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INHUMAN EMPIRE: SLAVERY AND NONHUMAN ANIMALS IN THE BRITISH
ATLANTIC WORLD

by

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ABSTRACT OF THE DISSERTATION

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This dissertation examines how material interactions between slaveholders, enslaved people, and nonhuman animals shaped the territorial expansion of the British Empire in the era of the Atlantic slave trade. My project is an environmental history of slavery and slaving from the Royal African Company's entrance into the castle trade in 1672 through the American Revolution to the abolition of the trade in 1808. I argue that human-animal entanglements generated by slaving constituted a decisive factor in expanding the political, scientific, and economic networks of the empire. *Inhuman Empire* challenges the predominantly European frame of ecological imperialism by interrogating the ecological, social, and cultural interplay between English enslavers, Atlantic Africans, and animals. I use the theoretical frameworks of eco-cultural networks and modes of interaction to draw out how these relations shaped the expanding geography of slavery in the British Atlantic world. English and African traders exchanged animals as propitiatory sacrifices, gifts, and media of exchange to forge bonds of alliance and commerce on the Gold Coast and the Bight of Benin. Naturalists studying the faunal environments of slave

depots from New Spain to North American plantations became slaveholders or relied on the judgment and collecting efforts of enslaved people to gather specimens for natural history collections. On Caribbean and Chesapeake plantations, enslavers raising sugar and tobacco harnessed the labor and bodily energy of slaves and draft animals. However, many animals proved difficult to control in the pursuit of imperial profit. Intractable vermin ruined plantations at alarming rates, and planters produced the category of pests to describe the animals beyond their control. Most importantly, enslaved people resisted their bondage and undermined the institution of slavery by injuring, starving, or stealing animals for their own purposes, while black intellectuals produced critiques of slavery as the foundation of an “inhuman” empire as central to the campaign to abolish the slave trade. The centrality of human-animal networks that supported slaving and slavery is one conclusion of this dissertation, which intervenes in early American environmental history. A second conclusion is that this environmental history provides a valuable materialist account that supports formerly enslaved people’s narratives and experiences of becoming less-than-fully human animalized subjects in the long eighteenth century.

Dedication
For Belinda Paige Blakley

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Introduction

Classing the Human and the Brutal Species

The commerce therefore, which was begun in the primitive ages of the world, by classing them with the brutal species, and by habituating the mind to consider the terms *brute* and *slave* as *synonymous*, soon caused them to be viewed in a low and despicable light, as as greatly inferior to the human species.

—Thomas Clarkson, *An Essay on the Slavery and Commerce of the Human Species*, 1786.

Driven like Cattle to a fair,
See they sell us young and old;
Child from Mother too they tear,
All for love of filthy Gold.

—Hannah More, “The Sorrows of Yamba”, 1797

Animals and slaves: forms of unfreedom depend on such inexact but nevertheless effective parallelism.

—Colin Dayan, *The Law is a White Dog*, 2011

In her memoir of her enslavement, Mary Prince described being sold as an enslaved girl at the age of twelve on Bermuda in 1800. Indelible in her memory, Prince recalled how in the dawn on the morning of her sale, her mother dressed her and her sisters, Hannah and Dinah, in new osnaburg clothes, and lead them to the market where they would be sold. Her mother cried out “I am going to carry my little chickens to market.” Writing later, as a forty-three-year-old woman reflecting on this experience, Prince made sure to emphasize to her readers that her mother's words that morning continued to haunt her.¹ Lined up with her sisters awaiting their sale, Prince’s heart pounded “with grief and terror so violently” that she trembled.

¹ Mary Prince, *The History of Mary Prince, a West Indian Slave. Related by Herself. With a Supplement by the Editor (T. Pringle). To which is Added, the Narrative of Asa-Asa, a Captured African* (London: Published by F. Westley and A.H. Davis, 1831), 3. Indeed, in the text, Prince wrote “‘I am going to carry my little chickens to market’ (these were her very words,)”. On Prince’s narrative see: Margot Maddison-MacFadyen, “Mary Prince, Grand Turk, and Antigua,” *Slavery & Abolition* 34, no. 4 (2013): 653-662; Barbara Baumgartner, “The Body as Evidence: Resistance, Collaboration, and Appropriation in *The*

When the vendue master who would be arranging their sale arrived, Prince remembered of the scene that she knew she and her sisters would be offered up “for sale like sheep or cattle” to a new enslaver.² As the oldest of her sisters, the vendue master selected Prince to be sold first. This man did not speak to Prince as he conducted the sale:

He took me by the hand, and led me out into the middle of the street, and, turning me slowly round, exposed me to the view of those who attended the vendue. I was soon surrounded by strange men, who examined and handled me in the same manner that a butcher would a calf or a lamb he was about to purchase, and who talked about my shape and size in like words—as if I could no more understand their meaning than the dumb beasts.

As she stood there, sensing the penetrating gaze of her would-be butchers, an enslaver bought Mary Prince for £38. Prince watched in horror as Hannah and Dinah endured the same humiliating experience. When the sale ended, Prince’s mother embraced and kissed her daughters, “mourned” for them, and begged them to survive, persist, and endure.

After being severed from her mother and family, Prince’s new enslaver carried her away to Spanish Point, a rocky headland in Pembroke parish, on the western side of the archipelago. Enslaved women in the home of Prince’s slaveholder, after seeing this new arrival enter in tears, stressed to her that she had “come here to work” and not to cry. Prince learned what kind of toil would be expected of her from an enslaved woman named Hetty, whom she described as “French Black.” Through conversation with Hetty, and observing Hetty’s labor in the field, Prince came to understand that her life would become deeply entangled with the lives of nonhuman animals.³

History of Mary Prince. "Callaloo 24, no. 1 (2001): 253-275; Mary Jeanne Larrabee, "'I Know What a Slave Knows': Mary Prince's Epistemology of Resistance," *Women's Studies* 35, no. 5 (2006): 453-473.

² Prince, *The History of Mary Prince*, 4.

³ Prince, *The History of Mary Prince*, 5-6.

In her memoir, Prince introduced Hetty to her readers as the “most active woman I ever saw, and she was tasked to her utmost.” Immediately after her arrival, Hetty escorted Prince to assist her in milking their enslavers cows. “She then fetched home the sheep, and penned them in the fold; drove home the cattle, and staked them about the pond site; fed and rubbed down my masters’ horse, and gave the hog and fed the cow their suppers.”⁴ In addition, Prince and Hetty made dinner for their enslaver, prepared beds in the house, cared for his children and put them to sleep. Prince remembered how comforting it could be to simply look into Hetty’s eyes and face, and “felt glad that she was there.”

However, that night, after being berated by the wife of their enslaver for failing to finish her work in a timely manner, the enslaver reached for his “long cow-skin” whip to attack Hetty, whose screams startled Prince as she lay awake in bed.

This single day in Prince’s life encapsulates two important aspects of enslavement in the British Atlantic world during the long eighteenth century. First, Prince herself understood both her enslavement and her sale as an enslaved child as being compared to and evaluated as if she were an animal. Historians should recognize and respect this understanding of slavery. Second, in studying Hetty’s grueling labors with animals—milking cows, herding and penning sheep, staking cattle, feeding and caring for horses, and feeding pigs—Prince, and others enslaved on both Caribbean islands and plantations in the southern colonies of North America, lived and labored in close proximity to livestock, and their lives were inextricably connected with the nonhuman world.

Thoughrought her narrative, Prince returned time and again to the theme of being compared by slaveholders to a nonhuman animal. Six years after being enslaved on

⁴ Prince, *The History of Mary Prince*, 6

Spanish Point, Prince's enslaver sold her again to another slaveholder on Grand Turk Island. This time, Prince did not have an opportunity to say goodbye to her mother or family. On the sloop from Bermuda to the Turks Islands, Prince turned over in her thoughts how English men and women "think that black people are like cattle, without natural affection. But my heart tells me it is far otherwise."⁵

Upon their arrival on Grand Turk, Prince encountered her new enslaver, who possessed several salt ponds on the island. On his estate, she remembered eating "Indian corn boiled with water", working leg-deep in the salt pans from four in the morning until late in the evening well after sunset, and returning to the house of the enslaver, where she and the other slaves "slept in a long shed, divided up into narrow slips, like the stalls used for cattle."⁶ Prince dwelled on how slavery appeared to produce and rely upon a kind of mundane violence to maintain disciplinary structures of hierarchy on plantations. She remembered her enslaver assaulting an elderly enslaved man, Daniel, who after being beaten and exposed to stinging saltwater would writhe "on the ground like a worm."⁷ Prince labored in the salt pans for a decade before her enslaver transported her with him as he retired to Bermuda.

On her return to Bermuda, Prince took up the work familiar to Hetty and others, as she "attended upon a horse and cow besides—also going upon errands. I had to curry the horse—to clean and feed him—and sometimes to ride him a little."⁸ In 1815, Prince endured being sold again, this time to an enslaver in Antigua. On Antigua, Prince watched other enslaved people cut grass to feed cattle as she labored inside the enslaver's

⁵ Prince, *The History of Mary Prince*, 9.

⁶ Prince, *The History of Mary Prince*, 10.

⁷ Prince, *The History of Mary Prince*, 11.

⁸ Prince, *The History of Mary Prince*, 13.

domicile. Long days and nights of labor as a domestic slave on a sugar plantation exhausted Prince. She wrote that she worked for hours without rest, “like a horse.”⁹ Over and again she returned to this theme, that her life had become reduced to an animal-like state of abjection.

In the conclusion to her memoir, written and published in 1831, Prince posed several important questions to her readers in Britain and its colonies throughout the Atlantic rim. First, how did slaveholders arrive at the conclusion that the enslaved were “disgraced and thought no more of than beasts?” Second, how could enslavers, and those men like the vendue master who orchestrated the slave market, dare to forcibly separate families—mothers and their children, husbands and wives, sisters and brothers—“just as cattle are sold and separated?” Finally, how could English people themselves, whose society within Europe forbade chattel slavery at home, “go out into the West Indies”, as if the Caribbean islands could be considered separate from Britain, to “act in such a beastly manner”? Prince established and repeatedly drew her readers attention to the fact that enslavers in the colonies “tie up slaves like hogs—moor them up like cattle, and they lick them, so as hogs, or cattle, or horses, never were flogged.”¹⁰ As enslavers compared the enslaved to animals, Prince argued, they themselves became animal-like in their brutality and inhuman disregard for the lives and pain of others.

Far from being an exception, the archive of slavery is replete with narratives and documents that bear similarities to Prince’s memoir. In 1723, an anonymous enslaved African writer in Virginia, for instance, wrote with boldness to Edmund Gibson, the Bishop of London, that slaveholders in the colony “doo Look no more up on us then if

⁹ Prince, *The History of Mary Prince*, 20.

¹⁰ Prince, *The History of Mary Prince*, 23.

wee ware dogs.”¹¹ The purpose of this dissertation is to raise two questions related to such descriptions of slavery. First, how did material interactions within environmental regimes imposed by enslavers upon the enslaved and animals shape the expansion of Britain’s colonial empire in the Atlantic world in the long eighteenth century? I invoke the concept of the long eighteenth century here to primarily draw attention to the chronological scope of the Atlantic slave trade in the Anglophone world between the crown’s granting of a monopolistic charter to the Royal African Company in 1672 and the abolition of the slave trade by Parliament in 1808 as a useful, albeit problematic, heuristic. Second, how did enslaved people come to reckon with these imposed relationships, either through physical resistance or through intellectual critiques of slavery such as those that appear in Prince’s book? If men and women like Prince experienced their enslavement as being compared to animals, what material conditions produced those experiences and influenced later arguments for the abolition of the trade?

This dissertation will examine the origins of a very complex web of human-animal networks from the Royal African Company’s entrance into the slave trade in Atlantic Africa from the date of its second royal charter in 1672 until the legal abolition of the slave trade in 1808 by both Great Britain and the United States. This dissertation combines research methods and scholarship from multiple historical fields, namely environmental history, animal studies, history of science, Atlantic history, and the history of the early modern British Empire in North America and the Caribbean.

¹¹ Anonymous to [Bishop Edmund Gibson], August 4, 1723, Fulham Papers, American Colonial Section, 42 vols. Lambeth Palace Library, London, vol. XVII, as quoted in Thomas N. Ingersoll, "'Release Us out of This Cruell Bondegg': An Appeal from Virginia in 1723." *The William and Mary Quarterly* 51, no. 4 (1994): 777-82.

Through this dissertation, I will advance two interrelated arguments. First, that the human and animal relationships produced by the slave trade in Atlantic Africa, the discipline of natural history as it spanned the routes of slavery in the Atlantic world, and plantation slavery in both the Caribbean and the Chesapeake, supported the expansion of crucial transcolonial networks involving imperial profits for the English crown, the pursuit of universal knowledge, and finally the fortunes of British slaveholders in colonial America. Second, I will argue that people of African descent fully realized that enslavers conceived of their lives as being comparable to nonhuman animals, and that their resistance, which could deliberately take the form of using or attacking animals to undermine slaveholders, should be understood within an environmental context involving nonhuman animals.

The first argument makes a contribution within environmental history by widening and complicating a foundational framework of the field that has been highly influential for nearly three decades, namely ecological imperialism. English slavers did not simply transplant slaves and animals to the empire's Atlantic world colonies, but crafted and struggled to maintain particular equations and combinations of the two that enabled the construction and expansion of networks of exchange and profit. This dissertation adds an important cultural layer to ecological imperialism with regards to the African Diaspora and slavery, and adds to a growing critique of the unidirectional framing of ecological imperialism by situating negotiated, and contingent, human-animal relationships throughout the Atlantic world.

The second argument will contribute to the fields of African American history and the history of the African Diaspora by grounding a materialist analysis of the context and

background for the kinds of claim-making Prince, and millions of other enslaved people whose thoughts do not appear within slavery's archive, engaged in to say that the functioning of slavery in the Atlantic world rested, in part, on European enslavers treating people of African descent as if they were comparable to nonhuman animals. This contribution is undoubtedly more modest, as other scholars have made this point already. However, their analyses have yet to be picked up by environmental historians, and so another aim of this dissertation is to put these fields into deeper and sustained conversation.

Race, Slavery, and the Nonhuman Animal in American History

Historians of African American history, the African Diaspora, slavery, and race in early America have long considered the question of how and when enslaved people came to be compared to nonhuman animals by enslavers. Winthrop Jordan's synthesis of the origins of racist ideology, white supremacy, and racial ideas in African American history in *White Over Black* remains an important foundation for any historical analysis of the conflation of people of African descent and nonhuman animals in early modern European history. In his book, Jordan contended that European perceptions of African savagery "fascinated Englishmen from the very first."¹²

White Over Black usefully introduced a fundamental tension in the history of the slave trade and slavery by documenting how European traders used the "powerful metaphor" of comparing Africans and animals as they "knew perfectly well that" Africans "were men, yet they frequently described the Africans as 'brutish' or 'bestial' or

¹² Winthrop D. Jordan, *White Over Black: American Attitudes Toward the Negro, 1550-1812* (Chapel Hill: University of North Carolina Press Books, 1968), 28.

beastly” in documents spanning from the sixteenth century to the nineteenth century. In 1554, John Lok, for instance, described all sub-Saharan Africans as “a beastly living people, without God, law, religion, or government.”¹³

In the early seventeenth century, as English enslavers entered the trade in ivory and human captives between the Gambia River, the Gold Coast, and the Bight of Benin, slavers began to conflate both humans and nonhuman animals as commodities. In December, 1651, the Guinea Company instructed Bartholomew Haward to sail from Gravesend to the Gambia River to transport a “Cargo of negers and Cattel” across the Atlantic Ocean to Bridgetown, Barbados.¹⁴ Similar phrases describing cargos of captives and livestock appear as well in letters from the Guinea Company, a joint-stock firm that preceded the Royal African Company.¹⁵

Other Europeans engaged in the slave trade also conflated humans and animals in their dispatches from Atlantic Africa. Jean Barbot, a French slaver based in West Africa between 1678 and 1682, observed that captives incarcerated north of Ouidah “above two hundred leagues up the country, where they are kept like cattle in Europe.”¹⁶ During his career, Barbot learned that “of those slaves we transport from Guinea to America [they] are prepossessed with the opinion, that they are carried like sheep to the slaughter, and

¹³ Jennifer L. Morgan, “Some Could Suckle over Their Shoulder”: Male Travelers, Female Bodies, and the Gendering of Racial Ideology, 1500-1770.” *The William and Mary Quarterly* 54, no. 1 (1997): 167-92, 179.

¹⁴ Guinea Company letter to Bartholomew Haward, 9 December, 1651, as cited in Elizabeth Donnan, editor, *Documents Illustrative of the History of the Slave Trade to America*, 4 volumes (Washington D.C.: Carnegie Institution of Washington, 1930-1935), volume 1, 129. In the Company’s letter to James Pope, the chief factor at the Gambia, they reiterated this conflation of “negers or Cattle” See: Guinea Company letter to James Pope, 9 December, 1651, as cited in Donnan, *Documents Illustrative*, volume 1, 130-131.

¹⁵ Kenneth G. Davies, *The Royal African Company* (London: Longmans, Green and Co., 1957), 40.

¹⁶ Jean Barbot “A Description of the Coasts of North and South Guinea”, 1732, as cited in Donnan, *Documents Illustrative of the History of the Slave Trade*, volume 1, 294.

that Europeans are fond of their flesh.”¹⁷ Comparisons between Europeans and Africans, Jordan affirmed, served to “place the [African] among the beasts.”

In his discussion of Europeans interest in apes as exotic animals for natural history collections and menageries, Jordan further connected how European merchants began to see Atlantic Africans as less than fully human. European traders compared African men to apes by claiming and describing their bodies as possessing simian physiological features.¹⁸ Travelers like Richard Jobson and Thomas Herbert, Jordan demonstrated, drew upon the language of the naturalist and bestiary author Edward Topsell to describe West African women and men’s bodies as animal-like. “Given this tradition”, wrote Jordan, “and the coincidence of contact, it was virtually inevitable that Englishmen should discern similarity between the man-like beasts and the beast-like men of Africa.”

These discussions extended to widespread speculation of bestiality between Africans and apes, a discourse that continued until the end of the eighteenth century, and was propagated by slaveholders including Thomas Jefferson. Jordan argued that the “sexual association of apes with [Africans]” supported an emerging racist imaginary through which “Englishmen were able to give vent to their feeling that [Africans] were a lewd, lascivious, and wanton people.”¹⁹

¹⁷ Barbot “A Description of the Coasts of North and South Guinea”, 1732, as cited in Donnan, *Documents Illustrative of the History of the Slave Trade*, volume 1, 289.

¹⁸ Jordan, *White Over Black*, 30-31.

¹⁹ Jordan, *White Over Black*, 32. Jordan is careful to note that these ideas and descriptions of Africans did come from a longer tradition of English writing from the Elizabethan period, and he cites examples from William Shakespeare’s *Othello*, 1603, and Francis Bacon’s *New Atlantis*, 1624, to support his claims. Further in the text, Jordan dedicates significant space to discussing late eighteenth century writers Edward Long, who expounded on the ideas that Africans were either an entirely different species of beings than Europeans, also known as monogenesis, and the ideas of Thomas Jefferson, who perpetuated the idea that Africans and apes engaged in sex. In the early decades of the nineteenth century, abolitionists actively engaged in written refutations of Long and Jefferson.

Jordan moved from English descriptions of Africans as animal-like to placing the legal and social status of people of African descent in the English Atlantic world as similar to animals. For seventeenth century English intellectuals “the claim that to treat a man as a slave was to treat him as a beast.”²⁰ Legally, the equation of the enslaved and animals came about due to their shared status as chattel property, a status that gradually coalesced in the late seventeenth century.

Jordan’s study demonstrated how the emergence of a disparate set of ideas involving African bodies, sexuality, and animality, could be located approximately within the late sixteenth century over time became more widespread throughout the Anglophone Atlantic world in the seventeenth century. In 1657, Richard Ligon, for instance, claimed Africans “are as neer beasts as may be.”²¹ In 1680, Morgan Godwyn attacked slaveholders in the Caribbean precisely for treating enslaved people as if they were “meer Brutes.”²² Writing in New England, Cotton Mather described in 1689 how white enslavers in Massachusetts valued enslaved Africans “as *Horses* or *Oxen*, to do our Drudgeries” despite their innate soul being “as white and good as those” of Europeans.²³ Citing Godwyn and Mather, Jordan argued that their “recognition” of how enslavers perceived the enslaved as nonhuman animals “was accorded to a very real, not an imaginary situation.”²⁴ While English settlers and slavers *did not literally* believe Africans were animals, chattel slavery in America “*did* lead to a mode of thinking about

²⁰ Jordan, *White Over Black*, 54.

²¹ Richard Ligon, *A True and Exact History of the Island of Barbadoes* (London: 1657), 137.

²² Morgan Godwyn, *The Negro's and Indians Advocate* (London: 1680), 13, 28.

²³ Cotton Mather, *Small Offers towards the Tabernacle in the Wilderness* (Boston: 1689), 58, as quoted in Jordan, *White Over Black*, 190.

²⁴ Jordan, *White Over Black*, 232.

the basest members of society” that was radically new and even “revolutionary” in Jordan’s analysis.

These ideas materialized in everyday life within the plantation colonies of English America. The physical act of branding linked enslaved people to livestock. Advertisements appeared in colonial newspapers to publicize the sale of human captives and horses. Jordan showed how colonial governments, such as Grenada, codified such connections by creating positions such as a “Superintendent of all the Negroes and Mules or Horses which are furnished for His Majesty’s Service” on the island. Jordan succinctly captured this attitude, writing that the “cruelties of slavery inevitably produced a sense of disassociation.” In the gaze of enslavers and their allies, enslaved people could “no longer be human” in the colonies by the late seventeenth century.²⁵ *White Over Black* crucially centered the tensions over the human, humanity, and the animal at the center of slavery.

Jordan’s scholarship influenced successive waves of historians of slavery. Though published in 1966, David Brion Davis’ *The Problem of Slavery in Western Culture* drew upon Jordan’s scholarship, presumably through scholarly exchanges and from reading the unpublished manuscript.²⁶ In that book, Davis touched on the issue of dehumanization in his discussion of the French Dominican missionary and botanist Jean-Baptiste du Tertre, who, in his *Histoire générale*, 1654, “observed, without either protesting or stating his own views, that Negroes in the West Indies conformed to Aristotle’s definition of a slave as the instrument of his master; that they were treated like animals, as if the blackness of

²⁵ Jordan, *White Over Black*, 233.

²⁶ David Brion Davis, *The Problem of Slavery in Western Culture* (Ithaca: Cornell University Press, 1966), for instance Davis cites “White Over Black” on pages 453-454.

their skins were a mark of their misfortune.”²⁷ Davis also described how Portuguese and Spanish enslavers, while knowing the reality of an enslaved person’s “immortal soul” and “human personality”, managed enslaved people like livestock as they “were examined and marketed like animals.”²⁸

Darold Wax further pursued the emergence of a racialized language through the slave trade in his article “A People of Beastly Living” published in 1980. Like Jordan, Wax interpreted texts, such as the anonymous travel narrative *The Golden Coast*, for evidence of the development of a European ethnocentric attitude that framed Africans as less than fully human. The author of *The Golden Coast*, for instance, in a near-identical passage to Lok’s narrative, described Atlantic Africans as “a People of beastly living, without a God, Law, Religion, or Commonwealth.”²⁹ In Wax’s reading, *The Golden Coast* offers further evidence of a bodily linkage in European minds between Africans and animals, such as one description of Atlantic Africans as being covered by a “wooly Tegument” different from European body hair and perceived by Europeans as more similar to a sheep or goat.³⁰

In addition to Jordan, Davis, and Wax, historians of race and slavery have, of course, emphasized the ways in which enslaved people navigated and resisted slavery and its dehumanizing effects between the Anglophone and Hispanophone Atlantic worlds. In *Bondsmen and Rebels*, David Barry Gaspar emphasized that enslaved people, through individual and collective resistance, actively sought to undermine enslavers on Antigua in

²⁷ Davis, *The Problem of Slavery in Western Culture*, 175.

²⁸ Davis, *The Problem of Slavery in Western Culture*, 235.

²⁹ *The Golden Coast, Or a Description of Guinney* (London: 1665), 35, as quoted in Darold D. Wax, ““A People of Beastly Living”: Europe, Africa and the Atlantic Slave Trade.” *Phylon* 41, no. 1 (1980): 12-24.

³⁰ Wax, “A People of Beastly Living”, 13.

the eighteenth century.³¹ In that book, Gaspar further argues that ideas about race crystallized in Antigua through legal codes between 1697 and the 1730s that limited contact between the enslaved and freedmen, who white settlers saw as potential enemies of a different race and class” in opposition to themselves.³² In the context of colonial Mexico, Herman Bennett has further argued that people of African descent developed a “legal consciousness” to self-consciously navigate the judicial system of New Spain to contest their status as enslaved people. Imperial absolutism, Bennett writes, “constituted slaves as subjects” both as legal property and people. Furthermore, by adopting Christianity through the ritual of baptism, converted African Christians became subjects with “defined obligations and rights” that partially contradicted their status as chattel.³³ Through baptism and their new legal status, enslaved people gained the rights of marriage, visitation rights between enslaved married couples, and restrictions on the sale of enslaved husbands and wives. “By insisting on their rights as Christians,” Bennett argued, “slaves circumscribed the [enslaver’s] authority to treat them in any manner they saw fit.”³⁴

In his later writings, David Brion Davis more fully developed his concept of bestialization under slavery. In an essay from 2001, titled “At the Heart of Slavery”, Davis lays out clearly his thesis of what he terms as the essential “problem of slavery”, namely that while historians have reckoned with the dehumanizing nature of slavery, scholars have avoided uncomfortable discussions surrounding the “*bestializing* aspects of

³¹ David Barry Gaspar, *Bondmen and Rebels: A Study of Master-Slave Relations in Antigua* (Durham: Duke University Press, 1985).

³² Gaspar, *Bondmen and Rebels*, 60-62.

³³ Herman L. Bennett, *Africans in Colonial Mexico: Absolutism, Christianity, and Afro-Creole Consciousness, 1570-1640* (Bloomington: Indiana University Press, 2005), 2-4.

³⁴ Bennett, *Africans in Colonial Mexico*, 13.

slavery.”³⁵ As slavery “in the Western world”, argues Davis, “became more and more restricted to Africans, the arbitrarily defined black ‘race’ took on all the qualities, in the eyes of many white people, of the infantilized and animalized slave.” Davis identifies this problem as a transhistorical phenomenon, and approvingly cites Karl Jacoby’s essay on bestialization from 1994 that locates the origins of enslavers attempts to “domesticate” enslaved people like animals from the Neolithic Revolution to antiquity, the medieval period, and through to the early modern era.³⁶

The “problem” of slavery, moreover, remains that enslavers never truly believed the enslaved to be nonhuman. That European enslavers in the Americas legally defined and in practice treated the enslaved as chattel property “endowed with elements” of humanity, enslavers nevertheless acknowledged the “irreducible humanness” of enslaved people.³⁷ This tension, Davis argues, was of course not unique to the European enslavement of people of African descent in the Americas. “What was unprecedented by the 1760s and early 1770s”, he argues, “was the emergence of a widespread conviction that New World slavery was deeply evil and embodied all the forces that threatened the true destiny of the human race.”

As an intellectual historian, Davis cites the emergence of a “secular social philosophy” beginning with Thomas Hobbes as instantiating a “redefinition of the place of human bondage in the rational order of being.” Intellectual efforts to critique slavery

³⁵ David Brion Davis, *In the Image of God: Religion, Moral Values, and Our Heritage of Slavery* (New Haven: Yale University Press, 2001), 128-130.

³⁶ Karl Jacoby, “Slaves by Nature? Domestic Animals and Human Slaves,” *Slavery and Abolition* 15, no. 1 (1994): 89-99; Keith Bradley, a scholar of ancient Rome, for instance, writes that Roman slaveholders saw enslaved people as an “animal—an ox, a cow or mule that had to be put through its paces before a deal could be made; indeed the aedilician edict that regulated the sale of slaves also regulated the sale of cattle and beasts of burden and required similar disclosure of diseases and defects.” Keith Bradley, *Slavery and Society at Rome* (Cambridge University Press, 1994), 53. Davis himself cites Sumerian tablets from the mid-third millennium BCE that listed the prices of captives slaves and livestock together.

³⁷ Davis, *In the Image of God*, 131-135.

as antithetical to prevailing concepts of Lockean natural liberty, from Montesquieu to Adam Smith, Davis argues, were defeated by the emergence of scientific racism in the late eighteenth century, which successfully incorporated “the Enlightenment and reduced the African to a ‘link’ or even a separate species between man and the apes.”³⁸

Enlightenment philosophers, including Edward Long and Thomas Jefferson, wrote at length to develop the thesis that Africans existed alongside nonhuman animals on a chain of being that ascended to fully-human Europeans.³⁹ Davis concludes by arguing that in the period after the American Revolution, including the conflict and contested period of emancipation from the Haitian Revolution to the American Civil War, that “the inherent contradiction of chattel slavery—the impossible effort to bestialize human beings—that eventually evoked a revolution in moral perception.”

Davis returned to his “bestialization” thesis in his synthesis of slavery in the Americas, *Inhuman Bondage*, which foregrounded “the unconscionable and *unsuccessful* goal of bestializing (in the form of pets as well as beasts of burden) a class of human beings.”⁴⁰ For Davis, the category of the “inhuman” refers to the unique brutality of slavery in the Americas, a form of slavery through which enslaved people became “chained to a mercantilist or capitalist system that intensified labor in order to maximize production for distant, international markets.” Davis further argues that the “bestialization” of enslaved people was neither a European invention or unique to European cultures. In Tupinambá ritual sacrifices involving enslaved people, he notes,

³⁸ Davis, *In the Image of God*, 134.

³⁹ David Bindman, *Ape to Apollo: Aesthetics and the Idea of Race in the Eighteenth Century* (Ithaca: Cornell University Press, 2002), 151-189.

⁴⁰ David Brion Davis, *Inhuman Bondage: The Rise and Fall of Slavery in the New World* (Oxford: Oxford University Press, 2006), 2-3.

“slaves from the very beginning were perceived as dehumanized humans” without the recognizable aspects or “prerequisites” for human dignity.⁴¹

Inhuman Bondage engages in a dialogue with the sociologist Orlando Patterson, who remains well-known for his influential framework of “social death” that enslaved people experienced in the Americas.⁴² Patterson held that defining humans as chattel property was not an essential constituent of slavery, and defined slavery as the “permanent, violent, and personal domination of natally alienated and generally dishonored persons.”⁴³ Rather than fundamentally disagree with Patterson, Davis adds his “bestialization” thesis as an addendum to his framework, writing that the status of a person’s alienation and dishonor is connected by their “animalization” or “bestialization.”⁴⁴ Davis emphasizes that this analytical point does not necessary entail that slaveholders “literally saw slaves as ‘only animals,’ or as an entirely different species,” yet as “human animals.” However, I argue, Davis goes too far in his “bestialization” thesis by claiming that “a kind of neoteny”, or the permanent, biological juvenilization of enslaved people, “was clearly the goal of many slaveholders.”⁴⁵

Scholars of slavery in the antebellum period have drawn from Jordan and Davis to investigate practices and processes related to animalization. Deborah Gray White introduced an important discussion in *Arn’t I a Woman?* of how slaveholders used “breeding” rhetoric in reference to enslaved women, and how formerly enslaved people

⁴¹ Davis, *Inhuman Bondage*, 29.

⁴² Orlando Patterson, *Slavery and Social Death: A Comparative Study* (Cambridge: Harvard University Press, 1982).

⁴³ Patterson, *Slavery and Social Death*, 13.

⁴⁴ Davis, *Inhuman Bondage*, 32, 62.

⁴⁵ Davis, *Inhuman Bondage*, 33, 35, 50-51. Davis further connects the “bestialization” of enslaved people with a global, transhistorical intellectual linkage of blackness and barbarity.

recalled the frequent use of such dehumanizing language.⁴⁶ Slaveholders directly compared, as Gary Edwards shows, enslaved people “and all other animals.”⁴⁷ Robert Cartmell, a Tennessee planter, wrote in 1854 that people of African descent “are an unpleasant animal to have anything to do with, requiring constant watching, they feel an interest in nothing, *only punctual* in coming *regularly* when their meat gives out.”⁴⁸

Following White’s scholarship, Mia Bay furthered this analysis by examining how formerly enslaved people themselves reflected on the dehumanizing language and brutality that enslavers employed in early America. Among the subjects that freedpeople discussed was their diet. Mary Estes Peters, for instance, recalled in an interview how her enslaver fed the enslaved “just like they would hogs.”⁴⁹ Another commented that his enslaver “kept his [slaves] fat, just like he keep his hogs and hosses fat, he did.” Formerly enslaved people’s memories of being compared to animals also included their life and work. One interviewee reported that he and his wife slept “like hogs” in a cabin on a Texas plantation. Josephine Howard remembered how planters exhausted enslaved laborers “like dey was mules an treat ‘em jus like dey don’t have no feelin.”⁵⁰ Others remembered brutal punishments, as one subject recalled “the dog was supe’ior to us; they would take him in the house.”

African Americans, argues Bay, deliberately understood how “they could be bred, whipped, or sold” like animals.⁵¹ Women such as Eliza Elsey, Bay shows, spoke openly

⁴⁶ Deborah Gray White, *Ar’n’t I a Woman? Female Slaves in the Plantation South* (New York: W.W. Norton and Company, 1985), 99-103.

⁴⁷ Gary T. Edwards, ““Negroes ... and All Other Animals”: Slaves and Masters in Antebellum Madison County.” *Tennessee Historical Quarterly* 57, no. 1 (1998): 24-35.

⁴⁸ Edwards, ““Negroes ... and All Other Animals”, 34.

⁴⁹ Mia Bay, *The White Image in the Black Mind: African-American Ideas about White People, 1830-1925* (Oxford: Oxford University Press, 2000), 128.

⁵⁰ Bay, *The White Image in the Black Mind*, 129.

⁵¹ Bay, *The White Image in the Black Mind*, 130.

about how their enslavers exploited their bodies and reproductive abilities for “breeding” purposes. Elsey stated succinctly that her enslaver “treated his slaves like animals.”⁵² Bay’s study underscores how formerly enslaved freedpeople repeatedly used opportunities with interviewers to describe how similar their conditions were on plantations to those of livestock. Moving further than Davis, Bay also directly connects bestialization to race. Bay argues that enslaved people’s recognition of their undifferentiated status with nonhuman animals “took on far-reaching implications among African-Americans enslaved within the racially divided slave system” in the American South.⁵³ Bay stresses that “the condition of being regarded as an animal” became tightly linked in the minds of formerly enslaved people “at least as much with race as with slavery.”

While scholars draw upon Davis’s framing of “bestialization” and the contradiction inherent within “the problem of slavery”, historians continue to wrestle with this thesis and the essential contradictions of slavery. In her description of punishments meted out by enslavers and their employees against enslaved people, especially castration, Kirsten Fischer emphasizes that these forms of discipline were carried out “not because the perpetrators believed slaves were animals, but precisely because they knew of their victims’ humanity.” Disfiguring enslaved people, through castration, branding, whipping, or dismembering, marked out the enslaved as “different” or other. Fisher, not necessarily in disagreement with Davis, underscores the “dialectic

⁵² Bay, *The White Image in the Black Mind*, 130-133.

⁵³ Bay, *The White Image in the Black Mind*, 136.

between a recognition and then symbolic denial of slaves' humanity was deeply intrinsic to the process of debasement that fueled racism."⁵⁴

Jennifer Morgan's study of enslaved women in the British Caribbean further attended to this tension between enslavers and the enslaved. Morgan identifies the comparison of non-European women and animals at the moment of contact in the late fifteenth century, noting that Europeans "situated women both as intermediaries between the intrusive and indigenous peoples and as animal-like reproductive units."⁵⁵ In her discussion of Richard Ligon, an early writer on Barbadian slavery, Morgan foregrounds that Ligon and his peers "equated black people with animals."⁵⁶ Drawing upon Fischer, Morgan is careful to underscore that for enslavers "the connection between slaves and livestock was always predicated not on the belief that Africans were animals, but rather in evocation of a degraded but fully present humanity."⁵⁷ Enslavers used branding and other punishments to humiliate the enslaved. Morgan moves beyond Fischer and indirectly challenges Davis by arguing that the categories of humanity and inhumanity did not exist in contradiction, but rather in coexistence.

Race remains a difficult category of analysis for historians of the slave trade and slavery, and very few environmental historians focusing on the early modern period grapple at length with the subject of racialization.⁵⁸ Intellectual historians and historians of philosophy, however, continue to grapple with the deep and complex history of the

⁵⁴ Kirsten Fischer, *Suspect Relations: Sex, Race, and Resistance in Colonial North Carolina* (Ithaca: Cornell University Press, 2002), 181.

⁵⁵ Jennifer L. Morgan, *Laboring Women: Reproduction and Gender in New World Slavery* (Philadelphia: University of Pennsylvania Press, 2004), 18.

⁵⁶ Morgan, *Laboring Women*, 33, 48.

⁵⁷ Morgan, *Laboring Women*, 105.

⁵⁸ Historians of modern American environmental history and environmentalism have discussed race in greater depth than scholars of early British America, including recently Kathleen A. Brosnan, "The Lifting Fog: Race, Work, and the Environment," *Environmental History* 24, no. 1 (2018): 9-24; Carolyn Merchant, "Shades of Darkness: Race and Environmental History," *Environmental History* 8, no. 3 (2003): 380-394.

emergence of racial thinking in early modern Europe. Justin E.H. Smith, following Jordan, discusses the role of animal comparisons and dehumanizing rhetoric in natural history, natural philosophy, and travel writing in the period between the beginning of the sixteenth century and the end of the eighteenth century in his book *Nature, Human Nature, and Human Difference*. Like Jordan, Smith writes that European descriptions of Africans as animal-like can be dated to at least the early seventeenth century, if not earlier. Smith argues that descriptions of African hair as “wooly” powerfully served to “insert the African into the order of animal nature, alongside other objects of study such as goats and ibexes, in a way that European naturalists had traditionally declined to do for his own physical attributes.”⁵⁹ Smith adds that such statements imply “the African shares a trait with sheep, it says. And this is no small claim.” The long argumentative arc of Smith’s text is to demonstrate how European authors developed ideas involving the “ontologization of human difference”, including polygenist ideas of multiple human species, first as a materialist critique of the sacred authority of the Christian church and doctrinal orthodoxy, which were later adopted by defenders of the slave trade in the late eighteenth century.⁶⁰ In his exhaustive history of racist ideas in American history, Ibram X. Kendi likewise argues that ideas of Black intellectual inferiority arose from transformations in natural history and Enlightenment thought that enslavers particularly adapted to suit their ambitions and justify the institution of slavery.⁶¹

An overlooked dimension within all of this literature is to what extent indigenous American ideas about slavery and nonhuman animals *perhaps* influenced European

⁵⁹ Justin E.H. Smith, *Nature, Human Nature, and Human Difference: Race in Early Modern Philosophy*, (Princeton University Press, 2015), 41-42.

⁶⁰ Smith, *Nature, Human Nature, and Human Difference*, 1-24.

⁶¹ Ibram X. Kendi, *Stamped From the Beginning: The Definitive History of Racist Ideas in America* (New York: Random House, 2017), 83-85.

perceptions of enslaved people. John Lawson travelled throughout the Province of Carolina between 1700 and 1709, during which time he encountered and met with diverse Algonkian-speaking indigneous groups, including Saponi and Tuscarora people. In his natural history of the colony, *A New Voyage to Carolina*, Lawson describired that for indigneous people in southeastern Native America:

As for Servant, they have no such thing, except Slave, and their Dogs, Cats, tame or Domestick Beasts, and Birds, are call'd by the same Name: For the *Indian* Word for Slave includes them all. So when an *Indian* tells you he has got a Slave for you, it may (in general Terms, as they use) be a young Eagle, a Dog, Otter, or any other thing of that Nature, which is obsequiously to depend on the Master for its Sustenance.

Lawson's observation that indigenous people equated enslaved captives with nonhuman animals is further supported by ethnographic evidence cited by contemporary scholars. Writing on Muscogee people, for instance, Claudio Saunt notes that enslaved people were considered to exist as "dunghill fowl" without kin relations and were therefore distinctly nonhuman.⁶² Christina Snyder and Brett Rushforth further demonstrate that Northeastern indigenous groups that enslaved captives were socially and ontologically considered to be tamed animals.⁶³ However, to date, historians of race and slavery have not fully connected this scholarship to the literature on Atlantic slavery.

Environmental Regimes of Exchange, Labor, and Colonization

⁶² Claudio Saunt, "'The English Has Now a Mind to Make Slaves of Them All': Creeks, Seminoles, and the Problem of Slavery." *American Indian Quarterly* 22, no. 1/2 (1998): 157-80.

⁶³ Christina Snyder, *Slavery in Indian Country: The Changing Face of Captivity in Early America* (Cambridge: Harvard University Press, 2010), 102, 128; Brett Rushforth, *Bonds of Alliance: Indigenous and Atlantic Slavery in New France* (Chapel Hill: University of North Carolina Press, 2012), 36-37, 52-55.

Environmental historians have long considered the role of animals as actors within settler colonial empires towards enabling colonization in the Americas. In 1986, Alfred Crosby began his landmark study *Ecological Imperialism* with the thesis that the success of European empires in the Americas, and later throughout the Pacific Ocean, relied on “a biological, an ecological component.”⁶⁴

Crosby theorized that the material effects of European “portmanteau biota”, the domesticated fauna and flora that explorers, soldiers, and settlers carried with them to North and South America beginning in 1492, precipitated the dispossession and depopulation of indigenous American societies and empires.⁶⁵ Horses, cattle, pigs, goats, sheep, donkeys, chickens, and cats became the foundation for durable colonial settlements in the Americas by acting as disease vectors for smallpox, grazing on indigenous farmland and devouring supplies of food reserves for emergencies, turning feral, and by transforming landscapes to resemble the homelands of settlers due to the demands of pastoral agriculture, particularly through deforestation.⁶⁶ Settlers furthermore seeded “swinish multitudes” of pigs to stock islands such as Bermuda and newly discovered lands on both continents as a reliable, cheap supply of food.⁶⁷ Animals, Crosby proved, were essential for European empires as they expanded across the globe in the early modern period.

Crosby stressed the dialectical nature of ecological imperialism by underscoring that while some portmanteau biota enabled colonization, others actively hindered

⁶⁴ Alfred Crosby, *Ecological Imperialism: The Biological Expansion of Europe, 900-1900*, (Cambridge: Cambridge University Press, 1986), 7.

⁶⁵ Crosby, *Ecological Imperialism*, 89.

⁶⁶ Crosby, *Ecological Imperialism*, chapter 8, “Animals”, 171-194.

⁶⁷ Crosby, *Ecological Imperialism*, 175.

settlements and colonial “improvements.”⁶⁸ “Varmints” in every colonial setting threatened to unsettle expansionist ambitions in ways that were similar to hungry attacks by livestock on indigenous American croplands. Rats, for instance, “almost extinguished Jamestown, Virginia” in 1609 by devouring storehouses of food and worsening the Starving Time.⁶⁹ Attacks from rats pushed settlers to feed themselves by hunting indigenous American grounds for game, and eventually raiding nearby Powhatan towns for provisions.⁷⁰

The central argument of *Ecological Imperialism*, that European settler colonial conquests of the Americas between 1500 and 1800 were driven by the physical impact and demands of portmanteau biota, including animals, germs, and plants, remains a crucial intellectual foundation for environmental histories of colonization in the early modern period. *Ecological Imperialism* significantly challenged any thesis of European exceptionalism as either an especially advanced or developed civilization uniquely poised to dominate the western hemisphere. As the book circulated, Crosby’s insights gradually influenced the emerging field of imperial environmental history into the 1990s.

Elinor Melville’s study of “ungulate irruptions” in sixteenth-century Mexico, *A Plague of Sheep*, for instance, examined the destructive role of a single portmanteau biota, sheep, as colonial fauna in New Spain.⁷¹ In her analysis, Melville demonstrated how Spanish settlers implemented extensive pastoralism in the central Mexican highlands

⁶⁸ Here I am referring to the ideology of improvement, expertly discussed in Richard Drayton, *Nature’s Government: Science, Imperial Britain, and the ‘Improvement’ of the World* (New Haven: Yale University Press, 2000).

⁶⁹ Crosby, *Ecological Imperialism*, 191-192.

⁷⁰ For an excellent example of Crosby’s influence on scholarship surrounding food scarcity see: Katherine A. Grandjean, “New World Tempests: Environment, Scarcity, and the Coming of the Pequot War.” *William and Mary Quarterly* 68, no. 1 (2011): 75-100.

⁷¹ Elinor G.K. Melville, *A Plague of Sheep: Environmental Consequences of the Conquest of Mexico*, (Cambridge: Cambridge University Press, 1997.)

by introducing rapacious herds of grazing sheep. The environmental consequences of ovines within colonial pastoralism transformed a “complex and densely populated agricultural mosaic into a sparsely populated mesquite desert” by the final decades of the sixteenth century.

The colonial ambitions of the Spanish and their hungry herds of ungulates in Mexico over time led to the displacement and marginalization of Otomí farmers, who relied on irrigation agriculture in the Valle del Mezquital that existed at odds with the animal-intensive demands of pastoralism. Melville’s study shows how ecological imperialism transformed “a human-centered landscape to an animal-centered landscape.”⁷² However, this transformation was not entirely carried out by Iberians. Enslaved African shepherds, whom Melville discusses briefly, oversaw sheep pens in the highlands while Spanish miners opened silver and lead mines at Ixmiquilpan and Pachuca in the mid sixteenth century.⁷³ Enslaved and indigenous people violently clashed over land use in the 1550s as herd sizes rapidly expanded to unsustainable levels and caused increasing damage to the Otomí landscape.⁷⁴ Melville’s study demonstrated that Otomí dispossession was the result of the biological and ecological costs of raising sheep within, of course, the wider social, economic, and political context of Spain’s Atlantic empire.

Crosby and Melville’s scholarship largely stressed the biophysical dimensions of animals—especially their grazing habits, disease-carrying potential, and the ability of herds to cause large-scale erosion—as agents of European empires. By turning the lens of analysis to the cultural and intellectual dimensions of human-animal encounters, Virginia DeJohn Anderson’s study of social relations between English and Algonkian-speakers in

⁷² Melville, *A Plague of Sheep*, 14.

⁷³ Melville, *A Plague of Sheep*, 46.

⁷⁴ Melville, *A Plague of Sheep*, 122.

seventeenth-century New England and the Tidewater Chesapeake pushed the field significantly toward a deeper dialogue between environmental history and a cultural history of animals in the early modern world.

In *Creatures of Empire*, Anderson contrasts the conceptual divergence between Algonkian-speakers ideas of manitou, a universal spiritual force infused within humans and nonhuman animals, and English animal cosmologies in the early modern period that blended Christian providential stewardship, ideals surrounding virtuous husbandry and civility, and Roman legal theories of improvement and property.⁷⁵ Algonkian-speakers beliefs about manitou, Anderson emphasizes, shaped hunting practices, shamanic ritual, bodily adornment, and material culture.⁷⁶ English ideas about nonhuman animals, by contrast, influenced colonial developments in both regions as settlers believed that husbandry improved the landscapes of New England and the Chesapeake, and in turn guaranteed their legal claims to possessing land over the rival territorial claims of Pamunkeys, Narragansetts, Nipmucks, and other indigenous ethnolinguistic groups.

Anderson's book introduces culture as a dimension to ecological imperialism, yet *Creatures of Empire* also contends, in a manner akin to Crosby and Melville, that livestock animals functioned as an "advance guard" for English settlers in seventeenth-century North America by trampling through and eating Algonquian crop fields. In her history of ecological imperialism, Anderson demonstrates that two major conflicts

⁷⁵ Virginia DeJohn Anderson, *Creatures of Empire: How Domestic Animals Transformed Early America*, (Oxford: Oxford University Press, 2004), 20-21, 55-56, 78-79.

⁷⁶ Anderson, *Creatures of Empire*, 25-27. While Anderson's book is otherwise excellent, her assertion on page 38 that "Indians did not have an equivalent conceptual category for living chattel" comparable to English ideas of private property is inaccurate. Historians of Indian slavery, in particular Christina Snyder, Brett Rushforth, and Claudio Saunt, have shown that many Native American groups, including Anishinaabeg and Muscogee societies, culturally understood enslaved people to be ontologically equivalent to nonhuman animals. See: Rushforth, *Bonds of Alliance*, 35-37; Claudio Saunt, "The English Has Now a Mind to Make Slaves of Them All": Creeks, Seminoles, and the Problem of Slavery." *American Indian Quarterly* 22, no. 1/2 (1998): 157-180.

between the English and their Algonquian neighbors—King Philip’s War in New England and Bacon’s Rebellion in Virginia—emerged out of conflicting ideas about animals and the material effects of settler free-range husbandry. Anderson also emphasizes in both cases that English settlers attempted to impose upon indigenous people the virtues and cultural practices of animal husbandry as a means of incorporating Native communities within English culture and society. Settlers in New England and Virginia offered rewards to indigenous hunters for catching and trapping dangerous pests, namely wolves.⁷⁷ While conflict over roaming livestock led to the wars that Anderson chronicles, David Silverman points out that in the wake of King Philip’s War several Northeastern indigenous groups actively adopted communal-scale livestock husbandry as a means to retain their claims of usufruct over their territorial homelands.⁷⁸ However, in Silverman’s analysis, such adoption of European human-animal relationships was too little and too late.

Anderson’s cultural environmental history further broadened the scope of inquiry to question how settlers dehumanized indigenous people by comparing their bodies and minds to animals. Algonquian-speakers traditional adornment involved wearing animal skins, which, she suggests, caused English settlers to perceive them as “beings that resembled animals more than people.”⁷⁹

Likewise, in *Vicious*, Jon Coleman argues that settlers in seventeenth-century New England frequently compared Native Americans to wolves to intellectually establish their savagery in contradistinction to English civility. Missionaries and others described

⁷⁷ Anderson, *Creatures of Empire*, 107, 200; Coleman *Vicious*, 60.

⁷⁸ David J. Silverman, ““We Chuse to Be Bounded”: Native American Animal Husbandry in Colonial New England.” *The William and Mary Quarterly* 60, no. 3 (2003): 511-48.

⁷⁹ Anderson, *Creatures of Empire*, 24.

indigenous people as “inhuman and barbarous” and “more like wolves than men.”⁸⁰

Settlers produced images of themselves in printed histories, travel accounts, and sermons as fully human beings existing in opposition to animal-like indigenous people.⁸¹ Praying Indians, converts to Christianity, also adopted this animal rhetoric as a mode of survival and accomodation by describing themselves as docile “sheep” and their unconverted neighbors as dangerous wolves.⁸² Joshua Kercsmar further explains that settlers in New England esteemed themselves to be culturally superior to Native Americans by comparing their own domesticated dog breeds as stronger and more tamed than “wolf-like” Indian dogs.⁸³

Environmental histories of encounter and conflict between English settlers, Native American societies, and animals have laid the foundation for scholarship that fuses approaches from cultural and environmental history. However, a robust body of scholarship has yet to fully appear that similarly investigates human-animal contact in the early modern period involving enslaved Africans and nonhuman animals. To date, several excellent articles have laid an important preliminary foundation, however no singular study exists in this developing subfield. Karly Jacoby’s article “Slaves by Nature? Domestic Animals and Human Slaves” from 1994, which Davis cited in his later scholarship, for instance, questions the deep historical connections between agriculture

⁸⁰ Jon T. Coleman, *Vicious: Wolves and Men in America* (New Haven: Yale University Press, 2008), 43.

⁸¹ Coleman, *Vicious*, 31, 62.

⁸² Coleman, *Vicious*, 44-45.

⁸³ Joshua Abram Kercsmar, "Wolves at Heart: How Dog Evolution Shaped Whites' Perceptions of Indians in North America." *Environmental History* 21, no. 3 (2016): 516-540.

and slavery in human societies over a *longue durée* by beginning his analysis in the second millennium BCE.⁸⁴

Jacoby posits that slavery as a socioeconomic institution, from human antiquity to the present, is founded upon and continuously produces a “blurring of the line that has traditionally separated human beings from domestic animals.” Using evidence ranging from the Code of Hammurabi to Aristotle’s *Politics*, Jacoby argues that enslaved people exist legally and socially as functional ontological equivalents to domestic animals.⁸⁵ In multiple cultures, assertions of an equivalence between slaves and animals appears in numerous rhetorical allusions produced by slaveholders of slave animality. In early seventeenth-century New Mexico, Jacoby cites the language of Spanish friars who described Indian slaves as “yearling calves or colts” and “living like animals.”⁸⁶ Such allusions persisted as the slave trade accelerated in the Atlantic world. In the eighteenth century, for example, London goldsmiths advertised padlocks designed for restraining either enslaved Africans or dogs.⁸⁷

European attempts to socially reduce enslaved people from the status of humans to animals, Jacoby suggests, intersects with Patterson’s framework of “social death” in the plantation colonies of the Americas.⁸⁸ Jacoby concludes his article by asking if the origins of both slavery and domination over animals can be traced directly to the origins

⁸⁴ David Brion Davis, *The Problem of Slavery in Western Culture* (Oxford: Oxford University Press, 1966), 175, 235; Karl Jacoby, “Slaves by Nature? Domestic Animals and Human Slaves,” *Slavery and Abolition* 15, no. 1 (1994): 89-99.

⁸⁵ Jacoby, “Slaves by Nature?”, 94-95.

⁸⁶ Jacoby, “Slaves by Nature?”, 89-90.

⁸⁷ Jacoby, “Slaves by Nature?”, 92.

⁸⁸ Orlando Patterson, *Slavery and Social Death* (Cambridge: Harvard University Press, 1982); Jacoby, “Slaves by Nature?”, 93. Patterson, citing Theda Purdue, observed that enslaved people occupied the same status as animals in Cherokee society. Patterson writes that “The slave, in not belonging, emphasized the significance of belonging; in being clanless, emphasized the clan as the only basis of belonging; in being deviant ‘helped establish and strengthen group identity among the Cherokees.’”, 47.

of hierarchical social relations related to agriculture during the Neolithic Revolution. While Jacoby's entry into this topic is laudable, his extremely broad chronological sweep—ranging from ancient Mesopotamia to antebellum Alabama and beyond—commits his thesis to a frustratingly transhistorical scope that obscures change over time and presents a mostly static history of humans and animals under slavery.

Rather than tackle the broad transhistorical question put forward by Jacoby, Philip Morgan explores the history of slavery and domesticated livestock in an article using a microhistory approach to the case of Vineyard Pen, Jamaica, between 1750 and 1751.⁸⁹ Unlike sugar-producing plantations, like Egypt in Westmoreland parish, where the would-be gentlemanly naturalist Thomas Thistlewood began his career as an overseer, livestock ranching pens primarily raised draft animals for sale at market. For eighteenth-century English planters in the Caribbean, Morgan argues, “humans and animals were the most valuable—and highly vulnerable—components of a plantation’s movable equipment.” Like Anderson, Coleman, and Kerckmar’s studies of indigenous Americans in northeastern North America, Morgan’s article combines material and intellectual approaches to argue that “the commingling of slaves and livestock encouraged the manager to think of his human and animal charges in similar ways and treat them as such.”⁹⁰

Enslaved people lived alongside animals on livestock pens, and larger plantation estates, throughout the British Caribbean in the eighteenth century. Enslaved people on Vineyard Pen, in St. Elizabeth parish, fed, nursed, and cared for cattle, horses, goats, chickens, turkeys, ducks, and pigs. Laboring with animals usually fell along gendered

⁸⁹ Philip D. Morgan, "Slaves and Livestock in Eighteenth-Century Jamaica: Vineyard Pen, 1750-1751." *The William and Mary Quarterly* 52, no. 1 (1995): 47-76.

⁹⁰ Morgan, "Slaves and Livestock in Eighteenth-Century Jamaica", 50.

lines, as enslaved men and boys worked closely with cattle as penkeepers, while women and girls cared for herds of sheep, pigs, and goats.

Proximity and everyday relations between slaves and animals, Morgan argues, encouraged their being “joined” as subjects in the minds of whites in Jamaica. Plantation doctors on the island, for instance, pathologized African bodies as degraded by diagnosing both enslaved patients and poultry birds with “yaws”, a strain of syphilis.⁹¹ On Vineyard Pen, and on other estates, slaveholders named enslaved men and women using the same names they gave to livestock animals, such as Cudjoe, Cynthia, Quash, and Quasheba.⁹²

Enslaved people with a modicum of status, such as the slave driver Dick, enjoyed privileges involving animals such as hunting game for food and to trade with at occasional markets. Unlike any other slave on Vineyard Pen, Dick possessed a hunting dog, which he used to catch snakes and wild hogs for food or to trade with other enslaved people.⁹³ Phibbah, an enslaved woman responsible for domestic tasks on the pen, used the money she made from selling and mending clothing to her enslaver, Thistlewood, to purchase animals, especially pigs. Reading Thistlewood’s diary, Morgan explains that in her life Phibbah owned a sow, a boar, and a mare.⁹⁴ Moreover, Phibbah often loaned the use of her horse to Thistlewood and others in exchange for favors. Morgan’s case study of Vineyard Pen provides granular analysis of the material entanglement of people and animals under slavery on the ground. However, as a single case study it raises interesting questions about the exceptionality or typicality of Vineyard Pen.

⁹¹ Morgan, “Slaves and Livestock in Eighteenth-Century Jamaica”, 52.

⁹² Morgan, “Slaves and Livestock in Eighteenth-Century Jamaica”, 53.

⁹³ Morgan, “Slaves and Livestock in Eighteenth-Century Jamaica”, 58.

⁹⁴ Morgan, “Slaves and Livestock in Eighteenth-Century Jamaica”, 68.

Beginning in the early 2000s, historical geographers, not necessarily interested in human-animal relations per se, produced important studies involving the intersection of environmental history, the African Diaspora, and slavery in the Atlantic world that scholars of human-animal relations have since drawn upon. Judith Carney's *Black Rice* is a landmark study that influenced an entire scholarly trajectory of interest in diasporic African environmental knowledge.⁹⁵

In her book, Carney elaborated on earlier scholarship that suggested riziculture in colonial South Carolina may have originated from West African technological expertise.⁹⁶ Carney's scholarship shows that West Africans, primarily enslaved women and girls from polities and city-states in coastal Upper Guinea, introduced specimens of *Oryza glaberrima* and techniques for seeding, cultivating, and processing rice across the Atlantic to coastal lowlands across the Americas from Brazil to the Carolinas. While Carney's work was disputed by critics, including Philip Morgan, her book made an important contribution by emphasizing the technical and skilled knowledge of enslaved people, rather than their sheer physical labor as workers, in transforming agricultural environments in the Americas.⁹⁷ *Black Rice* laid a foundation for scholarship of European and African hybrid landscapes in the Americas.

⁹⁵ Judith Carney, *Black Rice: The African Origins of Rice Cultivation in the Americas*, (Cambridge: Harvard University Press, 2001); Judith Carney, "Landscapes of Technology Transfer: Rice Cultivation and African Continuities," *Technology and Culture* 37, no. 1 (1996): 5-35; Judith Carney, and Richard Porcher, "Geographies of the Past: Rice, Slaves and Technological Transfer in South Carolina," *Southeastern Geographer* 33, no. 2 (1993): 127-147.

⁹⁶ Peter H. Wood, *Black Majority: Negroes in Colonial South Carolina from 1670 through the Stono Rebellion* (New York: W.W. Norton and Company, 1974).

⁹⁷ On the academic controversy surrounding *Black Rice*, see: David Eltis, Philip Morgan, and David Richardson, "Agency and Diaspora in Atlantic History: Reassessing the African Contribution to Rice Cultivation in the Americas," *The American Historical Review* 112, no. 5 (2007): 1329-1358; Walter Hawthorne, "From 'Black Rice' to 'Brown': Rethinking the History of Riziculture in the Seventeenth-and Eighteenth-Century Atlantic," *The American Historical Review* 115, no. 1 (2010): 151-163; S. Max Edelson, "Beyond 'Black Rice': Reconstructing Material and Cultural Contexts for Early Plantation Agriculture," *The American Historical Review* 115, no. 1 (2010): 125-135.

Shifting from a focus on plants to animals in the Atlantic world, Andrew Sluyter's research investigated how Senegambian agro-technical labor and intellectual approaches to cattle herding underpinned livestock ranching across New Spain, British America, and later the United States between the sixteenth and the nineteenth centuries.⁹⁸ Building on Carney's methodology and approach to studying the African diaspora from anthropology and geography, Sluyter's book argues that "West African agricultural ecologies" of cattle herding—in particular open-range herding, the implementation of stockwells, and the use of the lasso—converged with European techniques, especially herding with dogs, on estates from colonial Veracruz to Louisiana, Barbuda, and the Río de la Plata.⁹⁹

Sluyter developed an "Atlantic actor-network approach" to show how Fulani, Wolof, and Mandinka speakers transported the technical and intellectual components of open-range "herding ecologies" to multiple American environments.¹⁰⁰ Sluyter's focus in *Black Ranching Frontiers* on African Atlantic human-animal networks indicated the expansive geographic scope of diasporic African embodied and intellectual engagements with nonhuman nature from the Southern Cone to Caribbean archipelagoes and the Gulf South littoral. Carney and Sluyter's work is especially impressive given their ability to analyze diasporic communities across multiple imperial settings and locate materials in diverse archival collections using multidisciplinary approaches and methods.

⁹⁸ Andrew Sluyter, "The Ecological Origins and Consequences of Cattle Ranching in Sixteenth-Century New Spain." *Geographical Review* (1996): 161-177; Andrew Sluyter, "The Role of Black Barbudans in the Establishment of Open-Range Cattle Herding in the Colonial Caribbean and South Carolina." *Journal of Historical Geography* 35, no. 2 (2009): 330-349; Andrew Sluyter, "The Role of Blacks in Establishing Cattle Ranching in Louisiana in the Eighteenth Century." *Agricultural History* 86, no. 2 (2012): 41-67; Andrew Sluyter, *Black Ranching Frontiers: African Cattle Herders of the Atlantic World, 1500-1900* (New Haven: Yale University Press, 2012.)

⁹⁹ Sluyter, *Black Ranching Frontiers*, 3-4.

¹⁰⁰ Sluyter, *Black Ranching Frontiers*, 14.

Turning to the subject of human-animal co-mobility within historical geography, David Lambert's scholarship of what he terms "master-horse-slave" raises questions regarding how enslavers in the British West Indies enacted the spatial limits and vertical arrangements of slavery by using equines in the late eighteenth century.¹⁰¹ Slaveholders in Jamaica, Barbados, Antigua and elsewhere rode on horseback between plantations and town centers while enslaved footmen ran behind, struggling to keep apace.

Riding on horses afforded planters staged opportunities to display their expert horsemanship, gentility, and social status. In addition, the arrangement dramatized the power relations between the enslaver, the horse, and the enslaved person. "Master-horse-slave" was a material instantiation of planter's ambition to attain mastery over both humans and nonhuman animals. Citing the scholarship of Saidiya Hartman, Lambert situates "master-horse-slave" as an exemplary "scene of subjection" in which a mundane practice such as horse-riding became emblematic of the violence and terror-inducing strategies slaveholders fashioned to brutalize enslaved Africans.¹⁰² Lambert, further expanding on the work of Verene Shepherd, suggests that some enslaved people in the West Indies deliberately maimed or injured horses precisely to interrupt the power dynamics of master-horse-slave.¹⁰³ Lambert's article urges environmental historians and historians of technology to pay closer attention to human-animal arrangements, including those unrelated to mobility, in the West Indies. Master-horse-slave, he concludes, was

¹⁰¹ David Lambert, "Master-Horse-Slave: Mobility, Race and Power in the British West Indies, c. 1780–1838," *Slavery & Abolition* 36, no. 4 (2015): 618–641.

¹⁰² Lambert, "Master-Horse-Slave", 619; Saidiya V. Hartman, *Scenes of Subjection: Terror, Slavery, and Self-Making in Nineteenth Century America* (Oxford: Oxford University Press, 1997), 4.

¹⁰³ Lambert, "Master-Horse-Slave", 635; Verene Shepherd, *Livestock, Sugar and Slavery: Contested Terrain in Colonial Jamaica* (Kingston: Ian Randle Publishers, 2009), 155.

“not merely a reflection of slavery but one of its many instantiations. In short, master–horse–slave is slavery.”¹⁰⁴

While her earlier scholarship focused on technology transfer, gender, and agroenvironments in the Atlantic world, Judith Carney’s most recent studies of Neotropical mangrove swamps as historical and geographical spaces embedded within histories of slavery in the Hispanophone and Lusophone worlds explores more-than-human geographies of refuge and diasporic slave resistance in the Americas.¹⁰⁵

In West Africa, European slave traders feared swamplands ranging from the Senegal River to Angola as fever-inducing, insalubrious environments plagued by deadly miasmatic airs.¹⁰⁶ Carney argues that mangrove swamps in Atlantic Africa “impeded overland access to populations sequestered within, while the swamp forest’s meandering waterways often proved defensible against the depredations of slave raiders, even if the raiders themselves were malaria-resistant Africans.”¹⁰⁷ Enslaved people captured in Atlantic Africa and taken to South America used their knowledge of the fear swamplands created in the minds of their captors and their very real disease ecology to create fugitive spaces from Colombia’s Pacific lowlands to the Guianas and coastal Brazil, especially in the states of Pará, Maranhão, and Bahia. Neotropical mangrove swamps provided shelter, afforded enslaved people foods such as shellfish and crabs, and offered space to practice and transmit ritual culture beyond the surveillance of European enslavers. Carney examines how diasporic Africans exploited terraqueous spaces to nurture hopes of

¹⁰⁴ Lambert, “Master-Horse-Slave”, 635.

¹⁰⁵ Judith Carney, “The Mangrove Preserves Life”: Habitat of African Survival in the Atlantic World.” *Geographical Review* 107, no. 3 (2017): 433-451.

¹⁰⁶ Carney, and others of course including John R. McNeill and Paul Sutter, have pointed out that the deadliest threat of the mangrove swamps were mosquitoes, who existed as the disease vector for of the *falciparum* plasmodium associated with malaria.

¹⁰⁷ Carney, “The Mangrove Preserves Life”, 436.

freedom and survival. This work intersects with related, earlier studies of lowcountry environments as fugitive spaces created by enslaved people in South Carolina and Georgia in the seventeenth and eighteenth centuries.¹⁰⁸

Scholars of colonialism and Southeast Asian environmental history have revised what they perceive to be the mostly anthropocentric theoretical frame of human-animal interactions within imperial contexts, and to combine intellectual and materialist approaches. In a special issue of *Comparative Studies of South Asia, Africa, and the Middle East* titled “Nonhuman Empires” and edited by Rohan Deb Roy, a group of scholars shed light on the very diverse variety of roles nonhuman animals played in multiple empires to “narrate the co-constitution of imperial structures, human action, and nonhuman animals.”¹⁰⁹ The articles in this issue represent, the authors contend, a new engagement between actor-network theory, as developed by scholars including Bruno Latour, John Law, and Michel Callon, and the Subaltern Studies Group led by Ranajit Guha, David Arnold, and Gayatri Chakravorty Spivak. Through their collection, Deb Roy and his colleagues aim to combine the intently granular descriptive methods of actor-network theory that insists on the real agency and vitality of nonhuman actors—such as ships, winds, insects, or fishermen’s nets—with the Subaltern Studies’ analysis of the interlinked histories of imperialism, imperial power, colonization, orientalism, and Eurocentrism within historical metanarratives.

¹⁰⁸ Mart A. Stewart, *What Nature Suffers to Groe: Life, Labor, and Landscape on the Georgia Coast, 1680-1920* (Athens: University of Georgia Press, 1996), 140-143. Stewart notes that during the fever season, roughly between mid-May to late September, planters in coastal Georgia avoided their lowcountry rice plantations out of fears of being exposed to miasmatic airs.

¹⁰⁹ Rohan Deb Roy, "Introduction: Nonhuman Empires" *Comparative Studies of South Asia, Africa, and the Middle East* 35 no.1, (2015): 66-75.

The nonhuman empires framework builds on scholarship around the nonhuman and “interspecies” relations that investigate “relationships between different forms of biosocial life and their political effects.”¹¹⁰ What is perhaps most similar about the “nonhuman empires” frame introduced by Deb Roy and his colleagues and the “interspecies” terminology developed by Jasbir Puar and Julie Livingston is that both emphasize that historians should move beyond the category or focus of an individual animal species, and instead take complex and multifaceted human-animal relationships within networks oriented around particular political, economic, or social contexts as their analytical focus. Puar and Livingston intend their concept “to go beyond species by emphasizing relationships over types and by joining a politics that queries the origins, products, and uses of classificatory hierarchies.”

While Puar and Livingston’s terminology is intriguing, this framework could appear to be reifying the category of species itself as a transhistorical phenomenon. Rather than address the formation of “species” as a biological category, and in order to attempt to avoid replicating the white supremacist conflation of slaves and animals, this dissertation sets out to question and historicize the equation of enslaved people and nonhuman animals that Prince and others pointed out in the late eighteenth century. I will take it as a given that enslaved people, in my historical analysis, are people. And, I will take it for granted that animals are animals. My aim is not to intentionally reproduce the language of the enslaver, but to offer a cultural and environmental history narrative that

¹¹⁰ Julie Livingston, and Jasbir K. Puar, “Interspecies,” *Social Text* 29, no. 1 106 (2011): 3-14.

traces the material foundation of this intellectual and linguistic comparison in British Atlantic world history across the long eighteenth century.¹¹¹

This dissertation is organized chronologically, moving from the late seventeenth century to the early nineteenth century. However, each chapter is further organized thematically, and is informed by the conceptual framework of eco-cultural networks devised by James Beattie, Edward Melillo, and Emily O’Gorman, and human-animal modes of interaction developed by Marcy Norton.¹¹²

Eco-Cultural Networks

Environmental historians of the British Empire developed the framework of eco-cultural networks to examine how individuals, nonhumans and nonhuman forces, tools, and institutions succeeded in carrying out social, cultural, and environmental transformations. This conceptual frame fuses approaches from cultural and materialist formulations in environmental history to understand transimperial routes of trade, modes of governance, and movements of resistance that involved the circulation of “ideas, organisms and commodities” throughout the vast territorial reach of globe-spanning empires.¹¹³ The concept itself originated from a dissatisfaction with scholarship either

¹¹¹ On the related concept of the “global” eighteenth century developed by scholars such as Felicity Nussbaum, see: Felicity Nussbaum, editor, *The Global Eighteenth Century* (Baltimore: Johns Hopkins University Press, 2005); Adriana Craciun, and Mary Terrall, editors. *Curious Encounters: Voyaging, Collecting, and Making Knowledge in the Long Eighteenth Century* (Toronto: University of Toronto Press, 2019).

¹¹² Marcy Norton, "Going to the Birds: Animals as Things and Beings in Early Modernity," in *Early Modern Things: Objects and Their Histories, 1500–1800*, edited by Paula Findlen, (London: Routledge, 2013): 53-83; James Beattie, Edward Melillo, and Emily O’Gorman, "Rethinking the British Empire through Eco-Cultural Networks: Materialist-Cultural Environmental History, Relational Connections and Agency." *Environment and History* 20, no. 4 (2014): 561-575.

¹¹³ James Beattie, Edward Melillo, and Emily O’Gorman. "Rethinking the British Empire through Eco-Cultural Networks: Materialist-Cultural Environmental History, Relational Connections and Agency." *Environment and History* 20, no. 4 (2014): 561-575; Aaron Skabelund, "Animals and Imperialism: Recent Historiographical Trends." *History Compass* 11, no. 10 (2013): 801-807. On the role of animals in

focused purely on the physical effects of imperialism, such as Alfred Crosby's formulation of "ecological imperialism", or cultural histories of empire that focus solely on cultural ideas about nature or the nonhuman world that supported imperialism. While these historians do not explicitly acknowledge their indebtedness to actor-network theory, this framework is of course influenced by the foundational scholarship of Bruno Latour, Michel Callon, and John Law.¹¹⁴

Eco-cultural networks are actor-networks that involve humans, nonhumans, and the physical environment. Crucially, they involve the non-material world as well, including culture, beliefs, and ideas. We can think of an eco-cultural network as a network within an empire consisting of institutions, colonial settlements, shipping routes, trading outposts, and other imperial spaces and mobilities that connects the material infrastructure facilitating the movement of humans and nonhumans to wider cultural ideals, economic ambitions, ideology, scientific exchanges, or political networks of patronage, information, or trade across long distances.¹¹⁵ The expansion of the Portuguese Empire in the sixteenth century, as multiple scholars have shown, depended as much on carracks and trade winds as imperial ambitions to expand Iberian commerce, missionary efforts, and political authority from Europe to Brazil, Angola, and India.¹¹⁶

particular, Skabelund writes "Human imperialism has long been contingent on non-human animals. Beasts carried imperializers across vast spaces and into remote places, provided their very bodies to fund and fuel imperial projects, and instilled fear and fascination in colonized and colonizers alike."

¹¹⁴ Bruno Latour, *Reassembling the Social: An Introduction to Actor-Network-Theory* (Oxford: Oxford University Press, 2005); Wiebe E. Bijker, Thomas Parke Hughes, and Trevor J. Pinch, eds. *The Social Construction of Technological Systems: New Directions in the Sociology and History of Technology* (MIT Press, 1989); John Law, "Notes on the Theory of the Actor-Network: Ordering, Strategy, and Heterogeneity." *Systems Practice* 5, no. 4 (1992): 379-393.

¹¹⁵ Here I should note that Beattie, Melillo, and O'Gorman cite the scholarship of the late Christopher A. Bayly as a source of methodological and theoretical inspiration. C.A. Bayly, *Empire and Information: Intelligence Gathering and Social Communication in India, 1780-1870*. (Cambridge University Press, 1999.)

¹¹⁶ John Law, "Technology and Heterogeneous Engineering: The Case of Portuguese Expansion," in *The Social Construction of Technological Systems*, 111-134; Greg Bankoff, "Aeolian Empires: The Influence of

Institutions and the individuals within their ranks produced and supported eco-cultural networks in the early modern period, including colonial governments, scientific societies, large-scale plantations, and joint-stock companies.

Consider, as an example, the Hudson's Bay Company, established by royal charter in 1670. At its most basic level of existence, company factors traded fabrics, ironware goods, guns, and provision to Cree, Assiniboine, Dené, Chipewyan, and other indigenous towns and ethnolinguistic groups in exchange for goose feathers, marten skins, pemmican, and beaver furs throughout the geographical territory known to English-speakers as Rupert's Land and to indigenous people by a multiplicity of diverse toponyms.

The company's success hinged upon its agents knowing the terrain and routes between overland, riverine, lacustrine, and island spaces in the trade including their own factories, such as Rupert House, Moose Factory, and Fort Albany, and indigenous towns and villages.¹¹⁷ To enable their vast trade in animal commodities, factors for the Hudson Bay Company circulated maps of terrain and waterways, pictures of flora and fauna, dictionaries of indigenous languages and ethnographic descriptions of indigenous people, inventories and account books of commodities in transit or stored in depots, letters, and weather records. These circuits of exchange combined material information on physical commodities and the geography the company operated within, and cultural knowledge of indigenous gift economies, languages, customs, and political alliances that company

Winds and Currents on European Maritime Expansion in the Days of Sail." *Environment and History* 23, no. 2 (2017): 163-196.

¹¹⁷ George Colpitts, "Knowing Nature in the Business Records of the Hudson's Bay Company, 1670–1840," *Business History* 59, no. 7 (2017): 1054-1080; George Colpitts, 'Animated like Us by Commercial Interests': Commercial Ethnology and Fur Trade Descriptions in New France, 1660-1760", *Canadian Historical Review*, 83 no. 3(2002): 305-337.

factors required to succeed in the trade. The eco-cultural network model here emphasizes how trading connections, negotiations, and exchanges between Rupert's House and Mistissini, a Cree town, involving animal commodities and local environmental knowledge mattered as much as those between the factory and London. Put simply, the framework helps scholars understand three aspects of empire-building in seventeenth-century Canada: one, that networks in the British Empire involved material exchanges and cultural knowledge; two, that human-nonhuman relationships involving hunting, food, and clothing structured interactions and negotiations between English factors and indigenous traders; and three, that human agency is one aspect of a broader environmental story involving nonhuman actors that, in the case of vermin or other examples of animal agency, shaped the possibilities for trade and empire.

Perhaps the most important analytical result from the eco-cultural framework is that it complicates what Haripriya Rangan, Judith Carney, and Tim Denham characterize as the inherently Eurocentric and teleological structure of ecological imperialism.¹¹⁸ In their study of botanical exchanges in the Indian Ocean world, these scholars make the case for "a more 'amphibious' spatial framework for understanding environmental history" that focuses on human-nonhuman exchanges beyond the traditional scope and political borders of the nation-state or the narrowly local case study.¹¹⁹

Rangan, Carney, and Denham's argument is useful, and it is worthwhile to reflect on the analysis of enslaved people and slavery within Crosby's foundational text, which remains a touchstone for environmental histories of empire. Crosby's narrative of the

¹¹⁸ Haripriya Rangan, Judith Carney, and Tim Denham. "Environmental History of Botanical Exchanges in the Indian Ocean World." *Environment and History* 18, no. 3 (2012): 311-342.

¹¹⁹ Rangan, Carney, and Denham, "Environmental History of Botanical Exchanges in the Indian Ocean World," 334.

ecological transformation of Madeira in the late fifteenth century does include a discussion of the crucial role enslaved people, likely Berbers, Portuguese Christians that “acted too much like” North African Muslims or Jews, and the indigenous Guanches, played in creating irrigation networks and sugarcane plantations on the island.¹²⁰ However, apart from this description of enslaved labor on plantations, Crosby is largely silent on the cultural environmental history of slavery within his narrative of ecological imperialism. The absence of a sustained discussion of enslaved people and slavery in *Ecological Imperialism* supports Rangan, Carney, and Denham’s thesis that Crosby’s historical framework is generally flawed by Eurocentrism.

Modes of Interaction

Marcy Norton developed the analytical framework of “modes of interaction” to describe “meta-structures that organize how people relate to and think about animals.”¹²¹ This category, at its most basic level, refers to different kinds of interactions between people and animals. Modes of interaction are constituted by cultural customs, individual patterns of behavior, and institutions. The category of mode and interaction is quite broad, and Norton uses it to encompass subjects including hunting, husbandry, service, and menageries.

In a hunt, for instance, the hunter assembles a group of subordinate humans and nonhuman animals to pursue their quarry. The hunter articulates a mode of interaction that coordinates a hierarchical relationship between himself and the humans and animals

¹²⁰ Alfred W. Crosby, *Ecological Imperialism: The Biological Expansion of Europe, 900-1900* (Cambridge University Press, 1986), chapter 4 “The Fortunate Isles”.

¹²¹ Marcy Norton, “Going to the Birds: Animals as Things and Beings in Early Modernity,” in *Early Modern Things: Objects and Their Histories, 1500–1800*, edited by Paula Findlen, (London: Routledge, 2013): 53-83.

subordinate to him. Picture a fifteenth-century Spanish nobleman astride a horse with a hawk perched on their left arm, and below him are dogs running alongside servants, all gathered together in the pursuit of prey, including herons, storks, swans, cranes, and small mammals. The hunter and the event of the hunt produced the mode of interaction between the hunter and their subjects. This meta-structure accomplished several things for the hunter. First, it affords the hunter the opportunity to demonstrate their prowess in taming raptors and achieving mastery over animals, including the canines on the grounds. Second, through the act of hunting the hunter performs their readiness for war and martial knowledge. Third, hunting exhibits a form of noble leisure that exemplified the hunter's virtues as a master of the nonhuman world. As Norton puts it, hunting "reflected and promoted the neofeudal legitimacy of the aristocracy by naturalizing might as a legitimate source of power; the strong overpowering the weak is naturalized in hunting and so legitimated in war."¹²²

In the hunt, the hunter's raptors became his vassals, along with his hired huntsmen and falconers, kennel keepers, horses, and dogs. Hunting produced a hierarchical relationship that situated the hunter socially above and dominant to his human and nonhuman subjects. Through the hunt, the subjectivity of each human and nonhuman became crystallized as their role and status in the hierarchy emerged.

Norton's framework further intersects human-animal studies with the history of the body. In the context of elite hunting culture, the falconer uses their voice—either through speech or by whistling with their tongue—to train the raptor to hear and obey their commands. With their arm extended or their fist balled, the falconer's body becomes a familiar perch for the animal to rest upon and return to after flight. Falconers further used

¹²² Norton, "Going to the Birds", 55.

their hands to stroke the bird's feathers and feed them bits of meat, and gazed with their eyes into the animal's eyes to form a bond of familiarity. Drawing on neuroscience research, Norton adopts the concept of "peripersonal space", which is used to describe the ways in which the human brain becomes habituated to the immediate space each part of the body inhabits through a kind of cognitive mapping, to focus attention to the gradual habituation of the falconer's body to the raptor's body. The human and the animal become deeply enfolded in a new configuration of embodiment and embodied space through hunting as a mode of interaction.¹²³

Norton summarizes the importance of modes of interaction as a concept by placing these modes within a wider ontological framework. Modes of interaction produce the categories by which participants are defined, produce knowledge of humans and animals, and structure relationships, especially hierarchies and the qualities of subjectivity or objectivity. Husbandry, for example, produced the subjectivity of livestock, those animals valuable for their potential as laborers or sources of meat for the agriculturalist. In addition, husbandry categorized animals that threatened the stability of a farm and its stable operation as vermin or pests. Norton compares modes of interaction as an analytical category to gender, in that these modes lead to the production of ideas and ideology and are also "circumvented, defied, and transgressed." Modes of interaction, as opposed to more universalizing frameworks of human-animal studies, emphasizes the particularity of "cultural inflections" to understanding human and animal relationships in the past.

In this dissertation, I draw on these two frameworks to understand how human-animal interactions generated by the Atlantic slave trade and slavery became crucial in

¹²³ Norton, "Going to the Birds", 58.

the formation of Britain's Atlantic empire in the long eighteenth century. In each chapter, I trace how eco-cultural networks and modes of interaction involving enslaved people and animals developed to support particular ambitions of slavers and slaveholders. Modes of interaction, such as commodification and exchange, originate within geographically broad, distant, and diverse networks involving environments, humans, exchanges, and animals. I also put these frameworks to use to understand how both animals and enslaved people enacted their own limited agency in this narrative. Putting these frameworks into conversation is useful for grounding the geography and environmental history of slavery, as modes of interaction affords understanding particular *relations* between humans and animals, and eco-cultural networks describe how those relations came to be *produced across time and space*.

Chapter Overview

Chapter one opens by situating the origins of eco-cultural networks between English and Atlantic African slavers who used animals to establish bonds of trust and alliance, and manage commercial flows of exchange between the Royal African Company's castles, factories, and smaller outposts reaching from James Island in the Gambia River to Ouidah on the Bight of Benin. Ritual sacrifices of sheep, gifts of exotic animals such as elephants and ostriches, and the adoption of money cowries as currency, extended mercantile arrangements between the English and the numerous and varied Fula, Wolof, Fante, Twi, Fon, Yoruba, and Aja-speaking city-states and polities they engaged to purchase enslaved captives. This chapter uses the period between the granting of the African Company's second charter by Charles II in 1672 until its reorganization in

1731 under the Duke of Chandos to underscore how crucial animals were for expanding slavery from the Restoration until the early decades of the Georgian era.¹²⁴

In this period, the African Company struggled to establish footholds in Atlantic Africa at bases such as Dixcove, Sekondi, and James Fort at Accra. The company's difficulties lie in part from the competition of their major rival, the Dutch West India Company, based at Elmina Castle, and from the challenges of procuring stable supplies of money cowries. This chapter plumbs the gradual acculturation of English factors into West African ritual culture and economic protocols involving animals that were pivotal toward the expansion and stabilization of the slave trade, especially between the Gold and Slave Coasts. One mode of interaction scrutinized here is the commodification of captives with animals as their bodies became equated and evaluated with money cowries, a process already identified by diaspora scholars including Stephanie Smallwood.¹²⁵ This chapter builds on Smallwood's scholarship by highlighting just how contingent, fraught, and gradual the English adoption of money cowries was in this period.

In numerous forms of paperwork—including letters to Cape Coast Castle, inventories of factory warehouses, and printed accounts of slave trading voyages—employees of the African Company stressed time and again to their superiors the necessity of knowing the social, cultural, and economic value of animals in Atlantic

¹²⁴ Holly Brewer, "Slavery, Sovereignty, and 'Inheritable Blood': Reconsidering John Locke and the Origins of American Slavery," *The American Historical Review* 122, no. 4 (2017): 1038-1078; W.R. Scott, "The Constitution and Finance of the Royal African Company of England from Its Foundation Till 1720," *The American Historical Review* 8, no. 2 (1903): 241-59; A.P. Thornton, "The Organization of the Slave Trade in the English West Indies, 1660-1685," *The William and Mary Quarterly* 12, no. 3 (1955): 399-409.

¹²⁵ Stephanie E. Smallwood, *Saltwater Slavery: A Middle Passage from Africa to American Diaspora* (Cambridge: Harvard University Press, 2007), 92.

Africa.¹²⁶ Exchanges of animals for the purposes of obtaining human cargoes is another mode of interaction foregrounded in this chapter. Factors relied upon animals for their symbolic and commercial value in multiple West African political and cultural contexts, especially moneta cowries and red coral, to facilitate the wider trading networks that the company very gradually established. In addition, this chapter takes up the subject of intractable vermin animals, especially worms and rats, that constrained these eco-cultural networks by debilitating enslaved men and women held in barracoons or in dungeons below trading castles, and by damaging trade goods and supplies of provisions. Pests limited the flow and quantities of materials that factors needed to move the slave trade along. This chapter focuses on the tension of animals that became crucial for establishing slave trading, and those that limited connections between the African Company and various Atlantic African societies and city-states.

Chapter two pivots to the interconnected routes of the slave trade and the discipline of natural history. From Britain's American colonies to slave castles on the Gold Coast and slave trading depots in New Spain, this chapter probes how a combination of wealth derived from slaveholding and the judgment of enslaved collectors undergirded the accumulation and circulation of faunal specimens throughout the Atlantic world in the long eighteenth century. Slaveholders and their subordinates collected animals on shorelines around slave dungeons, in locales surrounding Spanish depots in South America, and on coastlines and plantation fields in the Caribbean and the Tidewater Chesapeake.

¹²⁶ On paperwork in early modern commercial geographies, with particular respect to the English empire, see: Miles Ogborn, "Streyntsham Master's Office: Accounting for Collectivity, Order and Authority in 17th-Century India," *Cultural Geographies* 13, no. 1 (2006): 127-155.

From these diverse and far-flung locations, enslavers and the enslaved forwarded novel creatures to naturalists in the metropole who aspired to build up prestigious collections that exemplified universal knowledge. Naturalists and their allies built up an eco-cultural network of animal collecting and faunal information driven by slavery and enslaved people.¹²⁷ Edward Barter, a powerful Anglo-Fante factor and enslaver at Cape Coast Castle, for instance, supplied the London apothecary James Petiver with specimens of Gold Coast mollusks and insects he gathered nearby the African Company's headquarters beginning around 1693. Surgeons employed by the South Sea Company who sailed from England to port cities such as Buenos Aires and Cartagena de Indias, and whose official duties involved supervising the health of enslaved captives and assessing Spanish agricultural products and pharmaceutical plants, used their positions to assemble collections of animals from the Spanish Main. Beyond gathering animals, surgeons amassed collections of enslaved people, whose bodies they transformed into medical materials for study. Just as slavers turned captives into commodities, naturalists turned enslaved people and animals into abstracted specimens.

Perhaps most importantly, this chapter shows how some of the specimens of Atlantic and American animals in private cabinets, university collections, and museums oriented toward the ambitious vision and virtues of universal knowledge, were furnished by the skill, judgment, and curiosity of enslaved collectors. A man whose name is not recorded within slavery's archive, for instance, contributed animal collections to the taxonomist Carl Linnaeus after traveling to Providence Island in 1771. Such individuals possessed skill at diving and hunting, and were held in bondage by diverse kinds of

¹²⁷ Christopher A. Bayly, "Knowing the Country: Empire and Information in India." *Modern Asian Studies* 27, no. 1 (1993): 3-43.

colonial figures including missionaries, planters, and itinerant naturalists throughout the colonies.

Slaveholders imposed the duties of collecting upon the enslaved, and profited from their labor as specimens moved through networks of scientific circulation. While some collectors rewarded enslaved people for collecting animals, it is unclear if such practices were common.¹²⁸ So, one mode of interaction I am examining through these networks is simply collecting, and the intellectual pursuits related to collecting such as curiosity, moral virtue, and piety, itself.¹²⁹ This chapter contributes to an ongoing reframing of the entangled histories of collecting, natural history, and slavery in the Atlantic world developed by scholars including James Delbourgo, Kathleen Murphy and Deirdre Coleman.

Chapter three moves from the routes of the slave trade to the geography of plantation slavery and agricultural production that encompassed sugar estates in the West Indies and tobacco and wheat plantations in the Tidewater Chesapeake. This chapter investigates how slaveholders attempted to transform enslaved people and livestock animals into the “nerves” and “sinews” of sugar, wheat, and tobacco plantations in the second half of the eighteenth century. Turning people and animals into “nerves” and “sinews” required imposing particular regimes of labor, another mode of interaction between people and animals, and material linkages involving diet and bodily waste.

¹²⁸ James Delbourgo, "Listing People." *Isis* 103, no. 4 (2012): 735-742.

¹²⁹ On virtue and piety as normative values in early modern science see: Sarah Irving, "Rethinking Instrumentality: Natural Philosophy and Christian Charity in the Early Modern Atlantic World." *HOPPOS: The Journal of the International Society for the History of Philosophy of Science* 2, no. 1 (2012): 55-76; James A.T. Lancaster, "Natural Knowledge as a Propaedeutic to Self-Betterment: Francis Bacon and the Transformation of Natural History." *Early Science and Medicine* 17, no. 1/2 (2012): 181-96; Peter Harrison, "Curiosity, Forbidden Knowledge, and the Reformation of Natural Philosophy in Early Modern England." *Isis* 92, no. 2 (2001): 265-90.

Samuel Martin, a sugar planter on Antigua, popularized this anatomical rhetoric while claiming to ameliorate the conditions of enslaved people and animals as he rebuilt his family's sugar estate, Green Castle, in St. Mary parish between 1750 and 1758.¹³⁰ In a printed manual offering advice for slaveholders, Martin explicitly connected enslaved people and animals as equivalent subjects using these bodily metaphors. Slaveholders influenced by Martin's advice attempted to implement such a program of likening slaves and animals as combined and interrelated sources of physical labor in both the Caribbean and the Chesapeake. Teams of enslaved people and livestock hauled plows over fields before harvest, and later carted crops of agricultural commodities to various transshipment stations, including sites located on rivers and coastal ports. Such work was exhausting, and over time led to illness, injury, and ultimately death. Justin Roberts succinctly captures this period as "the dark side of the Enlightenment."¹³¹

Transforming slaves and animals into nerves and sinews involved considering their bodies as fundamentally interchangeable. To support this material-intellectual transformation, and to reduce costs, planters fed both enslaved people and draft animals cheap, malnourishing diets of cereal grains, especially corn and sorghum, supplied by farmers in New England and recognized in European culture as fodder foods.¹³² In the West Indies, where fodder provisioning was more extreme, enslaved people suffering from near-starvation at times turned to eating the buried carcasses of recently deceased, and often diseased animals, a phenomenon known as "plague hunger." In their zeal for

¹³⁰ Justin Roberts, *Slavery and the Enlightenment in the British Atlantic, 1750-1807* (Cambridge: Cambridge University Press, 2013), 48; Christopher L. Brown, *Moral Capital: Foundations of British Abolitionism* (Chapel Hill: University of North Carolina Press, 2012), 245.

¹³¹ Roberts, *Slavery and the Enlightenment in the British Atlantic, 1750-1807*, 6.

¹³² Anya Zilberstein, "Bastard Breadfruit and other Cheap Provisions: Early Food Science for the Welfare of the Lower Orders." *Early Science and Medicine* 21, no. 5 (2016): 492-508.

agricultural improvements, planters in the West Indies further attempted to manipulate and improve “nature’s oeconomy” by extracting the bodily waste of slaves and livestock to restore the fertility of depleted soils.¹³³ At the same time in Virginia, on large estates situated throughout the Northern Neck, wealthy tobacco planters began to systematically collect, store, and apply animal waste toward producing and using manure in a scientific manner.¹³⁴ This chapter sheds light on the ambitions of enslavers to yoke humans and animals on plantations within a productive labor regime, and reimagine their bodies as equivalent sources of power and energy.

Chapter four reverses the focus of the first three chapters from the laborious production and maintenance of human-animal networks under slavery to look at how vermin animals damaged plantations, upset the ambitions of slaveholders, and impacted the lives and health of enslaved people in the West Indies and the Chesapeake. This chapter argues that slaveholders, and the plantations they attempted to build, created their own ecological vulnerabilities due to the simplified linear environments of monocrop agriculture. Pests infested, and sometimes entirely obliterated fields of sugar, wheat, and tobacco plants in both regions throughout the second half of the eighteenth century. Over time, pests proved to be a significant threat to the plantation complex slaveholders struggled to produce, and psychologically blunted the confidence of planters hoping to profit from enslavement.

In the West Indies, periodic drought enabled mutual predation by insects such as yellow blast, aphids, and sugar ants to devour entire fields of sugarcane to the point of

¹³³ Anna M. Foy, "The Convention of Georgic Circumlocution and the Proper Use of Human Dung in Samuel Martin's *Essay upon Plantership*," *Eighteenth-Century Studies* 49, no. 4 (2016): 475-506.

¹³⁴ Rhys Isaac, *Landon Carter's Uneasy Kingdom: Revolution and Rebellion on a Virginia Plantation* (Oxford: Oxford University Press, 2004) 83-84.

extirpation.¹³⁵ Cane rats, which enslaved people hunted as a source of protein, also ate through fields of sugarcane at astonishing rates. In the Caribbean, insects like black blast and carnivorous ants endangered the health of enslaved people, whose labor put them into close contact with the environmentally hazardous schemes of enslavers to exterminate pests. In printed accounts of plantation management, slaveholders observed how swarms of black blast afflicted the eyesight of slaves, while carnivorous ants, an animal British planters introduced as predators for reducing rat populations, attacked vulnerable enslaved children. Pests also exposed colonial settlements to the possibility of slave uprisings, as a wave of yellow blast attacks in 1736 in part sparked the rebellion on Antigua that year.

Tidewater planters in Virginia likewise faced agricultural problems from moles, birds, hornworm, webworm, ground worms, pissants, and weevils that blighted tobacco plants and infested storehouses brimming with wheat.¹³⁶ Waves of destructive pests, sometimes collaborating in mutual attacks, exploited plantation crops for their own flourishing. Slaveholders facing animal pests imagined themselves to be locked in a perpetual war against animals beyond their control. Zooming in on pests reveals how some animals exerted agency to unmake the eco-cultural networks of plantation slavery. Furthermore, plantation agriculture's insistence on categorizing enslaved people and livestock as laboring "nerves" and sinews" in turn produced the category of pests themselves. This chapter highlights how animals frequently challenged slaveholders for

¹³⁵ Matthew Mulcahy, and Stuart Schwartz. "Nature's Battalions: Insects as Agricultural Pests in the Early Modern Caribbean." *William & Mary Quarterly* 75, no. 3 (2018): 433-464.

