (caused by a lack of niacin, one of the B-vitamins) that has plagued most of the world's maize-eating peoples for centuries. This apparent immunity caused much puzzlement among medical researchers until it was realized that the Native American customs of preparing maize grain in alkali solutions and frequently consuming the grain in combination with leguminous vegetables tended to increase both the niacin availability and the protein quality of the maize, thus greatly improving its nutritional value. But when maize was adopted as a staple food by Old World populations, and by non-natives (blacks and whites) in North America, these customs failed to accompany it, with pellagra the result.' (Kiple and Ornelas, vol 2, 2000, p1805–6)

15 See Chapter 5: Diet and nutrition and www.nhm.ac.uk/jdsml/nature-online/seeds-of-trade/.



▲ Maize (*Zea mays*), a decorative ceiling panel from the roof of the Natural History Museum's Central Hall, Picture Library reference 37183 © The Natural History Museum, London



▲ Cassava (*Manihot esculenta*), Merian, 1705, Picture Library reference 26483 © The Natural History Museum, London

Europeans sometimes feared indigenous knowledge. Henry Barham, a doctor and natural historian, spent much time researching antidotes for poisons. He described the knowledge indigenous people had of plants used for poisoning¹⁶:

'The expressed juice of the root [cassava] is very sweet to the palate, but soon putrifies and breeds worms, called topuea, which are a violent poison, and which Indians too well know the use of: They dry these worms or maggots, and powder them; which powder, in a little quantity, they put under their thumb-nail, and, after they drink to those they intend to poison, they put their thumb upon the bowl, and so cunningly convey the poison; wherefore, when we see a negro with a long thumb-nail, he is to be mistrusted.'

(Barham, 1794, p34)

Henry Barham also wrote of the savanna flower (*Echites umbellata*) that:

'It is too well known, and it is pity that ever the negro or Indian slaves should know it, being so rank a poison.' (Barham, 1794, p167–8)

16 See also Chapter 6: Resistance.

4. Exchange or exploitation?

The way in which enslaved Africans and indigenous peoples of the Americas were often described suggests that they learned from each other, or they at least found similar solutions faced with European domination and control. Hans Sloane described many similarities between enslaved Africans and indigenous peoples:

‘Snakes or Serpents and Cossi (a sort of Worms) are eaten by the Indians¹⁷ and Negros.’ (Sloane, vol 1, 1707, pxx)

‘They [cotton-tree worms] are sought after by Negroes and Indians, and boyl’d in their Soups, Potages, Ollios, and Pepper-pots, and are accounted of admirable Taste, like to, but much beyond, Marrow.’ (Sloane, vol 2, 1725, p193–4)

‘The Leaves [allspice] are very much made Use of in Baths for Hydropick Legs, &c. by the Indians, Negroes and Surgeons, and may be substituted wherever Bay Leaves are thought useful, they resembling them in every thing. There is no great Difficulty in the Curing or Preserving of this Fruit for use. The Negroes and Indians climb some Trees, cut down others, and pull off the Twigs with the unripe green Fruit...’ (Sloane, vol 2, 1725, p76)

‘The Bark of this Tree stamp’d and thrown into a standing Pool where Fish are, intoxicates them for some time, they turning their Bellies up, and coming above Water, but if they are not presently caught, they come to themselves and recover... The Indians and Negro’s make Use of this Bark [dogwood] to take Fish, especially in deep Holes in inland Rivers, where there is no Current but the most Part of the Rivers are dry, only some deep Holes or Pools, whither the Fish retire for their own Safety. The Fish caught after this Manner, are counted very wholesome and good Food.’ (Sloane, vol 2, 1725, p39)



◀ Jamaica dogwood (*Piscidia piscipula*),
Sloane Herbarium, collected 1687–89, ID 724
© The Natural History Museum, London

17 Hans Sloane may have used the word Indian to mean anyone indigenous to the Caribbean or from South America, North America, or south Asia.

‘Indians and Negroes lie on the Floors, most generally on Mats made of Bull-rushes, ordinary Rushes, Ribs of Plantain Leaves, or the Spathae, or Vaginae of Cabbage-tree Flowers, with very little or no coverings, and a small Fire near them in their Cottages. Hence they and ordinary white Servants, who lie not in Beds, are not said to go to Bed, but to go and Sleep: and this Phrase has generally obtain’d all over the Plantations.’ (Sloane, vol 1, 1707, pxxxii)

It is thought that enslaved Africans and indigenous peoples of the Americas shared knowledge between each other more freely than with Europeans¹⁸. Both peoples shared experience of living in tropical environments and faced oppression by European colonisers¹⁹.