¹³⁶ James E. McWilliams, *American Pests: The Losing War on Insects from Colonial Times to DDT* (New York: Columbia University Press, 2008), 1-25.

control over environments in the Atlantic world, and often succeeded in destabilizing human-animal modes of interaction.

Chapter five considers how people of African descent throughout the diaspora in the West Indies and southeastern North America deliberately struck out against the human-animal bonds enslavers strived to build in British America. This chapter analyzes how enslaved people created their own networks of autonomy, mobility, and power with nonhuman animals. These networks are, as those described in chapters one to three, eco-cultural networks that include animals and animal remains, people, routes of travel, and circuits of information. This chapter also delves into what I argue are diasporic modes of interaction that people of African descent created with animals that deserve to be examined as much as European human-animal intersections.

Obeah ritualists in the Caribbean reconstituted animal remains—including money cowry shells, fish bones, dogs teeth, bird feathers, sheep skin, and blood— into new arrangements that enslavers feared as evidence of clandestine communication between slaves that could potentially incite revolt and rebellion. Obeah bundles furthermore intimidated enslavers, who perceived these accretions of animal materials as unfamiliar and strange claims to wielding supernatural power. Moreover, obeah ritualists often appeared as counselors to the leaders of slave revolts, and English fears of the powers of obeah rose dramatically after obeah practices were discovered to be central to the rebels involved in Tacky's War on Jamaica in 1760. Obeah rituals drew upon animal powers in ways that significantly disturbed slaveholders in the colonies.

Turning from ritual to sabotage, this chapter further examines how enslaved plowmen and cart drivers on plantations in the Chesapeake injured draft cattle and oxen.

Enslaved people drove animals into ditches, marshes, and other hazardous terrain to cause them to fall, break their legs, and suffer fatal injuries. Women also joined in community-wide sabotage efforts. Enslaved women responsible for supervising herds of cattle ignored their bovine charges and let animals range beyond their pens and trample crops of tobacco and wheat. Others slowly starved livestock, including chickens and sheep, to weaken their bodies over time, rendering the creatures prone to harm and death. In these instances, we can appreciate how the enslaved self-consciously sabotaged the productive modes of interaction that enslavers like Martin hoped to achieve on plantations.

Finally, this chapter looks at a corpus of runaway advertisements published from Maryland to Jamaica from the period before and after the American Revolution that attest to how enslaved people stole their enslaver's horses to escape plantations. This section builds directly from Lambert's master-horse-slave concept by examining nearly one hundred advertisements involving fugitive black riders in the eighteenth century who overturned horse-human animals relations under slavery in their bid for self-liberation. On horseback, people of African descent and African Americans fashioned their own powerful networks of mobility with equines to move between colonies, reunite with family and lovers, and push beyond the surveillance and authority of their enslavers.

Through each of these three relations—*obeah* bundles, sabotage, and mobility—this chapter brings to the fore how enslaved people instigated their own modes of interaction with animals for the purposes of resistance, and actively targeted the enslaver's modes of interaction to undermine the human-animal foundations of slavery.

The concluding chapter of the dissertation looks at how abolitionist campaigners, including African intellectuals whose lives spanned the eastern and western rims of the Atlantic, began to strategically invoke the category of the “inhuman” to describe the slave trade, the middle passage, and plantation slavery itself in the Americas. Intellectual’s use of inhuman as a keyword brilliantly drew attention to both the ways in which enslavers dehumanized the enslaved and distorted their own humanity to become slaveholders or slave traffickers.

In his *An Essay on the Slavery and Commerce of the Human Species*, 1785, Thomas Clarkson characterized slavery as the driving engine of an “inhuman” empire that collapsed the categories of the animal and the human into synonymous subjects. Africans, in the British Atlantic world as in other European empires, argued Clarkson and his allies, existed in an equivalent social, political, and economic position as “cattle, they could be *bought* and *sold*, [and] it will not be difficult to suppose, that they could be held in the same consideration, or treated in the same manner.”¹³⁷ Clarkson conceded in his text to his detractors that “the right to empire over brutes”, including pets, specimens, livestock, or racehorses, was a natural right for humans to exercise. However, he argued, no comparable right existed to possessing an “empire over men.”¹³⁸ It is important to underscore that Clarkson squarely located the equivalence of slaves and animals within the context of empire.

Quobna Ottobah Cugoano, an ally of Clarkson, further added to the abolitionist attack on an “inhuman” empire by arguing that while the “brute creation in general may fare better than man” in some circumstances, such as the status of a pet in a monied

¹³⁷ Thomas Clarkson, *An Essay on the Slavery and Commerce of the Human Species, particularly the African, Translated from a Latin Dissertation* (London: Printed by J. Philips, 1786), 21.

¹³⁸ Clarkson, *An Essay on the Slavery and Commerce of the Human Species*, 56-57.

household or royal palace, “the nature and situation of man is far superior to that of beasts.”¹³⁹ In the conclusion, I read Cugoano’s moral philosophy and his treatise against the slave trade that contrasted the ontological and moral status of Africans and animals as set of interrelated intellectual arguments emerging from a series of environmentally-grounded experiences with nonhuman animals familiar to many enslaved people.

Returning to the questions raised by Mary Prince in 1831, this dissertation pursues the inquiry she and others posed by putting environmental history into conversation with the history of slavery, the African Diaspora in the Caribbean and southeastern North America, and the history of empire in the early British Atlantic world. From the moment of capture in the hinterland to the sale of captives at port cities, to the backbreaking labor of enslaved people in the plantation complex, enslavers in the long eighteenth century convinced themselves, over time, that the enslaved were not fully human.

As Prince demonstrated, enslavers did this by annihilating families and separating mothers and children, but also by equating the enslaved to money cowries, by valuing the enslaved for their abilities in gathering unique faunal specimens, and by systematically imposing regimes of labor that deeply entwined the lives of the enslaved and livestock. These processes were not frictionless across space and time. Vermin animals exploited the human-animal connections enslavers struggled to produce. Enslaved people outright challenged such bonds with calculated violence. However, to return to Prince’s final question, how could enslavers themselves become a people of a “bestly manner”? The answer to Prince’s final question lies in taking on the scale of an empire, both colonial

¹³⁹ Quobna Ottobah Cugoano, *Thoughts and Sentiments on the Evil and Wicked Traffic of the Slavery and Commerce of the Human Species, humbly submitted to the inhabitants of Great-Britain* (London: Printed in the year 1787), 18-19.

peripheries and the imperial center, as interrelated subjects of analysis. This dissertation aims to provide a cultural environmental history of an inhuman empire as it grew across the Atlantic world in the era of the slave trade.

Chapter One

To Get A Cargo of Flesh, Bone, and Blood

In ye first place, It is to be understood yt Merchants and Bitchereen Esteem
Nothing Riches more than slaves and Cows.

—Cornelius Hodge, James Island, 1690

This Country produces nothing fit for Exportation but Slaves, from whence there
are incredible Numbers carried off Yearly.

—James Houstoun, *Some New and Accurate Observations of the Coast of
Guinea*, 1725

In March, 1686, John Carter wrote a letter to his employer, the Royal African Company, to express his exasperation. For the past two years, Carter fashioned a career for himself by exchanging commercial goods in trade for human beings on the coastline of the Bight of Benin as a factor, or purchasing agent in the slave trade, at the company's factory at Ouidah sited north the coastal lagoons. An adroit dealer, Carter accrued profits for his superiors in the company by knowing what commodities Fon-, Yoruba-, and Aja-speakers, and traders from other West African polities desired while bartering for enslaved captives plundered from northern towns and villages by raiders and soldiers from the kingdoms of Hueda, Allada, and others including textiles, brass kettles, muskets, and especially the polished remains of tiny marine sea snails. Through his correspondence, Carter kept his superiors at Cape Coast Castle, the company's headquarters on West Africa's Gold Coast, up to date by informing the castle of recent acquisitions of slaves, the arrivals and departures of coasting vessels loaded with human cargos, and fluctuations in the demand and prices for different commodities at Ouidah.

In his letter, Carter reported in a calculating tone that though "I doe admire that the Affrican Merchant, the Company one ship comeing to" the factory at Ouidah arrived,

the vessel delivered “a great quantity of large bouges, soe much behinde merchantable, that it was 10 slave loss to her cargo in slaves.”¹⁴⁰ Carter’s clients in Benin preferred smaller bouges, the smooth, pale white dorsal shells of the cowry sea snail *Monetaria moneta*. English traders used the words bouges, from the Portuguese búzio, and cowries, derived from the Hindi and Urdu word kauri, interchangeably.¹⁴¹ Carter likely learned from Hueda interpreters, and others including caboceers and more experienced factors, the particularities of taste and cultural values that made the small cowry more valuable than the larger kinds sent to Ouidah.¹⁴² By supplying a larger variety of the animal’s shell, perhaps a different species of cowry, the company put Carter and his subordinates at the factory at a disadvantage in the trade. Moreover, due to their size, shipments of larger cowries reduced the overall quantity of the shell money the factory had to barter for captives.¹⁴³ Carter coolly reminded his employer that future shipments should contain smaller cowries instead. So that he “may be furnished to purchase a quantity of Negroes reddy against any ships arrivall,” the factor urged Cape Coast to dispatch, among a shipment of textiles and red coral, “20 barrells bougees” for future trading. In November, Carter warned his associates once more that if his colleague, Captain George Nanter, commander of the African Company’s *African Merchant* pink, a small flat-bottomed

¹⁴⁰ “John Carter, Whidah, 1 March 1686”, in *The English in West Africa, The Local Correspondence of the Royal African Company in England, 1685-1688*, edited by Robin Law, (Oxford: The British Academy, 2001), 327-331.

¹⁴¹ Hugh Thomas, *The Slave Trade: The Story of the Atlantic Slave Trade: 1440-1870* (New York: Simon and Schuster, 1997), 324.

¹⁴² Joan M. Fayer, “African Interpreters in the Atlantic Slave Trade.” *Anthropological Linguistics* 45, no. 3 (2003): 281-95; Robin Law, *Ouidah: The Social History of a West African Slaving ‘Port’, 1727-1892* (Columbus: Ohio State University Press, 2004), 43, 127. Law describes how in Ouidah, in particular, Agou, or interpreters/translators, were valuable Hueda officials in the slave trade.

¹⁴³ Jan Hogendorn, and Marion Johnson, *The Shell Money of the Slave Trade* (Cambridge: Cambridge University Press, 1986), 5,9.

coasting vessel, “comes downe here without bouges itt will bee troublesome to procure her slaves, butt it shall be done to the best of my endeavor.”¹⁴⁴

One year later, Carter found himself continuing to struggle in his letters to emphasize the importance of sending the right kind of cowry to Ouidah. Writing in 1687, he notified Cape Coast that Nanter’s ship carried “230 slaves on board,” a disappointing total as it was a diminished shipment compared to the usual capacity of the slaver.¹⁴⁵ “His cargoe falls short,” Carter explained, “by reason 6 barrels of his booges proved bigg, whereby was 6 slaves and more lost I thinke.” Given the average mortality rate of a vessel crossing the middle passage, the factors’ concerns over the loss of six potentially valuable captives bound for slave markets in Barbados was understandable. Before he folded his letter to send it westward, he repeated that first and foremost “The goods I desire are booges.” While anchored at Ouidah, Nanter also relayed a message to Cape Coast via a canoeman hired by the company to report that his total cargo fell short of its expected amount as “severall barrels of booges pranes so large that I am forc’t to give the countrey people above a hundred pound for a slave,” a frustratingly unfavorable exchange rate for the company.¹⁴⁶

As they considered the size, color, quantity, and weight of the egg-shaped shells of the sea snails against the present worth and future profits to be made from captive human beings, men like Carter and Nanter performed important skilled labor in the slave

¹⁴⁴ “John Carter, Whiddah, 11 November 1686”, in *The English in West Africa, The Local Correspondence of the Royal African Company in England, 1685-1688*, edited by Robin Law, (Oxford: The British Academy, 2001), 332.

¹⁴⁵ “John Carter, Whiddah, 6 January 1686/7”, in *The English in West Africa, The Local Correspondence of the Royal African Company in England, 1685-1688*, edited by Robin Law, (Oxford: The British Academy, 2001), 337.

¹⁴⁶ “George Nanter, Whiddah, 5 January 1687,” in *The English in West Africa, The Local Correspondence of the Royal African Company in England, 1685-1688*, edited by Robin Law, (Oxford: The British Academy, 2001), 389-390. Law suggests that ‘pranes [=proves?]’ in his transcription.

trade. In particular, they exemplified the necessary judgment factors and commanders of vessels required in knowing and predicting the value of goods in exchange for slaves, including the remains of animals such as corals and cowries. Yet, their faunal knowledge was not limited to dead animals, but encompassed living animals as well. To succeed, factors in Atlantic Africa in the late seventeenth century required specific environmental and cultural knowledge regarding living and dead animals in the trade to make a profit for the company and expand their commercial orbit.

The dehumanizing nature of the Atlantic slave trade and early modern capitalism, of course, has not gone unnoticed by historians. Stephanie Smallwood contends that the trade on the Gold Coast, and throughout Atlantic Africa, in the seventeenth and eighteenth centuries became a “stage for a range of activities and practices designed to promote the pretense that human beings could convincingly play the part of their antithesis – bodies animated only by others’ calculated investments in their physical capacities.”¹⁴⁷ The commodification of enslaved captives involved the methodical evaluation of bodies, including estimating their future productive labor against the known value of material objects, such as the cowry shells Carter and his partners trafficked at Ouidah. Such evaluations emerged out of complex calculations, cultural negotiations, and the underlying material infrastructure of the trade spanning from England to coastal Atlantic Africa, and across the Atlantic Ocean to island colonies in the West Indies. The trade, as Smallwood and others demonstrate, depended upon the quantitative methods of accounting and attendant forms of paperwork to render enslaved people—whether shackled in a coffle, bound at a factory sale, or chained in the dungeons below Cape

¹⁴⁷ Stephanie E. Smallwood, *Saltwater Slavery: A Middle Passage from Africa to American Diaspora* (Cambridge: Harvard University Press, 2009), 35.

Coast Castle—abstract commodities tied to monetary equivalents.¹⁴⁸ Precise quantities of cowries, whether weighed in barrels, counted on strings, or measured in particular local enumerations, facilitated slave sales between English and West African traders.¹⁴⁹ By writing in account ledgers, inventory lists, and letters, factors and other agents did the work of “turning people into slaves” through numerical paper records, a process that at every turn depended on knowing the equivalent value of the remains of cowry shells, and other faunal goods like red coral, and humans in the slave trade.¹⁵⁰

Animals, living and dead, connected distant English and West African spaces in the slave trade in Atlantic Africa in the late seventeenth century. This chapter investigates two key aspects involving how English and African agents relied on exchanges of animals to instantiate and reinforce a broad trade in human captives. It does so by first situating how slave traders used animals, often livestock such as sheep, in ritual sacrifices and as diplomatic gifts to establish political and economic alliances; and second by examining how a mollusk, the cowry sea snail *Monetaria moneta*, functioned as a widespread form of currency in the castle trade the English struggled to build in seventeenth century West Africa. While these points of intersection in the trade supported commercial networks and expanded the wider traffic in enslaved people, the final section queries how some animals, such as worms and rats, became vermin that interfered with

¹⁴⁸ Smallwood, *Saltwater Slavery*, 71; Trevor Burnard, "Collecting and Accounting: Representing Slaves as Commodities in Jamaica, 1674-1784." in *Collecting Across Cultures: Material Exchanges in the Early Modern Atlantic World*, edited by Daniela Bleichmar and Peter Mancall, (Philadelphia: University of Pennsylvania Press, 2011): 177-191.

¹⁴⁹ Herbert Klein, *The Atlantic Slave Trade*, 2nd ed. (Cambridge: Cambridge University Press, 2010), 115. Hogendorn, and Johnson, *The Shell Money of the Slave Trade*, 114-124. Marion Johnson provides an outstanding account of particular local enumerations of cowries, including their change over time, in her two-part article series “The Cowries Currencies of West Africa” cited here and published in *The Journal of African History*.

¹⁵⁰ Smallwood, *Saltwater Slavery*, 35.

commercial flows by damaging valuable commodities, including trade goods and human captives, intended for exchange.

Using letters written by factors of the Royal African Company, and printed accounts of the trade written by other officials, I will show how animals mediated exchanges as the company entered the trade in West Africa in the late seventeenth century through the loss of its monopoly in 1698, and until its reorganization under James Brydges, the Duke of Chandos in 1731.¹⁵¹ After this period, the company turned towards more speculative projects in Atlantic Africa involving agriculture, medicine, and mining, such as raising indigo and cotton plantations in Sierra Leone, soap and potash manufactories on Sherbro Island, prospecting for drugs at various locales, and gold mining near Cape Coast, as their involvement and profits in the castle trade declined due to competition by separate traders.¹⁵² In 1752 the Company of Merchants Trading to Africa replaced the Royal African Company altogether.¹⁵³ Though these letters were primarily written by white factors, I read this archive for evidence of the actions taken by caboceers—West African headmen, often military or spiritual leaders, who interpreted for and negotiated between factors and local traders—and curranteers—rulers of towns, city-states, and larger polities—in the trade as well. However, factors often confused the difference between caboceers and curranteers, making it difficult to precisely identify

¹⁵¹ The letters cited in this chapter originate from MSS Rawlinson, C. 745, 746, and 747, held at the Bodleian Library, Oxford University. I am extremely grateful for the dedicated scholarly generosity and excellent scholarship of Robin Law, who painstakingly transcribed and published these collections in three volumes cited here; William A. Pettigrew, "Free to Enslave: Politics and the Escalation of Britain's Transatlantic Slave Trade, 1688-1714." *William and Mary Quarterly* (2007): 3-38.

¹⁵² William Pettigrew, *Freedom's Debt: The Royal African Company and the Politics of the Atlantic Slave Trade, 1672-1752* (Chapel Hill: University of North Carolina Press, 2013), 198; On bioprospecting and extraction projects of the RAC in the early eighteenth century see: Matthew David Mitchell. "'Legitimate Commerce' in the Eighteenth Century: The Royal African Company of England Under the Duke of Chandos, 1720-1726." *Enterprise & Society* 14, no. 3 (2013): 544-578.

¹⁵³ The African Company Act of 1750 passed by Parliament dissolved the Royal African Company.

several African individuals in the archive. This chapter strives to recover the enslaved as subjects as well in the narrative, yet I recognize how the violent commodification and objectification of slaves through the trade led to their fragmentary and mutilated existence in the archive of the company.¹⁵⁴

What emerges from this investigation of the slave trade is a clear picture of the significant cultural, political, and economic roles animals played in connecting or disconnecting sites of exchange across Atlantic Africa. Few historians study animals in the slave trade, with the exception of Marcus Rediker's article on how the threatening presence of sharks trailing behind slave ships became "an integral part of a system of terror" created by captains throughout the middle passage.¹⁵⁵ Moreover, fewer environmental histories of empire and colonization involving animals in the early modern British Atlantic world discuss the slave trade, or the factories of the African Company between the Gambia River and the Bight of Benin.¹⁵⁶ In broader environmental histories of the British Empire, animals do not appear as significant actors in discussions of the slave trade. William Benart and Lotte Hughes, for instance, stress that "plant transfers lay

¹⁵⁴ Marisa J. Fuentes, *Dispossessed Lives: Enslaved Women, Violence, and the Archive* (Philadelphia: University of Pennsylvania Press, 2016). I do not want to suggest that the victims of slave raids or captives did not engage the nonhuman environment through forms of resistance to slavery, however the records are scarce and my focus here has undoubtedly overlooked other possibilities. Louis Nelson, however, has noted that inland villagers targeted by raiders often used horns made from cow bones to warn of incursions. This does present an intriguing connection to the similar use of cow horns by enslaved people in the West Indies, and cow horns in Jonkonnu celebrations. See: Louis P. Nelson. "Architectures of West African Enslavement." *Buildings & Landscapes: Journal of the Vernacular Architecture Forum* 21, no. 1 (2014): 88-125, page. 92.

¹⁵⁵ Marcus Rediker, "History from Below the Water Line: Sharks and the Atlantic Slave Trade." *Atlantic Studies* 5, no. 2 (2008): 285-297.

¹⁵⁶ For important discussions of animals in British imperial environmental history see: Alfred Crosby, *Ecological Imperialism: The Biological Expansion of Europe, 900-1900* (Cambridge: Cambridge University Press, 1986); Virginia DeJohn Anderson, *Creatures of Empire: How Domestic Animals Transformed Early America* (Oxford: Oxford University Press, 2004); George Colpitts, *Pemmican Empire: Food, Trade, and the Last Bison Hunts in the North American Plains, 1780-1882* (Cambridge: Cambridge University Press, 2014); Andrea Smalley, *Wild By Nature: North American Animals Confront Colonization* (Baltimore: Johns Hopkins University Press, 2017).

at the heart of imperial expansion and the Atlantic slave trade.”¹⁵⁷ While valuable plants, especially sugar, tobacco, and other botanical commodities, drove the demand from slaveholders in the West Indies for greater shipments of captive laborers over time, this chapter shows, by contrast, how animals connected spaces of the trade in Atlantic Africa before the peak of the slave trade in the eighteenth century.

Drawing on the work of imperial environmental historians who question how “interlinked cultural formations, material exchanges, and ecological processes” shaped the expansion of the British Empire and its far-flung colonies and semicolonial spaces in the nineteenth century, this chapter asks how the Atlantic slave trade, which resulted in the unprecedented transfer of approximately twelve million African captives across the Atlantic Ocean from the seventeenth to the early nineteenth century, involved, to an appreciable extent, interactions between humans, sheep, elephants, sea snails, guinea worms, rats, cats, and other creatures.¹⁵⁸ The Royal African Company did not settle colonies in West Africa in the seventeenth century. However, the company performed an significant imperial function in delivering captives to colonies in the West Indies and ports in New Spain under the *asiento* until the early eighteenth century. The slave trade that the African Company built up, I argue, produced and depended upon unique eco-cultural networks in which English and African traders became bound through rituals involving propitiatory animal sacrifices, exchanges of animal gifts, and the widespread use of animal currencies. Local relationships between slavers hinged upon knowing the

¹⁵⁷ William Beinart, and Lotte Hughes, *Environment and Empire* (Oxford: Oxford University Press, 2007), 24.

¹⁵⁸ James Beattie, Edward Melillo, and Emily O’Gorman, eds. *Eco-Cultural Networks and the British Empire: New Views on Environmental History* (London: Bloomsbury Publishing, 2014), 3-20; Kenneth Morgan, *Slavery and the British Empire: From Africa to America* (Oxford: Oxford University Press, 2007), 12.

particular value and uses of nonhuman animals in Atlantic Africa. Broad networks between forts, outposts, ships, and the wider colonial world were contingent on micro-level human-animal relations. Before millions of enslaved men and women climbed out of the dungeons of the African Company at Cape Coast and passed through the Door of No Return on the shoreline, animals brought slave traders together in Atlantic Africa and shaped the “inhuman traffick” in significant ways.¹⁵⁹

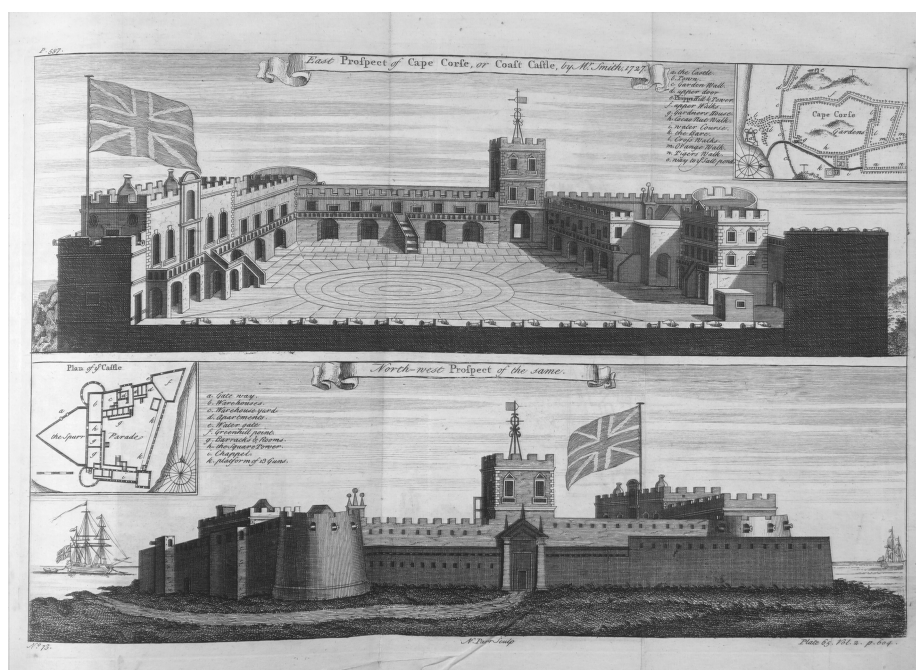


Figure. 1.1 Illustration of Cape Coast Castle made by William Smith circa 1727, in *A New Voyage to Guinea*, 1740, image courtesy of *Slavery Images: A Visual Record of the African Slave Trade and Slave Life in the Early African Diaspora*.

Sacrifices and Gifts

¹⁵⁹ Alexander Falconbridge, *An Account of the Slave Trade on the Coast of Africa* (London: Printed by James Phillips, 1788), 37.

The Royal African Company's material infrastructure, particularly the forts that defended and facilitated slave trading on the coast, developed gradually out of violent conflicts with their major European rivals in the late seventeenth century, the Dutch West India Company, and to a lesser extent the French, Portuguese, and Danish slave trading firms. Both in the form of ritual sacrifices and diplomatic gifts, animals played important roles in securing political and economic alliances between the Company and West African polities and city-states that shored up their presence on the coastline. Chartered in 1672, the African Company coordinated the slave trade in West Africa from its heavily fortified central castle on the Gold Coast, Cape Coast Castle, which had been captured from the Dutch West India Company by an English naval squadron in 1664.¹⁶⁰ While officers at Cape Coast reported to the company's headquarters and court of directors in London at African House, the central fort maintained correspondence with smaller outposts and unfortified outposts to the east and west, spanning over two thousand miles along the coastline from the mouth of the Gambia River to the Bight of Benin.

As propitiatory offerings, animals shaped the trading networks the African Company struggled to build at these forts and outposts. By examining the development of the company's base at Dixcove, environmental historians can glean insight into how factors adopted West African cultural values and rites involving sheep as sacrificial offerings to forge bonds of trust, commerce, and mutual alliance.¹⁶¹ On August 15, 1692,

¹⁶⁰ Kenneth Davies, *The Royal African Company* (London: Longmans, Green and Company, 1957), 40-41.

¹⁶¹ In several Fante, Twi, and Akan-speaking cultures, rituals involving animal sacrifice purified communities and sanctified the social bonds of individuals within their communities. On animal sacrifice see: Kwasi Konadu, *The Akan Diaspora in the Americas* (Oxford: Oxford University Press, 2010) 36, 104; Anthony Ephirim-Donkor, *African Religion Defined: A Systematic Study of Ancestor Worship Among the Akan* (London: Rowman & Littlefield, 2016), 229, 234; Walter Rucker, *Gold Coast Diasporas: Identity, Culture, Power* (Bloomington: Indiana University Press, 2015), 196; Rebecca Shumway, *The Fante and the Transatlantic Slave Trade* (Rochester: University of Rochester Press, 2011), 131, 135, 199; T.C. McCaskie, "Denkyira in the Making of Asante C. 1660-1720." *The Journal of African History* 48, no. 1 (2007): 1-25,

Christopher Clarkson, a surveyor for the company, reported to the chief factor at Sekondi, that a party consisting of his men and several company slaves successfully recaptured the site of the company's former outpost at Dixcove on the Gold Coast. While the company claimed Dixcove as territory since 1684, it failed to maintain a permanent fort there until Clarkson's mission.¹⁶² Clarkson seized the site at a crucial moment, as the company feared the rising influence and powerful fortresses to the west held by the Brandenburg African Company, based at Groß Friedrichsburg, and the Dutch West India Company to the east, headquartered at Elmina Castle.

Upon landing at Dixcove in the summer of 1692, Clarkson hoisted a flag and "fired 2 guns to keep of our enimies and encouradge our friends" to approach their camp. Clarkson's ritual of possession declared the space the property of the African Company, but did not guarantee their long-term security.¹⁶³ Aware of their precarity on the coast, Clarkson quickly dispatched messengers to arrange a palaver, a formal negotiation, with an Ahanta headman and the ruler of Dixcove, Captain Dickie, to lay the groundwork for a trading partnership. Prospects of trade with the company and a military alliance against Adom, a nearby city-state, enticed Dickie, who in a gesture signalling his acceptance of

21. Nineteenth-century authors also reported the use of sheep as sacrificial animals on the Gold Coast, see: William Hutton, *A Voyage to Africa: Including a Narrative of an Embassy to One of the Interior Kingdoms in the Year 1820* (London: Longman, 1821), 225. Hutton writes how in the Ashanti Empire "The Moors indeed set them the example of sacrificing sheep." In his book on the Gold Coast, Henry Meredith also related how the Ashanti Emperor used sheep as diplomatic gifts to the African Company of Merchants at Winneba, see: Henry Meredith, *An Account of the Gold Coast of Africa*, vol. 1 (London: Longman, 1812), 148. Thomas Edward Bowdich made similar observations in his work: Thomas Edward Bowdich, *Mission from Cape Coast Castle to Ashantee, with a Statistical Account of that Kingdom* (London: John Murray, 1819), 74, 116.

¹⁶² Robin Law, *The English in West Africa, The Local Correspondence of the Royal African Company in England, 1691-1699* (Oxford: The British Academy, 2007), 1-2.

¹⁶³ "Christopher Clarkson, Dickies Cove, 15 August, 1692", in *The English in West Africa, The Local Correspondence of the Royal African Company in England, 1691-1699*, 3; Patricia Seed, *Ceremonies of Possession in Europe's Conquest of the New World, 1492-1640*, (Cambridge: Cambridge University Press, 1995).

the company's terms, sent Clarkson workers to aide a party of company slaves in building up the fort at Dixcove.

After raising the limestone walls of the fort, Dickie, Clarkson, and a group of twelve caboceers who translated for the company and Dickie and negotiated trade agreements, gathered for a celebration. In a ritual to seal the relationship between his people and the African Company, Dickie "layed some gold under the foundation stone and killed a fatt sheep."¹⁶⁴ Clarkson participated as well, and acknowledged Dickie's sacrificial offering with dashees, or gifts, of brandy and textiles. Though Clarkson omitted if he and his subordinates ate the sheep's carcass in a celebratory meal with Dickie and his men, it is likely granted available evidence relating to precolonial West African societies and Dutch sources from this period.¹⁶⁵ In Fante-speaking cultures, and in others on the Gold Coast, ritual sacrifices of livestock created, or restored, social, economic, and political bonds of obligation between people.¹⁶⁶ As Kwasi Konadu explains, sheep figured in proto-Akan and Akan-speaking cultural groups as living instruments for making propitiatory sacrifices, gifts, or payments for resolving disputes and fulfilling debts. Sacrifices of sheep could also serve an apotropaic function to ward off danger.¹⁶⁷ While it is unclear from the records of the company, the animal was likely

¹⁶⁴ "Christopher Clarkson, Dickies Cove, 15 August, 1692", in *The English in West Africa, The Local Correspondence of the Royal African Company in England, 1691-1699*, 3.

¹⁶⁵ Robin Law, "Human Sacrifice in Pre-Colonial West Africa." *African Affairs* 84, no. 334 (1985): 53-87. Law cites the Dutch physician Olfert Dapper's *Description of Africa*, 1668, which cites primary sources from Dutch merchants employed by the West India Company.

¹⁶⁶ Konadu, *The Akan Diaspora in the Americas*, 36,104; Ephirim-Donkor, *African Religion Defined*, 229, 234; Rucker, *Gold Coast Diasporas*, 196; Shumway, *The Fante and the Transatlantic Slave Trade*, 135, 199. Sheep also figured in religious ritual involving sacrifice in Ouidah in this period, see: Robin Law, *Ouidah: The Social History of a West African Slaving 'Port', 1727-1892* (Columbus: The Ohio State University Press, 2004).

¹⁶⁷ In his letter to George I, Agaja, the king of Dahomey who reigned between 1718-1740, wrote that he would sacrifice "oxen, hoggs, sheep, and goats" for the safe return of the go-between Bulfinch Lambe and his companion Captain Tom. For an excellent analysis of Agaja's letter, dated 1724, and a transcription of

a breed of sheep indigenous to West Africa, or possibly a breed brought earlier in the sixteenth century by Portugese explorers.¹⁶⁸

Rites involving sheep would not have been alien or incommensurable to the English, as families in England and its North American colonies likewise gifted and bequeathed livestock as a form of intergenerational wealth and property.¹⁶⁹ In colonial New England, for instance, livestock animals were often given as a form of bridewealth. Moreover, in English literature, oral and visual culture, sheep represented social values including bonds of obedience and trust between servants and masters.¹⁷⁰



Figure. 1.2 Illustration of a sheep, made by William Smith circa 1727, in *A New Voyage to Guinea*, 1740, image courtesy of Rare Books and Special Collections Department, Princeton University Library.

the letter, see: Robin Law, "Further Light on Bulfinch Lambe and the "Emperor of Pawpaw:" King Agaja of Dahomey's Letter to King George I of England, 1726." *History in Africa* 17 (1990): 211-26.

¹⁶⁸ Kwamina B. Dickson, *An Historical Geography of Ghana* (Cambridge: Cambridge University Press, 1969), 36, 47, 209.

¹⁶⁹ Allan Kulikoff, *From British Peasants to Colonial American Farmers* (Chapel Hill: University of North Carolina Press, 2000), 236; Barbara Jean Harris, *English Aristocratic Women, 1450-1550: Marriage and Family, Property and Careers* (Oxford: Oxford University Press, 2002), 120, 133.

¹⁷⁰ Bruce Thomas Boehrer, *Animal Characters: Nonhuman Beings in Early Modern Literature* (Philadelphia: University of Pennsylvania Press, 2011), 164, 167.

However, in participating in this ritual with the Ahanta headman, Clarkson recognized Dickie's sacrifice as a crucial step toward creating trading opportunities and security for the African Company at Dixcove, which was embedded in a uniquely Atlantic African cultural milieu. Upon their conclusion, Clarkson urged Johnson, his superior at Sekondi, to send materials to furnish the fort and additional gifts to offer to their new allies. Among the supplies Clarkson requested were bricks, boards, company slaves, and trade goods to offer to Dickie and his caboceers as *dashees*. While Clarkson considered the profits of trade in enslaved captives and gold dust between Dickie and the Company, and the possibilities to enter into lucrative interior trade relations with nearby polities such as the Akan kingdom of Denkyira, the future of the fort at Dixcove, like others on the Gold Coast, was founded, in part, upon offering up an animal, the sheep, and the social bonds it represented.

Far from being an exception, sheep became important as ritual sacrifices and diplomatic gifts that shaped alliances between European factors and African actors engaged in the trade. In the mid-seventeenth century, the Dutch dominated the slave trade on the Gold Coast and often frustrated English ambitions to expand the ambit of their activities in the region.¹⁷¹ From Fort Ruijghaver on the Ankobra River to their outpost at Ouidah, the Dutch manned over a dozen forts.¹⁷² Since the English first settled their initial fort, Kormantin, primarily for engaging the gold dust trade, on the Gold Coast in 1631, continuous fighting with the Dutch West India Company and their allies over

¹⁷¹ Davies, *The Royal African Company*, 247-249, 268-269.

¹⁷² Harvey M. Feinberg, "Africans and Europeans in West Africa: Elminans and Dutchmen on the Gold Coast during the Eighteenth Century." *Transactions of the American Philosophical Society* 79, no. 7 (1989): 1-186.

influence in the trade hindered their ambitions.¹⁷³ Despite the station's precarious situation, Dixcove strengthened the company's territorial and commercial expansion on the coast among their European competitors.¹⁷⁴ However, their ultimate success in the trade depended on the company's ability to negotiate and secure alliances with powerful West African polities and kingdoms, which in part rested on knowing and recognizing the value of animals in the region. Several of these negotiations, such as the founding of Dixcove, involved accepting, offering, or providing sacrificial sheep. Though African Company officials, and their superiors and associates in Europe, most likely perceived the ritual offering of sheep in Atlantic Africa to local fetishes, including deities or other supernatural forces, as evidence of African irrationality, immorality, or intellectual corruption, the evidence I present here indicates that factors enthusiastically adapted to these customs as central to the ongoing work of building out the slave trade.¹⁷⁵

Six years after Clarkson recaptured Dixcove, William Gabb, a factor at the newly reoccupied fort at Sekondi, wrote to the company's headquarters at Cape Coast on April 27, 1698, to report that tensions between the English and the Dutch nearby at Fort Oranje,

¹⁷³ Davies, *The Royal African Company*, 12-42; Nelson, "Architectures of West African Enslavement," 97. Nelson notes that the English began slave trading in the Gambia River in 1618, though these efforts were not as systematic or planned as the slaving efforts of the Royal African Company. For discussions of English slave trading in the late sixteenth century and early seventeenth century see: Eric Williams, "The Golden Age of the Slave System in Britain." *The Journal of Negro History* 25, no. 1 (1940): 60-106; L.P. Jackson, "Elizabethan Seamen and the African Slave Trade." *The Journal of Negro History* 9, no. 1 (1924): 1-17; Ronald Pollitt, "John Hawkins's Troublesome Voyages: Merchants, Bureaucrats, and the Origin of the Slave Trade." *Journal of British Studies* 12, no. 2 (1973): 26-40.

¹⁷⁴ At Dixcove, the Royal African Company (RAC) established a successful trade alliance with the nearby kingdom of Denkyira, trading comparatively little in slaves, yet the fort became valuable as a provisioning station for ships coasting between the RAC's forts carrying enslaved people and other cargo from the forts to Cape Coast. On Dixcove see: Robin Law, *The English in West Africa, The Local Correspondence of the Royal African Company in England, 1691-1699*, (Oxford: The British Academy, 2007), 1-2.

¹⁷⁵ On European perceptions of West African "fetishism" as irrational, see: William Pietz, "The Problem of the Fetish: Bosman's Guinea and the Enlightenment Theory of Fetishism." *Res: Anthropology and Aesthetics*, no. 16 (1988): 105-24, especially pages 105-107. Pietz demonstrates in this piece how Europeans developed the concept of "fetishism" in the eighteenth century to contrast European Enlightenment rationality against African irrationality, an intellectual development that further justified participation in the Atlantic slave trade until the nineteenth century.

and further outposts including Shama, Butri, and Fort St. Sebastian, threatened to erupt into war. The Dutch, who obstructed the company's hopes to trade with the kingdoms of Wassa and Twifo, continued to frustrate English entrees into trading networks. Gabb's fort, Sekondi, lay between Dixcove to the west and Cape Coast to the east. Like Dixcove, the Company claimed to possess an outpost at Sekondi since 1683, however, the English evacuated and abandoned the fort several times in the midst of armed hostilities.¹⁷⁶

Between 1694 and 1700 disputes over access to markets in the slave trade between the Dutch and the English, West African kingdoms and towns on the Gold Coast including Eguafu, Adom, and Ahanta, and the powerful merchant prince John Cabess at Komenda, carried on through a series of violent conflicts, later known as the Komenda Wars.¹⁷⁷

As European and African competitors clashed, animal exchanges continued to shape the future of the slave trade at the company's Gold Coast forts. In a letter from Sekondi to Cape Coast in the spring of 1698, Gabb informed his superiors on the state of affairs at the fort with regards to the kingdom of Adom. The company warred with Adom throughout the 1680s, and found itself at times drawn into conflict between Adom and Ahanta.¹⁷⁸ As a factor, Gabb attempted to reconcile the Company and Adom, however peace between the two proved fragile. Like the foundation of trade at Dixcove, reconciliation hinged upon carefully presenting an animal sacrifice. During a palaver at Sekondi, "The King" of Adom, Gabb reported, "gave the sheep I brought up to the white men that was killed in the Castle, and his fetish [deity] tells him, if he doe not give one

¹⁷⁶ Law, *The English in West Africa, The Local Correspondence of the Royal African Company in England, 1691-1699*, 90-91.

¹⁷⁷ John Thornton, *Warfare in Atlantic Africa, 1500-1800* (London: University College London Press, 1999), 127-148; Robin Law. "The Komenda Wars, 1694-1700: A Revised Narrative." *History in Africa* 34, no. 1 (2007): 133-168.

¹⁷⁸ Law, *The English in West Africa, The Local Correspondence of the Royal African Company in England, 1691-1699*, 1-2, 90-91.

for the Castle, it will not doe well, so he desires one of your Worshippes.”¹⁷⁹ While the Adom king accepted Gabb’s offering of a sacrificial sheep to bind the company to Adom, he demanded the company offer a second sheep of their own in reciprocity for him to ritually slaughter in the castle to purify their relationship.

The African Company’s assent to providing animals for sacrifice, and the king’s demand for properly consecrating this alliance, demonstrates how necessary sheep became for English attempts to solidify their relationships with Gold Coast polities. Gabb requested Cape Coast send another sheep immediately to assure Adom of their intent for peaceful trading and to ensure their future bonds of mutual support against their Dutch rivals. The Company responded promptly to Gabb’s missive, and forwarded a sheep to Sekondi. Gabb thanked his superiors at Cape Coast the following month for sending the ovine present, which he promptly delivered to the king “and told em all you was pleased to order.”¹⁸⁰ The gift of the sheep, and other trade goods including textiles, secured the African Company’s political, economic, and military alliance with Adom, and further bolstered their power on the Gold Coast.

In addition to giving sheep as gifts or sacrificial offerings, factors understood the sacred nature of sheep in their ongoing negotiations with slavers and other merchants along the Gold Coast. In the spring of 1681, James Nightingale demanded sheep as the price of loyalty from his counterparts in the trade on the coast. After Akani traders entered into a palaver with an interloper in the trade, one Captain Been, Nightingale punished their treachery and “made the merchants and Arcanies take this country fetish

¹⁷⁹ “William Gabb, Succondee, 27 April, 1698”, in *The English in West Africa, The Local Correspondence of the Royal African Company in England, 1691-1699*, 127.

¹⁸⁰ “William Gabb, Succondee, 10 May, 1698”, in *The English in West Africa, The Local Correspondence of the Royal African Company in England, 1691-1699*, 130.

that none should go aboard of any ship to trade contrary to your Honours articles, and alsoe predee'd them three sheep, whereof your Honour will receive two from the transgressors.”¹⁸¹ Nightingale demanded the Akanis pay a fine as well to the caboceers and “fetishmakers” at Komenda, and sent his dispatch by way of “Cappusheer Hansico” eastward to Cape Coast. While the sheep may have been materially unimportant, Nightingale understood their symbolic value as the cost of disloyalty.

Gifts of livestock animals between company factors and African traders beyond the ritual context of sacrifice knit trading networks between forts, towns, and other markets throughout the slave trade. African rulers offered animal gifts to the company to keep routes of exchange and relays of communication open. Writing to Cape Coast from Komenda, the company’s factory east of Sekondi, in 1686, for instance, William Cross reported that the “The king [of Eguafo] yesterday sent me a sheep for farther satisfaction about this pallaver, which I have sent your Worship herewith.”¹⁸² The king used a gift of livestock to assure his English partners that Eguafo, and the towns subordinate to Eguafo, intended to maintain trade in enslaved captives and other goods with the company’s factors at Komenda. In later years, Eguafo continued to send animal gifts to the English, who recognized the ovines as valuable promises for continued trade, peace, and stability. In July, 1698, for instance, Gerrard Gore wrote from Komenda that the king of Eguafo sent the factory a customary gift of “a large sheepe, with severall other things, and

¹⁸¹ “James Nightingale at Commenda, 15 February 1681/82”, in *The English in West Africa, The Local Correspondence of the Royal African Company in England, 1681-1683*, edited by Robin Law, (Oxford: The British Academy, 1998), letter 59. Law notes that “predee” meant fined a penalty.

¹⁸² “William Cross, Commenda, 8 September, 1686”, in *The English in West Africa, The Local Correspondence of the Royal African Company in England, 1685-1688*, edited by Robin Law, (Oxford: The British Academy, 2001), 88.

likewise [demands] custome of me.”¹⁸³ Like Gabb at Sekondi, Gore wrote to Cape Coast to send a sheep to Komenda immediately to satisfy the Eguafo king.

Headmen presented gifts of wealth on the hoof to open new lines of trade on the Gold Coast. At Dixcove, Captain Nedd, likely an Ahanta caboceer familiar to the company, wrote to the company’s headquarters at Cape Coast informing them of his plans to build a croom, or village, nearby the castle in 1698. “My humble service to you all”, he wrote, “May it please your worships I have herewith sent you a sheepe, which desire your Worships will be pleased to except off.”¹⁸⁴ Nedd built his croom to profitably trade with the fort at Dixcove in provisions and for a possible trade in captives. Whether Nedd expected the English would accept the sheep as a sacrifice, or simply as a gift of meat, he succeeded in using the animal to insert himself, his kin networks, and allies into the company’s web of trade on the Gold Coast. Fante caboceers and curranteers continued to leverage four-footed gifts into the early eighteenth century. In the memorandum book of Cape Coast, entries from 1703 and 1704 record how a local trader, Quomino Coffee, sent the company regular presents of sheep to remain in their good graces and maintain his connection to the company.¹⁸⁵

Individuals used animal gifts to influence diplomatic channels established in the trade. Traders plied gifts of livestock, for instance, in exchange for people held in pawnship or taken captive during occasional conflict at the outforts. Thomas Willson, a factor stationed at Komenda, reported in the winter of 1694, for instance, that John

¹⁸³ “Gerrard Gore, Commenda, 1 July, 1698”, in *The English in West Africa, The Local Correspondence of the Royal African Company in England, 1691-1699*, Oxford Scholarly Editions Online version.

¹⁸⁴ “Captain Nedd, Dickes Cove, 28 June, 1698”, in *The English in West Africa, The Local Correspondence of the Royal African Company in England, 1691-1699*, 81.

¹⁸⁵ Entries from March 22, 1703 and May 10, 1703, Memorandum Book, Kept at Cape Coast Castle from January 13, 1703 to January 2, 1704, Papers of the Royal African Company, T70/11, National Archives, Kew, United Kingdom.

Cabess, a powerful merchant prince and military ally of the English, offered a “fatt sheep” as a gift to the company in exchange for freeing “one Peter, a Black, owt of irons.”¹⁸⁶ The circumstances of Peter’s incarceration are opaque, yet Willson accepted the gift and visited Cabess’ croom a few days later, bringing presents of his own including casks of beef.¹⁸⁷ In 1695, a messenger of Attabo, “your Cabbosheer att Anguinna”, brought with him to James Fort, Accra, a gift of “two sheep” to the Company’s factor, Edward Searle.¹⁸⁸ Factors at Cape Coast occasionally found themselves entangled in similar situations. An entry in the memorandum book at Cape Coast from 1704 records how the company redeemed a canoe pilot named Cawera held as a pawn by the king of the Fante polity Asebu, for the price of a fat sheep and three ounces of gold.¹⁸⁹ Entries from the fort diary at Komenda from 1714 document how presents of “fatted Sheep” continued to bind the company to John Cabess, and to the burgeoning state of Asante to the north.¹⁹⁰

Caboceers used animal gifts to ingratiate themselves with curranteers who negotiated with Europeans throughout the slave trade. In 1682, caboceers serving the Company at Anomabu brought “3 sheepe” during a palaver with another local headman,

¹⁸⁶ “Thomas Willson, Commenda, 10, December, 1694”, in *The English in West Africa, The Local Correspondence of the Royal African Company in England, 1691-1699*, 142. On Cabess see: David Henige, “John Kabes of Komenda: An Early African Entrepreneur and State Builder.” *The Journal of African History* 18, no. 01 (1977): 1-19.

¹⁸⁷ “Thomas Willson, Commenda, 16, December, 1694”, in *The English in West Africa, The Local Correspondence of the Royal African Company in England, 1691-1699*, 142.

¹⁸⁸ “Edward Searle at James Fort, Accra, 3 March 1695/96, to William Cooper, chief factor at Winneba”, in *The English in West Africa, The Local Correspondence of the Royal African Company in England, 1691-1699*, letter 1299.

¹⁸⁹ June 19, 1704, Memorandum Book, Kept at Cape Coast Castle from January 13, 1703 to January 2, 1704, T70/11, Papers of the Royal African Company, The National Archives, London, United Kingdom.

¹⁹⁰ Entries dated 20 November 1714, and 23 February 1714/15, in the Commenda Fort Diary, T70/1464, Papers of the Royal African Company, The National Archives, London, United Kingdom.

Ampeteens, presumably as ritual gifts.¹⁹¹ Upon seeing the sheep, Richard Thelwall, a factor at Charles Fort, it appears, “told them that would not doe, I bid them goe to Capo Corsoe” and leave the palaver. The reasons for Thelwall’s judgment on this matter are opaque, yet the nature or number of the sheep may have played a role. Caboceers, such as those living around Sekondi, also paid customary gifts of sheep to the factory to maintain relationships with the English.¹⁹² Sheep apparently existed as common forms of customary payment on the Gold Coast, as James Walker learned in the fall of 1687. Writing from Sekondi, Walker reported how trade relationships between the fort, their caboceers, and the “younge men” of the *asafo* company at Sekondi, from not having “paid their custome” that included three sheep.¹⁹³

In addition, caboceers used other animals as gifts. Writing from the company’s fort at Anomabu to Cape Coast, the factor Gerrard Gore reported in 1698 that in the midst of negotiating trade in enslaved captives and other goods, and diplomatic relations with Eguafu, “One of our Cabbosheers named Towne Auqua has killed an elephant” and presented the creature as a gift for the Eguafu curranteers assembled at the castle.¹⁹⁴ Perhaps Auqua fêted the men at the fort with the animal’s meat, or offered the ivory removed from its corpse as a gift. Gore notified Cape Coast that the bounty of Auqua’s hunt swayed the curranteers to remain and “further occasions their longer stay.”¹⁹⁵

¹⁹¹ “Richard Thelwall, Annamaboe, 23 January 1682/83”, in *The English in West Africa, The Local Correspondence of the Royal African Company in England, 1681-1683*, edited by Robin Law, (Oxford: The British Academy, 1998), letter 319.

¹⁹² “James Walker, Succondee, 27 October 1687”, in *The English in West Africa, The Local Correspondence of the Royal African Company in England, 1685-1688*, 59-60.

¹⁹³ On *asafo* companies in the Gold Coast, see: Shumway, *The Fante and the Transatlantic Slave Trade*, 16, 22, 82.

¹⁹⁴ “Gerrard Gore, Annamaboe, 21 January, 1698”, in *The English in West Africa, The Local Correspondence of the Royal African Company in England, 1691-1699*, 376.

¹⁹⁵ In an earlier letter, William Cross, writing from Komenda, noted how John Cabess intended to resume his service to the Company “when their bellyaring [dancing] about the elephant they have killed is over.”

The African Company's Dutch and Danish rivals in the slave trade likewise commented on the role of sacrificial offerings and livestock gifts in shaping their networks on the Gold Coast. Willem Bosman, a merchant for the Dutch West India Company in the late seventeenth century, for instance, recorded how Dutch factors gave and received sheep as sacrificial offerings and payments at Elmina Castle to curanteers and other headmen in nearby crooms.¹⁹⁶ Johannes Rask, a chaplain at the Danish factory Christiansborg Castle, near Accra, also took note of how caboceers and curanteers ritually slaughtered sheep and other livestock animals at the castle during his tenure there between 1708 and 1713.¹⁹⁷ Ludvig Ferdinand Rømer, a Danish merchant, further noted how wealthy individuals living around Osu, near Accra, sacrificed animals to ward off evil or obtain favor from the spirit world. In 1760, Rømer observed how men slaughtered "a sheep or a cabrit, and the fetish is given not the meat but only a little of the entrails," while the man and his companions consume the rest of the animal.¹⁹⁸

Gifts of megafauna appeared infrequently on the Gold Coast or the Bight of Benin, especially impressive and unusual animal presents. Since slave traders often purchased animals, such as parrots and monkeys, as pets to sell to elites in England who

See: "William Cross, Comenda, 24 October, 1686", in *The English in West Africa, The Local Correspondence of the Royal African Company in England, 1685-1688*, letter 189.

¹⁹⁶ Willem Bosman, *A New and Accurate Description of the Coast of Guinea: Divided Into the Gold, the Slave, and the Ivory Coasts* (London: Printed for J. Knapton, A. Fell, R. Smith, D. Midwinter, W. Haws, W. Davis, G. Strahan, B. Lintott, J. Round, and J. Wale, 1705), 30, 106, 124, 127.

¹⁹⁷ Johannes Rask, *Two Views from Christiansborg Castle: Volume I, A Brief and Truthful Description of a Journey to and from Guinea*, translated and edited by Selena Axelrod Winsnes (Legon, Accra: Sub-Saharan Publishers, 2009), 134, 181.

¹⁹⁸ Ludvig Ferdinand Rømer, *A Reliable Account of the Coast of Guinea* [1760] translated and edited by Selena Axelrod Winsnes (London: The British Academy, 2000), 91; quoted in Jonathan Roberts, "Medical Exchange on the Gold Coast during the Seventeenth and Eighteenth Centuries." *Canadian Journal of African Studies / Revue Canadienne Des Études Africaines* 45, no. 3 (2011): 480-523. To date, I have not found comparable evidence of consuming sacrificial sheep directly stated in the African Company letters. Elsewhere, Rømer writes "Our Accras, more than any other nation, are close to Judaism in their ceremonies of circumcision and those in relation to the slaughter of sacrifices, when they must saw away at the throat of a cow, sheep or other creature with a sharp stone, and never use a knife since that would desecrate the sacrifice. At Benin both of these religions are very recognizable." p.25 in Winsnes' translation.

kept fashionable private menageries, it is possible that these gifts reflected African savvy in supplying exotic fauna for the English in this period.¹⁹⁹ In 1715, the African Company shipped “a Tyger, 3 Guinea Hens, and the Green Birds” via a Royal Navy man-of-war as gifts to be presented to George I.²⁰⁰

African slavers presented animal gifts at the Company’s factories in Upper Guinea as well. A clerk at the African Company’s fort on James Island in the Gambia River, for instance, noted in his journal in 1730 that a Wolof-speaker trader had taken “a young Elephant brought alive as a Present to the Governor” of the fort.²⁰¹ While the clerk offered no comment on this animal, or the governor’s reaction, perhaps this captive present became a curiosity held at the fort for the amusement of the factors. On other occasions at James Island, Wolof- and Mande-speaking traders presented the governor with “two Porcupines” and an ostrich.

¹⁹⁹ Caroline Grigson, *Menagerie: The History of Exotic Animals in England* (Oxford: Oxford University Press, 2016), 47, 53, 72; Louise E. Robbins, *Elephant Slaves and Pampered Parrots: Exotic Animals in Eighteenth-Century Paris* (Baltimore: Johns Hopkins University Press, 2002), 22. Factors for the African Company sought after animal curiosities as well for their patrons in England. A letter dated 7 January 1682 from Richard Thelwall at Anomabu, for instance, mentions how the factor had scoured the land surrounding the factory looking for “green birds.”

²⁰⁰ T70.89.28 June 1715, and 5 July 1715, National Archives of the United Kingdom, as quoted in Helen Julia Paul, “The South Sea Company and the Royal African Company’s combined slaving activities.” Paper presented at the Economic History Society Conference, Reading, 2006.

²⁰¹ Francis Moore, *Travels Into the Inland Parts of Africa* (London: Printed by D. Henry and R. Cave, 1738), 40, 45, 62.

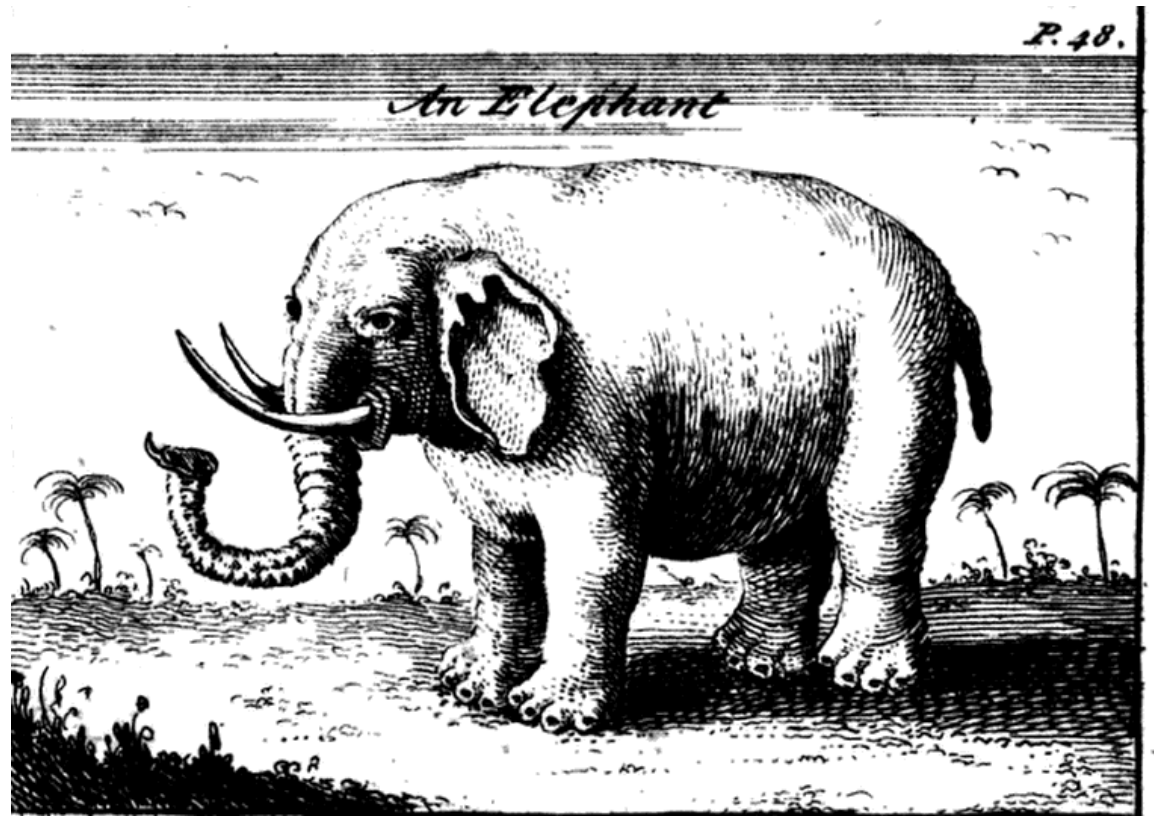


Figure. 1.3 Illustration of an elephant, made by William Smith circa 1727, in *A New Voyage to Guinea*, 1740, image courtesy of Rare Books and Special Collections Department, Princeton University Library.

African merchants in Upper Guinea also offered gifts of megafauna to separate traders unaffiliated with the African Company well after the loss of its monopoly and the decline of the castle trade. One slave ship captain anchored at Sierra Leone in 1805, for instance, received presents of “a young alligator, two porcupines, and a crown-bird.” In addition, the slaver liked to show off another gift to travelers he met in Upper Guinea: an enslaved boy named John Favorite.²⁰² In the early nineteenth century animal gifts continued to figure in the slave trade. On one occasion, African slavers furnished live

²⁰² Francis Spilsbury, *Account of a Voyage to the Western Coast of Africa: Performed by His Majesty's Sloop Favourite, In the Year 1805* (London: Printed for Richard Phillips, 1807), 26.

animal specimens for a menagerie at Cape Coast Castle, which included chimpanzees, parrots, and a leopard.²⁰³

Offerings of animals as propitiatory sacrifices, diplomatic gifts, or curiosities for menageries bound English and West African actors together in the late seventeenth century, and over time forged powerful political and economic networks in the slave trade in Atlantic Africa that bolstered the African Company's power in the region. Human-animal entanglements here produced modes of interaction involving the creation of alliances, exchanges, and interest in the natural world that bound slavers together. Trade in human captives was ultimately bound up with diverse exchanges in animal flesh that bridged cultural divides between Europeans and Africans and sustained the environmental and cultural networks through which captives moved between the spaces of the trade. Slavers made an eco-cultural network for the empires they served by manipulating people and animals.

Currency

Animal bones and remains connected the slave trade as forms of currency at the forts and markets where African Company factors and West African traders convened. Among the dead animal bodies traders and caboceers exchanged for enslaved captives were red corals culled from the Mediterranean Sea and the bone white shells of cowry sea snails transshipped from the Indian Ocean. *Monetaria moneta*, a cowry species endemic to the Maldivian Islands was most common in the trade on the Gold Coast and Bight of Benin in the late seventeenth century, while to a lesser extent the ringed *Cypraea annulus* species found in coastal East Africa, the Zanzibar Archipelago, and the Red Sea

²⁰³ Nelson, "Architectures of West African Enslavement", 107.

circulated as well.²⁰⁴ Forms of shell money existed in West Central Africa as well, such as the zimbo shell currency prevalent in the Congo.²⁰⁵

In the first decade of the sixteenth century, Portuguese traders and navigators, such as Duarte Pacheco Pereira, noticed how merchants used “money shells” in Benin, and began using the Maldivian *moneta* as a form of currency in the region.²⁰⁶ Forms of bone and shell money, like the shells Pereira noticed around 1508, including Atlantic species of mollusks, circulated as currency in West and West Central African polities since at least the ninth century.²⁰⁷ Cowries from the Maldives found their way into West African states such as the Ghana, Mali, and Songhai empires in the medieval era via maritime and overland routes as Arabic traders from Yemen and Oman sailed between ports across the Indian Ocean and shipped cowries through the Red Sea to Cairo and other port cities in North Africa.²⁰⁸ Traders from the Maghreb then transported the cowries south across the Sahara to the western Sudan.²⁰⁹ Trans-Saharan trade networks involving the sale of slaves and other commodities well before the arrival of the Portuguese involved *moneta* cowries from the Maldives.²¹⁰

²⁰⁴ Akinwumi Ogundiran, "Of Small Things Remembered: Beads, Cowries, and Cultural Translations of the Atlantic Experience in Yorubaland." *The International Journal of African Historical Studies* 35, no. 2/3 (2002): 427-457; Paul E. Lovejoy, *Transformations in Slavery: A History of Slavery in Africa* (Cambridge: Cambridge University Press, 2011), 103-105; Marion Johnson, "The Cowrie Currencies of West Africa. Part I." *The Journal of African History* 11, no. 1 (1970): 17-49; Jan S. Hogendorn, and H. A. Gemery. "Continuity in West African Monetary History? An Outline of Monetary Development." *African Economic History*, no. 17 (1988): 127-146; J. D. Fage, "African Societies and the Atlantic Slave Trade," *Past & Present*, no. 125 (1989): 97-115.

²⁰⁵ Jan Hogendorn, and Marion Johnson, *The Shell Money of the Slave Trade* (Cambridge: Cambridge University Press, 1986), 166.

²⁰⁶ Hogendorn, and Johnson, *The Shell Money of the Slave Trade*, 19, 106; Eugenia W. Herbert, "Portuguese Adaptation to Trade Patterns Guinea to Angola (1443-1640)." *African Studies Review* 17, no. 2 (1974): 411-23.

²⁰⁷ Ogundiran, "Of Small Things Remembered", 432, 442, 447.

²⁰⁸ Hogendorn, and Johnson, *The Shell Money of the Slave Trade*, 16. James Walvin, *Slavery in Small Things: Slavery and Modern Cultural Habits* (Chichester: Wiley and Sons, 2017), 40.

²⁰⁹ Fage, "African Societies and the Atlantic Slave Trade," 105.

²¹⁰ Hogendorn, and Johnson, *The Shell Money of the Slave Trade*, 22.

Cowries are small marine gastropods found primarily in the Indian Ocean, but the animals can be placed in global history due to their use as money in antiquity in India, much of continental Africa, China, and Europe.²¹¹ Like other snails, cowries use their muscular propodium to move and attach their bodies to surfaces. Cowry snails use their tentacles, siphon, and radula to locate and feed on algae, polyps, coral, and bits of floating detritus.²¹² As they develop, their mantle secretes calcium carbonate crystals to produce the enamel of their dorsal shell. In the Maldives, fishers, often women and girls, collected the animals from tidepools along the shore at low tide either by hand or using nets.²¹³ After gathering the animals from the shoreline, fishers either piled the animals in the sun to die, rot, and then easily remove the snail carcasses from their shells using branches, or buried caches of cowries in sand pits to quicken their decay and removal.²¹⁴ Next, fishers washed the shells with fresh water to clean away sand and dirt and any remaining animal matter from the shells.²¹⁵

Cowries' value as a form of currency in multiple cultures in North and West Africa derived from the virtual impossibility of counterfeiting the animal's shell.²¹⁶ In multiple polities, including those made up of Fante, Akan, Fon, Aja, Ewe, and Yoruba-speakers, people valued the snail shells for their political, economic, and religious value as instruments of divination, magical charms, and as ornamentation worn by elites, before the arrival of Europeans.²¹⁷ Patterned arrangements of cowries were also used as

²¹¹ Hogendorn, and Johnson, *The Shell Money of the Slave Trade*, 7, 13, 15. For a global history of cowries see: Bin Yang, *Cowrie Shells and Cowrie Money: A Global History* (New York: Routledge, 2019).

²¹² Hogendorn and Johnson, *The Shell Money of the Slave Trade*, 5.

²¹³ Hogendorn and Johnson, *The Shell Money of the Slave Trade*, 81, 157.

²¹⁴ Hogendorn and Johnson, *The Shell Money of the Slave Trade*, 23, 29.

²¹⁵ Hogendorn and Johnson, *The Shell Money of the Slave Trade*, 82, 83.

²¹⁶ Hogendorn, and Johnson, *The Shell Money of the Slave Trade*, 6.

²¹⁷ Ogundiran, "Of Small Things Remembered", 432, 442; Hogendorn and Johnson, *The Shell Money of the Slave Trade*, 101.

diplomatic objects exchanged between rulers among West Africans in the Bight of Benin.²¹⁸ Like sheep, cowry gifts symbolized social bonds of obligation in early modern Atlantic African societies.²¹⁹ As Akinwumi Ogundiran argues, the monetization of these animals did not become standardized and stabilized until the proliferation of the markets of the slave trade in the early modern period. Through the expansion of the Atlantic slave trade, cowries gradually became symbolically associated with wealth, fertility, and high social status.²²⁰ In Benin and Yorubaland, including the kingdom of Oyo, cowries came to be associated with the treasures of a sea god, Olokun.²²¹ Robin Law cites a traditional narrative from early eighteenth century Benin that describes how a local king, Eresoyen, struggled with Olokun for control over the flow of the Benin River after the king blocked its passage to the sea. After Eresoyen ultimately relented to Olokun and reopened the passage to the river, the sea god rewarded the king with heaps of “cowries to the sky.”²²²

Around 1515, European merchants, first Portuguese traders, began transporting massive shipments of *Monetaria moneta* purchased either directly from the Maldives Islands or indirectly from markets in the Indian subcontinent, to the Bight of Benin. The Dutch and the English followed the Portuguese precedent in the seventeenth century. In the Indian Ocean, Dutch East Indies Company ships often blocked their English East India Company rivals from purchasing cowries directly from the Maldivian archipelago. Without regular access to the Maldives, English EIC factors resorted to acquiring cowries

²¹⁸ Robert Smith, "Peace and Palaver: International Relations in Pre-Colonial West Africa." *The Journal of African History* 14, no. 4 (1973): 599-621, p. 609.

²¹⁹ Neil L. Norman, "Hueda (Whydah) Country and Town: Archaeological Perspectives on the Rise and Collapse of an African Atlantic Kingdom." *The International Journal of African Historical Studies* 42, no. 3 (2009): 387-410. See especially pages 408-409.

²²⁰ Ogundiran, "Of Small Things Remembered", 439, 447.

²²¹ Robin Law, "West Africa's Discovery of the Atlantic." *The International Journal of African Historical Studies* 44, no. 1 (2011): 1-25.

²²² Law, "West Africa's Discovery of the Atlantic", 20-24.

at markets in India such as Balasore in Orissa, Bombay, and Calcutta, and further south at Aceh in Sumatra, where the animals were commonly used as currency.²²³ In the late seventeenth century, English East India Company officials purchased substantial quantities of cowry shells at Balasore, which were then used as ballast for ships returning from their stronghold at Fort St. George in Madras to England, and later sold at auction to the African Company in London.²²⁴

Cowries became valuable and vital to the slave trade as an abstract, quantifiable currency media in West African kingdoms to trade for gold dust, provisions, ivory, and slaves.²²⁵ While slave traders did not systematically exchange cowries for captives in Upper Guinea and on the Gold Coast, the animals were most valuable in the Bight of Benin, later known to Europeans as the Slave Coast due to its principal commodity. Between the decades of the early sixteenth century until the early nineteenth century, European merchants shipped approximately thirty billion cowries to the Bight of Benin.²²⁶

Ships sailing for the African Company from England to the Gold Coast deposited their cowry cargo at the central castle, Cape Coast, where agents then dispersed the shells

²²³ Hogendorn, and Johnson, *The Shell Money of the Slave Trade*, 37, 41, 42, 81, 157.

²²⁴ Hogendorn and Johnson, *The Shell Money of the Slave Trade*, 37-47. For an example of an advertisement from the EIC in London see: East India Company, Court of Managers, *London: The Court of Managers for the United-Trade to the East Indies will put up to sale at the East-India-House in Leaden-Hall Street, on the 19th of March, 1705/06, the following goods* (London, 1706), *Eighteenth Century Collections Online*, Gale.

²²⁵ Johnson, "The Cowrie Currencies of West Africa. Part I", 18; John Thornton, *Africa and Africans in the Making of the Atlantic World, 1400-1800* (Cambridge: Cambridge University Press, 1998), 45.

²²⁶ Ogundiran, "Of Small Things Remembered", 429. Writing from his post in the Gambia River, Francis Moore did note that "Cowries are Shells which go as Money" in Upper Guinea. See: Moore *Travels Into the Inland Parts of Africa*, 7. On cowries in Senegambia, see: M. Hiskett, "Materials Relating to the Cowry Currency of the Western Sudan--II: Reflections on the Provenance and Diffusion of the Cowry in the Sahara and the Sudan." *Bulletin of the School of Oriental and African Studies, University of London* 29, no. 2 (1966): 339-66; Liza Gijanto, "Personal Adornment and Expressions of Status: Beads and the Gambia River's Atlantic Trade." *International Journal of Historical Archaeology* 15, no. 4 (2011): 637-68. To date, I have been unable to find any marine ecology research on the ecological impact of the removal of cowries from the Maldives.

further east and west via smaller coasting vessels. Company factors used the animal shells, along with trade goods, as money with local traders for buying captives. As coastal trade networks involving slaves and cowries expanded outward from the Bight of Benin further inland, the ubiquity of the Indian Ocean money cowries more fully connected trade networks between coastal West African and North African slavers via trans-Saharan trade routes that predated the arrival of Europeans by several centuries.²²⁷ In addition to using cowries to purchase captives as money, factors for the African Company paid customary tributes in the form of cowries to local rulers and city-states.²²⁸ Writing from Ouidah in 1682, Andrew Crosbie reported how factors paid “customs to the King” of Ouidah “out of your Honours warehouse in 9 lb of boogees” and other goods.²²⁹

Cowries, along with goods like kettles and fabrics, facilitated transactions involving captives between English and African slave traders. Coasting vessels that sailed between the Gold and Slave Coasts supplied the company’s forts and outposts with stocks of cowries and transported enslaved captives to the dungeons below Cape Coast Castle. In a letter from James Fort at Accra, sited east of Cape Coast, Arthur Wendover, a factor, notified his superiors in 1680, for instance, that the captain of the coasting vessel *Bonadventure* requested a typical supply “33 3/4 cask of coureyes” to exchange for

²²⁷ Lovejoy, *Transformations in Slavery*, 79. Lovejoy observes, for example, that Oyo traders at coastal ports exchanged cowries for slaves, and later used the cowries to purchase horses at northern markets from North African traders crossing the Sahara. See also: Ghislaine Lydon, *On Trans-Saharan Trails: Islamic Law, Trade Networks, and Cross-Cultural Exchange in Nineteenth-Century Western Africa* (Cambridge University Press, 2009), 74-76, 252-254.

²²⁸ Marion Johnson, “The Cowrie Currencies of West Africa Part I.” *The Journal of African History* 11, no. 1 (1970): 17-49.

²²⁹ “Andrew Crosbie, Guydah, 1 September 1682”, in *The English in West Africa, The Local Correspondence of the Royal African Company in England, 1681-1683*, edited by Robin Law, (Oxford: The British Academy, 1998), letter 485.

enslaved captives at Allada on the Slave Coast.²³⁰ “A proper cargo,” for purchasing slaves in Allada, wrote one factor, contained first and foremost a necessary quantity of “bougees.”²³¹ In his letters, Wendover complained to Cape Coast that some of the cowry shipments arriving at Accra lately appeared broken or otherwise damaged, which, along with being too large or discolored, depreciated their value on the coast.²³²

Factors and ship captains routinely requested that Cape Coast supply them with transshipments of cowries to successfully carry out the business of the slave trade. Writing at Offra, the company’s factory near Allada, and due east of Ouidah, William Cross wrote to Cape Coast in 1681 that the trade in enslaved people continued to accelerate in the region, and urged that “tis very inconvenient for a ship to come here without booges, and if you send none by the next ship, you must hardly expect any slaves.”²³³ However, he continued, “if you purchase any att the Mina Castle (where I heare there is plenty) you may be sure of slaves in a very short time.” Cross’ letter suggests how damaged, diminished, or delayed supplies of cowries from England could push the company to turn to its Dutch rivals for assistance, which placed the company temporarily into a subordinate position in the trade.

A lack of cowries stalled the trade. One ship captain, Charles Towgood, complained that without cowries he could not purchase captives while anchored at Adangme, near the Volta River, in 1682, while a “French man had nothing but bouges,”

²³⁰ “Arthur Wendover, James Fort, Accra, 10 February, 1680”, in *The English in West Africa, The Local Correspondence of the Royal African Company in England, 1681-1683*, edited by Robin Law, (Oxford: The British Academy, 1998), 154.

²³¹ “John Carter, Whiddah, 22 November 1686”, in *The English in West Africa, The Local Correspondence of the Royal African Company in England, 1685-1688*, 333-334.

²³² “Arthur Wendover, James Fort, Accra, 20 February, 1680”, in *The English in West Africa, The Local Correspondence of the Royal African Company in England, 1681-1683*, edited by Robin Law, (Oxford: The British Academy, 1998), 154-155.

²³³ “William Cross, Ophra in Arda, 18 August, 1681”, in *The English in West Africa, The Local Correspondence of the Royal African Company in England, 1681-1683*, 219-221.

and succeeded in buying slaves.²³⁴ James Thorne, a factor at Offra, wrote the same year to Cape Coast while in negotiations with the king of Allada to send “booges by the next shipping ... without them you must expect little to be done, for tis all one their money here, as silver and gold is with us.”²³⁵ Petley Wyborne, a separate trader and occasional collaborator with the African Company, writing from a town near Ouidah, reported to Cape Coast that enslaved captives “are to be had here if they that wants brings goods fitt for the place, as booges,” brass utensils, or linens.²³⁶

In 1686, John Carter continued to write to complain to his superiors that his base at Ouidah simply did not receive enough cowries to execute the trade in captives. “I have been so extreamply abussed by the Company”, wrote Carter, whose letters and advice on what kinds of cowries the outpost at Ouidah required, apparently went unnoticed by his superiors.²³⁷ Carter’s knowledge of African taste and values, of course, derived from his interactions with individual Atlantic Africans, including a Huedan Yuvogan, or trading official appointed by a king, known to the company as Captain Carter.²³⁸ While Cape Coast did respond to factors’ demands, men including John Carter and Captain Carter continued to emphasize time and again the necessity of a regular flow of cowries for opening or sustaining economic networks around the bight. One factor summed up the

²³⁴ “Charles Towgood, Aboard the Cape Coast Briganteen, Allampo Road, 5 March 1682”, in *The English in West Africa, The Local Correspondence of the Royal African Company in England, 1681-1683*, edited by Robin Law, (Oxford: The British Academy, 1998), 270-271.

²³⁵ “James Thorne, Ophra in Arda, 19 August, 1681”, in *The English in West Africa, The Local Correspondence of the Royal African Company in England, 1681-1683*, 221-223.

²³⁶ “Petley Wyborne, Judeah alias Whidda, 8 January 1681”, in *The English in West Africa, The Local Correspondence of the Royal African Company in England, 1681-1683*, 228.

²³⁷ “John Carter, Whidah, 22 November 1686”, in *The English in West Africa, The Local Correspondence of the Royal African Company in England, 1685-1688*, edited by Robin Law, (Oxford: The British Academy, 2001), Oxford Scholarly Editions Online version.

²³⁸ Robin Law, “The Common People Were Divided”: Monarchy, Aristocracy and Political Factionalism in the Kingdom of Whydah, 1671-1727.” *The International Journal of African Historical Studies* 23, no. 2 (1990): 201-229, pages 211, 212, and 216. Law notes that it is unclear if Captain Carter took his name from his partnership with John Carter, or, if the name simply reflected a title common around Ouidah.

situation by writing that a career “without bowges in these parts here is noe liveing for a whiteman.”²³⁹

In efforts to track the value of cowries, factors taking stock of the company’s warehouses at the forts listed their supply of the animal remains by weight and included the current rates of exchange for cowries and slaves in their ledgers. In an inventory of the warehouse at Offra from 1681, James Thorne, listed among the textiles, metal goods, guns, and other trade items at the warehouse, that the fort traded “961 pound of booges att 78 lb per slave.”²⁴⁰ The factor recorded in the inventory how the fort paid its caboceers in cowries, paid for repairs to the factory walls and buildings completed by local artisans in cowries, and how he paid the ransom of a messenger who had been panyarred, or kidnapped, at Ouidah “in booges.” “I would desire your worship to send booges,” Thorne requested in his letter accompanying the updated inventory to Cape Coast, “for I have none for my present use but am forct to borrow of the blacks.” Thorne’s petition reveals how crucial the market in cowries, and regular access to supplies of the animals were to reckoning the value of the enslaved and keeping the trade flowing in the bight.

Factors like John Carter at Ouidah wrote repeatedly in frustration to Cape Coast requesting information on the flow of cowries to the outforts, and the shifting value of cowries at different forts between the major regions of the slave trade. Time and again factors wrote to Cape Coast that “if you send booges a good quantity, with allmost any

²³⁹ “Josiah Pearson, Widah Factory, 24 November 1694”, in *The English in West Africa, The Local Correspondence of the Royal African Company in England, 1691-1699*, letter 1351.

²⁴⁰ “James Thorne, Ophra in Arda, 18 December, 1681”, in *The English in West Africa, The Local Correspondence of the Royal African Company in England, 1681-1683*, 221-223; see also “John Winder, Ophra in Arda, 23 March, 1681/82”, in *The English in West Africa, The Local Correspondence of the Royal African Company in England, 1681-1683*, letter 483.

other goods you have you cannot want slaves, for they are very plenty” at Ouidah and elsewhere in the Bight of Benin.²⁴¹ While stationed at Appa, near present-day Badagry, Arthur Wendover put the situation simply to his superiors: “noe booges noe slaves.”²⁴²

Factors frequently wrote to Cape Coast for up-to-date information on the value of cowries between the Gold Coast and the Bight of Benin. In 1686, Mark Bedford Whiting, a factor at Accra, wrote to Cape Coast “an enquirey for bouges for slaves,” requesting to know how much the price of cowries for captives differed between the Gold Coast and the Bight of Benin.²⁴³ The following month, Whiting wrote again to Cape Coast that as to exchanging “bouges and manobut bands we are as yet ignorant of the disposall, not knowing what quantity we must vend for slaves or gold.”²⁴⁴

Competition from others better equipped with cowry supplies frequently frustrated the English. In 1681, Daniel Gates reported that a French slaver at Olampo “cleared the towne of slaves, they haveing a great many booges.”²⁴⁵ Writing aboard the ship *Adventure*, in 1687, James Bayly reported that he purchased “six slaves with such goods as I have,” at Ningo, “but theirs twenty gon away for want of goods,” especially cowries, which his Dutch competitors possessed in much greater quantities.²⁴⁶

²⁴¹ “James Thorne, Ophra in Arda, 19 August, 1681”, in *The English in West Africa, The Local Correspondence of the Royal African Company in England, 1681-1683*, letter 478.

²⁴² “Arthur Wendover, Appa, 17 July 1682”, in *The English in West Africa, The Local Correspondence of the Royal African Company in England, 1681-1683*, letter 484.

²⁴³ “Mark Bedford Whiting, James Forte, Accra, 27 May, 1686”, in *The English in West Africa, The Local Correspondence of the Royal African Company in England, 1685-1688*, 273-274.

²⁴⁴ Mark Bedford Whiting, James Forte, Accra, 29 June, 1686”, in *The English in West Africa, The Local Correspondence of the Royal African Company in England, 1685-1688*, letter 719.

²⁴⁵ “Daniell Gates, Allampo, 6 March, 1681/82”, in *The English in West Africa, The Local Correspondence of the Royal African Company in England, 1681-1683*, letter 613.

²⁴⁶ “James Bayly, from on board the *Adventure*, at Mingo [Ningo], 26 September 1687”, in *The English in West Africa, The Local Correspondence of the Royal African Company in England, 1685-1688*, 364.

Africans laborers hired by the company at their factories posed challenges to the African Company's distribution and supplies of cowries. In 1693 and 1694, Thomas Phillips commanded the slave ship *Hannibal*, which sailed from England to Cape Mesurado, the Gold Coast, Ouidah, and São Tomé before crossing the ocean to Barbados. While anchored at the factory at Ouidah, Phillips learned firsthand how difficult it could be to maintain supplies of cowry shells on the ground. In the warehouse at Ouidah, barrels of cowries delivered from coasting vessels were frequently "pilfer'd by the negro porters" who stole cowries using "instruments like wedges" to pry loose barrel staves and pocket handfuls of shells.²⁴⁷ Phillips and his crew failed to prevent such incidents at the warehouse, as they failed to successfully catch any of the porters in the act of stealing the shells.

Factors on the coast also faced difficulties in dealing with local employees of the African Company. Josiah Pearson reported from Ouidah in the spring of 1697 on the "rogueries of the Cabo Corso canoamen" who paddled to the Bight of Benin.²⁴⁸ Tom, a canoe pilot hired by the company, arrived to Ouidah only to quickly loan his canoe to "the Mine blacks to goe to Jacking to take a Portuquize shipp." Later, Tom "took" another canoe pilot hired by Pearson to steal "three caskes bouges" from the factory, which they jettisoned from their canoes "into the sea, and gott them out afterwards in the night." Pearson suspected Tom and his compatriots would attempt to smuggle the stolen cowries to traders at Grand Popo. Pearson concluded his complaint by writing to condemn "all the

²⁴⁷ Thomas Phillips, *A Journal of a Voyage Made in the Hannibal of London, Ann. 1693, 1694* (London: Walthoe, 1732), 216.

²⁴⁸ "Josiah Pearson, Whidah", in *The English in West Africa, The Local Correspondence of the Royal African Company in England, 1691-1699*, letter 1353.

Cabo Corso canoamen in generall, they valuing not the English nor the Companyes fort in these parts, but continually side with the Mine blacks.”²⁴⁹

Captains of coasting vessels wrote directly to Cape Coast to request supplies of cowries on slaving voyages. William Piles, commander of the sloop *Sally Rose*, wrote to Cape Coast off the coast of Teshi, a town east of Accra, in 1697 “a few lines concerning my bouges.”²⁵⁰ Piles had requested the factor at Accra send him the current rates of exchange for enslaved men and women for cowries, and complained that local merchants refused previous prices for slaves in cowries and were now demanding more. After Piles offered seventy pounds of cowries “for a man, they immediately fell a telling them, and return’d back again. I have offered them eighty pound for a man, and they will not take them.” “I desire your answer”, he demanded, “how many pound of bouges you will allow me for a man, and likewise for a woman.” Despite factors regular calculations, the value of cowries fluctuated between places and across time due to their variable size, shape, and relative scarcity. On occasion, the value of cowries could drop precipitously as demand changed. Later that month at Kpone, also east of Accra, Piles lamented that local traders “not now ask for any” cowries.²⁵¹

Cowries not only attracted the attention of merchants in West Africa, but naturalists interested in improving the company’s prospects for accruing wealth in the form of enslaved captives in Atlantic Africa. James Houstoun, Chief Surgeon at Cape Coast Castle, sought valuable specimens—especially plants, animals, and minerals—for the

²⁴⁹ Of course, Tom’s actions further indicate the existence of clandestine networks between Atlantic Africans that bears further study beyond the scope of this dissertation.

²⁵⁰ “William Piles, Tersee, 22 June, 1697”, in *The English in West Africa, The Local Correspondence of the Royal African Company in England, 1691-1699*, 600-601.

²⁵¹ “William Piles, Pono, 30 June, 1697”, in *The English in West Africa, The Local Correspondence of the Royal African Company in England, 1691-1699*, 601.

“improvement” of the slave trade and the African Company on a bioprospecting expedition from 1722 to 1724.²⁵² James Brydges, the Duke of Chandos and an major investor in the African Company who aimed to diversify the company’s activities, appointed Houstoun to the position.²⁵³ Houstoun’s itinerary from Sierra Leone to the Gold Coast fit within other speculative missions the company launched in the early eighteenth century designed to adapt expertise in natural history towards projects in agricultural improvements, chemistry, medicine, and mining in the region.²⁵⁴

In 1722, while scouting a “most fertile Island” in the Sierra Leone River, the doctor collected “Cockle-Shells, which very much resemble our Cowries.”²⁵⁵ The animals, Houstoun projected, “might have been of considerable Use to me afterwards, as current Money on the Slave Coast. How far these Collections might have contributed to the Rise of *African* Stock, I shall not pretend to determine.” In his natural history of West Africa, published after his travels, Houstoun complained that factors on the Gold Coast, including, at the time, he alleged, the Governor of Cape Coast, undermined the company by illicitly selling cowries to other European competitors, in particular the Portugese, and hoped his discovery in Sierra Leone would ameliorate the losses caused by disloyalty to

²⁵² James Houstoun, *Some New and Accurate Observations Geographical, Natural and Historical. Containing a True and Impartial Account of the Situation, Product, and Natural History of the Coast of Guinea, so far As Relates to the Improvement of that Trade, for the Advantage of Great Britain in General, and the Royal African Company in Particular*, (London: Printed for J. Peele, at Locke's Head in Pater-Noster-Row, 1725), 2.

²⁵³ James Houstoun, *Memoirs of the life and travels of James Houstoun, M. D. (formerly Physician and Surgeon-General to the Royal African Company's Settlements in Africa, and late Surgeon to the Royal Assiento Company's Factories in America*, (London: Printed for the author, and sold by J. Robinson, in Ludgate-Street; J. Wood, under the Royal-Exchange, and W. Owen, near Temple-Bar, Fleet-Street, 1747), 127.

²⁵⁴ Mitchell, ““Legitimate Commerce” in the Eighteenth Century: the Royal African Company of England under the Duke of Chandos, 1720–1726.” Among the projects Mitchell points out that Brydges commissioned in this period were the missions led by Captain Trengove, Robert Plunkett, Samuel Heartsease, and a “mineralist” accompanied by Nicholas Baynton, who sought to locate gold mines, identify new commodities for acclimatization and cultivation, and to establish a company garden at Cape Coast Castle.

²⁵⁵ Houstoun, *Some New and Accurate Observations*, 4.

the company.²⁵⁶ While Houstoun dreamt of translating his knowledge in natural history and medicine to projects for improving company's position in the slave trade, such as the substitute cowries from Sierra Leone, his shell scheme never materialized.²⁵⁷ Houstoun's failure to "improve" the slave trade stands out as a case of the limits of bioprospecting for early modern empires.

Exchanges of cowrie shells for enslaved captives continued beyond the period of the Royal African Company's monopoly and waning power in the eighteenth century. William Snelgrave, a captain representing the separate trader Humphrey Morice, described exchanging cowries for slaves in Ouidah during his voyage in 1727.²⁵⁸ In the account book of the Liverpool slave trader William Davenport, for instance, there are records of the use of cowries as either currency or as dashees into the late eighteenth century. In an inventory of "sundry Merchandize shipped by Thomas Will, Ship *Ann* for the River Camaroons on the Coast of Africa" from 1782, the captain listed the ship's supplies of cowries, among other goods, used to trade for captives in West Central Africa, south of the Bight of Benin.²⁵⁹

As traders for the African Company manipulated, negotiated, and noted the value of cowries as currency on the coast to purchase captives, enslaved people understood cowries in an altogether different light. Saidiya Hartman explains that as the slave trade expanded across West Africa, people living in regions impacted by the trade that slavers frequently raided for captives, such as towns further inland from the coastline in present-

²⁵⁶ Houstoun, *Some New and Accurate Observations*, 32-33.

²⁵⁷ Marion Johnson, "The Cowrie Currencies of West Africa. Part I." *The Journal of African History* 11, no. 1 (1970): 17-49. The creatures Houstoun found most likely did not resemble the species of cowries taken from the Indian Ocean, *Monetaria moneta*.

²⁵⁸ William Snelgrave, *A New Account of Some Parts of Guinea, and the Slave-Trade* (London: Printed for James, John, and Paul Knapton, 1734), 38; Pettigrew, *Freedom's Debt*, 195.

²⁵⁹ Account book relating to ship voyages, 1777-1784, William Davenport and Co. mssHM 82854, The Huntington Library, San Marino, California.

day northern Ghana, circulated their own stories of how “cowrie shells feasted on the bodies of captives.”²⁶⁰ Oral traditions posited that Europeans threw captives overboard from their ships in the Atlantic to feed hungry cowries underwater and multiply their money, as human blood nourished the creatures in the ocean. Into the nineteenth century, popular vernacular knowledge in West Africa held that “the best places to harvest cowries were along the coast where slaves had been murdered or drowned,” and that fishermen could become wealthy by salvaging hybrid “human-mollusk” bodies of the trade’s numerous victims.²⁶¹ The proliferation and durability of beliefs about the vampiric powers of cowries attests to the fact that the enslaved themselves recognized how the trade constituted a deadly entanglement and equation of human and animal life as captives became commodities.

Exchanges of the bony shells of cowries for enslaved captives transformed West Africa, especially the Bight of Benin, or Slave Coast, from the late seventeenth century onward. Factors purchased slaves, in part, using cowries at outposts in the Gold Coast and at bases along the Slave Coast east of the Volta River. English traders capitalized on the Portuguese precedent of using the animals in the Bight of Benin, and Europeans further transformed the cultural significance of the animals from instruments of divination to stockpiles of wealth as the animal currency became loaded with new symbolic meaning by the early eighteenth century. However, the English often failed to keep up supplies of cowries, and lost captives to their Dutch, French, and Portuguese competitors. While

²⁶⁰ Saidiya Hartman, *Lose Your Mother: A Journey Along the Atlantic Slave Route* (New York: Farrar, Straus, and Giroux, 2007), 209.

²⁶¹ Hartman, *Lose Your Mother*, 209-210. On vampire cowries in oral history, see: Elizabeth Isichei, *Voices of the Poor in Africa: Moral Economy and the Popular Imagination* (Rochester: University of Rochester Press, 2002), 67-69; Rosalind Shaw, *Memories of the Slave Trade: Ritual and the Historical Imagination in Sierra Leone* (Chicago: University of Chicago Press, 2002), 9.

slavers used sheep and cowry shells as animals to expand the eco-cultural network of the slave trade in Atlantic Africa, the final section turns to predatory vermin that threatened to unmake commercial connections between English and West African slavers.

Vermin

Relationships of commerce and trust that English and West African traders struggled to build across space and over time were vulnerable to animals they understood as vermin that destroyed valuable goods, including human captives, across Atlantic Africa. Mary Fissell defines vermin in early modern England as animals that “poached human food” and exhibited unusual cunning in eluding humans and avoiding extermination.²⁶² Vermin and pests can also be understood as animals beyond and existing in opposition to the desired modes of interaction that slavers attempted to fashion between enslaved captives and nonhuman animals for the purposes of exchange. Vermin in West Africa, in particular worms and rats, exploited and hindered the slave trade in multiple ways by infesting supplies of food and goods, evading plans for their elimination, and by endangering the health of the enslaved. At every turn, vermin damaged and imperiled the value of human and nonhuman commodities, and in very material ways limited the expansion and flow of the trade. Reckoning with pests, therefore, is crucial toward a deeper understanding of the eco-cultural networks of slaving.

Shipworms impacted trade networks by destroying the hulls of coasting sloops and canoes that moved between sites of the slave trade while ferrying information,

²⁶² Mary Fissell, "Imagining Vermin in Early Modern England," *History Workshop Journal*, no. 47, (1999): 1-29.

cowries, captives, and other commodities between the outforts and Cape Coast Castle. Factors attempted to counter shipworms by sourcing species of wood from their partners in the trade to prevent the animals, a saltwater clam that thrives in tropical waters, from damaging the company's vessels. At Anashan, for instance, Arthur Richards wrote to Cape Coast in 1681 that a shipment of timber from the fort sent by their trading partners appeared promising for countering the creatures: "I am inform'd by the Curranteere itt is a sort of wood that the wormes will not take itt."²⁶³ Richards attempt to source woods that counteracted shipworms represents another form of bioprospecting among the factors of the African Company and their allies. Like Houstoun's search for new cowries, this prospect too appears to have resulted in failure.

Guinea worms—a species of parasitic nematode that found their way into the bodies of traders and captives through dirty drinking water—frequently frustrated the company by compromising the health of both groups.²⁶⁴ The worms infected factors and enslaved people from their habitats in polluted water cisterns at different spaces in the trade, including the "trunks" around Ouidah, the small underground "slave holes" at outforts such as Dixcove, in barracoons and "slave yards" or other makeshift holding cells scattered throughout the Gold and Slave Coasts, or in the dungeons below Cape Coast Castle, including the central castle's disturbing "Black Hole", where captives lingered for days or weeks before being sent onward for transatlantic voyages.²⁶⁵

In the bodies of their hosts, the worms bred and developed within the intestines, and as they grew moved outward through the skin by forming blisters that caused their

²⁶³ "Arthur Richard, Anishan, 13 September 1681," in *The English in West Africa, The Local Correspondence of the Royal African Company in England, 1681-1683*, 76.

²⁶⁴ Guinea worms' binomial name is *dracunculus medinensis*.