While undoubtedly some knowledge was shared with Europeans, it could also be seen as a commodity, and enslaved Africans may have traded information for money, favours or better conditions. When an enslaved African healed a European with self-heal (*Ruellia paniculata*)²⁰ Barham wrote that:

‘... and then the captain rewarded the negro very well, and desired him to shew him the herb’. (Barham, 1794, p171–2)

There is also evidence that Africans and indigenous peoples deliberately withheld some of their knowledge from Europeans. Thomas Winterbottom recognised African people’s reluctance to share medicinal knowledge when he was in Sierra Leone in 1795, and said the same situation existed in North America:

‘The following attempt to sketch a history of the present state of medicine among the natives of Africa, and to give some account of those diseases to which they are more peculiarly liable... must unavoidably prove very defective; partly from a want of knowledge of the different languages spoken by the nations who are the subject of it, and partly from the great unwillingness which they shew to disclose the secrets of their medical art. The inconveniences which are produced by the former circumstance, are but imperfectly remedied by the assistance of an interpreter; and the difficulties which result from the latter are well pointed out by Dr. Rush, who is so deservedly eminent as a physician and philosopher, in his Inquiry into the Natural History of Medicine among the Indians of North America. ‘By what arts,’ says he, ‘shall we persuade them to discover [reveal] their remedies? and how shall we come at the knowledge of facts in that cloud of errors in which, the credulity of the Europeans, and the superstition of the Indians, have involved both their diseases and remedies? These difficulties serve to increase the importance of our subject. If I should not be able to solve them, perhaps I may lead the way to more successful

18 See Schiebinger, 2004, p14 and p90–3.

19 Indigenous women in the Americas used abortion plants in similar ways to enslaved Africans; see Schiebinger, 2004, p128–30 as well as Chapter 2: People and the slave trade and Chapter 6: Resistance.

20 See Chapter 10: Attitudes and acknowledgement.

endeavours for that purpose?’ An inquiry of this kind, were the obstacles which oppose its prosecution entirely removed, would no doubt prove sufficiently interesting. We are indebted to the experience of nations, more rude than those of Africa, and inhabiting countries which possess fewer natural advantages, for some of our most valuable remedies. We have therefore some reason to hope, that as Africa, though hitherto too much neglected, has already enriched many European arts by its productions, so it may have in store for future observers some articles which may become important acquisitions to the material medica. ... Considerable pains have been taken to discover those remedies upon which the natives place their chief dependence for the cure of disease...’ (Winterbottom, vol 2, 1803, p1–3)

Another example is Kwasi, who withheld the knowledge of the medicinal plant he used, and profited from, in Suriname for 30 years until he chose to reveal its identity to Carl Gustaf Dahlberg²¹.

Europeans sometimes resorted to extorting information they wanted. Hans Sloane described how Europeans learned about *contra yerva*, the antidote to poisonous arrows used by indigenous peoples, from a doctor who threatened his enslaved worker with one of his own arrows until he treated him²².

It is less clear from research documents what enslaved Africans and indigenous peoples learned from Europeans²³. There are examples of them preferring their own practices to those of the Europeans, especially in traditional medicine²⁴. But the fusion of cultures in the Caribbean and North, Central and South America, and the adoption of Christianity by enslaved Africans over time²⁵ imply that knowledge and customs were passed in all directions. Christianity, especially the non-conformist versions practised by groups such as the Methodists and Baptists,²⁶ played an important part in bringing about the final freedom (emancipation) of enslaved people in British colonies in 1833 (the Emancipation Act became law on 1 August 1834, but freedom was not secured until 1838 after a period of ‘apprenticeship’²⁷).

21 See Chapter 2: People and the slave trade and Chapter 10: Attitudes and acknowledgement.

22 Sloane, vol 1, 1707, liv–lv, cited in Schiebinger, 2004, p91.

23 Europeans made enslaved Africans learn some things, such as European languages. They forbade learning other skills such as the ability to read and write. Enslaved people resisted the inhumane systems of oppression and found ways to improve their situation, but the transatlantic slave trade created lasting legacies of subordination.

24 See Chapter 8: Medicines.

25 Early in the transatlantic slave trade, Africans were forbidden from converting to Christianity.

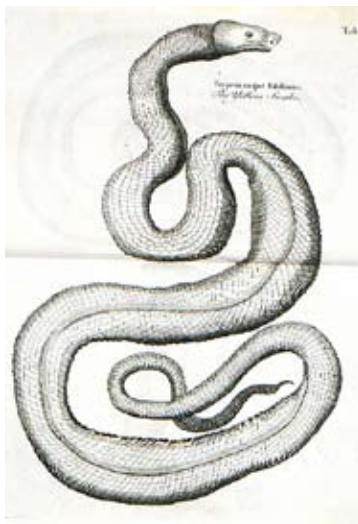
26 The 1831–32 Baptist War in Jamaica was led by Samuel Sharpe, see www.understandingslavery.com/teachingslavetrade/introduction/keyhistorical/?page=7.

27 Slavery was only finally abolished in the United States after the Civil War in 1865, and the Portuguese were the last European country to end slavery in the Americas when they gave enslaved workers in Brazil their freedom in 1869.

5. Contribution to collecting

There is evidence that enslaved Africans and indigenous peoples of the Americas collected many natural history specimens²⁸.

Hans Sloane described how a seven-foot (over 2.1 metres) long live yellow snake that he tried to take back to England was obtained:



‘An Indian brought this figur’d here and several others to me, he us’d to take them behind their Necks, so that they could not bite him; then he would give them Leave to twist themselves about his Arm, as they pleas’d. He kill’d them by putting their Tails under his Foot, taking them behind their Necks and stretching their Backbones, and twisting and pinching hard their Lungs and *Tracheae Arteriae*...I had one of this Kind tam’d by an Indian for me. It would follow the Indian as a Dog would his Master.’ (Sloane, vol 2, 1725, p335–6)

▲ Sloane’s yellow snake (*Epicrates subflavus*, Jamaican boa), Picture Library reference 30549 © The Natural History Museum, London

Henry Smeathman acknowledged that he had help from Africans excavating termite mounds in Sierra Leone²⁹:

‘We meet vast obstacles in examining the interior parts of these tumuli. In the first place, the works, for instance, the apartments which surround the royal chamber and the nurseries, and indeed the whole internal fabric, are moist, and consequently the clay is very brittle: they have also so close a connexion, that they can only be seen as it were by piece-meal; for having a kind of geometrical dependence or abutment against each other, the breaking of one arch pulls down two or three. To these obstacles must be added the obstinacy of the soldiers, who fight to the very last, disputing every inch of ground so well as often to drive away the negroes who are without shoes, and make white people bleed plentifully through their stockings.’ (Smeathman, 1781, p50)

Henry Smeathman was collecting specimens on behalf of a group of natural historians including Dru Drury. Drury wrote detailed instructions to contacts all over the world encouraging them to use local people and knowledge to help collect insects and other specimens³⁰:

28 See also Chapter 2: People and the slave trade.

29 See Chapter 2: People and the slave trade.

30 See also Chapter 2: People and the slave trade.



▲ African helping to excavate termite mounds, Smeathman, 1781
© The Natural History Museum, London

'Sir, I here do myself the pleasure of sending you the Implements & Materials for catching & preserving Insects & shall think myself very happy to receive some from the part where you are bound. The Box I must inform you has already done its duty having been to Bombay & China, but returned with but few Insects. I hope it will not do so from Africa. Indeed I have very little reason to expect it, as I am satisfied yr. good nature will prompt you to use your utmost endeavours to obtain some. But notwithstanding this, if it should happen that you cannot by any means procure me any, either by your own industry or the help of the natives, I think it would not be a bad scheme to leave the Box & things on the Coast with somebody you could trust... in order to be filled with Insects against next year.' (Drury, 1761–83, p137)

'As you was so very obliging to promise me you would use your endeavours for procuring some Insects in Africa I should be greatly wanting to myself not to accept your kind offer & as such have with the greatest pleasure sent you a Box with Implements &c for catching them, which I have not the least doubt will be employed to its intended purpose... The enclosed print in the Box was taken from an Insect (a Beetle) brought from the River Gaboon in Africa. I will beg you to show this print to some of the Natives both at Callabar & Princes [Island] & if it is possible to get such a one I will intreat you to do so. If you succeed you will greatly oblige me, it is an Insect I am very desirous to get, but have not hitherto been able.' (Drury, 1761–83, p176)

James Petiver was another great collector³¹. He wrote to Allan Broderich, a traveller to Spanish Town in Jamaica, asking for butterflies and moths, as well as other specimens, to be collected:

'Sir, This comes to kiss your hand & to congratulate your safe arrival to Jamaica – the which I understand by a letter lately arrived from you as my Brother Richardson informs me. I hope as you was pleased to promise me you will not fail by the next ship to send what Collections of Plants, Shells, & Insects you can procure about you. I have herewith sent you a small Collection of the last as a Pattern by which I would desire you would employ some Negro or a white servant after the same manner to fill any white paper or printed Booke for me of all the Butterflies & Moths they can find. The thick bodied Insects as Beetles Grasshoppers Bees Wasps etc must be run through with a pin & sent in a Box, all small Fish & Serpents may be easily sent in Rum as I shewed you when in London. The Shells need noe care but picking up & the sprigs of Trees, Shrubs, Bushes, Herbs and all sorts of Grasses ... to be put into a quire of brown paper as soon as gathered & so sent over to me, this Sir I beg you will hire some Man or Boy to doe & whatever charge you are at I will faithfully repay.'