²⁶⁵ Nelson, "Architectures of West African Enslavement", 88, 98-99, 101, 110, 112.

hosts to suffer debilitating pain.²⁶⁶ Richard Thelwall, a factor at Anomabu, for instance, apologized in a letter to his superiors at Cape Coast in 1681 for not writing and reporting on the status of the trade at the fort for some time. Guinea worms had festered in Thelwall's body, rendering him "very lame, having three wormes in one legg, being in a great paine." As such, the factor failed to regularly write and perform his duties at the fort, including supervising the purchase and transportation of captives.²⁶⁷ Reporting to Cape Coast in 1687, Thomas Price at Accra wrote with desperation that the factory doctor, gunner, and three other Company employees became "lame with wormes", which impeded the ability of slavers at James Fort to carry out their trade.²⁶⁸

While guinea worms infested the bodies of English factors like Thelwall, incarcerated captives suffered worse debilitating infections of the worms at a much higher rate due to their exposure to the dangerous, unhealthy environments of barracoons and other carceral spaces on the coast.²⁶⁹ Worms infected the bodies of both enslaved people who traders sold across the Atlantic Ocean and castle slaves, those held in permanent bondage at the forts. Reporting from Dixcove in 1692, Francis Smith complained that a company slave, a carpenter named Quashe, whose skills in repairing fort walls the factor desperately required to fortify the base, became "lame with the wormes." Smith requested Cape Coast send another enslaved artisan, Bastian, who was known among the company for his skill in carpentry, to replace him.²⁷⁰ Quashe's pain

²⁶⁶ Kenneth Kiple, *The Caribbean Slave: a Biological History* (Cambridge: Cambridge University Press, 2002), 71-74.

²⁶⁷ "Richard Thelwall, Anamaboe, 1 February 1681", in *The English in West Africa, The Local Correspondence of the Royal African Company in England, 1681-1683*, 107-108.

²⁶⁸ "Thomas Price, James Fort, Accra, 30 June 1687", in *The English in West Africa, The Local Correspondence of the Royal African Company in England, 1685-1688*, letter 757.

²⁶⁹ Smallwood, *Saltwater Slavery*, 141, 144, 194.

²⁷⁰ "Francis Smith, Dickis Cove Fort, 20 January 1692", in *The English in West Africa, The Local Correspondence of the Royal African Company in England, 1691-1699*, 12.

and the debility caused by the affliction, now known as dracunculiasis, hindered operations at Dixcove.

Pain caused by guinea worms afflicted the health and lives of enslaved people before enduring the middle passage, as the worms often broke out through the skin of the enslaved's limbs while being incarcerated in barracoons. For company factors whose interests lay in profiting from commodifying enslaved people and dispossessing them of their bodily labor, worms threatened to undercut future profits. Upon receiving notice from Cape Coast in 1693 that an enslaved man sent to the castle appeared sickly and "bursten" with an uncertain disease, Edward Searle at Charles Fort, Anomabu, replied that he "thought soe myselfe at first, but the Negroes told me it was a worme." Searle agreed to take the man back from Cape Coast as a company slave at Charles Fort "If hee bee not passible" for sale.²⁷¹ In 1694, Searle continued to write to Cape Coast on the problems worms posed at Anomabu by rendering captives held there incapacitated and entirely unfit for sale, which would lead to significant losses for the company. Searle warned that the worms also weakened the ability of company slaves to function as laborers in fortifying and manning Charles Fort: "The slaves wee have here are not sufficient to finde the Fort in wood and water, they are soe disabled with wormes."²⁷²

While guinea worms infested the bodies of factors, captives awaiting being taken aboard ships, and castle slaves held at the forts, other kinds of worms chewed through valuable provisions and trade goods and frequently ruined factors responsible for purchasing and overseeing enslaved people on the coast. In an inventory of the

²⁷¹ "Edward Searle, Charles Fort, Annimaboe, 11 December 1693", in *The English in West Africa, The Local Correspondence of the Royal African Company in England, 1691-1699*, 311.

²⁷² "Edward Searle, Charles Fort, Annimaboe, 21 February 1694", in *The English in West Africa, The Local Correspondence of the Royal African Company in England, 1691-1699*, 313.

warehouse of James Fort, Accra, from 1681, Ralph Hassell recorded that among the provisions he received from a coasting vessel that month were fifty-six pounds of “wormeaten stockfish” that were absolutely useless as a foodstuff.²⁷³ Later that year at Accra, Hassell complained that the barrels of corn delivered by another coasting vessel were “soe bad” from worms and rot “that the slaves will not eate it nor scarce the hoggs.”²⁷⁴

Worms also damaged cloth trade goods at the factories. In 1682, worms forced Richard Thelwall to sell “broken and wormeaten” textiles at deep discounts to Akani traders arriving at Anomabu.²⁷⁵ Writing from Mumford, sited between Tantumkweri and Winneba, Hugh Hilling complained in 1686 how there were “slaves plenty here but I want some good sayes, these I have are worm eaten” and worthless for exchange.²⁷⁶ Later that year, Henry Wood, commander of the sloop *George*, wrote off the coast of Axim that he also faced challenges while slaving from unforeseen worms. While negotiating for captives with slavers on the Grain Coast, Wood noted his “carpitts proves bad, here is 24, all worm and rott eaten and not worth one ounce.”²⁷⁷

Worms interrupted the progress of coasting vessels as they sailed as well. William Piles, commander of the sloop *Sally Rose*, reported in 1697 how worms ate through his

²⁷³ “Ralph Hassell, James Fort, Accra, 11 October 1681”, in *The English in West Africa, The Local Correspondence of the Royal African Company in England, 1681-1683*, 175.

²⁷⁴ “Ralph Hassell, James Fort, Accra, 18 October 1681”, in *The English in West Africa, The Local Correspondence of the Royal African Company in England, 1681-1683*, 177.

²⁷⁵ “Richard Thelwall, Annamaboe, 28 Septebmer 1682”, in *The English in West Africa, The Local Correspondence of the Royal African Company in England, 1681-1683*, 119-120.

²⁷⁶ “Hugh Hilling Mumford, 20 March 1686/87”, in *The English in West Africa, The Local Correspondence of the Royal African Company in England, 1685-1688*, letter 885.

²⁷⁷ “Henry Wood, off Axim, 3 June 1686”, in *The English in West Africa, The Local Correspondence of the Royal African Company in England, 1685-1688*, letter 837. Law notes that “roth” here refers to rats.

stock of yam provisions intended for the captives, necessitating the ship's return to the coast to resupply the ship before sailing onward to Cape Coast.²⁷⁸

Elusive nests of rats further evaded and troubled English slave traders at their forts along the Gold Coast. Rats gnawed at trade goods stored in warehouses in astonishing numbers, rendering valuable textiles for barter worthless. In Hassell's abovementioned inventory of James Fort, Accra, he reported that of the twenty says, a fine worsted wool cloth traders bartered with, delivered by Captain Samuel Rickard of the coasting sloop *Blessing*, every bolt was "ratt eaten" and useless for trade.²⁷⁹ Another factor at Mumford disclosed that of the twenty bolts of sayes he received from a sloop captain, nearly all of them were "much rat eaten, ten of them we found a dead rott in the case."²⁸⁰ At Charles Fort, Anomabu, William Cross complained that casks of valuable tallow for use at the fort and for trade were "eaten quite up by the rates" after being neglected by company officials and castle slaves tasked with supervising the warehouse.²⁸¹ Three years later, another factor at Anomabu, John Rootsey, continued to complain to Cape Coast that trade goods improperly maintained at the fort and nearby at Anashan appeared "much eaten by the ratts," temporarily halting exchanges in captives between both forts and their partners while the outposts waited for new supplies.²⁸²

Unable to endure the plunder caused by rat attacks, some factors attempted to eradicate the pests by introducing a predator, cats, into company warehouses. In 1686

²⁷⁸ "William Piles, St. Thomas, 30 December 1697", in *The English in West Africa, The Local Correspondence of the Royal African Company in England, 1691-1699*, 623-624.

²⁷⁹ "Ralph Hassell, James Fort, Accra, 11 October 1681" in *The English in West Africa, The Local Correspondence of the Royal African Company in England, 1681-1683*, 414

²⁸⁰ "Hugh Hilling, Mumford, 28 October 1686", in *The English in West Africa, The Local Correspondence of the Royal African Company in England, 1685-1688*, letter 875.

²⁸¹ "William Cross, Charles Fort, Annimaboe, 3 July 1692", in *The English in West Africa, The Local Correspondence of the Royal African Company in England, 1691-1699*, 294.

²⁸² "John Rootsey, Annimaboe, 27 May 1695", in *The English in West Africa, The Local Correspondence of the Royal African Company in England, 1691-1699*, 338.

Thomas Bucknell wrote to Cape Coast that the fort at Sekondi was “most intollerably trobled with rats in the warehouse. They now begin to damnifie the goods, I haveing found severall things knawed per them.”²⁸³ “If any man in the Castle,” he pleaded to Cape Coast, “can advise me how to distroy them, to advise me of the means; niether can I gett a catt any where.” Bucknell and his subordinates desperately sought after a cat at Sekondi for weeks without success.

The following month, Bucknell wrote again to Cape Coast that the warehouse continued to suffer from vermin: “I know not what to doe with the rats, they damage so much good that would make one mad to se, especially the woolen good” traders used in exchange to acquire captives.²⁸⁴ The rats ate “wholes in the boysadoes, Welch plains and blankets” so large that the factor could “run my fist in them.” Bucknell attached an inventory of the goods “damagd per the rats” to his letter, and wrote despondently that “how to remidy it I canot tell.” He tried moving the textiles above the warehouse floor on scaffolding, and in the process moved a nine hand canoe that had sheltered “eight ratts of a great biggness” which he and his men killed, along with “two nests of six young ones apeice, but some escap’d our hands doe what we could.” Bucknell then “spoild their harbors and made all passages free that they cannot secure themselves from a good cat.”

Bucknell eventually did find a cat for the warehouse, yet he found his proposed predator “to little, soe I humbly desire your Worship to send me a bigger if it can be procurd. Here be rats almost able to deal with cattis.” Bucknell’s encounters with rats were not exceptional, and neither was his failure to eradicate the pests. The company

²⁸³ “Thomas Bucknell, Succondee, 23 August 1686”, in *The English in West Africa, The Local Correspondence of the Royal African Company in England, 1685-1688*, 28-29.

²⁸⁴ “Thomas Bucknell, Succondee, 21 September 1686”, in *The English in West Africa, The Local Correspondence of the Royal African Company in England, 1685-1688*, 29-30.

warehouse at Anomabu faced a similar problem in 1687. Ralph Hassell wrote apologetically to Cape Coast that “I am sorry to write of dammage done by ratts, which is verry much, especially in the allejarrs: we are so pester’d with them that they are not easely destroyd, although keep three cattts in the warehouse.”²⁸⁵

Rat attacks compounded the duress slavers faced from competitors and warfare in Atlantic Africa. Thomas Willson described his station at Komenda in 1696, during the Second Komenda War, by writing “Here live pend up” in fear of the Dutch and their “abundance of blacks alwaies in arms about their fort.”²⁸⁶ Willson added that he and his companions “are all so lame with our late journey that wee are hardly able to stir.” That spring, the factory’s “towns people” also deserted the English. In his conclusion to the letter, the factor wrote that it “is almost incredible to report the abundance of rats we have, that wee cannot lye in our cotts a night but with sticks in our hands to kill them.” The following month, Willson pleaded again for support from Cape Coast, requesting supplies for the factory, including “one or two hour glasses, the rats haveing broke ours, that wee have none to stand sentry by.”²⁸⁷

Rats continued to pester slave traders and endanger the health of enslaved people in Cape Coast Castle and later below decks aboard transatlantic voyages. James Houstoun described the dungeons of Cape Coast Castle, where enslaved people languished before being taken on ships, as unhealthy and “swarming with Vermine.”²⁸⁸ One trader recalled aboard a slave ship, in addition to the “hot and corrupted air,” that the

²⁸⁵ “Ralph Hassell, Annamabo, 1 April 1687”, in *The English in West Africa, The Local Correspondence of the Royal African Company in England, 1685-1688*, 201.

²⁸⁶ “Thomas Willson, Commenda, 7 February, 1695/96”, in *The English in West Africa, The Local Correspondence of the Royal African Company in England, 1691-1699*, letter 370.

²⁸⁷ “Thomas Willson, Commenda 3 March 1695/96,” in *The English in West Africa, The Local Correspondence of the Royal African Company in England, 1691-1699*, letter 374.

²⁸⁸ Houstoun, *Some New and Accurate Observations*, 30.

crew and their “cargo” suffered from the presence of rats that “have done a great deal of damage, we being quite over-run with them.”²⁸⁹ The rats attacked the crew and the enslaved stowed below, and devoured the ship’s meager stores of provision food.

Worms and rats placed real, material limits on opportunities for English factors to purchase captives from their West African counterparts by damaging trade goods, including slaves, and preying upon provisions. As vermin, these animals could significantly impinge upon the eco-cultural networks that slave traders labored to produce through animal sacrifices, gifts, and systems of currency. The power of predatory vermin to curtail trading networks and exploit the vulnerabilities of factories and their warehouses indicates how the production and maintenance of eco-cultural networks was never all-encompassing or permanent, but rather limited, assailable, and fragile.

Conclusion

This chapter has shown how the slave trade in Atlantic Africa involved the production and maintenance of eco-cultural networks, including nonhuman animals, by English and West African slave traders who mobilized fauna as political, cultural, and economic actants in the late seventeenth century. It has done so by first demonstrating how trading relations between European and African groups, as evident in the founding of Dixcove, oftentimes involved ritual propitiatory sacrifices of sheep. Sheep and other animals, such as elephants or ostriches, became valuable as diplomatic gifts to open new trading connections, offerings to mediate political alliances, as payment for the redemption of pawns, or as curious faunal specimens for collections.

²⁸⁹ John Newton, eds. Bernard Martin, and Mark Spurrell. *The Journal of a Slave Trader (John Newton) 1750-1754* (London: Epworth Press, 1962), 32.

Second, the chapter has illustrated how the cowry sea snail, *Monetaria moneta*, became a valuable form of currency that facilitated transactions in captives between the Royal African Company and their West African partners. Moreover, the chapter indicates how tenuous the relations people created with cowries could be over long distances, and how the monetization of the cowry depended on joining overseas trading networks between the Indian Ocean, Europe, the Atlantic Ocean, and West Africa. Using these kinds of creatures, traders built out eco-cultural networks on the ground with animals that enabled the expansion of the slave trade in Atlantic Africa. Yet, in doing so, traders also created the conditions for vermin to thrive, and these animals unmade such networks by damaging valuable commodities, disturbing provisioning supplies, and infesting the bodies of enslaved people.

By focusing on the commodification and value of captives and animals, and the evaluation of animals as either commercial instruments or risks, this chapter further indicates opportunities for scholarly exchange between the history of slavery and environmental history. The co-constitutive commodification of human captives and cowries enabled the trade to flourish on the coast, and their combined evaluation is evident in the ledgers and inventories that listed their equivalent value. Turning people into slaves depended on turning animals into money. Factors performed skilled labor to keep cowries—evaluated by weight and shape—useful for the trade. On the other hand, factors learned and appreciate the value of other animals, as evident in their prompt responses to the demands of their counterparts for offerings of animals for sacrifice, especially sheep. While this chapter has mostly focused on English factors, the fragmentary archival existence of the enslaved themselves poses significant interpretive

limits on a fuller understanding of how captives themselves perceived different kinds of animals in the trade. Indeed, the archive of the Royal African Company itself produced the commodification of people as abstract figures existing only between the pages of a ledger book.²⁹⁰

This chapter further demonstrates the promise of the eco-cultural network concept for gaining a deeper understanding of the environmental and cultural foundations of relations between imperial metropolises, colonies, and semicolonial commercial sites created by the agents of joint-stock companies, local rulers, and merchants in the early modern world. The Atlantic slave trade taking place at the outposts and castles of the African Company involved rapidly increasing transfers of human captives, exchanges of sheep, deliveries of cowries, and other interactions between people and fauna. “To get a cargo of flesh, bone, and blood” in Atlantic Africa, as one nineteenth-century writer put it, English traders needed to know and act on the value of animals.²⁹¹ Yet, as animals in the slave trade enabled human agency, others circumscribed such plans. Nonhuman animals, whether livestock, sea snail shells, or rats, could extend human networks or break them apart.

²⁹⁰ Stephanie E. Smallwood, "The Politics of the Archive and History's Accountability to the Enslaved." *History of the Present* 6, no. 2 (2016): 117-132.

²⁹¹ Daniel Kumler Flickinger, *Ethiopia, Or, Twenty Years of Missionary Life in Western Africa* (Dayton: Printed at the United Brethren Printing House, 1873), 112.

Chapter Two

Curious Collections

So I have so much of the Philosopher in me as to circumscribe my desires to my conditions and that make me happy, and as I would not convert the Indigences of Heaven into sloth and idleness, so if you or any friend of yours will put me upon any enquire or Experiments directing the method and that within my Capacity I will readily goe about it, and remit you all the matter of Fact with pleasure and Truth, and likewise if you will take pains to instruct me by letters, or direct me to books how to know the Qualities of Herbs, Roots, barks, et as I have Negros and other opportunities to Employ my time in those things so my letter with the things themselves shall wait upon every discovery I make.

—Thomas Walduck, letter to James Petiver, 1712

In 1681, John Banister proposed to his patron in England “a way which I believe may be very satisfying to you” for him to prepare a “Naturall Hystory” of Virginia.²⁹²

Reverend Banister, an Anglican minister residing in Bristol parish, on the southern banks of the James River, collected plants, animals, minerals, and ethnographic observations of Appamatuck and Pamunkey towns during his time in the colony between 1678 and 1692.²⁹³

In his letter to his supporters in the metropole, Banister foregrounded his reliance on two crucial factors for producing colonial natural history and collecting animals: enslaved labor and the institution of slavery. “Supposing that some member of your [Royal] Society (which I fancy may be no great difficulty to do)”, he suggested, “can prevaile so far with the royall affrican company & bestow on me 4 or 6 young negroes it will be but a small matter to them yet with which flock I can procure my selfe may in

²⁹² Joseph Ewan, and Nesta Ewan, *John Banister and His Natural History of Virginia, 1678-1692* (Urbana: University of Illinois Press, 1970), 74-75.

²⁹³ Helen C. Rountree, *The Powhatan Indians of Virginia: Their Traditional Culture*, (Norman: University of Oklahoma Press, 1989), 6, 39-44. Banister’s letter was likely written to either the physician Martin Lister or the botanist Leonard Plukenet.

time make me a pretty livelyhood and to tell you that I am as willing to give any token encouragement to the carrying on so gradual and so copious a work.”

Banister’s request was commonplace among those engaged in producing and circulating faunal knowledge related to natural history in English America. Natural history and natural philosophy were deeply imbricated within routes of slaving and networks of the Atlantic slave trade. The founding members of the Royal Society for Improving Natural Knowledge, several of whom were among Banister’s clients, conceived of their society at its founding as the “Twin-Sister” of the Royal African Company. Charles II granted a royal charter to both corporations in 1660, and overlapping memberships bound both organizations together.²⁹⁴ “In both these *Institutions* begun together,” an English historian wrote, the Stuart crown “imitated the two most famous *Works*” of Solomon, “who at the same time sent to *Ophir* for *Gold*, and compos’d a *Natural History*, from the Cedar to the Shrub.” From its inception, the Royal Society frequently relied on reports from slaveholders in the American colonies in the late seventeenth century, such as the Virginia slaveholder and silkworm experimenter Edward Digges of York County.²⁹⁵

Though the fate of Banister’s appeal for slaves to assist him is unclear, in 1690 the minister held two enslaved Africans in bondage and acquired a one thousand seven hundred thirty-five acre plantation in the parish along the Appomattox River.²⁹⁶ Francis Nicholson, the lieutenant governor of the colony, gave the minister the plantation near

²⁹⁴ Thomas Sprat, *The History of the Royal Society of London, for the Improving of Natural Knowledge*, (London: Printed by T.R., for J. Martyn at the Bell without Temple-bar, and J. Allestry, at the Rose and Crown in Duck-lane, Printers to the Royal Society, 1667), 407-408. On the extensive entangled histories of the Royal Society and the Royal African Company see: Mark Govier, “The Royal Society, Slavery and the Island of Jamaica: 1660-1700.” *Notes and records of the Royal Society* 53, no. 2 (1999): 203-217.

²⁹⁵ Lyon G. Tyler, “Pedigree of a Representative Virginia Planter, Edward Digges, Esq.” *The William and Mary Quarterly* 1, no. 4 (1893): 208-213.

²⁹⁶ Ewan and Ewan, *John Banister and His Natural History of Virginia*, 87.

Hatcher's Run. While Banister offered no acknowledgement to either of these enslaved people, or the wealth he derived from his plantation, in his unpublished natural history fragments or his letters on natural history appearing in the *Philosophical Transactions*, it is possible that these two people collected animals for the minister. Perhaps they gathered the "10 or 12 *Species*" of land snails, mussels, and insects he shipped across the Atlantic to the Royal Society in London between 1689 and 1692.²⁹⁷ What is certain is that Banister accrued wealth from their labor on his plantation and gained status as a slaveholder and reverend in the colony.²⁹⁸ Banister benefited from the friendship and support of other enslavers as well, including William Byrd I.²⁹⁹

Banister's simultaneous engagements in enslaving people and producing a natural history illuminates the ways in which scientific networks involving the exchange and circulation of animals across the Atlantic world in the era of the slave trade came to be entangled with routes of slaving and fortunes amassed from plantation slavery in the colonies beginning in the late seventeenth century.³⁰⁰ John Clayton, rector of James Town parish in Virginia between 1684 to 1686, and a contemporary of Banister, likewise relied on enslaved people in his natural history career. In a letter to the Christian natural philosopher Robert Boyle, Reverend Clayton described collecting lizards from a recently drained swamp, and learning from enslaved men of a reptile "wch one of them cald a

²⁹⁷ John Banister, "The Extracts of Four Letters from Mr. John Banister to Dr. Lister, Communicated by Him to the Publisher." *Philosophical Transactions (1683-1775)* 17 (1693): 667-92.

²⁹⁸ On Banister's plantation, which his son John inherited, see: Thomas Jefferson Wertenbaker, *The Planters of Colonial Virginia* (Princeton: Princeton University Press, 1922), 158.

²⁹⁹ Ewan and Ewan, *John Banister and His Natural History of Virginia*, 91.

³⁰⁰ James Delbourgo, "Divers Things: Collecting the World Under Water." *History of Science* 49, no. 2 (2011): 149-185; James Delbourgo, *Collecting the World: Hans Sloane and the Origins of the British Museum*, (Cambridge: Harvard University Press, 2017); Kathleen S. Murphy, "Collecting Slave Traders: James Petiver, Natural History, and the British Slave Trade." *William & Mary Quarterly* 70, no. 4 (2013): 637-670; Susan Scott Parrish, *American Curiosity: Cultures of Natural History in the Colonial British Atlantic World*, (Chapel Hill: University of North Carolina Press, 2012), 259-306.

blew ground Lizard.”³⁰¹ Clayton “profered six pence to” the enslaved workers to “skin it for me”, yet the men found the animal “so loathsome” they refused the clergyman’s offer.

Moreover, naturalists further pursued plans to acquire enslaved people, for their skill as collectors and as plantation laborers, to gather faunal specimens and observations into the early eighteenth century. While writing a natural history of North and South Carolina, Florida, and the Bahama Islands, between 1772 and 1726, Mark Catesby purchased an enslaved man for £20 to assist him in collecting plants, animals, and minerals during his expedition across the southeastern colonies of British America.³⁰² After arriving in South Carolina, Catesby quickly learned to appreciate the value of enslaved people as collectors, particularly upon learning that several men at “a place in *Carolina* called *Stono*” unearthed “three or four teeth of a large animal, which, by the concurring opinion of all the *Negroes*, native *Africans*, that saw them, were the Grinders of an Elephant.”³⁰³ While the ethnolinguistic origins of these men remains obscure, their status as valuable sources of knowledge for Catesby and his patrons is evident in this comparatively rare acknowledgement. Moreover, like Banister, Catesby benefited from others involved in either slaving or slaveholding. Among Catesby’s backers for his American expedition were James Brydges, the duke of Chandos and a significant shareholder in the Royal African Company, and the Chelsea physician Hans Sloane,

³⁰¹ Edmund Berkeley, and Dorothy S. Berkeley. “Another ‘Account of Virginia’: By the Reverend John Clayton.” *The Virginia Magazine of History and Biography* (1968): 415-436, 421.

³⁰² Amy Meyers and Margaret Pritchard, “Introduction.” In *Empire’s Nature: Mark Catesby’s New World Vision*, edited by Amy Meyers and Margaret Pritchard, 1-33, (Chapel Hill: University of North Carolina Press, 1998).

³⁰³ Mark Catesby, *The Natural History of Carolina, Florida, and the Bahama Islands*, volume I (London: Printed at the expence of the Author; and sold by W. Innys and R. Manby, by Mr. Hauksbee, and by the Author, at Mr. Bacon’s in Hoxton, 1731), 18. Copy held at The Library Company of Philadelphia.

himself a Jamaican slaveholder by marriage.³⁰⁴ While traveling through the southeast, Catesby's contacts, including the planter William Byrd II, introduced him to number of wealthy planter clans, including the Moore, Bull, Johnson, and Waring families of South Carolina, who hosted him during his travels.

Historians have not overlooked the entangled networks of science and slavery in the early modern Atlantic world, and science and slavery itself now constitutes a rich academic field. However, examining the circulation of animal specimen collections through the slave trade, the production of knowledge of faunal environments, and the role of enslaved collectors whose skills shaped ongoing efforts toward attaining universal knowledge in the metropole deepens our understanding of the roles slavers, enslaved people, and animals played in expanding scientific networks in the early British Atlantic world.

Men of science such as Banister and Catesby collected animals for several reasons related to broader ideals involving curiosity, the natural world, and improvement. As a foundation for natural theology, studying animals—particularly through anatomy and observing relations between species—enabled an individual to improve their understanding of the providential design of the natural world.³⁰⁵ Slaveholding naturalists and their allies in Protestant Britain, such as Reverend Banister, conceived of their own piety and knowledge of nature as interrelated.³⁰⁶ Indeed, among Banister's chief correspondents and patrons was Henry Compton, Bishop of Oxford and Bishop of

³⁰⁴ David Brigham, "Mark Catesby and the Patronage of Natural History in the First Half of the Eighteenth Century." In *Empire's Nature: Mark Catesby's New World Vision*, edited by Amy Meyers and Margaret Pritchard, 91-147. (Chapel Hill: University of North Carolina Press, 1998).

³⁰⁵ Richard Drayton, *Nature's Government: Science, Imperial Britain, and the "Improvement" of the World*, (New Haven: Yale University Press, 2000), 3-4.

³⁰⁶ Drayton, *Nature's Government*, 4, 7, 13.

London, who from his position in Fulham Palace encouraged ministers to serve the church in Virginia and collect useful insects, plants, and other natural phenomena.³⁰⁷

Compton, not unlike others within the Anglican Church, fully believed in the compatibility of Christianity and slavery.³⁰⁸ Cabinets of natural history specimen jars loaded with preserved shells, insects, fish, birds, and mammals, in addition to printed books and letters filled with descriptions of animals that naturalists failed to collect in situ, presented nature as a series of particulars that amounted to a providential whole. Yet these collections crucially originated within the slave trade and the world of chattel slavery across the British Atlantic.

Collecting animals through trade networks and on plantations fit within wider efforts to accumulate natural knowledge in the service of colonial projects. Animals that produced commodities such as honey, wool, silk, drugs, and meat, attracted the attention of naturalists prospecting for profitable improvements. In addition, the scope of a naturalist's observations extended beyond established goods towards more speculative subjects.³⁰⁹ Expeditions to gather useful and interesting animals further offered naturalists opportunities to present their work to curry interest among powerful patrons, including the royal family, and present themselves as dedicated subjects in the fashion of their antique exemplar Pliny the Elder.³¹⁰

Slavery undergirded these intersecting desires for improving knowledge, status, and power in the eighteenth century British Atlantic. While many collectors served as

³⁰⁷ Ewan and Ewan, *John Banister and His Natural History of Virginia*, 32-33.

³⁰⁸ John K. Nelson, *A Blessed Company: Parishes, Parsons, and Parishioners in Anglican Virginia, 1690-1776* (Chapel Hill: University of North Carolina Press, 2003), 370, 440.

³⁰⁹ Drayton, *Nature's Government*, 86; Harriet Ritvo, *The Animal Estate: The English and Other Creatures in the Victorian Age*, (Cambridge: Harvard University Press, 1987), 45-81.

³¹⁰ Trevor Murphy, *Pliny the Elder's Natural History: The Empire in the Encyclopedia*, (Oxford: Oxford University Press, 2004).

ministers or missionaries for slaveholding institutions, such as the Society for the Propagation of the Gospel in Foreign Parts, others unaffiliated with evangelical projects hoped to further understand and assemble specimens of what they saw to be an ordered universe. Among these men were factors for the Royal African Company, surgeons of the South Sea Company, and merchant-planters in the Caribbean. Several of these individuals explicitly described how collecting animals fit within plans to improve their mind and improve their careers throughout the empire and its margins. Others searched after commodities and projects to enrich themselves. This chapter explores how these disparate, interconnected engagements between naturalists, enslavers, and enslaved people developed across three geographic regions in turn: slave trading castles and outposts in Atlantic Africa, slave depots in New Spain, and plantations throughout the Caribbean.

Atlantic Africa

Factors and slavers in the slave trade serving the Royal African Company used their positions at the company's coastal forts, island outposts, and other stations to collect animal specimens to be transshipped to correspondents in England. Separate traders, or interlopers not affiliated with the African Company, also gathered new creatures in Atlantic Africa. While not specifically instructed to collect fauna by either the African Company or interloper firms, merchants used their status, location, and faunal collections to embed themselves within wider imperial circuits of knowledge production, circulation, and consumption. Eco-cultural networks of slaving coexisted alongside and supported

networks of science. In short, the geography of natural history overlapped the geography of slaving.

Edward Barter, an Anglo-Fante factor at Cape Coast Castle on the Gold Coast, collected small marine animals during his tenure at the castle. As a young man, the African Company sent Barter, or Bartar, from Cape Coast to England sometime between 1690 and 1691 for his education. After his return to West Africa in 1693, Barter became a powerful figure in the company by collecting debts held by the king of Eguafu, negotiating the company's settlement at Fetu, serving as a diplomat to Akwamu and Allampo, and acting as an interpreter and go-between for the company and their Fante- and Akan-speaking partners at Komenda and other outforts.³¹¹ A Dutch merchant in the region during the late seventeenth century described Barter as holding the "greatest Power on the Coast, than all the three *English* Agents together" at Cape Coast Castle.³¹² From his residency at Cape Coast, Barter commanded his own *asafo*, or military company, for his personal defense.³¹³

Beyond his mercantile duties as a factor for the African Company, Barter, an enslaver himself, forwarded animals from the Gold Coast to the London apothecary

³¹¹ Kwame Yeboah Daaku, *Trade and Politics on the Gold Coast, 1600-1720: A Study of the African Reaction to European Trade*, (Oxford: Clarendon Press, 1970), 98-99. Bayo Holsey, *Routes of Remembrance: Refashioning the Slave Trade in Ghana*, (Chicago: University of Chicago Press, 2008), 31; Judith Spicksley. "Pawns On the Gold Coast: The Rise of Asante and Shifts in Security for Debt, 1680-1750," *The Journal of African History* 54, no. 2 (2013): 147-75. Like many go-betweens in the Atlantic World, Barter's grip on the slave trade led the Company, led by Agent-General Dalby Thomas, to oust him from Cape Coast in 1703.

³¹² Willem Bosman, *Nauwkeurige Beschryving van de Guinese Goud- Tand- en Slave-Kust* (Utrecht: Anthony Schouten, 1704), 51-52. Barter lived in what one scholar describes as a "miniature castle" sited next to Cape Coast, see: I. Chukwukere, "Akan Theory of Conception. Are the Fante Really Aberrant?" *Africa: Journal of the International African Institute* 48, no. 2 (1978): 135-48.

³¹³ Doran H. Ross, "'Come and Try': Towards a History of Fante Military Shrines." *African Arts* 40, no. 3 (2007): 12-35; Ansu K. Datta, and R. Porter. "The Asafo System in Historical Perspective." *The Journal of African History* 12, no. 2 (1971): 279-97.

James Petiver, including a limpet snail, a butterfly, and an “elegant hairy Catterpillar.”³¹⁴

As James Delbourgo has carefully demonstrated, Petiver collected collectors like Barter interested in gathering fauna across the globe to draw on for specimens to add to his storehouse of natural objects and artifacts in the metropole.³¹⁵ Petiver, not unlike other encyclopedic collectors, imagined a collection of naturalia that added up to a kind of cosmography of universal knowledge.³¹⁶ Animals and other items gathered from around the globe, Petiver intended, would in their totality provide useful knowledge for those interested in developing the empire’s commerce and insight into the heavenly order of nature. Barter’s collections were not exceptional, as other agents of the company, including the chaplain of Cape Coast, John Smyth, and John Kirckwood, who gathered butterflies from Cabinda and Ouidah as a slaver, forwarded specimens to Petiver during their careers in the slave trade.³¹⁷

Petiver advised individuals such as Barter to equip their own subordinates with “2 or 3 quires of brown paper & Insect books to have filled by their servants or slaves” who they should encourage in collecting animals.³¹⁸ In a set of directions to another collector,

³¹⁴ James Petiver, *Musei Petiveriani centuria prima, rariora naturae continens: viz. animalia, fossilia, plantas, ex variis mundi plagis advecta, ordine digesta, et nominibus propriis signata*. [London], 1695-1703. 87-89. Eighteenth Century Collections Online; Petiver, *Catalogus Classicus & topicus, omnium rerum figuratarum in V. decadibus, seu primo volumine Gazophylacii naturæ & artis; singulis ad proprias tabulas & numeros relatis. A Jacobo Petiver, ...* [London], [1709]. Eighteenth Century Collections Online. Petiver, *Gazophylacii naturæ & artis decas septima & octava. In quæ Animalia, Quadrupeda, Aves, Pisces, Reptilia, Infecta, Vegetabilia, Fossilia & Lapides Figura insignes, Corpora Marina, Stirpes Minerales e Terra eruta, &c. Item Antiquaria, Numismata, Gemmae excisae, Lucernae, Urnae, Instrumenta varia, Machinae, Busta, Effigies clarorum Virorum, omniaque Arte producta. Descriptionibus brevibus & iconibus illustrantur. Patronis suis & moecenatibus d.d.d. Jacobus Petiver. S.R.S.* [London], [1711?]. Eighteenth Century Collections Online.

³¹⁵ Delbourgo, “Listing People”, 737.

³¹⁶ Sarah Irving, *Natural Science and the Origins of the British Empire* (New York: Routledge, 2015.)

³¹⁷ On Kirckwood see: Murphy, “Collecting Slave Traders”, 653; Maria M. Romeiras, Maria Cristina Duarte, Arnaldo Santos-Guerra, Mark Carine, and Javier Francisco-Ortega. “Botanical Exploration of the Cape Verde Islands: From the Pre-Linnaean Records and Collections to Late 18th Century Floristic Accounts and Expeditions.” *Taxon* 63, no. 3 (2014): 625-40.

³¹⁸ Raymond P. Stearns, “James Petiver, Seventeenth-Century Promoter of Natural Science”, in *Proceedings of the American Antiquarian Society*, 62, no. 2, (1952), 243-365, 281.

Petiver ordered his assistants to “Procure Correspondents for me wherever you come ... showing their Slaves how to collect things by taking them along with you when you are abroad.”³¹⁹ Petivers’ correspondents hoped to be credited by name in his printed specimen lists, especially the *Gazophylacii Nature & Artis* catalogues, and introduced to advantageous professional contacts. However, as an already powerful merchant and political figure in the region, Barter’s reasons for collecting animals on the Gold Coast remains opaque.³²⁰

In addition to employees of the African Company, separate traders who bartered for captives outside the castle trade maintained by the company also forwarded specimens of West African animals to London via slave ships in the early eighteenth century. The London-based slave trader Richard Harris, a longstanding opponent of the African Company’s monopoly over the trade, sent fauna collected by his “Ginny masters” during slaving voyages to the Gold Coast and the Bight of Benin carried out in the 1720s to the physician Hans Sloane.³²¹ Harris’ captains put together several cargos for Sloane, which were sent after the ships delivered their captives to markets and trading bases across the Atlantic in Barbados, Jamaica, Buenos Aires, Caracas, and Puerto Rico. Among the animals Harris’ slavers sent were a hawksbill tortoise, the tooth “of a monstrous Sea horse”, guinea fowl, “large black shining beetles with 2 horns”, a “Guinea

³¹⁹ Stearns, “James Petiver, Seventeenth-Century Promoter of Natural Science”, 280.

³²⁰ Given his power and status, it is very unlikely Barter collected for Petiver to increase his political authority on the Gold Coast. However, it may be likely that he either collected to include himself within Petiver’s network hoping to learn of new products or innovations in medical or economic botany. Or, perhaps, Barter simply indulged his own interest for collecting animals. Dominik Nagl has written a fascinating history of Barter’s son, Thomas Barter, who likely became enslaved in Boston in 1712 after traveling from the Gold Coast to London, Weymouth, New York, Cadiz, Virginia, and Boston. Nagl’s article adds to the literature on the crystallization of blackness and slavery in the early Black Atlantic world. See: Dominik Nagl, “The Governmentality of Slavery in Colonial Boston, 1690-1760.” *Amerikastudien / American Studies* 58, no. 1 (2013): 5-26.

³²¹ Sloane MS 4045, f 37, British Library, London. James A. Rawley, “Richard Harris, Slave Trader Spokesman.” *Albion: A Quarterly Journal Concerned with British Studies* 23, no. 3 (1991): 439-58.

Sheeps Skin”, deer, lizards, “a Cameleon from Angola”, and a gazelle.³²² Harris’ collecting efforts bolstered Sloane’s accumulation of global animals, one small part of his collection dedicated to universal knowledge, and reinforced his political standing with the Board of Trade and Parliament as an expert on commerce, trade, and natural history in Atlantic Africa, New Spain, and North America.³²³

Other factors collected animals to pursue professional and personal ambitions at the margins of the African Company’s slaving networks. Francis Moore, a clerk, who later was promoted to the position of factor for the African Company, at James Island in the Gambia River, took notes on rare fauna in a journal during his residence in Upper Guinea from 1730 to 1735. Fort James, on James Island, received captives from smaller outforts at Cabata, Juffure, Bintang, Geregia, Colar, Joar, Cuttejar, Samy, and Wally.³²⁴ While cannons surrounded Fort James, cane palisades defended the smaller outforts, or “lodges”, of the African Company in the Senegambia.³²⁵ Moore stated he kept his journal “to improve myself, and keep in my Mind the Things worth Notice.”³²⁶ The range of observations in Moore’s journal display how information on natural history and animals could be useful for both individuals and the institutions they served.

³²² MSS Sloane, Catalogues, “Insects” and “Quadrupeds”, Natural History Museum, London.

³²³ Rawley, “Richard Harris, Slave Trader Spokesman”, 441-442.

³²⁴ W. Raymond Wood, “An Archaeological Appraisal of Early European Settlements in the Senegambia.” *The Journal of African History* 8, no. 1 (1967): 39-64 ; Donald R. Wright, “Darbo Jula: The Role of a Mandinka Jula Clan in the Long-Distance Trade of the Gambia River and Its Hinterland.” *African Economic History*, no. 3 (1977): 33-45; Liza Gijanto, and Sarah Walshaw. “Ceramic Production and Dietary Changes at Juffure, Gambia.” *The African Archaeological Review* 31, no. 2 (2014): 265-97.

³²⁵ Wood, “An Archaeological Appraisal of Early European Settlements in the Senegambia”, 42.

³²⁶ Francis Moore, *Travels Into the Inland Parts of Africa*, 2nd ed. (London: Printed by D. Henry and R. Cave, at St. John’s Gate, 1738), v-vi.

After returning to England, Moore revised his journal into a travel account, which he published in 1738.³²⁷ Moore's account included ethnographic observations on various Senegambian cultures and societies, notes on economic botany, and an account of the value of the Gambia River in the slave trade as a pivotal waterway for trafficking enslaved captives and other commodities for Britain's Atlantic empire.

In Moore's description of people in West Africa he differentiated between Arabs and "Negroes," the latter whom he claimed to be "a Race of People who appear to be different from the rest of Mankind," and possibly an entirely different species of humans distinct from Europeans.³²⁸ While striking, Moore's biblically unorthodox claims were not exceptional in this period. John Atkins, a naval surgeon who travelled between West Africa, Brazil, and the West Indies between 1721 and 1723 on a mission to suppress piracy in the region and defend British slavers, made similar arguments regarding West Africans. In his account of his career aboard the ships *Swallow* and *Weymouth*, Atkins remarked that after scrutinizing the hair and skin color of West Africans he became "persuaded that the black and white Race have, *ab origine*, sprung from different-coloured first Parents."³²⁹ It is noteworthy that Atkins and Moore's racial ideas originated from their slavery-related careers in Atlantic Africa, ideas that would find later elaboration from Caribbean slaveholders.

Unusual animals that Moore observed in towns and villages along the Gambia River caught the young writer's attention immediately upon his arrival in 1730. Several

³²⁷ Matthew H. Hill, "Towards a Chronology of the Publications of Francis Moore's "Travels into the Inland Parts of Africa" *History in Africa* 19 (1992): 353-68.

³²⁸ Moore, *Travels Into the Inland Parts of Africa*, xxii.

³²⁹ John Atkins, *A Voyage to Guinea, Brasil, and the West-Indies; in His Majesty's Ships, the Swallow and Weymouth*, (London: Printed for Caesar Ward and Richard Chandler, at the Ship, between the Temple-Gates in Fleet-Street, 1735), 39.

of the creatures Moore saw were not novel to English naturalists, such as the camel he saw the king of Demel offer as a gift to the king of Barsally.³³⁰ Others, such as the “Sea-Horse”, or hippopotamus, and crocodiles, attracted him as striking “Matters of Curiosity” that he believed to be faunal evidence that the Gambia, Senegal, and Sierra Leone rivers fed into the Nile, as he triangulated how previous authorities described that the animals could be found at each site.³³¹

Moore included descriptions of animals in the Gambia that he believed he uniquely discovered, and intended to furnish collections and descriptions of such animals to bolster his own credibility and career as a naturalist in England rather than a slave trading factor in Atlantic Africa. While serving the African Company as a factor at Joar, a town and trading outpost on the banks of the river near Ballanghar, Moore collected and wrote in detail on a number of chameleons he found. Correcting previous writings of those who “think [chameleons] live upon the Air only, and that the Object before them makes them change their Colour,” Moore watched the animals feed on flies and change their coloration “as they please.”³³² The factor’s careful notes detailed how the animal used its tongue to catch prey, and Moore claimed to see a chameleon that varied its coloration twenty times in a single day.

Moore hoped his chameleon notes and collections would establish him as a naturalist in England on his return from the Gambia. “I thought that the Tongue and Eyes of this Creature had been observed only by myself,” he later commented, yet “after I

³³⁰ Moore, *Travels Into the Inland Parts of Africa*, 63. On Barsally see: Martin A. Klein, “Servitude among the Wolof and Sereer of Senegambia,” in *Slavery in Africa: Historical and Anthropological Perspectives*, ed. Suzanne Miers and Igor Kopytoff (Madison: University of Wisconsin Press, 1977), 335–363. To date, I have found no sources on Demel, presumably another Wolof-speaking state.

³³¹ Moore, *Travels Into the Inland Parts of Africa*, 20.

³³² Moore, *Travels Into the Inland Parts of Africa*, 75–76.

return'd to *England*, going to see the Collection made by that Learned Gentleman Hans Sloane, I found nothing had escaped his Curiosity, and that the Tongue of a Cameleon had been by him preserv'd in Spirits." Despite his disappointment over seeing the animal in the astonishingly diverse collections of the Chelsea physician, Moore nevertheless used the chameleon as evidence of the harmonious order of nature, noting of the animal's tongue "that Nature has wisely provided the Cameleon with a Weapon" for preying on flies in the same manner as an elephant uses its trunk.

Moore's quest for status as a naturalist at times stretched the limits of credible information in natural history. At Joar, he claimed to see while hunting "a remarkable Bird, which comes abroad at Dusk, with four Wings, and about the Bigness of a Pigeon."³³³ He interviewed villagers at Joar to ask if the animal he saw was a "a Bird, or of the Bat-Kind," yet never found an answer. Uncertainty clouded his description of the animal, as he never successfully collected a specimen, "tho' I have frequently shot at them."³³⁴

Though the four-winged bird stretched the limits of his credibility as a naturalist, Moore found other animals in the Gambia River he knew would attract the attention of natural philosophers in the British Atlantic for their unusual physical properties. While serving as a factor at the African Company's outpost at Yamyamacunda, Mandinka fishermen netted a number of fish at a nearby lake.³³⁵ In his book, Moore described the men to be his assistants, and one fisherman warned him that one of the fish, which

³³³ Moore, *Travels Into the Inland Parts of Africa*, 76.

³³⁴ It is possible the creature he saw was an African species of nightjar. In his journal of his residency at Sierra Leone from 1795 to 1796, Adam Afzelius, an apostle of Linnaeus, wrote in similar terms on the nightjar.

³³⁵ On Yamyamacunda see: Christopher DeCorse, "Tools of Empire: Trade, Slaves, and the British Forts of West Africa." in *Building the British Atlantic World: Spaces, Places, and Material Culture, 1600-1850*, edited by Daniel Maudlin and Bernard L. Herman, (Chapel Hill: University of North Carolina Press, 2016), 169-175.

resembled a gudgeon, would “suffer me to come near it, telling me that it would kill me.”³³⁶ Moore watched as his companions first used sticks to cautiously touch the fish from the safety of the shore until reaching out to probe its body with their hands. “At last,” the factor noticed “when they touched it with their Fingers, they could not bear it the twentieth Part of a Minute.” Moore concluded the fish was not a mere gudgeon, but an electric “Torpedo, or Numb-Fish.” When the factor summoned enough “Curiosity” to touch it with his own fingers, he felt a shock travel through his body as his arm became “dead quite up to my Elbow.”

Moore touched the animal again a few more times, using his body as an instrument for conducting and observing electricity. It is possible Moore hoped by employing his body at Yamyamacunda he could accrue recognition for risking his limbs to position himself within discussions in natural philosophy over electricity.³³⁷ As the ray’s body continued to produce electric shocks even after it died out of the water, Moore ordered one of his companions to touch the animal, and concluded that it’s shocks derived from its skin, “which, when dried, had no Effect at all.”

Moore, a clerk and agent in the slave trade, like most individuals throughout the trade, lacked any formal training in natural history or the study of animals. Recognizing the diverse careers of figures such as Barter, Harris, and Moore, underscores how individuals employed in the slave trade, or in employments related to the trade, used Atlantic networks of slave ships and castle factories to collect fauna and indulge their animal interests. Thomas Thompson, a missionary of the Society for the Propagation of

³³⁶ Moore, *Travels Into the Inland Parts of Africa*, 124-125.

³³⁷ James Delbourgo, *A Most Amazing Scene of Wonders: Electricity and Enlightenment in Early America*, (Cambridge: Harvard University Press, 2006), 167.

the Gospel in Foreign Parts, for instance, collected information about animals on the Banana Islands during his transatlantic journey to Cape Coast Castle.

In 1752, the Society approved Thompson's request to relocate from his parish in Monmouth, New Jersey, to become the chaplain of Cape Coast and "make a Trial" of introducing the doctrines of the Church of England in Africa, as well as minister to the factors and other servants of the Company of Merchants Trading to Africa at the castle.³³⁸ While the Society ministered to enslaved people in North America and the Caribbean in the early eighteenth century, by the time of Thompson's mission, the Society became an intellectual and institutional supporter of chattel slavery.³³⁹ Thompson and his brethren taught and believed in the compatibility of enslavement and Christianity within Britain's empire.

After crossing the Atlantic, Thompson arrived at James Island in the Gambia River in January, 1752. From the Gambia he sailed south to the Banana Islands and Sierra Leone before arriving at Cape Coast Castle. Throughout his journey, Thompson recorded brief notes on animals including birds, fish, insects, and livestock. In a passage of his journal, Thompson attempted to take on the role of a naturalist through a longer description of a particular species of arachnid he encountered en route to Cape Coast.

³³⁸ Thomas Thompson, *An Account of Two Missionary Voyages*, (London: Printed for Benj. Dod., at the Bible and Key in Ave-Mary-Lane, near St. Paul's, 1758), 23. Sylvia R. Frey, and Betty Wood, *Come Shouting to Zion: African American Protestantism in the American South and British Caribbean to 1830*, (Chapel Hill: University of North Carolina Press, 2000), 28-29. Ty M. Reese, "'Sheep in the Jaws of So Many Ravenous Wolves': The Slave Trade and Anglican Missionary Activity at Cape Coast Castle, 1752-1816." *Journal of Religion in Africa* 34, no. 3 (2004): 348-72. Thompson, from his education in theology and given the stated positions of the Society, preached the harmonious compatibility of slavery and Christianity. After his residency as chaplain at Cape Coast, the reverend returned to England and published *The African Trade for Negro Slaves, Shewn to be Consistent with the Principles of Humanity*, dedicated to his patrons, the African Company of Merchants, in 1772. On the SPG and slavery see: Travis Glasson, *Mastering Christianity: Missionary Anglicanism and Slavery in the Atlantic World*, (Oxford: Oxford University Press, 2011), 75-110; Glasson, "Missionaries, Methodists, and a Ghost: Philip Quaque in London and Cape Coast, 1756-1816." *Journal of British Studies* 48, no. 1 (2009): 29-50.

³³⁹ Glasson, *Mastering Christianity*.

While anchored at the Banana Islands, an archipelago within Yawri Bay, Thompson hired several indigenous African men, likely Temne-speakers affiliated or familiar with English merchants and slavers, to collect tarantulas for him. In return, the reverend exchanged a flask of rum for each specimen the men gathered.³⁴⁰ One collector brought the missionary a number of live tarantulas, including “a Bag that they are bred in, very much like a Sheep’s Bladder whilst it is green.” While examining the sample, Thompson cut open the egg sac and watched as a number of young spiderlings crawled out.

Between the pages of Thompson’s reports on the status of introducing the gospel to Atlantic Africans in Sierra Leone and later the Gold Coast, the reverend’s description of tarantulas appeared as an instructional memorandum for future missionaries in avoiding these venomous creatures. Thompson described the animal’s body in detail, including its legs, abdomen, and back, which he likened to a “Shell resembling that of a Crab.” The reverend cautioned that “in the shelly back, standing forward, are two large Claws, armed with each a Sting, very sharp, and crooked shutting in like a Cat’s Nails.”³⁴¹ Thompson conversed with his collectors on the Banana Islands, and learned from these anonymized assistants that “this Enemy, that it attacks unprovoked, springing out into the Paths as they go along; and they say, that Oil cures the Poison of it.”³⁴² Thompson intended this Atlantic African materia medica would prove vital to future missions of the Society on the continent. The inclusion of the tarantula description in the missionary’s account of his career in Atlantic Africa exemplifies the kind of useful knowledge surrounding animals that emerged from the routes of the slave trade.

³⁴⁰ Thompson, *An Account of Two Missionary Voyages*, 27.

³⁴¹ Thompson, *An Account of Two Missionary Voyages*, 28.

³⁴² Thompson, *An Account of Two Missionary Voyages*, 29.

Natural history collectors residing in London, far from the faunal environments of the Atlantic slave trade, sought after animal curiosities from West Africa in the second half of the eighteenth century by recruiting individuals employed in the slave trade, including traders, slaveholders, and, at times, enslaved people. Dru Drury, for instance, relied on slave trading networks to furnish his vast entomological collections, which included Atlantic African fauna.

A silversmith by training, Drury and his collaborator Moses Harris assembled a circle of insect enthusiasts in 1762 to found the Aurelian Society of London.³⁴³ Drury esteemed science as a fundamentally ennobling endeavour. Like other naturalists of the eighteenth century, Drury held that natural history improved one's mind by refining an individual's "Standard of Judgement."³⁴⁴ For improving the nation and society, Drury praised natural history as an enterprise "of no small importance to mankind, since it may not only promote trade, arts, and sciences, but be conducive to the immediate happiness and safety of men's lives" by accumulating, classifying, and experimenting with valuable agricultural and medicinal plants and minerals.³⁴⁵ Assembling animal collections also improved the mind and society.³⁴⁶ However, Drury's ambition to gather animals and other natural curiosities relied upon the violent world of traffic in enslaved captives across the ocean carried out by slave traders.

Drury began collecting insects in the 1760s by directly hiring collectors embedded in the slave trade in West Africa. The silversmith built up epistolary networks

³⁴³ Michael A. Salmon, *The Aurelian Legacy: British Butterflies and Their Collectors* (Berkeley: University of California Press, 2000), 114-115.

³⁴⁴ Drury to Pallas, November 12, 1767, cited in T.D.A. Cockerell, "Dru Drury, an Eighteenth Century Entomologist." *The Scientific Monthly* 14, no. 1 (1922): 67-82, 70.

³⁴⁵ Dru Drury, *Illustrations of Natural History*, vol. 3 (London: Printed for the author and sold by B. White at Horace's Head in Fleet-street, 1782), xvii.

³⁴⁶ Dru Drury, *Illustrations of Natural History*, vol. 1 (London: Printed for the author and sold by B. White at Horace's Head in Fleet-street, 1770), preface.

of exchange with slavers and slaveholders that led to further contacts in the Caribbean and North America. Drury corresponded with several naturalists in the West Indies, including slaveholders in Antigua and Jamaica. Tesser Samuel Kuckhan, a slaveholder in Saint Andrew parish, Jamaica, corresponded with Drury over his collections of African and American insects. Drury hoped the planter would host one of his collectors in America, John Abbot.³⁴⁷ In Bath and Dinwiddie County, Virginia, Drury maintained correspondence with two slaveholders, Reverend Deveraux Jarrat and James Greenway, both interested in natural history.³⁴⁸ In 1772, Drury expanded his network of collectors significantly by publishing a short instructional pamphlet titled *Directions for Collecting Insects in Foreign Countries*.

The routes of the slave trade and the transit of slave ships from England to Atlantic Africa and further on to American plantations proved advantageous for Drury's collections. In a letter to Mr. Hugh, most likely a surgeon aboard a slave ship, who was "going to Africa with Capt. Johnson" in 1762, Drury requested he collect "Locusts and Grasshoppers" from Atlantic Africa and Jamaica. The silversmith specified the surgeon collect insects which appeared "being just like leaf and branch of a tree, others like half a

³⁴⁷ On Kuckhan as a slaveholder see: *The Laws of Jamaica: 1792-1799*, (Kingston: Printed by Alexander Aikman and Son, 1811). Private Acts, 1794. Kuckhan forwarded a collection of insects to the Royal Society before his death in 1775, and also contributed a paper to the *Philosophical Transactions* in 1770: "Four Letters from Mr. T. S. Kuckhan, to the President and Members of the Royal Society, on the Preservation of Dead Birds." *Philosophical Transactions (1683-1775)* 60 (1770): 302-20. Kuckhan's letter indicates his own interest in collecting and preserving specimens, an interest supported by his wealth as a slaveholder at his plantation, Charlottenburgh, in Saint Andrew parish. Abbot collected insects, and birds, for Drury and other English naturalists in Virginia and Georgia from 1773 until approximately 1797. On Abbot see: Joseph Ewan, "The Natural History of John Abbot: Influences and Some Questions." *Bartonia*, no. 51 (1985): 37-45.

³⁴⁸ On Jarratt see: Douglass Adair, and Devereux Jarratt. "The Autobiography of the Reverend Devereux Jarratt, 1732-1763." *The William and Mary Quarterly: A Magazine of Early American History* (1952): 346-393. On Greenway see: Edward Wyatt, "Dr. James Greenway, Eighteenth Century Botanist, of Dinwiddie County, with an Account of Two Generations of His Descendants." In *Genealogies of Virginia Families: From Tyler's Quarterly Historical and Genealogical Magazine, Volume 1*, 130-40 (Baltimore: Genealogical Publishing Company, 2007).

dozen straws joyn'd together.”³⁴⁹ Drury supplied another slave trader, Captain Mayle of the sloop *Hound*, with boxes, cork, nets, pins, and other tools for collecting insects in West Africa on a voyage in 1766.³⁵⁰ Writing to one Mr. Richards, a surgeon aboard the slave ship *Tartar* bound for West Africa in 1769, Drury entreated he collect “insects from Princess Island.”³⁵¹ In 1770, he wrote to a ship’s chief mate, Mr. Stewart, with instructions for transporting the collections made by Richards from Whitstable to London upon his return to England.³⁵²

Drury used his connections in the slave trade not only to obtain novel specimens but also rare insects already well-known to entomologists. Learning of a slave ship bound for the Bight of Bonny, Drury sent the captain, Richard Cowley, a print of a goliath beetle, and asked that he “show this print to some of the natives both at Calabar and Princess and if it is possible to get such a one” for his collection.³⁵³ Drury became interested in the goliath beetle after a merchant ship captain presented a specimen of *Goliathus goliatus* that he found floating in the Gabon River to a naval surgeon, David Ogilvie, in 1766. Returning to England, Ogilvie deposited the insect with the Scottish anatomist William Hunter. After seeing the beetle in Hunter’s collections, Drury printed

³⁴⁹ Drury to Mr. Hugh, going to Africa with Capt. Johnson, March 22, 1762. T.D. A. Cockerell, "Dru Drury, an Eighteenth Century Entomologist." *The Scientific Monthly* 14, no. 1 (1922): 67-82, 70.

³⁵⁰ A. Starr Douglas, and E. Geoffrey Hancock. "Insect Collecting in Africa During the Eighteenth Century and William Hunter's Collection." *Archives of Natural History* 34, no. 2 (2007): 293-306, 298.

³⁵¹ Douglas, and Hancock. "Insect Collecting in Africa During the Eighteenth Century and William Hunter's Collection." 299. "Princess Island" was used by British travellers and slavers to refer to Principe in the Gulf of Guinea.

³⁵² Douglas, and Hancock. "Insect Collecting in Africa During the Eighteenth Century and William Hunter's Collection." 299. In addition to the crewmen of the *Hound* and the *Tartar*, Drury enlisted the assistance of a captain of another ship, the *Vernon*, in 1770, and another slave trader based in Liverpool, Captain Larkes, in 1771.

³⁵³ A. Starr Douglas, and E. Geoffrey Hancock. "Insect Collecting in Africa During the Eighteenth Century and William Hunter's Collection." 298.

an image of the animal in his *Illustrations of Natural History*, the print which he later sent a copy of to Cowley.³⁵⁴



Figure. 2.1 Illustration of *Goliathus giganteus*, from Dru Drury, *Illustrations of Exotic Entomology*, a new edition by J.O. Westwood, volume 1, 1837, image courtesy of Entomology Collection, Special Collections, North Carolina State University.

³⁵⁴ E. Geoffrey Hancock, and A. Starr Douglas. "William Hunter's Goliath Beetle, *Goliathus goliatus* (Linnaeus, 1771), re-visited." *Archives of Natural History* 36, no. 2 (2009): 218-230.

While Drury relied on surgeons and ship captains in the slave trade, few British naturalists in eighteenth-century West Africa arrived equipped with any formal education in natural history to conduct collecting expeditions. Henry Smeathman, an exception to this precedent, gathered animals, especially insects, in Upper Guinea and Sierra Leone from 1771 to 1775 after being prepared in entomology, classification, and collecting.³⁵⁵

A circle of wealthy collectors, including John Fothergill, Dru Drury, Joseph Banks, and Margaret Cavendish Bentinck, duchess of Portland, and others, financed Smeathman's collecting expedition to West Africa in 1771. Before his voyage, Smeathman worked occasionally as a carpenter and insurance broker in England, though he immersed himself in natural history when he could, and gradually became a respected naturalist in his own right as an entomological specialist at Aurelian Society meetings in London. During his four year residence in West Africa, the "flycatcher," as he styled himself, acquired numerous animal specimens for his patrons, including corals, locusts, moths, tarantulas, butterflies, snakes, lizards, shells, birds, a pair of African king monkeys, and a sizeable collection of termites.³⁵⁶

Though Smeathman travelled to West Africa under the financial support of affluent naturalists, such as Fothergill, a Quaker physician and abolitionist, and ostensibly under the aegis of a scientific expedition to produce knowledge in natural history, his ability to collect animals on the ground hinged upon the crucial support and friendship of

³⁵⁵ Starr Douglas, "Smeathman, Henry (1742–1786)", *Oxford Dictionary of National Biography*, (Oxford: Oxford University Press, 2005).

³⁵⁶ Starr Douglas, "The Making of Scientific Knowledge in an Age of Slavery: Henry Smeathman, Sierra Leone and Natural History," *Journal of Colonialism and Colonial History* 9, no. 3 (2008); Deirdre Coleman, *Romantic Colonization and British Anti-Slavery*, (Cambridge: Cambridge University Press, 2005), 35. John Coakley Lettsom, *The Works of John Fothergill*, vol. 3, (London: Printed for Charles Dilly, 1784), 183-196.

slave traders and slaveholders at Îles de Los in Guinea, Bunce Island, the Banana Islands, and throughout coastal and riverine Sierra Leone.

The network of slavers Smeathman cultivated and maintained in West Africa included Miles Barber, a Liverpool factor who established his own slave trading fort at Îles de Los; James Cleveland, a slave trader at the Banana Islands and a member of the powerful Cleveland family; John Aird, one of several traders whom he befriended at Bunce Island; Zachary Corker, a trader of European and African descent on mainland Sierra Leone; and Alexander Grant, a trader residing at an outpost on the Sierra Leone River.³⁵⁷ During his expedition, Smeathman planned to become a slave trader himself, and even tried to persuade Andreas Berlin—an apostle of the Swedish taxonomist and agronomist Carl Linnaeus who joined him on the Banana Islands—to partner with him as a ship surgeon in a slaving venture.³⁵⁸

Smeathman further relied on West African slaving contacts he met in Sierra Leone to conduct his collecting work, particularly Temne men and women whose valuable knowledge appeared in his later termite essay, in which the flycatcher discussed the practice of collecting the animals in situ and recorded their indigenous names.³⁵⁹ Moreover, Smeathman inserted himself into Temne kinship networks through marriage to gain status on the Banana Islands and further access in the region.³⁶⁰ One of

³⁵⁷ Douglas, "The Making of Scientific Knowledge in an Age of Slavery".

³⁵⁸ Kristina Kindmark, and György Nováky. "Imperiets Budbärare: Henry Smeathman å resa i Sierra Leone 1771-1774." in *Från Karakorum till Silijan: Resor Under Sju Sekler*, edited by Hanna Hodacs and Åsa Karlsson, 163-96. (Lund, Sweden: Historiska Media, 2000), 187. Smeathman did not ultimately create a slave trading firm, however he did sail aboard a slave ship to the West Indies and held several enslaved people in bondage. The definitive biography of Smeathman is: Deirdre Coleman, *Henry Smeathman, the Flycatcher: Natural History, Slavery, and Empire in the Late Eighteenth Century* (Oxford University Press, 2018.)

³⁵⁹ Smeathman, "Some Account of the Termites", 140-141, 165, 167.

³⁶⁰ Kindmark, and Nováky. "Imperiets Budbärare: Henry Smeathman å resa i Sierra Leone 1771-1774." 184.

Smeathman's wives in Sierra Leone, for instance, was the daughter of a powerful "King of a Country up the River Sherbro."³⁶¹ Smeathman's natural history studies of Sierra Leone, including his unpublished journal, letters, and termite article, and the insect specimens he transported, reflect an entangled history of English and African natural history produced under slavery.³⁶²

Upon returning to England, Smeathman published an essay in 1781 on the termites and termitaria he collected during his entomological fieldwork in Sierra Leone in the *Philosophical Transactions* of the Royal Society. Publishing the essay solidified his status as a reputable naturalist. Smeathman's termite studies emphasized the "wonderful oeconomy" of nature, but also focused on the termitary itself as a kind of empire defined by accumulation, colonization, and brutal hierarchy.³⁶³

Slave traders engaged directly in the purchase of enslaved captives also produced natural histories of coastal West Africa filled with observations on animals. After serving as a lieutenant in the Royal Navy, John Matthews began to ply the trade in Sierra Leone in 1785 as a factor for a Liverpool firm.³⁶⁴ While serving the company, Matthews wrote a natural history of the region from the Rio Nuñez, in present-day Guinea, to Cape Saint Ann, off Sherbro Island. Matthews' book included descriptions of animals ranging from

³⁶¹ Smeathman to Drury, 8 August, 1772. 'Mr Smeathman's letters to Mr. Drury, Uppsala University Library, Ms D.26. 1–3 (emphasis in original), quoted in Douglas, "The Making of Scientific Knowledge in an Age of Slavery."

³⁶² On braided sciences, see: Projit Bihari Mukharji, *Doctoring Traditions: Ayurveda, Small Technologies, and Braided Sciences* (Chicago: University of Chicago Press, 2016).

³⁶³ Henry Smeathman, "Some Account of the Termites, Which are Found in Africa and Other Hot Climates. In a Letter from Mr. Henry Smeathman, of Clement's Inn, to Sir Joseph Banks, Bart. P. R. S." *Philosophical Transactions of the Royal Society of London*, 1781. 139-192; Coleman, *Romantic Colonization and British Anti-Slavery*, 39-47.

³⁶⁴ Rosalind Shaw, *Memories of the Slave Trade: Ritual and the Historical Imagination in Sierra Leone*, (Chicago: University of Chicago Press, 2002), 215

sharks to leopards, civets, chameleons, manatees, and alligators.³⁶⁵ Matthews' career as a merchant in the trade began at a slaving factory on Îles de Los. Later, he resided on the Banana Islands, where he encountered the Cleveland family, until his departure in 1787.³⁶⁶ After returning to England in 1788, Matthews published an account of his career in Sierra Leone, including chapters on natural history and an extended defense of the slave trade as, he claimed, it buttressed the "welfare of the [English] nation at large."³⁶⁷

Matthews' natural history reveals he became interested in West African fauna by reading texts by previous collectors, especially Henry Smeathman. Like Smeathman, Matthews depended on extensive interactions with other slavers and enslaved people to collect information on the faunal environment of Sierra Leone. In his natural history of the animals of Sierra Leone, Matthews mentioned collecting on one occasion a chimpanzee.

Wild chimpanzees dwelled in troops in papua trees near the firm's factories on Îles de Los and the Banana Islands. Slave traders, Matthews learned, warned against fierce attacks by chimpanzee troops in the event of a trader shooting at a pack for sport. Unlike wild chimpanzees, Matthews wrote that traders and indigenous Africans, likely Baga or Temne-speakers, captured and tamed young "Japanzees, or Chimpanzees" in Sierra Leone, who became "very tame and familiar."³⁶⁸ Matthews and his compatriots observed how domesticated chimpanzees kept as pets grew to be "extremely fond of clinging" to humans, and were "very sensible of good or ill treatment."

³⁶⁵ John Matthews, *A Voyage to the River Sierra-Leone: On the Coast of Africa; Containing an Account of the Trade and Productions of the Country, and of the Civil and Religious Customs and Manners of the People*, (London: Printed for B. White and Son, at Horace's Head, Fleet Street; and J. Sewell, Cornhill, 1788); Shaw, *Memories of the Slave Trade*, 215.

³⁶⁶ Coleman, *Henry Smeathman, the Flycatcher*, 91-92.

³⁶⁷ Matthews, *A Voyage to the River Sierra-Leone*, 181.

³⁶⁸ Matthews, *A Voyage to the River Sierra-Leone*, 41.

During his residency, Matthews experimented on a “young one in my possession” he collected by teaching him to come by calling the animal by its name. However, Matthews noted, “if I push him from me, or strike him, or even do not regard his advances by shewing him encouragement,” the ape became “sullen or sulky” and despondent. Matthews combined cruelty and racist condescension in his natural history by describing the chimpanzee as resembling “an old negro, except the hair on their heads is straight and black like an Indian’s.”³⁶⁹ Matthews’ description here would have been familiar to readers in Britain accustomed to narratives that compared sub-Saharan Africans and primates.³⁷⁰

Matthews learned the indigenous names for animals in Sierra Leone from conversations with West African traders. Descriptions of two species of snakes—the *tenné* and the *finyacki-amoofoong*—appeared in the trader’s natural history only by their indigenous names. These names reflect both Matthews’ inability to classify the animals and his reliance on local assistants, likely including enslaved people. *Tenné*, according to Matthews’ contacts, ranged in size between fifteen to twenty feet long, and not only preyed upon livestock such as goats, sheep and hogs, but “wild animals, such as leopards, tygers, and deer.”³⁷¹ *Tenné* caught their prey in their mouths using hooked teeth, then, after having “thrown their tails two or three times round” their prey, “by a sudden contraction, break every bone” of their victim. After killing their prey, *tenné* covered

³⁶⁹ Matthews, *A Voyage to the River Sierra-Leone*, 42.

³⁷⁰ Indeed, in William Smith’s *A New Voyage to Guinea*, the Royal African Company surveyor recalls a mandrill that, in his estimate, resembled an African. See: William Smith, *A New Voyage to Guinea* (London: Printed for John Nourse, 1744), 52-53.

³⁷¹ Matthews, *A Voyage to the River Sierra-Leone*, 43-44. At this point in time, my assumption is that the animal Matthews learned of is most likely *Python sebae*, the African rock python.

their bodies in a “unctious kind of saline” before slowly devouring their remains “without the least mastication.” “The natives”, he added, “esteem their flesh a great delicacy.”³⁷²

Though much smaller than the *tenné*, *finyacki-amoofofong* presented a less visible, but no less serious, danger for slave traders such as Matthews in Sierra Leone. These snakes rarely exceeded one foot in length, however he warned that this “destructive little creature is possessed of the power of ejecting a very subtle vapour into the eyes of any animal that approaches it” from a short distance. Venom spewed from *finyacki-amoofofong* caused “incurable blindness, and for eight or ten days, causes extreme pain”, which Matthews witnessed firsthand.³⁷³

Matthews used his descriptions of West African fauna, and the ethnographic narrative embedded in his account, to defend the slave trade and slavery as not only legal, moral, benevolent, and beneficial for Britain’s Atlantic empire, but also to establish slavery as a natural matter of fact.³⁷⁴ Concluding his account, Matthews argued that “man, of created beings, holds the first link” in the divinely ordered hierarchy of life.³⁷⁵ Yet, he claimed “there are different degrees of excellence in the human race, as there are in every other animal, or descending link, of the great chain of nature.” In Africa, he continued, “experience fully authorizes our assent to this” fact. “Trace”, he instructed his readers, “the manners of the natives, the whole extent of Africa from Cape Cantin to the Cape of Good Hope, and you find a constant and almost regular gradation in the scale of understanding, till the wretched Cafre sinks nearly below the Ouran Outang.” Matthews

³⁷² Matthews, *A Voyage to the River Sierra-Leone*, 46.

³⁷³ Matthews, *A Voyage to the River Sierra-Leone*, 46. At this point, my assumption is that the animal Matthews described is most likely *Naja nigricollis*, the black-necked spitting cobra.

³⁷⁴ Steven Shapin, and Simon Schaffer, *Leviathan and the Air-Pump: Hobbes, Boyle, and the Experimental Life* (Princeton: Princeton University Press, 1985), 22-25.

³⁷⁵ Matthews, *A Voyage to the River Sierra-Leone*, 158-159.

book, published during heated debates surrounding the abolition of the slave trade, defended the interests of slavers and slaveholders, and demonstrates how specimen collecting, enthusiasm for animals, and slavery became mutually reinforcing over the long eighteenth century.³⁷⁶

New Spain

In the first decades of the eighteenth century, slave ships owned by the Royal African Company crossed the Atlantic Ocean to New Spain. These ships carried surgeons aspiring to gain recognition in Europe as naturalists, along with their human cargoes. Surgeons collected animals on slaving voyages departing from the Gold Coast and the Bight of Benin bound for port cities along the Spanish Main, and the collections they accumulated were truly Atlantic in scope. Medical officers for the South Sea Company, a joint-stock company engaged in the slave trade that contracted with the African Company, further used their positions at company outposts to collect faunal specimens and observations on the nonhuman environment.³⁷⁷

The South Sea Company received its royal charter in 1711, in part, to capitalize on the profits of the Atlantic slave trade derived from the *asiento* contract Britain gained after the War of the Spanish Succession in 1713.³⁷⁸ Under the treaty, Spain contracted for

³⁷⁶ In 1788, the Committee of the Liverpool African Merchants, a group of slave traders, commissioned Matthews to testify, along with Robert Norris and Archibald Dalzel, before Parliament in support of the slave trade. See: Gomer Williams, *History of the Liverpool Privateers and Letters of Marque: With an Account of the Liverpool Slave Trade* (London: William Heinemann, 1897), 611.

³⁷⁷ William A. Pettigrew, "Free to Enslave: Politics and the Escalation of Britain's Transatlantic Slave Trade, 1688-1714," *The William and Mary Quarterly*, Third Series, 64, no. 1 (2007): 3-38, in particular pages 28-29. Adrian Finucane, *The Temptations of Trade: Britain, Spain, and the Struggle for Empire*, (Philadelphia: University of Pennsylvania Press, 2016), 53-83.

³⁷⁸ Arne Bialuschewski, "A True Account of the Design, and Advantages of the South-Sea Trade: Profits, Propaganda, and the Peace Preliminaries of 1711." *Huntington Library Quarterly* 73, no. 2 (2010): 273-85.

supplies of African captives from competing European companies in the slave trade.³⁷⁹

The London-based company originated as a mercantile interest intended to reduce the English national debt through economic projects in the Atlantic world, including whaling in the North Atlantic and delivering incarcerated Africans to port cities in the South Atlantic.³⁸⁰ The *asiento* contract from Spain granted the firm the privilege to deliver a cargo of four thousand and eight-hundred enslaved Africans annually to entrepôts in the viceroyalties of New Spain, New Granada, and Cuba, after the Treaty of Utrecht.³⁸¹

Using ships leased from the fleet of the Royal African Company, and escorts from the Royal Navy, the South Sea Company delivered captives purchased from factories and trading castles in West Africa across the ocean to depots at Veracruz, Cartagena de Indias, Caracas, Portobelo, Havana, and other ports.³⁸² In each of these cities, the South Sea Company operated small factories staffed by two factors, a bookkeeper, a surgeon, supercargoes, and various other employees.³⁸³ In addition to this network of slave trading terminals, the company established provisioning stations at Port Royal, Jamaica, and Barbados, where separate traders under contract and company officials, often surgeons,

³⁷⁹ Abigail Leslie Swingen, *Competing Visions of Empire: Labor, Slavery, and the Origins of the British Atlantic Empire* (New Haven: Yale University Press, 2015), 172-195.

³⁸⁰ Carl Wennerlind, *Casualties of Credit: The English Financial Revolution, 1620-1720*, (Cambridge: Harvard University Press, 2011), 197-234.

³⁸¹ Philip D. Curtin, *The Atlantic Slave Trade: a Census*, (Madison: University of Wisconsin Press, 1972), 131; Kenneth Morgan, *Slavery and the British Empire: From Africa to America*, (Oxford: Oxford University Press, 2007), 59-61; John G. Sperling, *The South Sea Company: An Historical Essay and Bibliographical Finding List*, (Cambridge: Harvard University Press, 1962), 13-15.

³⁸² A *pieza de India*, defined by the *asiento*, was a captive “with no defects at least 58 inches tall”, Sperling, *The South Sea Company*, 14. The Company did sell some captives at inland cities, including Bogotá. On the Royal Navy and the South Sea Company see: Helen J. Paul, *The South Sea Bubble: An Economic History of its Origins and Consequences*, (London: Routledge, 2010), 6-7, 27, 38, 42, 54, 55, 58, 72, 73, 109.

³⁸³ Finucane, *The Temptations of Trade*, 41.

fed and cared for the enslaved who survived the middle passage upon arrival before transferring them to ships bound for Spain's American colonies.³⁸⁴

Upon docking at slave depots in New Spain, Spanish officials often forced Company captains and other officials to accept agricultural commodities from New Spain— usually cacao, balsam, sarsaparilla, and various drugs and dyestuffs—in exchange for enslaved captives rather than paying for slaves with silver specie or bullion.³⁸⁵ In these arrangements, which often resulted in the unprofitable exchange of slaves for worthless or unfamiliar plants, Company officials recognized the necessity of employing surgeons trained in natural history and *materia medica* who would be capable of evaluating whether or not the “fruits” the company received could be transplanted or adapted as profitable drugs or agricultural products.³⁸⁶

In addition to their botanical duties, surgeons used their status and position in the company, and their relative mobility through the geography of Atlantic slaving, to collect specimens of the faunal environments of New Spain. David Patton, a surgeon serving aboard the man-of-war turned slaver *Elizabeth*, for instance, retrieved a “large lizard” from Veracruz for a metropolitan patron, which he “fed by the way on cockroaches, came alive to England where it lived till killed by the cold in January.”³⁸⁷

³⁸⁴ Sperling, *The South Sea Company*, 20-25. George H. Nelson, "Contraband Trade Under the Asiento, 1730-1739." *The American Historical Review* 51, no. 1 (1945): 55-67; Christian Cwik, "The End of the British Atlantic Slave Trade or the Beginning of the Big Slave Robbery, 1808-1850." in *The Second Slavery: Mass Slavery and Modernity in the Americas and in the Atlantic Basin*, edited by Javier Lavina and Michael Zeuske, 19-38, (Berlin: LIT Verlag, 2014), 26. Beyond the legally permitted traffic in enslaved captives under the *asiento*, Company officials also engaged in smuggling and illicit trade throughout New Spain.

³⁸⁵ Sperling, *The South Sea Company*, 21. Murphy, "Collecting Slave Traders", 666. Arthur S. Aiton, "The Asiento Treaty as Reflected in the Papers of Lord Shelburne." *The Hispanic American Historical Review* 8, no. 2 (1928): 167-77.

³⁸⁶ Murphy, "Collecting Slave Traders", 666; Edith Duncan Johnston, "Dr. William Houstoun, Botanist." *The Georgia Historical Quarterly* 25, no. 4 (1941): 325-39.

³⁸⁷ MSS Sloane, Catalogues, "Quadrupeds", Natural History Museum, London.

While brief notes of animals like the lizard exist, few collectors produced long narrative accounts of their time in New Spain. William Toller, a surgeon who traveled to Buenos Aires in 1715, kept an exceptional journal recording his “Diurnall Observations” of natural history during a voyage from England to the South Sea Company’s entrepôt on the southern banks of the Río de la Plata estuary. Toller used opportunities on land and sea to observe animals for his own “singular improvement & Satisfact Curiosity,” and to serve his client in England, James Petiver.³⁸⁸

At Buenos Aires, the southernmost station the Company operated in New Spain, company officials assumed the business of the slave trade at El Retiro, a building complex of warehouses previously leased and operated by their predecessors of the *asiento*, the French Guinea Company.³⁸⁹ The slave warehouse was located in the present-day Retiro *barrio* on the eastern edge of the city. Provisions for the factory came from a nearby farm sited on the river farmed by company agents.³⁹⁰ Among the promised total of four thousand and eight-hundred captives, Company ships transported eight hundred enslaved people to the factory on the Río de la Plata annually beginning in 1715.³⁹¹ The

³⁸⁸ William Toller, “Reproducción facsimilar de la “Historia de un Viaje al Río de la Plata y Buenos Aires desde inglaterra. Año MDCCXV por William Toller.” *Revista Histórica: Publicación del Museo Histórico Nacional* 23, no. 67-6 (May 1955): 201-63. Note: the page numbers of the facsimile of Toller’s manuscript produced by *Revista Histórica* run from 1-33; Murphy, “Collecting Slave Traders,” 637-670, 645, 662, 663. Petiver’s SSC collectors included David Patton, surgeon aboard the slave ship *Elizabeth*; Mr. Cooke, a surgeon at Panama; Thomas Dover, the company’s chief factor at Buenos Aires; John Burnett, surgeon at Porto Bello and Cartagena; and George Jesson, captain of the slave ship *William and Sarah*. During his career as a factor for the SSC at Buenos Aires, Dover forwarded samples of the valuable cinchona plant back to Petiver in London. On Petiver’s SSC contacts see: Raymond Phineas Stearns, *Science in the British Colonies of America*, (Urbana-Champaign: University of Illinois Press, 1970), 384-385; Kenneth Dewhurst, and Rex Doublet, “Thomas Dover and the South Sea Company,” *Medical History* 18, no. 2 (1974): 107-121.

³⁸⁹ Dewhurst and Doublet, “Thomas Dover and the South Sea Company”, 112. Daniel Schavelzon, “On Slaves and Beer: The First Images of the South Sea Company Slave Market in Buenos Aires.” *African and Black Diaspora: An International Journal* 7, no. 2 (2014): 119-128.

³⁹⁰ Finucane, *The Temptations of Trade*, 38.

³⁹¹ Dewhurst and Doublet, “Thomas Dover and the South Sea Company”, 111.

Company bought enslaved captives bound for Buenos Aires primarily from markets in Angola and Madagascar.³⁹²

After arriving in the city, English and Spanish slavers examined the enslaved through official appraisals, or *palmeos*, and then branded those who survived the middle passage who were neither diseased or disabled.³⁹³ Much like the castle dungeons of Cape Coast, enslaved people lingered in underground cellars at El Retiro, and other *casa de negrerías* in New Spain, before being sold as *fardos racionales*, or “rational bales” of chattel property.³⁹⁴ Many enslaved people at Buenos Aires were sold and taken overland to the north to labor in the silver mines at Potosí.³⁹⁵ Due to the relative dearth of documents, such as letters between factors, it is difficult to locate individual enslaved captives within this colonial context. As in plantation inventories, enslaved people appear in South Sea Company records frequently as anonymous figures, such as the “Venta de Negros” and “Negros Indultados” listed in the account books of the factories at Portobelo and Panama between 1718 and 1722.³⁹⁶ Similar forms of records for Cartagena reveal that the enslaved who did survive the voyage to New Spain frequently arrived missing

³⁹² Virginia Bever Platt, “The East India Company and the Madagascar Slave Trade,” *The William and Mary Quarterly: A Magazine of Early American History* (1969): 548-577, see footnote 30, p. 563; Nelson, “Contraband Trade Under the Asiento,” 60.

³⁹³ James Ferguson King, “Descriptive Data on Negro Slaves in Spanish Importation Records and Bills of Sale,” *The Journal of Negro History* 28, no. 2 (1943): 204-19.

³⁹⁴ Schavelzon, “On Slaves and Beer,” 126-126.

³⁹⁵ Aiton, “The Asiento Treaty as Reflected in the Papers of Lord Shelburne,” 171.

³⁹⁶ General account of the Portobelo and Panama factory and of the Balance of the Books of Debtors and Creditors of the Factoría, Archivo General de Indias, Seville, Sección Contaduría, 226, as cited in Rafael Donoso Anes, “Accounting and Slavery: The Accounts of the English South Sea Company, 1713-22,” *European Accounting Review* 11, no. 2 (2002): 441-452. On “indultado” slaves, see: Alex Borucki, *From Shipmates to Soldiers: Emerging Black Identities in the Río de la Plata* (University of New Mexico Press, 2015), 6.

toes and eyes, infected with ringworms, losing their sight or altogether blind, afflicted with sores across their skin, and suffering from scurvy.³⁹⁷

Thomas Dover, the chief agent of the company outpost at Buenos Aires, hired Toller to serve as physician for the slave base.³⁹⁸ Dover, also a physician by training, established himself as a surgeon supplying ships in the Bristol slave trade in the first decade of the eighteenth century, then as a surgeon for the South Sea Company, and later became a slave trader in his own right.³⁹⁹ In Buenos Aires, Toller's duties as a surgeon ranged from prescribing medicines and pharmaceutical supplies for stocking slave ships to diagnosing and treating endemic diseases associated with the middle passage such as overcrowding, malnutrition, exhaustion, and premature death, and certifying the health of the enslaved during each *palmeo* appraisal in conjunction with a Spanish physician.⁴⁰⁰

Embarking from Plymouth in February, 1715, Toller travelled aboard the company's ship *Warwick*, sailing first to the Atlantic Islands, anchoring at Madeira and Cape Verde for provisions, before making the transatlantic voyage.⁴⁰¹ As the *Warwick* sailed for Buenos Aires, its sister ship, the *Angelsea*, embarked for the company's nascent factory in Cartagena. In June, the *Warwick* landed at the Bay of Castillos, situated near

³⁹⁷ Colin A. Palmer, "The Company Trade and the Numerical Distribution of Slaves to Spanish America, 1703-1739" in *Africans in Bondage: Studies in Slavery and the Slave Trade*, edited by Philip D. Curtin and Paul Lovejoy (Madison: African Studies Program, University of Wisconsin-Madison, 1986), 27-43.

³⁹⁸ Stearns, *Science in the British Colonies of America*, 384-385.

³⁹⁹ In 1708 Dover joined a privateering voyage led by Woodes Rogers and William Dampier for four years to raid Spanish treasure ships in the Caribbean and along the Spanish Main. Dover's medical and commercial expertise as a surgeon in the slave trade likely played a role in selecting Toller for the position. On Dover see: Dewhurst, and Doublet. "Thomas Dover and the South Sea Company," 107-121. Finucane, *The Temptations of Trade*, 21.

⁴⁰⁰ Richard B. Sheridan, "The Guinea Surgeons on the Middle Passage: The Provision of Medical Services in the British Slave Trade." *The International Journal of African Historical Studies* 14, no. 4 (1981): 601-625; King, "Descriptive Data on Negro Slaves in Spanish Importation Records and Bills of Sale."

⁴⁰¹ Finucane, *The Temptations of Trade*, 34.

present-day Maldonado, Uruguay.⁴⁰² While the *Warwick* itself did not serve as a slave ship, the company permitted Dover to personally transport ten enslaved people on the voyage.⁴⁰³ When their ship arrived at Buenos Aires, Toller took note in his journal of the simultaneous arrival of several “Guinea Ships”, likely African Company ships, sailing into port. In the pages of his journal, the surgeon, like others, did not acknowledge his own financial and professional benefit from the slave trade, yet his status and position in the trade afforded him numerous opportunities to collect fauna throughout the Río de la Plata estuary.⁴⁰⁴

During their voyage and expedition in New Spain, Toller penned a manuscript natural history, *The History of a Voyage to the River Plate and Buenos Ayres*. While he never published his book, the surgeon presumably intended to use the text to impress Petiver and his circle of wealthy natural historians and natural philosophers in England. In his book, Toller described animals he collected and observed while sailing to the Atlantic Islands, and later afield in the Río de la Plata estuary at the Bay of Castillos, Isla de Lobos, and the Río Santa Lucía.

In May, Toller used his journal to write at length about the grampus, a kind of dolphin the crew spotted while crossing the Atlantic. For Toller, investigating the grampus in its ocean habitat presented an opportunity to reflect on providential meaning embedded in the nonhuman world. The animal’s “mortal Enemies”, he observed, the

⁴⁰² Gustavo Verdesio, *Forgotten Conquests: Rereading New World History from the Margins*, (Philadelphia: Temple University Press, 2001), 114-115.

⁴⁰³ Dewhurst and Doublet, “Thomas Dover and the South Sea Company”, 112.

⁴⁰⁴ Thomas Falkner, another South Sea Company surgeon, also practiced and wrote a natural history of New Spain after joining the Society of Jesus in 1732. On Falkner see: Álvaro Fernández Bravo, “Catálogo, Colección y Colonialismo Interno: Una lectura de la ‘Descripción de la Patagonia’ de Thomas Falkner (1774).” *Revista de Crítica Literaria Latinoamericana* (2004): 229-249; Miguel de Asúa, *Science in the Vanished Arcadia: Knowledge of Nature in the Jesuit Missions of Paraguay and Río de la Plata*. (Leiden: Brill, 2014.)

swordfish and the thrasher, preyed on the grampus on two fronts - "One Beats him, when he rises out of the Water, & the other Goars his Belly" below the waves.⁴⁰⁵ Observing the grampus further, Toller wrote a natural history of the Atlantic below the water-line to consider how the "Diversity of Creatures shew the Omnipotence of the Creator. Thro' the vast wastes of the Ocean, for the Fish of Prey, tho' ever so Large and Terrible are punished by means of others." Animal predation, in all its tremendous violence, revealed for Toller a balanced and harmonious order to the physical world.

Toller further contemplated how smaller creatures often exploited larger ones after seeing a grampus carcass float upward to the surface, and watched "Fowls of the Air Devour Them. Those Leviathans are publicly and shamefully tormented and foiled, by Creatures devoid of their Great Strength whose cunning is innate." Concluding his description of the grampus, Toller wrote how "the Providence of the Almighty is over all his works for their increase," and recited verses from Psalm 104: "O Lord, how manifold are thy works! in wisdom hast thou made them all: the earth is full of thy riches. So is this great and wide sea, wherein are things creeping innumerable, both small and great beasts."

In early June, the *Warwick* reached the easternmost mouth of the Río de la Plata estuary.⁴⁰⁶ Toller immediately set out to collect animals on fishing and hunting excursions, during which he drew sketches directly into his manuscript between scribbled lines of text. While fishing for provisions in a stream near the Bay of Castillos, Toller caught corvina, mullets, flounders, and other fish. Teals, plovers, swans, flamingoes, and

⁴⁰⁵ Toller, "Reproducción facsimilar de la "Historia de un Viaje al Río de la Plata y Buenos Aires desde inglaterra. Ano MDCCXV por William Toller." 13v.

⁴⁰⁶ Toller, "Reproducción facsimilar de la "Historia de un Viaje al Río de la Plata y Buenos Aires desde inglaterra. Ano MDCCXV por William Toller." 16v.

other birds filled the sky overhead, which the surgeon carefully drew in his book. Dover and his crew also hunted birds in the region, shooting coots, sparrows, ospreys, and linnets. In his journal, Toller drew over a dozen species of birds, in flight and at rest, he saw firsthand around Buenos Aires.⁴⁰⁷

Five days after landing near the factory at Buenos Aires, Toller and the crew of the ship set out on a hunting expedition to replenish their food supplies. On the hunt, Toller collected three “ostrich” eggs while scouting a plain for game. Toller noted that “the Eggs are smaller than the African or Asiatick & so undoubtedly are the Birds Here” smaller than those found in Europe, Africa, or Asia.⁴⁰⁸ This note suggests Toller’s familiarity with African and Asian animals, which might have been due to seeing collections in London made by employees of either the African Company or East India Company.⁴⁰⁹ On a “Sandy Plain,” Toller collected several armadillos, and inspected the carcass of one of the animals to study its shell. On their trip, Dover collected an armadillo to keep as a pet.⁴¹⁰ Toller caught two polecats at the end of the day, and furnished his book with descriptions of the animals.

Hunting in the Pampas lowlands with his “Musquet & Cartouch Box” afforded Toller fruitful opportunities for collecting fauna around the Río de la Plata.⁴¹¹ On the shoreline near Montevideo, Toller found few marine curiosities except for a specimen of

⁴⁰⁷ Toller, “Reproducción facsimilar de la “Historia de un Viaje al Río de la Plata y Buenos Aires desde Inglaterra. Ano MDCCXV por William Toller.” 18.

⁴⁰⁸ Toller, “Reproducción facsimilar de la “Historia de un Viaje al Río de la Plata y Buenos Aires desde Inglaterra. Ano MDCCXV por William Toller.” 17v. Most likely, Toller saw a species of rhea.

⁴⁰⁹ Surgeons for the East India Company, such as Edward Bulkley at Fort St. George in Madras, similarly drew pictures of birds for Petiver. On Bulkley see: Anna Winterbottom, *Hybrid Knowledge in the Early East India Company World* (Palgrave: London, 2016), 119, 122-23.

⁴¹⁰ Unfortunately, the animal refused to eat the roots the doctor fed it, and died shortly.

⁴¹¹ Toller, “Reproducción facsimilar de la “Historia de un Viaje al Río de la Plata y Buenos Aires desde Inglaterra. Ano MDCCXV por William Toller.” 18v.

“the female Cockle,” a tortoise “of an uncommon kind,” and several catfish.⁴¹² On hunting trips around Montevideo and Rio Santa Lucia, Toller’s party captured, collected, and ate several vipers, snakes, leopards, peccaries, and skunks.⁴¹³

Henry Partington, captain of the *Warwick*, hunted and killed several exotic animals, including a leopard that he had the crew flay, butcher, and roast for dinner one evening. Before the crew cooked the leopard carcass, Toller examined its entrails, which he found differed “from other Carnivorous Animals.” Petiver advised his collectors to eviscerate animals in the field, and instructed another naturalist on a collecting expedition that he must “look into their gutts & Stomach & take out what Animalls you shall find there.”⁴¹⁴ Surgeons trained in dissection, like Toller, demonstrated an aptitude for collecting animals from the entrails of other creatures. On a later hunting trip near Buenos Aires, a sailor shot an “Ostrich,” which the surgeon dissected.⁴¹⁵ Toller found the birds “hath no Tongue but an Epiglottis” covering its trachea. Cutting the creature open, he found its “Stomach was full of Grass.” Around the lungs the surgeon drew out “thousands of Worms some 2 foot long.”

⁴¹² Toller, “Reproducción facsimilar de la ‘Historia de un Viaje al Río de la Plata y Buenos Aires desde Inglaterra.’ Ano MDCCXV por William Toller.” 27v.

⁴¹³ Toller, “Reproducción facsimilar de la ‘Historia de un Viaje al Río de la Plata y Buenos Aires desde Inglaterra.’ Ano MDCCXV por William Toller.” 26v, 29v.; Braulio R. Orejas Miranda. “The Snake Genus *Lystrophis* in Uruguay.” *Copeia* 1966, no. 2 (1966): 193-205.

⁴¹⁴ Stearns, “James Petiver, Seventeenth-Century Promoter of Natural Science”, 280.

⁴¹⁵ Toller, “Reproducción facsimilar de la ‘Historia de un Viaje al Río de la Plata y Buenos Aires desde Inglaterra.’ Ano MDCCXV por William Toller.” 30.

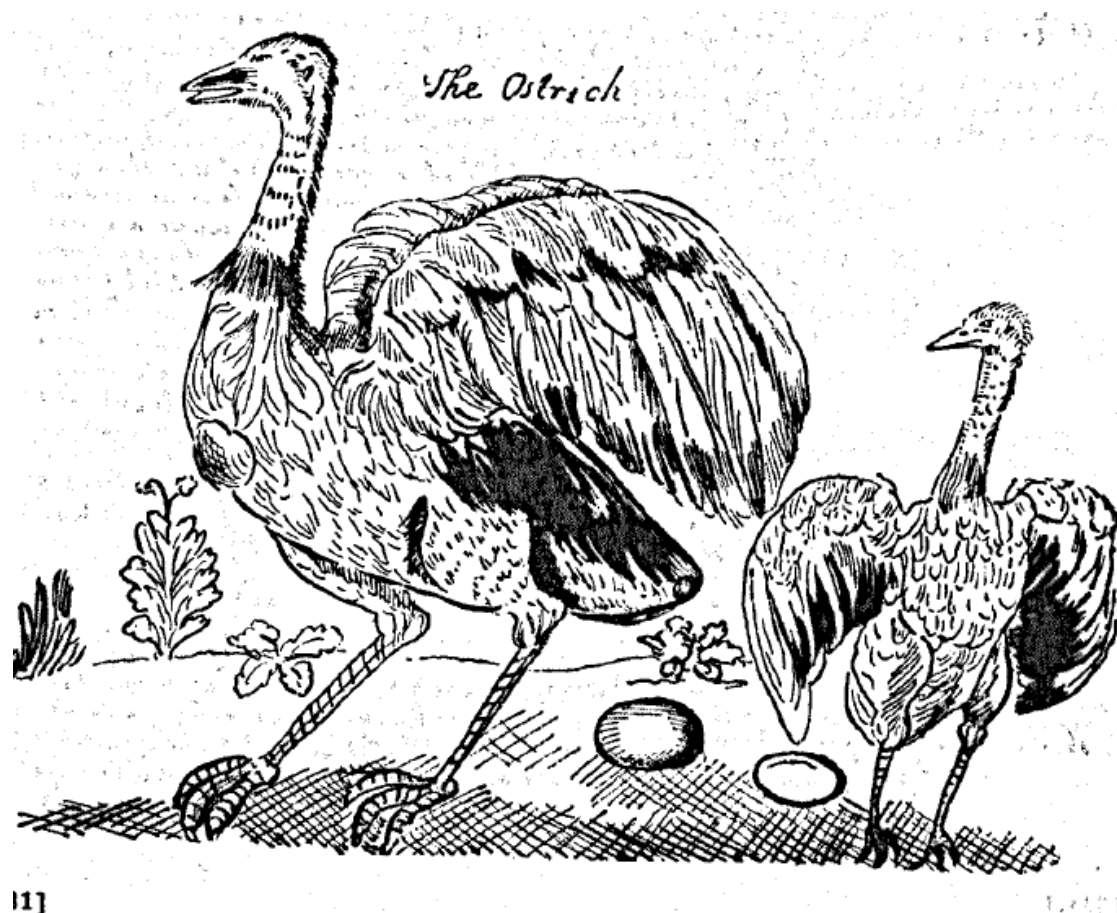


Figure. 2.2 Illustrations of “The Ostrich” found near Buenos Aires made by William Toller, *The History of a Voyage to The River of Plate & Buenos Ayres*, 1715, image reproduced in *Revista Histórica*, volume 23, issues 67-69, 1955.

At Isla de Lobos, a small island in the mouth of the Rio de la Plata, new fauna that appeared to blur the line between terrestrial and aquatic life attracted Toller’s attention. The island’s name derived from the “Multitude of Sea Wolves & some Seals which are on it as also of the Sea Dogs.”⁴¹⁶ Toller described the color, bodies, and swimming abilities of the sea lions and seals at Isla de Lobos, noting the animals swam faster than most fish. He noted the “cartilaginous or bony” whiskers and teeth of the sea lion. Some of the creatures he saw “walking & jumping”, and noted that “they are very fierce when

⁴¹⁶ Toller, “Reproducción facsimilar de la “Historia de un Viaje al Río de la Plata y Buenos Aires desde Inglaterra. Año MDCCXV por William Toller.” 19v-20.

provoked.” Toller saw seals prey on fish and fowl on the island. To compare the animals to more familiar species for readers, the surgeon added that “The Dogs in the Water very much resemble our Bull Dogs” and mastiffs. Sailors from the *Warwick* shot, cooked, and ate several sea lions from the island.

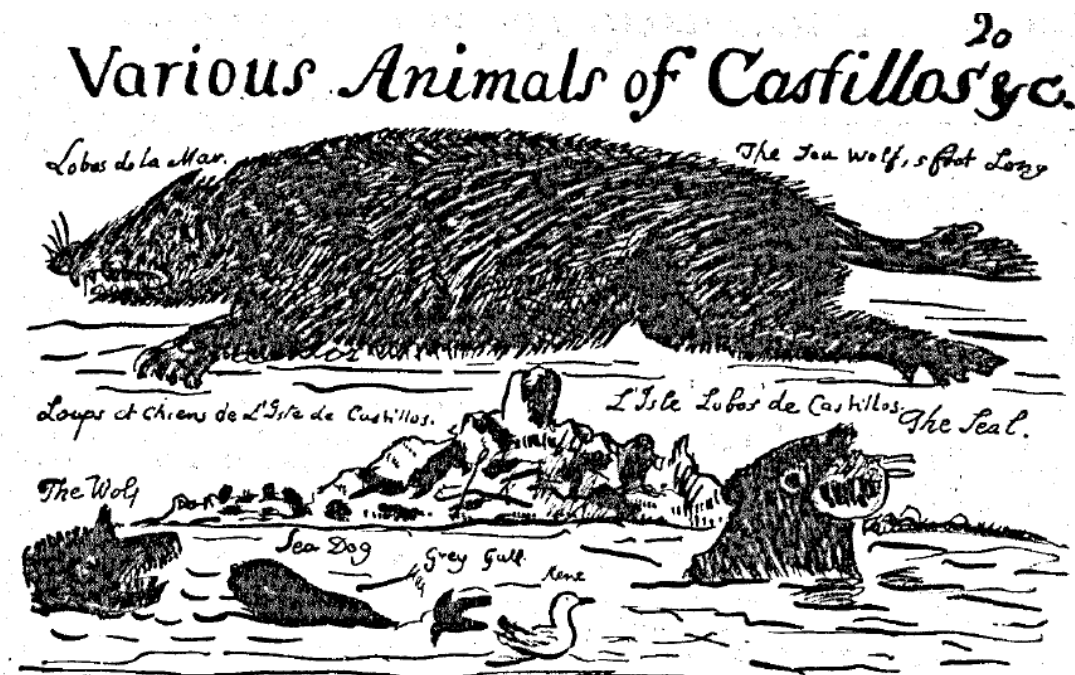


Figure. 2.3 Illustrations of animals near Isla de Lobos made by William Toller, *The History of a Voyage to The River of Plate & Buenos Ayres*, 1715, image reproduced in *Revista Histórica*, volume 23, issues 67-69, 1955.

Like other naturalists employed in the slave trade, insect colonies drew Toller’s attention as examples of curious creatures united in order and collective purpose. In Buenos Aires, Toller and Captain Partington found a “Nest of flying Ants” hanging from a tree in a teardrop shape.⁴¹⁷ Partington struck the crust of the nest with his cane, and immediately the insects attacked the guards and crew attending them. Toller used the opportunity to record observations on the animal’s behavior, especially nest-building, in

⁴¹⁷ Toller, “Reproducción facsimilar de la “Historia de un Viaje al Río de la Plata y Buenos Aires desde Inglaterra. Año MDCCXV por William Toller.” 32.

terms similar to Henry Smeathman's study of termitaries in Sierra Leone. By the end of August, Toller and the other agents of the company left the outpost at Buenos Aires to begin their return trip to England.⁴¹⁸

John Burnet, a Scottish collector for Petiver, and later Hans Sloane, ranged across New Spain and likewise used his position within the South Sea Company to gather animals and other kinds of specimens for clients in England. Burnet studied medicine at the University of Edinburgh, and served the company as a surgeon on the Gold Coast aboard the slave ship *Wiltshire*, and later at the company factories in New Granada at Portobelo and later Cartagena de Indias between 1716 and 1728.⁴¹⁹ From his station in Panama, Burnet forwarded the apothecary cargos containing specimens of shells, fish, and curiosities including a shark's jaw.

On several occasions, Burnet's collecting activities blurred the distinctions between people and animals as collectable objects. For instance, Burnet sent Petiver the remains of a stillborn fetus taken from an enslaved woman who suffered a miscarriage.⁴²⁰ Another specimen was a "worm of about 4 foot long" removed from the leg of a person on the Gold Coast while the *Wiltshire* anchored there.⁴²¹ Burnet considered animals and human remains equally worthy and intriguing specimens for impressing his London correspondent. Often his shipments contained both kinds of subjects, reflecting Burnet's intellectual tendency to ontologically collapse African people and nonhuman animals through his collecting activities. In 1716, for instance, Burnet sent an assemblage of items

⁴¹⁸ Toller, "Reproducción facsimilar de la "Historia de un Viaje al Río de la Plata y Buenos Aires desde Inglaterra. Año MDCCXV por William Toller." 32v-33.

⁴¹⁹ Kathleen S. Murphy, "A Slaving Surgeon's Collection: The Pursuit of Natural History through the British Slave Trade to Spanish America." in *Curious Encounters: Voyaging, Collecting, and Making Knowledge in the Long Eighteenth Century*, edited by Adriana Craciun and Mary Terrall, 138-58 (Toronto: University of Toronto Press, 2019).

⁴²⁰ Murphy, "Collecting Slave Traders", 662; Stearns, *Science in the British Colonies of America*, 385.

⁴²¹ Murphy, "A Slaving Surgeon's Collection", 145.

to Petiver containing “three polipus taken out of the heartts of two negroes,” two fishes, “the bill of a fish taken out of a shark’s belly almost dissolved,” and “the shell of an ostrage egg from Buenos Ayres.”⁴²²

In 1722, the Company relocated the doctor from Portobelo to their outpost at Cartagena. In Cartagena, Burnet ingratiated himself into local networks of information, including a Franciscan at Santa Fe and “one of the *oidores* of Charcas”, an important judge within the Real Audiencia of the Viceroyalty of Peru.⁴²³ That year he wrote to the Company’s court of directors requesting permission and funding to lead an expedition across New Spain to produce a “Naturall History of these Countreys.”⁴²⁴ To his frustration, the court denied Burnet’s proposal. During his career, Burnet continued to send Petiver, and later Sloane, cargoes of animal and human anatomical specimens in the hopes of being recognized for his skill in natural history, and to parlay such recognition to a promotion in the company from surgeon to factor.⁴²⁵

Burnet sent Sloane two taxidermied sloths, a mother and her child, from Cartagena the year he arrived at the company’s factory.⁴²⁶ Burnet failed to keep the animals alive to send as living specimens, but sent the doctor “the old ones skin stuffed & the young one in spirits.” Other specimens Burnet sent to Sloane included animals collected in 1723 during an expedition to the company’s depot in Buenos Aires such as “A white swallow from Buenos Ayres. Feathers made up to fright the slaves” and an “ostriches egg from Mr. Burnett from Buenos aires much lesser an Condors a smaller sort

⁴²² Finucane, *The Temptations of Trade*, 66.

⁴²³ Finucane, *The Temptations of Trade*, 67.

⁴²⁴ Finucane, *The Temptations of Trade*, 63.

⁴²⁵ Luis Eduardo Fajardo, “Dos Comerciantes Británicos en Cartagena a Principios del siglo XVIII.” *Boletín Cultural y Bibliográfico* 43, no. 72-71 (2006): 2-19.

⁴²⁶ Finucane, *The Temptations of Trade*, 65. Sloane MS 4046, British Library, London.

of Ostridge, whose feathers are of no value.”⁴²⁷ Moreover, Kathleen S. Murphy has recently shown that Burnet sent butterflies, a wingless cockroach, a marine caterpillar, an armadillo, and a scorpion from Portobelo to Petiver during his residency.⁴²⁸

In 1728, frustrated by a lack of acknowledgment from his correspondents or professional advancement in the company, Burnet betrayed his employer to the Spanish by testifying against company factors engaged in contraband trade at Cartagena. Burnet delivered his testimony on the contraband trade to a group of Spanish ambassadors during the Congress of Soissons in France in 1728. In return for his testimony on contraband, the Spanish crown rewarded Burnet with a new title as *médico de cámara*, physician to the king, a pension to continue conducting research in natural history in Madrid, and secured a position for his nephew in the naval academy at Cadiz.⁴²⁹ In his letters, Burnet never acknowledged if he relied on enslaved collectors, however it is likely that animals or animal parts such as the “white swallow” feathers came into his possession from either conversations with, assistance from, or coercive exploitation of enslaved people. Racialized observations, of course, entered into the world of natural history, as is evident in catalog descriptions of a “fowl whose [black] feathers”, a collector in Cartagena forwarded, “resembled the skin of a negro.”⁴³⁰ Certainly medical officers for the South Sea Company did articulate a racial language that denigrated people of African descent. Another surgeon at Cartagena who arrived after Burnet, James

⁴²⁷ Portions of Sloane’s *Vertebrate* catalog are reproduced in: Arthur MacGregor, and Alistair McAlpine. *Sir Hans Sloane: Collector, Scientist, Antiquary, Founding Father of the British Museum* (London: Published for the Trustees of the British Museum by British Museum Press, 1994) 84-85. In Sloane’s manuscript catalogs, further evidence of South Sea Company collectors is available, including entries listing woodpeckers and magpies collected at Rio de la Hacha, and “The under mandibles of this Toucan from Cartagena in America by Mr. Houstoun”, presumably William Houstoun, a surgeon and protégé of Sloane who served the South Sea Company at Cartagena, Veracruz, and Jamaica.

⁴²⁸ Murphy, “A Slaving Surgeon’s Collection”, 143.

⁴²⁹ Fajardo, “Dos Comerciantes Británicos”.

⁴³⁰ MSS Sloane, Catalogues, “Birds”, Natural History Museum, London.

Houstoun, whose salary hinged upon caring for sick slaves, claimed that Africans “exactly resemble their fellow Creatures and Natives, the Monkeys.”⁴³¹ Despite these archival silences, it is clear Burnet, and his scientific slaving colleagues, profited in life from the professional status he accrued from his career as a surgeon in the slave trade.⁴³²

The West Indies

North of the coastal cities of the Spanish Main, Petiver and others based in England assembled networks of collectors by using their contacts in the slave trade to assemble correspondents from plantations in Britain’s island colonies in the West Indies.⁴³³ Petiver’s Caribbean collaborators, like his connections at the castle factories of the African Company on the Gold Coast or the slave trade entrepôts operated by the South Sea Company across New Spain, identified, collected, and forwarded preserved faunal specimens across the Atlantic on ships, and sent along descriptions of animals written in letters.⁴³⁴ As in Atlantic Africa and the Spanish Main, slavery and the slave trade produced natural history networks in the West Indies, furthering an eco-cultural network of faunal environmental information. Moreover, these collecting and slaving networks produced modes of interaction between enslaved people and animals through the broader frame of natural history, curiosity, and universal knowledge.

⁴³¹ James Houstoun, *Some New and Accurate Observations Geographical, Natural and Historical. Containing a True and Impartial Account of the Situation, Product, and Natural History of the Coast of Guinea* (London: J. Peele, 1725), 33-34.

⁴³² Michel-Rolph Trouillot, *Silencing the Past: Power and the Production of History* (Boston: Beacon Press, 1995).

⁴³³ Delbourgo, "Listing People." 735-742.

⁴³⁴ Christopher M. Parsons and Kathleen S. Murphy. "Ecosystems under Sail: Specimen Transport in the Eighteenth-Century French and British Atlantics." *Early American Studies: An Interdisciplinary Journal* 10, no. 3 (2012): 503-529.

Thomas and Rachael Grigg, slaveholders and the proprietors of a sugar estate on Antigua, Parham Plantation, became affiliated with Petiver sometime around 1700.⁴³⁵ Petiver first wrote to Thomas in December requesting “wtever Plants Shells Insects &c as yr Island affords.”⁴³⁶ The Grigg family possessed more than one hundred enslaved people at Parham, situated in St. Peter parish on the northern coast of the island.⁴³⁷ As he advised other collectors, such as the tobacco planter William Byrd II in Virginia, Petiver suggested the Grigg’s instruct enslaved men and women on Parham to gather animals for his collections whenever possible.⁴³⁸ While Petiver credited the Grigg’s and their associates in his printed natural history catalogues, in particular the second volume of his *Jacobi Petiveri Opera, Historiam Naturalem Spectantia*, there are no references acknowledging any individual enslaved people in his published materials.⁴³⁹ Nevertheless, the fortune the Grigg family accumulated via sugar and slavery afforded them the leisure and opportunities to collect animals and, it is probable, the skill of enslaved people for acquiring exemplary Caribbean animals.

While men made up the majority of Petiver’s collectors in the West Indies, his associates at Parham primarily consisted of women: Rachael Grigg, Rachael Chapman,

⁴³⁵ Stearns notes that it is likely Petiver learned of the Grigg’s through a shipowner, George Searle, who traded in the West Indies. Stearns, *Science in the British Colonies*, 345.

⁴³⁶ “Petiver to Thomas Grigg, December, 11, 1700”, quoted in Raymond Phineas Stearns, *Science in the British Colonies of America*, (Urbana-Champaign: University of Illinois Press, 1970), 345.

⁴³⁷ David Barry Gaspar, *Bondmen and Rebels: A Study of Master-Slave Relations in Antigua*, (Durham: Duke University Press, 1993), 36, 94, 103, 105, 110, 113. Griggs also rented land and enslaved people from Clement Tudway. See: Sarah Barber, “” Not worth one Groat”: The Status, Gentility and Credit of Lawrence and Sarah Crabb of Antigua.” *Journal of Early American History* 1, no. 1 (2011): 26-61.

⁴³⁸ Stearns, *Science in the British Colonies of America*, 334, 345-346. Delbourgo, “Listing People.”, 738. Parrish, *American Curiosity*, 271. Among Petiver’s other collectors on Antigua were Daniel Mackenning, and Mr. Ricketts, “Gardiner to Mr. Gale at Falmouth.” See also: Edmund Berkeley, and Dorothy Smith Berkeley, “The Most Common Rush or Vilest Weed: Some Unpublished Letters of James Petiver to William Byrd II.” *The Virginia Magazine of History and Biography* 95, no. 4 (1987): 481-95.

⁴³⁹ Petiver’s acknowledgment of the Grigg’s appears on page 263 of: James Petiver, *Jacobi Petiveri Opera, Historiam Naturalem Spectantia*, volume 2. London, 1767. Eighteenth Century Collections Online. Gale. Rutgers State University of New Jersey. 12 June 2017.

and “old Mrs. Rawlins.”⁴⁴⁰ Each of these women added to Petiver’s animal collections, and their ability to do so depended on the privileges they enjoyed as slaveholders.

Rachael Grigg sent insects, butterflies, and shellfish to the apothecary.⁴⁴¹ In an account in the *Philosophical Transactions*, Petiver credited Rachael Chapman for sending him a collection of marine animals, including a “red Beam’d Jamaica Muscle” and a “Carolina Egg-Cockle.”⁴⁴²

While the women of Parham made no explicit reference to enslaved collectors on Antigua, some correspondents did mention enslaved people in their natural history accounts. Captain Thomas Walduck, a military officer, discussed the role of enslaved people as collectors in his letters on natural history that he wrote from Barbados to his nephew John Searle and to James Petiver between 1710 and 1712.⁴⁴³

While stationed at Rupert’s Fort, in Saint Peter parish, Walduck penned letters on the flora, fauna, and minerals of the island.⁴⁴⁴ As a military captain and slaveholder, Walduck wrote to his nephew “a little Naturall History” of the colony, written, apparently, as a leisurely exercise and as a means to promote himself as an observer and empiricist in the colonies to metropolitan scholars. He requested his nephew put him in touch with “some Gentlemen of the Royall Society” to advertise his service as a

⁴⁴⁰ Among Petiver’s other women contacts in America were Hannah English Williams of Charleston, South Carolina, and Mary Danson, daughter of John Archdale, colonial governor of Carolina. On Williams see: Beatrice Scheer Smith, “Hannah English Williams: America’s First Woman Natural History Collector.” *The South Carolina Historical Magazine* 87, no. 2 (1986): 83-92; “Early Letters from South Carolina upon Natural History.” *The South Carolina Historical and Genealogical Magazine* 21, no. 1 (1920): 3-9; Charlotte Porter, “Natural History Discourse and Collections: The Roles of Collectors in the Southeastern Colonies of North America.” *Museum History Journal* 1, no. 1 (2008): 129-146.

⁴⁴¹ Stearns, *Science in the British Colonies*, 346.

⁴⁴² James Petiver, “An Account of Animals and Shells Sent from Carolina to Mr. James Petiver, FRS.” *Philosophical Transactions* 24, no. 1704-05: 1952-60, 1953-1954.

⁴⁴³ Stearns notes that John Searle’s brother, George Searle, was a ship captain in the Caribbean.

⁴⁴⁴ Stearns, *Science in the British Colonies*, 351.

correspondent on the animal environment of Barbados.⁴⁴⁵ While not a member of the planter class in Barbados, Walduck possessed several African bondmen and women as domestic slaves. These men and women also served him by collecting animals, which the captain supplied to Petiver in shipments he infrequently dispatched to London.

After being introduced to Petiver via Searle, Walduck boasted in one letter to the apothecary that “I have Negros and other opportunities to Employ” for acquiring Caribbean animals that English naturalists would find useful and interesting.⁴⁴⁶ In 1711, Walduck wrote in a letter to Petiver several notes on “Shells, Fossils, Animals, flies” that the enslaved found in Barbados, and forwarded several preserved specimens, including plants whose medicinal properties he learned through conversations with enslaved people.⁴⁴⁷ In addition, he forwarded three bottles containing “a worme I found under a stone in the sea att Low water,” another containing “wormes and Crabs” and other unidentified marine animals, and a specimen of “a poyson Lizard speckled with white and yellow upon a Brown skin.” Along with the lizard, Walduck packed several spiders, including a “fly catcher or the Hunting Spider.”

Included in this cargo, the captain added a “sea hedgehoge” along with a narrative account of how he came to acquire the animal from his enslaved collectors. “This sea urchin,” he explained, “my Negros took out of the sea stuffed it and brought it home when I was about and hung it up in my Chamber.” After they carefully suspended the animal in the air, Walduck fell asleep until “I was surprised to see alight or rather a 1,000

⁴⁴⁵ “Thomas Walduck’s Letters from Barbados, 1710,” *Journal of the Barbados Museum and Historical Society*, 15, no. 1, (1947), 27-51; Stearns, “James Petiver, Seventeenth-Century Promoter of Natural Science”, 243-365, 316.

⁴⁴⁶ “Thomas Walduck’s Letters from Barbados, 1710-1711,” *Journal of the Barbados Museum and Historical Society*, 15, no. 3, (1948) 137-149, 148.

⁴⁴⁷ “Thomas Walduck’s Letters from Barbados, 1710-1711,” *Journal of the Barbados Museum and Historical Society*, 15, no. 3, (1948) 137-149, 144.

lights in my Chamber motionless” emanating from the animal’s body. The captain hurt his hand attempting to grasp the creature in the darkness, until the light “caused by the salt particles” vanished. While the captain made no mention in his letter of punishing his slaves for their mischief, he related to Petiver that he ordered his bondspeople the following day to dip the urchin into the sea in an attempt to replicate the visual effect. Walduck’s narrative playfully mixed natural history, slavery, and comic detail via the enslaved collectors’ trickery.

This narrative exemplifies how slavery and natural history easily commingled in the early modern Caribbean, and encouraged broader networks that turned animals and human chattel into specimens. Alongside his descriptions and specimens of marine life, Walduck added notes on natural and medical “curiosities” from Barbados in his letters that belied the violent context of his natural history research. Set between sketches on plants and animals in Barbados, Walduck recalled seeing “a Negro woman the last year in the parish of St. Thomas delivered of two Children att one birth, the one as white as any European, the other as black as any Negro, both Boyes.”⁴⁴⁸ For Walduck, and presumably his English audience in the metropole, this woman and her children, and their skin color, existed foremost as objects for study and collection rather than fully human individuals. Moreover, while he elided this woman’s personal history, it is quite possible that she was a victim of rape and sexual assault, as enslaved women were frequently targeted by white men on Barbados like Walduck.⁴⁴⁹

⁴⁴⁸ Thomas Walduck’s Letters from Barbados, 1710-1711,” *Journal of the Barbados Museum and Historical Society*, 15, no. 3, (1948) 137-149, 148-149.

⁴⁴⁹ Hilary McDonald Beckles, *Natural Rebels: A Social History of Enslaved Black Women in Barbados* (New Brunswick: Rutgers University Press, 1989), 43, 133-135, 143.

In another passage, Walduck described an enslaved woman and her child who both died during her labor while in St. Michael parish. These gruesome medical observations fit within a wider circum-Atlantic discourse of anatomical descriptions that situated enslaved people as natural historical curiosities for the abstract consumption of metropolitan scholars in England, especially the Royal Society.⁴⁵⁰ In his cargos of human “specimens” mixed with animals, Walduck’s contributions to the study of America’s faunal environments preceded similar collections such as those made by Burnet at Portobelo.

For several years, Walduck continued to send Petiver letters on natural history and animals, including descriptions of ambergris, sea tortoises, and sea urchins, until their correspondence ended in 1716. Petiver acknowledged Walduck’s labor in his *Pterigraphia Americana* and in an article published in the *Philosophical Transactions* in 1715.⁴⁵¹ However, the enslaved, both the playful tricksters on the shoreline and the woman whose children provoked curiosity, became invisible in such catalogs.

Naturalists in the West Indies collected animals as a form of leisure and sociability to imbricate themselves within potentially advantageous intellectual and slaveholding networks across the British Atlantic. White men and women frequently

⁴⁵⁰ See also: James Brodie, and Dr. Preston. "An Account of a Faetus, Voided by the Ulcered Navil of a Negro in Nevis, by Mr. James Brodie; Communicated by Dr. Preston." *Philosophical Transactions (1683-1775)* 19 (1695): 580-81; James Parsons, "An Account of the White Negro Shewn before the Royal Society: In a Letter to the Right Honourable the Earl of Morton, President of the Royal Society, from James Parsons, M. D. F. R. S." *Philosophical Transactions (1683-1775)* 55 (1765): 45-53; James Bate, and Alexander Russel. "An Account of the Remarkable Alteration of Colour in a Negro Woman: In a Letter to the Reverend Mr. Alexander Williamson of Maryland, from Mr. James Bate, Surgeon in That Province. Communicated by Alexander Russel, M. D. F. R. S." *Philosophical Transactions (1683-1775)* 51 (1759): 175-78; William Byrd. "An Account of a Negro-Boy That Is Dappel'd in Several Places of His Body with White Spots. By William Byrd, Esq, F. R. S." *Philosophical Transactions (1683-1775)* 19 (1695): 781-82. John H. Appleby, "Human Curiosities and the Royal Society, 1699-1751." *Notes and Records of the Royal Society of London* 50, no. 1 (1996): 13-27; James Delbourgo, "The Newtonian Slave Body: Racial Enlightenment in the Atlantic World." *Atlantic Studies* 9, no. 2 (2012): 185-207.

⁴⁵¹ James Petiver, "Botanicum Hortense IV. Continued from No. 345. by James Petiver, F. R. S." *Philosophical Transactions (1683-1775)* 29 (1714): 353-64.

became enslavers and enlisted the enslaved to locate, preserve, and identify animals in the field to increase their bids for self-improvement. Slaveholding clergy in the Caribbean interested in improving their status justified their enthusiasm for natural history as complementary to their studies in natural theology. Reverend William Smith, rector of St. John parish, Nevis, for instance, exploited his station as a minister on the island from 1716 to 1721 to study fauna, among other subjects, while being accompanied by “my Negro Man Oxford” on collecting excursions.⁴⁵²

On Nevis, Smith exploited and benefitted from Oxford’s skilled labor and judgment, and the labors of other enslaved people who toiled on sugar plantations in St. John parish. Enslavers in the parish paid the minister an annual salary of “sixteen thousand pound weight of Muscovado” sugar.⁴⁵³ Smith forwarded collections of cockles, “Groopers, Rock-fish, Old Wives, Welchmen” and other marine fauna from Nevis across the Atlantic to Charles Mason, Woodwardian Professor of the University of Cambridge.

In his writing on fish and other sea creatures on the island, Smith described in detail how enslaved divers, including Oxford, collected fauna for slaveholders who indulged in natural history as a pastime. To collect shells and other small marine animals, Smith and other slaveholders directed enslaved men using baskets to sift through “sandy Bays” for colorful or unusually shaped specimens of mollusks.⁴⁵⁴ Slaveholders also directed enslaved collectors in “Fish-hunting,” a sport that combined the pleasures of

⁴⁵² William Smith, *A Natural History of Nevis, and the Rest of the English Leeward Charibee Islands in America*, (London: Printed by J. Bentham, sold by W. Thurlbourn in Cambridge; S. Birt in Ave-Maria Lane, C. Bathurst in Fleet Street, and J. Beecroft in Lombard Street, London, 1745), 10.

⁴⁵³ John Nichols, *Illustrations of the Literary History of the Eighteenth Century*, vol. I, (Printed for the Author by Nichols, Son, and Bentley, at Cicero’s Head, Red-Lion Passage, Fleet Street, 1817), 790.

⁴⁵⁴ Smith, *A Natural History of Nevis*, 2-3.

collecting, curiosity, and sociability for slaveholding men, who often assembled together to watch enslaved fishers and divers capture underwater prey along the shoreline.

In their huddles on the shore, Smith and his slaveholding colleagues would “send each of them a Negro Slave to the Woods” to first gather supplies of dogwood bark. After crushing the bark using stones, and packing the tree pulp in sacks, slaves dipped the sacks into the water until the satchels excreted a dark “Juice.” As the bark secreted its ooze, the juice coloured the water “with a reddish hue; and being of a poisonous nature” slowly rendered the fish “so drunk or intoxicated” that they swam heedlessly toward the surface. At this point, Smith and the other enslavers watched the men collect the fish by “both swimming and diving” underwater.⁴⁵⁵ In addition to fish, Oxford and other enslaved people on Nevis collected specimens for Smith including corals, crabs, crayfish, and sea urchins, which the reverend noted “prick the Feet of such Negroes as dive to take them up.”⁴⁵⁶

In addition to swimming and diving underwater for fish, enslaved collectors on Nevis under Smith’s instruction caught birds destined for animal collections across the Atlantic. While on an expedition from Nevis across the tidal strait to Saint Christopher, Smith tasked “a sharp-sighted and nimble Negro” with shooting birds, including kites, screech owls, noddies, spoon-bills, pelicans, boobies, pigeons, ground doves, and hummingbirds. Smith also relied on this person to shoot and retrieve bats he saw flying overhead.⁴⁵⁷ Smith himself lacked such skills, and his self-promoting projects involving Caribbean animals would have floundered without enslaved assistants.

⁴⁵⁵ Smith describes these events as equal parts scientific curiosity and sociable leisure, noting that the slaveholders watch “standing by on high Rocks to see the Pastime”.

⁴⁵⁶ Smith, *A Natural History of Nevis*, 7-10, 17.

⁴⁵⁷ Smith, *A Natural History of Nevis*, 50-51.

On his return from Nevis to England in 1721, Smith began writing and revising a series of letters to Mason at Cambridge on the natural history of the colony and surrounding islands, including Saint Christopher and Montserrat. In 1745, Smith published *A Natural History of Nevis*, an epistolary natural history, which introduced Oxford as a significant assistant in the reverend's collecting treks. In the *Natural History*, Smith described Oxford as a skilled diver, collector, and preserver of animal specimens, and noted briefly that he was born in West Africa, captured as a child, and taken aboard a slave ship to Brazil before being sold to Smith on Nevis.

For Smith and others, natural history fulfilled an intellectual and spiritual desire to understand the cosmos as an ordered totality. The reverend collected the "Animal World" on Nevis and other Caribbean islands to offer a portal onto "the great Creator's Wisdom and Magnificence."⁴⁵⁸ However, collecting to improve the soul and mind entailed compelling enslaved people, such as Oxford, to expose their bodies to dangerous risks to indulge the curiosity of slaveholders.

Embedded in the violent context of plantations and chattel slavery on Nevis, Smith often described human "curiosities" at sugar estates around the island in addition to studying nonhuman animal specimens, much like Burnet and Walduck. "I once went to see, out of pure Curiosity," he recalled, "a Negro Boy, as soon as born; he looked of a dark Red colour; and I also visited a Mulatto Child, about half an hour after his Mother was brought to Bed of him, and I do sincerely declare, I could not have distinguished him from a White Woman's Child."⁴⁵⁹ On another occasion, Smith recalled the case of an

⁴⁵⁸ Smith, *A Natural History of Nevis*, 20, 92; Stuart Peterfreund, "From the Forbidden to the Familiar: The Way of Natural Theology Leading Up to and Beyond the Long Eighteenth Century." *Studies in Eighteenth-Century Culture* 37, no. 1 (2008): 23-39.

⁴⁵⁹ Smith, *A Natural History of Nevis*, 231.

enslaved woman who gave birth to two children, one “Coal Black” and the other “Mulatto,” and speculated over how parentage determined skin color. Like his peers, Smith’s anatomical queries turned enslaved women and children from fully realized persons deserving of empathy into static objects of curiosity to be consumed, studied, and relished for learned philosophers.

While Smith admitted Oxford as a valuable collector for his natural history expeditions in print, other clergy in the Caribbean used the presence of enslaved people in their printed natural histories to contrast their own intellectual standing against what they framed as the ineptitude of slave assistants. Reverend Griffith Hughes, for instance, lived on Barbados from 1736 to 1748, where he served as the rector of St. Lucy, and as a missionary of the Society for the Propagation of the Gospel in Foreign Parts.

While the Society charged Hughes with proselytizing to both free and enslaved people on Barbados, the reverend mostly neglected his pastoral duties and instead filled his time on the island collecting flora, minerals, and faunal specimens, especially sea creatures, for a planned natural history of the colony. In 1743, Hughes promoted his book project in London to Hans Sloane and Martin Folkes, and offered Sloane “some worms and Reptile” from Barbados for his collections.⁴⁶⁰ Hughes published his voluminous *The Natural History of Barbados* in 1750.

In the *Natural History*, Hughes described how an enslaved man collected an intriguing mollusk on Barbados. While scouring the northern shores of St. Lucy parish on

⁴⁶⁰ Francis J. Dallett Jr., “Griffith Hughes Dissected.” *Journal of the Barbados Museum and Historical Society* 23, no. 1 (1955): 3-29; Griffith Hughes, “A Letter from the Reverend Mr. Griffith Hughes, Minister of St. Lucy’s Parish in Barbadoes, to Martin Folkes, Esq; President of the Royal Society, concerning a Zoophyton, Somewhat Resembling the Flower of the Marigold.” *Philosophical Transactions (1683-1775)* 42 (1742): 590-593.

Barbados for animals Hughes spied a rare mollusk, a murex, clutching a distant rock. Murexes are carnivorous marine molluscs with spiny, spiralled shells. Hughes immediately saw the animal on the rock as an opportunity to distinguish himself as a naturalist in Europe.

In his narrative of the murex that caught his attention on the rocky cliffs of St. Lucy in a section on shells and shellfish, Hughes recalled that after sighting the animal he quickly “ordered a Slave to fetch” the creature.⁴⁶¹ This man, whom the parson referred to in his account simply as his “Lad,” hurried to collect the sea snail, and in his rush “grasped it with so much Roughness” that the animal broke in his hand, coloring his body in the bright hues of Tyrian purple, known to dyers in Europe and throughout the Mediterranean world as imperial purple.⁴⁶²

Disappointed, Hughes recalled in his narrative how the accidental damage to the specimen repeated the mythical discovery of this natural dye by the ancient Greek hero Hercules and his loyal dog. In Hughes *Natural History*, he cast himself as a powerful demigod amassing knowledge of the natural world in the West Indies and his “Lad” as a clumsy, unsophisticated animal.

⁴⁶¹ Griffith Hughes, *The Natural History of Barbados*, (London: Printed for the Author, 1750), 272.

⁴⁶² Annalisa Marzano, *Harvesting the Sea: The Exploitation of Marine Resources in the Roman Mediterranean* (Oxford: Oxford University Press, 2013), 143.

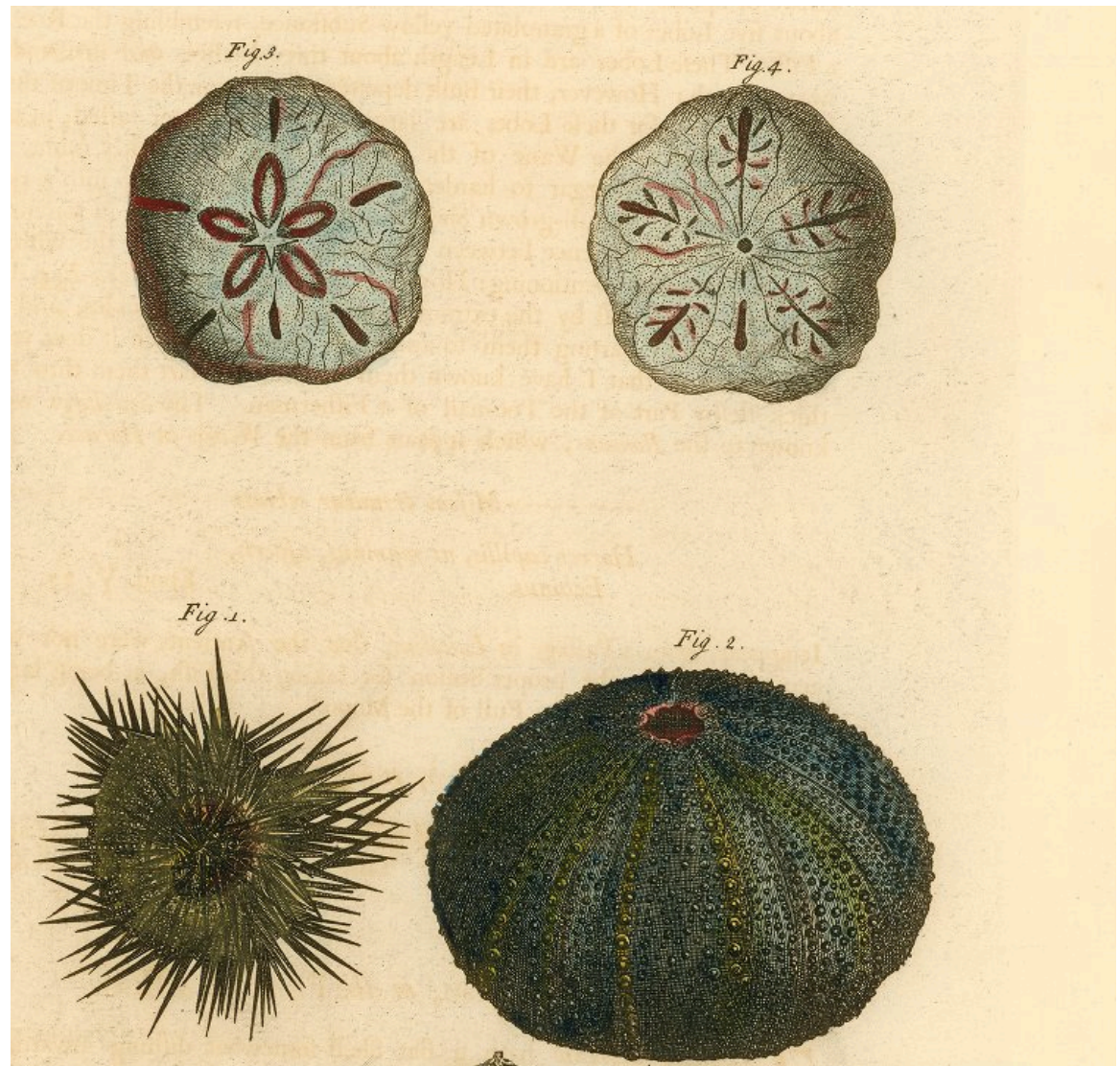


Figure. 2.4 Marine animals illustrated by Griffith Hughes, *The Natural History of Barbados*, 1750, image courtesy of The John Carter Brown Library, Brown University.

Animals collected from West Indies plantations by enslaved people not only satisfied the personal curiosity of naturalists in the field, but also furnished contemporary debates within European academic and scientific discussions over the boundaries of plant and animal life in the eighteenth century. In numerous letters appearing in the *Philosophical Transactions* of the Royal Society, John Ellis, a textile merchant and royal agent for West Florida and Dominica who resided in London, persuaded his peers at the

Royal Society, and throughout continental Europe, that various forms of marine life—including corals, corallines, and polyps—exhibited the anatomical and physical qualities of animals, including the observable presence of musculature and tendons, rather than plants or minerals, and should be taxonomically categorized as such.⁴⁶³ In his correspondence with the Swedish naturalist and agricultural improver Carl Linnaeus, Ellis challenged the positions held by naturalists on the continent, especially Peter Simon Pallas and Job Baster, who claimed these marine creatures were in fact either flora or minerals.⁴⁶⁴

Ellis, with the aid of his collaborator Daniel Solander, an apostle of Linnaeus, and others, collected, described, and catalogued hundreds of species of marine fauna acquired from sites around the globe in his numerous letters and scientific publications, which later appeared in a collected volume of natural history, published posthumously by his daughter Martha Watt, entitled *Natural History of Many Curious and Uncommon Zoophytes* in 1786.⁴⁶⁵ Correspondents across the planet sent animals to Ellis, who listed in his texts the provenance of the animals gathered from sites near and far including Cornwall, Aberdeen, Ascension Island, the Maluku Islands, Mauritius, Algiers, and even a “Sea-Feather” and a “Shagg Sponge...sent from our factory at Cape Coast Castle on the coast of Africa, where it grows in plenty on the rocks.”⁴⁶⁶

⁴⁶³ Deirdre Coleman, “‘Aetherial Journies, Submarine Exploits’: The Debatable Worlds of Natural History in the Eighteenth Century.” In *Romanticism's Debatable Lands*, edited by Claire Lamont and Michael Rossington, 223-36, (New York: Palgrave Macmillan, 2007), 227; Roy A. Rauschenberg, “John Ellis, Royal Agent for West Florida,” *The Florida Historical Quarterly*, 62 no.1 (1983), 1-24; Marc J. Ratcliff, “Temporality, Sequential Iconography and Linearity in Figures: The Impact of the Discovery of Division in Infusoria,” *History and Philosophy of the Life Sciences* 21, no. 3 (1999): 255-92.

⁴⁶⁴ Ellis to Linnaeus, January 31, 1766; Ellis to Linnaeus, October 21, 1766, in *A Selection of the Correspondence of Linnaeus, and Other Naturalists: From the Original Manuscripts, Volume 1*, edited by James Edward Smith, 185-191, (London: Longman, Hurst, Rees, Orme, and Brown, 1821).

⁴⁶⁵ John Ellis, *The Natural History of Many Curious and Uncommon Zoophytes*, (London: Printed for Benjamin White and Son, 1786).

⁴⁶⁶ Ellis, *The Natural History of Many Curious and Uncommon Zoophytes*, 96, 185.

John Greg, Ellis' most prolific collector, fashioned a career for himself as a planter and slaveholder in the West Indies.⁴⁶⁷ Greg began his colonial career as a land surveyor in Dominica, and in 1765 purchased and managed two sugar plantations on the island, Hertford and Hillsborough.⁴⁶⁸ He sent Ellis dozens of specimens from Dominica: various "animal flowers", or sea anemones; a "pipy sea mat", a species of bryozoan; a kidney-shaped purple sea pen; eight species of gorgonia; "Trident" and "Cylindrical jointed" corallines; and an alcyonium with "little Eyes."⁴⁶⁹ While visiting Charleston, South Carolina, Greg collected a "Spanish Broom Gorgon" and a sea pen, which Ellis discussed at length in a letter published in the *Philosophical Transactions*.⁴⁷⁰

Whether Greg exploited the labor of enslaved people to collect these animals for Ellis, or simply picked up the animals while profiting handsomely from his sugar estates, is unclear. Yet, slavery in the West Indies furnished the collections Ellis later mobilized in London to defend his zoological claims in print that zoophytes belonged within the kingdom Animalia.⁴⁷¹

The presence of individual enslaved collectors, such as Oxford, within the archive is comparatively rare. Moreover, enslaved collectors who gathered animals at a

⁴⁶⁷ Nini Rodgers, *Ireland, Slavery and Anti-Slavery: 1612-1865*, (New York: Palgrave Macmillan, 2007), 147-148, 192, 212.

⁴⁶⁸ Rodgers, *Ireland, Slavery and Anti-Slavery*, 147; Polly Pattullo, *Your Time Is Done Now: Slavery, Resistance, and Defeat: The Maroon Trials of Dominica (1813-1814)*, (New York: New York University Press, 2015), 43, 74; Richard K. MacMaster, "From Ulster to the Carolinas: John Torrans, John Greg, John Poaug, and Bounty Immigration, 1761-1768." in *The Irish in the Atlantic World*, edited by David T. Gleeson (Columbia: University of South Carolina Press, 2010).

⁴⁶⁹ Ellis, *The Natural History of Many Curious and Uncommon Zoophytes*, 5-7, 17, 65, 81-83, 91-95, 109, 114; 180.

⁴⁷⁰ John Ellis, "An Account of the Sea Pen, or Pennatula Phosphorea of Linnaeus; Likewise a Description of a New Species of Sea Pen, Found on the Coast of South-Carolina, with Observations on Sea-Pens in General. In a Letter to the Honourable Coote Molesworth, Esq; MD and FRS from John Ellis, Esq; FRS and Member of the Royal Academy at Upsal." *Philosophical Transactions (1683-1775)* 53 (1763): 419-435.

⁴⁷¹ Susannah Gibson, "On Being An Animal, or, the Eighteenth-Century Zoophyte Controversy in Britain." *History of Science* 50, no. 4 (2012): 453-476.

significant spatial distance, either across regional boundaries by land or separated by hundreds of miles at sea from the men and women who held them in bondage, were very uncommon in the eighteenth-century British Atlantic. Most enslaved people employed in collecting animals for natural history scouted for specimens in close proximity to the physicians, ministers, naturalists, and planters who claimed ownership over their bodies and labor, and rarely ventured beyond their sight. However, an intriguing exception to the normal spatial relations between enslaved people and slaveholders engaged in collecting faunal specimens offers an opportunity to understand the abilities, risks, and scientific demands slaveholders expected of enslaved collectors.

In the summer of 1770, an enslaved man travelled from the port city of Charleston, South Carolina, to Isla de Providencia, a small Caribbean island situated one hundred and twenty miles east of the Miskito Coast, or present-day Nicaragua.⁴⁷² Settlers interested in the natural environment and improvement through natural history on Providence Island, the English name for the island, reached back into the seventeenth century. Individuals scoured the island for useful plants, animals, and minerals from its initial settlement by the Providence Island Company in 1629 until its capture by the Spanish in 1641.⁴⁷³

It is unclear how this man, whose name and identity is irrecoverable from the archive, travelled to the island. Moreover, it is unclear whether he was accompanied by an overseer or another agent of his enslaver, Dr. Alexander Garden. It is possible he carried letters of introduction identifying the slaveholder who held him in bondage in

⁴⁷² Parrish, *American Curiosity*, 272.

⁴⁷³ Karl Offen, "Puritan Bioprospecting in Central America and the West Indies." *Itinerario* 35, no. 1 (2011): 15-48; Karen Ordahl Kupperman, "Errand to the Indies: Puritan Colonization from Providence Island through the Western Design." *The William and Mary Quarterly* 45, no. 1 (1988): 70-99.

South Carolina explaining his mission between the two colonies, and two empires, perhaps along with directions for collecting animals.

During his inter-imperial expedition and his time collecting animals on the island, the man, referred to by Garden in a letter as his “black servant,” obtained specimens of chigoe fleas “preserved in spirits of wine.”⁴⁷⁴ To portray the parasitic insect’s life cycle, the man collected multiple specimens of the animal, including “some full grown, others younger and smaller, others in the little bags in which they conceal themselves, while they wound the skin of the feet, or other parts of the human body, for the sake of depositing their eggs there.”⁴⁷⁵

Given his ability to identify and collect specimens of chigoe fleas at different stages of development, the man possessed an indisputably keen eye for entomology and insect anatomy. How he collected the animals remains obscure. He may have removed the fleas from the feet of enslaved people on the island, or even his own, using the bodies of others to carry out the work of natural history. In addition to the chigoe fleas, the man “collected and preserved some fishes amongst other things” from the island.

Among the animals the “black servant” collected at Providence Island, and later around Charleston, that his enslaver Garden sent to Carl Linnaeus in 1771 were more than a dozen kinds of fish, a “Potato Louse,” “some Fire-flies,” a “coleopterous insect,” an insect known in South Carolina as “a *Smith*,” an “unknown animal” in a glass bottle,

⁴⁷⁴ “Alexander Garden to Carolus Linnaeus, Charlestown, 20 June 1771”, in James Edward Smith, *A Selection of the Correspondence of Linnaeus and Other Naturalists, from the Original Manuscripts*, vol. 2, (London: Printed for Longman, Hurst, Rees, Orme, and Brown, 1821), 330-337. This man is also, most likely, the “servant” mentioned in a paper written by John Ellis discussing an animal sent by Garden to London: John Ellis, “An Account of an Amphibious Bipes; By John Ellis, Esq; F. R. S. To the Royal Society,” *Philosophical Transactions (1683-1775)* 56 (1766): 189-192. Chigoe fleas are known to entomologists as *Tunga penetrans*.

⁴⁷⁵ “Alexander Garden to Carolus Linnaeus, Charlestown, 20 June 1771”, 330-331.

and a fish known to Garden as a “*Fat-back*.”⁴⁷⁶ The fishes the man collected at Providence Island included “Goat Fish,” “Spanish Hog Fish,” “Pork Fish,” “Schoolmaster,” “Parrot Fish,” and “Leather coat.”⁴⁷⁷

While Garden did not name the man in his letter to Linnaeus, his labor and skill can be inferred given the variety of specimens he collected and the few he successfully preserved in transit on his return to South Carolina. Moreover, the man’s ability to collect, like Garden’s, most likely hinged upon contacts with others he encountered in his travels. Perhaps the man caught some of these specimens while fishing on the coastline around Providence Island. It is possible he conversed with other enslaved men and women who caught fish for food, or perhaps exchanged goods for specimens of fish or information on where to find rare kinds of fish. Undoubtedly, his work to accrue animals required ingenuity, persistence, and skill in taxonomy and specimen preservation that white naturalists valued in free and enslaved collectors.

On his return to South Carolina, the man packed and stored the animals from Providence aboard the ship he sailed on. Exposure to tropical weather, both heat and rain, destroyed most of the specimens in transit, an unfortunate, though common, outcome of many collecting expeditions in the eighteenth-century Caribbean. While Garden chided the man for having “neglected all his specimens,” plant and animal collections often withered, rotted, and decayed aboard ships sailing between the colonies of British America and the West Indies.⁴⁷⁸ During many voyages, rats and other vermin chewed through boxes used to preserve specimens and ate animal remains. Moreover, while

⁴⁷⁶ “Alexander Garden to Carolus Linnaeus, Charlestown, 20 June 1771”, 331-335.

⁴⁷⁷ For an excellent analysis of this man’s labor and skill in natural history, see: Whitney Barlow Robles, “Flatness.” in *The Philosophy Chamber: Art and Science in Harvard's Teaching Cabinet, 1766-1820*, edited by Ethan W. Lasser (New Haven: Yale University Press, 2017), 190-209.

⁴⁷⁸ Parsons, and Murphy, “Ecosystems under Sail,” 503-529.

aboard the ship on the turbulent surface of the Atlantic seascape, the man reported he often feared “immediate shipwreck” during his return passage. The man’s fears, which were not misplaced, underscore the dangerous, risky labor white naturalists exposed enslaved collectors to above and below the waterline while gathering animals.

Despite the losses, Garden forwarded the “whole stock” of what remained from the man’s voyage to Carl Linnaeus, the Swedish botanist and taxonomist who promoted identifying, transporting, and acclimating plant specimens for the purposes of economic botany as agricultural staples and pharmacological products to bolster Sweden’s economic and imperial reach beyond the Baltic Sea.⁴⁷⁹ Garden’s correspondence with Linnaeus spanned from their initial contact in 1755 until Linnaeus’ death in 1778.⁴⁸⁰ As a node in the global network of collectors assembled by Linnaeus, Garden immersed himself in natural history as a means to gain botanical and zoological knowledge and specimens, and to ingratiate himself as a naturalist in Europe. In 1763, Linnaeus nominated Garden for membership in the Royal Academy of Uppsala, propelling him to eventually become a fellow of the Royal Society in 1773, and other societies including the Royal Society of Arts, the Philosophical Society of Edinburgh, and the American Philosophical Society.

Garden practiced medicine as a physician in South Carolina, and reaped the profits of a plantation he purchased from John Moultrie in 1771 named Otranto, in Saint

⁴⁷⁹ The literature on Linnaeus is vast, for a relevant selection on his ideas about improvement and empire see: Lisbet Koerner, *Linnaeus: Nature and Nation*, (Cambridge: Harvard University Press, 2000); Staffan Müller-Wille, "Nature as a Marketplace: The Political Economy of Linnaean Botany." *History of Political Economy* 35, no. 5 (2003): 154-172.

⁴⁸⁰ Margaret Denny, "Linnaeus and His Disciple in Carolina: Alexander Garden." *Isis* 38, no. 3/4 (1948): 161-174.

James parish.⁴⁸¹ Garden used the fortunes of his plantation and his medical practice to fund his collecting interests, and by 1785 possessed seventy-six enslaved people.⁴⁸² As a correspondent of an esteemed European naturalist and taxonomist, Garden accrued credit by associating with English naturalists like John Ellis and supplying systematists like Linnaeus with specimens. Linnaeus reciprocated in turn, and bestowed credit on Garden in the twelfth edition of *Systema Naturae*, by using Garden's name to denominate new species of fish, reptiles, and plants, including the *Gardenia*.⁴⁸³ What became of the career or life of the "black servant" is unknown. However, his judgment, like other go-betweens in the early modern world, determined the natural history collections of Linnaeus.⁴⁸⁴

Conclusion

Animal collections moved through networks of slaving and natural history networks in the eighteenth-century British Atlantic. Men of science relied upon the labors, both labor in collecting specimens and labor in plantations, of enslaved people of African descent to produce their clusters of colonial faunal curios destined for consumption in the metropole. Entangled routes of knowledge and slaving involving animals can be conceived of as productive eco-cultural networks through which new faunal knowledge circulated via the geography of slavery, British colonial settlements, and the African diaspora.

⁴⁸¹ *The Papers of Henry Laurens: August 1, 1768 - July 31, 1769*, eds. David Chesnutt, and Philip Hamer, vol. 6, (Columbia: University of South Carolina Press, 1978), 181; Stearns, *Science in the British Colonies of America*, 599-619.

⁴⁸² Edmund Berkeley, and Dorothy Smith Berkeley, *Dr. Alexander Garden of Charles Town*, (Chapel Hill: University of North Carolina Press, 1969), 275, 280.

⁴⁸³ G. S. Boulger, 'Garden, Alexander (1730–1791)', rev. Marcus B. Simpson jun., *Oxford Dictionary of National Biography*, Oxford University Press, 2004.

⁴⁸⁴ Simon Schaffer, Lissa L. Roberts, Kapil Raj, and James Delbourgo, eds. *The Brokered World: Go-Betweens and Global Intelligence*, (Sagamore Beach: Science History Publications, 2009).

While some naturalists instructed and oversaw enslaved people in the oftentimes dangerous work of collecting rare animals, most naturalists benefitted as enslavers from the toil of enslaved people on plantations, via connections to slaving voyages or factories in Atlantic Africa, or through friendship, correspondence, or patronage from slaveholders between the colonies. Others, such as William Smith, Griffith Hughes, and Alexander Garden employed enslaved people at locating, acquiring, transporting, and preserving animal specimens. In both cases, the exploitation of enslaved laborers and the wider worlds of slaving and slavery materially supported natural history expeditions and collections of Atlantic world fauna. Moreover, this chapter has foregrounded labor in collecting animals as a mode of interaction between enslaved collectors themselves, such as Oxford, the “black servant”, and those anonymized by white naturalists, who exercised judgment and care in selecting animal specimens. In sum, the eco-cultural networks of slaving and natural history relied upon the enthusiasm and power of enslavers, but also the taste and skill of enslaved people who located and transported animals across the ocean.

Chapter Three

Plantation Nerves and Sinews

To one point you ought particularly to attend, and never let it escape from your memory, that a negro is an instrument, which requires to be incessantly acted upon to the performance of its duty.

—David Collins, *Practical Rules for the Management and Medical Treatment of Negro Slaves in the Sugar Colonies*, 1803.

The experience of servitude means being placed forcefully in the zone of undifferentiation between human and animal, in those zones where human life is seen from the posture of the animal – human life taking on the shape of animal life to the point that the two can no longer be distinguished, to the point where it is no longer clear what part of the animal is more human than the human and what part of man is more animal than the animal.

—Achille Mbembe, *Critique of Black Reason*, 2017.

Samuel Martin felt pangs of regret upon finding his father's plantation in Antigua, Green Castle, "all tumbling down" and "ten fold worse than it was naturally" after returning to the island from England in June, 1750.⁴⁸⁵ Since the murder of his father, Major Samuel Martin, on Christmas Day in 1697 by enslaved people armed "with the hoes they had been using in the cultivation of his sugar-canes," managers oversaw the five hundred acre sugar estate sited in St. Mary parish on the western coast of the island for nearly forty years.⁴⁸⁶ From atop a high hill, Martin could stand on the grounds of his family's manor and gaze downward at the slave cabins west of the house.⁴⁸⁷ From this vantage point, Martin could begin to conceive of how to reassemble a plantation.

⁴⁸⁵ Samuel Martin to Samuel Martin Jr., June 16, 1758, British Museum, Additional Manuscripts, 41, 346, folder 210, as quoted in Richard Sheridan, "Samuel Martin, Innovating Sugar Planter of Antigua", *Agricultural History* 34, no. 3 (1960): 126-139. 128.

⁴⁸⁶ Mrs. Lanaghan, *Antigua and the Antiguans*, volume 2 (London: Saunders and Otley, 1844), 79, 353.

⁴⁸⁷ Samantha Rebovich Bardoe, "Resistance and Reform: Landscapes at Green Castle, Antigua," in *The Limits of Tyranny*, edited by James A. Delle, 65-92 (Knoxville: University of Tennessee Press, 2015).

In a letter to his son eight years after his arrival, Martin computed that a catastrophic decline in the number of enslaved people and cattle, and other disastrous mismanagement owing to the ineptitude of their managers, cost the family a threefold loss in sugar production in the decades between his father's death and Martin's return to the ruins of Green Castle.⁴⁸⁸ "I have good reason," he suspected, "to believe my two last Managers cheated me most abominally."⁴⁸⁹ Martin learned from his subordinates deception, or sheer incompetence, the acute challenges that a planter returning from absenteeism faced for controlling both humans and nonhumans at a distance. For Martin, grappling with humans and animals as tools became fundamental to his ambitious restoration.

Martin immediately set about rebuilding the estate, and after the better part of a decade succeeded in restoring Green Castle to its former condition. He explained to his son that with a "Stock of Cattle & Mules [which] do the [labor] of" sixty enslaved men and women in spreading dung across the plantation fields, and the muscular toil and skilled labor of two hundred and seventy enslaved men, women, and children, who drudged in hoeing and dunging the earth, gathering fodder vegetables and grasses, and planting, weeding, harvesting, carting, and refining rows of cane sugar, Green Castle began to produce an average of two hundred and fifty hogsheads of sugar for markets across the British Atlantic world by 1758.⁴⁹⁰ Martin accomplished this reconstruction by

⁴⁸⁸ Sheridan, "Samuel Martin, Innovating Sugar Planter of Antigua", 129. Samantha Anne Rebovich, "Landscape, Labor, and Practice: Slavery and Freedom at Green Castle Estate, Antigua," PhD dissertation, Syracuse University, 2011.

⁴⁸⁹ Samuel Martin to Samuel Martin Jr., June 14, 1758, British Museum, Additional Manuscripts, 41, 346, folder 208, as quoted in Sheridan, "Samuel Martin, Innovating Sugar Planter of Antigua", 129.

⁴⁹⁰ Samuel Martin to Samuel Martin Jr., June 14, 1758, British Museum, Additional Manuscripts, 41, 346, folder 208, as quoted in Sheridan, "Samuel Martin, Innovating Sugar Planter of Antigua", 129.

focusing on tightly controlling patterns of human-animal labor already existing under slavery with an innovative scientific bent.

In a printed treatise on “plantership,” published sometime in the early 1750s, Martin circulated the insights he gained from repairing Green Castle to his slaveholding peers. He intended his essay to serve as a complete manual for new planters, including those transitioning from absenteeism to directly overseeing their estates, by providing detail on the techniques necessary at each stage of sugar production.⁴⁹¹

In his dedication, Martin encouraged planters to draw on their liberal education—including the study of classical authorities, such as the fourth-century Roman agriculturalist Columella, and reading in natural philosophy—to improve their plantations.⁴⁹² Elite planters like Martin read widely, but also collected information from every available source. Patrick Kein, a Jamaican planter who directly plagiarized Martin in his own *Essay Upon Pen-Keeping and Plantership*, printed in 1796, recommended, for example, that slaveholders study the Dutch chemist Herman Boerhaave and abridged introductions to the work of Isaac Newton to better understand the physics of sugarmaking. However, Kein also acknowledged the value of learning sugar chemistry directly from enslaved people, such as two men in Jamaica named Isaac and London who tutored him while he visited the sugar operations at Fontabelle in St. Mary parish.⁴⁹³

⁴⁹¹ Book historians disagree when the first edition of the *Essay Upon Plantership* was published, however there is agreement the earliest date may have been 1750.

⁴⁹² Samuel Martin, *An Essay Upon Plantership, humbly inscrib'd to all the planters of the British sugar-colonies in America. The Second Edition, Corrected and Enlarged* (Antigua: Printed by T. Smith, 1750), vii. See also the subscribers list for: Henry Pemberton, *A View of Sir Isaac Newton's Philosophy* (London: S. Palmer, 1728). Among the planters from Antigua who read Pemberton's book on Newton were: Richard Ash, Edward Byam, Nathaniel Crump, Benjamin King, and William Mackinnen.

⁴⁹³ Patrick Kein, *An Essay on Pen-Keeping and Plantership*, (Kingston, Jamaica: Printed at His Majesty's Printing Office, 1796), 38, 70-71, 77. See also: Eric Otremba, "Inventing Ingenios: Experimental Philosophy and the Secret Sugar-Makers of the Seventeenth-Century Atlantic." *History and Technology* 28,

At the outset of Martin's essay, after urging that planters inspect their estates with their "own eyes" rather than become dependent on managers, he emphasized that above all West Indian slaveholders hold as a fundamental principle that enslaved people, "cattle, mules, and horses are the *nerves* of a sugar-plantation," and deserved expert attention in their management.⁴⁹⁴ John Pinney, a Bristol absentee planter-merchant and a contemporary of Martin who owned a sugar estate on Nevis, likewise emphasized to his overseers that "slaves and stock" are "the sinews of a plantation and must claim your particular care and attention."⁴⁹⁵ Abstracting enslaved people and livestock as "nerves" and "sinews" served an important purpose, namely conceiving of their labor and bodies as instruments within networks to be systematically disciplined.

Martin and Pinney's anatomical terminology raises several questions. How did slaves and animals come to be considered as interconnected subjects through bodily rhetoric? For early moderns, nerves existed as connective tissue through which signals moved from the mind to distant parts of the body, such as the limbs and muscles, and relayed sensory impressions back to the mind.⁴⁹⁶ Sinew denoted the material substance binding muscles to bones, which enabled motion.⁴⁹⁷ Nerves and sinews in human anatomy bound the mind's capability to exert physical power over the body. How did planters like Martin come to understand slaves and animals to be the "nerves" and

no. 2 (2012): 119-147. Kein writes, "I first learned to make sugar from a Papaw negro, and rum from a Mandingo negro, named London, for which I gave them a cob each."

⁴⁹⁴ Martin, *An Essay Upon Plantership*, 1-2.

⁴⁹⁵ Quoted in Patrick Richardson, *Empire & Slavery* (New York: Harper and Row, 1968), 118. Philip D. Morgan, "Slaves and Livestock in Eighteenth-Century Jamaica: Vineyard Pen, 1750-1751." *The William and Mary Quarterly* 52, no. 1 (1995): 47-76; Kenneth Morgan, "Bristol West India Merchants in the Eighteenth Century." *Transactions of the Royal Historical Society* 3 (1993): 185-208.

⁴⁹⁶ Mary Lindemann, *Medicine and Society in Early Modern Europe* (Cambridge: Cambridge University Press, 1999), 107.

⁴⁹⁷ Carla Mazzio, "Acting with Tact: Touch and Theater in the Renaissance", in *Sensible Flesh: On Touch in Early Modern Culture*, edited by Elizabeth D. Harvey, 159-186, (Philadelphia: University of Pennsylvania Press, 2003), 174.

“sinews” of a dualistic plantation body in which the enslaver occupied the place of the mind and the enslaved served as their somatic appendages? What grounded realities did this language derive from? And, to what extent did relationships between enslaved people and livestock in the Caribbean, where Martin began his career, resemble different plantation arrangements on tobacco estates in the Chesapeake Bay?

Questioning how and why enslaved people and animals came to be understood, valued, and implemented as the “nerves” and “sinews” of slaveholders on plantations in the West Indies and southeastern North America in the second half of the eighteenth century presents environmental historians with opportunities to analyze how plantation labor and the wider social and ecological contexts of slavery structured modes of interaction between enslaved people and nonhuman animals. Slaveholders aimed to yoke slaves and livestock into productive labor relations to cultivate agricultural commodities, especially sugar, tobacco, and wheat, for transatlantic markets. These human and animal entanglements, like those found in the routes of the Atlantic slave trade in the previous chapters, constituted eco-cultural networks binding enslaved people and animals on plantations to merchant ships, markets, and consumers across the British Atlantic world.

Burdensome tasks imposed upon slaves and animals ranged from plowing fields before a planting season to instructing enslaved children to carefully feed silkworms, as John Archdale described in his promotional book on the Province of Carolina.⁴⁹⁸ This chapter focuses foremost on enslaved people and the kinds of livestock Martin outlined in his essay. Plantation labor arrangements, I argue, buttressed a broader political economic system that spanned Britain’s Atlantic colonies and constituted a settler-planter empire founded upon slavery, agricultural commodities, and white slaveholders treatment of

⁴⁹⁸ John Archdale, *A New Description of that Fertile and Pleasant Province of Carolina* (London: 1707).

people of African descent in the Americas as mere things akin to animals. While my focus here is on human-animal relations, this chapter is informed by and expands on well-established arguments from economic and agricultural historians of the British Empire.⁴⁹⁹

Russell Menard demonstrates, citing quantitative data on tobacco and sugar exports from the Chesapeake and the West Indies, that between the 1650s and the 1680s the colonial architecture of the English Empire emerged out of the dramatic economic profits of plantation harvests from colonies in these two geographic regions. Menard characterizes England's Atlantic empire of the late seventeenth century as a "plantation empire" due to the extensive networks of intercolonial trade and shipping that connected the riverine geography of the Tidewater plains of Virginia and Maryland to the volcanic and coralline island arcs of the Caribbean Sea, including Martin's seat in Antigua, linking the northern and southern basins of the ocean.⁵⁰⁰

While Menard and other economic historians, especially Lois Carr Green and Lorena Walsh, tabulate receipts, account books, and ledgers of planter-merchants to plumb the centrality of agriculture for the empire, this chapter shifts the discussion by focusing on the laborious experiences of enslaved people and animals on the ground in a more descriptive, less enumerative mode. Across plantation fields, warehouses, mills, quarters, pens, and stables, enslavers like Martin and Pinney aimed to transform the enslaved and livestock into vital "nerves" and "sinews" through everyday tasks, punishments, and material linkages that bound the two together.

⁴⁹⁹ Russell R. Menard, "Plantation Empire: How Sugar and Tobacco Planters Built Their Industries and Raised an Empire," *Agricultural History* 81, no. 3 (2007): 309-332; Trevor Burnard, *Planters, Merchants, and Slaves: Plantation Societies in British America, 1650-1820* (Chicago: University of Chicago Press, 2015); Trevor Burnard, and John Garrigus, *The Plantation Machine: Atlantic Capitalism in French Saint-Domingue and British Jamaica* (Philadelphia: University of Pennsylvania Press, 2016.)

⁵⁰⁰ Menard, "Plantation Empire", 323.

Environmental historians have not overlooked the encounters between people and livestock under slavery in the Atlantic world, and have employed different temporal and geographical scales of analysis. Karl Jacoby, for instance, takes a *longue durée* approach to propose a deep history of slaves and animals reaching from the origins of agriculture and chattel slavery in the Neolithic Revolution until the nineteenth century. Philip Morgan takes a more micro-level approach in his study of Vineyard Pen, Jamaica, in the 1750s, to show how slaves and livestock were “inextricably linked” on Jamaican livestock pens.⁵⁰¹ Moreover, historians of science, including Justin Roberts and Anya Zilberstein have illuminated how Enlightenment ideas surrounding agricultural improvement and scientific expeditions shaped slavery in the British Atlantic, most notably transplantation schemes in the service of amelioration, such as the introduction of breadfruit as food for enslaved people, until the abolition of the slave trade in 1808.⁵⁰² This chapter builds on this scholarship by situating enthusiasm for plantership, particularly techniques involving subjugating enslaved people and livestock, alongside such scientific developments, and by describing the material-semiotic networks that enslavers assembled by manipulating slaves and animals as instruments.

While Martin himself repeatedly avowed the humanity of diasporic Africans in his essay, and though an earlier generation of historians framed Martin and his meliorist contemporaries as “humane,” I claim that examining human-animal relationships on plantations reveals how slaveholders crafted a political ecology in which enslaved people

⁵⁰¹ Karl Jacoby, “Slaves by Nature? Domestic Animals and Human Slaves.” *Slavery and Abolition* 15, no. 1 (1994): 89-99; Morgan, “Slaves and Livestock in Eighteenth-Century Jamaica: Vineyard Pen, 1750-1751.” On the *longue durée* thesis see especially: Mark S. Roberts, *The Mark of the Beast: Animality and Human Oppression* (West Lafayette: Purdue University Press, 2008), 61-72.

⁵⁰² Justin Roberts, *Slavery and the Enlightenment in the British Atlantic, 1750-1807* (Cambridge: Cambridge University Press, 2013), 33, 40-41, 79, 114, 119; Richard Drayton, *Nature’s Government: Science, Imperial Britain, and the ‘Improvement’ of the World* (New Haven: Yale University Press, 2000), 64-65, 113-115.

and animals became inextricably entangled, valued, and disciplined as the energetic appendages for enacting a planter's will.⁵⁰³ Slaveholders conceived of their bodies as extensions of a planter's mind. In this context, the agricultural wealth produced by the enslaved and animals for enslavers, and the wider intercolonial commercial and political networks they operated within, produced a colonial hierarchical structure that equated the enslaved as akin to animals.⁵⁰⁴ This argument itself is not novel, however I aim to provide a meso-level analysis that synthesizes the scholarship of historians such as Jacoby and Morgan. These relations, furthermore, emerged out of the rapid ecological transformation of islands and coastal plains since the mid-seventeenth century caused by forest clearing, soil erosion, and monocrop cultivation.⁵⁰⁵

Texts, ranging from advice literature to agricultural journals, reinforced the idea that enslaved people and animals should be thought of as mere instruments and encouraged planters to carry out certain techniques in reality. David Collins, a planter and physician on St. Vincent, advised would-be slaveholders in his 1803 handbook to mold and conceive of enslaved people as "an instrument" that "requires to be incessantly acted

⁵⁰³ Sheridan, "Samuel Martin", 129. Martin, *An Essay Upon Plantership*, 2, 10. On entanglement as a historical concept see: Ralph Bauer, and Marcy Norton, "Introduction: Entangled Trajectories: Indigenous and European Histories." *Colonial Latin American Review* 26, no.1 (2017): 1-17.

⁵⁰⁴ On political ecology as an analytical framework see: Molly A. Warsh. "A Political Ecology in the Early Spanish Caribbean." *The William and Mary Quarterly* 71, no. 4 (2014): 517-548; Keith Pluymers. "Atlantic Iron: Wood Scarcity and the Political Ecology of Early English Expansion." *The William and Mary Quarterly* 73, no. 3 (2016): 389-426. Political ecology is a capacious framework historians and geographers employ to highlight how interactions between humans, nonhumans, environments, and natural resources come to be understood, delimited, exploited, and controlled by states, legal regimes, norms of private property enforcement, and the material implementation of power, in this case not only punishments but coerced labor, semi-starvation, and the implicit material and ontological equation evident in slaveholders collection of waste. Like political economy, political ecology suggestively draws attention to the ways in which political power, resource extraction, scientific knowledge, and nonhumans are interrelated.

⁵⁰⁵ Richard H. Grove, *Green Imperialism: Colonial Expansion, Tropical Island Edens and the Origins of Environmentalism, 1600-1860* (Cambridge University Press, 1996), 153-167.

upon to the performance of its duty.”⁵⁰⁶ “A slave,” he continued, “being a dependent agent, must necessarily move by the will of another, which is incessantly exerted to control his own: hence the necessity of terror to coerce his obedience.” Violence meted out by managers, overseers, and drivers, in the form of whipping, sexual assault and rape, branding, castration, and other mutilating punishments undergirded agricultural schemes by Martin and his peers.⁵⁰⁷

It is crucial to point out that people of African descent throughout the diaspora did not simply submit to becoming tools, and that the transformations planters and their agents hoped to enact were never complete or absolute. Enslaved people starved, injured, and stole laboring animals from the Caribbean to the Chesapeake. The story of enslaved peoples resistance to their enslavement by creating new relationships with animals is the focus of chapter five.

Taking Martin’s principle as my starting point and using the framework of human-animal modes of interaction developed by Marcy Norton, defined as the meta-structures that coordinate how people relate to and conceive of the relationships between people and animals, this chapter examines three points of intersection between enslaved people and livestock in both the West Indies and Chesapeake Bay: first, the muscular labor involved on plantations such as plowing fields, harvesting plants, caring for animals, and hauling commodities; second, the malnourishing diets of fodder grains

⁵⁰⁶ [David Collins], *Practical Rules for the Management and Medical Treatment of Negro Slaves in the Sugar Colonies* (London: Printed by J. Barfield, Wardour Street, Printer to His Royal Highness the Prince of Wales, 1803), 191; Roberts, *Slavery and the Enlightenment in the British Atlantic, 1750-1807*, 161.

⁵⁰⁷ Diana Paton, "Punishment, Crime, and the Bodies of Slaves in Eighteenth-Century Jamaica." *Journal of Social History* 34, no. 4 (2001): 923-954; Elizabeth A. Bohls, "The Aesthetics of Colonialism: Janet Schaw in the West Indies, 1774-1775." *Eighteenth-Century Studies* 27, no. 3 (1994): 363-390; Simone Browne, *Dark Matters: On the Surveillance of Blackness* (Durham: Duke University Press, 2015). Browne makes a persuasive case that branding was “a racializing act” by which enslavers attempted to produce the dehumanization of the enslaved.

slaveholders prescribed for both slaves and livestock; and third slaveholders extraction and accumulation of the excreta of both to transform waste into energy.⁵⁰⁸ The modes of interaction analyzed here involve exertion, both the planter's attempt to exert their will and the arduous labor the enslaved carried out. A final section considers how planters conceived of the transformation of enslaved people into "nerves" and "sinews" comparable to animals through slavery's paperwork, especially inventories, wills, and indentures.

The Toil of Brutes: The Labor of the Enslaved with Animals

Martin's appreciation of the intertwined labors of enslaved people and livestock on Antigua in the mid-eighteenth century emerged from a deep history of plantation slavery on estates in the Lesser Antilles reaching back into the seventeenth century. A traveller, Richard Ligon, observed in 1650, for instance, how newly-arrived planters on the island colony of Barbados invested a significant portion of their wealth in purchasing enslaved people "Horses, Cattle, Assinigoes, [and] Camels" to furnish their operations on the island.⁵⁰⁹ The geography of slavery drew on diverse sites to move people and animals for plantation labor regimes. Before planters arrived in the Caribbean, they stocked their ships with enslaved people, horses, cattle, sheep, goats, and fowl purchased at Madeira, the Canary Islands, and Cape Verde.⁵¹⁰ Slavers from Atlantic Africa also carried

⁵⁰⁸ Marcy Norton, "Going to the Birds: Animals as Things and Beings in Early Modernity." in *Early Modern Things: Objects and their Histories, 1500-1800* ed. Paula Findlen (London: Routledge, 2013), 53-83.

⁵⁰⁹ Richard Ligon, *A True & Exact History of the Island of Barbados Illustrated with a Mapp of the Island, as also the Principall Trees and Plants there, set forth in their due proportions and shapes, drawne out by their severall and respective scales* (London: Printed for Humphrey Moseley, at the Prince's Armes, 1657), 108.

⁵¹⁰ Ligon, *A True & Exact History of the Island of Barbados*, 3

livestock and captives together across the middle passage.⁵¹¹ West Indies planters imported horses from as far abroad as the Netherlands, Virginia, and New England.⁵¹²

Labor regimes involving animals developed alongside racial attitudes among Europeans that equated people of African descent and livestock. While in residence at the five hundred acre plantation of William Hilliard, in St. John parish, Ligon sought “to improve my self, in the knowledge of the management of a Plantation” by studying the labor involved in Hilliard’s fields and sugar mills.⁵¹³ Hilliard’s plantation included a sugar ingenio, livestock stables and pens, store rooms filled with provisions of corn, and “Houses for *Negroes* and *Indian* slaves, with 96 *Negroes*, and three *Indian* women, with their Children; 28 Christians, 45 Cattle for worke, 8 Milch Cowes, a dosen Horses and Mares, [and] 16 Assinigoes.” Ligon’s list, like other inventories, reduced and abstracted the enslaved and animals into the same economic and social categories.

Comparisons between enslaved people and animals abounded among planters like Hilliard. As slave ships laden with captives from West Africa arrived in Bridgetown, Ligon observed planters “choose them as they do Horses in a Market; the strongest, youthfulest, and most beautifull, yield the greatest prices.”⁵¹⁴

Ligon set out to study plantation labor in action by observing productive combinations of human and animal workers. In Hilliard’s fields, Ligon watched enslaved people’s efforts at harvest time at cutting off the tops and blades of sugarcane plants with hand bills, a kind of small agricultural blade, and piling the remnants, known as cane

⁵¹¹ Judith Carney, “Landscapes and Places of Memory: African Diaspora Research and Geography,” in *The African Diaspora and the Disciplines*, edited by Tejumola Olaniyan and James Sweet (Bloomington: Indiana University Press, 2010), 101-118.

⁵¹² Ligon, *A True & Exact History of the Island of Barbados*, 58. Charlotte Carrington-Farmer, “Slave Horse/War Horse: The Narragansett Pacer in Colonial and Revolutionary Rhode Island”, *War Horses of the World Proceedings* (London: School of Oriental and African Studies, University of London, 2014).

⁵¹³ Ligon, *A True & Exact History of the Island of Barbados*, 22-23.

⁵¹⁴ Ligon, *A True & Exact History of the Island of Barbados*, 46.

trash, to later use as fodder for cattle, horses, donkeys, and pigs. Without cane trash to eat, Ligon warned aspiring planters “our Horses and Cattle are not able to work, the pasture being so extream harsh and sapless.”

After cutting the blades, enslaved men and women bound up piles of sugarcane stalks, and loaded them on to “the backs of *Assinigoes*” equipped with small pack-saddles. Next, the donkeys, a breed selected by Portuguese traders from the Senegal River Valley and imported to multiple European colonies in the Americas, carried the plants from the fields to the ingenio.⁵¹⁵ “So understanding this little beast is in performing his duty,” marveled Ligon, that after delivering bundles of sugarcane stalks to enslaved people at the mill house, the animals returned to the fields without a guide. Donkeys, he reflected, “may not unfitly be compar'd to Bees; the one fetching home honey, the other sugar.”⁵¹⁶

Enslaved people labored with animals in the ingenio to turn the plants into commodities. In cattle mills—the most common ingenios in the seventeenth-century English Caribbean—enslaved people drove teams of five oxen or horses to power the grinding machinery to crush the cane stalks.⁵¹⁷ In an index accompanying diagrams of an ingenio he observed, Ligon marked the precise circumference livestock treaded to power the rollers of the ingenio.

Hazardous mill work exposed enslaved people to incredibly dangerous risks, including disfigurement and premature death. Cattle mills proved durable in the West

⁵¹⁵ Judith Carney, “Seeds of Memory: Botanical Legacies of the African Diaspora” in *African Ethnobotany in the Americas*, edited by Robert Voeks and John Rashford, 13-34, (New York: Springer Science and Business Media, 2013), 20-22.

⁵¹⁶ Ligon, *A True & Exact History of the Island of Barbados*, 88-89.

⁵¹⁷ Richard S. Dunn, *Sugar and Slaves: The Rise of the Planter Class in the English West Indies, 1624-1713* (Chapel Hill: University of North Carolina Press Books, 1972), 192. Ligon, *A True & Exact History of the Island of Barbados*, 90.

Indies, as wind and water mills did not entirely replace human-animal sources of power until the early nineteenth century.⁵¹⁸ After tallying up the mechanical costs of a sugar ingenio, Ligon continued that “there is yet more to be added: for though we breed both Negres, Horses, and Cattle; yet that increase, will not supply the moderate decays which we finde in all those.”⁵¹⁹ Deadly plantation work necessitated a regular influx of captives to the West Indies, which slave traders supplied in increasing quantities in the final decades of the seventeenth century.

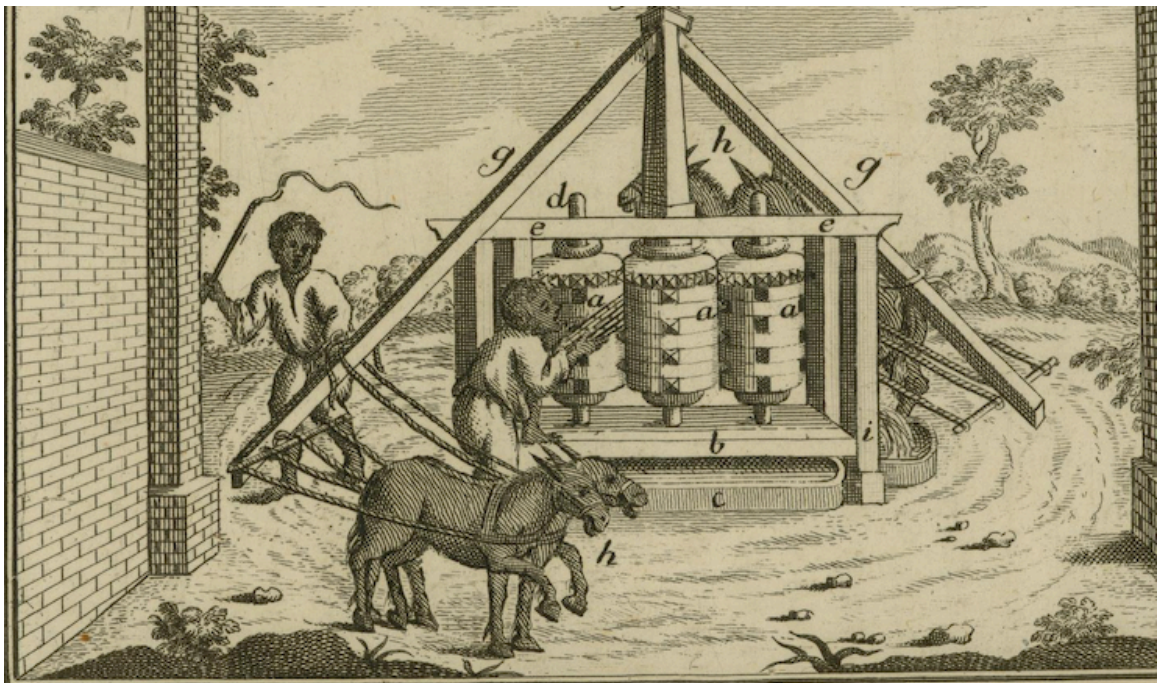


Figure. 3.1 Illustration of a sugar mill driven by enslaved people and mules, Rafael Landívar, 1782, image courtesy of The John Carter Brown Library, Brown University.

After human laborers and their nonhuman counterparts produced refined sugar for markets, convoys of camels lugged hogsheads of sugar in barrels from plantations to the port in Bridgetown to be loaded on ships. Planters valued camels as “very usefull beasts,”

⁵¹⁸ Bonham Richardson, *The Caribbean in the Wider World, 1492-1992: A Regional Geography* (Cambridge: Cambridge University Press, 1992), 48.

⁵¹⁹ Ligon, *A True & Exact History of the Island of Barbados*, 113.

yet Ligon remarked that “few know how to diet them.” Camels transported “hogsheads of Wine, Beer, or Vinegar, which horses cannot do, nor can Carts pass for Gullies, and *Negroes* cannot carry it” on other islands in the West Indies beyond Barbados until the late eighteenth century.⁵²⁰

Forms of labor familiar to those described by Ligon persisted into the eighteenth century. Evidence of slaveholder’s dependence on the labor of enslaved people and animals can be established from sources other than travel narratives, including legal records such as indentures made between absentee planters and managers. In 1746, for instance, William Hollyer signed an indenture with James Gordon for the lease of his three hundred acre plantation in St. Paul parish, Antigua, that included the use of the enslaved people, horses, and mules in Hollyer’s possession.⁵²¹ Numerous indenture contracts from Antigua included clauses specifying the lessee’s right to a plantation’s “negros, horses, mules, asses, bulls, oxen, cows, sheep, and other live stock.”⁵²² Labor performed by the enslaved and animals was crucial for maintaining a plantation.

Chancery court records from Antigua further demonstrate the entwined social and economic status of enslaved people and livestock in the West Indies as chattel property under English law. John Gray, Master in Chancery for Antigua, for instance, ordered the sale of a plantation in St. Mary parish in 1787 to one John Rose. This estate contained twenty-five enslaved people, two cows, three mules, and six horses, which Gray awarded

⁵²⁰ Ligon, *A True & Exact History of the Island of Barbados*, 58. David Watts, *The West Indies: Patterns of Development, Culture and Environmental Change Since 1492* (Cambridge: Cambridge University Press, 1987), 198-199, 229, 391. Judith Carney observes that Spanish settlers transported North African camels as draft animals to Peru beginning in the sixteenth century, see Carney “Seeds of Memory”, 21.

⁵²¹ Vere Langford Oliver, *The History of the Island of Antigua: One of the Leeward Caribbees in the West Indies, from the First Settlement in 1635 to the Present Time*, vol.2 (London: Mitchell and Hughes, 1896), 1.

⁵²² Oliver, *The History of the Island of Antigua*, 30, 31, 44, 85, 147, 179, 193, 225, 256, 297, 303, 306, 327, 328, 373.

to Rose after the death of another planter, Thomas Haws, as payment for debts incurred during his life to the former.⁵²³

Letters between plantation managers and absentee owners with news of the status of enslaved people and livestock also offer evidence of their shared status. In their letters to James Stothert of Jamaica, his managers and overseers wrote to their employer on the condition of the family sugar estates and pens, or grazing farms for raising livestock, in Hanover, St. James, and Trelawney parishes. Writing from Dundee in Hanover parish, James Alexander recorded in his letters the health and labor of the slaves, cattle, and mules on the plantation.⁵²⁴ In 1787, one of Stothert's managers at Dundee recommended "selling the sheep from Dundee, it will save two Negroes who attend them and also save grass." Writing from Salt Marsh and Stonefield, two pens near Martha Brae in Trelawney, John Fowler wrote to his employer to report on recent deaths on the pens, including "Several of the Old Mules [that died] in Crop", and enslaved people such as Susan, Tom, and Bella, who the penkeeper described as "all weakly."⁵²⁵

Maps of plantations further indicate the proximity of the enslaved and animals in the Caribbean. Manuscript maps of four estates—Harts, Royals, Thibou, and Blizards—held by the Jarvis family in Antigua, indicate the closeness of slave quarters on each site to animal spaces such as horse stables, cattle pens, and mule pens.⁵²⁶ Close proximity between enslaved people and animals supported the efficient operation of a plantation labor regime, and further encouraged the intellectual equivalence of the two by enslavers.

⁵²³ Oliver, *The History of the Island of Antigua*, 69.

⁵²⁴ James Alexander, letter addressed to James Stothert, 8 November, 1786, Box 1, James Stothert Papers, William L. Clements Library, The University of Michigan.

⁵²⁵ John Fowler, letters addressed to James Stothert, dated 6 November 1787; 1 October, 1788; 7 October, 1788, Box 1, Stothert Papers.

⁵²⁶ Diagrams of the estates are included in Jarvis Family Papers, Box 1, William L. Clements Library, The University of Michigan.

Descriptions of slaves and animals on plantations further conflated the two, and indicates planters' willingness to imagine them as equivalent subjects. Writing in a letter to another slaveholder, Mary Trant, Thomas Jarvis laid out his concerns over a gang of enslaved men and women he rented from her in 1791. "I am entirely concerned," Jarvis wrote to Trant, "of the declining state of the Gang. The Men & most of the Women are far advanced in Years and only two of them have bred during their abode with me, namely Nanny & Bess, and each of them have only scared me & this the only increase."⁵²⁷ Jarvis, in accordance with the terms of his lease, replaced six of the fifty enslaved people he rented from Trant who died while he rented their laboring bodies as chattel.

Jarvis' use of the language of animal breeding to describe Nanny and Bess, however, was not exceptional. In the Caribbean, overseers kept monthly estate records to provide absentee planters with rates of increase and decrease of the enslaved, along with similar accounts of livestock. Jennifer Morgan and Kirsten Fischer demonstrate how slaveholders numerical valuations of slaves and animals were bound up with future aspirations to accumulating and passing on wealth, and part of intellectual efforts for rationalizing slavery in the Caribbean and southeastern North America as a "natural" hierarchical arrangement of fully-human whites, "degraded" Africans, and nonhuman animals.⁵²⁸

The "problem of slavery" continued to produce tension among slaveholders into the mid-eighteenth century. Samuel Martin and his peers claimed to be ameliorating the

⁵²⁷ Thomas Jarvis, letter to Mary Trant, October 1791, Jarvis Family Papers, Box 2, William L. Clements Library, The University of Michigan.

⁵²⁸ Jennifer Morgan, *Laboring Women: Reproduction and Gender in New World Slavery* (Philadelphia: University of Pennsylvania Press, 2004), 105. Kirsten Fischer, *Suspect Relations: Sex, Race, and Resistance in Colonial North Carolina* (Ithaca: Cornell University Press, 2002), 181.

brutality of plantation slavery, yet slavery rested on enforcing particular human-animal relations. Martin acknowledged that enslaved people are “rational beings” who should not be forced to endure “the toil of brutes,” yet his plans for reassembling Green Castle expanded upon techniques developed on seventeenth-century estates in the West Indies.⁵²⁹ Enslaved people, for instance, continued to cut cane tops and trash as fodder for livestock, and produce sugar in the same fashion as observed by Ligon.⁵³⁰

However, Martin proposed several “improvements” for ameliorating the labor of the enslaved. Martin advised planters to adapt a small breed of cattle for plowing fields, whose horns could be bored with “gimblet holes” to loop a “ligature” that connected a team.⁵³¹ Among the “Working Negroes” recorded in the inventory of Green Castle, were enslaved men who drove teams of cattle over the topsoil to prepare fields for planting.⁵³² After receiving instructions from an overseer, drivers worked to train cattle to “walk before [horses] as a leader” in straight, uniform lines.⁵³³ Martin recommended planters implement pairs of “a man and a boy” with two horses or mules connected to a Dutch hoe or a triangular horse-hoe-plow for plowing.⁵³⁴

Martin’s influence on the increasing enthusiasm for innovations in plantership involving animals continued in the West Indies into the early nineteenth century. In 1804, a circle of slaveholders in Barbados, including Reverend Henry Evans Holder and Philip Gibbes, formed the Society for the Improvement of Plantership based on Martin’s recommended rubric for study and experiment in plantership, especially arrangements of

⁵²⁹ Martin, *An Essay Upon Plantership*, 2, 7. Martin justified slavery as replicating a natural hierarchy of superior and inferior people.

⁵³⁰ Martin, *An Essay Upon Plantership*, 7-9, 33, 36, 39.

⁵³¹ Martin, *An Essay Upon Plantership*, 13.

⁵³² Estimate of Martin’s Plantation, 1768, British Museum, Additional Manuscripts, MS 41,353, f 85, quoted in Sheridan, “Samuel Martin, Innovating Sugar Planter of Antigua”, 131.

⁵³³ Martin, *An Essay Upon Plantership*, 13-14.

⁵³⁴ Martin, *An Essay Upon Plantership*, 27-28.

human-animal labor.⁵³⁵ During a meeting in 1805 at Malvern Estate, in St. Joseph parish, for instance, the society began a discussion on “the quantum of labor which will be required to perform each respective” task involved in operating a plantation.⁵³⁶ Among the tasks the society identified, and attempted to quantify, included clearing land, cutting cane tops, and making, turning, throwing, and bedding animal dung. On other occasions, the society discussed techniques in plowing, methods for treating common livestock diseases, and “the practical advantages of keeping horses on plantations for the purpose of husbandry.”⁵³⁷

Slaveholders in the West Indies, such as the members of the society, continued to worry over “the subject of population” on plantations, particularly “what causes prevented the more rapid increase of” enslaved people on plantations.⁵³⁸ William Grasett, one of the founders of the Society for the Improvement of Plantership, introduced the topic during a meeting in March, 1805. Grasett and his colleagues discussed how “promiscuous intercourse,” “the suckling of the children an improper length of time,” the “unwholesomeness” of provisions on plantations, and polygamy hindered the population of enslaved people from growing. In May, 1806, the Society voted to continue investigating the topic, and in January, 1807, Grasett passed a motion for the members to record and share information on the “annual increase and decrease of” enslaved people on the estates of the members.⁵³⁹

⁵³⁵ *Minutes of The Society for the Improvement of Plantership on the Island of Barbados, instituted 8 December 1804* (Liverpool: Thomas Kaye, 1811), manuscript copy held at Shilstone Memorial Library, The Barbados Museum and Historical Society, Bridgetown, Barbados. Hereafter cited as *MTSIPB*.

⁵³⁶ 5 January, 1805, *MTSIPB*.

⁵³⁷ See the society meeting minutes for 27 March 1805, 9 July 1808, 13 August 1808, 24 March 1809, and 29 April 1809, *MTSIPB*.

⁵³⁸ 27 March, 1805, *MTSIPB*.

⁵³⁹ 3 May 1805, 3 January 1807, *MTSIPB*.

In the spring of 1810, Grasett shared his findings and thoughts on the “best mode of increasing” the population of enslaved people. Grasett began by emphasizing “the importance of the present question to a colonial agriculturalist,” particularly for the sugar island colonies of the West Indies.⁵⁴⁰ Citing the population studies of Thomas Malthus, Grasett advised his fellow slaveholders that “it would be good policy in us not to suffer our breeding women to perform the most laborious work of a plantation.” While Grasett believed provisions on plantations to be sufficient, he suggested improving housing and medicine for slaves, limiting enslaved people’s consumption of liquor, and allowing enslaved men and women to marry.

Measurements of “increase” and “decrease” were familiar to Grasett’s audience of planters. In inventories and other plantation account books, slaveholders often included lists of both their human and nonhuman chattel property titled “Increase of Negroes,” “Increase of Cattles,” “Increase of Donkeys,” and “Increase of Horses.”⁵⁴¹ Since the seventeenth century, as Morgan has shown, planters in the West Indies conceived of livestock animals—including pigs, poultry, sheep, cattle, and horses—and enslaved people under the same rubric of “increase.”⁵⁴²

Images offer further evidence for the centrality of labor as a mode of interaction between enslaved people and animals. Visual culture produced in the early nineteenth century British Atlantic reflected the centrality of the combined labor of enslaved people and livestock for producing sugarcane. Slaves and livestock appeared together in a series of colorful prints produced in 1823 by William Clark entitled “Ten Views of Antigua.”

⁵⁴⁰ 17 March, 1810, *MTSIPB*.

⁵⁴¹ Exposition of Turners Hall Plantation, 1832, Turners Hall Records, microfilm reels 20767-20787, Barbados Department of Archives, Cave Hill, Barbados; Benjamin M’Mahon, *Jamaica Plantership* (London: Effingham Wilson, 1839), 64.