(Petiver, 1696–9, p62)

James Petiver also wrote the following directions for George Harris, another traveller to the colonies, in his letters:

'Procure correspondents for me wherever you come, & take directions how to write to them & procure something from them whilst you stay shewing their Slaves how to collect things by taking them along with you, when you are abroad. Engage some Persons whenever you come to procure you all the smallest of such kind of Lizard, serpent while you stay & if you can learn of them their Names either Native or otherwise or other properties that may belong to them fail not to transcribe it, the like do as to all small Beasts, Birds & Fishes & whenever you catch any of these last very large look into their gutts & stomach & take out Animalls you shall find there. Take always the pencil book with you & never fail to write down any thing observable as soon as you see it, which transcribe into the Observatory book as soon as you can... Give my printed Directions & Centuria [Petiver's natural history publications] to such you can engage & whilst you are with them give out 2 or 3 quires of brown paper & Insect books to have filled by their Servants or Slaves which requite as they shall deserve. Wherever you come enquire of the Physicians or Natives what seeds, Herbs etc they have of any Vertue or other use as in Building, Dying etc or what Shrubs Herbs etc they have that yield any Gum, Balsam or are taken notice of for their Smell, taste etc. and of each of these get samples with the names they call them by. The like learn of them in relation to their Beasts, Birds, Fishes, Insects, Fossils etc & whatever they report take down in writing & if possible procure the things themselves.'

(Petiver, 1696–9, p235–6)

31 See Chapter 2: People and the slave trade.

Henry Barham described using enslaved labour to collect logwood seeds (*Haematoxylum campechianum*) in Mexico to grow commercially in Jamaica:

‘In the year 1715, I had an Indian slave, that I sent down to the Bay of Campeche to cut logwood, whom I ordered to send me up some of the seed of it, which he did; and I ordered it to be planted in Jamaica, where it takes to growing admirably well, even in the worst of the lands; so that there are now seed-bearing trees enough to stock the whole island.’ (Barham, 1794, p91–2)

He also described how enslaved Africans identified plants in Jamaica with those they knew in Africa (although sometimes incorrectly):

‘I met with a tree in Jamaica that had a very black heart, and a fine scent, much resembling lignum aloes, being very bitter: A carpenter who first shewed me this tree, called it sweet iron-wood. A negro that I employed to get some of it, when he brought it me, said the same sort grew with them in Africa, where they called it *Columba*.’ (Barham, 1794, p86)

Henry Barham also wrote that an African provided knowledge of a balsam obtained from the Bastard Mamee, or Santa Maria tree (*Calophyllum calaba*) when a Spanish supplier could not:

‘These are very tall trees, and very straight, growing to fifty or sixty, some to eighty feet high... I had once a green balsam presented to me, brought from the Spaniards, of a very fine green, clear, and pleasant smell, which they said was the finest balsam in the world for green wounds, but could not tell me from what tree it came. Some time after, a negro brought me of the same sort of balsam, both in colour and smell, which he got from one of these trees, and I found it to be an excellent balsam; for, melt it and pour it into a green or fresh incised wound, and it would heal up in once or twice dressing.’ (Barham, 1794, p18)

The female natural historian Sarah Bowdich³² described paying local people to help collect specimens in the Cape Verde islands, but with little effect:

‘The geology, botany, and conchology of a place, may always be ascertained by the morning walks of an individual; but to catch fish, shoot birds, &c., it is frequently necessary to have recourse to others... Mr. Bowdich tried the effect of a few dollars, which prevailed in one or two instances, but to no extent. The fishes seemed to be rare and beautiful, but neither money nor entreaty could prevail on any one to catch them... I kept a troop of little ragged boys and girls in pay, to bring me shells, but they would go no further than the immediate precincts of the town, and they all deserted me when I refused to purchase the same shells four or five times over.’ (Bowdich, 1825, p189)

32 See Chapter 2: People and the slave trade.

'We anchored early in the morning, and Mr. Bowdich immediately went ashore, and despatched emissaries in various directions, for plants and shells, leaving me in the schooner to examine the most perishable, as he sent them on board to me, and to preserve the best. I was also to hail every boat I saw, in the hope of procuring fish, while he went as far as he could with his bag and hammer, to examine and collect specimens of the rocks. We were tolerably successful, as the results of this one day's work will shew to those who peruse the appendix, particularly, as there was but one fishing-boat in the place, which did not make its appearance till five in the afternoon.' (Bowdich, 1825, p196–7)