⁵⁴² Morgan, *Laboring Women*, 82-83, 89, 91, 107, 128, 138-139, 186.

In the first plate, “Holeing a Cane-Piece,” the viewer sees on the right of the image a group of enslaved men and women with hoes digging and turning the soil, while to the left an enslaved woman and two children tend a well-stocked cattle pen.⁵⁴³



Figure 3.2 Detail from “Holeing a Cane-Piece”, taken from William Clark, *Ten Views of the Island of Antigua*, 1823, image courtesy of The John Carter Brown Library, Brown University.

In the following plate, “Planting the Sugar-Cane”, horses and cattle appear in the background, while a group of enslaved men and women dig cane holes in the foreground.⁵⁴⁴

⁵⁴³ William Clark, “Holeing a Cane-Piece”, plate 1, *Ten Views of Antigua*, (London: Infant School Society Depository, 1823), image held at The John Carter Brown Library, accession number 75-199.

⁵⁴⁴ William Clark, “Planting the Sugar-Cane”, plate 2, *Ten Views of Antigua*, (London: Infant School Society Depository, 1823), image held at The John Carter Brown Library, accession number 75-199.



Figure 3.3 Detail from “Planting the Sugar-Cane”, taken from William Clark, *Ten Views of the Island of Antigua*, 1823, image courtesy of The John Carter Brown Library, Brown University.

In “Cutting the Sugar-Cane,” two enslaved men in the foreground load bundles of cut sugarcane onto a cart yoked to a horse, while an overseer on horseback surveils a group of enslaved men and women harvesting a field of plants.⁵⁴⁵

⁵⁴⁵ William Clark, “Cutting the Sugar-Cane”, plate 3, *Ten Views of Antigua*, (London: Infant School Society Depository, 1823), image held at The John Carter Brown Library, accession number 75-199.



Figure 3.4 Detail from “Cutting the Sugar-Cane”, taken from William Clark, *Ten Views of the Island of Antigua*, 1823, image courtesy of The John Carter Brown Library, Brown University.

In the center of the next image, “A Mill Yard”, an enslaved driver leads a teams of six cattle yoked to one cart and a mule yoked to another cart to a mill, where other enslaved people and livestock inside the building toil to grind the plants.⁵⁴⁶

⁵⁴⁶ William Clark, “A Mill Yard”, plate 4, *Ten Views of Antigua*, (London: Infant School Society Depository, 1823), image held at The John Carter Brown Library, accession number 75-199.

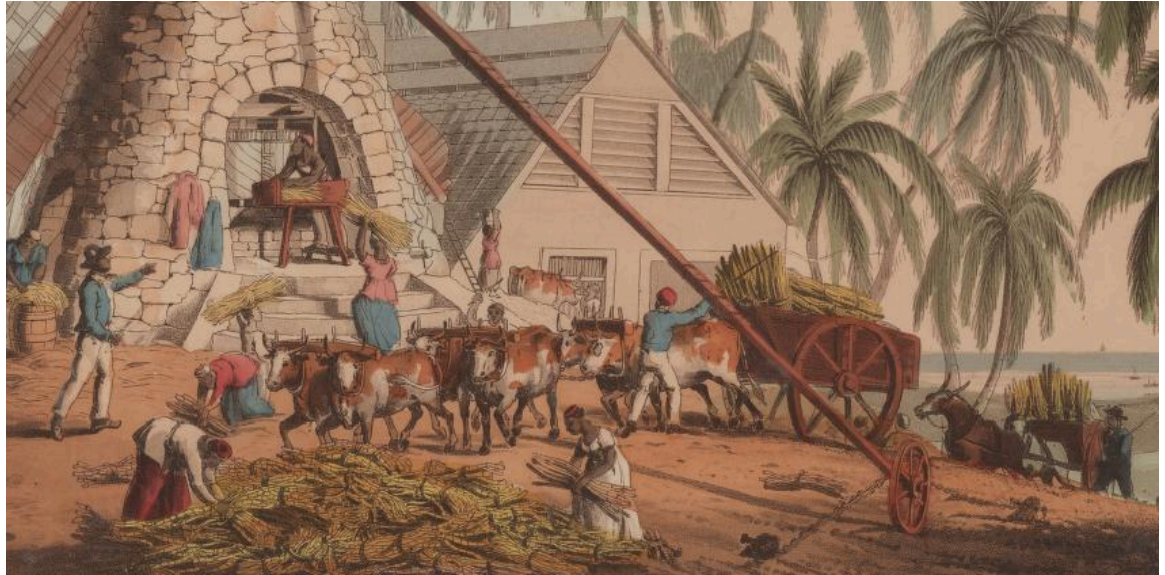


Figure 3.5 Detail from “A Mill-Yard”, taken from William Clark, *Ten Views of the Island of Antigua*, 1823, image courtesy of The John Carter Brown Library, Brown University.

In a final plate, “Shipping Sugar”, the viewer can see an enslaved man on the shoreline leading a team of three horses yoked to a cart loaded with barrels of sugar to be packed on rowboats and transported out to a larger ship anchored nearby in deep water.⁵⁴⁷ In the background, another cart led by four cattle and enslaved drivers loads more barrels on another small rowboat near the shore.

Clark’s prints visualize how ubiquitous human-animal regimes of labor were on Caribbean plantations. Moreover, they indicate the presence of animals as instruments of authority, especially the horses enslavers and overseers rode as they surveilled the enslaved.

⁵⁴⁷ William Clark, “Shipping Sugar”, plate 6, *Ten Views of Antigua*, (London: Infant School Society Depository, 1823), image held at The John Carter Brown Library, accession number 75-199.



Figure 3.6 Detail from “Shipping Sugar”, taken from William Clark, *Ten Views of the Island of Antigua*, 1823, image courtesy of The John Carter Brown Library, Brown University.

Human and animal labor regimes under plantation slavery existed in North America as well in the mid-eighteenth century that structured labor as a mode of interaction between slaves and livestock. In the Chesapeake Bay, tobacco and wheat planters in Virginia and Maryland relied upon forms of agricultural labor between enslaved people and livestock to cultivate fortunes from crops of tobacco and wheat. While small planters in the Tidewater did not use draft animals for plowing, wealthy slaveholders, like their peers in the Caribbean, relied on multiple gangs of slaves and experimented with combinations of human and animal labor on their estates.⁵⁴⁸ Moreover, enslaved people in the region, including those enslaved on small estates, lived alongside and cared for animals even if they did not labor with them at plowing.

⁵⁴⁸ Allan Kulikoff, *Tobacco and Slaves: The Development of Southern Cultures in the Chesapeake, 1680-1800* (Chapel Hill: University of North Carolina Press, 1986), 408-412; Lorena S. Walsh, *Motives of Honor, Pleasure, and Profit: Plantation Management in the Colonial Chesapeake, 1607-1763*, (Chapel Hill: University of North Carolina Press, 2010), 105, 144-145, 227, 567.

Probate inventories from York County, on the northern edge of the Virginia Peninsula, for instance, document the material reality of numerous enslaved people who tended to livestock animals in the southern Chesapeake.⁵⁴⁹ As Lorena Walsh and Allan Kulikoff observe, small-scale planters in southern Virginia typically owned a single enslaved person, “a few head of cattle and swine, a horse” and a few agricultural implements.⁵⁵⁰

Reconstructing the lives of enslaved people and their interactions with animals on these small estates is difficult. One of the earliest narratives involving an enslaved person in early eighteenth-century Maryland, Ayuba Suleiman Diallo, a Fulbe man from Bundu, offers insight into the entangled lives and labor of slaves and animals in the Atlantic world.⁵⁵¹

Before his enslavement, Diallo profited as a slave trader himself, trading captives with Europeans from Senegal to the Gambia.⁵⁵² In 1730, a West African slaver captured and sold Diallo along with “a Servant, and about twenty or thirty Head of Cattle” on the Gambia River.⁵⁵³ The slaver sold Diallo and his servant to an English separate slave trader, a man named Pyke, whose ship *Arabella* sailed from the Gambia across the ocean

⁵⁴⁹ An Inventory of Mr. Cope Dooley's Estate, 1702; An Inventory & Appraisement of the Estate of Rebecca Pinkethman, 1708; An Inventory of the Estate of Mrs. Elizabeth Goodwyn, 1719; An Inventory & Appraisement of the Estate of William Craig, 1720; An Inventory of the Goods belonging to the Estate of Thomas Barbar, 1727; An Inventory of Anne Davis's Estate, 1729; Inventory and Appraisement of the Estate of Henry Bowcock, 1730; An Inventory and Appraisement of the Estate of James McKindo, 1731; Inventory of the Estate of Elizabeth Tabb, 1732; Inventory of the Estate of Mary Hunter, 1733; An Inventory of the Estate of Elimeleck Calthorp, 1734; An Inventory of the Estate of Robert Ballard, 1735; An Inventory of the Estate of Anthony Robinson, Jr., 1738; Inventory of the Estate of Robert Davidson, 1740; An Inventory of the Estate of Thomas Brown, 1742; An Inventory and Appraisement of the Estate of Mary Ripping, 1745. York County Estate Inventories, John D. Rockefeller Jr. Library, The Colonial Williamsburg Foundation, Williamsburg, Virginia.

⁵⁵⁰ Kulikoff, *Tobacco and Slaves*, 153. Lorena S. Walsh, "Plantation Management in the Chesapeake, 1620-1820." *The Journal of Economic History* 49, no. 2 (1989): 393-406.

⁵⁵¹ Kulikoff, *Tobacco and Slaves*, 326.

⁵⁵² David Brion Davis, *Slavery in the Colonial Chesapeake* (Williamsburg: The Colonial Williamsburg Foundation, 1986), 14.

⁵⁵³ Francis Moore, *Travels Into the Inland Parts of Africa* (London: Printed by Edward Cave, 1738), 69.

to Annapolis on the mouth of the Severn River.⁵⁵⁴ After being sold to a tobacco planter on Kent Island, on Maryland's Eastern Shore, Diallo labored at planting until he "grew sick" and his enslaver "therefore put him to tend the Cattle." Though Diallo came from an elite Muslim family in Bundu, he was not unfamiliar with herding. Yet, Diallo "would often leave the Cattle" under his supervision to pray alone in the woods nearby the plantation.

Runaway advertisements, such as those printed in the *Virginia Gazette*, give a sense of the spectrum of work enslaved people carried out with animals in the Chesapeake. In newspaper columns, slaveholders solicited the arrest of enslaved men and women they depended upon as dairymaids, cattle drivers, plowmen, farriers, grooms, postilions, and stablemen. In 1768, an advertisement from a slaveholder in Stafford County offered a reward for the arrest of Peter Deadfoot. The copy described Peter as a skilled plowmen and carter, and "understands breaking oxen well... he is so ingenious a fellow, that he can turn his hand at anything."⁵⁵⁵ An advertisement regarding an enslaved man, David, who ran away from his enslaver's estate in Northumberland, in the Northern Neck of Virginia, noted, for instance, his skill as "a good driver, ostler... can work at the plough."⁵⁵⁶ A planter in Louisa, Virginia, advertised that a man named Jacob, valuable for his "great skill in farriery," fled his estate.⁵⁵⁷ Dozens of other advertisements appeared in newspapers in the late eighteenth century, written by planters seeking the arrest of runaway slaves valued for their abilities as hostlers, cock fighters, and jockeys, whose

⁵⁵⁴ Thomas Bluett, *Some Memoirs of the Life of Job: The Son of Solomon the High Priest of Boonda in Africa; who was a Slave about Two Years in Maryland* (London: Printed for Richard Ford, 1734), 18-21.

⁵⁵⁵ *Virginia Gazette*, Rind, September 22, 1768, 3, John D. Rockefeller Jr. Library, The Colonial Williamsburg Foundation, Williamsburg, Virginia.

⁵⁵⁶ *Virginia Gazette*, Rind, October 29, 1772, 3, John D. Rockefeller Jr. Library, The Colonial Williamsburg Foundation, Williamsburg, Virginia.

⁵⁵⁷ *Virginia Gazette*, Purdie, March 22, 1776, 3, John D. Rockefeller Jr. Library, The Colonial Williamsburg Foundation, Williamsburg, Virginia.

worth for slaveholders derived from their experience and expertise in laboring with animals.

The centrality of slaves and livestock for agricultural labor on Tidewater plantations is further visible in advertisements announcing the sale of slave lots by auction sale of an entire estate. An advertisement from 1773 for the sale of a group of enslaved people born in Virginia at Williamsburg noted that many of the men were skilled in plowing with cattle and caring for horses, likely as coachmen.⁵⁵⁸ In addition to the slaves, four bay coach horses were part of the auction lot. In 1777, a slaveholder in Charles City County announced the sale of their total estate, including one hundred “*Virginia* born *SLAVES*” for sale to the highest bidder, among them skilled dairymaids, and a “stock of horses, cattle, and sheep, and some very valuable high blooded horses.”⁵⁵⁹

Planters relied upon the skilled agricultural labor of enslaved people and livestock to cultivate crops, especially tobacco and wheat.⁵⁶⁰ Enslaved drivers labored with draft animals, which required skill in managing teams of stubborn creatures and equipment.⁵⁶¹ Landon Carter, a planter who held five hundred acres of land in Richmond County on the southern banks of the Rappahannock River, required the labors of skilled enslaved plowmen, such as Manuel, Peter, Simon, and Joe, who drove teams of oxen, mules, and

⁵⁵⁸ *Virginia Gazette*, Purdie and Dixon, April 22, 1773, 3, John D. Rockefeller Jr. Library, The Colonial Williamsburg Foundation, Williamsburg, Virginia.

⁵⁵⁹ *Virginia Gazette*, Purdie, March 14, 1777, 2, John D. Rockefeller Jr. Library, The Colonial Williamsburg Foundation, Williamsburg, Virginia.

⁵⁶⁰ Philip D. Morgan, and Michael L. Nicholls, "Slaves in Piedmont Virginia, 1720-1790," *The William and Mary Quarterly* 46, no. 2 (1989): 212-251.

⁵⁶¹ On the status of drivers in the West Indies and the Chesapeake see: Richard S. Dunn, *A Tale of Two Plantations: Slave Life and Labor in Jamaica and Virginia* (Cambridge: Harvard University Press, 2014), 250, 325, 327, 331; On enslaved drivers in Maryland see: J. Elliott Russo, "'Fifty-Four Days Work of Two Negroes': Enslaved Labor in Colonial Somerset County, Maryland," *Agricultural History* 78, no. 4 (2004): 466-492.

on occasion horses, to prepare his fields before the planting season.⁵⁶² The plowmen drove the animals to dig furrows into the soil, crush weeds, and turn the earth. In his diary, kept between 1752 and 1758, Carter entered brief entries on the labor of his slaves and livestock, such as how the planter “Left Manuel plowing my Fork Land for Wheat.”⁵⁶³ In the diary, he noted how groups of slaves and livestock worked together, like “Peter and two horses in his light plow” ripping up fields designated for barley, oats, and tobacco in the late spring of 1772.⁵⁶⁴ Men like Manuel and Peter drove livestock for plowing, and their control over the animals indicates enslaved people’s ability to discipline animals for agricultural labor. Moreover, Carter expected the same people to care for the animals welfare, which, as I will discuss in chapter five, was frequently a site of contention and resistance between enslavers and enslaved people.

Virginia planters encountered friction in putting their plans involving human and animal labor into action. Carter, a well-read planter like Martin and his peers in the West Indies, complained how using mathematical calculations for planning plowing, sowing, and harvesting during a crop season could be at times useful, but was often frustrated by the reality of the difficulties of the labor the enslaved performed. “Castings up by arithmitic” in plowing, he complained, rarely proved accurate. In 1772, he noted how “Manuel’s Oxen does 32 rows in the day. Peter has 90 rows to come to his ditch which finishes that field. Certainly 4 horses can do more then 4 oxen,” but Carter doubted the plowing could be done to such precise standards.⁵⁶⁵

⁵⁶² Jack P. Greene, *The Diary of Colonel Landon Carter of Sabine Hall, 1752-1778*. volumes 1 and 2. (Charlottesville: University Press of Virginia, 1965), 216, 286, 681, 682. On horses and plowing in Maryland see: Gloria Lund Main, *Tobacco Colony: Life in Early Maryland, 1650-1720* (Princeton University Press, 1982), 66.

⁵⁶³ Greene, *The Diary of Colonel Landon Carter of Sabine Hall, 1752-1778*, 132.

⁵⁶⁴ Greene, *The Diary of Colonel Landon Carter of Sabine Hall, 1752-1778*, 683.

⁵⁶⁵ Greene, *The Diary of Colonel Landon Carter of Sabine Hall, 1752-1778*, 687.

At harvest-time, the same drivers and draft animals carted plants gathered from the fields to storehouses across the plantation. Diary entries record how Manuel and others carted crops of tobacco and wheat from the fields to the slaveholder's warehouse for storage before sending the plants to market.⁵⁶⁶ Other enslaved people on Carter's plantations, such as a man named Talbot, performed different tasks with animals, such as shearing sheep for wool.⁵⁶⁷ Another man, Robin, watched over hogs at the Fork quarter, one of Carter's surrounding farms.⁵⁶⁸

Enslaved women supervised livestock on Carter's plantations as well. Two elderly women, Sukey and Betty, cared for geese, ducks, chickens, and turkeys in Carter's hen house.⁵⁶⁹ Sukey reported to Carter on the health of the birds he entrusted her with, especially when the animals laid eggs or when their eggs hatched. Carter tasked two other women, Rose and Sicely, with keeping cattle "from trespassing" into his fields and damaging his plants.⁵⁷⁰

In addition to these burdensome tasks, Carter trusted at least one enslaved man with another form of plantation labor: veterinary medicine.⁵⁷¹ Carter relied on an enslaved man, whom he referred to as "Dr. Nassaw" in his diary, with caring for his livestock as they gave birth, became ill, and to administer therapeutic bleedings.⁵⁷² In a diary entry from 1771, for instance, Carter recorded how "Nassaw cut and marked 16

⁵⁶⁶ Greene, *The Diary of Colonel Landon Carter of Sabine Hall, 1752-1778*, 333.

⁵⁶⁷ Greene, *The Diary of Colonel Landon Carter of Sabine Hall, 1752-1778*, 270.

⁵⁶⁸ Greene, *The Diary of Colonel Landon Carter of Sabine Hall, 1752-1778*, 561.

⁵⁶⁹ Greene, *The Diary of Colonel Landon Carter of Sabine Hall, 1752-1778*, 267, 270.

⁵⁷⁰ Greene, *The Diary of Colonel Landon Carter of Sabine Hall, 1752-1778*, 488, 672-673.

⁵⁷¹ Of course, such labor was not limited to Virginia. Morgan notes that Phibbah, an enslaved woman on Vineyard Pen, performed some similar kinds of work while enslaved by Thomas Thistlewood, see: Morgan, "Slaves and Livestock in Eighteenth-Century Jamaica", 59.

⁵⁷² Greene, *The Diary of Colonel Landon Carter of Sabine Hall, 1752-1778*, 583.

piggs, marked and turned out 2 black Cows, [and] mark one sow pigg at the Fork.”⁵⁷³

Nassaw also inspected the health of Carter’s horses, and often treated the animals for infections of worms.⁵⁷⁴ Nassaw’s skilled work underscores the productive and reproductive labor enslaved people carried out on plantations.

As entanglements between enslaved people and animals on Tidewater plantations intensified, slaveholders increasingly drew upon racialized rhetoric that framed the enslaved as akin to animals in their minds, features, and even sexuality. In his diary, Carter justified slavery by outright denying the humanity of people of African descent. Carter wrote to himself that the enslaved could “as little be humanized as bears,” and that Africans were “Nothing but a brute in human shape.”⁵⁷⁵ Thomas Jefferson, a slaveholder in the Virginia Piedmont and a peer of Carter, suggested that Africans were akin to animals in a natural history treatise that classified people of African descent along with animals using the taxonomy of the Swedish natural historian Carl Linnaeus.⁵⁷⁶ Jefferson further repeated the disgusting racist trope that “Oran-ootan” apes sought after African women for sexual intercourse.⁵⁷⁷ Jefferson declared that he considered Africans, in respect to their physiology and mental abilities, as comparable to “our horses, dogs, and other domestic animals.”⁵⁷⁸ Scholars such as Jennifer Morgan and Kirsten Fischer persuasively argue that slaveholders used this dehumanizing rhetoric to assuage themselves and their subordinates that slavery was just, humane, and reinforced hierarchies already existing in nature.

⁵⁷³ Greene, *The Diary of Colonel Landon Carter of Sabine Hall, 1752-1778*, 577.

⁵⁷⁴ Greene, *The Diary of Colonel Landon Carter of Sabine Hall, 1752-1778*, 628-629.

⁵⁷⁵ Rhys Isaac, *Landon Carter's Uneasy Kingdom: Revolution and Rebellion on a Virginia Plantation* (Oxford: Oxford University Press, 2004), 94.

⁵⁷⁶ Thomas Jefferson, *Notes on the State of Virginia* [Paris, 1782], 130-134.

⁵⁷⁷ Jefferson, *Notes on the State of Virginia*, 253. See also Winthrop D. Jordan, *White Over Black* (Chapel Hill: University of North Carolina Press, 1968), 29-32, 230, 238.

⁵⁷⁸ Jefferson, *Notes on the State of Virginia*, 253.

Racist language comparing enslaved people and animals emerged out of the geography of plantation slavery and eco-cultural networks of slaving and animal exchanges, including the transshipment of horses, cattle, and donkeys to Caribbean and Chesapeake estates, that supported plantation regimes of labor. Enslaved people performed skilled labor with livestock, including plowing, carting, mill work, farriery, and veterinary medicine, that sustained plantation operations.

The Most Useful Grain in the World: Feeding “Slaves and Stock”

Slaveholders further enmeshed the lives of the enslaved with livestock by providing and prescribing both malnourishing diets of fodder grains.⁵⁷⁹ Feeding enslaved people and animals near-identical diets constituted a mode of interaction that supported the wider cultural perception among enslavers that the enslaved and animals were functionally equivalent.

Enslaved people endured diets designed to minimize a planter’s costs in the seventeenth-century Caribbean.⁵⁸⁰ In a set of instructions to his overseers written around 1670, the planter Henry Drax ordered his manager Richard Harwood to direct the enslaved on his estate to plant provision crops in small grounds, especially potatoes, “Guny Corn or rather bony biss” sorghum, and plantains, on his Drax Hall and Hope plantations in St. George parish on Barbados.⁵⁸¹ Drax stressed that “Most be Care takne to plantt all the ground you Can with Corn without Enough of which neither horses nor

⁵⁷⁹ Roberts, *Slavery and the Enlightenment in the British Atlantic*, 91-92, 97; Kenneth F. Kiple, *The Caribbean Slave: a Biological History* (Cambridge: Cambridge University Press, 1984), 64, 84, 87; Kenneth F. Kiple, and Virginia H. Kiple. "Deficiency Diseases in the Caribbean." *The Journal of Interdisciplinary History* 11, no. 2 (1980): 197-215.

⁵⁸⁰ Peter Thompson, "Henry Drax's Instructions on the Management of a Seventeenth-Century Barbadian Sugar Plantation." *The William and Mary Quarterly* 66, no. 3 (2009): 565-604. 585-586.

⁵⁸¹ Thompson, "Henry Drax's Instructions on the Management of a Seventeenth-Century Barbadian Sugar Plantation." 565-604.

Cattle will be able to perform theire work and when theire is no wantt of thatt Every thing in the plantation will be fatt[–]itt being also for Change wery good for negros.”⁵⁸² Drax valued sorghum in particular as a food for feeding both livestock and slaves.

Recommendations of cheap diets for slaves also appeared in England’s colonies in North America. In 1700, John Lawson, the surveyor-general for the Province of Carolina, reported that during his expedition he learned that “The *Indian* Corn, or *Maiz*, proves the most useful Grain in the World and had it not been for the Fruitfulness of this Species, it would have proved very difficult to have settled some of the Plantations in *America*.” “And this Assertion is made good,” Lawson continued, “by the *Negro*-Slaves, who, in many Places, eat nothing but this *Indian* Corn and Salt. Pigs and Poultry fed with this Grain,” he added, “eat the sweetest of all others.”⁵⁸³ Lawson lavished praise upon corn, a plant he speculated could “refuse no Grounds” and might be adapted for distant soils to expand plantation slavery from New England to the West Indies.

Hugh Jones, chaplain to the General Assembly in Virginia, likewise heaped praise upon corn as a food for “great Increase and General Use” for provisioning enslaved people, “Cattle, Hogs, Sheep, and Horses.”⁵⁸⁴ Agricultural plans involving slave labor and diet overlapped on Chesapeake plantations, Jones observed, as enslaved people raised “*Hogs* and *Cattle*, and plant *Indian Corn* (or Maize) and Tobacco for the Use of their Master” to simultaneously furnish slaveholders the labor to produce fodder, livestock, and plant commodities.⁵⁸⁵ Fields in Virginia and elsewhere, Jones

⁵⁸² Thompson, “Henry Drax’s Instructions on the Management of a Seventeenth-Century Barbadian Sugar Plantation”, 586.

⁵⁸³ John Lawson, *A New Voyage to Carolina* (London: 1709), 75.

⁵⁸⁴ Hugh Jones, *The Present State of Virginia* (London: Printed for J. Clarke, 1724), 40-41.

⁵⁸⁵ Jones, *The Present State of Virginia*, 36.

recommended, could fruitfully alternate between seasons of tobacco, corn, and wheat with “wonderful Increase” as the enslaved raised market and food crops.⁵⁸⁶

Like his contemporaries, the chaplain defended slavery as a natural and healthy institution alongside his praise for corn provisions. Jones assured aspiring planters that enslaved Africans in Virginia “are not only encreased by fresh Supplies from Africa,” but were “very prolifick” in the Chesapeake Bay colonies.⁵⁸⁷ Like others, he justified slavery in Virginia by claiming that Africans “are of a more servile Carriage, and slavish Temper,” and “by Nature cut out for hard Labour and Fatigue.”⁵⁸⁸ The chaplain promoted “Chimerical hard Slavery” as a natural arrangement between Africans and Europeans, and he claimed the former “delight” in toiling under “violent Heat.”

Naturalists also took note of corn’s value on plantations in Virginia and the Carolinas. Mark Catesby wrote how planters in South Carolina ordered enslaved people to cut corn blades, like those of sugarcane plants, as “winter provender for horses and cattle.”⁵⁸⁹ The easy culture of corn, he wrote, “adapts it to the use of these countries as the properest food for” enslaved Africans. In Virginia, Catesby discussed experiments in feeding slaves diets consisting entirely of wheat or corn with the naturalist and slaveholder William Byrd II.⁵⁹⁰ Deeply related diets for slaves and animals continued to occupy the attention of naturalists in North America into the second half of the eighteenth

⁵⁸⁶ Jones, *The Present State of Virginia*, 39.

⁵⁸⁷ Jones, *The Present State of Virginia*, 37.

⁵⁸⁸ Jones, *The Present State of Virginia*, 4, 38. For similar ideas about African bodies and the “naturalness” of slavery see: William Byrd, “A Progress to the Mines”, 1732, in *The Writings of Colonel William Byrd*, edited by John Spencer Bassett (New York: Doubleday, 1901), 346-360. William Byrd II believed Africans to be “all Face”, and claimed their bodies were naturally suited to labor in intemperately cold or hot climates.

⁵⁸⁹ Mark Catesby, *The Natural History of Carolina, Florida, and the Bahama Islands*, volume I (London: Printed at the expence of the Author; and sold by W. Innys and R. Manby, by Mr. Hauksbee, and by the Author, at Mr. Bacon’s in Hoxton, 1731), 27-28. Copy held at The Library Company of Philadelphia.

⁵⁹⁰ Frederick C. Knight, *Working the Diaspora: The Impact of African Labor on the Anglo-American World, 1650-1850* (New York: New York University Press, 2010), 60.

century.⁵⁹¹ In 1767, the physician and geographer John Mitchell, for instance, reported to the Board of Trade in London that planters fed enslaved people on Tidewater plantations “entirely on Indian Corn.”⁵⁹²

Slaveholders in the British Caribbean used sorghum for provisioning the enslaved and fodder for livestock in the mid-eighteenth century. A missionary for the Society for the Propagation of the Gospel in Foreign Parts, who resided in St. Lucy parish, Barbados, between 1736 and 1750, observed that planters primarily fed enslaved people bread made from “*Guiney Corn*,” or sorghum.⁵⁹³ In his plantership essay, Samuel Martin also recommended planters feed enslaved people “Guinea corn, yams, or eddas, besides potatoes growing in regular succession.”⁵⁹⁴ Planters in Jamaica likewise primarily fed the enslaved rations of sorghum.⁵⁹⁵

⁵⁹¹ Writing on rice, for instance, Bernard Romans noted that the plant was a commodity and valued by planters in East and West Florida for its “usefulness in feeding Negroes, cattle and poultry.” Bernard Romans, *A Concise Natural History of East and West Florida* (New York: Sold by R. Aitken, 1776), 126, 198. Moreover, scholars of slavery in New Spain have demonstrated that corn, specifically maize, was at the center of the “core diets” of enslaved people in Cartagena, Portobelo, and Lima. See: Linda A. Newson, and Susie Minchin, “Diets, Food Supplies and the African Slave Trade in Early Seventeenth-Century Spanish America.” *The Americas* 63, no. 4 (2007): 517-50.

⁵⁹² Anya Zilberstein, “Bastard Breadfruit and Other Cheap Provisions: Early Food Science for the Welfare of the Lower Orders,” *Early Science and Medicine* 21, no. 5 (2016): 492-508, 507.

⁵⁹³ Griffith Hughes, *The Natural History of Barbados in Ten Books*, (London: Printed for the Author, 1750), 254.

⁵⁹⁴ Martin, *An Essay Upon Plantership*, 4, 47.

⁵⁹⁵ Edward Long, *The History of Jamaica. Or, General Survey of the Antient and Modern State of that Island*, volume II, (London: Printed for Thomas Lowndes in Fleet-Street, 1774), 71-72.



Figure 3.7 Illustration of maize, sugar cane, and sorghum together, from Griffith Hughes, *The Natural History of Barbados*, 1750, image courtesy of The John Carter Brown Library, Brown University.

Writing in a meliorist tone, Martin advised planters that diets consisting only of “New England corn” would be insufficient, yet he and other planters prescribed malnourishing diets consisting primarily of grains and a few vegetables for the enslaved. In the same text, Martin advised that sorghum, in addition to cane tops and grass, could

also be used as fodder for cattle.⁵⁹⁶ Good plantership, then, relied on an implicit, and violent equation of slaves and livestock as functionally equivalent.

In his scholarship on slavery and provisioning, Thomas Andrews argues that planters consciously created a “caloric gap” between whites, whose diets included regular portions of meat, and enslaved people, whose nutrient-deficient diets consisted mostly of fodder grains, to support an ideal and material reality in Britain’s Atlantic colonies that reduced the enslaved to the status of beasts of burden through food inequality.⁵⁹⁷ While slave diets in the Chesapeake were meager compared to whites, enslaved people in the West Indies faced far worse problems related to dietary malnutrition due, in part, to the agricultural labor demanded by different plant commodities.⁵⁹⁸ Moreover, examining the caloric gap within the wider context of plantation labor regimes demonstrates how food and diet, as a mode of interaction, contributed to the racialized equation of enslaved people and animals.

Plantation manuals inspired by Martin, and written in the second half of the eighteenth century, recommended enslavers implement near-identical grain diets for enslaved people and livestock. In his unpublished manuscript manual on plantership written in 1774, the slaveholder John Dovaston included a chapter on “Planting of Grass,

⁵⁹⁶ Martin, *An Essay Upon Plantership*, 8-9. On plantations in North America that provided corn and other provisions for the West Indies see: Heather B. Trigg, and David B. Landon. "Labor and Agricultural Production at Sylvester Manor Plantation, Shelter Island, New York." *Historical Archaeology* 44, no. 3 (2010): 36-53; Katherine Howlett Hayes, *Slavery Before Race: Europeans, Africans, and Indians at Long Island's Sylvester Manor Plantation, 1651-1884* (New York: New York University Press, 2014).

⁵⁹⁷ Thomas Andrews, "Beasts of the Southern Wild: Slaveholders, Slaves and Other Animals" in Charles Ball's *Slavery in the United States*, in *Rendering Nature: Animals, Bodies, Places, Politics*, edited by Marguerite Shaffer and Phoebe Young, (Philadelphia: University of Pennsylvania Press, 2015), 21-47, 26.

⁵⁹⁸ James E. McWilliams, *A Revolution in Eating: How the Quest for Food Shaped America* (New York: Columbia University Press, 2005), 113.

Corn, and Provision for Cattle and Slaves.”⁵⁹⁹ The centrality of corn and other grains for plantations can be further found in records kept by overseers. An overseer at Somerset Vale, a coffee plantation in St. Thomas parish, Jamaica, for instance, kept a journal between 1776 and 1780 to record the weekly labor of the enslaved. Entries from the journal list the tasks of enslaved men tending yam hills, “Breaking in Corn in old Negro Ground,” “Cleaning new Ground Corn and plantin walk,” planting sorghum, and harvesting other fodder crops.⁶⁰⁰ The enslaved at Somerset Vale lived and worked alongside livestock animals, whose pens and hogsties they built, and ate near-identical diets that slaveholders set for feeding nonhumans.

Grain-based diets implicated slavery within a wider Atlantic world of projects surrounding scientific improvement. Anya Zilberstein has shown how in the 1780s—after a series of political ecological catastrophes including the Bengal famine, crop failures in Britain, and hurricanes in the Caribbean—natural philosophers and agricultural improvers began to address the fragility of the empire’s global networks of provisioning.⁶⁰¹ In Barbados, planters implemented rigid corn-centered diets adapted from natural philosophers including Benjamin Thompson, Count Rumford.⁶⁰² In an essay, Thompson advocated the many virtues of corn for feeding “negro slaves”, “fattening hogs and poultry,” and “giving strength to working oxen.”⁶⁰³ Philip Gibbes, a planter who held the estate Spring Head in St. James parish and studied Thompson’s work closely, printed

⁵⁹⁹ John Dovaston, *Agricultura Americana, or Improvements in West India Husbandry Considered Wherein the Present System of Husbandry Used in England is Applied to the Cultivation or Growing of Sugar Canes to Advantage*, 1774, Codex Eng 60, The John Carter Brown Library.

⁶⁰⁰ Journal of a Jamaican Slave Overseer, Somerset Vale, 1776-1780, Codex Eng. 180, The John Carter Brown Library.

⁶⁰¹ Zilberstein, “Bastard Breadfruit and Other Cheap Provisions”, 492-508.

⁶⁰² Zilberstein, “Bastard Breadfruit and Other Cheap Provisions”, 492.

⁶⁰³ Benjamin Thompson, *Essays, Political, Economical and Philosophical*, volume 1 (London: Printed for T. Cadell and W. Davies, 1796), 249-250.

directions for making cheap soups from corn and other grains for the enslaved in his *Instructions for the Treatment of Negroes*, published in 1797.⁶⁰⁴

Gibbes, adapting Thompson's research, stressed to the manager of his plantation, Jacob Lewis, that portions of food, mostly corn, for the enslaved should be "more than sufficient."⁶⁰⁵ Large amounts of food, he claimed, would lead to greater rates of "increase" on plantations.⁶⁰⁶ In the recipes for cheap soup he described in his *Instructions*, involving corn, sorghum, and oats – "the food of man and beast" – Gibbes promoted a dietary regimen for the enslaved that appeared to mobilize insights from natural philosophy on diet for producing large quantities of food, yet the soups ultimately proved malnutritious for slaves.⁶⁰⁷ Later manuals inspired by Gibbes continued to suggest slave diets consisting primarily of sorghum, a cheap "food for both man and beasts."⁶⁰⁸ In 1797, James Clarke, a physician in Dominica, also prescribed that enslaved people eat a diet of root vegetables, in addition to cheap grains, including yams and eddoes.⁶⁰⁹

Plantation doctors likewise prescribed grain-based diets in the West Indies. David Collins, a physician in St. Vincent, advocated cheap soups made from corn or sorghum in his plantation manual appearing in 1803.⁶¹⁰ Horse beans, another food Collins recommended, could be equally useful for feeding the enslaved, hogs, and horses on an

⁶⁰⁴ Philip Gibbes, *Instructions for the Treatment of Negroes*, (London: Printed for Shepperson and Reynolds, 1797); T.C. Thomas, and J.B. Legg, "Archaeological Evidence of Afro-Barbadian Life at Springhead Plantation, St. James Parish, Barbados," *Journal of the Barbados Museum and Historical Society* 43 (1996/1997): 32-49.

⁶⁰⁵ Gibbes, *Instructions for the Treatment of Negroes*, 10.

⁶⁰⁶ Gibbes, *Instructions for the Treatment of Negroes*, 55.

⁶⁰⁷ Gibbes, *Instructions for the Treatment of Negroes*, 19.

⁶⁰⁸ Edwin Lascelles, et al, *Instructions for the Management of a Plantation in Barbadoes and for the Treatment of Negroes*, (London: 1786), 14.

⁶⁰⁹ James Clark, "An Account of Some Experiments Made with a View to Ascertain the Comparative Quantities of Amylaceous Matter, Yielded by the Different Vegetables Most Commonly in Use in the West India Islands", *Medical Facts and Observations*, vii–viii (1797), as quoted in Rebecca Earle, "The Political Economy of Nutrition in the Eighteenth Century", *Past & Present*, vol. 242, no. 1, (2019): 79–117.

⁶¹⁰ [Collins], *Practical Rules*, 93-94. Roberts, *Slavery and the Enlightenment in the British Atlantic*, 161.

estate.⁶¹¹ Planters valued cereal grains as durable supplies of food in periods of crises. Hurricane strikes, the doctor cautioned, could destroy entire fields of provisions, herds of livestock, and cause “temporary scarcity” on plantations approaching famine. Caribbean planters, he warned, must prepare for such moments of potential crisis caused by food shortages, particularly slave revolts.⁶¹² “Nothing is better for that purpose than the Indian corn of America,” he counseled, “because, if wanted, it will afford a good food to the negroes, and, if not wanted for them, it may be given instead of oats, to the horses and mules.”⁶¹³

Though some enslaved people did receive an “animal part” of their diet, Collins and others pointed out it was typically “small indeed,” and that fodder grains, by far, made up most of their diet on plantations.⁶¹⁴ Meager diets of fodder exposed enslaved people to frequent suffering and persistent ill-health.⁶¹⁵ Among the diseases plantation doctors identified among enslaved men and women caused by malnutrition were “dirt-eating,” “yaws,” and infectious worms.⁶¹⁶ Plantation doctors further pathologized

⁶¹¹ [Collins], *Practical Rules*, 97.

⁶¹² Matthew Mulcahy, *Hurricanes and Society in the British Greater Caribbean, 1624–1783* (Baltimore: Johns Hopkins University Press, 2010), 112; Stuart B. Schwartz, *Sea of Storms: A History of Hurricanes in the Greater Caribbean from Columbus to Katrina* (Princeton: Princeton University Press, 2015), 102; Candice Goucher, *Congotay! Congotay! A Global History of Caribbean Food* (London: Routledge, 2013), 70.

⁶¹³ [Collins], *Practical Rules*, 114.

⁶¹⁴ [Collins], *Practical Rules*, 115.

⁶¹⁵ Kenneth F. Kiple, and Virginia H. King, “Black Tongue and Black Men: Pellagra and Slavery in the Antebellum South.” *The Journal of Southern History* 43, no. 3 (1977): 411-28; Kenneth F. Kiple, and Virginia Himmelsteib King, *Another Dimension to the Black Diaspora: Diet, Disease and Racism*, (Cambridge: Cambridge University Press, 2003).

⁶¹⁶ James Grainger, *An Essay on the More Common West-India Diseases; and the Remedies which that Country Itself Produces* (London: Printed for T. Becket and P. A. de Hondt, 1764).

enslaved people as being related to animals by claiming that yaws afflicted enslaved people and fowl equally.⁶¹⁷

The physical and mental violence caused by extreme malnourishment in the West Indies can be seen most clearly in cases of “plague hunger.” The missionary Griffith Hughes, for instance, observed enslaved men and women suffering from painful starvation unearth the corpses of perished cattle and horses in Barbados to consume as food.⁶¹⁸ In his description of a “very contagious and pestilential” disease afflicting livestock on the island, Hughes described how animals “feeding heartily” and appearing otherwise well would “without any Symptom of a previous Disorder, drop down and die.” Planters immediately buried the animals, and appointed watchmen to guard their graves and prevent newly bought captives arriving on the island from West Africa and other enslaved people from “digging up the Carcasses, and feeding upon them.” Hughes learned how enslaved people who ate the liver or entrails of buried livestock quickly became sick and died.

Abolitionists testifying before the House of Commons in 1790 and 1791 added plague hunger as evidence of the brutality of slavery to their brief against the slave trade. Mark Cook, an overseer in Jamaica who worked on multiple plantations between 1744 and 1790, testified that enslaved people in the West Indies “have not sufficient food.”⁶¹⁹ On Jamaica, Cook observed “Africans and *Creoles* eat the putrid carcasses of animals, and

⁶¹⁷ Morgan, “Slaves and Livestock in Eighteenth-Century Jamaica”, 52; Tim Fulford, Debbie Lee, and Peter J. Kitson, *Literature, Science and Exploration in the Romantic Era: Bodies of Knowledge* (Cambridge: Cambridge University Press, 2004), 210.

⁶¹⁸ Hughes, *The Natural History of Barbados*, 62-63.

⁶¹⁹ *An Abstract of the Evidence Delivered Before a Select Committee of the House of Commons in the Years 1790, and 1791, on the Part of the Petitioners for the Abolition of the Slave Trade*, (London: Printed by James Phillips, 1791), 58, copy held at The William L. Clements Library.

is convinced they did it *through want*.”⁶²⁰ John Terry, an overseer and plantation manager in Grenada, witnessed enslaved people, “on estates *where they have been worse fed than on others*, eat the putrid carcasses of animals also.” Another Jamaican overseer, Henry Coor, who served on plantations in Westmoreland parish, recalled how planters burnt dead “mules, horses, and cows” to prevent such occasions. “Had they been buried,” he claimed, “the negroes would have dug them up in the night to eat them *through hunger*.”

Plague hunger also disturbed planters in the West Indies. In 1795, John Gay Alleyne wrote in a letter how three enslaved people on his plantation, Turners Hall Wood, St. Andrew parish, Barbados, “have been destroyed on the Estate with Plague hunger, the Effect of their Eating putrid Cattle.”⁶²¹ The problematic reality of plague hunger exemplified how white slaveholders used food, in the form of the caloric gap described by Andrews, as a weapon to attack and undermine the health and will of the enslaved in the Caribbean.

Enslaved people did not passively accept the malnourishing dietary regime of slavery. Slaves fished and hunted for animals inside and beyond the limits of a plantation. In Jamaica, the naturalist and physician Patrick Browne, who practiced medicine on the island between 1746 and 1755, observed enslaved people catch and eat the supposedly poisonous mangrove crab found in the lowland marshes, and fish for young sharks on the shoreline.⁶²² Inland, Browne observed, enslaved people hunted for yellow snakes and feral cats.⁶²³ In the Bahama Islands, a naturalist observed enslaved divers and fishermen

⁶²⁰ *Abstract of the Evidence Delivered Before a Select Committee of the House of Commons*, 58.

⁶²¹ Microfilm, file E20570, John Gay Alleyne letter to Sarah Fitzherbert, 1795, Turners Hall Plantation, Fitzherbert Collection, Barbados Department of Archives.

⁶²² Patrick Browne, *The Civil and Natural History of Jamaica*, (London: Printed for the Author and Sold by T. Osborne and J. Shipton, 1756), 422, 458.

⁶²³ Browne, *The Civil and Natural History of Jamaica*, 461, 485.

catching green turtles, land crabs, and other fish.⁶²⁴ Enslaved people also made use of fishing traps and pots to catch shrimp, crawfish, and, on occasion, alligators in rivers, creeks, streams, and bays.⁶²⁵ A few enslaved people possessed dogs for hunting game, such as Dick, a mulatto man on Vineyard Pen in St. Elizabeth parish, Jamaica.⁶²⁶

Fishing, trapping, and hunting afforded some enslaved people the means to diversify and bolster their health with animal food. By acquiring food through their own frequently clandestine movements away from the plantation, enslaved people defied the will of planters who aimed to equate diasporic Africans with animals through dietary regimes.

Many enslaved fishers and hunters ate their game to fortify the malnourishing diets of fodder grains they endured. However, some enslaved people in the West Indies occasionally sold the animals they caught at Sunday markets.⁶²⁷ A colorful lithograph print from 1806 depicts such a “Negroes Sunday Market at Antigua.”⁶²⁸ In the center of the foreground, an enslaved woman sits on the dirt ground. Beneath her, animals for sale—ducks, chickens, geese, and other birds—encircle the space around her. To the right, an enslaved man drags a reluctant pig by a rope. Behind him, black men and women with

⁶²⁴ Catesby, *The Natural History of Carolina, Florida, and the Bahama Islands*, volume II, 19-20, 68, 83.

⁶²⁵ Alexander Barclay, *Practical View of the Present State of Slavery in the West Indies* (London: Published by Smith, Elder, and Co., 1827), 328-330.

⁶²⁶ Morgan, “Slaves and Livestock in Eighteenth-Century Jamaica”, 68-69. Morgan notes that Dick taught the slaveholder Thomas Thistlewood how to hunt and shoot birds using “Negro peppers.”

⁶²⁷ Hilary Beckles, “An Economic Life of Their Own: Slaves as Commodity Producers and Distributors in Barbados”, in *The Slave's Economy: Independent Production by Slaves in the Americas*, edited by Ira D. Berlin and Philip Morgan, 31-47 (London: Frank Cass and Co., 1991); Jillian E. Galle, “Assessing the Impacts of Time, Agricultural Cycles, and Demography on the Consumer Activities of Enslaved Men and Women in Eighteenth-Century Jamaica and Virginia”, in *Out of Many, One People: The Historical Archaeology of Colonial Jamaica*, edited by James A. Delle, Mark W. Hauser, and Douglas V. Armstrong, 211-42 (Tuscaloosa: University of Alabama Press, 2011); Jerome Handler, and Diane Wallman.

“Production Activities in the Household Economies of Plantation Slaves: Barbados and Martinique, Mid-1600s to Mid-1800s,” *International Journal of Historical Archaeology* 18, no. 3 (2014): 441-66. In Vineyard Pen, Jamaica, Phibbah, an enslaved woman, bought and sold pigs and poultry at similar informal markets, see: Morgan, “Slaves and Livestock in Eighteenth-Century Jamaica”, 59, 68.

⁶²⁸ W.E. Beastall, *A Negro Market in the West Indies* (London: Printed by Motte, 1806) copy held at The Lewis Walpole Library, Yale University.

goats pigs, and deer for sale, sit and engage in conversation. In the lower right hand corner of the image, a man of African descent sits with a pair of fowls. Behind him, a woman with a basket loaded with pigeons stands in the distance. In the far left corner of the image, a man of African descent appears to be selling an iguana, while to the right a small boy carries a lamb over his shoulders. Throughout the image, a number of dogs and deer are scattered, possibly belonging to one of the marketers or perhaps one of the few white planter's in the background. This image, and a few others, indicates the economic decisions made by some slaves to sell their quarry at market, using the animals as a means to purchase other valuable goods, such as clothes or tools.



Figure 3.8 Detail from “Negroes Sunday Market at Antigua”, drawing by W.E. Beastall and G. Testolini, London, 1806, image courtesy of National Maritime Museum, Greenwich, London, Michael Graham-Stewart Slavery Collection.

The subject of diet and dietary costs continued to occupy the attention of planters interested in “improving,” or ameliorating slavery in the West Indies. The members of the Society for the Improvement of Plantership, for instance, met often to discuss dietary advice on plantations. In 1805, the society met on several occasions to report on various

experiments in planting potatoes, yams, and eddoes as cheap provisions for the enslaved.⁶²⁹ The planters, led by Henry Evans Holder, began correspondence in February, 1808, with Alexander Anderson, the superintendent of the royal botanic garden on St. Vincent, on the subject of a species of rice “planted in Sierra Leone,” which they hoped could become a plantation provision crop.⁶³⁰ In October, Anderson replied by sending the society specimens of “Upland Rice” for experiment.⁶³¹ Anderson expected the rice would become “a useful acquisition” for slaveholders, and offered to send future specimens of rice from the East Indies.

Enslaved people in the West Indies understood the diets they received were malnourishing, and different from those whites enjoyed in the colonies. An enslaved man on Bloxburgh, a coffee plantation in the Port Royal Mountains of Jamaica, explained to an overseer that their diet consisted almost entirely of “raw corn,” and added “we flesh belong to buckra, and no more; we bones belong to we self.”⁶³² Benjamin M’Mahon, the overseer, who found employment on multiple plantations on the island, repeatedly observed emaciated, skeletal enslaved people “who looked more like phantoms than human beings” suffering from malnourishment.⁶³³ An enslaved man on Harmony Hall, in St. Mary parish, told M’Mahon that their enslaver treated his slaves worse than his cattle. While employed at Passley Garden, in Portland parish, M’Mahon discovered to his astonishment that the enslaved did not receive any rations of herring, even on holidays like Christmas and New Year’s Day, when planters customarily provided slaves with

⁶²⁹ 3 May, 1805; 10 August, 1805; 6 December 1805, *MTSIPB*.

⁶³⁰ 13 February, 1808, *MTSIPB*. On Anderson see: Julie Chun Kim, “Natural Histories of Indigenous Resistance: Alexander Anderson and the Caribs of St. Vincent”, *The Eighteenth Century* 55, no. 2-3, (2014): 217-233.

⁶³¹ 8 October, 1808, *MTSIPB*.

⁶³² M’Mahon, *Jamaica Plantership*, 23, 28.

⁶³³ M’Mahon, *Jamaica Plantership*, 56-57.

meals of fish. M'Mahon learned the enslaved “chiefly supported themselves by night-fishing” to resist the caloric gap slaveholders embedded in their diets.⁶³⁴

Slavery’s foodways, in particular the meager diet of fodder grains that enslavers forced upon enslaved people and livestock, existed as a mode of interaction between people and animals that supported a broader equation of slaves and livestock in the minds of planters and settlers.

Nature’s Oeconomy: Accumulating the Waste of People and Animals

After extracting the muscular labor of enslaved people and animals, and feeding both diets of fodder grains, slaveholders in the British Atlantic continued to “improve” plantations through schemes to restore the fertility of their lands by collecting the waste of the enslaved and livestock to transform it into energy. Turning waste into a source of energy for plantations involved slaveholders configuring the enslaved and livestock into another mode of interaction: producing, collecting, and using manure. Accumulating, storing, and distributing dung became crucial to both sugar and tobacco plantations in the second half of the eighteenth century as soil depletion in both the Caribbean and the Chesapeake worsened.⁶³⁵

Enslaver’s interest in profiting from waste has not been unnoticed by historians. Justin Roberts explains how enslaved people toiling alongside livestock animals in both regions labored at gathering, hauling, and casting dung at greater rates for planters who increasingly “championed the value of dung” as the material foundation for agricultural

⁶³⁴ M'Mahon, *Jamaica Plantership*, 79.

⁶³⁵ Roberts, *Slavery and the Enlightenment in the British Atlantic, 1750-1807*, 107-108, 111, 116, 129; Simon Newman, *A New World of Labor: The Development of Plantation Slavery in the British Atlantic* (Philadelphia: University of Pennsylvania Press, 2013), 198, 208-209; Kulikoff, *Tobacco and Slaves*, 47, 114.

improvement.⁶³⁶ Moreover, Roberts shows how exposure to manure through the dirty, dangerous, and exhausting work of dunging increased rates of illness and disease among enslaved people.⁶³⁷ Hauling pounds of manure tore people's muscles, damaged tendons, and strained joints to the breaking point.⁶³⁸ Enslaved people's backbreaking labor with dung further encouraged descriptions of the enslaved as animal-like drones, such as one enslaver on Barbados who noted that "*Negrees* work at it like Ants or Bees" while loading animal waste and humanure across plantations.⁶³⁹

Planters approached manuring in a similar fashion to labor and diet by likening the bodies of slaves and animals as interchangeable and equally exploitable. Close reading techniques from literary studies reveals how enslavers built an eco-cultural network between animals, humans, and plantations connected by ordure. In his essay, Samuel Martin wrote that a West Indies planter intending "to grow rich with ease, must be a good oeconomist; must feed his negroes with the most wholesome food, sufficient to preserve them in health and vigor."⁶⁴⁰ Furthermore, "it is nature's oecomy so to fructify the soil by the growth of yams, plantains, and potatoes, as to yield better harvests of sugar by that very means."⁶⁴¹ Agricultural historians examining Martin's essay for the most part overlook this passage of the text. However, Anna Foy, a literary historian of Augustan poetics, interprets this "puzzling passage" as an instance of circumlocution: the

⁶³⁶ Roberts, *Slavery and the Enlightenment in the British Atlantic, 1750-1807*, 47.

⁶³⁷ Roberts, *Slavery and the Enlightenment in the British Atlantic, 1750-1807*, 177, 200-201.

⁶³⁸ Roberts, *Slavery and the Enlightenment in the British Atlantic, 1750-1807*, 180, 191.

⁶³⁹ Edward Littleton, *The Groans of the Plantations* (London: Printed by M. Clark, 1698), 18.

⁶⁴⁰ Martin, *An Essay Upon Plantership*, 3.

⁶⁴¹ Martin, *An Essay Upon Plantership*, 5-6.

rhetorical use of a “circuit or compass of words” to indirectly discuss a topic generally considered beyond the limits of polite discussion.⁶⁴²

Through a close reading of Martin’s advice on preparing soil, organizing plantation space, and planning crop harvests, by reading the essay in its historical context alongside agricultural improvers such as Francis Home and Arthur Young, and by reading contemporary travel accounts by writers including Janet Schaw, Foy argues that Martin’s essay used circumlocution to propose “that planters should use human excreta as fertilizer, specifically the excreta of their slaves” to replenish the land of their weakened estates.⁶⁴³ While Martin did directly discuss using animal dung on plantations, the thesis Foy establishes allows environmental historians to consider entanglements of human and animal waste under slavery, including the valuation of waste as a source of fertility. Foy’s insightful analysis demonstrates the willingness of planters to capture the energy of slaves and livestock at every turn, and provides an important opportunity to reevaluate Martin’s essay, especially when considered alongside the interrelated labor and diet of enslaved people and animals in the British Atlantic.

⁶⁴² Anna M. Foy. "The Convention of Georgic Circumlocution and the Proper Use of Human Dung in Samuel Martin’s *Essay Upon Plantership*." *Eighteenth-Century Studies* 49, no. 4 (2016): 475-506; Samuel Johnson, *A Dictionary of the English Language: In which the Words are Deduced from Their Originals, and Illustrated in Their Different Significations by Examples from the Best Writers* (London: Printed by W. Strahan, 1755), 34, 36.

⁶⁴³ Foy, “The Convention of Georgic Circumlocution and the Proper Use of Human Dung in Samuel Martin’s *Essay Upon Plantership*”, 475-476.



Figure 3.9 “Manuring”, illustration from *Cuffy the Negro’s Doggrel Description of the Progress of Sugar*, 1823, image courtesy of The John Carter Brown Library, Brown University.

In print, Martin expounded on the problem of soil depletion with his peers residing in Antigua, Barbados, Saint Christopher, and Jamaica. While rebuilding Green Castle, he learned when “soils are exhausted of their fertility, by long and injudicious culture, they may be restored by any kind of dung well rotted.”⁶⁴⁴ Situating sheep folds on fallow fields could improve soils, however, he added, “this can be practised only where there are extensive pastures,” an unlikely prospect on small island colonies such as Antigua. Systematically collecting and mixing the waste of humans and animals solved a pressing ecological problem originating from the exhaustive nature of monocropping.

⁶⁴⁴ Martin, *An Essay Upon Plantership*, 15.

In addition to mixing the combined excreta of enslaved people and livestock, Martin advocated the “*art of caving*”, or mining marl—or lime-rich mud, which planters added to manure—from hillsides.⁶⁴⁵ Enslaved people mining for marl transformed the landscape of the islands by excavating vertical layers of earth to restore plantation fields. “Ten mules or horses” driven by ten enslaved men equipped with mattocks to extract the marl, Martin calculated, could produce “more dung, than sixty able negroes can do in the present methods.”⁶⁴⁶

Slaves dug out marl pits from the downward slope of hillocks on the island until they became “*caved*.” After removing the marl, enslaved men piled the substance on cattle carts “from whence it may be carted into cattle-pens” to be combined with animal manure, and, presumably later, humanure. Martin estimated from his calculations that a team of slaves “with the assistance of cattle-carts” could provide enough marl for seventy or eighty acres of land. Caving, he judged, would be an “improvement highly worth every planter’s consideration, when negroes, and feeding them, are so expensive.” In his observations on marl, Martin displayed the range of his reading by citing the scholarship of the Dutch botanist and chemist Herman Boerhaave as an influence on his improving techniques.⁶⁴⁷ Unlike their “improving” peers in the West Indies, slaveholders in the Chesapeake did not experiment with using slaves to mine for marl until the nineteenth century.⁶⁴⁸

⁶⁴⁵ Martin, *An Essay Upon Plantership*, 16.

⁶⁴⁶ Martin, *An Essay Upon Plantership*, 17.

⁶⁴⁷ Martin, *An Essay Upon Plantership*, 18. On the connections of chemistry and agriculture in the Enlightenment, which planters like Martin drew upon, see: Peter M. Jones, “Making Chemistry the ‘Science’ of Agriculture, c. 1760–1840.” *History of Science* 54, no. 2 (June 2016): 169–94.

⁶⁴⁸ Benjamin R. Cohen, *Notes from the Ground: Science, Soil, and Society in the American Countryside* (New Haven: Yale University Press, 2014), 158; Steven Stoll, *Larding the Lean Earth: Soil and Society in Nineteenth-Century America* (New York: Hill and Wang, 2003), 156–170; Terry G. Sharrer, *A Kind of Fate: Agricultural Change in Virginia, 1861–1920* (West Lafayette: Purdue University Press, 2002), 37;

Martin recommended planters direct the enslaved to spread dung across fields using cattle carts or wheelbarrows, and, in keeping with his meliorist identity, judged planters who ordered slaves to toil with “dung by baskets, and by spreading it with dung-forks” as backwards and unenlightened by the principles of English husbandry.⁶⁴⁹

Innovating schemes for maximizing dung, likely mixtures of human and animal excreta, marl, and cane trash, continued to appear in West Indian plantation manuals published after Martin’s essay. William Belgrove, a planter who read Henry Drax’s instructions and likely read Martin’s essay, advised planters in his 1755 manual to “know to a Certainty the Quantity of Dung you'll require” for a plantation.⁶⁵⁰ Belgrove stressed that planters recognize dung as “the Article upon which the success of a Crop almost intirely depends.”⁶⁵¹ Enslaved people, he advised, should collect manure from cattle pens, mule pens, and horse stables, and mix piles of animal excreta with the soil of the fields they turned for the “Improvement of the Dung.” Belgrove included examples of calculations in his book for computing precise quantities of dung using the number of animals in the pens, the square footage of each pen, and the acreage to be planted. He further recommended planters site “Dung-Heaps most convenient for the Carriage,” and, as other meliorist planters wrote in manuals, should not overtax the bodily labor of their slaves. “The want of a sufficient Stock of Cattle and Horses, to make the Dung within due Time,” he cautioned, “is attended with many Inconveniences, and a manifest Loss. And I not only recommend a proper Quantity of those, but a sufficient Strength of Negroes; whom I would employ on a Work, which though of much Consequence, has

Avery Craven, *Soil Exhaustion as a Factor in the Agricultural History of Virginia and Maryland, 1606-1860* (Columbia: University of South Carolina Press, 1925), 136.

⁶⁴⁹ Martin, *An Essay Upon Plantership*, 24-25.

⁶⁵⁰ William Belgrove, *A Treatise Upon Husbandry or Planting*, (Boston: Printed by D. Fowle, 1755), 2-4.

⁶⁵¹ Belgrove, *A Treatise Upon Husbandry or Planting*, 5-7.

been very little thought of.”⁶⁵² Edwin Lascelles, a Barbadian planter, also dedicated attention to the “improvement of dung” in his manual, cautioning planters to be “accurate in your calculation” of dung produced and applied.⁶⁵³ Like Martin and others, Lascelles imagined himself to be an ameliorating improver, and cautioned his slaveholding peers that slaves should not carry more than seventy pounds of dung during a day’s work, which “is surely as great a load as any negroe should be made to carry.”⁶⁵⁴ As Roberts has shown, manure became an object of statistical precision that planters enumerated and encouraged others to study in-depth, and a source of tremendous, backbreaking work for the enslaved.⁶⁵⁵

While Foy’s thesis may not be applicable to small slaveholders in Virginia, large-scale Chesapeake plantations certainly relied upon enslaved men and women to prepare and cover their fields with manure before the planting season. In the mid-eighteenth century, large-scale enslavers adopted dunging as part of a wider acceptance of “English husbandry” techniques, including plowing.⁶⁵⁶ Landon Carter’s diary, for instance, includes over a hundred entries on dunging. However, most of the entries record an anonymous “we” manuring the various quarters of his plantation, a rhetorical style that reflects, as one historian has argued, Carter’s tendency to perceive himself and his own mind at the

⁶⁵² Belgrove, *A Treatise Upon Husbandry or Planting*, 9-10.

⁶⁵³ Lascelles, et al, *Instructions for the Management of a Plantation in Barbadoes and for the Treatment of Negroes*, 8-10.

⁶⁵⁴ Lascelles, et al, *Instructions for the Management of a Plantation in Barbadoes and for the Treatment of Negroes*, 11.

⁶⁵⁵ Roberts, *Slavery and the Enlightenment in the British Atlantic, 1750-1807*, 57.

⁶⁵⁶ Lorena Walsh, "Slave Life, Slave Society, and Tobacco Production in the Tidewater Chesapeake, 1620-1820," in *Cultivation and Culture: Labor and the Shaping of Slave Life in the Americas*, edited by Ira Berlin and Philip D. Morgan (Charlottesville: University of Virginia Press, 1993), 170-202.

center of his planting operations and to imagine enslaved people to be the purely physical instruments of his will.⁶⁵⁷

Most entries on dunging in the diary contain phrases such as “We are still turning the dung,” “My turning of dung,” “The people have only buried the dung,” “We have heaped our dung,” “We have dunged all this field,” or “Yesterday they began to bury the dung.”⁶⁵⁸ Enslaved men and women, not Carter, performed the dirty work of turning and preparing dung in livestock pens before piling loads of manure on to cattle carts to be cast across the fields. Few entries mention enslaved people by name involved in this labor. In March, 1758, for instance, an enslaved man named Harry finished casting a load of dung made from sixty cattle, “very good and larger than common but not in proportion to his number of Cattle,” across the Fork quarter on his estate.⁶⁵⁹ Other accounts record how Manuel “began this day to carry manure to” plant patches, or toiled at “getting the dung” via ox cart teams “to the Fork new ground.”⁶⁶⁰ After transporting the manure to the fields, Manuel toiled at “casting dung from this years’ cowyard below and when he has done that that he is to Cast the rest into the last year’s dunged ground between the two years’ Cow penns which I am in hopes will make all the ground that I tend exceeding rich.”⁶⁶¹ Enslaved women also labored at dunging. In the summer of 1778, for instance, “Grace and her three hands Yesterday finished Manuring, chopping the dung in, and sowing” rows of corn and turnips.⁶⁶²

⁶⁵⁷ Isaac, *Landon Carter’s Uneasy Kingdom*, 73-74.

⁶⁵⁸ Greene, *The Diary of Colonel Landon Carter of Sabine Hall, 1752-1778*, 149-150, 155-156, 274, 371, 414.

⁶⁵⁹ Greene, *The Diary of Colonel Landon Carter of Sabine Hall, 1752-1778*, 202-203.

⁶⁶⁰ Greene, *The Diary of Colonel Landon Carter of Sabine Hall, 1752-1778*, 347, 566.

⁶⁶¹ Greene, *The Diary of Colonel Landon Carter of Sabine Hall, 1752-1778*, 415.

⁶⁶² Greene, *The Diary of Colonel Landon Carter of Sabine Hall, 1752-1778*, 1137.

Carter's interest in dung extended into the realm of natural philosophy. Carter measured and sketched what one historian termed a "scientific manure manufactory" in his diary capable of producing a precise quantity of dung by calculating the square yardage and livestock necessary for a specific acreage of land.⁶⁶³ Carter's plans suggest similarities in the interest and implementation of "improved" dunging through quantification between Chesapeake and West Indies plantations.

Historians of medicine have shown how enslaved people created their own relations to animal dung within the context of the colonial African diaspora. One scholar has argued that enslaved people used dried cow, sheep, and horse dung as *materia medica* for treating painful colds.⁶⁶⁴ Enslaved people made teas, ointments, and poultices using animal waste. These non-agricultural uses of excrement reflect diasporic environmental knowledge.

Ruminations on dung and manure continued to occupy the minds of planters in the West Indies into the late eighteenth century. Joshua Peterkin, a planter on Saint Christopher, wrote *A Treatise on Planting From the Origin of the Semen to Ebullition*, 1790, which included a section on making dung from penned livestock. "It's of the utmost utility for Planters," he wrote, to build and maintain pens for horses, mules, and cattle for accumulating dung.⁶⁶⁵

In their manuals, planters abstracted enslaved people and animals as mere inputs for replenishing their land and securing future profits. In doing so, they produced a mode

⁶⁶³ Isaac, *Landon Carter's Uneasy Kingdom*, 83-84.

⁶⁶⁴ Herbert C. Covey, *African American Slave Medicine: Herbal and Non-herbal Treatments* (New York: Lexington Books, 2007), 139; [Collins], *Practical Rules for the Management and Medical Treatment of Negro Slaves in the Sugar Colonies*, 363.

⁶⁶⁵ Joshua Peterkin, *A Treatise on Planting, From the Origin of the Semen to Ebullition*, 2nd edition, (Basseterre: Printed by Edward Low, 1790), 35-36.

of interaction by locating waste, both animal and human excrement, as a powerful source of energy for reproducing plantation fortunes and commingling the enslaved with animals.

Slavery's Paperwork: Listing the Enslaved and Livestock

The labor slaveholders extracted from enslaved people and livestock shaped the kinds of paper records, such as inventories, wills, and indentures, that fill slavery's archive.⁶⁶⁶ In these forms of paperwork—a framework that book historians use to denote the communicative and bureaucratic power of paper documents that circulate through administrative and political economic networks—enslavers possessing plantations made legible to their peers, and indelible for historians, their material and intellectual attempts to render enslaved people and livestock interchangeable.⁶⁶⁷ Moreover, modes of interaction through labor are simultaneously clearly recognizable in paperwork yet also opaque due to the abstraction of documentary forms of writing.

Slaveholders in the Chesapeake and the Caribbean listed, enumerated, and evaluated by price the quantities of enslaved people and livestock animals claimed as their chattel property in probate inventories taken at the death of another slaveholder and in regular inventories kept on estates. In the probate inventory of Thomas Whitby of York County, Virginia, in 1712, for instance, his executors listed among his property “2 old horses,” a gray horse, an old gray mare and her “Yearling Coult,” five cows and five

⁶⁶⁶ Trevor Burnard, “Collecting and Accounting: Representing Slaves as Commodities in Jamaica, 1674-1784”, in *Collecting Across Cultures: Material Exchanges in the Early Modern Atlantic World*, edited by Daniela Bleichmar and Peter Mancall, (Philadelphia: University of Pennsylvania Press, 2011): 177-191.

⁶⁶⁷ Ben Kafka, “Paperwork: The State of the Discipline.” *Book History* 12 (2009): 340-53. On paperwork and the British Empire, see: Bhavani Raman, *Document Raj: Writing and Scribes in Early Colonial South India* (Chicago: University of Chicago Press, 2012.)

calves, “3 Cows big with Calf,” a cow and two heifers, two steers and two bulls, thirty one “old Sheep,” and four “Sick Cows,” alongside Jeffrey, an enslaved man, Kate and Pegg, two enslaved women, and Sarah and Moll, two enslaved girls.⁶⁶⁸ It is likely Jeffery, Kate, Pegg, Sarah, and Moll labored with these animals, either by plowing with the horses, feeding the cattle, or penning and manuring with the sheep.

Paperwork involving slavery varied by time, place, and custom. Several inventories did not list or record a price for each itemized subject of an estate. In the probate inventory of William Blaikley of York County, prepared after his death in 1736 by Catherine Blaikley, perhaps his wife or daughter, the document listed two enslaved women “about the house Nanny Lucy and hannah a Cow a horse some Corn” and various other goods without assigning either a monetary value.⁶⁶⁹ An inventory from Charleston taken in 1736, for instance, records among the enslaved “Peg & Child” on the first page, and a “Mare and Colt” on the subsequent page.⁶⁷⁰ Inventories like Blaikley’s further reinforced the intellectual equivalence slaveholders made between enslaved women and breeding livestock by listing pairs of mothers and their children as if they were equivalent to animals. Reading the inventory also reveals its ambiguous style. Was the “hannah” listed in Blaikley’s inventory an enslaved woman or cattle? The absence of clear spacing and punctuation in the document keeps this question frustratingly open.

Lists of enslaved people and livestock appeared in plantation inventories in the eighteenth century beyond the territorial limits of Britain’s Atlantic empire as settlers

⁶⁶⁸ An Inventory of Mr. Thomas Whitby’s, March 19, 1711/1712, York County Estate Inventories, John D. Rockefeller Jr. Library, The Colonial Williamsburg Foundation, Williamsburg, Virginia.

⁶⁶⁹ A True Inventory of the Eastate of William Blaikley, September 20, 1736, York County Estate Inventories, John D. Rockefeller Jr. Library, The Colonial Williamsburg Foundation, Williamsburg, Virginia.

⁶⁷⁰ John Hendrick’s Inventory, July 12, 1736. Estate Inventories and Bills of Sale, 1732-1872, South Carolina Department of Archives and History, Columbia, South Carolina.

planted estates within the colonies of other European empires. Enslaved men, women, and children, and livestock animals populate the pages of an account book for Weilburg Plantation, a sugar estate situated on the Demerara River in Dutch Guiana and held by the Scottish slaveholder James Douglas.⁶⁷¹ In his account book, Douglas recorded purchases of sheep, horses, turkeys, “Feather’d Stock”, an enslaved boy named Yorrick, and anonymized groups of people like the “13 Negroes” purchased by one of his managers in September, 1767. Scottish planters who settled in Demerara maintained trade networks with other planters in nearby British colonies, particularly Grenada, Barbados, and Jamaica, and Dutch Caribbean colonies such as Sint Eustatius.⁶⁷²

In a page titled “Profit & Loss” from 1769, Douglas’ listed valuable acquisitions made on behalf of Weilburg that year including “a Mare named Juno”, “a horse named Sampson”, “a child named Nancy”, two horses named Robin and Peter, two mules named Sangora and Leghorn, and a “negro Man named Moon.” Douglas valued each horse at £2, twice as much as Nancy, but not as valuable as Moon, who Douglas listed at £4 and 6 shillings.

Valuations of enslaved people and livestock are further evident in the wills of slaveholders preserved in colonial archives across the British Atlantic world. Evidence from wills demonstrates how slaves and animals became forms of intergenerational wealth between husbands and wives and their children. In the will of Colin Campbell, of New Hope plantation in Westmoreland parish, Jamaica, submitted before a magistrate in the colony in February, 1761, for instance, the planter bequeathed to his wife Mary

⁶⁷¹ Weilburg Plantation, Accounts Ledger, Rio Demerary, circa August 1767 - June 1770, Codex Eng. 52, The John Carter Brown Library. On Douglas see: Douglas Hamilton, *Scotland, the Caribbean and the Atlantic World, 1750-1820* (Oxford: Oxford University Press, 2010), 36, 70.

⁶⁷² Hamilton, *Scotland, the Caribbean and the Atlantic World, 1750-1820*, 71-72, 92, 98.

Campbell a portion of the property he accrued in life as a slaveholder on the island. Campbell imparted to his wife on his death “twelve Negroes such as she shall chuse” and “two chaise horses, riding horses, saddle and furniture with two riding mules such as she shall chuse.”⁶⁷³ Campbell also stipulated in his will how his wealth would be distributed among his beneficiaries. He apportioned to his godson Charles Graves, for instance, “£100 to buy him two Negro girls.” Campbell added very few detail in his will on the individual enslaved people he held, barring the exception of his “waiting man Cako,” who he desired would “be well used and kept to bring in runaways or such easy offices as my executors shall judge proper and that he shall be allowed a third of white man’s allowances as by the law of the island directed.” In the will of Thomas Jarvis, a Chief Justice in Antigua whose family held the sugar estate Popeshead, St. John parish, and sworn before a court magistrate in 1786, the slaveholder bequeathed to his widow Rachel, his cattle, horses, and eight enslaved people. Jarvis stipulated in his will that of the enslaved women given to his wife, Dinah, Fanny, and Jenny, that the “issue” of the three women would become the property of his daughter, Jane.⁶⁷⁴

Plantation inventories and wills, much like the paperwork of the slave trade in Atlantic Africa, frustrate attempts and desires to gain deeper insight into the interior lives of enslaved men and women as individuals with unique lives, minds, and understandings of the natural world. Slavery’s paperwork, as one scholar of the slave trade and the middle passage reminds us, produced “representations meant to make a stark political

⁶⁷³ Will of Colin Campbell, New Hope, 1761, Will Books, Registrar General’s Department, Twickenham Park, St. Catherine parish, Jamaica.

⁶⁷⁴ Oliver, *The History of the Island of Antigua*, 96. On Jarvis’ family and plantation, and their connection to the provisioning trade in livestock to Long Island, New York, see: Thomas Jarvis Jr. letter to William Whitehead, August 1791, in Jarvis Family Papers, Box 2, William L. Clements Library, The University of Michigan.

contest over the commodification of a human life appear as a natural and foregone conclusion.”⁶⁷⁵

Enslaved men and women’s labor with animals is apparent in such documents through the archive’s intentional abstraction of real, human subjects transformed into abstract, frequently anonymous figures. Modes of interaction involving work, care, and reproductive labor can be inferred from such documents. Each micro-level mode sustained a broader eco-cultural network that further supported plantation slavery, the heart of what economic historians rightly term Britain’s “plantation empire” in the eighteenth century.

In the “Valuation of Mount Tirzah Estate” held by Joseph Gardner in Westmoreland parish, Jamaica, taken by appraisers in 1785, enslaved men and women who toiled with animals are listed, including “Nick, Head Mule Man,” Cuba, who managed Gardner’s “Fowl House,” and Peggie, a “Doctress,” who likely cared for both ill enslaved people and sick animals on the plantation.⁶⁷⁶ Among the enslaved men and women listed in a probate inventory of the planter, James McIntosh, of Saint Catherine parish, Jamaica, from 1806, are “Lavina (a blind child),” “Willie / Runaway,” and “Charles Brown (cattle man) £200.”⁶⁷⁷ In a “List of the Negroes on Drax Hall Plantation” in Barbados, taken in 1804, entries for “Quashey Spencer, Groom,” “Bob Horn with the Cattle,” “Tullimew in stables,” “Venus Horn, Stock keeper,” “Margery, Raises Calves,” “Providence, at the fowl house,” and dozens of other men, women, and children, indicate

⁶⁷⁵ Stephanie E. Smallwood, “The Politics of the Archive and History’s Accountability to the Enslaved,” *History of the Present* 6, no. 2 (2016): 117-132.

⁶⁷⁶ “Notes and Queries.” *The Pennsylvania Magazine of History and Biography* 58, no. 4 (1934): 378-84. On Gardner’s plantation see: Gardner Family Papers, William L. Clements Library, The University of Michigan.

⁶⁷⁷ Inventory and Appraisal of the Goods Chattels and Rights and Credits of James McIntosh late of the Parish of Saint Catherine Esquire, 1806, 1B/11/3/106 Folios 52- 54, Inventories and Appraisals, Jamaica Archives and Records Department.

how planters conceived of the enslaved in relation to the animals they labored with and cared for as part of their everyday lives.⁶⁷⁸ Sixteen years later, an updated inventory added Quaco and Miah Kitty, both designated as “Cattle Keeper.” Yet, it is worthwhile to return to the refusal of the archive, which forecloses the possibility to know how women like Cuba, Peggie, Venus Horn, Margery, and Miah Kitty understood the nonhuman world around them.

Conclusion

Enslavers struggled to gradually build human-animal networks of plantation labor between enslaved people of African descent and livestock in the island colonies of the Caribbean and the Tidewater Chesapeake in the long eighteenth century. Slaves and animals cultivated crops of sugar, tobacco, and wheat, that formed the foundation of family fortunes in the British Atlantic world.

To accomplish this, slaveholders disciplined the muscular power of both the enslaved and draft animals as they toiled to clear fields, carry plants at harvest, power mills, and transport crops. Enslavers used diets made up primarily of corn, sorghum, and other grains to simultaneously reduce their costs, and most importantly created a caloric gap between Atlantic Africans and whites in both regions that undermined the strength and will of the enslaved. Over time, food became a powerful racialized tool for restraining the literal strength of enslaved people.

After extracting their labors, slaveholders continued to extract energy from the enslaved and animals from their bodily waste, which they implemented as fertilizer.

⁶⁷⁸ Drax Hall Plantation Records, Call Number z/9/11/4/-z/9/11/27, Barbados Department of Archives, Cave Hill.

Material techniques for transforming slaves and livestock into “nerves” and “sinews” produced a political ecology of slavery, in which slaveholders in the eighteenth century defended enslavement as humane while laying the foundations for a racialized hierarchy in the empire through which fully-human whites subjugated animal-like enslaved people and nonhuman animals. The micro-physics of power under slavery—meaning the control of bodily movements, bodily strength, and the body’s waste—tightly interlinked the enslaved and their nonhuman animal counterparts.⁶⁷⁹ Slaveholders plundered human and nonhuman bodies at each metabolic phase of a plantation’s operation.

Traces of this material plunder are evident in plantation manuals, diaries, travel accounts, prints, inventories, and wills. Enslaved people, such as Harry or Miah Kitty, appear in these records as pliant subjects laboring productively alongside animals, or merely as names fixed to monetary values listed between rows of livestock.

However, human-animal networks that enslavers labored to produce were not immutable or impenetrable systems. Like all actor-networks, plantation systems of labor were leaky, fragile, and could be exploited. While part one of this dissertation has examined how eco-cultural networks produced by the slave trade and plantation slavery involved the formation of more-than-human relations across long distances and divergent sites, part two turns to the ways in which these arrangements were manipulated, damaged, or broken. First, chapter four will turn to the subject of animal pests, the competitors of enslavers, who used plantation spaces for their own nourishment, habitat, and flourishing. Next, chapter five will make an important pivot to the diverse ways in

⁶⁷⁹ Michel Foucault, *Discipline and Punish: The Birth of the Prison* (New York: Pantheon Books, 1977), 135-169.

which enslaved people themselves struck out against the networks that enslavers hoped to maintain by refashioning their interactions with animals.

Chapter Four

Destructive Vermin

The last, though not the least, of the animal pests I shall mention, are the Rats; which, when suffered to increase, are very destructive vermin; for which reason a continual war is to be kept up against them, rewards to be given to the slaves in proportion to the number of these animals destroyed by each.

—Gordon Turnbull, *Letters to a Young Planter*, 1785

After all his trouble and care, the planter's hopes are often blasted by a little fly, which frequently destroys the plants when they first come up, and very often when they are grown to a moderate size; no certain remedy against them has as yet been discovered.

—William Tatham, *An Historical and Practical Essay on the Culture and Commerce of Tobacco*, 1800

Worms, or electricity, or various gadgets, or fats, or metals, or stem cells are actants, or what Darwin calls “small agencies”, that, when in the right confederation with other physical and physiological bodies, can make big things happen.

—Jane Bennett, *Vibrant Matter*, 2009

In his third letter to a young planter aspiring to cultivate a sugar fortune by becoming a slaveholder in the West Indies, Gordon Turnbull, a Scottish planter, warned the inexperienced novice of the numerous animal “diseases to which the cane is liable,” particularly insatiable cane ants.⁶⁸⁰ Ants, he recalled, overran “many fine plantations a few years ago” on Grenada and other islands throughout the 1780s, and threatened to ruin entire harvests of sugarcane plants that enslaved people and livestock labored to produce. Cane ants attacked plants in the destructive wake of another elusive insect, “the *Blast*,” a pest that planters knew consumed sugarcane stalks for nourishment.⁶⁸¹ Despite

⁶⁸⁰ Gordon Turnbull, *Letters to a Young Planter; or, Observations on the Management of a Sugar-Plantation: to which is added, the Planter's Kalendar, Written on the Island of Grenada by an Old Planter* (London: Printed by Stuart and Stevenson, 1785), 12-18.

⁶⁸¹ Matthew Mulcahy, and Stuart Schwartz, “Nature's Battalions: Insects as Agricultural Pests in the Early Modern Caribbean.” *William & Mary Quarterly* 75, no. 3 (2018): 433-464. On the epistemological problems associated with identifying the blast, Mulcahy and Schwartz caution historians that “Colonists employed the term *blast* to describe any sudden destruction of crops. The idea harkened back to medieval

implementing “mineral and vegetable poisons” on their plantations, Turnbull lamented that “many beautiful and fertile fields were laid waste” by wave after wave of insects and other small animals that enslavers struggled to understand, predict, or counter in the long eighteenth century. In his subsequent letters, Turnbull further warned the would-be initiate of a plantation of the ability of animals to appear, as if in collaboration, in simultaneous raids on plants, including dangerous alliances of yellow blast, “the *greasy fly*, and *yellow fly*,” “destructive worms in the cane, called the *borer*, and the *grub*,” and omnipresent, rapacious rats.⁶⁸²

Ruined plantation landscapes marked with blighted, drooping plants existed in stark opposition to the lofty visions planters held for improving the land and themselves through the institution of slavery in the eighteenth-century British Atlantic world.⁶⁸³ On plantations in the Chesapeake Bay, intractable vermin likewise dashed enslaver’s ambitions. Row upon row of failed, decayed, and worthless sugarcane plants, tobacco leaves and roots, and wheat stalks and ear spikes infested with insects, appeared during virtually every harvest season on plantations in both the Caribbean and the Tidewater Chesapeake. Plants marred with discoloration, or otherwise deformed, punctured, and sapped, limped toward the ground and appeared to signal the failure of slaveholders to improve landscapes or attain mastery over the nonhuman environment of the Americas.

beliefs about an ill wind or an unfavorable constellation of stars as the cause of crop misfortune, and usage of that term remained common during the early modern period as well,” 445.

⁶⁸² Turnbull, *Letters to a Young Planter*, 19-23.

⁶⁸³ On improvement ideology in the eighteenth-century British Empire, see: Richard Drayton *Nature's Government: Science, Imperial Britain, and the 'Improvement' of the World* (New Haven: Yale University Press, 2000); Frederik Albritton Jonsson, *Enlightenment's Frontier: The Scottish Highlands and the Origins of Environmentalism* (New Haven: Yale University Press, 2013); David Chan Smith. "Useful Knowledge, Improvement, and the Logic of Capital in Richard Ligon's *True and Exact History of Barbados*." *Journal of the History of Ideas* 78, no. 4 (2017): 549-570.

Persistent and inescapable waves of animals exploited the simplified environments of plantations—especially linear planting rows characteristic of monocrop agriculture—for their own purposes as sources of food, habitats, and breeding grounds.⁶⁸⁴ Monkeys, feral dogs, ground worms, weevils, and other animals devoured and trampled over the botanical wealth of slaveholders. Vermin exercised their agency in powerful ways that are evident in archival documents such as Turnbull’s letters, as well as other manuals, diaries, memoirs, poems, and legislative records.⁶⁸⁵ The material power of vermin animals points toward the fragility of slavery’s eco-cultural networks and rigid modes of interaction as creatures rapidly decimated plants that might have become profitable crops for overseas markets and instead used plantings for their own sustenance and expansion.

This chapter turns to explore animals that undermined the human-animal networks slaveholders labored to build in the British Atlantic world. A sense of defeat and alarm in the face of animal pests is apparent in records involving plantation vermin. One writer described how in the Leeward Islands an “Army of Worms, Flies, and other Insects” launched attacks on sugar estates in the wake of periodic drought.⁶⁸⁶ “Nature,” lamented another planter facing pests in Saint Christopher in 1790, “seems to have waged war with us.”⁶⁸⁷ Statements like these indicate a widespread sense of fatigue among slaveholders, not dissimilar to the phenomena of “hurricane fatigue” and climate-related

⁶⁸⁴ Richard H. Grove, *Green Imperialism: Colonial Expansion, Tropical Island Edens and the Origins of Environmentalism, 1600-1860* (Cambridge: Cambridge University Press, 1996), 95-152.

⁶⁸⁵ Max S. Edelson, *Plantation Enterprise in Colonial South Carolina* (Cambridge: Harvard University Press, 2006), 196-197; Christa Dierksheide, *Amelioration and Empire: Progress and Slavery in the Plantation Americas* (Charlottesville: University of Virginia Press, 2014); Justin Roberts, *Slavery and the Enlightenment in the British Atlantic, 1750-1807* (Cambridge: Cambridge University Press, 2013).

⁶⁸⁶ Robert Robertson, *A Detection of the State and Situation of the Present Sugar Planters of Barbados and the Leeward Islands* (London: Printed and sold by J. Wilford, 1732), 49.

⁶⁸⁷ Joshua Peterkin, *A Treatise on Planting, From the Origin of Semen to Ebullition* (Basseterre: Printed by Edward Luth R. Low, 1790), 41-42.

depression people experienced throughout the Atlantic world in the eighteenth century.⁶⁸⁸ Further, their militaristic rhetoric implies a deep sense of defeat felt after each successful pest infestation. Moreover, vermin troubled optimism for scientific improvements and regulating nature's oeconomy in the British Atlantic world and other European colonial empires in this period.⁶⁸⁹

Vermin competed for control over plantation space by infesting plants, sucking and chewing through crops, reproducing at incredible rates, and by launching mutual attacks on estates. Such powerful assemblages of small animals threatened to replace and displace human societies through the kinds of distributed agency theorized by new materialist scholars.⁶⁹⁰ As one prominent scholar notes, while some animals enable human culture and societies to thrive, such as worms and dung beetles that turn and replenish soil, others, including those discussed in this chapter, threaten to rival or altogether dislocate human political ecologies and eco-cultural networks.⁶⁹¹ Moreover, as Lucinda Cole argues, vermin upset early moderns precisely because of their real and powerful agency, and because that agential power was wielded against human interests in frightening ways.⁶⁹²

Pests further imperiled the lives of enslaved people in the Caribbean and the Chesapeake as they attacked provision gardens as well as the plantation fields where the

⁶⁸⁸ Sherry Johnson, *Climate and Catastrophe in Cuba and the Atlantic World in the Age of Revolution* (Chapel Hill: University of North Carolina Press, 2011), 17, 27, 53, 111.

⁶⁸⁹ Etienne Stockland, "Policing the Oeconomy of Nature: The Oiseau Martin as an Instrument of Oeconomic Management in the Eighteenth-Century French Maritime World," *History and Technology* 30, no. 3 (2014): 207-231; Pernille Røge, "A Natural Order of Empire: the Physiocratic Vision of Colonial France after the Seven Years' War," in *The Political Economy of Empire in the Early Modern World*, edited by Sophus Reinert and Pernille Røge (London: Palgrave Macmillan, 2013), 32-52.

⁶⁹⁰ Jane Bennett, *Vibrant Matter: A Political Ecology of Things*, (Durham: Duke University Press, 2010), 20-38.

⁶⁹¹ Bennett, *Vibrant Matter*, 96-97.

⁶⁹² Lucinda Cole, *Imperfect Creatures: Vermin, Literature, and the Sciences of Life, 1600-1740* (Ann Arbor: University of Michigan Press, 2016).

enslaved labored. Matthew Mulcahy and Stuart Schwartz demonstrate how food scarcity caused by insect pests “fell especially hard upon enslaved Africans” who endured severe hardships due to waves of vermin.⁶⁹³ In the eighteenth century, British observers cognizant of the near-starvation conditions of slaves and aware of blast attacks observed how patterns of food shortages and revolt resulted from combinations of vermin and weather.⁶⁹⁴ Vermin also posed new environmental hazards for enslaved people, as did planter’s efforts to exterminate pests through measures such as fumigating plantation fields with arsenic. However, as we shall see, enslaved people did find ways to use vermin for their own purposes as well.

Focusing on diverse vermin on different kinds of agricultural estates, including Caribbean sugar plantations and Chesapeake tobacco and wheat farms, I argue, reveals how diverse animals reshaped the anthropocentric human-animal networks and agricultural environments that enslavers intended to build and expand. Pests and vermin existed outside of the modes of interaction that enslavers designed, and indeed, the very categories of pest or vermin are products of ideal human-animal relations as understood by slaveholders. Vermin produced their own networks of support and expansion that existed in opposition to the plantation empire tht slaveholders attempted to build up by instrumentalizing the labors of enslaved people and livestock in the British Atlantic world.

⁶⁹³ Mulcahy, and Schwartz. "Nature's Battalions: Insects as Agricultural Pests in the Early Modern Caribbean," 436. In their article, Mulcahy and Schwartz further note that the 1733 slave insurrection on St. John led by Awkwamu-speakers was caused by food scarcity due to drought and blast, p.44.

⁶⁹⁴ Robert Thomson to Reverend William D. Shipley, July 25, 1795, Bodrhyddan Correspondence, Bodrhyddan Estate Papers, 58/115, National Library of Wales (NLW), Aberystwyth, as quoted in Mulcahy, and Schwartz, "Nature's Battalions: Insects as Agricultural Pests in the Early Modern Caribbean," 444.

Perdition of the Isles: The West Indies

Destructive insects frustrated slaveholders and ruined plantations in the British Caribbean reaching from Grenada to Jamaica in the seventeenth and eighteenth centuries. Pests drew the attention of colonial administrators concerned over the stability of their island regimes. In 1663, the governor of Barbados reported to London that a “strange and unusual caterpillars and worms” devastated crops of sugar and other agricultural commodities across the island.⁶⁹⁵ In 1682 “a prodigious Number” of locusts and crickets similarly swarmed Jamaica.⁶⁹⁶ Colonial governments worried over the security of the empire’s island settlements due to insect attacks, as is evidenced from a report on insect infestations to the Lords of Trade by Lieutenant Governor Edwin Stede of Barbados in 1687.⁶⁹⁷

On the ground, slaveholding planters fretted over the presence of threatening insects, such as yellow and black blast, and struggled to understand or predict the wider environmental causes of these pests. Walter Tullideph, a plantation overseer and doctor on Antigua, and later a slaveholder himself, reported in letters to absentee planters on the status of their sugar estates during his career as a manager in St. John parish, on the west coast of the island, between 1735 and 1758.⁶⁹⁸ In his colonial career, Tullideph learned to appreciate how “blast does much damadge” to fields of sugarcane during periods of dry

⁶⁹⁵ Nicholas Blake to Joseph Williamson, Mar. 23, 1670, no. 163, in Sainsbury, ed., *CSPCS*, vol. 7, 1669–1674 (London, 1889), 60, as quoted in Mulcahy, and Schwartz, “Nature’s Battalions: Insects as Agricultural Pests in the Early Modern Caribbean,” 443.

⁶⁹⁶ Hans Sloane, *A Voyage to the Islands Madera, Barbados, Nieves, St Christophers and Jamaica*, vol. 2 (London: Printed for the Author, 1725), 201, and quoted in Mulcahy, and Schwartz, “Nature’s Battalions: Insects as Agricultural Pests in the Early Modern Caribbean,” 443.

⁶⁹⁷ Lieutenant Governor Stede to Lords of Trade and Plantations, Sept. 19, 1687, no. 1441, in Fortescue, *CSPCS*, 12: 444, quoted in Mulcahy, and Schwartz, “Nature’s Battalions: Insects as Agricultural Pests in the Early Modern Caribbean,” 443.

⁶⁹⁸ Richard B. Sheridan, “The Rise of a Colonial Gentry: A Case Study of Antigua, 1730-1775.” *The Economic History Review* 13, no. 3 (1961): 342-357.

weather.⁶⁹⁹

In correspondence with family members in Scotland and his employers, mostly absentee planters residing in England and North America, Tullideph kept his correspondents up-to-date on changing environmental conditions throughout the Leeward Islands, especially drought, winds, and periodic outbreaks of insect pests that ruined crops of sugar, especially yellow blast.⁷⁰⁰ Reading Tullideph's letters reveals that enslavers grappled with important ontological and epistemological questions: what exactly was the blast, and how could its surging growth be checked? Disagreement over accurately describing and identifying the animal perturbed slaveholders, colonial administrators, and naturalists alike in the English Caribbean in the long eighteenth century.⁷⁰¹

Settlers on Antigua failed to predict, prevent, or eradicate yellow blast in the early decades of the eighteenth century, and at times the insects dramatically undermined the security of the colony. In 1734, William Mathew, Governor of the Leeward Islands, warned the Lords of Trade and Plantations, that in addition to destroying sugarcane, upsurges of yellow blast continued to gain "ground even upon the provisions" of root vegetables in the provision grounds tended by enslaved people. Blasted provision grounds, slaveholders feared, could lead to food shortages, and in turn incite slave

⁶⁹⁹ Walter Tullideph, Letter Book, GD 205, Box 53, National Records of Scotland, quoted in David Barry Gaspar, *Bondmen and Rebels: A Study of Master-Slave Relations in Antigua* (Durham: Duke University Press, 1993), 224.

⁷⁰⁰ Environmental reporting practices by overseers, it appears, was common in the British Caribbean in this period. David Stalker, an overseer on Nevis, for instance reported to an absentee planter of his sugarcane fields in December, 1735, that "I am Mortified by their coming up full of the Pestilential Vermin," as quoted in Mulcahy, and Schwartz, "Nature's Battalions: Insects as Agricultural Pests in the Early Modern Caribbean," 455.

⁷⁰¹ Insect pests existed on other islands within different imperial spheres during this period. On insect pests in Cuba, for instance, see: Reinaldo Funes Monzote, *From Rainforest to Cane Field in Cuba: An Environmental History since 1492* (Chapel Hill: University of North Carolina Press, 2008), 47. On Saint-Domingue see: James E. McClellan III, *Colonialism and Science: Saint Domingue and the Old Regime* (Chicago: University of Chicago Press, 1992), 67, 217-218.

revolts.⁷⁰² Mathew lamented the blast appeared to be “a publick calamity the Almighty Power” caused to punish the colony.⁷⁰³ Mathew’s comments illustrate how insects caused slaveholders to doubt the providential nature of Britain’s Caribbean colonies.⁷⁰⁴

Pernicious insects worsened the already fragile and fraught social relations between British settler colonists and enslaved diasporic Africans in the Caribbean. In 1736, after the suppression of a plot by enslaved people led by a Coromantee man named Court to revolt and overtake British control of the island, Mathew warned that Antigua had become “Exhausted by the vast Charges and loss brought on it by the Conspiracy, as well as loosing nine tenths of this years Cropp by Blast and Drowth.”⁷⁰⁵ The 1736 conspiracy, in which the rebels crowned their Gold Coast diaspora leader as King Court, intimidated and terrified planters on Antigua by exposing the limits of planter authority, power, and surveillance on the island.⁷⁰⁶ In July that year, Mathew ordered a general fast on the island “to deprecate God’s Anger from whence this Island has been Affected with the blast and Dry Weather.”⁷⁰⁷ Mathews pious gambit continued to call into question the godliness and righteousness of the colony, as well as its settlers’ ability to fully attain mastery over enslaved people and distant environments. Mathew, along with members of the colonial council and others on the island, feared the combined risk presented by slave revolts and irruptions of destructive insects beyond their control.

⁷⁰² Gaspar, *Bondmen and Rebels*, 224.

⁷⁰³ Gaspar, *Bondmen and Rebels*, 223.

⁷⁰⁴ On providential political theology in the British Atlantic see: Carla Gardina Pestana, *Protestant Empire: Religion and the Making of the British Atlantic World* (Philadelphia: University of Pennsylvania Press, 2009), 12, 90, 131-138.

⁷⁰⁵ Gaspar, *Bondmen and Rebels*, 53. Gaspar calculates that blast dramatically reduced the sugarcane crop in 1731, 1732, 1734, and 1737. On the critical role of Coromantee leaders in the 1736 conspiracy see: Walter C. Rucker, *Gold Coast Diasporas: Identity, Culture, and Power* (Bloomington: Indiana University Press, 2015), 108-143.

⁷⁰⁶ Gaspar, *Bondmen and Rebels*, 122, 227, 231.

⁷⁰⁷ Gaspar, *Bondmen and Rebels*, 318.

Plantation doctors attempted to reckon with the social and environmental hazards endemic to the slave colonies of the West Indies. In 1739, Tullideph wrote a letter to George Thomas, who held four sugar plantations on Antigua, to inform his employer of the health of the enslaved and livestock at his Five Islands estate, and nearby plantations in Saint John parish, including those of his neighbor, Dr. Walter Sydsferfe.⁷⁰⁸ After discussing the planting season with Sydsferfe and his overseer, Tullideph agreed to rent from him “14 negroes” at “£36 pr. Ann” as a precautionary measure against the damage caused by insects on the island that ruined sugarcane plants during the growing season and at harvest-time.⁷⁰⁹ “As the blast,” he explained to Thomas, “so often visits us believe you will have occasion for them and really I think they must be well worth that money.”⁷¹⁰

After “two deep seasons all over the Country & small showers almost every day besides, which has putt a new face on the Island,” Tullideph hoped Thomas’ plants would resist attacks by yellow blast.⁷¹¹ However, the doctor’s environmental predictions proved mistaken. The following year, Tullideph notified his employer that Sydsferfe’s cane fields “next to you were so much blasted that I cutt them down both for his own sake as well as your’s. You have both had a large share of it in your present young Canes but we have had such seasonable weather that I hope with Care to get the better of it.”⁷¹² Tullideph

⁷⁰⁸ At the time Tullideph served Thomas, Thomas resided in Philadelphia where he held the office of Lieutenant Governor of Pennsylvania.

⁷⁰⁹ “Walter Tullideph to George Thomas, August 3, 1739”, unpublished letter books of Walter Tullideph, of Antigua and Dundee, Scotland, 3 vols., 1734-1767, quoted in Richard B. Sheridan, “Letters from a Sugar Plantation in Antigua, 1739-1758.” *Agricultural History* 31, no. 3 (1957): 3-23, 4.

⁷¹⁰ “Tullideph to Thomas, August 3, 1739”, quoted in Sheridan, “Letters from a Sugar Plantation in Antigua.”

⁷¹¹ “Tullideph to Thomas, August 3, 1739”, quoted in Sheridan, “Letters from a Sugar Plantation in Antigua.”

⁷¹² “Tullideph to Thomas, April 22, 1740”, quoted in Sheridan, “Letters from a Sugar Plantation in Antigua.”

neglected to document the agricultural chemical treatments he intended to implement to prevent the blast, however it is possible he treated the fields with pitch or some other substance. Moreover, in his letters to his employer, the doctor omitted an explanation of the blast, which suggests both its ubiquity in the West Indies and the uncertainty surrounding the physical nature of the animal.

Tullideph considered himself a naturalist, and he and others who embraced the discipline of natural history faltered in establishing any consensus around the nature of yellow blast. On Barbados, the missionary-naturalist Reverend Griffith Hughes wrote in detail on “Yellow Blast,” which he described as an “incurable” plague that planters faced each season in his natural history of the island.⁷¹³ Hughes served as parish rector in Saint Lucy on the northern edge of the island in the 1740s.

Hughes concluded in his book that the “Ingenious in this Part of the World have not as yet agreed in their Opinions about the Cause of this destructive Blast.” He observed that yellow blast consisted of “Swarms of little Insects, at first invisible to the naked Eye” that devoured the fluid sucrose within sugarcane stalks and the blades of the plants. “Hence the Circulation being impeded” in the stalk by the blast, “the Growth of the Plant is checked; and soon after it withers, decays, or dies, in proportion to their Degree of Ravage.”⁷¹⁴

Beyond their pernicious feeding, attacks by yellow blast, named for the straw color of affected plants, exposed sugarcane plants to other insect predators that planters and overseers at times misconstrued as the blast itself. Hughes advised planters to observe their plants after rains, and look for uninfected plants in their fields that absorbed

⁷¹³ Griffith Hughes, *The Natural History of Barbados*, (London: Printed for the Author, 1750), 245-246.

⁷¹⁴ Hughes, *The Natural History of Barbados*, 245.

water and flourished while “the infected, being made more soft and tender by the Rain, becomes easier to be pierced by the devouring Worms.” The missionary warned to watch for “small protuberant Knobs” on cane blades, which contained maggots that later transformed into moths. Moth eggs on the blades further sapped the vitality of the plants, rendering them vulnerable to other kinds of insects and worms. As the animals grew, infected plants became susceptible to “Multitudes of Ants.” Studying yellow blast, therefore, involved identifying the animal in relation to broader environmental conditions and the interaction of multiple animals who exploited the plants as habitats and nourishment for their own flourishing.

Over time, those studying yellow blast gradually accumulated greater knowledge of the insect. Hughes and others recognized that drought left sugarcane fields especially vulnerable to yellow blast, that if a field became infested it continued to be afflicted and deteriorate over time, and that Leeward coasts of islands in the Caribbean were particularly vulnerable because the insect “Eggs were conveyed thither by the Wind.”⁷¹⁵ Given their miniscule bodies, and their ability to open lines of attack for other animals, yellow blast posed real scientific problems for naturalists.

Slaveholders further observed how ecological transformations wrought by clearing woodland forests for building plantations in the West Indies encouraged the expansion of insect predators such as yellow blast. Two planters on Barbados, William and Joseph Senhouse, saw yellow blast consume their plantation, The Grove, in St. Philip parish, and their sugar fortunes, between 1770 and 1777. William explained the problem of drought on the island stemmed from planters destructive “rage for Cultivation, [which] had cut down almost all the woods in every accessible place.” Deforestation, in turn,

⁷¹⁵ Hughes, *The Natural History of Barbados*, 246.

increased the frequent ravages of yellow blast throughout the West Indies, and proved to be “horribly destructive of the hopes and industry of the Planter.”⁷¹⁶

James Grainger, a plantation doctor, slaveholder, and aspiring poet on Saint Christopher, raised the problem of yellow blast in his poem *The Sugar-Cane*, published in 1764.⁷¹⁷ Grainger married Daniel Mathew Burt in 1759, and served as a physician on the sugar estates of her uncle, near Basseterre, where he observed the blast using “microscopic arts.”⁷¹⁸ Grainger described how blast, the “Fell plague of Heaven” and “perdition of the Isles,” emerged from eggs that upon hatching devoured the stalk of the sugarcane.

In his poem, the doctor framed the blast as an invading enemy and a “pestilence” attacking the “waving gold” of Saint Christopher’s plantations.⁷¹⁹ Grainger considered the insects to be rival settlers, “pernicious pioneers,” who competed directly against planters for possession of the colony. Like Hughes, Grainger noticed the multispecies nature of pests on Caribbean plantations, such as how the “bugs confederate, in destructive league” with the “ant’s republic,” or cane ants, to consume sugarcane.⁷²⁰

Yellow blast swarms continued to threaten the stability of West Indian plantations into the later decades of the eighteenth century. On Antigua, Samuel Martin, of Green Castle in Saint Mary parish, wrote in 1785 that “After many years drought the Ants

⁷¹⁶ James V. Brandow, editor, “The Diary of Joseph Senhouse.” *Journal of the Barbados Museum and Historical Society* 38 (1988): 179-195; Brandow, editor, “The Diary of Joseph Senhouse.” *Journal of the Barbados Museum and Historical Society* 37 (1985): 276-295.

⁷¹⁷ James Grainger, *The Sugar-Cane: A Poem in Ten Books*, (London: R. and J. Dodsley, 1764), 65-68; Gordon Goodwin, ‘Grainger, James (1721x4–1766)’, rev. Caroline Overy, *Oxford Dictionary of National Biography*, (Oxford: Oxford University Press, 2004).

⁷¹⁸ John Gilmore, *The Poetics of Empire: A Study of James Grainger’s The Sugar Cane*. (New Brunswick: Athlone Press, 2000), 13; Dan Hicks, “Material Improvements: the Archaeology of Estate Landscapes in the British Leeward Islands, 1713-1838” in *Estate Landscapes: Design, Improvement and Power in the Post-Medieval Landscape*, edited by Jonathan Finch and Kate Giles (Suffolk: Boydell Press, 2007), 205-208.

⁷¹⁹ Grainger, *The Sugar-Cane*, 65.

⁷²⁰ Grainger, *The Sugar-Cane*, 66.

multiplied with the Blast in this Island,” and another insect called “Ash or white Fly,” “to such a degree as to threaten dissolution” of the colony.⁷²¹ Exacerbating the problem, naturalists continued to disagree over what exactly yellow blast was or the nature of its relations to other animal pests into the 1790s. Martin, for instance, disagreed with his peers that a “closer connexion” existed between the blast and cane ants. For Martin, yellow blast had become an environmental and cultural problem stemming from rumor, unsupported “opinions, conjectures, and above all, the avarice of Negroe labour” in Britain’s Caribbean colonies spanning from Grenada to Antigua.⁷²² Martin’s abstraction of enslaved people as the key source of yellow blast infestations occludes understanding how the enslaved themselves understood the animals.

In her natural history of Antigua and Saint Christopher written in 1792, Maria Riddell identified yellow blast as an animal that metamorphosed from a caterpillar to a moth.⁷²³ Riddell described how the borer, a term occasionally used to describe yellow blast or an altogether different animal, “*eru saccharivora*,” perforated sugarcane in its caterpillar stage to drain the plant by “sucking out the juice and reducing the pith to a powder.”⁷²⁴ Riddell did not use the term “blast”, and her description collapsed yellow blast and the borer into a single subject. By contrast, in his history of the West Indies, Bryan Edwards, citing the Swedish naturalist-improver Carolus Linnaeus, disagreed and instead wrote that yellow blast was a species of aphid, an animal that did not metamorphosize as it developed. Edwards stressed that the blast and the borer were different animals entirely. Adding to the taxonomic confusion, he reported that in

⁷²¹ Samuel Martin, *An Essay on Plantership*, 7th edition, (Antigua: Printed by Samuel Clapham, 1785), 31.

⁷²² Martin, *Essay on Plantership*, 7th edition, 32.

⁷²³ Maria Riddell, *Voyage to the Madeira and Leeward and Caribbean Isles, with Sketches of the Natural History of these Islands*, (Salem: Printed by N. Coverly, 1802), 52.

⁷²⁴ Riddell, *Voyage to the Madeira and Leeward and Caribbean Isles*, 52.

Tobago, the blast was known as the “Jumper Fly.”⁷²⁵ For naturalists, the blast existed as a scientific problem worsened by competing observations among observers in the field.⁷²⁶

Insect colonies exploited the architectural and environmental vulnerabilities of plantations, in particular their linearity and the simplified ecology of monocrop agriculture. In letters to his business partners and absentee planters whose estates he managed, Charles Winstone, a slaveholder and attorney general for Dominica, wrote frequently on the social environmental problem of the cane borer. In a letter to an absentee planter in 1784, Winstone reported that “heavy Rains continually and the Borer” damaged fields of sugarcane across the island.⁷²⁷ Writing the following year, Winstone wrote to another planter that he found a quarter of his sugarcane plantation in Roseau entirely destroyed by swarms of borers.

Thomas Jarvis, an enslaver residing in Antigua, also wrote letters on the destruction wrought by borers in his plantations, Mount Joshua and Popeshead, and on estates he managed for absentee planters to correspondents across the Atlantic. In January, 1791, he wrote that five acres of his Mount Joshua estate would not produce a single hogshead of sugar that season due to “the Borer having made such destruction among the Canes.”⁷²⁸ The following month, Jarvis wrote to an absentee that a combination of drought and borer, which “rages more than ever,” diminished the plantation’s sugar profits.⁷²⁹ In the spring, Jarvis wrote to one Mrs. Roberts, whose estate

⁷²⁵ Bryan Edwards, *The History Civil and Commercial of the British Colonies in the West Indies*, vol. 3 (London: B. Crosby, 1793), 28.

⁷²⁶ By the early nineteenth century observers agreed that the yellow blast and cane borers were the same animal.

⁷²⁷ Letterbook entry, 20 September, 1784, Charles Winstone Letter Book, William L. Clements Library, The University of Michigan.

⁷²⁸ Thomas Jarvis to Daniel Roberts, 30 January, 1791, Jarvis Family Papers, Box 2, William L. Clements Library, The University of Michigan.

⁷²⁹ Thomas Jarvis to William Whitehead, 13 February, 1791; 10 March, 1791, Jarvis Family Papers, Box 2.

he rented throughout the year, to inform her that “Having suffered very considerably from the three last bad Crops, and seeing no prospect of better weather, nor any likelihood of getting rid of the Borer,” he begged to terminate his lease.⁷³⁰ All summer long, Jarvis continued to write to family in Trinidad and his sugar factors in Bristol to explain how the borer caused his dwindling shipments of sugar. Jarvis wrote repeatedly how borers in Antigua caused “terrible devastation among the Cane-fields,” that “the Borer continues to ravage the Cane fields,” and how colonies of “borer however is still troublesome, and every Estate in the Colony has it more or less.”⁷³¹

In 1792, borer colonies continued to interfere with Jarvis’ ambitions. In the spring, Jarvis found “the Borer, has been so cruelly destructive” in his cane fields “that I am afraid an Average crop is not to be expected.”⁷³² Jarvis counted himself among the “very indigent planters” ruined by infestations of cane borers.⁷³³ Facing mounting debts from renting estates and gangs of enslaved people, he lamented that “nothing I am afraid will relieve us, but an immediate act of Providence, by destroying the Borer, and granting us a succession of good Crops. The weather was fully sufficient to have made a large crop, but the Borer by early piercing the Cane-plant, contaminated it, and thereby checked its growth and weakened its juices.” Even with “uncommonly good” weather, the cane borer, “that destructive animal,” prevented Jarvis and his peers from attaining success as planters in the Caribbean.⁷³⁴

As waves of yellow blast and borers ruined sugar fortunes, slaveholders attempted

⁷³⁰ Thomas Jarvis to Mrs. Roberts, 16 May, 1791, Jarvis Family Papers, Box 2.

⁷³¹ Thomas Jarvis to Jacob Jarvis, 30 June, 1791; Jarvis to John Gordon, 24 July 1791, August 1791, Jarvis Family Papers, Box 2.

⁷³² Thomas Jarvis to Reverend Robert Whitehead, 19 February, 1792, Jarvis Family Papers, Box 2.

⁷³³ Thomas Jarvis to Ralph Payne Jarvis, 1792, Jarvis Family Papers, Box 2.

⁷³⁴ Thomas Jarvis to B. and H. Heywood, 4 May, 1792, Jarvis Family Papers, Box 2.

to leverage scientific and environmental uncertainty over insect pests throughout the colonies to their advantage in London to defend the political and economic necessity of plantation slavery for the empire. In their study of insect pests in the Caribbean, Mulcahy and Schwartz note how planters in Nevis and Dominica, including John Pinney, stressed the dual threat posed by the borer and abolitionism to the stability of slavery as an institution.⁷³⁵ Public and sustained opposition from abolitionist campaigners in England in the 1770s and 1780s led by Thomas Clarkson pressed the Privy Council to launch an investigation into the conditions of the slave trade and colonial slavery in 1788.⁷³⁶ The Lords of Trade and Plantations oversaw the inquiry, and collected information on the conditions of slavery from slaveholders in the West Indies. After assembling a board to study the trade, the Lords drafted a questionnaire addressed to colonial governors, councils, and colonial agents in the Caribbean, and circulated copies of their queries in print. The questionnaire included questions regarding the major environmental problems planters faced in cultivating valuable crops, and whether the political and economic institution of slavery was absolutely necessary given the environmental conditions of plantation agriculture on the islands.

Settlers and colonial governments used their answers to the inquiry as an opportunity to stress the ecological challenges they faced to justify the absolute necessity of enslaved labor and the future of the slave trade to the Caribbean. In his response to their questions, the colonial agent for Jamaica, for instance, stressed that “Droughts, Floods, and Hurricanes, the Blast and Rats” exposed sugar estates to unpredictable and

⁷³⁵ Mulcahy, and Schwartz, "Nature's Battalions: Insects as Agricultural Pests in the Early Modern Caribbean," 447.

⁷³⁶ Katherine Paugh, *The Politics of Reproduction: Race, Medicine, and Fertility in the Age of Abolition* (Oxford: Oxford University Press, 2017), 44-46.

often staggering damage that could not be restored without reliable and sufficient quantities of enslaved people for reconstruction efforts.⁷³⁷ Governor David Parry of Barbados reported to the board that plantations on the island appeared “very precarious and variable, however well stocked with Slaves and Cattle” due to “Calamities to which they are subject of Blasts, Vermin and Insects of different Kinds.” Parry continued that “Vermin, Blast, and Weather” devastated crops, and emphasized that “the Causes of these Calamities, has not yet been discovered.”

In their response to a question put forth by the committee on the expected annual income a planter on Antigua could assume on average, the Council and Assembly answered that “the Blast, and other Accidents, and the present dreadful Scourge of the Borer” eliminated any certainty planters could achieve for forecasting their annual profits. Likewise, on Montserrat, government representatives complained how the “Ravages of the Borer” and “Vermin, such as Rats, Grub, Blast ... proved in some Parts more destructive than the severest Hurricanes.” On Nevis, the legislature worried that plantation profits would continue to be “lessened from our being infested” by the cane borer. The councils and assemblies of Grenada and Saint Christopher similarly communicated the problems that infestations of insects posed to the colony, and proposed that if the destruction caused by cane borers continued, planters would attempt to substitute cotton to replace sugar on the island entirely. Several planters and the colonial agent for Dominica replied to the board that “Borer, Grub, and Blast”, rats, and “a thousand other Evils, infest” the island without pause. Governor James Seton of St.

⁷³⁷ *Reports of the Lords of the Committee of Council appointed for the Consideration of all Matters relating to Trade and Foreign Plantations Submitting to his Majesty's Consideration The Evidence and Information they have collected in consequence of his Majesty's Order in Council, dated the 11th of February 1788, Jamaica* (London: 1789), volume III, “Treatment of Slaves in the West Indies.”

Vincent responded that the island frequently became “infected with a Kind of Vermin, known by the Name of Borer, which is very injurious to the Sugar Cane.”

In each of their replies to the Lords of Trade, political administrators, many of whom made their fortunes as slaveholders, stakeholders of sugar estates, or as the relatives of slaveholders, warned the committee of the precarity of colonial sugar fortunes in the Caribbean that undergirded the empire, and unanimously defended the slave trade and slavery as both politically and environmentally necessary for maintaining Britain’s Atlantic colonies. The centrality of enslaved labor to mitigate the effects of destructive insects, these men repeatedly argued, absolutely could not be brought into question.

In addition to yellow blast and borers, other numerous, elusive, and intractable insects threatened to ruin sugar plantations in the West Indies. As planters in Barbados and Antigua suffered from yellow blast, enslavers in Jamaica struggled to identify and prevent black blast, an animal distinct from the yellow variety described by naturalists. The name black blast referred to the coloration of the animals themselves, which often appeared in thick, black swarms.

Simon Taylor, a plantation manager in Jamaica, witnessed how black blast sapped sugarcane plants during his tenure on Golden Grove plantation in St. Thomas parish. In a letter to his employer, Chaloner Arcedekne, in January, 1773, Taylor wrote how “Black blast, a thing never before known here about” weakened Arcedekne’s plants in his Plantain Garden River cane piece, one plot among his plantation fields.⁷³⁸ The attorney—another title for managers on the island—warned that black blast impeded the “Crop exceedingly and God knows if we shall any of us make Sugar next year.” Taylor

⁷³⁸ Betty Wood, T. R. Clayton, and W. A. Speck. “The Letters of Simon Taylor of Jamaica to Chaloner Arcedekne, 1765–1775.” *Royal Historical Society Camden Fifth Series* 19 (2002): 1-164, 114.

described how the canes became covered in a black, viscous layer of what appeared to be soot, and informed Arcedekne that his own estate, Holland Park, suffered in “a most terrible manner” as well, “which hurts me much, both in the goodness & yielding of the Sugars.”⁷³⁹

Later that summer, Taylor complained to Arcedekne that the managers of a nearby estate, Duckensfield Hall, failed to contain black blast in a section of their plantation, which led to the insects spreading to nearby estates including Amity Hall, Hordley, and Taylor’s own Holland Park. “It is particularly hard upon me to be so checkt,” complained Taylor, as the blast threatened to unsettle the political ecology he struggled to create by controlling enslaved people and animals in St. Thomas.⁷⁴⁰

In September 1773, Taylor reported that black blast “again infected my canes as well as” plants nearby at Duckensfield Hall.⁷⁴¹ Consistent infestations of black blast led Taylor to question if the attorney at Duckensfield “did it on purpose never to gett rid of that Virman tho’ they have suffered allready so much by it.”⁷⁴² Taylor’s fears suggests the power the animals held to cause anxiety and paranoia between planters. In a letter written to his brother, Taylor admitted black blast pushed him to “put me under such anxiety and uneasiness of mind that I almost began to despair & despond in such a manner that I could not set down to any business.”⁷⁴³ Outbreaks of black blast continued over the next two years and caused Taylor to doubt his future as a plantation manager, and further distrust his fellow slaveholders, who he suspected tried to sabotage his

⁷³⁹ Wood, “The Letters of Simon Taylor of Jamaica to Chaloner Arcedekne, 1765–1775”, 114.

⁷⁴⁰ Wood, “The Letters of Simon Taylor of Jamaica to Chaloner Arcedekne, 1765–1775”, 121.

⁷⁴¹ Wood, “The Letters of Simon Taylor of Jamaica to Chaloner Arcedekne, 1765–1775”, 125.

⁷⁴² Wood, “The Letters of Simon Taylor of Jamaica to Chaloner Arcedekne, 1765–1775”, 125.

⁷⁴³ Christer Petley, *White Fury: A Jamaican Slaveholder and the Age of Revolution* (Oxford University Press, 2018), 77.

fortunes by neglecting to prevent the animal's attacks.

Black blast fed on sugarcane plants in ways similar to the yellow blast. William Beckford, a slaveholder in Jamaica who held four sugar estates in Savanna-la-Mar, in Westmoreland parish, described the black blast as "an accumulation of insects; and if they be in any quantities ... they will not only check, and in a great measure suppress vegetation, but very severely affect the quantity and quality of the expected produce" of sugar.⁷⁴⁴ On Barbados, Joseph Senhouse wrote in his diary that the animals appeared occasionally on his plantation, and became especially troubling when they combined with another insect pest, cane borers.⁷⁴⁵ In both colonial contexts, black blast undermined planter's ambitions to profit from improving nature in the West Indies.

Black blast exposed enslaved Africans in the West Indies to environmental hazards beyond the risks endemic to plantation labor. In his account of Jamaica, Beckford remarked upon seeing sugarcane fields "so generally covered with [black blast], that they have (and in the course of a few days) become almost absolutely black, and in which case, the poor negroes are, for a time, blinded by the numbers which fly from every plant."⁷⁴⁶ On Barbados, Senhouse described black blast as "easily mistaken for a Fog or Mist," a description that attests to how clouds of black insects could envelop an enslaved person's face and eyes and cause temporary loss of vision.⁷⁴⁷ Though planters expressed mild concern for enslaved people who faced disfigurement or danger from swarms of the blast in print, slaveholders continued to expose the enslaved to increasingly risky

⁷⁴⁴ William Beckford, *A Descriptive Account of the Island of Jamaica*, Vol. 1. (London: T. and J. Egerton, 1790), 53-54.

⁷⁴⁵ Joseph Senhouse, "Diary," *Journal of the Barbados Museum and Historical Society*, 38, no. 2, 1988, 179-195, 183.

⁷⁴⁶ Beckford, *A Descriptive Account*, 54.

⁷⁴⁷ Joseph Senhouse, "Diary," *Journal of the Barbados Museum and Historical Society*, 37, no. 3, 1985, 276-296. Entry for November 26, 1777.

environments and uncertain material hazards to counter black blast.

To eradicate yellow and black blast, planters turned to new agricultural techniques and destructive chemical treatments. Beckford instructed his fellow Jamaican planters aiming to destroy black blast “to throw up the cultivation of the land thus affected, for some time; and before it shall be again planted, to have it carefully and repeatedly ploughed.”⁷⁴⁸ Leaving acres of fields fallow for seasons delayed planters from reaping sugar fortunes. Moreover, Beckford admitted that “There are some particular pieces, nay patches only of those particular pieces, that will, for years together, be full of the blast” and could never be recovered. Other planters, such as Samuel Martin on Antigua, suggested that regularly and vigorously turning dung in livestock pens and horse stables could prevent infestations of either yellow or black blast, and other pests such as grub worms. Martin further suggested that regularly burning cane trash prevented future blast waves, and likewise might eradicate ants and crickets. Burning trash, concluded Martin, “must be [a planter’s] constant practice, not only for the sake of contributing to warm and divide the soil, but as the only effectual means of destroying pernicious insects.”⁷⁴⁹

To counteract yellow blast on Barbados, Hughes advised planters bind infected canes and expose the plants to the smoke produced by burning sulfur to destroy the insects.⁷⁵⁰ On Saint Christopher, Grainger similarly advised planters expose blighted plants to “pitch, and sulphur’s suffocating steam.” Grainger noted that planters “Command their slaves each tainted blade to pick With care, and burn them in vindictive flames,” a technique that exposed the enslaved to dirty work and dangerous chemical hazards. Grainger added this vapor often passed in useless “curling volumes” over cane

⁷⁴⁸ Beckford, *A Descriptive Account*, 54.

⁷⁴⁹ Samuel Martin, *Essay on Plantership*, 4th edition, (Antigua: Printed by Samuel Clapham, 1765), 21.

⁷⁵⁰ Hughes, *The Natural History of Barbados*, 247.

fields and failed to kill the blast.⁷⁵¹ Clouds of sulphuric smoke from burning plants made breathing difficult for enslaved men and women. Gangs of enslaved adults and children choked and coughed in the fields from burning sulphur, their breath became short and difficult, and their throats became sore from inhaling the fumes. Their eyes reddened from the chemical smoke, and sulfuric acid mists caused skin to become irritated from working the plants. Yet overseers and improving planters failed to caution each other in the manuals they published and circulated.

In the seventh edition of his *Essay on Plantership*, Samuel Martin suggested that a mixture of arsenic and sugar might eradicate and prevent yellow blast and sugarcane ants from consuming cane fields. He acknowledged, though, that “I try’d that remedy upon two or three acres and it effectually destroyed the Ants for a short time; but soon after a neighboring Colony supplied their place.”⁷⁵² Martin and Grainger’s reflections on the blast underscore the ability of insects to intimidate and discourage Caribbean slaveholders. Swarms of blast and colonies of sugar ants, in effect, rivalled human settlements in their ability to conquer space on the islands. In her natural history, Riddell framed the cane borer as an especially vexing “pest to the colonies” that proved over time “impossible to extirpate” through either experimental pesticides or other improvements.⁷⁵³ “Repeated experiments” designed to destroy the borer failed in turn, including an experiment involving submerging the insect in a “bottle of spirits of wine” for thirty six hours.⁷⁵⁴

In addition to chemical solutions, several planters proposed punitive legal

⁷⁵¹ Grainger, *The Sugar-Cane*, 67.

⁷⁵² Martin’s “Experimental Observations on the Blast” appear on pages 31-33 in the seventh edition of *An Essay on Plantership*, published in 1785

⁷⁵³ Riddell, *Voyage to the Madeira and Leeward and Caribbean Isles*, 52.

⁷⁵⁴ Riddell, *Voyage to the Madeira and Leeward and Caribbean Isles*, 52.

measures to counter the blast. Martin argued in his essay that “it is the indispensable duty of every good man, to take such early care to cure the Blast” and prevent the animals from spreading further. Planters who would not attempt to do so, Martin argued, should be penalized with fines imposed by colonial assemblies.⁷⁵⁵

Sugar ants, also known as cane ants, often appeared simultaneously alongside both yellow and black blast after those insects weakened sugarcane plants. On Grenada, John Castles, a physician and slaveholder, observed that sugar ants, “so called from their ruinous effects on the sugar-cane,” arrived on the island by a provisioning ship from Martinique around 1770.⁷⁵⁶ According to one observer, the ants arrived “with the ships that bring the negroes from Africa.”⁷⁵⁷ The ants also appeared in Barbados at that time to such an extent “that it was deliberated, whether that island, formerly so flourishing, should not be deserted” at one point.⁷⁵⁸ An historian in the late nineteenth century referred to this period as a cataclysmic “plague of ants.”⁷⁵⁹

Sugar ants decimated plantations on Grenada from St. George to St. John parish, prompting the colonial legislature to offer a substantial public reward of £20,000 for devising a method of destroying the insects.

Sugar ants not only killed sugarcane, but also valuable lime, lemon, and orange groves on plantations throughout the island. Unlike the blast, which preyed on the stalk and blades of the plants, sugar ants chewed at the root. While studying sugar ants to accurately identify them, Castles tasted the insects and described their acidic flavor in his

⁷⁵⁵ Martin, *Essay on Plantership*, 7th edition, 3.

⁷⁵⁶ John Castles, “Observations on the Sugar Ants. In a Letter from John Castles, Esq. to Lieut. Gen. Melvill, FRS,” *Philosophical Transactions of the Royal Society of London* 80 (1790): 346-358. 346.

⁷⁵⁷ Thomas Coke, *A History of the West Indies: Containing the Natural, Civil and Ecclesiastical History of Each Island*, volume 2, (London: Printed for the Author, 1810), 313-315.

⁷⁵⁸ Coke, *A History of the West Indies*, 313.

⁷⁵⁹ Hesketh Bell, *Obeah: Witchcraft in the West Indies*, second edition (London: Sampson, Low, Marston, and Company, 1893), 77.

mouth, using his body as an instrument for natural history and agricultural improvement in the hopes of winning the reward. The sheer mass of sugar ants on Grenada awed Castles, who wrote in a letter on the subject to the Royal Society that their “numbers were incredible. I have seen the roads coloured by them for miles together; and so crowded were they in many places, that the print of the horses feet would appear for a moment or two, till filled up by the surrounding multitude.” Like the blast, sugar ants became an environmental hazard for enslaved people who toiled on plantations. Castles described how “Negroes with sores had difficulty to keep the ants from the edges of them.”

Enslavers attempted to destroy sugar ants with chemical poisons, fire, and other techniques. Using a solution of “arsenic and corrosive sublimate, mixed with animal substances, such as salt fish, herrings, crabs, and other shell-fish”, planters lured the ants to devour the poison mixture. Chemical solutions had the unintended effect of driving the ants to become “outrageous” and kill each other.⁷⁶⁰ The volume of poison necessary to significantly impede this insect, however, proved impractical to implement on the island. Controlled fires, another technique West Indian planters experimented with, also proved ineffective and dangerous.

Like the yellow and black blasts, sugar ants confounded naturalists equipped with supposedly useful natural historical knowledge. While on Grenada, Castles met with and discussed the problem of sugar ants with Henry Smeathman, an insect collector newly arrived from a natural history expedition to Sierra Leone. Smeathman intended to translate his expertise in identifying and understanding termites on the Banana Islands to solve the problem of sugar ants in the West Indies to win the £20,000 prize. He argued

⁷⁶⁰ Castles, “Observations on the Sugar Ants”, 348.

that yellow blast and the sugar ants were related but distinct environmental problems, and tried using “train oil” to eliminate both pests. However, the chemical tests “had not the least effect” on the ants, and Smeathman returned to England unrewarded.⁷⁶¹ In 1780, a massive hurricane strike, which destroyed multiple plantations on the island, proved the most effective means of eradicating the ants.⁷⁶²

In addition to insects, avian and mammal pests devoured supplies of food in provision grounds enslaved people tended on West Indian plantations and in storehouses of fodder grains. On Barbados, planters found that though blackbirds could be “serviceable in destroying Crickets, and other Vermin” on the island, the birds equally attacked stores of Guinea corn, the staple food slaveholders used to provision the enslaved.⁷⁶³ Mammals, especially monkeys, also attacked food crops, including digging up yams and potatoes raised in provision grounds.⁷⁶⁴ Slaveholders throughout the West Indies feared crises of food scarcity, as slave revolts could result, in part, from shortages in provisions caused by natural disasters and pests.⁷⁶⁵

Mammal pests, however, did the most damage to planters wealth in their raids on sugarcane fields. Naturalists, such as Hughes, reported rats were “very destructive” to plantations on Barbados, and learned in conversations with planters that sugar estates in St. Joseph and St. Andrew parish annually lost two to three thousand pounds worth of

⁷⁶¹ Deirdre Coleman, *Romantic Colonization and British Anti-Slavery*, (Cambridge: Cambridge University Press, 2005), 29. See also William Dickson and Joshua Steele, *Mitigation of Slavery, in two Parts*, (London: Longman, Hurst, Rees, Orme, and Brown, 1814), 416, 454.

⁷⁶² Matthew Mulcahy, *Hurricanes and Society in the British Greater Caribbean, 1624–1783* (Baltimore: Johns Hopkins University Press, 2010), 81.

⁷⁶³ Hughes, *The Natural History of Barbados*, 72.

⁷⁶⁴ Hughes, *The Natural History of Barbados*, 66.

⁷⁶⁵ Wim Klooster, *Revolutions in the Atlantic World: A Comparative History* (New York: New York University Press, 2009), 37; Andrew Jackson O’Shaughnessy, *An Empire Divided: the American Revolution and the British Caribbean*, (Philadelphia: University of Pennsylvania Press, 2000), 146.

valuable sugarcane due to predatory rats.⁷⁶⁶ On Saint Christopher, Grainger observed “ravens rats” decimate plantation fields.⁷⁶⁷ Rats exploited hilly environments on the island, and bred within hidden cavities of “high inaccessible Rocks.” Citing the Italian botanist Castore Durante, Grainger argued that “cane-rats” could be eaten safely, and that “field Negroes” found them an especially appealing meal.⁷⁶⁸ Grainger also recommended introducing mongooses to the West Indies to “effectuate the extirpation of this destructive vermin.”⁷⁶⁹ In the last decades of the eighteenth century, planters introduced mongooses to the Caribbean, however the animals did not become predators for rats.⁷⁷⁰ On Jamaica, Patrick Browne, a plantation doctor and naturalist, attested that mice became “extremely destructive to the sugar-canes,” particularly in fields overrun with weeds.⁷⁷¹

Monkeys and raccoons destroyed sugar estates at an alarming rate. In *The Sugar-Cane*, Grainger described how “silent parties” of the “monkey-nation” preyed upon plantation fields at night and cost planters on Saint Christopher thousands of pounds each year.⁷⁷² In her natural history, Maria Riddell noted that monkeys wrought “inconceivable mischief and damage” in sugarcane fields on the islands she toured around Antigua and Saint Christopher.⁷⁷³ In response to the complaints of planters and the damage done by mammal pests, the House of Assembly on Barbados passed legislation in 1745 and 1748 offering rewards to free and enslaved hunters for the heads of rats, raccoons, and

⁷⁶⁶ Hughes, *The Natural History of Barbados*, 68.

⁷⁶⁷ Grainger, *The Sugar-Cane*, 17.

⁷⁶⁸ Grainger, *The Sugar-Cane*, 56.

⁷⁶⁹ Grainger, *The Sugar-Cane*, 59.

⁷⁷⁰ Marco Meniketti, *Sugar Cane Capitalism and Environmental Transformation: An Archaeology of Colonial Nevis, West Indies* (Tuscaloosa: University of Alabama Press, 2015), 101.

⁷⁷¹ Patrick Browne, *The Civil and Natural History of Jamaica*, (London: Printed for the Author and sold by T. Osborne and J. Shipton, 1756), 484.

⁷⁷² Grainger, *The Sugar-Cane*, 55.

⁷⁷³ Riddell, *Voyage to the Madeira and Leeward and Caribbean Isles*, 24.

monkeys.⁷⁷⁴ Enslaved people throughout the West Indies hunted pests as a source of meat, catching and consuming the animals for food and to exchange for other goods.⁷⁷⁵ In her book, Riddell noted how enslaved people sold rats at Sunday markets for a shilling a piece.⁷⁷⁶ In several plantation manuals, planters advised their peers to encourage and reward enslaved “rat-catchers” to hunt rats and mice.⁷⁷⁷

Methods for dealing with mammal pests, especially the importation of animals as predators, often resulted in unpredictably dangerous outcomes that often failed and frequently risked the health of enslaved people. In St. Thomas parish, Jamaica, William Beckford learned how planters introduced a predator for destroying rats “[which] have been greatly diminished, and in some parts have been utterly exterminated by an ant, which is known by the name of Tom Raffles.”⁷⁷⁸ Planters named *formica omnivora*, the carnivorous ant, Tom Raffles, after the planter who introduced the species from Cuba to Jamaica in 1762. However, while successful in reducing the numbers of rats, the ant itself at times became another dangerous pest.⁷⁷⁹ Beckford cautioned that “the remedy was worse than the disease” and wrote that *formica omnivora* appeared “excessive [in] their number” in some parts of Jamaica, and “that where they have no rats to encounter, they will attack the poultry.”⁷⁸⁰

Carnivorous ants became an environmental risk that enslaved people feared as

⁷⁷⁴ Robert Hermann Schomburgk, *The History of Barbados*, (Longman: London, 1848), 178.

⁷⁷⁵ Grainger, *The Sugar-Cane*, 56. Edward Long, *The History of Jamaica. Or, General Survey of the Antient and Modern State of that Island*, volume 3, (London: Thomas Lowndes, in Fleet-Street, 1774), 901-902.

⁷⁷⁶ Riddell, *Voyage to the Madeira and Leeward and Caribbean Isles*, 40-41.

⁷⁷⁷ John Dovaston, *Agricultura Americana, or Improvements in West-India Husbandry*, [1774], Codex Eng. 60, John Carter Brown Library; Joshua Peterkin, *A Treatise on Planting, From the Origin of Semen to Ebullition* (Basseterre: Printed by Edward Luth R. Low, 1790).

⁷⁷⁸ Beckford, *A Descriptive Account*, 56-57.

⁷⁷⁹ Charles Riley, and Leland Howard, *Insect Life: Devoted to the Economy and Life-habits of Insects, Especially in Their Relations to Agriculture*, (Washington: United States Government Printing Office, 1892), 44.

⁷⁸⁰ Beckford, *A Descriptive Account*, 56-57.

well, as the ants had been observed “to blind, by their numbers and perseverance, not only the eyes of lambs and calves, but even those of negro children.”⁷⁸¹ Planters inability to contain the spread of *formica omnivora*, and their impotence at safeguarding enslaved children from dangerous animals, underscored the incompleteness of colonial improvements and the oftentimes thwarted ambitions of slaveholders by unruly animals.

Schemes by slaveholders or naturalists to introduce predators in the West Indies often failed. In his natural history of Jamaica, Patrick Browne wrote in an entry on “*Cauda lineari tereti*”, or “The Water-Rat, commonly called *Price’s Rat*,” that these animals were “natives of some foreign land, are now grown very common” in the colony.⁷⁸² Planters feared water rats as especially “pernicious animals, for they spare neither fowls nor provisions, and are much larger than [cane] rats.”⁷⁸³ Browne omitted the origins of the rats in his natural history, however others later offered a longer history of the rats in print. In the third volume of his *History of Jamaica*, the slaveholder and planter Edward Long wrote a description of “*Price’s Rat*.”⁷⁸⁴ Long explained that planters named “the *Charles-price rat*” after a wealthy planter, Sir Charles Price, who introduced the species to Jamaica.⁷⁸⁵ Whether Long referred to Charles Price, 1708–1772, or his son Charles Price, 1732–1788, remains unclear.⁷⁸⁶ However, the Price family possessed several sugar plantations in St. Catherine parish, including The Decoy and

⁷⁸¹ Beckford, *A Descriptive Account*, 56-57. Beckford’s *Account* is supported by Bryan Edward’s description of *formica omnivora* in his *The History, Civil and Commercial, of the British Colonies in the West Indies*, 1793.

⁷⁸² Browne, *The Civil and Natural History of Jamaica*, 484.

⁷⁸³ Browne, *The Civil and Natural History of Jamaica*, 484.

⁷⁸⁴ Kenneth Morgan, ‘Long, Edward (1734–1813)’, *Oxford Dictionary of National Biography* (Oxford University Press, 2004). Long was the owner of a large sugar plantation, Lucky Valley, in Clarendon parish, Jamaica.

⁷⁸⁵ Long, *The History of Jamaica*, volume 3, 899.

⁷⁸⁶ Stuart Handley, ‘Price, Sir Charles, first baronet (1708–1772)’, *Oxford Dictionary of National Biography* (Oxford University Press, 2004).

Rose Hall.⁷⁸⁷

Long claimed that the rat Price introduced had been “imported by a Danish ship belonging to Sancta Croix” anchored in Kingston at an unknown date.⁷⁸⁸ Regardless of when the animal arrived, Long wrote “it is certain the breed multiplied so fast... [and] are now grown exceedingly numerous and troublesome.”⁷⁸⁹ Price’s rat penetrated the fences and other barriers of plantation fowl-yards to prey on chickens and their eggs. The animal defied the planter’s surveillance because of its “amphibious” mobility. Rats utterly “perforated” the spatial boundaries planters built around plantations, including burrowing underground to pillage poultry yards. Price’s rat raided sugarcane fields at night and destroyed whole stalks of cane.

Joshua Peterkin, a planter on Saint Christopher, elaborated on Long’s description of the rat in his plantation manual published in 1790. Unlike Browne and Long, Peterkin elaborated that Price “introduced” the rat “to destroy the small cane rat, but they now over-run” Jamaica and “prove more productive of mischief than the *Mus Saccharivora*.”⁷⁹⁰ “The species of rat” Price transplanted to Jamaica “as a *philanthropy*” became “one of the greatest destroyers of the cane.”⁷⁹¹ Rats caused “havock among the canes” in the fields and “attack the tender plant so rapaciously” rendering the plants worthless.⁷⁹²

In the first decades of the nineteenth century, Prices’ rat continued to trouble and intimidate planters in Jamaica by exploiting the artificially linear rows of sugarcane for

⁷⁸⁷ Louis P. Nelson, *Architecture and Empire in Jamaica* (New Haven: Yale University Press, 2016), 136-142.

⁷⁸⁸ Long, *The History of Jamaica*, 899.

⁷⁸⁹ Long, *The History of Jamaica*, 899.

⁷⁹⁰ Joshua Peterkin, *A Treatise on Planting, From the Origin of Semen to Ebullition* (Basseterre: Printed by Edward Luth R. Low, 1790), 44.

⁷⁹¹ Peterkin, *A Treatise on Planting*, 44.

⁷⁹² Peterkin, *A Treatise on Planting*, 44.

their own flourishing. In the novel *Marly, Or, A Planter's Life*, the book's narrator describes how George Marly, the eponymous planter of the title, learns that the enslaved on his plantation are required to hunt "Sir Charles Price" rats.⁷⁹³ Moreover, Marly discovers he is expected to maintain a "rat-book" documenting how frequently the enslaved at his estate hunt, capture, and kill rats nearby. Unlike Long, the anonymous author of *Marly* claimed that the rat originated from the Miskito Coast. The author claimed Price dispatched agents to the Miskito Coast to locate a larger species of rat to prey on the cane rats, which "pestered the colonists."⁷⁹⁴ However, this experiment in introducing a predator proved a failure, as the rats became a "destructive and widely disseminated race" on the island.

Beyond encouraging, rewarding, or outright coercing enslaved people to hunt Price's rat or cane rats, planters in the West Indies continued to attempt transplantations of new predators to limit the rats plunder of their estates. Matthew Gregory Lewis, a novelist and playwright who travelled from England to Jamaica in 1812 to manage his family's plantations in Westmoreland, St. James, and Portland parishes, quickly learned about the problem of rats in the colony.

Lewis's family held over four hundred enslaved people of African descent on their sugar estates in Jamaica. After his arrival, Lewis discovered how planters hoped to use dogs to hunt rats.⁷⁹⁵ Rats violently preyed on the fields at Cornwall, Lewis' plantation near Montego Bay in St. James parish. Lewis gathered from his attorney, that the family paid rewards to the enslaved in the past several years for catching approximately three

⁷⁹³ *Marly, Or, A Planter's Life in Jamaica* (Glasgow: Published by Richard Griffin & Co., 1828), 51-53.

⁷⁹⁴ *Marly*, 53.

⁷⁹⁵ Nigel Leask, 'Lewis, Matthew Gregory (1775–1818)', *Oxford Dictionary of National Biography*, (Oxford University Press, 2004).

thousand rats, making them the “most expensive of the planter’s enemies.”⁷⁹⁶ Beyond paying out rewards, the effects of Price’s rat on the cane itself could ruin a whole harvest. Lewis’s managers informed him “the worst mischief is, that if ... one cane which has been gnawed by the rats is allowed admittance” to the mill, “that single damaged piece is sufficient to produce acidity enough to spoil the whole sugar.”⁷⁹⁷ Planters in Jamaica attempted to use cats to reduce the number of Price’s rats on the island, but the rats “strength and size at length” proved more formidable against their feline predators. Lewis found from speaking with other planters that terriers in Jamaica proved the “best mode of destroying rats” on the island.⁷⁹⁸ Dogs, he heard, born in the tropics “are provided by nature with a protecting film over their eyes, which effectually secures them” from being blinded by the sun and made the animals better suited to hunt rats.

Planters repeated failures to identify and eradicate “destructive Vermin” like yellow blast, cane borers, sugar ants, or cane rats continued into the nineteenth century.⁷⁹⁹ The effects of small animals severely limited and called into question the utility of agricultural improvements. Similar human-animal conflicts persisted in the North American colonies of the British Atlantic. Contrasting the power of animal pests in the Caribbean and the Chesapeake underscores how fragile the physical environments of plantations could become, and the vulnerability of enslavers who placed their confidence and identity in colonial improvement and settlement.

⁷⁹⁶ Matthew Gregory Lewis, *Journal of a West-India Proprietor: Kept During a Residence in the Island of Jamaica* (London: John Murray, 1834), 112.

⁷⁹⁷ Lewis, *Journal of a West-India Proprietor*, 112.

⁷⁹⁸ Lewis, *Journal of a West-India Proprietor*, 175.

⁷⁹⁹ Reports of the Lords of the Committee of Council appointed for the Consideration of all Matters relating to Trade and Foreign Plantations Submitting to his Majesty’s Consideration The Evidence and Information they have collected in consequence of his Majesty’s Order in Council, dated the 11th of February 1788, Jamaica (London: 1789). The phrase “destructive Vermin” was used by the colonial legislature of Grenada to describe several pests, including Guinea worms.

An Enemy In Such Swarms: The Tidewater Chesapeake

A prominent slaveholder in Virginia writing in 1705 summed up the three most damaging “Annoyances and Inconveniences” of the colony as “Thunder, Heat, and troublesom Vermin.”⁸⁰⁰ For settler-enslavers, vermin functioned as a capacious category of animals that either posed risks to human health or danger to the future profits of plantation agriculture, including mammals, reptiles, and insects. As in the West Indies, for instance, rats in Virginia and North Carolina threatened enslavers by “destroying Corn, Fruit and many other things” slaveholders used as fodder provisions and food for the enslaved.⁸⁰¹ In the Chesapeake, vermin troubled enslavers by destroying crops, infesting harvests, and undermining the profits of plantation slavery.

Examining one slaveholder’s encounters with vermin offers a window onto the problem of pests and rival eco-cultural networks in the Chesapeake. Landon Carter, an enslaver and planter in Richmond County, Virginia, aspired to be a gentleman, an experimental natural philosopher, an improving agriculturalist, and a disciplined patriarch to the people who he perceived and treated as his subjects, including his family, overseers, servants, and a population, at the time of his death, of over five hundred enslaved people of African descent.⁸⁰²

⁸⁰⁰ Robert Beverly, *The History and Present State of Virginia* (London: Printed for R. Parker at the Unicorn, 1705), 62.

⁸⁰¹ John Brickell, *The Natural History of North-Carolina*, (Dublin: Printed by James Carson, 1737), 130.

⁸⁰² Jack P. Greene, *The Diary of Colonel Landon Carter of Sabine Hall, 1752-1778*. Volumes 1 and 2. (Charlottesville: University Press of Virginia, 1965), 9; Jack P. Greene, *Landon Carter: An Inquiry Into the Personal Values and Social Imperatives of the Eighteenth-Century Virginia Gentry* (Charlottesville: University of Virginia Press, 1965); Rhys Isaac, *Landon Carter's Uneasy Kingdom: Revolution and Rebellion on a Virginia Plantation* (Oxford: Oxford University Press, 2004). On Carter’s pretensions to being a natural historian see: “Description of a plant on the summit of a hill by Landon Carter 1741 May”, in the Papers of the Carter and Wellford Family of Sabine Hall 1650-1918, Special Collections, University of Virginia Library. On Carter as an improver see: Lorena S. Walsh, *Motives of Honor, Pleasure, and*

The enslaved labored and resided in small quarters scattered around Carter's vast wheat and tobacco plantations, in which they raised crops of agricultural commodities, provisions, and, on occasion, experimental plantings, such as indigo. From his manorial estate, Sabine Hall, situated near the southern banks of the Rappahannock River on the Northern Neck peninsula, Carter surveyed his territory on horseback by riding out daily to surveil his overseers and the enslaved. While Carter conjoined the labor of the people he enslaved to livestock animals, especially cattle and oxen for plowing his fields and carting dung for his plantings, the proprietor of Sabine Hall recorded in his diary numerous, troublesome animals that unsettled his ambitiously crafted identity as an experimentalist and an improver ruling over people and the nonhuman environment in Virginia.

Carter filled his diary, kept between 1752 and 1778, with entries on animal pests, which in the Tidewater Chesapeake included feral or stray dogs, birds, moles, mice, and a host of insects that he struggled to identify, understand, or eradicate from his plantation fields. Some pests impacted his plantations more significantly than others. For instance, outbreaks of insect pests troubled Carter and destroyed seasonal crops of wheat, tobacco, or corn completely, while others, such as mice and rats appeared less frequently in his fields.⁸⁰³ Carter's experiments for exterminating pests to end the damage caused by these animals failed on numerous occasions. A number of animals proved particularly elusive to compare against established scientific taxonomies and the limited number of printed books available to Carter in his private library. His inability to address the problems

Profit: Plantation Management in the Colonial Chesapeake, 1607-1763. (Chapel Hill: University of North Carolina Press, 2012), 536-538. On Carter's agricultural thought see: James E. McWilliams, "Worshipping Weeds: The Parable of the Tares, the Rhetoric of Ecology, and the Origins of Agrarian Exceptionalism in Early America." *Environmental History* 16, no. 2 (2011): 290-311.

⁸⁰³ Greene, *The Diary of Colonel Landon Carter of Sabine Hall*, 259, 545.

caused by pests heightened his fears over the value of experimental husbandry and the usefulness of studying natural philosophy. Failures to counter pests led to doubt over the validity of improvement itself as an ideology or an attainable environmental reality. Uncertainty further brought into question Carter's vision of mastering himself, his family, and the hundreds of enslaved people, whom he often referred to condescendingly as "my people" in his diary, who labored across the plantation and quarters surrounding Sabine Hall. Using Carter's diary, and his sole published scientific article from 1769, this section tracks how multiple pests and vermin unsettled Carter, and presumably other elite landholding enslavers in colonial Virginia in the decades before the American Revolution.⁸⁰⁴

Dogs troubled Carter, in particular feral packs ranging across the countryside and the domesticated, roaming canines of his neighbors in Richmond County. As a member of the House of Burgesses, Carter advocated legislation for "restraining the Number of dogs kept by Negroes and Servants" in Northumberland, Westmoreland, Richmond, Lancaster, and King George counties in 1755.⁸⁰⁵ Carter worried over the possibility of enslaved people using dogs for their own purposes, perhaps for hunting game, and the menace of an unrestricted dog population in the colony.⁸⁰⁶

In his diary, he recorded the predation of his neighbor's stray dogs over his livestock as evidence of the dangers of prowling animals beyond human surveillance. In the winter of 1764, Carter wrote with frustration that "Colo. Tayloe's Fork quarter dogs

⁸⁰⁴ While Carter's education and the size of his plantations may make him an arguably exceptional figure, the pests he encountered would have affected his neighbors as well.

⁸⁰⁵ Greene, *The Diary of Colonel Landon Carter of Sabine Hall*, 72-73, 77. See also: Sarah Hand Meacham, "Pets, Status, and Slavery in the Late-Eighteenth-Century Chesapeake." *The Journal of Southern History* 77, no. 3 (2011): 521-54.

⁸⁰⁶ This bill ultimately failed to become law during Carter's political career.

made great havock amongst my sheep last night. 11 killed and 4 wounded of the home gang and 4 killed of the Northumberland sheep.”⁸⁰⁷ The following month he complained that “Yesterday two more of the Sheep that the dogs had bit dyed so that my loss by dogs have been 34 sheep. I have now but 88 sheep and 19 lambs only.”⁸⁰⁸

Carter continued to tally the losses caused by his neighbor John Tayloe’s dogs: “My stock of Sheep reduced to 85 by the death of 5 more since the dog Slaughter which were harassed by the dogs. As yet but 21 lambs. A young Ewe Yeanned yesterday in a puddle of water. The lamb perished.”⁸⁰⁹ Two years later in 1766, Carter reasoned from indirect evidence the pernicious effects of either feral or stray dogs around his plantations. While burying “dung at the fork,” he learned from either an overseer or one of his enslaved drivers how he lost “one Ewe and lamb gone there out of the old corn field, by dogs ‘tis supposed.”⁸¹⁰ While these entries refer to the prowling dogs of neighbors such as Tayloe or perhaps feral dogs drifting across the landscape, other jottings simply refer to the animals as an unforeseen and unidentifiable pest. In a brief entry from 1767, Carter bluntly recorded after an overseer neglected to regularly surveil his fields that “Now 12 lambs, we have had 15 and one the dogs killed as soon as Yeanned.”⁸¹¹

Below the earth’s surface, other pests tunnelled under the fields surrounding Sabine Hall to further pester the slaveholder. Moles troubled the agrarian foundation of Carter’s plantation by devastating crops of corn, a staple food Carter relied on to feed enslaved people and livestock animals. In a diary entry on a number of his wheat and

⁸⁰⁷ Greene, *The Diary of Colonel Landon Carter of Sabine Hall*, 254.

⁸⁰⁸ Greene, *The Diary of Colonel Landon Carter of Sabine Hall*, 259.

⁸⁰⁹ Greene, *The Diary of Colonel Landon Carter of Sabine Hall*, 261.

⁸¹⁰ Greene, *The Diary of Colonel Landon Carter of Sabine Hall*, 299.

⁸¹¹ Greene, *The Diary of Colonel Landon Carter of Sabine Hall*, 335.

corn fields from 1758, Carter wrote how the combined effects of drought and moles, who ate “most prodigiously,” created a “dismal prospect in every thing.”⁸¹² Later that month, Carter found his corn fields “much missing by means of the birds and mole who root every where like hogs.”⁸¹³ While damage caused by some pests, such as hares, did not significantly impact Carter’s grain fields, their paired attacks with moles could be destructive enough to warrant attention.⁸¹⁴ Fields planted with barley, oats, and other fodder crops across the plantation succumbed first to hares and then “a second enemy the mole underground that eats the root off a little below the Crown and this in Rowses so that some care must be taken to prevent his destruction as we have numbers of them in the Country.”⁸¹⁵ In 1771, Carter wrote with surprise how though he “never knew the Mole before to be rooting up my corn as it has been this week, even corn full a foot high and green.” “I do suppose,” the planter conjectured, “some want of other food has pushed them to do this.”⁸¹⁶ Animal predation in response to environmental changes, especially the linear arrangement of simplified plantation fields and monocropping, surprised planters and further imperiled notions of improvement.

Beyond damaging vulnerable fields of provision crops, moles dug under acres of plants raised for market around Carter’s plantations. In an entry from 1771, Carter recorded how he discovered why the fields at his Oliver branch quarter failed to produce a successful tobacco crop. “There have been moles,” he found, “running in every hill,

⁸¹² Greene, *The Diary of Colonel Landon Carter of Sabine Hall*, 224.

⁸¹³ Greene, *The Diary of Colonel Landon Carter of Sabine Hall*, 227.

⁸¹⁴ Carter’s diary records several instances in which hares ate through fields of burnet, a fodder plant for cattle, in 1763 and 1764. While Carter worried he could “not save seed from” the burnet patches, the hares don’t seem to have especially destabilized the number or health of his cattle. Greene, *The Diary of Colonel Landon Carter of Sabine Hall*, 243, 249.

⁸¹⁵ Greene, *The Diary of Colonel Landon Carter of Sabine Hall*, 256.

⁸¹⁶ Greene, *The Diary of Colonel Landon Carter of Sabine Hall*, 570.

occasioned I suppose by my late dunging it.”⁸¹⁷ While gangs of enslaved men, women, and children toiled at weeding and dunging the tobacco quarter, they ripped out grass by the roots in the fields and inadvertently weakened the soil in the hills, creating opportunities for moles to burrow underneath. Carter decided to adjust his calendar for dunging the land to prevent future incursions by moles. However, the pest provoked doubt in his mind over his ability to improve the land in Virginia. “Tend ever so much,” he confided in his diary, “some enemy or another will destroy me.”⁸¹⁸ For the next three years, moles continued to relentlessly dig under, chew, and eat through Carter’s corn fields and tobacco hills.⁸¹⁹

Winged vermin attacked Carter’s fields and forced him to reconsider the plantation ecology he imagined and strived to create around Sabine Hall. In 1758, Carter and several of the enslaved learned that “Corn requires in light land some care in planting” because dry soils often became vulnerable to crows that “pull all up as they have done at the fork for 100 hills together.”⁸²⁰ One naturalist in North Carolina described crows as “most hurtful and pernicious (especially to Corn) in all America.”⁸²¹ To secure corn plants from crows, Carter resolved to plant “early and deep and tread the earth that covers the grain well down.” However, his agricultural innovations proved ineffective. In a harvest season eight years later, Carter found his corn fields completely barren. “The birds,” he noted, “seem to pull the corn up as fast as it comes up. I had a whole row in my view yesterday.”⁸²² Later that month, Carter complained that he and

⁸¹⁷ Greene, *The Diary of Colonel Landon Carter of Sabine Hall*, 608.

⁸¹⁸ Greene, *The Diary of Colonel Landon Carter of Sabine Hall*, 608.

⁸¹⁹ Greene, *The Diary of Colonel Landon Carter of Sabine Hall*, 668, 704, 801.

⁸²⁰ Greene, *The Diary of Colonel Landon Carter of Sabine Hall*, 226.

⁸²¹ Brickell, *The Natural History of North-Carolina*, 181.

⁸²² Greene, *The Diary of Colonel Landon Carter of Sabine Hall*, 295.

gangs of enslaved people struggled in “replanting corn” and that “so great is the injury that the birds and vermine have done, it seems to be near as much trouble as the first planting.”⁸²³

In 1770, Carter shifted his strategies from agricultural techniques to counter predatory crows to offering rewards to his overseers and the enslaved for destroying the pests. An overseer at the Fork quarter of the plantation, Dolman, for instance, smashed “a Crow’s nest this morning with 4 young ones” for his employer. Carter encouraged the enslaved to attack crows by promising “half a pound of meat for every 6 Crows heads which they will catch on sunday next as they are now so easily to be taken in the nest. I wish I had an opportunity of writing to my Northumberland plantations to get this done. I am sure the hands there would amongst those pines catch a great many now they are so young.”⁸²⁴ While Carter did not record many successes made by slaves on his plantations in killing birds, it is likely that enslaved people used this opportunity to licitly supplement the malnourishing diet of corn, oats, and other fodder grains they endured on the plantation. It is also possible the enslaved did not attack vermin as a form of resistance to undermine their enslaver.

Dogs, moles, and birds pestered Carter and hindered his pretensions to being an improver in Virginia. Vermin challenged his agricultural expertise and tested his ability to control enslaved people. While these animals appear throughout his diary frequently, the presence of a multitude of diverse insect pests draws attention to the ways in which Carter struggled to adapt his readings in natural philosophy, natural history, medicine, and agriculture to his plantation fields. Ranging from a few individual insects to

⁸²³ Greene, *The Diary of Colonel Landon Carter of Sabine Hall*, 300.

⁸²⁴ Greene, *The Diary of Colonel Landon Carter of Sabine Hall*, 390.

devastating swarms, vermin insects unsettled the enslaver's ambitions to become an improver of the natural world, a patriarch over enslaved people, and the proprietor of a plantation.

Carter filled his diary with entries on insect pests that exploited his plantation fields as a source of food and habitats. In an entry from 1757, Carter noted that despite manuring, weeding, planting, and plowing done by teams of enslaved people and livestock, and an ample supply of rain, he expected his tobacco grounds would "not receive a great profit" as an "Abundance of Hornworm, Ground worm, Web worm, and bud worm" consumed the plants in the ground.⁸²⁵ The presence and variety of the insects frustrated Carter who aimed to settle the natural world in Virginia through improvements. However, for decades he found his tobacco crops infested with "ground worm, piss ants, grasshoppers, and even Crickets centreing themselves under the leaves."⁸²⁶

Diverse species of worms unsettled Carter's ambitious schemes of plantation improvements.⁸²⁷ While planting tobacco plants in 1757, Carter worried that changes in the temperature would bring about ground worms, as the worms thrived in cold weather during the spring planting season.⁸²⁸ The following year, the planter and the enslaved discovered in a field of two thousand tobacco plants at his Fork quarter the presence of "a young ground worm that has killed thousands of very small ones."⁸²⁹ Ground worms concerned the planter, who intended to sow another crop of tobacco that season. Later that year Carter painfully recorded that "all our expectations from plants are gone" due to

⁸²⁵ Greene, *The Diary of Colonel Landon Carter of Sabine Hall*, 162.

⁸²⁶ Greene, *The Diary of Colonel Landon Carter of Sabine Hall*, 426.

⁸²⁷ In a particularly terse and unusual entry he recorded simply: "Wit worm coming all over the old fields.", Greene, *The Diary of Colonel Landon Carter of Sabine Hall*, 712.

⁸²⁸ Greene, *The Diary of Colonel Landon Carter of Sabine Hall*, 160.

⁸²⁹ Greene, *The Diary of Colonel Landon Carter of Sabine Hall*, 231.

the “flye” and ground worms.⁸³⁰ Out of sixty thousand plants at the Fork quarter and two hundred thousand in another field, “I shall not get 40,” he lamented. Ground worm, and an inept overseer who ignored hogs rooting through the fields under his supervision, ruined Carter’s fortunes in 1758.

Pests also troubled the plantations around Sabine Hall by frustrating Carter’s agricultural experiments. Incredibly small insects, such as pissants, held back the enslaver’s attempts to expand his plantation ecology and his fortunes as a slaveholder. In 1757 he attempted a “tryal at making of Indigo” in one of his fields to supplement his staple crops of tobacco and wheat. However, insects blocked his ability to “steal into a knowledge” of raising indigo. Doubt over what kind of soil to plant in, confusion over methods for seeding, and trouble with uncertain weather, set back his attempts to cultivate indigo. Even the young sprouts he did manage to raise became “injured by piss Ants.”⁸³¹ Carter found that “flye, buggs, or worms certainly killed the plant” before it could grow to maturity.

Insect pests caused Carter to doubt his abilities as an empirical planter. Despite his belief that “common philosophy sh[ould] lead us to think this or that the [best] method and indeed something li[ke] experience may have taught us it is so,” Carter found many insects unpredictable and worried that pests were a natural phenomena that “over set all our reasoning.”⁸³²

In 1770, Carter, his overseers, and the enslaved men and women on his plantations, reckoned with infestations of grasshoppers and hornworms in the tobacco fields. The two pests upset planters around Richmond County by consuming “whole

⁸³⁰ Greene, *The Diary of Colonel Landon Carter of Sabine Hall*, 234-235.

⁸³¹ Greene, *The Diary of Colonel Landon Carter of Sabine Hall*, 181.

⁸³² Greene, *The Diary of Colonel Landon Carter of Sabine Hall*, 460.

plants and whole fields” for the first time in over a decade.⁸³³ An overseer reported that a field of one hundred and eighty thousand tobacco plants “has been kept down and still is so by the grass hoppers, an evil I know not how to prevent, although I have before had near a whole Crop destroyed by them.”⁸³⁴ Carter puzzled over why the insects ate the tobacco plants instead of nearby grass fields. In his diary, he forecasted that grasshoppers could “in a few years destroy the possibility of making Tobacco” altogether in the Chesapeake. “We must submit to all such destruction and do as well as we can,” he conceded, “but I believe it will be difficult under such a staple to make a tollerable subsistence.”⁸³⁵

Ground worms troubled Carter’s plantations beyond his tobacco fields, and proved to be especially disastrous for his planting season in 1770. In entries from the late spring, he wrote with frustration how worms interfered with experiments in planting new vegetable crops.⁸³⁶ Episodic appearances of the worms led Carter to adjust the work patterns of his enslaved laborers. The planter ordered the enslaved to repeatedly plough tobacco hills and cowpen grounds in order to “prevent the attacks of the ground worm.”⁸³⁷ Carter expected his overseers would carefully surveil the enslaved who performed the vital, and exhausting, labor of countering pests. Overseers on the plantations, such as Carter’s manager William Ball, were expected to supervise enslaved people as they wormed tobacco fields. Ball reported, for instance, that the enslaved

⁸³³ Greene, *The Diary of Colonel Landon Carter of Sabine Hall*, 435.

⁸³⁴ Greene, *The Diary of Colonel Landon Carter of Sabine Hall*, 460.

⁸³⁵ Greene, *The Diary of Colonel Landon Carter of Sabine Hall*, 435.

⁸³⁶ Greene, *The Diary of Colonel Landon Carter of Sabine Hall*, 415, 416, 418.

⁸³⁷ Greene, *The Diary of Colonel Landon Carter of Sabine Hall*, 419.

sometimes “wormed over the day... 30,000 [plants] he had planted and got 8 measured quarts of worms.”⁸³⁸

Carter framed the problem of ground worms as a challenge stemming from his inability to trust and control his overseers and the enslaved. Enslaved people, he complained in 1770, either “cover all the plant over and then for want of air it is late in shooting or they do not plant it all,” since the enslaved recognized that absent overseers “cannot see the plants at a distance, [and] concludes that they are planted when they are not”.⁸³⁹ Using ground worms as a cover for literally covering over crops to interfere with their enslaver’s ambitions, suggests the enslaved exploited the problem of worms to defy and attack Carter.⁸⁴⁰

Ground worms ate the few plants that did grow out later than expected in 1770. Later that year, at his Bloughpoint quarter, the planter found tobacco plants “appearing as if in real growth.”⁸⁴¹ However, the fields quickly became ruins due to attacks by ground worms, an “evil” Carter failed to understand or attain mastery over as an improver.

While Carter did not write in his diary if he punished enslaved people by forcing them to eat worms, contemporaneous planters along the Tobacco Coast of the Chesapeake evidently did execute such punishments. John Brickell, a naturalist and physician in North Carolina, wrote a natural history of the colony in 1737.⁸⁴² In his entry on the “*Tobacco-worm*”, Brickell described how the insect became “destructive and pernicious in the Tobacco Plantations” of Virginia and North Carolina, especially if

⁸³⁸ Greene, *The Diary of Colonel Landon Carter of Sabine Hall*, 419.

⁸³⁹ Greene, *The Diary of Colonel Landon Carter of Sabine Hall*, 421.

⁸⁴⁰ James C. Scott, *Domination and the Arts of Resistance: Hidden Transcripts* (New Haven: Yale University Press, 1990), chapter five “Making Space for a Dissident Subculture”, 108-135.

⁸⁴¹ Greene, *The Diary of Colonel Landon Carter of Sabine Hall*, 422.

⁸⁴² Percy G. Adams, “John Lawson’s Alter-Ego - Dr. John Brickell.” *The North Carolina Historical Review* 34, no. 3 (1957): 313-326.

“there be not care taken to Search for and kill them, which is a business that the Negroes are very much employed in during the Tobacco Season.”⁸⁴³ Brickell added that the worms were not poisonous, a fact he attributed to learning how “some of the Planters make their Negroes eat them by way of punishment, when they have been negligent in their Tobacco Fields.”⁸⁴⁴ An enslaved woman, Nancy Williams of Norfolk, Virginia, remembered being forced to eat tobacco worms as a child.⁸⁴⁵ As a young girl in the tobacco fields of her enslaver, another girl, Crissy, warned Williams to pick all of the animals from each tobacco leaf. When Williams ignored Crissy, and turned in tobacco leaves with worms, the enslaver forced the girl to eat the worms, a scene she later remembered as a woman speaking to WPA interviewers.

In July, 1770, the compounded effects of ground worms and the flight of a number of fugitive enslaved men compelled Carter to reorganize his enslaved laborers. He ordered carpenters, normally tasked with building and repairing livestock pens, storehouses, and other buildings around the plantations, to replant tobacco plants in a “whole field cut off by the ground worm.”⁸⁴⁶ The carpenters plowed and tilled infested fields at the Mangorike quarter, where “ground worm has eat more there than any where.”⁸⁴⁷ After planting, replanting, and covering the tobacco crop, Carter brooded in his diary that ground worm “have continually destroyed me.”⁸⁴⁸ Unpredictable weather, self-liberated people, and unforeseen bouts of ground worms “make all my Cropping

⁸⁴³ Brickell, *The Natural History of North-Carolina*, 168.

⁸⁴⁴ Brickell, *The Natural History of North-Carolina*, 168.

⁸⁴⁵ Charles L. Perdue, Thomas E. Barden, and Robert K. Phillips, eds. *Weevils in the Wheat: Interviews with Virginia Ex-Slaves* (Charlottesville: University of Virginia Press, 1992), 322.

⁸⁴⁶ Greene, *The Diary of Colonel Landon Carter of Sabine Hall*, 423.

⁸⁴⁷ Greene, *The Diary of Colonel Landon Carter of Sabine Hall*, 425.

⁸⁴⁸ Greene, *The Diary of Colonel Landon Carter of Sabine Hall*, 448.

precarious.”⁸⁴⁹ Even the “chief of the plants” that appeared to be viable “seem to be dying and the ground worm was cutting off what had begun to grow in the hills.”⁸⁵⁰ The combination of his failures as a planter and a patriarch provoked doubt in Carter’s mind as to his ability to settle Virginia, or whether God blessed and approved his endeavors. In 1771 and 1772 ground worms carried on destroying tobacco in his fields. Finally in 1773, a cold and “exceeding wet” season slowed their growth momentarily.⁸⁵¹

Webworm, a species of worm Carter struggled to distinguish from ground worm, appeared in fields around Sabine Hall in the late 1760s and early 1770s. In 1766, webworm infested a tobacco field of 150,000 plants.⁸⁵² Though Carter found modest success in ordering his enslaved laborers to weed and worm his plants, webworms occasionally destroyed “one half of the Tobacco” during a season, as they did in 1770.⁸⁵³ In the year following that disastrous season, Carter relied on his most trusted slave, Nassaw, whose medical expertise and familiarity with both the overseers and the enslaved granted him a particular degree of authority around Sabine Hall, to scrutinize his fields for worms. Carter instructed Nassaw “to bring me some of the crop grass from the tops of the cowpen ground tobacco hills” to inspect the plants for webworm.⁸⁵⁴ Carter often trusted Nassaw with surveying his fields for insect pests and other environmental problems including plant rust.⁸⁵⁵

In 1771, after experimenting with intercropping different cereal grains and corn, one of Carter’s overseers warned him that “chintz bug,” a pest that ate grains, appeared in

⁸⁴⁹ Greene, *The Diary of Colonel Landon Carter of Sabine Hall*, 449.

⁸⁵⁰ Greene, *The Diary of Colonel Landon Carter of Sabine Hall*, 449.

⁸⁵¹ Greene, *The Diary of Colonel Landon Carter of Sabine Hall*, 756.

⁸⁵² Greene, *The Diary of Colonel Landon Carter of Sabine Hall*, 303-304.

⁸⁵³ Greene, *The Diary of Colonel Landon Carter of Sabine Hall*, 473.

⁸⁵⁴ Greene, *The Diary of Colonel Landon Carter of Sabine Hall*, 572.

⁸⁵⁵ Greene, *The Diary of Colonel Landon Carter of Sabine Hall*, 254, 385, 417, 470, 572, 596.

the fields. Carter saw “thos buggs” as an opportunity to disprove the “Vulgar error that any thing can breed a living animal from its particular nature” with another intercropping experiment using oats. “Should it turn out so to be sure,” he hoped “my Philosophy as to the buggs must then be right.”⁸⁵⁶ After this entry, Carter’s diary fails to mention the chinch bug again. The omission may be due to his success, his failure, or perhaps questions surrounding the ability to accurately identify different animal pests.

In another entry from 1771, Carter recorded the presence of “Hornworm eggs in abundance” while experimenting with planting Napier grass and Norway turnips for fodder.⁸⁵⁷ The planter reckoned the insects to be another “material Circumstance” omitted by English improvers, whose writings he studied, such as the botanist John Hill, who failed to consider the environmental differences between Europe and America.

As ground worms, hornworms, webworms, and other small insects attacked tobacco and other agricultural plants, other pests ravaged wheat fields across Carter’s plantations, and later shaped his reputation as a naturalist in Virginia and Europe. For two decades Carter wrote diary entries on flies, weevils, and the fly-weevil, terms that indicate his frustration over identifying the animal, its life cycle, establishing their ability to metamorphosize, or determining the precise species of weevil with certainty.

Carter’s first entry on weevils from 1757 recognized how the pest and other animals threatened to unmake his plantations, like combinations of worms, ants, and other insects. “I am affraid,” he wrote, “that my Crop of Wheat for this year is all nought, the flye weavil being all in it ... My Corn is merely infested with the large bats which is a sure sign that they are there for their food is such flyes that fill the air in Clear evenings

⁸⁵⁶ Greene, *The Diary of Colonel Landon Carter of Sabine Hall*, 550.

⁸⁵⁷ Greene, *The Diary of Colonel Landon Carter of Sabine Hall*, 581

and that there do so is pritty evident.”⁸⁵⁸ Carter studied the recommendations of a slaveholder on Barbados for countering this “Evil” and concluded that it amounted to “a Farce to me and must be a thing started by one who knows not the nature of this animal or insect.”⁸⁵⁹ Fly-weevils remained elusive in Virginia, as enslavers only discovered their traces in bales of damaged wheat, although Carter held with “Certainty that they take place in the Ear, as it grows like unto the pea bugg which being a layer embrio” could be found gestating in wheat.⁸⁶⁰ “These are first eggs, then maggots, then flyes and before they get to that stage eat up the grain to a hull.” While a few planters recommended using sassafras in an unspecified formula of pesticide to counter the fly-weevil, Carter suggested an “affluvium” of the plant mixed with the wheat could prevent the pest.⁸⁶¹

Carter’s initial attempts to eradicate the fly-weevil in 1757 failed. The planter stored wheat mow unthreshed in hopes to destroy “in the embrio by means of the sweating” any weevils. However, the wheat appeared “to be full of the flye and the bank or field swallow seems to be as busy as the bats were yon May, the flye crawling from under the boards and the birds keep a continual snapping with their bills as they catch at thousands and ten thousands,” which the planter reckoned would destroy his entire wheat crop that year.⁸⁶² Carter planned for the following year a scheme to prevent the fly-weevil by stacking hay and surrounding the harvested wheat with thick layers of straw. However, these experiments lead to failure.

⁸⁵⁸ Greene, *The Diary of Colonel Landon Carter of Sabine Hall*, 169.

⁸⁵⁹ Greene, *The Diary of Colonel Landon Carter of Sabine Hall*, 169.

⁸⁶⁰ Greene, *The Diary of Colonel Landon Carter of Sabine Hall*, 169.

⁸⁶¹ Greene, *The Diary of Colonel Landon Carter of Sabine Hall*, 169.

⁸⁶² Greene, *The Diary of Colonel Landon Carter of Sabine Hall*, 179-180.

As the season carried on in 1757, Carter continued to worry over the “unhappy condition of the Country in the destruction” of his wheat crops by fly-weevils.⁸⁶³ Seeing “almost every grain is destroyed,” the planter “reasoned on many methods to kill the enemy in its embrio” either through chemical or mechanical methods of arranging his wheat harvest. In his diary, Carter sketched a plan for stacking wheat to prevent the grass from becoming infested with weevils. His “Hypothesis to be proved by practice,” he expected, would not only reveal his aptitude as a planter but as an experimental improver.⁸⁶⁴ Later that year, weevils continued to eat through Carter’s wheat fields and the plantations held by his son, Robert Wormeley Carter, nearby.⁸⁶⁵

In 1756, another pest struck Carter’s tobacco fields, the “Flye,” which appeared to be distinct from the fly-weevil that preyed on wheat.⁸⁶⁶ In the spring of 1758, Carter found small wingless insects “skipping when the hand is laid on the bed” in his young tobacco plants. Anxious he would not be able to save any seeds from the crop that year for the next season, he collected a few plants in boxes and glasses. Thick layers of flies appeared to cover the plants entirely, not unlike black blast in the Caribbean, rendering the tobacco itself in the field almost invisible.⁸⁶⁷ The next month, the planter noted how the fly “destroyed and destroys almost every bed as fast as the seed sprouts.”⁸⁶⁸ Carter hoped dousing the plants in cow urine and manure collected by enslaved laborers from the cow pens would prove a successful mixture against the flies. Later that year, he continued experiments to prevent tobacco flies and groundworms, “an enemy of as

⁸⁶³ Greene, *The Diary of Colonel Landon Carter of Sabine Hall*, 185-186.

⁸⁶⁴ Greene, *The Diary of Colonel Landon Carter of Sabine Hall*, 185-186.

⁸⁶⁵ Greene, *The Diary of Colonel Landon Carter of Sabine Hall*, 190.

⁸⁶⁶ Greene, *The Diary of Colonel Landon Carter of Sabine Hall*, 223.

⁸⁶⁷ Greene, *The Diary of Colonel Landon Carter of Sabine Hall*, 223.

⁸⁶⁸ Greene, *The Diary of Colonel Landon Carter of Sabine Hall*, 225.

dangerous a sort”, by instructing the enslaved to collect and cover his tobacco fields with dung and urine from cattle, horses, and hens on the plantation.⁸⁶⁹

Weevils continued to upset Carter’s ambitions in 1758. In “spight of all our care,” the planter wrote bitterly in his diary that he lost yearling cattle that year due to paltry harvests of “weevil eaten wheat.”⁸⁷⁰ Despite the stacking and threshing methods he instructed the enslaved to perform to preserve the harvested crop, “all the wheat this year is weavel eaten.”⁸⁷¹ Carter continued arranging wheat experiments, however he discovered that even if stacking prevented the weevil another pest appeared, “there was also in this layer several worms with white soft bodys, a sharp brownish red and very hard head with a mouth hard enough to eat wood and a hard horny fork at the tail like the earwigg.”⁸⁷² The enslaver collected a specimen in a vial to observe the animal, however both the worm and the weevil decimated that year’s crop. Over the summer, weevils continued to chew through the wheat fields. In August, while inspecting the Fork quarter and his son’s fields, Carter found wheat plants infested with weevils, and deplored that “there is no stacking close enough” possible to prevent the pest without available hay or straw.⁸⁷³ Scrutinizing the wheat barns at Mangorike quarter later that fall, he found his experiments became compromised due to the uneven settling of the plants, enabling the “weevil flye” to thrive.⁸⁷⁴

In the 1760s, tobacco flies and the fly-weevil that preyed on wheat continued to ruin Carter’s plantations. In his diary, he wrote how flies appeared “eating every where,”

⁸⁶⁹ Greene, *The Diary of Colonel Landon Carter of Sabine Hall*, 233.

⁸⁷⁰ Greene, *The Diary of Colonel Landon Carter of Sabine Hall*, 211.

⁸⁷¹ Greene, *The Diary of Colonel Landon Carter of Sabine Hall*, 221.

⁸⁷² Greene, *The Diary of Colonel Landon Carter of Sabine Hall*, 229.

⁸⁷³ Greene, *The Diary of Colonel Landon Carter of Sabine Hall*, 235-236.

⁸⁷⁴ Greene, *The Diary of Colonel Landon Carter of Sabine Hall*, 238.

“in abundance everywhere,” and how some fields became “eaten up weeds and all” by the insects.⁸⁷⁵ In the spring of 1766, the compound effects of cattle dying from starvation due to grass shortages and tobacco flies continued.⁸⁷⁶ After uncovering plants that he sheltered under a tarpaulin, he found “Much flye and few plants every where.”⁸⁷⁷ The flies moved outward beyond the tobacco toward meadows the planter hoped to use for pasturage, however the meadows too became infested and weakened by destructive flies.⁸⁷⁸

After numerous failed seasons and his ruined fields, Carter used insect pest to attempt to establish his credentials as a naturalist in an article in the first printed volume of the *Transactions* of the American Philosophical Society on the “the Moth or Fly-Weevil” in 1769.⁸⁷⁹ He framed the problem of weevils as threat to the colony’s future to become a “granary to most parts of Europe,” and framed himself as a scientific planter versed in natural philosophy whose expertise could reverse the damage caused by weevils.⁸⁸⁰

Carter set out his paper by differentiating the insect from another pest naturalists referred to as the “Curculio,” which, unlike the fly-weevil, “carries no cases for its wings; neither has it any feelers.”⁸⁸¹ The planter described his observations on “the enemy” fly-weevil, in the wheat at his Northumberland quarters, including collecting specimens of

⁸⁷⁵ Greene, *The Diary of Colonel Landon Carter of Sabine Hall*, 264, 288, 290.

⁸⁷⁶ Greene, *The Diary of Colonel Landon Carter of Sabine Hall*, 292, 293.

⁸⁷⁷ Greene, *The Diary of Colonel Landon Carter of Sabine Hall*, 294-295.

⁸⁷⁸ Greene, *The Diary of Colonel Landon Carter of Sabine Hall*, 296, 301-302.

⁸⁷⁹ Landon Carter, and Colonel Lee. “Observations concerning the Fly-Weevil, That Destroys the Wheat, with Some Useful Discoveries and Conclusions, concerning the Propagation and Progress of That Pernicious Insect, and the Methods to Be Used for Preventing the Destruction of the Grain by It. By Colonel Landon Carter, of Sabine. Hall, Virginia; Communicated by Colonel Lee of Virginia.”

Transactions of the American Philosophical Society 1 (1769): 205-217.

⁸⁸⁰ Carter, “Observations concerning the Fly-Weevil”, 205.

⁸⁸¹ Carter, “Observations concerning the Fly-Weevil”, 205.

the “rascals” for further study under a telescope.⁸⁸² He described the animal as a “pale brownish moth, with little trunks or bodies, some trifle shorter than their wings; and as some of their little bodies appeared bulging as if loaded, I applied the pressure of a fine straw upon them, and saw them squirt out, one after another, a number of little things which I took to be eggs.”⁸⁸³ In his article, Carter referred to his own diary entries on the weevil, inserting his plantation observations into the patriotic scientific discourse of improvement the Society aimed to foster.⁸⁸⁴

Carter described how the insect laid its eggs in the husk of wheat, enabling the insect to consume the plant’s protective covering before damaging the grain.⁸⁸⁵ The planter admitted that “Nature . . . from the minuteness of her ways in effecting her intended purposes, is frequently out of the comprehension of man,” even for men equipped with “microscopical improvements” the fly-weevil remained a problem shrouded in uncertainty.⁸⁸⁶ The flies, for instance, did not necessarily always exhibit either the same physical development, lifespan, or pattern of egg-laying. Citing what “naturalists tell us of some of the moth flies,” the planter reasoned the animal existed in at least three distinct stages: the egg, the weevil, and the fly.⁸⁸⁷ As in his diary, Carter described in his article how to destroy the fly-weevil using the “two principles then of heat and air” to destroy the animal in its egg phase.⁸⁸⁸

Tobacco flies and the wheat weevil continued to infest Carter’s fields a year after the article appeared in print. Carter hoped letting some weeds grow near his tobacco

⁸⁸² Carter, “Observations concerning the Fly-Weevil”, 206.

⁸⁸³ Carter, “Observations concerning the Fly-Weevil”, 206.

⁸⁸⁴ “Preface.” *Transactions of the American Philosophical Society* 1 (1769): i-xix.

⁸⁸⁵ Carter, “Observations concerning the Fly-Weevil”, 207.

⁸⁸⁶ Carter, “Observations concerning the Fly-Weevil”, 210.

⁸⁸⁷ Carter, “Observations concerning the Fly-Weevil”, 211.

⁸⁸⁸ Carter, “Observations concerning the Fly-Weevil”, 213-214.

fields might attract the flies away from his potentially profitable crop.⁸⁸⁹ Between 1771 and 1774, Carter continued to face an “enemy in such swarms” and finally lost all “expectation to think of destroying all of them.”⁸⁹⁰ The planter further continued to use the methods described in his scientific paper on the wheat weevil, however waves of insect pests continued to unsettle his plantations into the 1770s. In 1774, Carter congratulated himself in his diary upon learning from Thomas Bond that his weevil paper had been well-received by scholars in Europe. “So great is the veneration that Europe has for me,” he wrote, “as to Pronounce me the greatest Natural Philosopher of this age, and from my writings they are convinced of my almost Universal knowledge.”⁸⁹¹ A few weeks later, Carter wrote in his diary that his sons plantation had become infested again with weevils.⁸⁹²

While the diary of a slaveholder in Virginia reveals nothing of how enslaved people themselves thought about insects like the wheat weevil, other records within the archive of slavery may offer limited insight into how the enslaved creatively used environmental knowledge in forms of clandestine communication. An enslaved woman, Bird Walton, for instance, recalled as a child hearing her parents, Jane and Paschal Follkes, discussing secret parties to be held by slaves at the plantation she lived on in Mt. Freeman, Virginia. If overseers discovered her plans, Jane would warn others in conversation that “dey bugs in de wheat”, to inform them their plans had become compromised.⁸⁹³ In addition to warning of overseers or enslavers surveilling the gatherings of enslaved people, men and women told others of “bugs in de wheat” to warn

⁸⁸⁹ Greene, *The Diary of Colonel Landon Carter of Sabine Hall*, 390, 393, 399, 400, 401, 403

⁸⁹⁰ Greene, *The Diary of Colonel Landon Carter of Sabine Hall*, 557, 560, 562, 614.

⁸⁹¹ Greene, *The Diary of Colonel Landon Carter of Sabine Hall*, 880.

⁸⁹² Greene, *The Diary of Colonel Landon Carter of Sabine Hall*, 886.

⁸⁹³ Perdue, Barden, and Phillips, eds. *Weevils in the Wheat*, 297.

of the presence or threat of night-riding slave patrols.⁸⁹⁴ Enslaved men and women exploited the ubiquity and problem of weevils to camouflage their resistance and networks of communication from enslavers.

Problems stemming from animal pests on tobacco plantations in the Tidewater Chesapeake persisted into the last decade of the eighteenth century. A slaveholder in the Virginia Piedmont writing in 1781 explained to his European readers that the wheat “weevil indeed is a formidable obstacle to the cultivation of this grain with us.”⁸⁹⁵ In his compendium on tobacco culture, William Tatham, a merchant and geographer in Virginia, warned prospective planters of the “*tobacco or horn worm*”, which metamorphosed after a chrysalis stage into its “fly state, or Moth, vulgarly called the tobacco hawk.”⁸⁹⁶ Tatham’s volume brought insights from colonial natural history to tobacco culture. He cited the naturalist Mark Catesby’s precise anatomical description of the worm and the German naturalist and artist Maria Sibylla Merian “Dissertation on the Insects of Surinam” in his book.⁸⁹⁷ Like plantation writers in the West Indies, Tatham described tobacco worms as “a very dangerous enemy” who “makes great havoc among the young and tender plants.”⁸⁹⁸ A planter’s surest defense, Tatham advised, would be the constant labor of enslaved “hands” at worming a tobacco field.

Conclusion

⁸⁹⁴ Gladys-Marie Fry, *Night Riders in Black Folk History* (Knoxville: University of Tennessee Press, 1975), 94; Stephanie M. H. Camp, “The Pleasures of Resistance: Enslaved Women and Body Politics in the Plantation South, 1830-1861,” *The Journal of Southern History* 68, no. 3 (2002): 533-72.

⁸⁹⁵ Thomas Jefferson, *Notes on the State of Virginia* ([Paris], [1782]), 307.

⁸⁹⁶ William Tatham, *An Historical and Practical Essay on the Culture and Commerce of Tobacco* (London: Printed for Vernor and Hood, 31, Poultry, by T. Bensley, Bolt Court, Fleet Street, 1808).

⁸⁹⁷ Tatham, *An Historical and Practical Essay on the Culture and Commerce of Tobacco*, 21-22.

⁸⁹⁸ Tatham, *An Historical and Practical Essay on the Culture and Commerce of Tobacco*, 122-123.

This chapter took up the subject of pests in the eighteenth-century Caribbean and Chesapeake worlds to examine how animals exerted agency in contradiction to the ambitious eco-cultural networks enslavers designed. As animals that unsettled and ruined plantations, intimidated planters, and posed new environmental risks for enslaved people, pests violently called into question ideals of colonial improvement under slavery in the British Atlantic world. To a limited extent, enslaved people used pests for their own purposes, either as food, as game to hunt for small rewards, or in forms of coded language.

In sum, vermin threatened to unmake crucial economic connections that emerged out of the agrarian eco-cultural networks discussed in the previous chapter that enslavers and their allies hoped to build between colonies and the imperial metropole in the British Atlantic world. Honing in on the agency of nonhuman animals like pests—who also formed their own networks, as in the case of simultaneous yellow blast and cane ant attacks—brings the powerful threat of nonhuman animal agency to the foreground. Turning from nonhuman to human agency, the next chapter lays out how enslaved people of African descent forged their own relations with animals to further strike out at the power and authority of their enslavers.

Chapter Five

Severing Their Bonds

In another angle of the vault was a calabash filled with various sorts of hair, among which it was easy to discriminate that of white men, horses, and dogs. These were huddled together, and crowded with feathers of various birds, especially those of domestic poultry and wild parrots, with one or two of the spoils of a macaw.

—Cynric Williams, *Hamel, The Obeah Man*, 1827

Slaves pulled down fences, sabotaged farm equipment, broke implements, damaged boats, vandalized wagons, ruined clothing, and committed various other destructive acts. They set fire to outbuildings, barns, and stables; mistreated horses, mules, cattle, and other livestock. They stole with impunity: sheep, hogs, cattle, poultry, money, watches, produce, liquor, tobacco, flour, cotton, indigo, corn, nearly anything that was not under lock and key - and they occasionally found the key.

—John Hope Franklin and Loren Schweninger, *Runaway Slaves*, 1999

From island colonies in the Caribbean Sea to the riverine world of the Tidewater Chesapeake, enslaved people throughout the African diaspora in the eighteenth-century British Atlantic world resisted enslavers and their enslavement by producing their own creative and destructive relationships with nonhuman animals. This chapter focuses on three forms of resistance with nonhumans that enslaved people pursued across the long eighteenth century within wider contexts of resistance and rebellion.

In the West Indies, obeah ritualists on sugar estates used animal body parts to create apotropaic amulets and poisons that could be used against enslavers. Obeah bundles filled with plant and animal materials supported clandestine oathing ceremonies between slaves plotting revolt, and reports on oathing, slave alliances, and obeah alarmed white settlers.⁸⁹⁹ Collections of animal materials—including feathers, bones, claws, horns, and teeth—further embodied and enacted the intellectual connections enslaved people

⁸⁹⁹ Walter C. Rucker, *Gold Coast Diasporas: Identity, Culture, and Power* (Bloomington: Indiana University Press, 2015), chapter 5 “Obeah, Oaths, and Ancestral Spirits”, 179-206.

maintained to their ancestral homelands, facilitated covert communication between slaves, and concretized an enslaved shaman's power to draw out and manipulate otherworldly forces.⁹⁰⁰

Enslaved people on wheat and tobacco plantations in the Tidewater Chesapeake undermined slaveholders by other subtle means, namely by starving, injuring, abusing, and killing livestock animals. Wounding or withholding food from a team of draft oxen obstructed plantation operations.⁹⁰¹ Attacks on livestock indicated enslaved peoples ability to creatively produce a countercolonial landscape by using the margins of a plantation, including ditches and marshes, to destroy animal life and defy the productive plans that slaveholders struggled to build and sustain.⁹⁰² Sabotage with animals by enslaved people constituted a community-wide attack against a planter-slaveholder.

Finally, in both the West Indies and southeastern North America, men and women raided slaveholder's stables to pilfer their horses, ride away, and escape plantations. Through their decision and the act of stealing their enslaver's four-footed vehicles for control, enslaved people staged their own critique of slavery's spatial boundaries by riding stolen horses. The enslaved overturned the normal vertical arrangements of slavery with horses, and their actions constituted a sophisticated material and intellectual engagement with nonhumans to escape plantation spaces and symbolically denigrate enslavers. Fugitive riders created rival geographies in opposition to the spatialized

⁹⁰⁰ Jason R. Young, *Rituals of Resistance: African Atlantic Religion in Kongo and the Lowcountry South in the Era of Slavery* (Baton Rouge: Louisiana State University Press, 2007), chapter 3 "Minkisi, Conjure Bags, and the African Atlantic Religious Complex"; Pablo F. Gómez, "Caribbean Stones and the Creation of Early-Modern Worlds," *History and Technology* 34, no. 1 (2018): 11-20.

⁹⁰¹ Clay McShane, and Joel Tarr, *The Horse in the City: Living Machines in the Nineteenth Century* (Baltimore: Johns Hopkins University Press, 2007), 1-17.