'The usual means were resorted to, of purchasing the birds, shells, &c., brought us by the natives, and every facility was afforded by our countrymen, particularly by the Commandant [Captain Findlay], whose anxiety for the survey seemed to equal Mr. Bowdich's.' (Bowdich, 1825, p197)

Maria Merian was another female natural historian who had help from enslaved Africans and indigenous peoples of the Americas. She used local people to help collect specimens, and wrote down information told to her by 'myne slaven' (my slaves). Unlike many other writers at the time, she acknowledged this help and information³³:

'... the names of the plants I have kept as they were given to me by the natives and Indians in America'. (Merian, quoted in Schiebinger, 2004, p207)

6. Alternative interpretations



This chapter presents research information and context. The evidence itself can be seen in different ways and raises many questions and some further areas for research. Through the Natural History Museum's slavery and the natural world public programme many alternative interpretations and questions relevant to this chapter have been collected and some of these are summarised below:

33 See also Chapter 2: People and the slave trade and Chapter 10: Attitudes and acknowledgement.

- There has been much discussion on knowledge gained, but is there any evidence for knowledge lost as a result of the slave trade: plant species now extinct due to exploitation of land etc?
- Why didn't Hans Sloane know about African rice growing methods? Perhaps he was not in Jamaica long enough to see it first hand, or just assumed production was the same as described by other writers in Asia? Asian methods may have been used in the area he was staying.

The significance of the transfer of knowledge as well as material products such as plants was highlighted: '... isolating that object throughout from the meaning makes it a material transfer rather than a knowledge transfer and I think there was a lot of knowledge transfer. I think there is a lot of evidence for that and it will be really useful to have more of the context as an example... What I want to know is how were the enslaved people treated differently from the normal context of this kind of movement between places, again what kind of knowledge did they bring with them? It is all about the interaction of... different local knowledge'.

A participant talked about a healer and researcher from the Rastafarian movement who, 'has done it from the Native American perspective and we were talking on that table about how things were exchanged between the Africans and the Native Americans... His name is Ras Daniel Babu'.

'You can make correlation between what was happening on one island and another... the slaves could have been from different parts of Africa [and] that will give you answers to the part of Africa that they were from and how they exchanged knowledge from one region to another from within the Caribbean and that way you can trace it back to Africa because we are talking about Africa here at the end of the day.'

People also commented that, 'Africans [were] told they were going to work not as slaves'. This raised the debate about the movement of knowledge and whether or not plants were moved intentionally:

- How could enslaved people have brought plants? They did not know they were going to be enslaved. They might have put things in their hair to take to their villages and then they were kidnapped. It was probably therefore a mistaken transfer; we must not give the impression that they transferred stuff by choice.
- Enslaved people put seeds in their hair because they knew if they had their food and medicine they might stand a chance of a bright future.

Participants also expressed their opinions on the subject of transfer and exploitation of knowledge, '... what this is showing us is that there was indigenous knowledge'.

Some of their comments were:

- Give indigenous knowledge status – even when it is not written.
- [We] Black communities should make an effort in looking at African history.
- I'm fascinated by the origin of the specimens especially if they were collected by enslaved [people].
- Perhaps slaves helped collect plants or animals and taught naturalists how to use them? Some of our plants were cultivated in plantations where slaves worked.
- Transmission of plant knowledge was shared between African and Native American healers.
- How and when did the slaves learn to make use of plants, seeds etc?
- Show these people the good they have done. Something for humanity. Respect them.

7. Additional references

There is a full list of references, including all of the research documents, in Chapter 1: The project. These references offer additional reading specifically relating to this chapter.

Carney, Judith Ann, *Black Rice: The African Origins of Rice Cultivation in the Americas*, Harvard University Press, 2001

Kiple, Kenneth F, and **Ornelas**, Kriemhild Coneè, eds, *The Cambridge World History of Food*, Cambridge, 2000

Petiver, James, Letterbooks and miscellaneous papers, British Library, London, 1696–9 and 1712³⁴

Schiebinger, Londa, *Plants and Empire: Colonial Bioprospecting in the Atlantic World*, Harvard University Press, 2004

Walvin, James, *Black Ivory: Slavery in the British Empire*, 2nd edition, Blackwell Publishing, 2001

Wood, Peter, *Black Majority*, Random House Inc, 1974

34 These papers are located in the British Library, Sloane Mss. 2302, 3333, 3334.