⁹⁰² Jill H. Casid, *Sowing Empire: Landscape and Colonization* (Minneapolis: University of Minnesota Press, 2005).

strategies for containment slaveholders labored to build, surveil, and enforce from Maryland to Jamaica in the long eighteenth century.⁹⁰³

Through each of these modes of resistance with nonhumans, enslaved people challenged their enslaver's plans to combine their labor and lives with animals, and created their own eco-cultural networks with nonhumans that visibly defied white authority and the slaveholder ideal to conceive of slaves as merely the animal-like instruments of their will. By tracing histories of powerful occult materialities, sabotage, and mobility between these two different geographic regions of the British Atlantic, this chapter explores how diasporic Atlantic Africans and people of African descent in the Americas imagined and enacted their own will and self-liberation by manipulating animals.⁹⁰⁴

A Farrago of Materials: Obeah in the Caribbean

In the first decade of the eighteenth century, slaveholders on Barbados became intrigued and afraid of the powers of enslaved people who appeared to be “a sort of Magicians” capable of performing “Surprizing things” involving animals.⁹⁰⁵ Captain Thomas Walduck, stationed at Rupert's Fort in St. Peter parish on the western coast of the island, relayed in a letter to the London apothecary James Petiver in 1711 that white

⁹⁰³ Stephanie Camp, *Closer to Freedom: Enslaved Women and Everyday Resistance in the Plantation South* (Chapel Hill: University of North Carolina Press, 2004), xx-xxi.

⁹⁰⁴ Projit Bihari Mukharji, "Occulted Materialities." *History and Technology* 34, no. 1 (2018): 31-40.

⁹⁰⁵ “Thomas Walduck's Letters from Barbados, 1710-1711,” *Journal of the Barbados Museum and Historical Society*, 15, no. 2, (1948) 84-88, 88.

settlers agreed that the enslaved “here use Naturall (or Diabolical) Magick,” though “how they doe it none of us knows.”⁹⁰⁶

Walduck recalled learning, for instance, of an enslaved man “who kept great many Fowls” that roosted upon a calabash tree planted in front of the door to his quarters.⁹⁰⁷ His enslavers, along with “severall white people in the plantation”, would frequently watch the birds jump from the ground and climb into the tree. After some time, the man would emerge from his dwelling and pose a challenge to his audience of white onlookers: “if they could finde any of these fowls they should have them.” As the onlookers suddenly scrambled to clamber up “into the tree several att once” they mysteriously “could not find a soule” bird. Walduck, himself could not explain the phenomenon to his correspondent across the Atlantic in London, and found the anecdote noteworthy enough to describe in his letter.

Slaveholders in the British Caribbean struggled to grapple with enslaved people’s ulterior knowledge of and relationships with nonhuman animals, and the wider physical environment of the island colonies of the West Indies. Enslaved people’s rich environmental knowledge indicated their ability to produce countercolonial landscapes with animals.⁹⁰⁸ Countercolonial landscapes could take the form of alternative spaces beyond the plantation zone or the creative refashioning of space under slavery. While on a hunting party on Nevis, for instance, the Reverend William Smith discovered a surprising scene while ascending the island’s volcanic mountain. “Somewhat higher up” the peak, his entourage discovered “at a little distance a Hut that undoubtedly belonged to

⁹⁰⁶ “Thomas Walduck’s Letters from Barbados, 1710-1711,” *Journal of the Barbados Museum and Historical Society*, 15, no. 3, (1948) 137-149, 148.

⁹⁰⁷ “Thomas Walduck’s Letters from Barbados, 1710-1711”, 148.

⁹⁰⁸ Casid, *Sowing Empire*, 191-236.

some run-away Negroes.”⁹⁰⁹ Enslaved people on Nevis, and on nearby Saint Christopher across the narrow strait separating the two islands, often committed petit marronage for days or weeks at a time on both islands, and used small mobile shelters while living beyond their enslaver’s surveillance.⁹¹⁰ Slave marronage on Nevis, the reverend suspected, involved to an appreciable extent enslaved people’s ability to engage animals.

Between the hut and the path before them, Smith’s party noticed a small “Gut or Gully” separating the trail. Being “too weary” to cross the ravine, the minister and his companions decided against investigating the maroon encampment. Looking out across the gap, Smith “could plainly discern a few Foot-steps of some cloven-hoofed Beasts, and guessed them to be young Heifers that had been stolen, and drove thither by the run-away” people. In a letter to his esteemed correspondent, Charles Mason, Woodwardian Professor at the University of Cambridge, Smith confessed “by the by let me tell you, I can by no means conceive how Heifers could possibly clamber up a Precipice, where we ourselves were very hard put to ascend it for steepness, even by helping up each other.” “In short,” he concluded, “there must be some other and much easier way for them to clamber up, though unknown to us.”⁹¹¹ Maroon environmental knowledge of moving across the island’s intimidating topography alternately impressed and troubled enslavers like Smith.

These two accounts of clandestine human-animal relationships illuminate the anxiety slaveholders felt over enslaved people’s ability to create bonds and spaces with animals beyond the surveillance of a plantation or patrols of white overseers. Likewise,

⁹⁰⁹ William Smith, *A Natural History of Nevis, and the Rest of the English Leeward Charibee Islands in America* (London: J. Bentham, sold by W. Thurlbourn; S. Birt, C. Bathurst, and J. Beecroft), 36.

⁹¹⁰ Bonham C. Richardson, *Caribbean Migrants: Environment and Human Survival on St. Kitts and Nevis*. (Knoxville: University of Tennessee Press, 1983), 74-75.

⁹¹¹ Smith, *A Natural History of Nevis*, 36.

the presence of “Physicians and Conjurors” practicing obeah rituals, a diasporic African medical and spiritual complex of divination, healing, and apotropaic practices, undercut slaveholder’s confidence in their own imagined or hoped-for mastery over the enslaved.⁹¹² Walter Rucker explains that obeah, a word derived from the Akan-Twi phrase *abroykire bayi*, or foreign witchcraft, emerged as a spiritual technology developed by diasporic Atlantic Africans from the Gold Coast, including Akan and Igbo-speaking people, who used rites involving animals and other natural materials to ritually fasten bonds of alliance and loyalty between slaves in coronations of rebel leaders and oathing ceremonies, through which rebels pledged themselves to unite in revolt against white enslavers.⁹¹³

As a set of material practices, obeah rituals transformed plants, animals, minerals, and other organic materials into powerful new configurations that transcended their materiality to become endowed with supernatural and occult powers.⁹¹⁴ Animals, existing in the form of bodily parts, figured in these rites as powerful material instruments for world-making.⁹¹⁵ Obeah practices involving nonhuman matter emerged out of what the religious scholar Theophus Smith terms the “pharmacopeic worldview” of diasporic

⁹¹² Griffith Hughes, *The Natural History of Barbados in Ten Books* (London: Printed for the Author, 1750), 15; Kelly Wisecup, *Medical Encounters: Knowledge and Identity in Early American Literatures* (Amherst: University of Massachusetts, 2013), 127-128; Randy M. Browne, “The ‘Bad Business’ of Obeah: Power, Authority, and the Politics of Slave Culture in the British Caribbean,” *The William and Mary Quarterly* 68, no. 3 (2011): 451-80.

⁹¹³ Rucker, *Gold Coast Diasporas*, chapter 5 “Obeah, Oaths, and Ancestral Spirits”, especially pages 184-186. Rucker also notes that obeah is related to the Igbo word *dibia*, which refers to various forms of divination.

⁹¹⁴ Diana Paton, “Obeah Acts: Producing and Policing the Boundaries of Religion in the Caribbean,” *Small Axe* 13, no. 1 (2009): 1-18; Kelly Wisecup, “Knowing Obeah,” *Atlantic Studies* 10, no. 3 (2013): 406-425; Emily Senior, *The Caribbean and the Medical Imagination, 1764-1834: Slavery, Disease and Colonial Modernity*. Vol. 119. Cambridge University Press, 2018), chapter 5 “The ‘Intimate Union of Medicine and Magic’: Obeah, Revolution, and Colonial Modernity.”

⁹¹⁵ Gómez, “Caribbean Stones and the Creation of Early-Modern Worlds.”

Africans in the Americas, in particular shamanic figures such as ritualists, that bound the forces of the material and immaterial worlds under the ritualists control.⁹¹⁶

Obeah rituals enacted a particular form of power in the West Indies. When ritualists combined mixtures of plants, animals, and other materials into bundles or bottles, they assembled what Monique Allewaert characterizes as dangerous “technologies that allow a collection that mediates the relations between” the human and nonhuman world, in many cases involving animal remains that signified alliances and communication between enslaved people.⁹¹⁷ Stephan Palmié further argues that settler colonists failed to fully understand, prevent, or “purify” the ontological status of objects like parrot feathers or dogs teeth to separate the nonhuman world from the supernatural worlds enslaved ritualists accessed with animals.⁹¹⁸ Moreover, Kelly Wisecup claims that by “disrupting the separation that colonists sought to maintain between human and non-human entities,” including the boundaries between the material and cosmic worlds, “obeah practitioners’ powerful words not only challenged colonists to admit the power of words to influence the material world but also laid bare the arbitrary nature of their categories for humans and non-human.”⁹¹⁹

Obeah ritualists on plantations in the British Caribbean occupied positions of high status among other enslaved people, as is evident in their connections with the animal environment. Nonhuman animal materials reflecting authority and power, for instance,

⁹¹⁶ Theophus H. Smith, *Conjuring Culture: Biblical Formations of Black America* (Oxford: Oxford University Press 1994), 35, 76, 10; Susan Scott Parrish, *American Curiosity: Cultures of Natural History in the Colonial British Atlantic World* (Chapel Hill: University of North Carolina Press, 2012), 5-6, 260, 265, 279, 282.

⁹¹⁷ Monique Allewaert, *Ariel’s Ecology: Plantations, Personhood, and Colonialism in the American Tropics* (Minneapolis: University of Minnesota Press, 2014), 134.

⁹¹⁸ Stephan Palmié, “Other Powers: Tylor’s Principle, Father Williams’s Temptation, and the Power of Banality,” in *Obeah and Other Powers: The Politics of Caribbean Religion and Healing*, edited by Diana Paton and Maarit Forde, 316-40 (Durham: Duke University Press, 2012.)

⁹¹⁹ Wisecup, “Knowing Obeah”, 420-421.

can be found among the comparatively rare evidence of grave goods among obeah ritualists. In addition to other artifacts buried in the grave of a ritualist from the late seventeenth century in the cemetery of Newton Plantation in Christ Church parish, Barbados, for instance, were a necklace made from money cowries, fish bones, and twenty-one dog's teeth.⁹²⁰ The bone necklace signified the man's ability to control, intervene in, and draw out the powers of animals for performing healing or causing harm. The presence of animal bones in the grave indicates the continuation of rich West African cultural traditions and beliefs about the powers of animal remains throughout the diaspora in the Atlantic world among societies and ethnolinguistic groups including Mende-, Fante-, Fon-, and Twi-speakers.⁹²¹ It is unknown if this man's neckware was fashioned before his capture, during the middle passage, or after his arrival in Barbados.



Figure 5.1 African-Type Necklace, late 17th – early 18th century, Newton Plantation Slave Cemetery, Barbados, Jerome Handler, personal slide collection, image courtesy of

⁹²⁰ Jerome S. Handler, "An African-type Healer/Diviner and His Grave Goods: A Burial from a Plantation Slave Cemetery in Barbados, West Indies." *International Journal of Historical Archaeology* 1, no. 2 (1997): 91-130.

⁹²¹ Handler, "An African-type Healer/Diviner and His Grave Goods", 118-119.

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Obeah ritualists disrupted the political stability of Britain's Caribbean colonies by offering religious support to the leaders and participants of revolts and coordinated resistance to slaveholders in the British Atlantic. Slave revolts throughout the West Indies involved obeah shamans who led ceremonial rituals, especially oath-taking rituals of vital importance. As an historian of the Gold Coast diaspora in the Atlantic world explains, the revolt in Jamaica of 1685, the First and Second Maroon Wars between 1728 to 1795, the Antigua conspiracy of 1736, and Tacky's War in 1760, among other rebellions led by enslaved men and women in other European colonies in the Caribbean, involved the spiritual leadership of obeah ritualists who counseled and endorsed rebel leaders.⁹²² Tacky and his circle of obeah advisors, for instance, created amulets and charms using plants, animal blood, grave dirt, and animal remains to protect themselves from the bullets of their slaveholding enemies.⁹²³ After more than a year of attacks, raids, and evasion from the pursuit of their enemies, it was the Maroon allies of the colonial government that ultimately defeated Tacky and his followers in July, 1760. Writing about the rebellion a decade later, a planter historian described how an "old Coromantin" obeah man "was caught whilst he was tricked up with all his feathers, teeth, and other implements of magic" common among Tacky's followers.⁹²⁴

⁹²² Walter C. Rucker, *The River Flows On: Black Resistance, Culture, and Identity Formation in Early America* (Baton Rouge: Louisiana State University Press, 2006), chapter 1 "Fires of Discontent, Echoes of Africa" and chapter 2, "Only Draw in Your Countrymen". On obeah in the Bermuda conspiracy of 1761, see: Clarence Maxwell, "Enslaved Merchants, Enslaved Merchant-Mariners, and the Bermuda Conspiracy of 1761." *Early American Studies* 7, no. 1 (2009): 140-78.

⁹²³ Vincent Brown, *The Reaper's Garden: Death and Power in the World of Atlantic Slavery* (Cambridge: Harvard University Press, 2008), 148-149.

⁹²⁴ Edward Long, *The History of Jamaica. Or, General Survey of the Antient and Modern State of that Island*, volume II (London: Printed for Thomas Lowndes in Fleet-Street, 1774), 451-452.

Obeah ritualists performed oathing ceremonies within slave revolts that bound the rebels together, which involved drawing out the powers of nonhuman animals.⁹²⁵ Oathing rituals often involved sacrifices of animals or the bodily remains of animals, including feathers, teeth, hair, and bones. In the Antigua conspiracy of 1736, for instance, oathing ceremonies revolved around initiates drinking mixtures of rum, “Cock’s Blood,” and grave dirt prepared by an “*Obiaman*, or Wizard.”⁹²⁶ One of the ritualists allied with King Court and the later rebel leader Secundi, in the revolt, Quawcoo, used an “Obey made of Sheeps Skin” to perform an oathing ceremony involving the blood of a “Dominique Cock”.⁹²⁷ Quawcoo slashed the animal’s mouth and toes, and poured its blood over the “Obey” and then rubbed the rebels foreheads with the animal’s “bloody Toe”.

While ritualists occupied important roles in earlier rebellions, the practice of obeah, including diasporic people’s uses of animals, became explicitly criminalized by the colonial legislature in Jamaica, and later throughout the wider British Caribbean world, in the aftermath of Tacky’s Rebellion in 1760.⁹²⁸ On December 18, the House of Assembly passed “An Act to remedy the Evils arising from irregular Assemblies of Slaves,” which included “preventing the Practice of Obeah.”⁹²⁹ The act described “Obeah Men and Obeah Women” known to possess “strange preternatural Faculties” as fatal threats to the foundation and future stability of the colony. The law stipulated that

⁹²⁵ Rucker, *The River Flows On*, 44-45, 84, 87-89.

⁹²⁶ *A Genuine Narrative of the Intended Conspiracy of the Negroes at Antigua. Extracted from an Authentic Copy of a Report, made to the Chief Governor of the Carabee Islands, by the Commissioners, or Judges appointed to try the Conspirators* (Dublin: Printed by and for R. Reilly, on Cork-Hill, 1737), 13.

⁹²⁷ Walter Rucker, “Earth from a Dead Man’s Grave: Ritual Technologies and Mortuary Realms in the Eighteenth-Century Gold Coast Diaspora”, in *Slavery and its Legacy in Ghana and the Diaspora*, edited by Rebecca Shumway, and Trevor R. Getz, 62-84 (London: Bloomsbury Publishing, 2017); Rucker, *Gold Coast Diasporas*, 181-182.

⁹²⁸ Jerome S. Handler, and Kenneth M. Bilby, *Enacting Power: The Criminalization of Obeah in the Anglophone Caribbean, 1760-2011* (Mona: University of West Indies Press, 2012), 46.

⁹²⁹ Jamaica. *Acts of Assembly, passed in the island of Jamaica; from ... 1681, to ... 1754, ... In two volumes.* ... Vol. Volume 2 (Saint Jago de la Vega, Jamaica, 1769-1771), 52, 55, 63. *Eighteenth Century Collections Online*.

ritualists found guilty of conducting obeah would “suffer Death or Transportation” if discovered. Among the physical objects colonists associated with obeah, the law specifically prohibited suspected ritualists from “making use of any Blood, Feathers, Parrots Beaks, Dogs Teeth, Alligators Teeth, broken Bottles, Grave Dirt, Rum, Egg-shells, or any other Materials” for the purposes of performing rites or producing charms.

The tension between obeah as a potentially useful medical practice, as discussed by scholars including Kelly Wisecup and Vincent Brown, and a troubling source of rebellion posed a dilemma for slaveholders and their subordinates, including plantation doctors attempting to detect or understand clandestine sacred practices in the colonies. In 1764, the physician and poet James Grainger described in verse the “Conjurer’s snake” that “Obia-men” used to curse others on plantations on Saint Christopher in his poem *The Sugar-Cane*.⁹³⁰ In a footnote to the poem, Grainger described in detail how the staffs wielded by obeah ritualists were marked with frogs and snakes that signified their power to access occult forces. However, the doctor, and others, hoped that obeah could “do good” as a form of plantation medicine “if kept in subordination” to white authority. In his poem, Grainger described the ritual instruments imbricated within obeah as bewildering and morbid combinations of human and animal remains, plants, and minerals, fused into bizarre and threatening arrangements.

Fern root cut small, and tied with many a knot;
Old teeth extracted from a white man’s skull;
A lizard’s skeleton; a serpent’s head;
These mix’d with salt, and water from the spring,
Are in a phial pour’d’ o’er these the leach
Mutters strange jargon, and wild circles forms.⁹³¹

⁹³⁰ James Grainger, *The Sugar-Cane: A Poem in Ten Books*, (London: R. and J. Dodsley, 1764), 143-144.

⁹³¹ Grainger, *The Sugar-Cane*, 145.

In *The Sugar-Cane*, Grainger urged slaveholders to “let humanity prevail” and not treat the enslaved as “insensate” or below the “bestial rank” of the chain of being.⁹³²

Treating people as equivalent to beasts of burden, the doctor feared, would encourage the enslaved to further transform animals into subtle weapons turned against their enslavers through obeah. The poet stressed to his readers, many of whom were absentee planters in Britain, as well as literate overseers in the colonies, the dangers of enslaved people’s covert interactions with animals that could generate conflict and spark rebellion.

Historians writing in the late eighteenth century wavered between describing obeah and the animals involved in rituals as either a threatening phenomenon or an ethnographic curiosity. In 1774, Edward Long, a slaveholder and chronicler in Jamaica residing at Lucky Valley plantation in Clarendon parish, for instance, wrote how enslaved people adorned with “the teeth of wild cats” believed their animal amulets empowered them with longevity and power over others bodily health, including the power to afflict disease upon others.⁹³³

Long’s history of Jamaica, which cast diasporic Africans as irrational, animal-like, and less-than fully-human, relied upon an older racial concept of innate African intellectual inferiority and produced an emergent scientific paradigm of polygenic, biological racial differences between Europeans and Africans rooted in divergent anatomy and physiology.⁹³⁴ Moreover, it is unsurprising Long wrote at length on obeah,

⁹³² Grainger, *The Sugar-Cane*, 136, 147.

⁹³³ Long, *The History of Jamaica*, volume II, 1774, 420.

⁹³⁴ Suman Seth, “Materialism, Slavery, and The History of Jamaica.” *Isis* 105, no. 4 (2014): 764-772; Suman Seth, *Difference and Disease: Medicine, Race, and the Eighteenth-Century British Empire* (Cambridge: Cambridge University Press, 2018) chapter 6; Rana A. Hogarth, *Medicalizing Blackness: Making Racial Difference in the Atlantic World, 1780-1840* (Chapel Hill: University of North Carolina Press, 2017), 71. On the existence of obeah or similar practices in North America, see Pehr Kalm, *Travels Into North America: Containing Its Natural History* vol. I (Warrington: Printed by William Eyres, 1772), 397-400. On Moravian accounts of obeah practitioners in eighteenth-century Antigua, see: John Catron,

given that in the second half of the eighteenth century over one thousand cases involving obeah were reported and prosecuted in Jamaica, attesting to the resilience of ritual practitioners.⁹³⁵

In the wake of a slave revolt involving raiding parties on Jamaica in 1780, obeah shifted as a topic of concern and discussion beyond the empire's island colonies as the subject moved into print and popular culture in Britain. An escaped enslaved man and obeah practitioner in Jamaica, later known in the British press as Three-Fingered Jack, or Jack Mansong, led a party of sixty maroons into the Blue Mountains for approximately one year.⁹³⁶ Jack and his compatriots raided plantations from their mountainside hideouts, and killed several whites during their insurgency. In 1781, Maroons bound in alliance by treaty with the colonial government in Jamaica captured and killed Jack and his followers.

"Slavery, Ethnic Identity, and Christianity in Eighteenth-Century Moravian Antigua." *Journal of Moravian History* 14, no. 2 (2014): 153-78.

⁹³⁵ Danielle Boaz, "'Instruments of Obeah': The Significance of Ritual Objects in the Jamaican Legal System, 1760-Present," in *Materialities, Meanings and Modernities of Rituals in the Black Atlantic*, eds. Akinwumi Ogundiran and Paula Saunders (Bloomington: Indiana University Press, 2014), 143-158.

⁹³⁶ Diana Paton, "The Afterlives of Three-Fingered Jack," in *Slavery and the Cultures of Abolition: Essays Marking the Bicentennial of the British Abolition Act of 1807*, edited by Brycchan Carey and Peter J. Kitson, 42-63 (Suffolk: Boydell and Brewer, 2007); Frances R. Botkin, *Thieving Three-Fingered Jack: Transatlantic Tales of a Jamaican Outlaw, 1780-2015* (New Brunswick: Rutgers University Press, 2017); Jenna Gibbs, "Toussaint, Gabriel, and Three Finger'd Jack: 'Courageous Chiefs' and the 'Sacred Standard of Liberty' on the Atlantic Stage." *Early American Studies: An Interdisciplinary Journal* 13, no. 3 (2015): 626-660.



Figure 5.2 Depiction of Three-Fingered Jack, *The Wonderful Life and Adventures of Three Fingered Jack, the Terror of Jamaica!*, 1825?, image courtesy of The John Carter Brown Library, Brown University.

Two decades after Jack's capture, Benjamin Moseley, surgeon-general for the island, described in his *A Treatise on Sugar* seeing the fugitive enslaved man's obeah bundle brought to him by the "Maroons who slew him," which appeared chock full of animal remains. The doctor recalled seeing "the end of a goat's horn, filled with a compound of grave dirt, ashes, the blood of a black cat, and human fat; all mixed into a kind of paste. A cat's foot, a dried toad, a pig's tail, a slip of virginal parchment of kid's skin, with characters marked in blood on it" inside Jacks' "*Obian bag*."⁹³⁷ In his book, Moseley recalled finding similar bundles on the island made from "grave dirt, hair, teeth of sharks and other animals ... the hearts of birds, liver of mice" and plants.⁹³⁸

⁹³⁷ Benjamin Moseley, *A Treatise on Sugar* (London: Printed by John Nichols, 1800), 197.

⁹³⁸ Moseley, *A Treatise on Sugar*, 191. In the early nineteenth century, Jack's legacy continued as he became the subject of several novels and a stage play in the 1820s, see: Paton, "The Afterlives of Three-Fingered Jack", 43-45.

As the abolitionist campaign to abolish the slave trade developed in England, the threat of obeah and the animals imbricated in rituals on plantations entered into Parliamentary debates in the late 1780s. In their report to the Lords of Trade and Plantations in 1788, colonial agents wrote at length in their replies to the board's questionnaire on the threatening existence and ongoing problem of obeah in the West Indies.

Stephen Fuller, the colonial agent for Jamaica, Edward Long, and James Chisholme, a Scottish planter, wrote in their replies to the Lords of Trade how planters on the island loathed and feared obeah men and women, along with "Myal-Men", who were known to possess herbal medical knowledge, induce trancelike states in others, and were believed to be able to "reanimate dead Bodies."⁹³⁹ Their report noted that the "Professors of Obi are, and always were, Natives of Africa, and none other, and they have brought the Science" of obeah to Jamaica from "African Seminaries." "It is very difficult," they wrote, "for the White Proprietor to distinguish the *Obia Professor* from any other Negro upon his Plantation."

Fuller and his colleagues further described in detail how obeah men and women crafted bundles or bottles containing eggshells as protective charms against thieves on plantations, and were often paid by other enslaved people to recover stolen animals, including those few who held a small stock of fowl or hogs. In their description of the threatening presence of obeah practitioners and their potential to instigate or worsen

⁹³⁹ *Reports of the Lords of the Committee of Council appointed for the Consideration of all Matters relating to Trade and Foreign Plantations Submitting to his Majesty's Consideration The Evidence and Information they have collected in consequence of his Majesty's Order in Council, dated the 11th of February 1788, Jamaica* (London: 1789) replies from Jamaica, Antigua, Barbados, Grenada and Saint Christopher. Diana Paton, *The Cultural Politics of Obeah: Religion, Colonialism and Modernity in the Caribbean World* (Cambridge: Cambridge University Press, 2015), 51-64.

already fraught relations between enslaved people on plantations, the respondents observed that people targeted by obeah ritualists and their instruments suffered from an occult “invisible and irresistible Agency.” The respondents warned the Lords of “the Terrours of *Obi*”, particularly in combination with “Poisons, whose Operation is slow and intricate, will baffle the Skill of the ablest Physician.” To identify an obeah bottle, Fuller and his coauthors listed the animal parts, “usually composed of a Farrago of Materials,” frequently found in amulets or other bundles.

In the conclusion to their report, these men mentioned several particular cases involving obeah men and women on the island.⁹⁴⁰ In 1775, one obeah woman taken from the “*Papaw* or *Popo* Country” in the Bight of Benin, terrified her enslaver by attacking and killing other enslaved people on his plantation over a span of fifteen years. In his final estimate, the planter approximated that this woman caused the death of one hundred people of African descent using obeah. When the planter eventually confronted the woman and inspected her quarters, he found that the thatch roof of her hut and “every Crevice of the Walls” was absolutely filled “with the Implements of her Trade” including feathers and the “Bones of Cats.” In a ceramic pot hidden under her bed, the planter further discovered balls of clay decorated with “Hair and Rags or Feathers of all Sorts” and others “blended with the upper Section of the Skulls of Cats, or stuck round with Cats Teeth and Claws, or with Human or Dogs Teeth.” Moreover, the jar contained “a great many Eggshells” the woman used to produce obeah bundles. Fuller added several other papers to their evidence, including a report “delivered by Mr. Rheder” describing obeah bags “filled with Parts of Animals, Vegetables, and Earth,” and a report on an

⁹⁴⁰ “The Paper referred to in the preceding Account”, submitted by Stephen Fuller, Edward Long, and James Chisholme.

obeah bundle made from the beak and claws of a “a *white Fowl*,” indigo seeds, and grave dirt.

Officials and slaveholders in other colonies reported on obeah rituals and practices to the Lords of Trade in similar detail. John Brathwaite, the agent for the House of Assembly of Barbados, wrote that though the number of obeah practitioners in general declined on the island there “is hardly any Estate in the Island” without a man or woman who claimed “to possess some supernatural Power” involving animals.⁹⁴¹ Brathwaite likened obeah to “Animal Magnetism,” or mesmerism. Obeah herbalists “Knowledge in Simples” and “Knowledge in Poisons” gave them status among the enslaved as valuable healers, but also positioned them as troubling, competing sources of medical authority on plantations. In their replies to the Lords queries, William Hutchinson, agent for Antigua, and Dr. James Adair compared obeah to animal magnetism, and warned of ritualist’s secret knowledge of “noxious Drugs.” Charles Spooner, agent for Grenada and Saint Christopher, testified that while obeah practitioners could, and did, influence colonial rebellions, he himself often resorted to their care and medical expertise to treat his own bouts of “foul Sores and Ulcers.”

Obeah continued to threaten and disturb slaveholders in the West Indies after the passage of the Amelioration Act in 1798 designed to “improve” slavery and alleviate the suffering of enslaved people.⁹⁴² In his history of Dominica, Thomas Atwood, the chief judge of the island, described men and women practicing obeah as “very artful in their way, and have a great ascendancy” in the colony.⁹⁴³ Atwood described obeah as a

⁹⁴¹ Paton, *The Cultural Politics of Obeah*, 60.

⁹⁴² Christa Dierksheide, *Amelioration and Empire: Progress and Slavery in the Plantation Americas* (Charlottesville: University of Virginia Press, 2014.)

⁹⁴³ Thomas Atwood, *The History of the Island of Dominica* (London: Printed for J. Johnson, 1791), 269.

perplexing mixture of charlatanism and valuable medical techniques, a combination that in his judgement rendered ritualists “very dangerous on any plantations” for their carefully concealed knowledge of the “quality of many poisonous herbs that grow in the West Indies,” which they combined with animal remains in their bottles and bundles.⁹⁴⁴ Another planter writing around the same time reported capturing an escaped enslaved man who practiced obeah using “a great variety of strange materials” including “thunderstones, cat’s ears, the feet of various animals, human hair, fish bones, the teeth of alligators, &c.”⁹⁴⁵ During the apprenticeship period precipitating the legal abolition of slavery in the colonies, Richard Robert Madden, a surgeon who lived in Jamaica between 1833 and 1834, observed how obeah practitioners used “the gall of the alligator” as a “virulent poison.”⁹⁴⁶

In British visual culture, artists depicted obeah involving animals as simultaneously ridiculous and threatening. In a satirical cartoon etching from 1808, a white planter in the West Indies, “Johnny Newcome”, a comically hapless new planter, attempts to seduce an enslaved woman. Hoping to acquire a charm to seduce the woman, the planter approaches “Old Mumbo Jumbo the Oby Man” for assistance.⁹⁴⁷ The shaman firmly turns down the planter’s request, and depicted directly behind him is a jar containing his principal instruments: “Feathers, Grave Dirt, Egg Shells.” While these nonhuman materials linked with obeah in reality unnerved planters, in the cartoon they appear as the comical evidence of white notions of African irrationality.

⁹⁴⁴ Atwood, *The History of the Island of Dominica*, 271.

⁹⁴⁵ Matthew Gregory Lewis, *Journal of a West-India Proprietor: Kept During a Residence in the Island of Jamaica* (London: John Murray, 1834), 95.

⁹⁴⁶ Richard Robert Madden, *A Twelvemonth's Residence in the West Indies: During the Transition from Slavery to Apprenticeship* (Philadelphia: Carey, Lea and Blanchard, 1835), 62, 69, 70, 74.

⁹⁴⁷ “Johnny Newcome in Love in the West-Indies, J.F.”, 1808, William L. Clements Library Image Bank, University of Michigan.



Figure 5.3 Depiction of an "Oby Man" in *Johnny Newcome in Love in the West Indies*, University of Michigan Library Digital Collections, William L. Clements Library Image Bank.

In some instances, obeah practitioners not only struck against enslavers by sowing discord on plantations with animals, but by attacking an enslaver's livestock. A botanist residing in Jamaica observed in 1711 how obeah ritualists used field poppies to poison livestock on plantations on the island.⁹⁴⁸ On other plantation colonies, such as Martinique and Saint-Domingue, enslaved people poisoned livestock, including horses, cattle, and

⁹⁴⁸ Henry Barham, *Hortus Americanus: The Trees, Shrubs, and other Vegetable Productions, of South-America and the West-India Islands, and Particularly of Jamaica* (Kingston: Printed and published by Alexander Aikman, 1794), 152. Barham sent a manuscript copy of this book to Sloane in 1711.

mules.⁹⁴⁹ A newspaper article in Barbados, for instance, recalled the actions of a man named Dick Burrowes, who lived in St. James parish.⁹⁵⁰ Burrowes led “a coterie of fellow necromancers” who “did a flourishing business in the sale of nostrums and deleterious drugs” on plantations around the parish and beyond. In 1807, Philip Gibbes and his manager at Spring Head became “two of the objects” of Burrowes obeah powers. Burrowes, aided by an obeah woman named Joan, drugged the chocolate drinks of Gibbes and his manager, “and they almost succeeded in poisoning them both.” However, for reasons that are unclear from the newspaper article, their gambit failed. Yet, Burrowes and Joan successfully attacked Gibbes indirectly by attacking his animals. “Not being satisfied with their attempt to kill Sir Philip they poisoned his plantation stock instead; upwards of three hundred cattle and fifty horses on his estate being killed.” Gibbes further lost three enslaved people who Burrowes and Joan poisoned on separate occasions.

While obeah ritualists primarily appeared in the Caribbean, similar forms of poisoning involving animals existed among enslaved people in southeastern North America.⁹⁵¹ Numerous archaeological excavations have uncovered animal objects associated with conjure, a form of sacred ritual similar to obeah, such as cowrie shells and bird skulls, for instance, below the site of former plantations from Virginia to Texas.⁹⁵² Archaeological research conducted on Kingsley Plantation in Florida recovered

⁹⁴⁹ John Savage, “Black Magic” and White Terror: Slave Poisoning and Colonial Society in Early 19th Century Martinique.” *Journal of Social History* 40, no. 3 (2007): 635-662; Bernard Moitt, *Women and Slavery in the French Antilles, 1635-1848* (Bloomington: Indiana University Press, 2001), 142.

⁹⁵⁰ “Tales of Old Barbados”, *Journal of the Barbados Museum and Historical Society*, 12 no. 4, (1945): 171-178.

⁹⁵¹ Douglas B. Chambers, *Murder at Montpelier: Igbo Africans in Virginia* (Jackson: University Press of Mississippi, 2005), 69, 141-142, 185-186.

⁹⁵² Patricia Samford, “The Archaeology of African-American Slavery and Material Culture.” *The William and Mary Quarterly* 53, no. 1 (1996): 87-114; Michael T. Lucas, “Empowered Objects: Material

evidence that enslaved people performed ritual sacrifices with chickens in their cabins.⁹⁵³ The enslaved at Kingsley, which included Igbo, Susu, and Wolof-speakers, likely derived from West and West Central African cultural and ethnolinguistic groups that practiced forms of animal sacrifice involving chickens to perform divination and purification rites. Slaves on the plantation raised chickens, among other small livestock, in small yards close to the cabins.

In interviews conducted by the Federal Writers Project across the South during the 1930s, formerly enslaved people and their descendants in the United States recalled the use of animals in conjure practices similar to obeah rituals. May Satterfield of Lynchburg, Virginia, remembered conjurors using “rat veins”, cherry blossoms, and whiskey to make a medical charm.⁹⁵⁴ Virginia Hayes Shepherd of Norfolk recalled a conjure doctor who used “a bottle with a live bug in it” called the “walking boy” to perform conjure.⁹⁵⁵ Marrinda Jane Singleton, also of Norfolk, described “the practice of conjuration” carried out by people taken from the West Indies to Virginia on a plantation that included herbs, roots, and “certain fowl feathers” that were “believed to wuk charms or spells” on people.⁹⁵⁶ John Spencer, of King George County, told an interviewer that enslaved people who practiced conjure used bottles filled with “pieces of snake, spiders, tadpoles, lizards, and other curious substances” to place a curse on their enemies.⁹⁵⁷ W.P. Jacobs of Phoebus, in Elizabeth City County, remembered how an enslaved man on the

Expressions of Spiritual Beliefs in the Colonial Chesapeake Region." *Historical Archaeology* 48, no. 3 (2014): 106-124.

⁹⁵³ James M. Davidson, "'A Cluster of Sacred Symbols': Interpreting an Act of Animal Sacrifice at Kingsley Plantation, Fort George Island, Florida (1814–39)." *International Journal of Historical Archaeology* 19, no. 1 (2015): 76-121.

⁹⁵⁴ Charles L. Perdue, Thomas E. Barden, and Robert K. Phillips, eds., *Weevils in the Wheat: Interviews with Virginia Ex-Slaves* (Charlottesville: University of Virginia Press, 1992), 246.

⁹⁵⁵ Perdue, Barden, and Phillips, *Weevils in the Wheat*, 263.

⁹⁵⁶ Perdue, Barden, and Phillips, *Weevils in the Wheat*, 267.

⁹⁵⁷ Perdue, Barden, and Phillips, *Weevils in the Wheat*, 267.

plantation he lived on caught snakes, “and kept them as pets.”⁹⁵⁸ Whether he practiced conjure is unclear, however the man did defang the animals, fed them liquor, and the overseer “never beat him because he feared” the man would “call out his snakes on him.” In another interview, Emmaline Heard recalled how her father, who was born into slavery in Virginia, learned conjuring from another man, Ned, by watching him craft “little bundles wrapped in white cloth.”⁹⁵⁹ Ned burnt grasshoppers, spiders, scorpions, and the heads of snakes into a powder, and wrapped the creatures in bundles to create protective charms. Conjure workers and root doctors carried on rich diasporic traditions involving Atlantic African beliefs and ideas about animals, including their medical properties and supernatural powers.⁹⁶⁰ Moreover, conjure represented a uniquely African form of environmental knowledge constructed in opposition to European ways of understanding land, nonhuman animals, and the environment.⁹⁶¹

Through obeah and conjure, Atlantic Africans in diaspora and creoles of African descent born in the Americas posed unique epistemological and environmental challenges for whites by crafting bundles, mixtures, and material combinations of animals, plants, and minerals. Animal remains, whether feathers, teeth, hair, skin, or organs, became sources of power when assembled within obeah rituals.⁹⁶² British efforts to halt shamans using animals after Tacky’s War in 1760 failed in large part due to the precedent of

⁹⁵⁸ Perdue, Barden, and Phillips, *Weevils in the Wheat*, 156.

⁹⁵⁹ *Slave Narratives: A Folk History of Slavery in the United States From Interviews With Former Slaves* volume 4, Georgia Narratives, Prepared by the Federal Writers’ Project of the Works Project Administration for the State of Georgia, (Washington: The Library of Congress, 1941), 259-260. See also the file, “Conjuration”, included from page 269 to 281.

⁹⁶⁰ Ras Michael Brown, *African-Atlantic Cultures and the South Carolina Lowcountry* (Cambridge University Press, 2012), 163-164.

⁹⁶¹ Jeffrey Myers, "Other Nature: Resistance to Ecological Hegemony in Charles W. Chesnutt's "The Conjure Woman"." *African American Review* 37, no. 1 (2003): 5-20.

⁹⁶² Rucker, *Gold Coast Diasporas*, 5, 109, 125, 134, 139, 168, 185, 193.

robust obeah networks before the conflict, and the power that obeah continued to afford enslaved people throughout the Caribbean.

Unmerciful Plowmen: Sabotage in the Chesapeake

Unlike obeah ritualists, enslaved laborers in the riverine world of the Chesapeake primarily used animals as targets to attack and harass their enslavers and resist their enslavement by destroying the living machines of a plantation. In Virginia and North Carolina, enslaved people subverted slaveholders by attacking animals, including cattle, horses, and hogs.⁹⁶³ Examining the diary entries of a Virginia planter, Landon Carter, among other sources, reveals how particular individual enslaved people identified animal targets, carried out attacks on animals, and struggled with their enslaver for control over the plantation landscape and the nonhumans that populated it.

After several days of spring rains in early May, 1766, Landon Carter recorded in his diary of the agricultural labors of the enslaved working alongside animals on his plantations in Richmond County that “I find that it is not so much the obstinacy of my steers that won’t break to drawing kindly as the Villainy of Manuel concerned.”⁹⁶⁴ Manuel, who labored as a plowman on Carter’s agricultural estates, or quarters, in the Northern Neck of Virginia, “took up and turned out” one of his enslaver’s steers “because he would not work.” While the enslaver did not directly observe Manuel’s attack on his bovine property, the plowman’s harsh treatment of the animal left it limping and “on the lift ever since.”

⁹⁶³ Alan D. Watson, "North Carolina Slave Courts, 1715-1785." *The North Carolina Historical Review* 60, no. 1 (1983): 24-36; Ulrich B. Phillips, "Slave Crime in Virginia." *The American Historical Review* 20, no. 2 (1915): 336-40.

⁹⁶⁴ Jack P. Greene, *The Diary of Colonel Landon Carter of Sabine Hall, 1752-1778*. Volumes 1 and 2. (Charlottesville: University Press of Virginia, 1965), 296.

Four years later, Carter described how in March, 1770, other enslaved plowmen, perhaps emboldened by Manuel's tactics, began to attack the plantation's living machines. "The cattle," Carter noted, "that have died this year are 8 in Lawson's penn, 5 in Dolmon's, and 2 steers" due to injuries caused by enslaved plowmen, including Manuel and another man, Kit.⁹⁶⁵ At one point, the planter ordered the two men to drive his livestock to his Fork quarter plantation "to be raised where they had plenty of food" to graze. Rather than obey their enslaver, the two men "drove them through the same marsh in the Corn field where each mired and died." Manuel and Kit used their knowledge of the hazardous terraqueous landscape of marshy fields, especially after rains, to indirectly destroy the animals.

The following week, Carter observed one of his draught oxen broke his neck entirely by Manuel's carelessness. He "fed the Creature and then turned him out of the Cowyard" where the animal fell into a ditch "and so brike his neck."⁹⁶⁶ "This is the third draught Steer," Carter lamented, "put to a violent death by that cursed villain." Manuel defended himself by claiming he drove the animals to pasture using a "short cut." In the following weeks, Manuel continued to drive his enslaver's cattle and oxen into ditches, marshes, and other deadly terrain to increase their chances of being severely injured or killed. In addition to his sense of the terrain, Manuel and others exploited how rain, sleet, and snow could be used to "effect a great destruction amongst Creatures of all kinds" to kill or starve them.⁹⁶⁷

⁹⁶⁵ Greene, *The Diary of Colonel Landon Carter of Sabine Hall*, 366.

⁹⁶⁶ Greene, *The Diary of Colonel Landon Carter of Sabine Hall*, 367-368.

⁹⁶⁷ Greene, *The Diary of Colonel Landon Carter of Sabine Hall*, 368.

In April, Carter penned the longest entry in his diary on Manuel's everyday insurrection against his enslaver by killing his bovines with the assistance of the perilous topography of the margins of the plantation landscape.⁹⁶⁸

Mr. Manuel has at last compleated every scheme that he might have in hand to ruin me. Before this winter came in I was possessed of 8 oxen, 4 of them well used to the draft and 4 newly broke. In a little time he contrived that 3 of them should mire and die only because he would not see 4 of them when spelled drove to the fork to be rested along the road over the dam but suffered a rascally boy to drive them over the marsh where they mired. The other he contrived to lame. I constantly allowed 2 bushels of ears besides fodder to feed those 4 that were worked every day they did work and I am certain from the honesty of Ball they had this food. But now, as they were but 4 to work, two horses were allowed to go before them that I might spell them two and two. For my horses I constantly gave half a bushel of shelled Corn every day they worked. In a little time Manuel consigned two of those horses to death and so he has continued behaving till last week when I wanted to Cart out my dung I had neither horses nor Oxen to carry a loa[d].

Carter added that Manuel further failed to instruct his wife, Sarah "the Cowkeeper", to "keep them up in the penn," and so the cattle roamed freely beyond the boundaries of their pen, crushing crops of tobacco and wheat under their heavy hoofs, and later becoming lost from wandering unsupervised. While Manuel and two other enslaved men slowly attempted to wrangle the stray animals, they ultimately failed to retrieve their enslaver's cattle.

After numerous assaults on his animal property, Carter vowed to sell Manuel. "He was once a valuable fellow," he complained to his diary. However, Manuel's crimes became untenable. He turned "thief as before killed beef which was found upon him," and repeatedly injured and killed animals by steering them to their death in ditches, including some "20 or 30 horses and as many draught oxen." "By one barbarity or another he has certainly killed these Creatures as ever he has been concerned with them

⁹⁶⁸ Greene, *The Diary of Colonel Landon Carter of Sabine Hall*, 396-397.

and now I will part with him.”⁹⁶⁹ Despite his complaints, and the staggering losses in livestock, Carter faltered in executing his plans, likely due to his dependence on the otherwise skilled and valuable cattle man. Manuel remained on the plantation.

In July, 1770, Carter scrawled in his diary that a number of “plowmen unmercifull,” including Manuel, repeatedly and clandestinely attacked his oxen and disrupted the timing and success of plowing the tobacco and wheat fields of his Richmond County plantations.⁹⁷⁰ Horses proved to be as vulnerable to their assaults as oxen. Carter noticed that “if I get horses, than they are rode out in the nights by the negroes.” It is possible that Manuel and others used the horses to ride at night and visit family, friends, and even lovers, under the cover of darkness. Or, these men simply found pleasure in riding the horses without the surveillance of Carter and his white underlings. Later that month, Manuel disturbed Carter’s confidence in his pretensions to mastery again by breaking an ox cart loaded with tobacco after driving the machine and the animals leading it into another ditch. “Manuel a Villain,” he wrote, “and must be whipped.”⁹⁷¹

In the spring of 1771, Manuel managed to succeed at destroying another ox at Carter’s Fork quarter estate.⁹⁷² Carter imagined that Manuel killed the animal “for want of care” either by starving it, injuring it, or forcing the creature to founder and perish into a dangerous environmental trap like a muddy ditch. “He first kills them and then turns them there to be fed [found?]”⁹⁷³ It appears the enslaver intuited Manuel’s strategies, yet

⁹⁶⁹ Greene, *The Diary of Colonel Landon Carter of Sabine Hall*, 397.

⁹⁷⁰ Greene, *The Diary of Colonel Landon Carter of Sabine Hall*, 442.

⁹⁷¹ Greene, *The Diary of Colonel Landon Carter of Sabine Hall*, 495.

⁹⁷² Greene, *The Diary of Colonel Landon Carter of Sabine Hall*, 541.

⁹⁷³ Greene, *The Diary of Colonel Landon Carter of Sabine Hall*, 495. The paleography suggestion is Greene’s.

could never decisively catch the plowman in the act of killing livestock. Manuel's engagement with these animals suggests the formation of a rich countercolonial landscape that African Americans exploited for their advantage in the Tidewater.⁹⁷⁴ This concept, developed by the art historian Jill Casid, evokes how Manuel and others drew on particular environmental knowledge to undermine enslavers by manipulating their animals.

Each time Manuel destroyed a portion of his enslaver's bovine wealth or equine sources of muscular energy, waste, and mobility, Carter punished him by ordering a brutal whipping, beating, or solitary confinement in irons. However, Manuel persisted and continued to undermine his enslaver by maiming or killing his animals whenever he found an opportunity.⁹⁷⁵ While Manuel and the other plowmen's particularly violent strategy of attacking animals was less common than other forms of resistance, their intent to harm livestock was by no means exceptional. Johnny, another enslaved man, ignored lambs and calves until they died, and blamed the animal's deaths on cold weather.⁹⁷⁶ Many other enslaved people toiling in the fields and farms around Sabine Hall joined in severing the bonds enslavers hoped to fashion between slaves and animals in Virginia.⁹⁷⁷

Enslaved people starved animals by stealing their food, usually fodder corn and other grains, to weaken their health. Jack, an enslaved man living on the Fork quarter, successfully killed several livestock animals through starvation while enslaved by Carter. In the spring of 1766, Jack reported to his slaveholder that "his Corn was all gone" and

⁹⁷⁴ Casid, *Sowing Empire*, 191-236.

⁹⁷⁵ In 1773, while protecting his daughter Sarah from Carter's violence, Manuel assisted her in hiding from their enslaver for over a week. Three years later, in 1776 at the outset of the American Revolutionary War, Manuel and eight other men fled Carter permanently to join Lord Dunmore's forces. See Greene, *The Diary of Landon Carter of Sabine Hall*, 777, 1051.

⁹⁷⁶ Greene, *The Diary of Colonel Landon Carter of Sabine Hall*, 370.

⁹⁷⁷ Albert H. Tillson Jr, *Accommodating Revolutions: Virginia's Northern Neck in an Era of Transformations, 1760-1810* (Charlottesville: University of Virginia Press, 2010), 113-116.

requested more from the granary reserves to feed the animals under his care. Carter suspected that Jack stole the forty bushels of corn for himself or others, as “He pretends the Cattle and sheep eat it” yet “He has but 6 calves and 15 lambs. 5 cattle have died 92 lambs and 2 oxen which was all he had.”⁹⁷⁸ Despite quantifiable evidence of starvation, the slaveholder failed to prove or prevent Jack’s other attacks.

In 1770, Carter learned from one of his overseers that he “found some shelled Corn as well as eared Corn” for feeding livestock hidden in none other than Manuel’s quarters.⁹⁷⁹ Manuel’s subterfuge “made good my suspicions either of not giving all the Corn he was allowed to the Oxen he drove to the horses or else has robbed me of Corn.” “I thought it to be impossible,” Carter wrote, “that those Creatures should look so poor when they had all along been so well fed.” As a technique of resistance, starving animals further weakened their bodies for labor and rendered livestock prone to injury, abuse, and death.

In an entry from 1771, Carter rode out on horseback to endeavor “if I could to find out the care of my sheep.”⁹⁸⁰ At the time, flocks of sheep around the plantation farms began dying in alarming droves. After conversing with his overseers, some of whom were English and Irish servants he also seldom trusted, he determined that the sheep had died due to covert attacks carried out by the enslaved who “may pretend they fed them, but I cannot believe them.”⁹⁸¹ He learned, for instance, how Rose, an enslaved woman tasked with shelling corn to feed livestock, “did not care to give it to the sheep. So it is, I dare say, every where.” Another enslaved man, Tom, ignored the lambs and sheep the

⁹⁷⁸ Greene, *The Diary of Colonel Landon Carter of Sabine Hall*, 299.

⁹⁷⁹ Greene, *The Diary of Colonel Landon Carter of Sabine Hall*, 376.

⁹⁸⁰ Greene, *The Diary of Colonel Landon Carter of Sabine Hall*, 544.

⁹⁸¹ Greene, *The Diary of Colonel Landon Carter of Sabine Hall*, 545.

slaveholder tasked him with supervising. After several perished from starvation and exposure Carter punished Tom by confining him in irons and ordering an overseer to whip him.⁹⁸² Despite Tom's punishment, the slaves continued to starve other animals, and further eroded their enslaver's sense of control over the free and enslaved subjects he pretended to rule over as a just and benevolent patriarch. At the Fork quarter, George, Johnny, and a "stout Girl", starved lambs, ewes, and yearlings, and used the pretext of "excessive wetness" to kill the animals as they pastured.⁹⁸³

Bondspeople living in the quarters around Sabine Hall on occasion killed animals for their own use as food without their enslaver's consent. This tactic enabled enslaved people to bolster the meager diet of fodder grains they were given, like corn, oats, and barley, with portions of meat, and attempt to close the caloric gap created by their enslavers. In 1777, Carter learned from an overseer and an enslaved man that "Tom and Manuel of Bluff point killed a Sheep."⁹⁸⁴ It is unclear, but likely the men intended to cook and eat the animal as food, or trade the creature to others for goods. Upon apprehending the men, Carter "ordered them to be taken up and tried and, if Manuel will confess it, he shall be cleared as an evidence." Their enslaver decided that "One shall be hanged to terrify the rest." Carter's gruesome punishments and order for execution explains the relatively rare occurrence of animal theft for food on his plantations.

Ignoring the destruction of tobacco crops wrought by roaming livestock became a more common, and less detectable, strategy enslaved people developed to frustrate Carter. Sicely, an enslaved woman and "cowkeeper," frequently neglected the cattle her enslaver charged her with supervising. On one occasion she "let a cow go into the mire

⁹⁸² Greene, *The Diary of Colonel Landon Carter of Sabine Hall*, 547.

⁹⁸³ Greene, *The Diary of Colonel Landon Carter of Sabine Hall*, 385.

⁹⁸⁴ Greene, *The Diary of Colonel Landon Carter of Sabine Hall*, 1109.

below the Barn swamp where she perished.”⁹⁸⁵ Perhaps Manuel encouraged Sicely and others to attempt his tactics involving countercolonial environmental knowledge in their own labor settings. Stray ungulates ignored by enslaved people tasked with caring for them destroyed crops of tobacco by crushing the plants under their hooves. An enslaved man, Jesse, who Carter described in his diary as “a most vile dog,” neglected the livestock under his charge with great effect.⁹⁸⁶ On multiple occasions Jesse was “never to be found with his hogs and they are finding out ways to get into the Corn field.”

Sukey, an elderly woman, exacted retribution against her enslaver for denying her time to visit with her granddaughter and for not providing her grandchildren with enough food by ignoring animals on the plantation. Like Manuel, Sicely, and Jesse, Sukey neglected the livestock she was responsible for overseeing on the plantation. She “turned out all my Cattle” one night, wrote Carter, “on my Cowpen ground which have done me a prodigious mischief” by damaging crop fields and straying away.⁹⁸⁷ Sukey’s actions inspired others to attempt similar forms of resistance camouflaged as carelessness.

Attacks on animals through neglect also included violent plans. During the winter of 1770, enslaved people ignored calves and cattle during a snowstorm, and used the hazardous terrain created by snowfall to kill roaming animals.⁹⁸⁸ Enslaved people also exploited incidents involving animals that appeared coincidental to further their own aims. Upon hearing how “A young bull killed one steer and lamed another yesterday,” Carter learned how the enslaved later ate the steer.⁹⁸⁹ Suspicious that the animal’s death

⁹⁸⁵ Rhys Isaac, *Landon Carter's Uneasy Kingdom: Revolution and Rebellion on a Virginia Plantation* (Oxford: Oxford University Press, 2005), 23.

⁹⁸⁶ Greene, *The Diary of Colonel Landon Carter of Sabine Hall*, 561.

⁹⁸⁷ Greene, *The Diary of Colonel Landon Carter of Sabine Hall*, 762.

⁹⁸⁸ Greene, *The Diary of Colonel Landon Carter of Sabine Hall*, 380.

⁹⁸⁹ Greene, *The Diary of Colonel Landon Carter of Sabine Hall*, 588.

was the result of a cunning plot, Carter worried the incident was a coordinated “contrivance” the enslaved staged for their own benefit. If so, the plan had the double effect of denying their enslaver a laboring draught animal and providing the enslaved community with portions of meat, allowing the slaves to bridge the caloric gap slaveholders created between white and black people in the southeast.⁹⁹⁰

While temporally removed from the eighteenth-century context of Carter’s diary, WPA narratives offer rich evidence of enslaved people’s resistance involving animals. An interview recorded with Fannie Berry, a formerly enslaved woman from Petersburg, Virginia, reveals how enslaved people attacked their enslavers indirectly with animal targets.⁹⁹¹ In her interview, Berry spoke of slave sales, slave patrols, and runaway slaves. Berry also described the plantation mistress, who owned a “dog who could do funny tricks.” While entertaining guests, the mistress instructed the dog to bite Berry’s brother, who would cry as the enslaver’s guests would “laugh an’ have a good time over it.” Disgusted by her brothers’ torture-entertainment, Berry resolved to kill the dog. Secretly, she took the dog into the woods near the plantation, tied a rope around the animal’s neck, slung the rope over a tree branch, and tied the dog high in the tree. Berry returned home, “an’ nobody knows how dat dog got up dat tree like dat.” When someone did find the dog, it had been dead for months. “I ain’t said a word ‘bout it myself,” concluded Berry.

Enslaved people in the West Indies also attacked plantation animals as a means of subverting their enslaver and to defy the legal regimes of island colonies as well. Since 1749, Jamaican law criminalized “the clandestine killing and marking of cattle” by either

⁹⁹⁰ Thomas Andrews, “Beasts of the Southern Wild: Slaveholders, Slaves and Other Animals” in Charles Ball’s *Slavery in the United States*,” in *Rendering Nature: Animals, Bodies, Places, Politics*, edited by Marguerite Shaffer and Phoebe Young, (Philadelphia: University of Pennsylvania Press, 2015), 21-47, 26.

⁹⁹¹ Perdue, Barden, and Phillips, *Weevils in the Wheat*, 45-46.

free black hunters or enslaved Africans on plantations.⁹⁹² In 1760, the Assembly passed stricter legislation to regulate enslaved people's ability to possess or exchange livestock or own horses. On Antigua, one plantation "lost several working Cattle last Crop, some of them owing to the Devilish disposition of the" enslaved.⁹⁹³ As Diana Paton demonstrates through extensive research of the legal records of St. Andrew parish, Jamaica, and other parishes in the colony, many enslaved people illicitly stole sheep, goats, cattle, hogs, and fowl to sell in underground markets throughout Jamaica.⁹⁹⁴ In 1765, enslaved people on Egypt, a sugar estate in Westmoreland parish, killed cattle, raided the fowl house, and let cattle roam in canefields to destroy sugar plants, as targeted acts of resistance.⁹⁹⁵

Paton's study further indicates that enslaved people were often tried and convicted of intentionally abusing or killing animals in ways that were similar to those in Virginia. In a letter to an absentee planter in England, John Fowler an estate manager residing in Martha Brae, in Trelawny parish, Jamaica, reported in 1786 that after conversing with an "Overseer, who seems a well Informed Experienced man has represented, that a Spell of Mules are wanted" on the plantation under his care.⁹⁹⁶ The

⁹⁹² *The Act of Assembly of the Island of Jamaica, to repeal several acts, and clauses of acts, respecting slaves, and for the better Order and Government of Slaves, and for other Purposes; commonly called the Consolidated Act, as Exhibiting at One View Most of the Essential Regulations of the Jamaica Code Noir; which was passed by the Assembly on the 19th day of December 1787, and by the Lieutenant Governor and the Council on the 22d of the said Month. Respectfully communicated to the public by Stephen Fuller, Esq. Agent for Jamaica* (London: Printed for B. White and Son, 1788), 2.

⁹⁹³ David Barry Gaspar, "Working the System: Antigua Slaves and their Struggle to Live," *Slavery and Abolition* 13, no. 3 (1992): 131-135, 142.

⁹⁹⁴ Diana Paton, "Punishment, Crime, and the Bodies of Slaves in Eighteenth-Century Jamaica," *Journal of Social History* 34, no. 4 (2001): 923-954.

⁹⁹⁵ Richard B. Sheridan, "From Chattel to Wage Slavery in Jamaica, 1740-1860," in *The Wages of Slavery: From Chattel Slavery to Wage Labour in Africa, the Caribbean, and England*, edited by Michael Twaddle (New York: Frank Cass and Co., 1993), 13-40, 18.

⁹⁹⁶ John Fowler to James Stothert, 12 November 1786, James Stothert Papers, William L. Clements Library, The University of Michigan.

manager suspected the request came from “the Negroes of Working Old Mules overmuch,” causing either injury or death.

Enslaved people deceived their slaveholders while pretending to care for their animals. In 1791, Thomas Jarvis, an Antigua planter, sold an elderly enslaved man, Fusso, to another planter, William Gunthorpe. Jarvis described Fusso as “a civil, quiet fellow, and has ever been constant and attentive to business.”⁹⁹⁷ After speaking with a plantation doctor employed by Gunthorpe, Jarvis learned the doctor “thought your Cattle had been injured for want of Fusso” to his shock. Jarvis wrote to Gunthorpe that he could not fathom “the Idea suggested of your Cattle being injured” by Fusso, who likely maimed the animals either to be returned to Jarvis or to resist his new enslaver. Whether by directly attacking animals or using countercolonial environmental knowledge, enslaved people’s decision to kill their enslaver’s animals demonstrates a destructive relationship that succeeded in eroding slaveholders’ confidence as slaveholders possessing absolute authority.

Enslaved people in the Chesapeake also stole animals for their own purposes, including increasing their personal mobility. Several of the men Carter held in bondage used their enslaver’s horses during the night as their own living machines for riding and moving between plantation spaces. In an entry from 1771, the planter wrote how “Peter the plowman, a night Walker, really sick. I have discovered he rides my plow horses in the night.”⁹⁹⁸ Whether Peter rode the horses he labored alongside during the day at night to meet with other enslaved men and women under the moonlight, or for his own

⁹⁹⁷ Thomas Jarvis to William Gunthorpe, April 1791, Jarvis Family Papers, Box 2, William L. Clements Library, The University of Michigan.

⁹⁹⁸ Greene, *The Diary of Colonel Landon Carter of Sabine Hall*, 588.

enjoyment and pleasure, is unclear from the diary. However, his defiance encouraged others living around Sabine Hall.

Around the same time as Peter's night rides, Carter discovered that another man, Pater, who appeared during a day's work in 1771 drowsy and lethargic due to night riding. "I must suppose," the planter suspected, "that he was out all night upon one of my cart horses."⁹⁹⁹ Other references to night riding appear in similarly opaque entries. Peter, along with another man, Tom, stole their enslaver's horses for night riding on several occasions. Late one evening in 1775, Carter's son in law, Reuben Beale, "Caught Mulatto Peter on the gray Colt Parker rides and Johny's son on the Rippon Hall horse."¹⁰⁰⁰ Carter ordered Tom to be whipped, and Peter to be "curiously handled."¹⁰⁰¹ Peter's punishment is unclear, however it is likely that it involved a form of torture. The following year, Carter's grandson caught another man, Johnny, "night riding a horse" despite being earlier "locked up and tied neck and heels with this hands behind him, was broke out and has not been seen or heard since."¹⁰⁰²

Night riding, like other forms of resistance with animals in the Chesapeake, involved enslaved people's use of countercolonial environmental knowledge. The actions taken by fugitive black riders, however, were not limited or exceptional to the men held by Landon Carter in Richmond County.

Riding Away: Fugitive Human-Equine Networks

⁹⁹⁹ Greene, *The Diary of Colonel Landon Carter of Sabine Hall*, 579.

¹⁰⁰⁰ Greene, *The Diary of Colonel Landon Carter of Sabine Hall*, 927.

¹⁰⁰¹ At this time, I am unable to determine what form of punishment Peter endured given the absence of description in the diary.

¹⁰⁰² Greene, *The Diary of Colonel Landon Carter of Sabine Hall*, 1063.

Kate fled from her enslaver's estate along Rock Creek near Georgetown, Maryland in early October, 1755.¹⁰⁰³ She evaded the pursuit of Henry Threlkeld, who had purchased her in June that year from another slaveholder in Anne Arundel County. Kate departed after being held by Threlkeld in bondage for five months. An advertisement in the *Maryland Gazette* offering a reward for her recapture reported that "She took with her a small Black Horse, branded on the near Buttock with a large S." The text described Kate as a "pert pallavering" woman, approximately thirty years old, well dressed, and attempting to pass as a free person of color. The copy added she "is a great Rambler" and well known in Calvert County. "It is supposed," the advertisement continued, that an enslaved man named Jemmy, perhaps her lover or kin, aided Kate in escaping with "the Assistance and Contrivance of some other" resourceful enslaved people "in the neighbourhood where she was bought."

In preparing for her flight from enslavement, Kate assembled her own powerful network of human allies and appropriated her enslaver's prized nonhuman possession, his horse, to improve the odds of her bid for self-liberation as she rode away from Rock Creek that fall. Kate's plans, while not typical of people who escaped from plantations or the households of slaveholders, were also not exceptional. Between 1730 and 1791, slaveholders in Britain's American colonies and the early republic of the United States, paid for nearly one hundred advertisements in newspapers from Maryland to Jamaica offering rewards for the arrest of enslaved men and women who stole horses and rode away.

¹⁰⁰³ Lathan A. Windley, *Runaway Slave Advertisements*, vol. 2, Maryland (Westport: Greenwood Press, 1983), 26-27.

Enslaved people abducted horses to rapidly flee plantations, navigate difficult terrain, reunite with lovers and family, and move beyond the surveillance and authority of white slaveholders and overseers. Plundering horses from slaveholders was an impressive tactic by which African Americans created their own networks of mobility with human and nonhuman partners, including other enslaved people, free people of color, and equines. On horseback, people of African descent forged rival geographies, or ways of knowing and using southern space, in eighteenth century British America in opposition to their enslaver's spatial strategies for containment.¹⁰⁰⁴ Fugitive black riders created clandestine routes between plantation spaces using British and Native American roads, rivers, creeks, woods, and other southern environments with the aid of their four-footed living machines.¹⁰⁰⁵

When enslaved men and women took the reins from their enslavers, they mounted a substantial challenge to the cultural and political foundations of the British Empire, and later the United States, on three fronts. First, black equestrians struck out at the intellectual underpinnings of slavery including ideas justifying the enslavement of Africans who whites believed to be irrational. According to one writer, Africans were “of a more servile Carriage, and slavish Temper” and “by Nature cut out for hard Labour and Fatigue.”¹⁰⁰⁶ Second, riders undermined an aristocratic ideology that defined Britain's imperial identity through assimilating, improving, and disciplining foreign subjects,

¹⁰⁰⁴ Stephanie Camp, *Closer to Freedom: Enslaved Women and Everyday Resistance in the Plantation South* (Chapel Hill: University of North Carolina Press, 2004), xx-xxi. Camp herself noted how enslaved women and others stole horses to escape plantations during the American Civil War, 120.

¹⁰⁰⁵ Clay McShane, and Joel Tarr. *The Horse in the City: Living Machines in the Nineteenth Century* (Baltimore: Johns Hopkins University Press, 2007).

¹⁰⁰⁶ Hugh Jones, *The Present State of Virginia* (London: Printed for J. Clarke, 1724), 3-7, 38. On white ideas about European rationality versus African irrationality see: Ibram X. Kendi, *Stamped From the Beginning: The Definitive History of Racist Ideas in America* (New York: Random House, 2017), 79-92.

including people and animals.¹⁰⁰⁷ As Donna Landry explains, beginning in the late sixteenth century, English elites fashioned a set of cultural values around mastering Arabian horses, through which they demonstrated their capability to subdue nonhuman nature to their dominion. Third, African Americans threatened a form of English masculinity bound up with ideals embedded in equestrianism including kinesthetic and bodily autonomy, and sovereignty over the natural world. Monica Mattfeld places this “centauric” identity at the center of English conceptions of liberty in the early modern world.¹⁰⁰⁸

Planters in British America put these horse-human values into action when they rode out on horseback across their estates and used the animal’s speed, bulk, and verticality to intimidate and surveil enslaved people toiling on the ground. In the West Indies, planters and overseers further used horses to hunt and recapture people committing marronage. Richard Ligon’s 1657 map of Barbados, for instance, depicts a white man on horseback pursuing two enslaved people on foot, firing his gun directly towards them.¹⁰⁰⁹ Slaveholders further linked the two in their minds as related subjects

¹⁰⁰⁷ Donna Landry, *Noble Brutes: How Eastern Horses Transformed English Culture* (Baltimore: Johns Hopkins University Press, 2008), 1-14, 164-174; Donna Landry, “English Brutes, Eastern Enlightenment.” *The Eighteenth Century* 52, no. 1 (2011): 11-30.

¹⁰⁰⁸ Monica Mattfeld, *Becoming Centaur: Eighteenth-century Masculinity and English Horsemanship*. (University Park: Pennsylvania State University Press, 2017); Monica Mattfeld, “‘Undaunted all he views’: The Gibraltar Charger, Astley’s Amphitheatre and Masculine Performance.” *Journal for Eighteenth-Century Studies* 37, no. 1 (2014): 19-36; T.H. Breen, “Horses and Gentlemen: The Cultural Significance of Gambling among the Gentry of Virginia.” *The William and Mary Quarterly* 34, no. 2 (1977): 239-57. Katherine C. Mooney, *Race Horse Men: How Slavery and Freedom Were Made at the Racetrack* (Cambridge: Harvard University Press, 2014), 6-7. Mooney notes that in many West African societies horsemanship denoted a particular mastery over nonhuman nature: “The kings of the Yoruba and the Hausa boasted massive stable complexes, over which slaves presided. Such slaves were valued members of the royal household, supervisors of large staffs, intimates of princes.

¹⁰⁰⁹ Jerome S. Handler, “Escaping Slavery in a Caribbean Plantation Society: Marronage in Barbados, 1650s-1830s.” *New West Indian Guide* 71, no. 3/4 (1997): 183-225.

through the physical practice of branding.¹⁰¹⁰ Moreover, as slave patrols on horseback began to proliferate, overseers and other white servants policed the boundaries of the plantation south in the service of slaveholders.¹⁰¹¹ Enslaved people resisted patrollers on horseback by tying grape vines together, laying the vines on a road, and waiting for riders to approach until they pulled the vines tight to “tangle ‘em up an’ cause de horses to stumble an fall” and break their legs.¹⁰¹²

However, just as slaveholders used horses as machines to extend their own mobility and recapture runaway people, enslaved men and women could also use horsepower for their own ambitions and upset the envirotechnical boundaries planters made with equines.

Black riders asserted their own will and visibly contradicted racist ideas with their formidable bodies and minds. Men and women like Kate, I argue, tested and disputed white supremacist beliefs and the material limits of plantation spaces by severing their bonds with slaveholders, appropriating their equine property, and riding away. These men and women overturned the vertical arrangements of slavery and made new spaces for themselves.¹⁰¹³

Considering the significance of an enslaved person’s decision to steal a slaveholder’s horse deepens an ongoing conversation between scholars of envirotechnical

¹⁰¹⁰ Gwenda Morgan, and Peter Rushton. "Visible Bodies: Power, Subordination and Identity in the Eighteenth-Century Atlantic World." *Journal of Social History* 39, no. 1 (2005): 39-64; Simone Browne, *Dark Matters: On the Surveillance of Blackness* (Durham: Duke University Press, 2015), chapter 3, “Branding Blackness.”

¹⁰¹¹ Sally E. Hadden, *Slave Patrols: Law and Violence in Virginia and the Carolinas* (Cambridge: Harvard University Press, 2001), 109; Walter Johnson, *River of Dark Dreams: Slavery and Empire in the Cotton Kingdom* (Cambridge: Harvard University Press, 2013), 222-228.

¹⁰¹² Perdue, Barden, and Phillips, *Weevils in the Wheat*, 93, 290, 294.

¹⁰¹³ Geographer Peter Adey argues that “hierarchies of verticality” reflect social hierarchies of status and class, and materialize in how people “higher up in the hierarchies of class may literally come to enjoy spaces higher up above the ground.” Peter Adey, *Mobility*, 2nd edition (New York: Routledge, 2017), 121.

history and the geography of the African diaspora.¹⁰¹⁴ Enslaved people used horses to join with family and lovers, create networks of mobility with other free and enslaved people, challenge racist beliefs surrounding African irrationality, and violently assert their own humanity.¹⁰¹⁵

Enslaved men stole horses to reunite with their wives, fathers and mothers, and other kin in British America. In the spring of 1732, Owen, an man living on a plantation near Goose Creek, South Carolina, rode away from his enslaver on a “bay colour’d Horse, which had a white Ring about his Neck.”¹⁰¹⁶ In an advertisement printed in the *South-Carolina Gazette*, the slaveholder explained that Owen would likely travel to his wife, who lived enslaved on another estate in the colony.

Cuffee similarly escaped a plantation in Annapolis in 1749 with the assistance of “a small Bay Mare.”¹⁰¹⁷ Cuffee stole away with “a broad cloth Coat with broad metal Buttons, dark colour’d German Serge Breeches with metal buttons, an Irish Linnen Shirt, a white Cap, and an old Beaver Hat.” Robert Swan, his enslaver, furthermore reported in the *Maryland Gazette* that Cuffee “took with him a small Bay Mare,” and may have traveled southwest to Piscataway, Prince George’s County, “where he has a Wife.”

That same year, Peter, described as being “between a mulato and mustee,” escaped from his enslaver in South Carolina by taking a “young red roan gelding of great

¹⁰¹⁴ Judith Carney, *Black Rice: The African Origins of Rice Cultivation in the Americas* (Cambridge: Harvard University Press, 2001); Andrew Sluyter, “The Role of Black Barbudans in the Establishment of Open-Range Cattle Herding in the Colonial Caribbean and South Carolina.” *Journal of Historical Geography* 35, no. 2 (2009): 330-349; Judith Carney, “‘The Mangrove Preserves Life’: Habitat of African Survival in the Atlantic World.” *Geographical Review* 107, no. 3 (2017): 433-451.

¹⁰¹⁵ Kevin Hutchings, *Romantic Ecologies and Colonial Cultures in the British Atlantic World, 1770-1850* (Montreal: McGill-Queen's University Press, 2009), chapter 2, “Race and Animality in the British Atlantic World”, 50-69.

¹⁰¹⁶ Lathan A. Windley, *Runaway Slave Advertisements: A Documentary History From the 1730s to 1790*, vol.3 *South Carolina* (Westport: Greenwood Press, 1983), 2.

¹⁰¹⁷ Lathan A. Windley, *Runaway Slave Advertisements: A Documentary History From the 1730s to 1790*, vol.2 *Maryland* (Westport: Greenwood Press, 1983), 10.

spirit, about 13 hands high, 5 years old next spring, with a blaze in his face, a roman nose, a short tail, and 3 white feet, and branded on the mounting buttock K.”¹⁰¹⁸ Peter used the animal’s speed to substantially increase his own mobility, as a slaveholder described him as being “remarkable for limping, his right thigh having been broke near two years since.” After escaping the plantation, another enslaved man betrayed Peter’s confidence by informing their enslaver that he “supposed he will proceed alone, either to some of the Indian nations, Georgia, St. Augustine, or the Northward;” though the slaveholder believed Peter might seek refuge near Santee, where his wife lived, Pedee, where he could find friends, or further at Four Holes, Saluda, or New Windsor. The spirited gelding afforded him significant locomotive range across the south. Given Peter’s multi-ethnic status, it is likely he could have made his way to his wife or family through Native American trading roads or paths constructed by other fugitive maroons. It is also possible he fled to St. Augustine, knowing his chances for freedom would be greater in free black settlements in the borderlands of New Spain such as Gracia Real de Santa Teresa de Mosé.¹⁰¹⁹

In the spring of 1755, Cain, a man formerly held in bondage as a coachman in a slaveholder’s service, fled the town of Brandon in Prince George County, Virginia.¹⁰²⁰ His enslaver, Colonel Nathaniel Harrison, described Cain as a tall, elderly, “smooth-tongued Fellow”, known for his guile. Cain traveled south in pursuit of a woman “belonging to Major Thomas Hall” whom he “used to visit as a Wife.” “He took with

¹⁰¹⁸ Windley, *Runaway Slave Advertisements*, vol.3, *South Carolina*, 94.

¹⁰¹⁹ Peter H. Wood, *Black Majority: Negroes in Colonial South Carolina from 1670 through the Stono Rebellion* (New York: WW Norton & Company, 1996) 304-305; Jane Landers, "Gracia Real de Santa Teresa de Mose: A Free Black Town in Spanish Colonial Florida." *The American Historical Review* 95, no. 1 (1990): 9-30.

¹⁰²⁰ Lathan A. Windley, *Runaway Slave Advertisements: A Documentary History From the 1730s to 1790*, vol.1 *Virginia and North Carolina* (Westport: Greenwood Press, 1983), 32.

him”, read an advertisement submitted in the *Virginia Gazette*, “a dark-grey Mare, low in Flesh, paces well, and branded on the Buttock and Shoulder, but can’t remember the Brand.” In addition, Cain pilfered a fine “Country-made Saddle with Leather Housing”, a pair of boots, a dark riding coat, a new white jacket, “Breeches, Oznabrig Shirts, and Plenty of other Apparel.”

Owen, Cuffee, Peter, and Cain used horses to elude their enslavers, and subvert their pretensions to patriarchal authority. Moreover, in deciding to break apart the intended horse-human relationships of slavery in Britain’s colonies, these men used the animals to bridge the spatial distance white planters created to separate, subdue, and discipline husbands and wives disunited on different plantations.¹⁰²¹

Advertisements involving fugitive women stealing horses appeared with less frequency in colonial newspapers in the British Atlantic. However, several records document how women disrupted horse-human relations under slavery to increase their own mobility and bodily autonomy. An Igbo woman in St. Andrew parish, Jamaica, for instance, stole a “young bay horse” while running away in the spring of 1730.¹⁰²² A pen-keeper in Liguanea caught the woman and the horse, and advertised her arrest in the *Weekly Jamaica Courant* in June. The advertisement added that whomever could “prove their just right, and describe her marks” could claim the woman and the animal from their captor.

¹⁰²¹ Emily West, *Chains of Love: Slave Couples in Antebellum South Carolina* (Urbana-Champaign: University of Illinois Press, 2010), 30.

¹⁰²² “24 June, 1730, *Weekly Jamaica Courant*”, in *Runaway Slaves in Jamaica (I): The Eighteenth Century*, edited by Douglas B. Chambers, (Hattiesburg: University of Southern Mississippi, 2013), digital humanities project.

In October 1734, Flora, an enslaved woman on James Island, South Carolina, fled from her enslaver's estate with a horse.¹⁰²³ The slaveholder described in his advertisement in the *South-Carolina Gazette* the scar on Flora's forehead, and reported that she had been seen around Charleston. He added that as she escaped she stole from a neighbor's stable "a Horse marked EP on the mounting shoulder." The horse could be recognized by his "lost one eye, a star in his face, with some white running from it toward his nose," and his black and chestnut-colored coat. Flora's enslaver offered a reward of £3 for whoever captured her, and thirty shillings for the horse. The following year, an enslaved woman named Hagar fled from her enslaver, a house and ship painter in Charleston, who advised readers that she might travel to Johns Island or further west to the Edisto River.¹⁰²⁴ Dressed in a "blue negro cloth gown," Hagar escaped mounted on "a black horse about 13 hands high, branded on the mounting shoulder DB, and on the off buttock EI." Hagar's enslaver offered the same reward for whoever apprehended her or the horse: £4. More than the actions of enslaved men, the decision to steal horses by the Igbo woman, Flora, and Hagar, amounted to a significant gendered critique of an ideology that situated horsemanship as the exclusive province of free, white men. Astride their horses, these women visibly challenged white beliefs about the proper place of black women in white settler society using their bodies and instantiating their own relationships with animals.

Men and women escaping together appear in the archives of runaway advertisements alongside equines as well. Andrew and Moll, who may have been

¹⁰²³ Windley, *Runaway Slave Advertisements*, vol. 3, *South Carolina*, 11.

¹⁰²⁴ Windley, *Runaway Slave Advertisements*, vol. 3, *South Carolina*, 118; Jeanne A. Calhoun, Martha A. Zierden, and Elizabeth A. Paysinger. "The Geographic Spread of Charleston's Mercantile Community, 1732-1767." *The South Carolina Historical Magazine* 86, no. 3 (1985): 182-220.

romantic partners or family, stole a horse as they ran away from their enslaver's plantation on the Ashley River in South Carolina in 1751.¹⁰²⁵ In his advertisement alerting his neighbors of their flight, the slaveholder described Andrew, age 40, as speaking "indifferent English", and Moll, age 30, as a dissembling, persuasive woman possessing "a most artful knack of framing and delivering a story" and capable of expert deception. Perhaps it was Moll who convinced Andrew to steal the slaveholder's horse. Their enslaver valued Moll the most, and he posted a reward of £3 for whoever brought her to his plantation, while only 40 shillings each for whoever captured Andrew or the horse.

Many runaway advertisements indicate the existence of extensive networks of support between enslaved people in the American South. In the fall of 1739, for instance, three enslaved men—England, Prosper, and Prince—ran away together from their enslaver's plantation in Goose Creek. Prince, who an advertisement in the *South Carolina Gazette* described as "Mustee," made his escape weighed down by "an Iron round one leg" and also stole from his enslaver's stable "a large Bay natural pacing Stallion, branded on the Mounting Shoulder IW." The three men, and the stallion, walked and rode west toward Dorchester where they intended to rendezvous with Prince's father.¹⁰²⁶

In 1757, a slaveholder in Charleston put out an advertisement for two men, Will and Harry, who escaped his plantation and took "with them an old saddle and 2 bridles, also 2 horses, one a pretty large dark gelding, with a switch tail, paces slow, and branded on the buttock BLP in one; the other a small likely bay mare, with a switch tail, paces

¹⁰²⁵Windley, *Runaway Slave Advertisements*, vol. 3, *South Carolina*, 109.

¹⁰²⁶Windley, *Runaway Slave Advertisements*, vol. 3, *South Carolina*, 38.

slow.”¹⁰²⁷ Perhaps due to exposure to the frigid environment of winter, or some brutal form of torture or punishment, Will “lost all his toes on one foot”, which might indicate why he persuaded Harry to join him and assist him in stealing the horses and fleeing South Carolina.

In September 1760, a slaveholder living near Rock Creek, Maryland, announced in the *Maryland Gazette* how “a likely well-made Mulatto Fellow” named Tom fled his enslaver’s estate.¹⁰²⁸ In his flight, Tom purloined a “Check Shirt, and Cotton Jacket and Breeches” and a “black horse about 14 Hands high, branded very plain on the off Thigh CF.” Anthony Holmead, the slaveholder, mentioned that Tom “has some Accomplices, and may possibly change his Name, and endeavour to pass for a Freeman.”

Two brothers, Peter and Joe, fled their enslaver’s plantation in Amelia Township, South Carolina, on the southern banks of the Congaree River, in November 1762.¹⁰²⁹ An advertisement in the *South Carolina Gazette* described the men as skilled tradesmen—valuable for their craft as “shoe-makers, tanners, sawyers and jobing carpenters”—and for being “remarkably sensible”. In addition to the clothes they carried, Peter and Joe “took with them two black horses” as they departed.

On occasion, enslaved people of African descent fled plantations and conspired to steal horses in collaboration with English or Irish servants. In 1768, a planter from Loudoun County, Virginia, posted an advertisement in the *Maryland Gazette* for the capture of an “English Convict Servant” and an enslaved man named Jack.¹⁰³⁰ The slaveholder mentioned that Jack “lost the greatest Part of his Toes with the Frost” and

¹⁰²⁷ Windley, *Runaway Slave Advertisements*, vol. 3, *South Carolina*, 151.

¹⁰²⁸ Windley, *Runaway Slave Advertisements*, vol. 2, *Maryland*, 38.

¹⁰²⁹ Windley, *Runaway Slave Advertisements*, vol. 3, *South Carolina*, 223.

¹⁰³⁰ Windley, *Runaway Slave Advertisements*, vol. 2, *Maryland*, 72-73.

was a “brisk lively Fellow.”¹⁰³¹ Jack and the anonymous English man “stole out of my Stable, Two Horses, one a bay, about 14 Hands high, shod before, has a Star in his Forehead, hanging Mane and Switch Tail, Brand not known; the other a large sorrel Horse, shod all round, has a Star in his Forehead, and goes well” and a “small grey Horse.” The planter concluded that the servant might have “black’d themselves, as there was some Coal and Tallow found in a Kettle of theirs.” Jack’s association with the servant attests to the possibility of intersecting free, slave, and human-animal relations. However, while Jack’s temporary alliance with this white servant poses an intriguing case, such partnerships were relatively rare.

In another instance, three men—Sam, Charles, and Paul—ran away from a plantation on the Ogeechee River, Georgia, in 1774 with a “black mare, about 14 hands high, with a star on her forehead.”¹⁰³² While it would have been unlikely for all three to ride the mare together, perhaps one used it to scout ahead for white travellers or patrols nearby while the others walked. Or perhaps the men sold or traded the horse illicitly on the road.

Stealing multiple horses while escaping plantations perhaps offered fugitive riders both mobility, mobile goods for trading, and the means to assist others in riding away. In the fall of 1741, an enslaved man named Cudgoe stole away from his enslaver’s plantation in Goose Creek.¹⁰³³ Cudgoe’s irate slaveholder advised his fellow planters and slave patrols in the *South-Carolina Gazette* that he took with him “a large strawberry

¹⁰³¹ On slavery, frigid environments, and disfigurement in Maryland see: Tony C. Perry, “In Bondage When Cold Was King: The Frigid Terrain of Slavery in Antebellum Maryland.” *Slavery & Abolition* 38, no. 1 (2017): 23-36.

¹⁰³² Lathan A. Windley, *Runaway Slave Advertisements: A Documentary History From the 1730s to 1790*, vol.4 *Georgia*, (Westport: Greenwood Press, 1983), 52.

¹⁰³³ Windley, *Runaway Slave Advertisements*, vol. 3, *South Carolina*, 50.

rhone Mare and her Colt with one Eye.” One year later, Cudgoe and his horses continued to elude capture. The Goose Creek planter, who submitted the advertisement describing Cudgoe and offering a reward for his arrest, added that since his escape someone, possibly the fugitive rider, further carried away “two white trotting horses” from his neighbor’s stables.

In the winter of 1756, an enslaved man named Ketch used the opportunity of an errand involving horses to commit marronage.¹⁰³⁴ Ketch’s enslaver, a reverend in Augusta, Georgia, tasked him with traveling with “2 horses, the one a bright sorrel, the other a grey (both trotters)” from Charleston to the estate of Peter Taylor in Goose Creek. It is unclear what the nature of his business was with Taylor, however the Reverend Copp expected Ketch to return to Charleston “with the said horses.” Rather than perform his duty faithfully, Ketch stole the two trotters en route from Charleston for his own purposes. Copp fulminated in the advertisement he submitted to the *South-Carolina Gazette* that Ketch was a “cunning fellow” who possibly drove the horses south to James Island to find his father, or rode westward to St. George where his grandmother lived.

People who stole multiple horses possibly used the animals to move between overland routes and waterways. In 1762, a slaveholder in Calvert County, Maryland, disclosed that an enslaved man, Sam, had fled his estate.¹⁰³⁵ Thomas Reynolds, his enslaver, described Sam as forty years old, a skilled carpenter and cooper, “and has more Sense than Honesty.” In addition, Sam travelled with “a Mare and Horse which he calls his own.” Reynolds supposed Sam fled south toward Virginia, and added that he

¹⁰³⁴Windley, *Runaway Slave Advertisements*, vol. 3, *South Carolina*, 140.

¹⁰³⁵Windley, *Runaway Slave Advertisements*, vol. 2, *Maryland*, 46.

“understands going by Water”, which suggests Sam’s familiarity with riverine and maritime transport.

In February 1764, an enslaved young man named Ben held at the Baltimore Iron Works on the Patapsco River fled his bondage under unusual circumstances.¹⁰³⁶ In addition to his clothes, Ben took with him “A black Stallion... a natural Pacer, hanging Mane, and short Tail. A dark brown Gelding, about 14 Hands high, shod round, hanging Mane, and short bob Tail...A grey Gelding, of the English running Breed, near 15 Hands high, gallops and trots well.” While the gelding appears to be a racehorse, it is likely Ben worked with the other two who were described as wagon horses at the ironworks.¹⁰³⁷ The advertisement for Ben and the three horses offered a reward of a £5 for the capture of Ben and fifty shillings each for the horses.

People of African descent continued to partner in stealing horses to flee from enslavers through the American Revolutionary War.¹⁰³⁸ Two men, Abraham and Lewis, escaped on horseback from their enslaver in New Bern, North Carolina, in 1778 in the midst of the war.¹⁰³⁹ The slaveholder in New Bern speculated that the men would “keep together,” change their names, and attempt to pass as free men as they traveled on the horse toward South Carolina “to enter on board some vessel, in order to make their escape to the West Indies.” Abraham planned to seek his family in the Dutch colony of Sint Eustatius, and his tactics reveal how enslaved people imagined connecting terrestrial and maritime space with animals.

¹⁰³⁶ Windley, *Runaway Slave Advertisements*, vol. 2, *Maryland*, 53.

¹⁰³⁷ While the archive is silent on Ben’s life after this moment, I believe it is likely he offered the other two horses to family members or friends also pursuing their liberation.

¹⁰³⁸ Cassandra Pybus, *Epic Journeys of Freedom: Runaway Slaves of the American Revolution and their Global Quest for Liberty* (Boston: Beacon Press, 2006), 47-48.

¹⁰³⁹ Windley, *Runaway Slave Advertisements*, vol. 1, *Virginia and North Carolina*, 449.

Enslaved people in the West Indies rarely stole multiple horses while escaping their enslavers. An advertisement in the *Cornwall Chronicle* appearing in July 1783, advertised that a “mulatto man slave” named Dan escaped the prison in Saint Ann parish, Jamaica, that spring.¹⁰⁴⁰ The slaveholder who held Dan in bondage at Drax Hall suggested he may have been in hiding at another one of the slaveholder’s smaller estates. “He is a dangerous fellow,” the advertisement read, “goes armed, and is supposed to have stolen two horses since he made his escape.” Dan used his enslaver’s equine mobility to significantly increase his own, in particular because he lived with a disability that was the result of a brutal punishment. The advertisement described how Dan withstood having “his leg cut off for robbing the late Mr. John McDonald, then overseer of Drax Hall; information has been received, that since his escape, he uses a neat cork leg and wears trowsers.”

Advertisements offer several examples of slaveholders begrudging recognition of fugitive black riders’ intelligence and ability to outwit their pursuers. One advertisement from 1746 described how a young man named Stephen stole a gray horse from his enslaver in King William County, Virginia.¹⁰⁴¹ The advertisement noted Stephen “is very artful and cunning.” Ben, an enslaved man in Gloucester County, Virginia, was described as possessing “a smooth Tongue, and a very good Knack at telling a Story”, which, along with a horse and his own assertiveness, assisted him in his escape.¹⁰⁴²

In an advertisement involving a man named Peter who fled the Bush River Furnace in Baltimore, an operator at the furnace complex noted Peter rode “a small Grey

¹⁰⁴⁰ “12 July 1783, *Cornwall Chronicle*”, in *Runaway Slaves in Jamaica (I): The Eighteenth Century*, edited by Douglas B. Chambers, (Hattiesburg: University of Southern Mississippi, 2013), digital humanities project.

¹⁰⁴¹ Windley, *Runaway Slave Advertisements*, vol. 1, *Virginia and North Carolina*, 18.

¹⁰⁴² Windley, *Runaway Slave Advertisements*, vol. 1, *Virginia and North Carolina*, 32-33.

Gelding” south toward Yorktown.¹⁰⁴³ The slaveholder added that Peter “talks good English, and will almost deceive any one by his crafty Lies.” In 1777, a subscriber to the *Maryland Journal and Baltimore Advertiser* in Alexandria submitted an advertisement regarding an enslaved man, Jack, who stole a four-year old “bright bay Horse” as he fled.¹⁰⁴⁴ The advertisement also warned that Jack “is a smooth plausible fellow,” who would present himself as a free man.

While advertisements offer an important window onto how enslaved people used horses for their own mobility, the emotional relationship between enslaved people and equines is difficult to explore in detail. Fragmentary evidence from the WPA Slave Narrative Collection offers some evidence of the kinds of affective formations or bonds enslaved people created with horses. In 1937 John Petty, a formerly enslaved man from Spartanburg, South Carolina, recalled learning to ride a horse under slavery. When he knew that neither his enslaver nor other slaves were watching, John would secretly enter into the stable of one horse, Max, to feed and play with him for hours at a time. “None of them never knowed 'bout the good times that me and Max used to did have.”¹⁰⁴⁵

Enslaved men and women appropriated horses for their own mobility in contradiction to the enslaver’s ideology. Horsepower enabled fugitive equestrians the speed to rapidly escape plantations, reunite with distant kin, navigate southern landscapes and waterscapes, and stake out their own ulterior networks of support. In doing so, they tested the limits of a plantation empire founded on slavery and ideals of patriarchal

¹⁰⁴³ Windley, *Runaway Slave Advertisements*, vol. 2, *Maryland*, 48. On Webster’s role in the furnace see: James M. Swank, *History of the Manufacture of Iron in All Ages* (Philadelphia: The American Iron and Steel Association, 1892), 253.

¹⁰⁴⁴ Windley, *Runaway Slave Advertisements*, vol. 2, *Maryland*, 198-199.

¹⁰⁴⁵ Federal Writers Project, *South Carolina Slave Narratives: A Folk History of Slavery in the United States from Interviews with Former Slaves*, vol. 14 (United States Work Projects Administration, 1938), 263-267.

mastery over nonhuman nature. Horse-human modes of resistance, however, were not unique to the British Atlantic, as enslaved people of African descent in French and Spanish colonies used horses in a similar fashion.¹⁰⁴⁶ Resistance with animals took other forms as well, including the decision by fugitive Africans to maim the horses of English settlers in British America and the borderlands surrounding New Spain.¹⁰⁴⁷ These and other creative interactions illuminate how African Americans built powerful human and nonhuman alliances in opposition to slavery.

Conclusion

Enslaved people created their own networks with animals as they resisted their enslavement and sought to unmake the human-animal relations that enslavers labored to build and enforce in the colonial British Atlantic world. The forms of resistance that existed in this world incorporated a sophisticated critique of the socio-environmental ambitions of enslavers throughout the empire.

Ritualists in the West Indies, such as Jack and his compatriots in Jamaica, produced obeah bundles with animal teeth, hair, feathers, bones, and skin to draw out nonhuman forces in opposition to their enslavers. Obeah rites, including oathing ceremonies, further bound diasporic Africans in alliance against the slave societies of the English Caribbean. In the Tidewater Chesapeake, enslaved people like Manuel and Sicely severed their bonds of labor with livesotck by driving draft animals into steep ditches to

¹⁰⁴⁶ M.L.E. Moreau de Saint-Méry, "The Border Maroons of Saint-Domingue: Le Maniel." In *Maroon Societies: Rebel Slave Communities in the Americas*, edited by Richard Price, 107-34, (Baltimore: The Johns Hopkins University Press, 1979); William H. Dusenberry, "Discriminatory Aspects of Legislation in Colonial Mexico." *The Journal of Negro History* 33, no. 3 (1948): 284-302.

¹⁰⁴⁷ Stephanie M.H. Camp, "The Pleasures of Resistance: Enslaved Women and Body Politics in the Plantation South, 1830-1861." *The Journal of Southern History* 68, no. 3 (2002): 533-572, 553; Landers, "Gracia Real de Santa Teresa de Mose", 19, 23.

their death, surreptitiously starving cattle, and ignoring roaming sheep and pigs as they trampled over tobacco plants. Fugitive riders like Kate and the unnamed Igbo woman, moreover, stole their enslaver's horses to attain increased levels mobility, and created their own networks using equines, paths, creeks, and woods, to move between spaces, reunite with family and lovers, and escape their bondage.

By severing the human-animal relations that slaveholders struggled to connect the enslaved and animals on plantations, the enslaved asserted their own will and humanity. People of African descent engaged the nonhuman world in highly creative and powerful ways, and this chapter's focus on animals represents one facet of this history. Their actions visibly challenged the racialized hierarchy of the British Atlantic world in powerful ways.

Conclusion

Inhuman Plunder

Quobna Ottobah Cugoano chose his words carefully as he penned his moral philosophical treatise *Thoughts and Sentiments on the Evil and Wicked Traffic of the Slavery and Commerce of the Human Species*, published in 1787. Cugoano wrote his book in England, yet it appeared after he lived for seventeen years as an enslaved person in the British Caribbean. Entering into the contemporary discourse of slavery's philosophical apologists—especially intellectuals and clergy such as David Hume, James Tobin, Raymund Harris, and Edward Long—the thirty-year-old Cugoano endured “very discouraging” feelings and thoughts as he turned over in his mind their proposed arguments that “an African is not entitled to any competent degree of knowledge, or capable of imbibing any sentiments of probity; and that nature designed him for some inferior link in the chain, fitted only to be a slave.”¹⁰⁴⁸ Nevertheless, this young West African intellectual, whose text derived from his experience moving throughout the Atlantic world, entered into fraught discussions over the ethical foundations of slavery with relish.

¹⁰⁴⁸ Quobna Ottobah Cugoano, *Thoughts and Sentiments on the Evil and Wicked Traffic of the Slavery and Commerce of the Human Species, Humbly Submitted to the Inhabitants of Great-Britain, by Ottobah Cugoano, A Native of Africa* (London, 1787), 5. On Cugoano's substantive philosophical agreements with philosophers, see: Paget Henry, "Between Hume and Cugoano: Race, Ethnicity and Philosophical Entrapment." *The Journal of Speculative Philosophy* 18, no. 2 (2004): 129-48; Jeffrey Gunn, "Creating a Paradox: Quobna Ottobah Cugoano and the Slave Trade's Violation of the Principles of Christianity, Reason, and Property Ownership." *Journal of World History* 21, no. 4 (2010): 629-656; Robert Bernasconi, "Ottobah Cugoano's Place in the History of Political Philosophy," in *Debating African Philosophy: Perspectives on Identity, Decolonial Ethics and Comparative Philosophy*, edited by George Hull (London: Routledge, 2019); Tacuma Peters, "The Anti-Imperialism of Ottobah Cugoano: Slavery, Abolition, and Colonialism in Thoughts and Sentiments on the Evil of Slavery." *The CLR James Journal* 23, no. 1/2 (2017): 61-82.

For moral philosophers of the Enlightenment such as Hume and his colleague Immanuel Kant, arguments for Africans' intrinsic and essential inferiority rested on the foundation that Black people were not fully human, but rather similar to animals in body and mind. In 1775, Kant laid out and affirmed in his text *Über die verschiedenen Rassen der Menschen* evidence for the ontological existence of a racial hierarchy that positioned white Europeans above Black Africans.¹⁰⁴⁹

Likewise, in Hume's anthropological philosophy outlined in his essay "Of National Characters", he posited that Africans were "naturally inferior to the Whites" and separated by "an original distinction."¹⁰⁵⁰ Edward Long, a Jamaican planter and reader of Hume and other Enlightenment figures, approvingly adopted the taxonomic classification of Africans in his colonial history as existing first among "2nd Ourang Outangs, 3rd Apes, 4th Baboons, 5th Monkeys."¹⁰⁵¹ Long further developed a taxonomic distinction between Africans, who he claimed shared a natural affinity with animals, and Europeans in his three volume *History of Jamaica* published in 1774.¹⁰⁵² In a rhetorical vein familiar to the language slaveholders such as Landon Carter and Thomas Jefferson used to compare enslaved people and animals that previously appeared in chapter 3, another pamphleteer writing in the British Atlantic described Africans as a "bestly race of animals in human shape" and "utterly devoid of reason."¹⁰⁵³

¹⁰⁴⁹ Pauline Kleingeld, "Kant's Second Thoughts on Colonialism," in *Kant and Colonialism: Historical and Critical Perspectives*, edited by Katrin Flikschuh and Lea Ypi, 43-67 (Oxford: Oxford University Press, 2014).

¹⁰⁵⁰ David Hume, *Essays and Treatises on Several Subjects* (Edinburgh: A. Millar; and A. Kincaid and A. Donaldson, 1758), 125.

¹⁰⁵¹ George Boulukos, *The Grateful Slave: The Emergence of Race in Eighteenth-Century British and American Culture* (Cambridge: Cambridge University Press, 2008), 108-109.

¹⁰⁵² Colin Dayan, *The Law is a White Dog: How Legal Rituals Make and Unmake Persons* (Princeton University Press, 2011), 113-137; Suman Seth, "Materialism, Slavery, and *The History of Jamaica*," *Isis* 105, no. 4 (2014): 764-772.

¹⁰⁵³ Boulukos, *The Grateful Slave*, 109.

Rhetorical examples of simianization abounded in proslavery Enlightenment writing. Literary scholar Colin Dayan argues, in similar vein with David Brion Davis, that animal comparisons were not marginal, but rather central to the continuous existence of slavery in the Atlantic world. In Dayan's words, "the logic of slavery both depended and tried to evade the consequences of the comparison with animals."¹⁰⁵⁴ As such, directly attacking such dishumanizing propositions became vital for abolitionists such as Cugoano.

Cugoano himself survived slavery from his capture in Agimaque, presently Ajumako, on the Gold Coast in 1770 to his first passage to Cape Coast Castle, the middle passage voyage that carried him and other slaves across the ocean to Grenada, until he obtained his freedom in the wake of the Court of King's Bench judgement in *Somerset v. Stewart* decided by Lord Mansfield after being taken as an enslaved man to England in 1772. Around 1786, Cugoano found intellectual allies and enthusiastic companions among a circle of other formerly enslaved writers, including Olaudah Equiano and numerous other "Sons of Africa" in London.¹⁰⁵⁵

¹⁰⁵⁴ Dayan, *The Law is a White Dog*, 137. On simianization as a rhetorical strategy within racist writing, see: *Simianization: Apes, Gender, Class, and Race*, edited by Wulf Hund, Charles W. Mills, and Silvia Sebastiani (Zurich: LIT Verlag, 2015).

¹⁰⁵⁵ Victor C. D. Mtubani, "The Black Voice in Eighteenth-Century Britain: African Writers against Slavery and the Slave Trade." *Phylon* 45, no. 2 (1984): 85-97; George E. Boulukos, "Olaudah Equiano and the Eighteenth-Century Debate on Africa." *Eighteenth-Century Studies* 40, no. 2 (2007): 241-55; Ryan Henley, *Beyond Slavery and Abolition: Black British Writing, c.1770–1830* (Cambridge: Cambridge University Press, 2018), 180.



Figure 6.1 Illustration of Ottobah Cugoano, *Richard and Maria Cosway, and Ottobah Cugoano*, etching, 1784, image courtesy of Yale Center for British Art, Paul Mellon Collection, Yale University.

Like Mary Prince, whose narrative began this dissertation, Cugoano described his enslavement as a process of gradually losing his status as a human and becoming comparable to an animal by the violence and humiliation imposed on him by enslavers. After being captured, Cugoano felt he had become the “prey” of slave raiders.¹⁰⁵⁶ After being delivered by coffle from Agimaque to Cape Coast, Cugoano endured “brutal avarice”, the “brutish, base, but fashionable way of traffic” of the middle passage voyage to Grenada, where he and his compatriots continued to further live under “brutal slavery.”¹⁰⁵⁷ Throughout his text, Cugoano described slavery as being reduced from a fully-human person to “the situation of a horse or a dog”, and that “slaves, like animals,

¹⁰⁵⁶ Cugoano, *Thoughts and Sentiments*, 7.

¹⁰⁵⁷ Cugoano, *Thoughts and Sentiments*, 5, 10-12.

are bought and sold” and become “to a state of a degree equal to that of a cow or a horse.”¹⁰⁵⁸

And, like Prince, Cugoano’s experiences led him to embrace the conclusion that not only did enslavement rest upon slaveholders treating the enslaved as if they were nonhuman animals, but slavery itself transformed European enslavers from humans into animals. Cugoano described his enslavers as “monstrous” crocodiles, “ravenous beasts of the night”, predatory “owls and night-hawks”, “tygers”, “ravenous beasts of prey”, and “devouring reptiles.”¹⁰⁵⁹ In Cugoano’s scholarship, slavery fundamentally changed the humanity of every person involved from human to animal.

Cugoano summed up his encounters with slave traders and slaveholders in Atlantic Africa, the Caribbean, and England by characterizing them foremost as “those who make no scruple to deal with the human species, as with the beasts of the earth, [and] I must think them not only brutish, but wicked and base.”¹⁰⁶⁰ For Cugoano, and others, enslavement produced the category of the *inhuman*, and these thinkers saw themselves as developing this category as an important lens for understanding slavery.¹⁰⁶¹ In the late eighteenth century, inhuman connoted multiple meanings: persons lacking the normal emotional interiority of a human; cruel actions that transcended normative human relations; the unnatural; and a person akin to an animal in their behavior.¹⁰⁶²

¹⁰⁵⁸ Cugoano, *Thoughts and Sentiments*, 18-19, 22. Elsewhere, Cugoano describes slavery as the “unlawful traffic of dealing with our fellow-creatures, as with the beasts of the earth”, 21-22; that slaves become “as a kind of engines and beasts of burden”, 22; as akin to “the brute creation”, 26, 29, 105; “like cattle and beasts of burden”, 42; “treated as a dog, and sold like a beast”, 64; “to the rank of a brute”, 109; “prey”, 119-120; and “treated as beasts”, 121.

¹⁰⁵⁹ Cugoano, *Thoughts and Sentiments*, 20, 55-56, 60-61, 123.

¹⁰⁶⁰ Cugoano, *Thoughts and Sentiments*, 5.

¹⁰⁶¹ “Inhuman” appears twenty-two times in *Thoughts and Sentiments*.

¹⁰⁶² “Inhuman, adj. and n.”. Oxford English Dictionary Online. March 2019. Oxford University Press.

In his treatise, Cugoano used multiple phrases involving inhuman—“inhuman murders”, “inhuman and unjust dealing”, “barbarous inhuman Europeans”, “inhuman purchasers”, “inhuman traffic”, “inhuman violation”, “inhuman barbarities”, and “inhuman men”—among others, to fully describe enslavers and the world of slave trading and plantation slavery across the Atlantic world. Moreover, Cugoano characterized the inhumanity of enslavers as related to a broader pattern of “plunder” across “different parts of the globe”, though in his text he focused primarily on the capture and dispersal of people from West and West Central Africa, and East Africa, to the Americas and Asia.¹⁰⁶³

Throughout his book, Cugoano developed an important and original thesis, namely that slavery in the Atlantic world was predicated upon enslavers denying the humanity of enslaved African captives by becoming inhuman themselves. To paraphrase Stephanie Smallwood, turning people into commodities involved turning people into forms of animal-like and less than fully-human objects. Moreover, slavery constituted a form of global plunder, by which the fortunes and colonial expansion of the British Empire rested upon the active processes of animalization. Cugoano’s key insight—namely that slavery relied upon actively dehumanizing other people and comparing them to animals—did not result from a purely intellectual history of race or racist ideas, but rather, as this dissertation underscored, an environmental history with a material foundation in human-animal relations reaching back into the seventeenth century. Environmental historians with a vested interest in understanding the social, cultural, and environmental

¹⁰⁶³ The verb plunder, or the noun plunderer, appear nine times in *Thoughts and Sentiments*, often alongside sentences involving inhuman.

contours of the expanding British Empire in the Atlantic world beyond the limiting frame of ecological imperialism, have much to gain from reckoning with these ideas.

Returning to the formation of Atlantic African outposts like Dixcove and the Royal African Company's factory at Ouidah in the late seventeenth century with a focus on nonhuman animals reveals the connective roles sacrificial sheep, elephant tusks, and cowry shells played in linking a network of English and African slavers in the late seventeenth century. Trade in human captives pivoted on eco-cultural networks involving animal gifts, rituals, and forms of currency that joined distant outposts, factories, coasting vessels and canoes, to the company's central fortress at Cape Coast Castle on the Gold Coast. As gifts and ritual objects, animals played cultural roles; yet, as living or dead creatures, animals such as sheep, cowries, worms, or rats, also constituted unpredictable nonhuman elements within routes of slaving that proved difficult to fully control. Chapter one offers a new history of the origins of slave trading embedded within the nonhuman faunal environment that illuminates how crucial animal knowledge and animal exchanges were for the agents of the Royal African Company as they struggled to acquire human cargoes for slavers between 1660 and 1731.

As spaces and individuals within the Atlantic slave trade shuttled along human captives through networks of exchange, the same networks circulated animal specimens destined for ambitious scientific collections of universal knowledge in the imperial metropole. Slavers' criss-crossing made up eco-cultural networks of collecting and travel that facilitated such collections. Edward Barter's collections of mollusks from the environs surrounding Cape Coast Castle found their way to London, and eventually the

British Museum, via slave ships. Doctors of slaving companies transformed shipments of enslaved people into specimens that arrived alongside preserved invertebrates and mammals to be consumed by metropolitan virtuosos motivated by curiosity. John Burnet, for instance, judged the physical remains of an enslaved woman's stillborn fetus to be as noteworthy as an armadillo. Moreover, Caribbean plantations and enslaved collectors became crucial sites of knowledge production and specimen acquisition in the eighteenth century. Oxford, and others like him including the "black servant" who assembled animal collections for Alexander Garden at Providence Island, judged what creatures would arrive and form collections of universal knowledge derived from the colonies, and proved to be important linchpins between the diverse environmental contexts of the empire's colonies, semi-colonial sites, and the metropole. While slaveholders valued the enslaved's mode of interaction in these cases to be their labor and judgment, whether or not the enslaved themselves found pleasure or satisfaction from their activities remains difficult to answer. Chapter two therefore contributes to an ongoing understanding of the inextricably linked histories of the Atlantic slave trade and scientific collections of animals, the geography of knowledge in the colonial British Atlantic world, and the interlaced relations between merchants, doctors, missionaries, planters, and the enslaved across great distances.

Moving from networks of scientific knowledge production and circulation to the groundwork of plantations in the Caribbean and Chesapeake, the construction of a slaveholder argot in the mid-eighteenth century that framed the enslaved and livestock as plantation "nerves" and "sinews" is the subject of chapter three. Slaveholders like Samuel Martin and John Pinney sought to place the enslaved into what the Cameroonian

philosopher Achille Mbembe terms the “zone of undifferentiation between human and animal” to launch and build up plantation fortunes.¹⁰⁶⁴ Slaves and livestock labored together to plow fields before planting, and later carted the harvest of their labors to ports and other transshipment stations along coasts and rivers. Enslavers further developed plantation foodways designed to cheaply supply slaves and livestock with near-identical foods, especially maize, sorghum, and other foods that were culturally recognizable in Europe as animal fodder. Plantation diets reduced costs and reinforced the notion that the enslaved and livestock existed as equivalent subjects. Planters further conceived of the two as physical inputs within “nature’s oeconomy”, as Martin put it, and conjoined their bodies as instruments through systematically collecting humanure and animal waste to revitalize depleted soil. Every plantation existed as a network of enslavers, enslaved people, and livestock oriented around the economic purposes of profit and the cultural goal of equating slaves and animals. In sum, chapter three shows how slaveholders like Martin and his peers constructed a disciplined body politic with the enslaver’s mind imagined to be above the muscular forces of the enslaved and livestock.

So, the first three chapters of this dissertation set out how enslavers constructed networks through the Atlantic geography of slaving with human captives and nonhuman animals for expanding trade, assembling collections, and regulating regimes of labor. By contrast, the final two chapters turn to how both animals, in the form of pests, and enslaved people, through diverse forms of resistance, undermined these networks. The two concluding chapters show how the eco-cultural networks enslavers built contained their own environmental and culturally-specific vulnerabilities.

¹⁰⁶⁴ Achille Mbembe, *Critique of Black Reason*, translated by Laurent Dubois (Durham: Duke University Press, 2017), 153.

Culturally and ontologically, as Mary Fissell contends, vermin exist in opposition to the ambitions and dominion of human societies. Chapter four delved into how pests unsettled plantations in the eighteenth-century Caribbean and Chesapeake worlds. In the Caribbean, pests such as yellow and black blast, sugar ants, cane rats, and monkeys wrought havoc on sugar plantations and disturbed enslavers. Slaveholders worried over how to prevent and eradicate pests, and turned to chemical treatments, including arsenic, and introducing predators such as the carnivorous ant *Tom Raffles* to counter incursions of vermin. However, pests proved to be an obdurate force that frequently outcompeted planters for control over land and space on plantations. Vermin in the Caribbean made their own networks, such as blast-ant mutualism, by exploiting plantation zones, and their attacks corroded the human-animal networks that enslavers struggled to build. Pests furthermore made life increasingly dangerous for enslaved people, as planters turned to pesticides that proved to be hazardous to the enslaved. In the Chesapeake, similar attacks by pests, including tobacco worms and wheat weevils, threatened to disintegrate plantations. Enslavers punished the enslaved for not fully “worming” plants from these pests. Yet, as we have seen, the enslaved used the prevalence of pests such as weevils to develop their own vocabularies for clandestine communication. By focusing on the agency of nonhuman vermin, chapter four enables a new story to emerge of how particular animals took advantage of plantation environments and subverted the human-animal networks and regimes of labor that enslavers sought to create.

Turning from animal to human agency, the final chapter considers how enslaved people consciously resisted their enslavers and enslavement by creating new relationships with nonhumans. This chapter considers three human-animal relations: obeah rituals,

plantation sabotage, and networks of human-equine mobility. Through obeah ritual, enslaved men and women in the Caribbean repurposed animal body parts—including feathers, teeth, skin, hair, and bones—to produce sacred instruments and bundles. Obeah shamans used these new assemblages of animal parts in oath-taking ceremonies to bind rebel slaves—as in the case of slave conspiracies including the planned revolt on Antigua in 1736 and Tacky’s War in 1760—and to draw upon otherworldly powers that intimidated slaveholders. Human-animal rituals in the British Caribbean were not dissimilar to those that occurred at the outset of the Haitian Revolution in 1791.¹⁰⁶⁵ In the Chesapeake, enslaved laborers drew upon their environmental knowledge and everyday labor with animals to undermine their enslavers through sabotage. Slaves drove cattle into ditches, starved herds of sheep, and injured horses to weaken their enslaver’s overall supply of labor and damage their sense of, or pretensions to mastery. Forms of sabotage involved enslaved people producing countercolonial landscapes, including exploiting the margins of plantation spaces, such as ditches, to attack animals. Finally, in both regions enslaved people stole horses to escape plantations, reunite with family, and stake out their own rival geographies of mobility and communication. Stealing a horse constituted a culturally loaded act, one that symbolically emasculated enslavers and empowered the enslaved. Chapter five demonstrates the creativity, resilience, and will of enslaved people to use animals for their own purposes in the British Atlantic. This chapter represents an initial foray into a wider human-animal history of interactions between enslaved people and animals that ought to be further developed.

¹⁰⁶⁵ David Geggus, "Marronage, Voodoo, and the Saint Domingue Slave Revolt of 1791." *Proceedings of the Meeting of the French Colonial Historical Society* 15 (1992): 22-35.

To write an environmental history of human-animal interactions within the British Atlantic world in the long eighteenth century requires drawing upon diverse kinds of archival materials, which I have sought to gather for this dissertation. Letters, factory inventories, travel narratives, and printed images of the castle trade provide evidence for understanding how English enslavers gradually became acculturated to Atlantic African rituals involving sheep sacrifices and the use of money cowries as currency media as they purchase captives from the Gambia River to Ouidah. Moreover, my intent here has been to judiciously use secondary literature to establish the cultural roles animals played in Atlantic African societies before the rise of the slave trade. Specimen catalogues, correspondence, specimen prints, and printed natural histories that circulated from ports across Atlantic Africa to New Spain and the Caribbean reflect how the networks of slave trading, slaveholding, and natural history became deeply entwined. These materials are further enriched by my reading of new histories of science and slavery, and natural history in the early modern period. Plantation manuals, diary entries, and the visual culture of slavery, including drawings, paintings, maps, and etchings, offer glimpses into how enslavers imagined constructing a regime of labor that involved transforming enslaved people and livestock into vital “nerves” and “sinews.” And these same materials further document the existence of plantation vermin, a subject that worried slave traders, slaveholders, and naturalists. Legal codes involving obeah, grave goods, cartoons, planter diary entries, runaway advertisements, and interviews with formerly enslaved people show enslaved people resisted slavery with animals.

This research is further reliant on theoretical frameworks from imperial environmental history and the interdisciplinary field of animal studies. The concept of an

eco-cultural network fruitfully encourages historians to consider how transregional flows of humans and nonhuman animals shaped the British Empire in the Atlantic world without losing sight of the connections between environmental factors and the cultural contexts of empire-building in the eighteenth century. Human-animal modes of interaction further helps locate particular human and animal networks and relations within their specific cultural context, and draws attention to the embodied nature of these intersections. Each of these frameworks is not without their own analytic limits, yet, I claim, they are valuable methodologies for grasping the diversity of human-animal interactions that shaped slaving in the British Atlantic in the long eighteenth century.

Inhuman Empire argues that the intersections and entanglements of enslavers, enslaved people, and animals in the era of the Atlantic slave trade were crucial to the expansion of commercial, scientific, and colonial networks of the British Empire in the Atlantic world. Between 1660 and 1808, slaveholders assembled human-animal networks spanning from the castle trade in Atlantic Africa to plantations in the Caribbean and the Chesapeake, and these networks supported the empire's rising economic power in Europe and the Americas, the intellectual pursuit of universal knowledge of the natural world, and colonial settlements as well as semi-colonial spaces such as trade depots sited in the borders of rival empires. However, these networks were not inviolable, and nonhuman animals frequently exploited the very infrastructure that slaveholders tried to build for their own ends. Furthermore, enslaved people self-consciously struck back against enslavement by attacking the human-animal structures that supported slavery whether through plantation regimes of labor or by stealing animals.

This study offers five conclusions related to ongoing research in imperial environmental history in the early modern period, British Atlantic and early North American history, and early African American history. First: slave traders had to adapt to Atlantic African ritual culture and economic protocols involving animals, and in turn gain local environmental knowledge, to succeed in the castle slave trade in the late seventeenth century. Second: naturalists in the British Atlantic who drew upon contacts in the slave trade, became slaveholders, or relied on the judgement of enslaved collectors to furnish museum cabinets and private assemblages of faunal specimens, were deeply embedded within the geography of slaving. As such, animal collections from this period must be understood foremost as products of the Atlantic slave trade, and more importantly the result of the exploitation of the enslaved. Third: enslavers developing plantations in the Caribbean and the Chesapeake imposed a regime of labor that equated slaves and livestock as the “nerves” and “sinews” of sugar and tobacco estates. These slaveholders furthered these connections by feeding both the enslaved and animals meager diets of fodder foods, and by instrumentalizing both animal waste and humanure to revitalize soils. Fourth: as plantations developed, vermin animals posed significant challenges to the ambitions of slaveholders and enslaved people by destroying crops and creating new environmental risks. Plantation networks were frequently limited by nonhuman agency. Finally, enslaved people understood the political ecology of slavery that developed in the British Atlantic world in the long eighteenth century, and actively resisted human-animal arrangements in creative ways that damaged the material basis of their enslavement and challenged the intellectual equation of Africans and animals that slavers persisted in making from the seventeenth century to the early nineteenth century.

Taken as a whole, these conclusions constitute a new environmental history of slavery in the eighteenth-century Atlantic world that moves beyond the impact of ecological imperialism or the contributionist lens of narratives of African agricultural expertise.

Scholarship on slavery, enslaved people, and animals has become increasingly vibrant in recent decades. Forthcoming scholarship by Joshua Kerckmar, Tyler Parry and Charlton Yingling, and Thomas Andrews promises to open up this field with diverse chronological and thematic focuses.¹⁰⁶⁶ Rachel L. Pasierowska is completing a dissertation on nineteenth-century human-animal interactions under slavery in the United States, Cuba, and Brazil. Their research contributes to a deeper understanding of how African Americans articulated their humanity vis-à-vis animals. In an excellent article making use of WPA archival materials, Pasierowska has shown how enslaved people connected owls to both the belief in the return of a deceased person's soul to Africa, the ascent of the soul to Heaven, and more general ideas of liberty.¹⁰⁶⁷ As this research moves forward, *Inhuman Empire* stands to make a contribution to this historical sub-field.

Yet, several questions remain to be more fully explored that are not answered by this dissertation. To what extent did the Royal African Company build upon precedent established by Elizabethan slavers like John Hawkins, the Company of Adventurers of London Trading to the Ports of Africa, or the Guinea Company, that existed between

¹⁰⁶⁶ Kerckmar is currently developing a book project titled *Animal Domestication and the Origins of American Slavery* that will examine, following Jacoby, the connected histories of animal domestication and slavery in early America from 1550 to 1834. Parry and Yingling have a forthcoming article titled "Slave Hounds and Abolition in the Americas" on the role of dogs in recapturing runaway enslaved people that will appear in *Past and Present*. Andrews is currently developing a book on human-animal relations in U.S. history broadly defined.

¹⁰⁶⁷ Rachael L. Pasierowska, "'Screech Owls Allus Holler'round the House before Death": Birds and the Souls of Black Folk in the 1930s American South." *Journal of Social History* 51, no. 1 (2016): 27-46.

1618 and 1651, or other early slaving firms?¹⁰⁶⁸ What archival evidence exists to further reconstruct the lives of slaver-collectors like Edward Barta? How did the formation of the archive actively preclude any further insight into the life and curiosity of people like the “black servant” who travelled from South Carolina to Providence Island in 1770? While I examine Martin’s language of plantership, what precedents did he and other slaveholders draw on to develop this terminology? Finally, how did enslaved people’s cultural environmental imaginary, including trickster tales of animal heroes such as Br’er Rabbit, develop alongside the material forms of resistance I describe in chapter five? What intellectual contribution could this study make to wider discussions of African American environmental thought?¹⁰⁶⁹ Most importantly, future revisions should address change over time on a deeper level, a problem within this research as it is presently organized thematically, resulting in a more synchronic than diachronic approach.

Using this dissertation as a foundation, I will continue to pursue these questions in future research. I intend to build on the methodological approach of this project by combining research with archival materials, printed books, and evidence from visual and material culture. Further engagement with theoretical frameworks in environmental history, actor-network theory, and animal studies will be important moving forward to tell a broad-ranging yet more tightly focused chronological narrative. Finally, I intend for this research to support a more sustained scholarly dialogue between the fields of early American history, environmental history, and early African American history in the Atlantic world.

¹⁰⁶⁸ Kenneth Morgan, *Slavery and the British Empire: From Africa to America* (Oxford University Press, 2007), 56.

¹⁰⁶⁹ Kimberly K. Smith, *African American Environmental Thought: Foundations* (Lawrence: University of Kansas Press, 2007).

Bibliography

Manuscript Collections

American Philosophical Society, Philadelphia, Pennsylvania

Sir Hans Sloane Correspondence, 1647-1743, microfilm

Archives Department, Black Rock, Barbados

Drax Hall Plantation Records

Turners Hall Records, microfilm

Turners Hall Plantation Records, Fitzherbert Collection, microfilm

Beinecke Rare Book and Manuscript Library, Yale University

Thomas Thistlewood Papers

The British Library

Reports of the Lords of the Committee of Council appointed for the consideration of all matters relating to Trade and Foreign Plantations; submitting ... the evidence and information they have collected in consequence of His Majesty's Order in Council, dated the 11th of February, 1788, concerning the present state of the Trade to Africa, and particularly the Trade in Slaves, etc, six volumes.

Department of Archives and History, Columbia, South Carolina

Estate Inventories and Bills of Sale, 1732-1872

Historical Society of Pennsylvania, Philadelphia, Pennsylvania

Powel Papers, Series XII, Alexander Johnston, Daybook, 1762-1839

The Huntington Library, Art Collections, and Botanical Gardens, San Marino, California

William Davenport and Company, Account Book, 1777-1784

Jamaica Archives and Records Department, Spanish Town, Jamaica

Estate Inventories and Appraisals

The John Carter Brown Library, Brown University

John Dovaston, *Agricultura Americana*, manuscript

Journal of a Jamaican Slave Overseer, Somerset Vale, 1776-1780, manuscript

Weilburg Plantation, Accounts Ledger, 1767-1770

William Clark, *Ten Views of Antigua*, 1823

The John D. Rockefeller Library, Colonial Williamsburg Foundation

York County Estate Inventories

The Kislak Center for Special Collections, University of Pennsylvania

Miscellaneous Manuscripts, Account Book, Box 2, Folder 23

Rebecca Buckley Ferguson Letters, 1747-1819

The Lewis Walpole Library, Yale University

W.E. Beastall, *A Negro Market in the West Indies*. London: Printed by Motte, 1806.

The Library Company of Philadelphia, Pennsylvania

Catesby, Mark. *The Natural History of Carolina, Florida, and the Bahama Islands*, volume I. London: Printed at the expence of the Author; and sold by W. Innys and R. Manby, by Mr. Hauksbee, and by the Author, at Mr. Bacon's in Hoxton, 1731.

Kein, Patrick. *An Essay on Pen-Keeping and Plantership*, Kingston: Jamaica, His Majesty's Printing-Office, 1796.

Michael Graham-Stewart Slavery Collection, The National Maritime Museum,
Greenwich, London, United Kingdom

W.E. Beastall, and G. Testolini, *Negroes Sunday Market at Antigua*. London:
Printed by Motte, 1806.

The National Archives, Kew, London, United Kingdom

Royal African Company, Records, Series T70

The Natural History Museum, London, United Kingdom

Sir Hans Sloane Collection, Manuscript Catalogs

Registrar General's Department, Twickenham Park, St. Catherine Parish, Jamaica

Will Books, Will of Colin Campbell, New Hope, 1761

Shilstone Memorial Library, Barbados Museum and Historical Society, Bridgetown,
Barbados

*Minutes of The Society for the Improvement of Plantership on the Island of
Barbados, Instituted 8 December 1804*. Liverpool: Thomas Kaye, 1811.

Special Collections, Earl Gregg Swem Library, The College of William and Mary

Richard Corbin, Account Book, 1786-1797

Skipwith Family Papers

William Selden Papers

Special Collections, Sidney Martin Library, University of the West Indies, Cave Hill,
Barbados

*Minutes of The Society for the Improvement of Plantership on the Island of
Barbados, 1811-1816*, manuscript

University Library, Uppsala University

Henry Smeathman Collection

The William L. Clements Library, University of Michigan

An Abstract of the Evidence Delivered Before a Select Committee of the House of Commons in the Years 1790, and 1791, on the Part of the Petitioners for the Abolition of the Slave Trade. London: Printed by James Phillips, 1791.

Charles Winstone Letter Book

Gardner Family Papers

James Stothert Papers

Jarvis Family Papers

“Johnny Newcome in Love in the West-Indies, J.F.”, 1808, print

Journals

Philosophical Transactions, The Royal Society of London

Transactions of the American Philosophical Society

Newspapers

Cornwall Chronicle

Maryland Gazette

South-Carolina Gazette

Virginia Gazette, Purdie

Virginia Gazette, Purdie and Dixon

Virginia Gazette, Rind

Weekly Jamaica Courant

Published Printed Works

Acts of Assembly, passed in the island of Jamaica; from ... 1681, to ... 1754, ... In two volumes. ... two volumes. Saint Jago de la Vega, Jamaica, 1769-1771.

Atkins, John. *A Voyage to Guinea, Brasil, and the West-Indies; in His Majesty's Ships, the Swallow and Weymouth.* London: Printed for Caesar Ward and Richard Chandler, at the Ship, between the Temple-Gates in Fleet-Street, 1735.

Atwood, Thomas. *The History of the Island of Dominica.* London: Printed for J. Johnson, 1791.

Banister, John. "The Extracts of Four Letters from Mr. John Banister to Dr. Lister, Communicated by Him to the Publisher." *Philosophical Transactions (1683-1775)* 17 (1693): 667-92.

Barclay, Alexander. *Practical View of the Present State of Slavery in the West Indies.* London: Published by Smith, Elder, and Co., 1827.

Barham, Henry. *Hortus Americanus: The Trees, Shrubs, and other Vegetable Productions, of South-America and the West-India Islands, and Particularly of Jamaica.* Kingston: Printed and published by Alexander Aikman, 1794.

Bate, James, and Alexander Russel. "An Account of the Remarkable Alteration of Colour in a Negro Woman: In a Letter to the Reverend Mr. Alexander Williamson of Maryland, from Mr. James Bate, Surgeon in That Province. Communicated by Alexander Russel, M. D. F. R. S." *Philosophical Transactions (1683-1775)* 51 (1759): 175-78.

Beckford, William. *A Descriptive Account of the Island of Jamaica*, Vol. 1. London: T. and J. Egerton, 1790.

Belgrove, William. *A Treatise Upon Husbandry or Planting.* Boston: Printed by D. Fowle, 1755.

Bell, Hesketh. *Obeah: Witchcraft in the West Indies*, second edition. London: Sampson, Low, Marston, and Company, 1893.

Beverly, Robert. *The History and Present State of Virginia.* London: Printed for R. Parker at the Unicorn, 1705.

Bluett, Thomas. *Some Memoirs of the Life of Job: The Son of Solomon the High Priest of Boonda in Africa; who was a Slave about Two Years in Maryland.* London: Printed for Richard Ford, 1734.

Bowdich, Thomas Edward. *Mission from Cape Coast Castle to Ashantee, with a Statistical Account of that Kingdom.* London: John Murray, 1819.

Bosman, Willem. *A New and Accurate Description of the Coast of Guinea: Divided Into the Gold, the Slave, and the Ivory Coasts*. London: Printed for J. Knapton, A. Fell, R. Smith, D. Midwinter, W. Haws, W. Davis, G. Strahan, B. Lintott, J. Round, and J. Wale, 1705.

Brickell, John. *The Natural History of North-Carolina*. Dublin: Printed by James Carson, 1737.

Brodie, James, and Dr. Preston. "An Account of a Faetus, Voided by the Ulcered Navil of a Negro in Nevis, by Mr. James Brodie; Communicated by Dr. Preston." *Philosophical Transactions (1683-1775)* 19 (1695): 580-81.

Browne, Patrick. *The Civil and Natural History of Jamaica*. London: Printed for the Author and Sold by T. Osborne and J. Shipton, 1756.

Byrd, William. "An Account of a Negro-Boy That Is Dappel'd in Several Places of His Body with White Spots. By William Byrd, Esq, F. R. S." *Philosophical Transactions (1683-1775)* 19 (1695): 781-82.

Byrd, William. "A Progress to the Mines", 1732, in *The Writings of Colonel William Byrd*, edited by John Spencer Bassett. New York: Doubleday, 1901: 346-360.

Carter, Landon, and Colonel Lee. "Observations concerning the Fly-Weevil, That Destroys the Wheat, with Some Useful Discoveries and Conclusions, concerning the Propagation and Progress of That Pernicious Insect, and the Methods to Be Used for Preventing the Destruction of the Grain by It. By Colonel Landon Carter, of Sabine. Hall, Virginia; Communicated by Colonel Lee of Virginia." *Transactions of the American Philosophical Society* 1 (1769): 205-217.

Castles, John. "Observations on the Sugar Ants. In a Letter from John Castles, Esq. to Lieut. Gen. Melvill, FRS." *Philosophical Transactions of the Royal Society of London* 80 (1790): 346-358.

Clarkson, Thomas. *An Essay on the Slavery and Commerce of the Human Species, particularly the African, Translated from a Latin Dissertation*. London: Printed by J. Philips, 1786.

[Collins, David], *Practical Rules for the Management and Medical Treatment of Negro Slaves in the Sugar Colonies*. London: Printed by J. Barfield, Wardour Street, Printer to His Royal Highness the Prince of Wales, 1803.

Coke, Thomas. *A History of the West Indies: Containing the Natural, Civil and Ecclesiastical History of Each Island*, volume 2. London: Printed for the Author, 1810.

Cugoano, Quobna Ottobah. *Thoughts and Sentiments on the Evil and Wicked Traffic of the Slavery and Commerce of the Human Species, Humbly Submitted to the Inhabitants of Great-Britain, by Ottobah Cugoano, A Native of Africa*. London, 1787.

Dickson, William, and Joshua Steele, *Mitigation of Slavery, in two Parts*. London: Longman, Hurst, Rees, Orme, and Brown, 1814.

Drury, Dru. *Illustrations of Natural History*, three volumes. London: Printed for the author and sold by B. White at Horace's Head in Fleet-street, 1782.

East India Company, Court of Managers, *London: The Court of Managers for the United-Trade to the East Indies will put up to sale at the East-India-House in Leaden-Hall Street, on the 19th of March, 1705/06, the following goods*. [broadsheet], London, 1706.

Edwards, Bryan. *The History Civil and Commercial of the British Colonies in the West Indies*, three volumes. London: B. Crosby, 1793, 1805.

Ellis, John. "An Account of an Amphibious Bipes; By John Ellis, Esq; F. R. S. To the Royal Society." *Philosophical Transactions (1683-1775)* 56 (1766): 189-192.

Ellis, John. "An Account of the Sea Pen, or Pennatula Phosphorea of Linnaeus; Likewise a Description of a New Species of Sea Pen, Found on the Coast of South-Carolina, with Observations on Sea-Pens in General. In a Letter to the Honourable Coote Molesworth, Esq; MD and FRS from John Ellis, Esq; FRS and Member of the Royal Academy at Upsal." *Philosophical Transactions (1683-1775)* 53 (1763): 419-435.

Ellis, John. *The Natural History of Many Curious and Uncommon Zoophytes*. London: Printed for Benjamin White and Son, 1786.

Falconbridge, Alexander. *An Account of the Slave Trade on the Coast of Africa*. London: Printed by James Phillips, 1788.

Federal Writers Project. *South Carolina Slave Narratives: A Folk History of Slavery in the United States from Interviews with Former Slaves*, vol. 14. United States Work Projects Administration, 1938.

Federal Writers Project. *Slave Narratives: A Folk History of Slavery in the United States From Interviews With Former Slaves* volume 4, Georgia Narratives, Prepared by the Federal Writers' Project of the Works Project Administration for the State of Georgia. Washington: The Library of Congress, 1941.

Flickinger, Daniel Kumler. *Ethiopia, Or, Twenty Years of Missionary Life in Western Africa* (Dayton: Printed at the United Brethren Printing House, 1873.

"Four Letters from Mr. T. S. Kuckhan, to the President and Members of the Royal Society, on the Preservation of Dead Birds." *Philosophical Transactions (1683-1775)* 60 (1770): 302-20.

A Genuine Narrative of the Intended Conspiracy of the Negroes at Antigua. Extracted from an Authentic Copy of a Report, made to the Chief Governor of the Carabee Islands, by the Commissioners, or Judges appointed to try the Conspirators. Dublin: Printed by and for R. Reilly, on Cork-Hill, 1737.

Gibbes, Philip. *Instructions for the Treatment of Negroes.* London: Printed for Shepperson and Reynolds, 1797.

Godwyn, Morgan. *The Negro's and Indians Advocate.* London: 1680.

Grainger, James. *An Essay on the More Common West-India Diseases; and the Remedies which that Country Itself Produces.* London: Printed for T. Becket and P. A. de Hondt, 1764.

Grainger, James. *The Sugar-Cane: A Poem in Ten Books.* London: R. and J. Dodsley, 1764.

Houstoun, James. *Some New and Accurate Observations Geographical, Natural and Historical. Containing a True and Impartial Account of the Situation, Product, and Natural History of the Coast of Guinea, so far As Relates to the Improvement of that Trade, for the Advantage of Great Britain in General, and the Royal African Company in Particular.* London: Printed for J. Peele, at Locke's Head in Pater-Noster-Row, 1725.

Hughes, Griffith. "A Letter from the Reverend Mr. Griffith Hughes, Minister of St. Lucy's Parish in Barbadoes, to Martin Folkes, Esq; President of the Royal Society, concerning a Zoophyton, Somewhat Resembling the Flower of the Marigold." *Philosophical Transactions (1683-1775)* 42 (1742): 590-593.

Hughes, Griffith. *The Natural History of Barbados.* London: Printed for the Author, 1750.

Hume, David. *Essays and Treatises on Several Subjects.* Edinburgh: A. Millar; and A. Kincaid and A. Donaldson, 1758.

Hutton, William. *A Voyage to Africa: Including a Narrative of an Embassy to One of the Interior Kingdoms in the Year 1820.* London: Longman, 1821.

Jefferson, Thomas. *Notes on the State of Virginia* [Paris, 1782].

Johnson, Samuel. *A Dictionary of the English Language: In which the Words are Deduced from Their Originals, and Illustrated in Their Different Significations by Examples from the Best Writers.* London: Printed by W. Strahan, 1755.

Jones, Hugh. *The Present State of Virginia*. London: Printed for J. Clarke, 1724.

Kalm, Pehr. *Travels Into North America: Containing Its Natural History* vol. I. Warrington: Printed by William Eyres, 1772.

Lanaghan, Mrs. *Antigua and the Antiguans*, two volumes. London: Saunders and Otley, 1844.

Lascelles, Edwin, et al, *Instructions for the Management of a Plantation in Barbadoes and for the Treatment of Negroes*. London: 1786.

The Laws of Jamaica: 1792-1799. Kingston: Printed by Alexander Aikman and Son, 1811.

Lawson, John. *A New Voyage to Carolina*. London: 1709.

Lettsom, John Coakley. *The Works of John Fothergill*, three volumes. London: Printed for Charles Dilly, 1784.

Lewis, Matthew Gregory. *Journal of a West-India Proprietor: Kept During a Residence in the Island of Jamaica*. London: John Murray, 1834.

Ligon, Richard. *A True & Exact History of the Island of Barbados Illustrated with a Mapp of the Island, as also the Principall Trees and Plants there, set forth in their due proportions and shapes, drawne out by their severall and respective scales*. London: Printed for Humphrey Moseley, at the Prince's Armes, 1657.

Littleton, Edward. *The Groans of the Plantations*. London: Printed by M. Clark, 1698.

Long, Edward. *The History of Jamaica. Or, General Survey of the Antient and Modern State of that Island*, three volumes. London: Printed for Thomas Lowndes in Fleet-Street, 1774.

Madden, Richard Robert. *A Twelvemonth's Residence in the West Indies: During the Transition from Slavery to Apprenticeship*. Philadelphia: Carey, Lea and Blanchard, 1835.

Marly, Or, A Planter's Life in Jamaica. Glasgow: Published by Richard Griffin & Co., 1828.

Martin, Samuel. *An Essay Upon Plantership, humbly inscrib'd to all the planters of the British sugar-colonies in America. The Second Edition, Corrected and Enlarged*. Antigua: Printed by T. Smith, 1750.

Mather, Cotton. *Small Offers towards the Tabernacle in the Wilderness*. Boston: 1689.

Matthews, John. *A Voyage to the River Sierra-Leone: On the Coast of Africa; Containing an Account of the Trade and Productions of the Country, and of the Civil and Religious Customs and Manners of the People*. London: Printed for B. White and Son, at Horace's Head, Fleet Street; and J. Sewell, Cornhill, 1788.

Meredith, Henry. *An Account of the Gold Coast of Africa*, vol. 1. London: Longman, 1812.

M'Mahon, Benjamin. *Jamaica Plantership*. London: Effingham Wilson, 1839.

Moore, Frances. *Travels Into the Inland Parts of Africa*. London: Printed by D. Henry and R. Cave, 1738.

Moseley, Benjamin. *A Treatise on Sugar*. London: Printed by John Nichols, 1800.

Nichols, John. *Illustrations of the Literary History of the Eighteenth Century*, vol. I. Printed for the Author by Nichols, Son, and Bentley, at Cicero's Head, Red-Lion Passage, Fleet Street, 1817.

Oliver, Vere Langford. *The History of the Island of Antigua: One of the Leeward Caribbees in the West Indies, from the First Settlement in 1635 to the Present Time*. two volumes. London: Mitchell and Hughes, 1896.

The Papers of Henry Laurens: August 1, 1768 - July 31, 1769, eds. David Chesnutt, and Philip Hamer, vol. 6. Columbia: University of South Carolina Press, 1978.

Parsons, James. "An Account of the White Negro Shewn before the Royal Society: In a Letter to the Right Honourable the Earl of Morton, President of the Royal Society, from James Parsons, M. D. F. R. S." *Philosophical Transactions (1683-1775)* 55 (1765): 45-53.

Peterkin, Joshua. *A Treatise on Planting, From the Origin of the Semen to Ebullition*. 2nd edition. Basseterre: Printed by Edward Low, 1790.

Petiver, James. "An Account of Animals and Shells Sent from Carolina to Mr. James Petiver, FRS." *Philosophical Transactions* 24, no. 1704-05: 1952-60, 1953-1954.

Petiver, James. *Catalogus Classicus & topicus, omnium rerum figuratarum in V. decadibus, seu primo volumine Gazophylacii naturæ & artis; singulis ad proprias tabulas & numeros relatis. A Jacobo Petiver, ...* [London], [1709].

Petiver, James. "Botanicum Hortense IV. Continued from No. 345. by James Petiver, F. R. S." *Philosophical Transactions (1683-1775)* 29 (1714): 353-64.

Petiver, James. *Gazophylacii naturae & artis decas septima & octava. In quod Animalia, Quadrupeda, Aves, Pisces, Reptilia, Infecta, Vegetabilia, Fossilia & Lapides Figura insignes, Corpora Marina, Stirpes Minerales e Terra eruta, &c. Item Antiquaria, Numismata, Gemmae excisae, Lucernae, Urnae, Instrumenta varia, Machinae, Busta, Effigies clarorum Virorum, omniaque Arte producta. Descriptionibus brevibus & iconibus illustrantur. Patronis suis & moecenatibus d.d.d. Jacobus Petiver. S.R.S.* [London], [1711?].

Petiver, James. *Musei Petiveriani centuria prima, rariora naturae continens: viz. animalia, fossilia, plantas, ex variis mundi plagis advecta, ordine digesta, et nominibus propriis signata.* [London], 1695-1703.

Phillips, Thomas. *A Journal of a Voyage Made in the Hannibal of London, Ann. 1693, 1694.* London: Walthoe, 1732.

Prince, Mary. *The History of Mary Prince, a West Indian Slave. Related by Herself. With a Supplement by the Editor (T. Pringle). To which is Added, the Narrative of Asa-Asa, a Captured African.* London: Published by F. Westley and A.H. Davis, 1831.

Rask, Johannes. *Two Views from Christiansborg Castle: Volume I, A Brief and Truthful Description of a Journey to and from Guinea* [1754] translated and edited by Selena Axelrod Winsnes. Legon, Accra: Sub-Saharan Publishers, 2009.

Riddell, Maria. *Voyage to the Madeira and Leeward and Caribbean Isles, with Sketches of the Natural History of these Islands.* Salem: Printed by N. Coverly, 1802.

Robertson, Robert. *A Detection of the State and Situation of the Present Sugar Planters of Barbados and the Leeward Islands.* London: Printed and sold by J. Wilford, 1732.

Romans, Bernard. *A Concise Natural History of East and West Florida.* New York: Sold by R. Aitken, 1776.

Rømer, Ludvig Ferdinand. *A Reliable Account of the Coast of Guinea* [1760] translated and edited by Selena Axelrod Winsnes. London: The British Academy, 2000.

Schomburgk, Robert Hermann. *The History of Barbados.* Longman: London, 1848.

A Selection of the Correspondence of Linnaeus, and Other Naturalists: From the Original Manuscripts, Volume I, edited by James Edward Smith. London: Longman, Hurst, Rees, Orme, and Brown, 1821.

Sloane, Hans. *A Voyage to the Islands Madera, Barbados, Nieves, St Christophers and Jamaica*, two volumes. London: Printed for the Author, 1707, 1725.

Smeathman, Henry. "Some Account of the Termites, Which are Found in Africa and Other Hot Climates. In a Letter from Mr. Henry Smeathman, of Clement's Inn, to Sir

Joseph Banks, Bart. P. R. S." *Philosophical Transactions of the Royal Society of London*, 1781. 139-192.

Smith, William. *A Natural History of Nevis, and the Rest of the English Leeward Charibee Islands in America*. London: Printed by J. Bentham, sold by W. Thurlbourn in Cambridge; S. Birt in Ave-Maria Lane, C. Bathurst in Fleet Street, and J. Beecroft in Lombard Street, London, 1745.

Smith, William. *A New Voyage to Guinea*. London: Printed for John Nourse, 1744.

Snelgrave, William. *A New Account of Some Parts of Guinea, and the Slave-Trade*. London: Printed for James, John, and Paul Knapton, 1734.

Spilsbury, Francis. *Account of a Voyage to the Western Coast of Africa: Performed by His Majesty's Sloop Favourite, In the Year 1805*. London: Printed for Richard Phillips, 1807.

Sprat, Thomas. *The History of the Royal Society of London, for the Improving of Natural Knowledge*. London: Printed by T.R., for J. Martyn at the Bell without Temple-bar, and J. Allestry, at the Rose and Crown in Duck-lane, Printers to the Royal Society, 1667.

Tatham, William. *An Historical and Practical Essay on the Culture and Commerce of Tobacco*. London: Printed for Vernor and Hood, 31, Poultry, by T. Bensley, Bolt Court, Fleet Street, 1808.

Walduck, Thomas. "Thomas Walduck's Letters from Barbados, 1710-1712," *Journal of the Barbados Museum and Historical Society*, 15, no. 1, (1947-1948): 27-51, 84-88, 137-149.

Thompson, Benjamin. *Essays, Political, Economical and Philosophical*, volume 1. London: Printed for T. Cadell and W. Davies, 1796.

Thompson, Thomas. *An Account of Two Missionary Voyages*. London: Printed for Benj. Dod., at the Bible and Key in Ave-Mary-Lane, near St. Paul's, 1758.

Toller, William. "Reproducción facsimilar de la "Historia de un Viaje al Río de la Plata y Buenos Aires desde Inglaterra. Año MDCCXV por William Toller." *Revista Histórica: Publicación del Museo Histórico Nacional* 23, no. 67-6 (May 1955): 201-263.

Turnbull, Gordon. *Letters to a Young Planter; or, Observations on the Management of a Sugar-Plantation: to which is added, the Planter's Kalendar, Written on the Island of Grenada by an Old Planter*. London: Printed by Stuart and Stevenson, 1785.

Secondary Printed Works

Adair, Douglass. "The Autobiography of the Reverend Devereux Jarratt, 1732-1763." *The William and Mary Quarterly: A Magazine of Early American History* (1952): 346-393.

Adams, Percy G. "John Lawson's Alter-Ego - Dr. John Brickell." *The North Carolina Historical Review* 34, no. 3 (1957): 313-326.

Adey, Peter. *Mobility*, second edition. New York: Routledge, 2017.

Aiton, Arthur S. "The Asiento Treaty as Reflected in the Papers of Lord Shelburne." *The Hispanic American Historical Review* 8, no. 2 (1928): 167-77.

Alderman, Derek H., and G. Rebecca Dobbs. "Geographies of Slavery: Of Theory, Method, and Intervention." *Historical Geography* 39 (2011): 29-40.

Allewaert, Monique. *Ariel's Ecology: Plantations, Personhood, and Colonialism in the American Tropics*. Minneapolis: University of Minnesota Press, 2014.

Anderson, Virginia DeJohn. *Creatures of Empire: How Domestic Animals Transformed Early America*. Oxford: Oxford University Press, 2004.

Andrews, Thomas. "Beasts of the Southern Wild: Slaveholders, Slaves and Other Animals in Charles Ball's *Slavery in the United States*," in *Rendering Nature: Animals, Bodies, Places, Politics*, edited by Marguerite Shaffer and Phoebe Young. Philadelphia: University of Pennsylvania Press, 2015: 21-47

Appleby, John H. "Human Curiosities and the Royal Society, 1699-1751." *Notes and Records of the Royal Society of London* 50, no. 1 (1996): 13-27.

Bankoff, Greg. "Aeolian Empires: The Influence of Winds and Currents on European Maritime Expansion in the Days of Sail." *Environment and History* 23, no. 2 (2017): 163-196.

Barber, Sarah. "'Not worth one Groat': The Status, Gentility and Credit of Lawrence and Sarah Crabb of Antigua." *Journal of Early American History* 1, no. 1 (2011): 26-61.

Bardoe, Samantha Rebovich. "Resistance and Reform: Landscapes at Green Castle, Antigua," in *The Limits of Tyranny*, edited by James A. Delle. Knoxville: University of Tennessee Press, 2015: 65-92.

Bauer, Ralph, and Marcy Norton. "Introduction: Entangled Trajectories: Indigenous and European Histories." *Colonial Latin American Review* 26, no.1 (2017): 1-17.

Baumgartner, Barbara. "The Body as Evidence: Resistance, Collaboration, and Appropriation in *The History of Mary Prince*." *Callaloo* 24, no. 1 (2001): 253-275.

Bay, Mia. *The White Image in the Black Mind: African-American Ideas about White People, 1830-1925*. Oxford: Oxford University Press, 2000.

Bayly, Christopher A. *Empire and Information: Intelligence Gathering and Social Communication in India, 1780-1870*. Cambridge: Cambridge University Press, 1999.

Bayly, Christopher A. "Knowing the Country: Empire and Information in India." *Modern Asian Studies* 27, no. 1 (1993): 3-43.

Beattie, James, Edward Melillo, and Emily O’Gorman, eds. *Eco-Cultural Networks and the British Empire: New Views on Environmental History*. London: Bloomsbury Publishing, 2014.

Beattie, James, Edward Melillo, and Emily O’Gorman. "Rethinking the British Empire through Eco-Cultural Networks: Materialist-Cultural Environmental History, Relational Connections and Agency." *Environment and History* 20, no. 4 (2014): 561-575.

Beckles, Hilary. "An Economic Life of Their Own: Slaves as Commodity Producers and Distributors in Barbados", in *The Slave’s Economy: Independent Production by Slaves in the Americas*, edited by Ira D. Berlin and Philip Morgan. London: Frank Cass and Co., 1991: 31-47.

Beckles, Hilary McDonald. *Natural Rebels: A Social History of Enslaved Black Women in Barbados*. New Brunswick: Rutgers University Press, 1989.

Beinart, William, and Lotte Hughes. *Environment and Empire*. Oxford: Oxford University Press, 2007.

Bennett, Herman L. *Africans in Colonial Mexico: Absolutism, Christianity, and Afro-Creole Consciousness, 1570-1640*. Bloomington: Indiana University Press, 2005.

Bennett, Jane. *Vibrant Matter: A Political Ecology of Things*. Durham: Duke University Press, 2010.

Berkeley, Edmund, and Dorothy S. Berkeley. "Another ‘Account of Virginia’: By the Reverend John Clayton." *The Virginia Magazine of History and Biography* (1968): 415-436.

Berkeley, Edmund, and Dorothy Smith Berkeley. *Dr. Alexander Garden of Charles Town*. Chapel Hill: University of North Carolina Press, 1969.

Berkeley, Edmund, and Dorothy Smith Berkeley. "The Most Common Rush or Vilest Weed: Some Unpublished Letters of James Petiver to William Byrd II." *The Virginia Magazine of History and Biography* 95, no. 4 (1987): 481-95.

Bernasconi, Robert. "Ottobah Cugoano's Place in the History of Political Philosophy," in *Debating African Philosophy: Perspectives on Identity, Decolonial Ethics and Comparative Philosophy*, edited by George Hull. London: Routledge, 2019.

Besson, Jean. *Martha Brae's Two Histories: European Expansion and Caribbean Culture-Building in Jamaica*. Chapel Hill: University of North Carolina Press, 2002.

Bialuschewski, Arne. "A True Account of the Design, and Advantages of the South-Sea Trade: Profits, Propaganda, and the Peace Preliminaries of 1711." *Huntington Library Quarterly* 73, no. 2 (2010): 273-85.

Bijker, Wiebe E., Thomas Parke Hughes, and Trevor J. Pinch, eds. *The Social Construction of Technological Systems: New Directions in the Sociology and History of Technology*. Cambridge: MIT Press, 1989.

Bindman, David. *Ape to Apollo: Aesthetics and the Idea of Race in the Eighteenth Century*. Ithaca: Cornell University Press, 2002.

Boaz, Danielle. "'Instruments of Obeah': The Significance of Ritual Objects in the Jamaican Legal System, 1760-Present," in *Materialities, Meanings and Modernities of Rituals in the Black Atlantic*, edited by Akinwumi Ogundiran and Paula Saunders. Bloomington: Indiana University Press, 2014: 143-158.

Boehrer, Bruce Thomas. *Animal Characters: Nonhuman Beings in Early Modern Literature*. Philadelphia: University of Pennsylvania Press, 2011.

Bohls, Elizabeth A. "The Aesthetics of Colonialism: Janet Schaw in the West Indies, 1774-1775." *Eighteenth-Century Studies* 27, no. 3 (1994): 363-390.

Borucki, Alex. *From Shipmates to Soldiers: Emerging Black Identities in the Río de la Plata*. University of New Mexico Press, 2015.

Botkin, Frances R. *Thieving Three-Fingered Jack: Transatlantic Tales of a Jamaican Outlaw, 1780-2015*. New Brunswick: Rutgers University Press, 2017.

Boulger, G.S. 'Garden, Alexander (1730–1791)', rev. Marcus B. Simpson jun., *Oxford Dictionary of National Biography*, Oxford University Press, 2004.

Boulukos, George E. *The Grateful Slave: The Emergence of Race in Eighteenth-Century British and American Culture*. Cambridge: Cambridge University Press, 2008.

Boulukos, George E. "Olaudah Equiano and the Eighteenth-Century Debate on Africa." *Eighteenth-Century Studies* 40, no. 2 (2007): 241-55.

Bradley, Keith. *Slavery and Society at Rome*. Cambridge University Press, 1994.

Brandow, James V, editor, "The Diary of Joseph Senhouse." *Journal of the Barbados Museum and Historical Society* 37 (1985): 276-295.

Brandow, James V, editor, "The Diary of Joseph Senhouse." *Journal of the Barbados Museum and Historical Society* 37 (1986): 318-414.

Brandow, James V, editor, "The Diary of Joseph Senhouse." *Journal of the Barbados Museum and Historical Society* 38 (1988): 179-195.

Breen, T.H. "Horses and Gentlemen: The Cultural Significance of Gambling among the Gentry of Virginia." *The William and Mary Quarterly* 34, no. 2 (1977): 239-57.

Brewer, Holly. "Slavery, Sovereignty, and "Inheritable Blood": Reconsidering John Locke and the Origins of American Slavery," *The American Historical Review* 122, no. 4 (2017): 1038-1078.

Brosnan, Kathleen A. "The Lifting Fog: Race, Work, and the Environment." *Environmental History* 24, no. 1 (2018): 9-24.

Brown, Christopher L. *Moral Capital: Foundations of British Abolitionism*. Chapel Hill: University of North Carolina Press, 2012.

Brown, Ras Michael. *African-Atlantic Cultures and the South Carolina Lowcountry*. Cambridge University Press, 2012.

Brown, Vincent. *The Reaper's Garden: Death and Power in the World of Atlantic Slavery*. Cambridge: Harvard University Press, 2008.

Browne, Randy M. "The "Bad Business" of Obeah: Power, Authority, and the Politics of Slave Culture in the British Caribbean." *The William and Mary Quarterly* 68, no. 3 (2011): 451-80.

Browne, Simone. *Dark Matters: On the Surveillance of Blackness*. Durham: Duke University Press, 2015.

Burnard, Trevor. "Collecting and Accounting: Representing Slaves as Commodities in Jamaica, 1674-1784." in *Collecting Across Cultures: Material Exchanges in the Early Modern Atlantic World*, edited by Daniela Bleichmar and Peter Mancall. Philadelphia: University of Pennsylvania Press, 2011: 177-191.

Burnard, Trevor. *Planters, Merchants, and Slaves: Plantation Societies in British America, 1650-1820*. Chicago: University of Chicago Press, 2015.

Burnard, Trevor, and John Garrigus. *The Plantation Machine: Atlantic Capitalism in French Saint-Domingue and British Jamaica*. Philadelphia: University of Pennsylvania Press, 2016.

Calhoun, Jeanne A., Martha A. Zierden, and Elizabeth A. Paysinger. "The Geographic Spread of Charleston's Mercantile Community, 1732-1767." *The South Carolina Historical Magazine* 86, no. 3 (1985): 182-220

Camp, Stephanie M.H. *Closer to Freedom: Enslaved Women and Everyday Resistance in the Plantation South*. Chapel Hill: University of North Carolina Press, 2004.

Camp, Stephanie M.H. "The Pleasures of Resistance: Enslaved Women and Body Politics in the Plantation South, 1830-1861." *The Journal of Southern History* 68, no. 3 (2002): 533-72.

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

Carney, Judith, and Richard Porcher. "Geographies of the Past: Rice, Slaves and Technological Transfer in South Carolina." *Southeastern Geographer* 33, no. 2 (1993): 127-147.

Carney, Judith. "Landscapes and Places of Memory: African Diaspora Research and Geography," in *The African Diaspora and the Disciplines*, edited by Tejumola Olaniyan and James Sweet. Bloomington: Indiana University Press, 2010: 101-118.

Carney, Judith. "Landscapes of Technology Transfer: Rice Cultivation and African Continuities." *Technology and Culture* 37, no. 1 (1996): 5-35.

Carney, Judith. "'The Mangrove Preserves Life': Habitat of African Survival in the Atlantic World." *Geographical Review* 107, no. 3 (2017): 433-451.

Carney, Judith. "Seeds of Memory: Botanical Legacies of the African Diaspora" in *African Ethnobotany in the Americas*, edited by Robert Voeks and John Rashford. New York: Springer Science and Business Media, 2013: 13-34.

Casid, Jill H. *Sowing Empire: Landscape and Colonization*. Minneapolis: University of Minnesota Press, 2005.

Catron, John. "Slavery, Ethnic Identity, and Christianity in Eighteenth-Century Moravian Antigua." *Journal of Moravian History* 14, no. 2 (2014): 153-78.

Chambers, Douglas B. *Murder at Montpelier: Igbo Africans in Virginia*. Jackson: University Press of Mississippi, 2005.

Chukwukere, I. "Akan Theory of Conception. Are the Fante Really Aberrant?" *Africa: Journal of the International African Institute* 48, no. 2 (1978): 135-48.

Cockerell, T.D.A. "Dru Drury, an Eighteenth Century Entomologist." *The Scientific Monthly* 14, no. 1 (1922): 67-82.

Cohen, Benjamin R. *Notes from the Ground: Science, Soil, and Society in the American Countryside*. New Haven: Yale University Press, 2014.

Cole, Lucinda. *Imperfect Creatures: Vermin, Literature, and the Sciences of Life, 1600-1740*. Ann Arbor: University of Michigan Press, 2016.

Coleman, Deirdre. "'Aetherial Journies, Submarine Exploits': The Debatable Worlds of Natural History in the Eighteenth Century." in *Romanticism's Debatable Lands*, edited by Claire Lamont and Michael Rossington, New York: Palgrave Macmillan, 2007: 223-236.

Coleman, Deirdre. *Henry Smeathman, the Flycatcher: Natural History, Slavery, and Empire in the Late Eighteenth Century*. Oxford University Press, 2018.

Coleman, Deirdre. *Romantic Colonization and British Anti-Slavery*. Cambridge: Cambridge University Press, 2005.

Coleman, Jon T. *Vicious: Wolves and Men in America*. New Haven: Yale University Press, 2008.

Colpitts, George. 'Animated like Us by Commercial Interests': Commercial Ethnology and Fur Trade Descriptions in New France, 1660-1760", *Canadian Historical Review*, 83 no. 3(2002): 305-337.

Colpitts, George. "Knowing Nature in the Business Records of the Hudson's Bay Company, 1670–1840," *Business History* 59, no. 7 (2017): 1054-1080.

Colpitts, George. *Pemmican Empire: Food, Trade, and the Last Bison Hunts in the North American Plains, 1780–1882*. Cambridge: Cambridge University Press, 2014.

Covey, Herbert C. *African American Slave Medicine: Herbal and Non-herbal Treatments*. New York: Lexington Books, 2007.

Craven, Avery. *Soil Exhaustion as a Factor in the Agricultural History of Virginia and Maryland, 1606-1860*. Columbia: University of South Carolina Press, 1925.

Crosby, Alfred. *Ecological Imperialism: The Biological Expansion of Europe, 900-1900*. Cambridge: Cambridge University Press, 1986.

Curtin, Philip D. *The Atlantic Slave Trade: a Census*. Madison: University of Wisconsin Press, 1972.

Cwik, Christian. "The End of the British Atlantic Slave Trade or the Beginning of the Big Slave Robbery, 1808-1850." in *The Second Slavery: Mass Slaveries and Modernity in the*

Americas and in the Atlantic Basin, edited by Javier Lavina and Michael Zeuske. Berlin: LIT Verlag, 2014: 19-38.

Daaku, Kwame Yeboah. *Trade and Politics on the Gold Coast, 1600-1720: A Study of the African Reaction to European Trade*. Oxford: Clarendon Press, 1970.

Dallett Jr., Francis J. "Griffith Hughes Dissected." *Journal of the Barbados Museum and Historical Society* 23, no. 1 (1955): 3-29.

Datta, Ansu K., and R. Porter. "The Asafo System in Historical Perspective." *The Journal of African History* 12, no. 2 (1971): 279-97.

Davidson, James M. "'A Cluster of Sacred Symbols': Interpreting an Act of Animal Sacrifice at Kingsley Plantation, Fort George Island, Florida (1814-39)." *International Journal of Historical Archaeology* 19, no. 1 (2015): 76-121.

Davies, Kenneth. *The Royal African Company*. London: Longmans, Green and Company, 1957.

Davis, David Brion. *In the Image of God: Religion, Moral Values, and Our Heritage of Slavery*. New Haven: Yale University Press, 2001.

Davis, David Brion. *Inhuman Bondage: The Rise and Fall of Slavery in the New World*. Oxford: Oxford University Press, 2006.

Davis, David Brion. *The Problem of Slavery in Western Culture*. Ithaca: Cornell University Press, 1966.

Davis, David Brion. *Slavery in the Colonial Chesapeake*. Williamsburg: The Colonial Williamsburg Foundation, 1986.

Dayan, Colin. *The Law is a White Dog: How Legal Rituals Make and Unmake Persons*. Princeton University Press, 2011.

de Asúa, Miguel. *Science in the Vanished Arcadia: Knowledge of Nature in the Jesuit Missions of Paraguay and Río de la Plata*. Leiden: Brill, 2014.

Deb Roy, Rohan. "Introduction: Nonhuman Empires" *Comparative Studies of South Asia, Africa, and the Middle East* 35 no.1, (2015): 66-75.

DeCorse, Christopher. "Tools of Empire: Trade, Slaves, and the British Forts of West Africa." in *Building the British Atlantic World: Spaces, Places, and Material Culture, 1600-1850*, edited by Daniel Maudlin and Bernard L. Herman. Chapel Hill: University of North Carolina Press, 2016: 165-187.

Delbourgo, James. *Collecting the World: Hans Sloane and the Origins of the British Museum*. Cambridge: Harvard University Press, 2017.

Delbourgo, James. "Divers Things: Collecting the World Under Water." *History of Science* 49, no. 2 (2011): 149-185.

Delbourgo, James. "Listing People." *Isis* 103, no. 4 (2012): 735-742.

Delbourgo, James. *A Most Amazing Scene of Wonders: Electricity and Enlightenment in Early America*. Cambridge: Harvard University Press, 2006.

Delbourgo, James. "The Newtonian Slave Body: Racial Enlightenment in the Atlantic World." *Atlantic Studies* 9, no. 2 (2012): 185-207.

Denny, Margaret. "Linnaeus and His Disciple in Carolina: Alexander Garden." *Isis* 38, no. 3/4 (1948): 161-174.

Dewhurst, Kenneth, and Rex Doublet. "Thomas Dover and the South Sea Company." *Medical History* 18, no. 2 (1974): 107-121.

Dickson, Kwamina B. *An Historical Geography of Ghana*. Cambridge: Cambridge University Press, 1969.

Dierksheide, Christa. *Amelioration and Empire: Progress and Slavery in the Plantation Americas*. Charlottesville: University of Virginia Press, 2014.

Donnan, Elizabeth, editor. *Documents Illustrative of the History of the Slave Trade to America*, four volumes. Washington D.C.: Carnegie Institution of Washington, 1930-1935.

Donoso Anes, Rafael. "Accounting and Slavery: The Accounts of the English South Sea Company, 1713-22." *European Accounting Review* 11, no. 2 (2002): 441-452.

Douglas, Starr. "The Making of Scientific Knowledge in an Age of Slavery: Henry Smeathman, Sierra Leone and Natural History." *Journal of Colonialism and Colonial History* 9, no. 3 (2008)

Douglas, Starr. "Smeathman, Henry (1742–1786)", *Oxford Dictionary of National Biography*. Oxford: Oxford University Press, 2005.

Douglas, A Starr, and E. Geoffrey Hancock. "Insect Collecting in Africa During the Eighteenth Century and William Hunter's Collection." *Archives of Natural History* 34, no. 2 (2007): 293-306.

Drayton, Richard. *Nature's Government: Science, Imperial Britain, and the "Improvement" of the World*. New Haven: Yale University Press, 2000.

Dunn, Richard S. *A Tale of Two Plantations: Slave Life and Labor in Jamaica and Virginia*. Cambridge: Harvard University Press, 2014.

Dunn, Richard S. *Sugar and Slaves: The Rise of the Planter Class in the English West Indies, 1624-1713*. Chapel Hill: University of North Carolina Press Books, 1972.

Dusenberry, William H. "Discriminatory Aspects of Legislation in Colonial Mexico." *The Journal of Negro History* 33, no. 3 (1948): 284-302.

Earle, Rebecca. "The Political Economy of Nutrition in the Eighteenth Century", *Past & Present*, vol. 242, no. 1, (2019): 79–117

"Early Letters from South Carolina upon Natural History." *The South Carolina Historical and Genealogical Magazine* 21, no. 1 (1920): 3-9.

Edelson, S. Max. "Beyond "Black Rice": Reconstructing Material and Cultural Contexts for Early Plantation Agriculture." *The American Historical Review* 115, no. 1 (2010): 125-135.

Edelson, Max S. *Plantation Enterprise in Colonial South Carolina*. Cambridge: Harvard University Press, 2006.

Edwards, Gary T. "'Negroes ... and All Other Animals': Slaves and Masters in Antebellum Madison County." *Tennessee Historical Quarterly* 57, no. 1 (1998): 24-35.

Eltis, David, Philip Morgan, and David Richardson. "Agency and Diaspora in Atlantic History: Reassessing the African Contribution to Rice Cultivation in the Americas." *The American Historical Review* 112, no. 5 (2007): 1329-1358

Ephirim-Donkor, Anthony. *African Religion Defined: A Systematic Study of Ancestor Worship Among the Akan*. London: Rowman & Littlefield, 2016.

Ewan, Joseph, and Nesta Ewan, *John Banister and His Natural History of Virginia, 1678-1692*, Urbana: University of Illinois Press, 1970.

Ewan, Joseph. "The Natural History of John Abbot: Influences and Some Questions." *Bartonia*, no. 51 (1985): 37-45.

Fage, J.D., "African Societies and the Atlantic Slave Trade," *Past & Present*, no. 125 (1989): 97-115.

Fajardo, Luis Eduardo. "Dos Comerciantes Británicos en Cartagena a Principios del siglo XVIII." *Boletín Cultural y Bibliográfico* 43, no. 72-71 (2006): 2-19.

- Fayer, Joan M., "African Interpreters in the Atlantic Slave Trade." *Anthropological Linguistics* 45, no. 3 (2003): 281-95.
- Feinberg, Harvey M. "Africans and Europeans in West Africa: Elminans and Dutchmen on the Gold Coast during the Eighteenth Century." *Transactions of the American Philosophical Society* 79, no. 7 (1989): 1-186.
- Fernández Bravo, Álvaro. "Catálogo, Colección y Colonialismo Interno: Una lectura de la "Descripción de la Patagonia" de Thomas Falkner (1774)." *Revista de Crítica Literaria Latinoamericana* (2004): 229-249.
- Finucane, Adrian. *The Temptations of Trade: Britain, Spain, and the Struggle for Empire*. Philadelphia: University of Pennsylvania Press, 2016.
- Fischer, Kirsten. *Suspect Relations: Sex, Race, and Resistance in Colonial North Carolina*. Ithaca: Cornell University Press, 2002.
- Fissell, Mary. "Imagining Vermin in Early Modern England." *History Workshop Journal*, no. 47, (1999): 1-29.
- Foucault, Michel. *Discipline and Punish: The Birth of the Prison*. New York: Pantheon Books, 1977.
- Foy, Anna M. "The Convention of Georgic Circumlocution and the Proper Use of Human Dung in Samuel Martin's *Essay Upon Plantership*." *Eighteenth-Century Studies* 49, no. 4 (2016): 475-506.
- Frey, Sylvia R. and Betty Wood, *Come Shouting to Zion: African American Protestantism in the American South and British Caribbean to 1830*, (Chapel Hill: University of North Carolina Press, 2000), 28-29.
- Fry, Gladys-Marie. *Night Riders in Black Folk History*. Knoxville: University of Tennessee Press, 1975.
- Fuentes, Marisa J. *Dispossessed Lives: Enslaved Women, Violence, and the Archive*. Philadelphia: University of Pennsylvania Press, 2016.
- Fulford, Tim, Debbie Lee, and Peter J. Kitson, *Literature, Science and Exploration in the Romantic Era: Bodies of Knowledge*. Cambridge: Cambridge University Press, 2004.
- Galle, Jillian E. "Assessing the Impacts of Time, Agricultural Cycles, and Demography on the Consumer Activities of Enslaved Men and Women in Eighteenth-Century Jamaica and Virginia", in *Out of Many, One People: The Historical Archaeology of Colonial Jamaica*, edited by James A. Delle, Mark W. Hauser, and Douglas V. Armstrong. Tuscaloosa: University of Alabama Press, 2011: 211-242.

Gaspar, David Barry. *Bondmen and Rebels: A Study of Master-Slave Relations in Antigua*. Durham: Duke University Press, 1993.

Gaspar, David Barry. "Working the System: Antigua Slaves and their Struggle to Live," *Slavery and Abolition* 13, no. 3 (1992): 131-135.

Geggus, David. "Marronage, Voodoo, and the Saint Domingue Slave Revolt of 1791." *Proceedings of the Meeting of the French Colonial Historical Society* 15 (1992): 22-35.

Gibbs, Jenna. "Toussaint, Gabriel, and Three Finger'd Jack: "Courageous Chiefs" and the "Sacred Standard of Liberty" on the Atlantic Stage." *Early American Studies: An Interdisciplinary Journal* 13, no. 3 (2015): 626-660.

Gibson, Susannah. "On Being An Animal, or, the Eighteenth-Century Zoophyte Controversy in Britain." *History of Science* 50, no. 4 (2012): 453-476.

Gijanto, Liza. "Personal Adornment and Expressions of Status: Beads and the Gambia River's Atlantic Trade." *International Journal of Historical Archaeology* 15, no. 4 (2011): 637-68.

Gijanto, Liza, and Sarah Walshaw. "Ceramic Production and Dietary Changes at Juffure, Gambia." *The African Archaeological Review* 31, no. 2 (2014): 265-97.

Gilmore, John. *The Poetics of Empire: A Study of James Grainger's The Sugar Cane*. New Brunswick: Athlone Press, 2000.

Glasson, Travis. *Mastering Christianity: Missionary Anglicanism and Slavery in the Atlantic World*. Oxford: Oxford University Press, 2011.

Glasson, Travis. "Missionaries, Methodists, and a Ghost: Philip Quaque in London and Cape Coast, 1756-1816." *Journal of British Studies* 48, no. 1 (2009): 29-50.

Gómez, Pablo F. "Caribbean Stones and the Creation of Early-Modern Worlds," *History and Technology* 34, no. 1 (2018): 11-20.

Goodwin, Gordon. 'Grainger, James (1721x4–1766)', rev. Caroline Overy, *Oxford Dictionary of National Biography*. Oxford: Oxford University Press, 2004.

Goucher, Candice. *Congotay! Congotay! A Global History of Caribbean Food*. London: Routledge, 2013.

Govier, Mark. "The Royal Society, Slavery and the Island of Jamaica: 1660-1700." *Notes and records of the Royal Society* 53, no. 2 (1999): 203-217.

Grandjean, Katherine A. "New World Tempests: Environment, Scarcity, and the Coming of the Pequot War." *William and Mary Quarterly* 68, no. 1 (2011): 75-100.

Greene, Jack P. *Landon Carter: An Inquiry Into the Personal Values and Social Imperatives of the Eighteenth-Century Virginia Gentry*. Charlottesville: University of Virginia Press, 1965.

Greene, Jack P. *The Diary of Colonel Landon Carter of Sabine Hall, 1752-1778*. volumes 1 and 2. Charlottesville: University Press of Virginia, 1965.

Grigson, Caroline. *Menagerie: The History of Exotic Animals in England*. Oxford: Oxford University Press, 2016.

Grove, Richard H. *Green Imperialism: Colonial Expansion, Tropical Island Edens and the Origins of Environmentalism, 1600-1860*. Cambridge University Press, 1996.

Gunn, Jeffrey. "Creating a Paradox: Quobna Ottobah Cugoano and the Slave Trade's Violation of the Principles of Christianity, Reason, and Property Ownership." *Journal of World History* 21, no. 4 (2010): 629-656.

Hadden, Sally E. *Slave Patrols: Law and Violence in Virginia and the Carolinas*. Cambridge: Harvard University Press, 2001.

Hamilton, Douglas. *Scotland, the Caribbean and the Atlantic World, 1750-1820*. Oxford: Oxford University Press, 2010.

Hancock, E. Geoffrey, and A. Starr Douglas. "William Hunter's Goliath Beetle, *Goliathus goliatus* (Linnaeus, 1771), re-visited." *Archives of Natural History* 36, no. 2 (2009): 218-230.

Handler, Jerome S. "An African-type Healer/Diviner and His Grave Goods: A Burial from a Plantation Slave Cemetery in Barbados, West Indies." *International Journal of Historical Archaeology* 1, no. 2 (1997): 91-130.

Handler, Jerome S. "Escaping Slavery in a Caribbean Plantation Society: Marronage in Barbados, 1650s-1830s." *New West Indian Guide* 71, no. 3/4 (1997): 183-225.

Handler, Jerome S., and Diane Wallman. "Production Activities in the Household Economies of Plantation Slaves: Barbados and Martinique, Mid-1600s to Mid-1800s," *International Journal of Historical Archaeology* 18, no. 3 (2014): 441-66.

Handler, Jerome S. and Kenneth M. Bilby, *Enacting Power: The Criminalization of Obeah in the Anglophone Caribbean, 1760-2011*. Mona: University of West Indies Press, 2012.

Handley, Stuart. 'Price, Sir Charles, first baronet (1708–1772).' *Oxford Dictionary of National Biography*. Oxford University Press, 2004.

Harris, Barbara Jean. *English Aristocratic Women, 1450-1550: Marriage and Family, Property and Careers*. Oxford: Oxford University Press, 2002.

Harrison, Peter. "Curiosity, Forbidden Knowledge, and the Reformation of Natural Philosophy in Early Modern England." *Isis* 92, no. 2 (2001): 265-90.

Hartman, Saidiya V. *Lose Your Mother: A Journey Along the Atlantic Slave Route*. New York: Farrar, Straus, and Giroux, 2007.

Hartman, Saidiya V. *Scenes of Subjection: Terror, Slavery, and Self-Making in Nineteenth Century America*. Oxford: Oxford University Press, 1997.

Hawthorne, Walter. "From 'Black Rice' to 'Brown': Rethinking the History of Risiculture in the Seventeenth-and Eighteenth-Century Atlantic." *The American Historical review* 115, no. 1 (2010): 151-163.

Hayes, Katherine Howlett. *Slavery Before Race: Europeans, Africans, and Indians at Long Island's Sylvester Manor Plantation, 1651-1884*. New York: New York University Press, 2014.

Henige, David. "John Kabes of Komenda: An Early African Entrepreneur and State Builder." *The Journal of African History* 18, no. 01 (1977): 1-19.

Henley, Ryan. *Beyond Slavery and Abolition: Black British Writing, c.1770–1830*. Cambridge: Cambridge University Press, 2018.

Henry, Paget. "Between Hume and Cugoano: Race, Ethnicity and Philosophical Entrapment." *The Journal of Speculative Philosophy* 18, no. 2 (2004): 129-48.

Herbert, Eugenia W. "Portuguese Adaptation to Trade Patterns Guinea to Angola (1443-1640)." *African Studies Review* 17, no. 2 (1974): 411-23.

Hicks, Dan. "Material Improvements: the Archaeology of Estate Landscapes in the British Leeward Islands, 1713-1838" in *Estate Landscapes: Design, Improvement and Power in the Post-Medieval Landscape*, edited by Jonathan Finch and Kate Giles (Suffolk: Boydell Press, 2007), 205-208.

Hill, Matthew H. "Towards a Chronology of the Publications of Francis Moore's 'Travels into the Inland Parts of Africa'" *History in Africa* 19 (1992): 353-68.

Hiskett, M. "Materials Relating to the Cowry Currency of the Western Sudan—II: Reflections on the Provenance and Diffusion of the Cowry in the Sahara and the Sudan." *Bulletin of the School of Oriental and African Studies, University of London* 29, no. 2 (1966): 339-66.

Hogarth, Rana A. *Medicalizing Blackness: Making Racial Difference in the Atlantic World, 1780-1840*. Chapel Hill: University of North Carolina Press, 2017.

Hogendorn, Jan S., and H. A. Gemery. "Continuity in West African Monetary History? An Outline of Monetary Development." *African Economic History*, no. 17 (1988): 127-146.

Hogendorn, Jan, and Marion Johnson. *The Shell Money of the Slave Trade*. Cambridge: Cambridge University Press, 1986.

Holsey, Bayo. *Routes of Remembrance: Refashioning the Slave Trade in Ghana*. Chicago: University of Chicago Press, 2008.

Hutchings, Kevin. *Romantic Ecologies and Colonial Cultures in the British Atlantic World, 1770-1850*. Montreal: McGill-Queen's University Press, 2009.

Ingersoll, Thomas N. "'Release Us out of This Cruell Bondegg': An Appeal from Virginia in 1723." *The William and Mary Quarterly* 51, no. 4 (1994): 777-82.

Irving, Sarah. *Natural Science and the Origins of the British Empire*. New York: Routledge, 2015.

Irving, Sarah. "Rethinking Instrumentality: Natural Philosophy and Christian Charity in the Early Modern Atlantic World." *HOPOS: The Journal of the International Society for the History of Philosophy of Science* 2, no. 1 (2012): 55-76.

Isaac, Rhys. *Landon Carter's Uneasy Kingdom: Revolution and Rebellion on a Virginia Plantation*. Oxford: Oxford University Press, 2004.

Isichei, Elizabeth. *Voices of the Poor in Africa: Moral Economy and the Popular Imagination*. Rochester: University of Rochester Press, 2002.

Jackson, L.P. "Elizabethan Seamen and the African Slave Trade." *The Journal of Negro History* 9, no. 1 (1924): 1-17.

Jacoby, Karl. "Slaves by Nature? Domestic Animals and Human Slaves." *Slavery and Abolition* 15, no. 1 (1994): 89-99.

Johnson, Marion. "The Cowrie Currencies of West Africa Part I." *The Journal of African History* 11, no. 1 (1970): 17-49.

Johnson, Marion. "The Cowrie Currencies of West Africa Part II." *The Journal of African History* 11, no. 3 (1970): 331-353.

Johnson, Sherry. *Climate and Catastrophe in Cuba and the Atlantic World in the Age of Revolution*. Chapel Hill: University of North Carolina Press, 2011.

Johnson, Walter. *River of Dark Dreams: Slavery and Empire in the Cotton Kingdom*. Cambridge: Harvard University Press, 2013.

Johnston, Edith Duncan. "Dr. William Houstoun, Botanist." *The Georgia Historical Quarterly* 25, no. 4 (1941): 325-39.

Jones, Peter M. "Making Chemistry the 'Science' of Agriculture, c. 1760–1840." *History of Science* 54, no. 2 (June 2016): 169–94.

Jonsson, Frederik Albritton. *Enlightenment's Frontier: The Scottish Highlands and the Origins of Environmentalism*. New Haven: Yale University Press, 2013.

Jordan, Winthrop D. *White Over Black*. Chapel Hill: University of North Carolina Press, 1968.

Kafka, Ben. "Paperwork: The State of the Discipline." *Book History* 12 (2009): 340-53.

Kendi, Ibram X. *Stamped From the Beginning: The Definitive History of Racist Ideas in America*. New York: Random House, 2017.

Kercsmar, Joshua Abram. "Wolves at Heart: How Dog Evolution Shaped Whites' Perceptions of Indians in North America." *Environmental History* 21, no. 3 (2016): 516-540.

Kim, Julie Chun. "Natural Histories of Indigenous Resistance: Alexander Anderson and the Caribs of St. Vincent", *The Eighteenth Century* 55, no. 2-3, (2014): 217-233.

Kindmark, Kristina, and György Nováky. "Imperiets Budbärare: Henry Smeathman å resa i Sierra Leone 1771-1774." in *Från Karakorum till Silijan: Resor Under Sju Sekler*, edited by Hanna Hodacs and Åsa Karlsson, 163-96. Lund, Sweden: Historiska Media, 2000.

King, James Ferguson. "Descriptive Data on Negro Slaves in Spanish Importation Records and Bills of Sale." *The Journal of Negro History* 28, no. 2 (1943): 204-19.

Kiple, Kenneth F., and Virginia Himmelsteib King. *Another Dimension to the Black Diaspora: Diet, Disease and Racism*. Cambridge: Cambridge University Press, 2003.

Kiple, Kenneth F., and Virginia H. King. "Black Tongue and Black Men: Pellagra and Slavery in the Antebellum South." *The Journal of Southern History* 43, no. 3 (1977): 411-28.

Kiple, Kenneth F. *The Caribbean Slave: a Biological History*. Cambridge: Cambridge University Press, 2002.

- Kiple, Kenneth F. and Virginia H. Kiple. "Deficiency Diseases in the Caribbean." *The Journal of Interdisciplinary History* 11, no. 2 (1980): 197-215.
- Klein, Herbert. *The Atlantic Slave Trade*, 2nd edition. Cambridge: Cambridge University Press, 2010.
- Klein, Martin A. "Servitude among the Wolof and Sereer of Senegambia," in *Slavery in Africa: Historical and Anthropological Perspectives*, edited by Suzanne Miers and Igor Kopytoff. Madison: University of Wisconsin Press, 1977: 335–363.
- Kleingeld, Pauline. "Kant's Second Thoughts on Colonialism," in *Kant and Colonialism: Historical and Critical Perspectives*, edited by Katrin Flikschuh and Lea Ypi. Oxford: Oxford University Press, 2014: 43-67.
- Klooster, Wim. *Revolutions in the Atlantic World: A Comparative History*. New York: New York University Press, 2009.
- Knight, Frederick C. *Working the Diaspora: The Impact of African Labor on the Anglo-American World, 1650-1850*. New York: New York University Press, 2010.
- Koerner, Lisbet. *Linnaeus: Nature and Nation*. Cambridge: Harvard University Press, 2000.
- Konadu, Kwasi. *The Akan Diaspora in the Americas*. Oxford: Oxford University Press, 2010.
- Law, Robin. *The English In West Africa, 1681-1683*. Oxford: Published for the British Academy by Oxford University Press, 1997.
- Kulikoff, Allan. *From British Peasants to Colonial American Farmers*. Chapel Hill: University of North Carolina Press, 2000.
- Kulikoff, Allan. *Tobacco and Slaves: The Development of Southern Cultures in the Chesapeake, 1680-1800*. Chapel Hill: University of North Carolina Press, 1986.
- Kupperman, Karen Ordahl. "Errand to the Indies: Puritan Colonization from Providence Island through the Western Design." *The William and Mary Quarterly* 45, no. 1 (1988): 70-99.
- Lambert, David. "Master–Horse–Slave: Mobility, Race and Power in the British West Indies, c. 1780–1838." *Slavery & Abolition* 36, no. 4 (2015): 618-641.
- Lambert, David. "'Taken Captive by the Mystery of the Great River': Towards an Historical Geography of British Geography and Atlantic Slavery." *Journal of Historical Geography* 35, no. 1 (2009): 44-65.

Lancaster, James A.T. "Natural Knowledge as a Propaedeutic to Self-Betterment: Francis Bacon and the Transformation of Natural History." *Early Science and Medicine* 17, no. 1/2 (2012): 181-96.

Landers, Jane. "Gracia Real de Santa Teresa de Mose: A Free Black Town in Spanish Colonial Florida." *The American Historical Review* 95, no. 1 (1990): 9-30.

Landry, Donna. "English Brutes, Eastern Enlightenment." *The Eighteenth Century* 52, no. 1 (2011): 11-30.

Landry, Donna. *Noble Brutes: How Eastern Horses Transformed English Culture*. Baltimore: Johns Hopkins University Press, 2008.

Larrabee, Mary Jeanne. "'I Know What a Slave Knows': Mary Prince's Epistemology of Resistance." *Women's Studies* 35, no. 5 (2006): 453-473.

Latour, Bruno. *Reassembling the Social: An Introduction to Actor-Network-Theory*. Oxford: Oxford University Press, 2005.

Law, John. "Notes on the Theory of the Actor-Network: Ordering, Strategy, and Heterogeneity." *Systems Practice* 5, no. 4 (1992): 379-393.

Law, Robin. "'The Common People Were Divided': Monarchy, Aristocracy and Political Factionalism in the Kingdom of Whydah, 1671-1727." *The International Journal of African Historical Studies* 23, no. 2 (1990): 201-229.

Law, Robin. *The English In West Africa, 1685-1688*. Oxford: Published for the British Academy by Oxford University Press, 2001.

Law, Robin. *The English In West Africa, 1691-1699*. Oxford: Oxford University Press for The British Academy, 2006.

Law, Robin. "Further Light on Bulfinch Lambe and the 'Emperor of Pawpaw:' King Agaja of Dahomey's Letter to King George I of England, 1726." *History in Africa* 17 (1990): 211-26.

Law, Robin. "Human Sacrifice in Pre-Colonial West Africa." *African Affairs* 84, no. 334 (1985): 53-87.

Law, Robin. "The Komenda Wars, 1694-1700: A Revised Narrative." *History in Africa* 34, no. 1 (2007): 133-168.

Law, Robin. *Ouidah: The Social History of a West African Slaving 'Port', 1727-1892*. Columbus: Ohio State University Press, 2004.

Law, Robin. "West Africa's Discovery of the Atlantic." *The International Journal of African Historical Studies* 44, no. 1 (2011): 1-25.

Leask, Nigel. 'Lewis, Matthew Gregory (1775–1818).' *Oxford Dictionary of National Biography*. Oxford University Press, 2004.

Lindemann, Mary. *Medicine and Society in Early Modern Europe*. Cambridge: Cambridge University Press, 1999.

Livingston, Julie, and Jasbir K. Puar. "Interspecies." *Social Text* 29, no. 1 106 (2011): 3-14.

Lovejoy, Paul E. *Transformations in Slavery: A History of Slavery in Africa*. Cambridge: Cambridge University Press, 2011.

Lucas, Michael T. "Empowered Objects: Material Expressions of Spiritual Beliefs in the Colonial Chesapeake Region." *Historical Archaeology* 48, no. 3 (2014): 106-124.

Lydon, Ghislaine. *On Trans-Saharan Trails: Islamic Law, Trade Networks, and Cross-Cultural Exchange in Nineteenth-Century Western Africa*. Cambridge University Press, 2009.

MacGregor, Arthur, and Alistair McAlpine. *Sir Hans Sloane: Collector, Scientist, Antiquary, Founding Father of the British Museum*. London: Published for the Trustees of the British Museum by British Museum Press, 1994.

MacMaster, Richard K. "From Ulster to the Carolinas: John Torrans, John Greg, John Poaug, and Bounty Immigration, 1761-1768." in *The Irish in the Atlantic World*, edited by David T. Gleeson. Columbia: University of South Carolina Press, 2010.

Maddison-MacFadyen, Margot. "Mary Prince, Grand Turk, and Antigua," *Slavery & Abolition* 34, no. 4 (2013): 653-662.

Main, Gloria Lund. *Tobacco Colony: Life in Early Maryland, 1650-1720*. Princeton University Press, 1982.

Marzano, Annalisa. *Harvesting the Sea: The Exploitation of Marine Resources in the Roman Mediterranean*. Oxford: Oxford University Press, 2013.

Mattfeld, Monica. *Becoming Centaur: Eighteenth-century Masculinity and English Horsemanship*. University Park: Pennsylvania State University Press, 2017.

Mattfeld, Monica. "'Undaunted all he views': The Gibraltar Charger, Astley's Amphitheatre and Masculine Performance." *Journal for Eighteenth Century Studies* 37, no. 1 (2014): 19-36.

Maxwell, Clarence. "Enslaved Merchants, Enslaved Merchant-Mariners, and the Bermuda Conspiracy of 1761." *Early American Studies* 7, no. 1 (2009): 140-78.

Mazzio, Carl. "Acting with Tact: Touch and Theater in the Renaissance", in *Sensible Flesh: On Touch in Early Modern Culture*, edited by Elizabeth D. Harvey. Philadelphia: University of Pennsylvania Press, 2003: 159-186.

Mbembe, Achille. *Critique of Black Reason*, translated by Laurent Dubois. Durham: Duke University Press, 2017.

McCaskie, T.C. "Denkyira in the Making of Asante C. 1660-1720." *The Journal of African History* 48, no. 1 (2007): 1-25.

McClellan III, James E. *Colonialism and Science: Saint Domingue and the Old Regime*. Chicago: University of Chicago Press, 1992.

McShane, Clay, and Joel Tarr, *The Horse in the City: Living Machines in the Nineteenth Century*. Baltimore: Johns Hopkins University Press, 2007.

McWilliams, James E. *American Pests: The Losing War on Insects from Colonial Times to DDT*. New York: Columbia University Press, 2008.

McWilliams, James E. "Worshipping Weeds: The Parable of the Tares, the Rhetoric of Ecology, and the Origins of Agrarian Exceptionalism in Early America." *Environmental History* 16, no. 2 (2011): 290-311.

McWilliams, James E. *A Revolution in Eating: How the Quest for Food Shaped America*. New York: Columbia University Press, 2005.

Meacham, Sarah Hand. "Pets, Status, and Slavery in the Late-Eighteenth-Century Chesapeake." *The Journal of Southern History* 77, no. 3 (2011): 521-54.

Melville, Elinor G.K. *A Plague of Sheep: Environmental Consequences of the Conquest of Mexico*. Cambridge: Cambridge University Press, 1997.

Menard, Russell R. "Plantation Empire: How Sugar and Tobacco Planters Built Their Industries and Raised an Empire." *Agricultural History* 81, no. 3 (2007): 309-332.

Meniketti, Marco. *Sugar Cane Capitalism and Environmental Transformation: An Archaeology of Colonial Nevis, West Indies*. Tuscaloosa: University of Alabama Press, 2015.

Merchant, Carolyn. "Shades of Darkness: Race and Environmental History," *Environmental History* 8, no. 3 (2003): 380-394.

- Meyers, Amy R.W., and Margaret Beck Pritchard, editors. *Empire's Nature: Mark Catesby's New World Vision*. Chapel Hill: University of North Carolina Press, 1998.
- Miller, Joseph. *Way of Death: Merchant Capitalism and the Angolan Slave Trade, 1730–1830*. Madison: University of Wisconsin Press, 1988.
- Mitchell, Matthew David. "'Legitimate Commerce' in the Eighteenth Century: The Royal African Company of England Under the Duke of Chandos, 1720–1726." *Enterprise & Society* 14, no. 3 (2013): 544-578.
- Monzote, Reinaldo Funes. *From Rainforest to Cane Field in Cuba: An Environmental History since 1492*. Chapel Hill: University of North Carolina Press, 2008.
- Mooney, Katherine C. *Race Horse Men: How Slavery and Freedom Were Made at the Racetrack*. Cambridge: Harvard University Press, 2014.
- Moreau de Saint-Méry, M.L.E. "The Border Maroons of Saint-Domingue: Le Maniel." in *Maroon Societies: Rebel Slave Communities in the Americas*, edited by Richard Price. Baltimore: The Johns Hopkins University Press, 1979: 107-134.
- Morgan, Gwenda, and Peter Rushton. "Visible Bodies: Power, Subordination and Identity in the Eighteenth-Century Atlantic World." *Journal of Social History* 39, no. 1 (2005): 39-64.
- Morgan, Jennifer. *Laboring Women: Reproduction and Gender in New World Slavery*. Philadelphia: University of Pennsylvania Press, 2004.
- Morgan, Jennifer L. "'Some Could Suckle over Their Shoulder': Male Travelers, Female Bodies, and the Gendering of Racial Ideology, 1500-1770." *The William and Mary Quarterly* 54, no. 1 (1997): 167-92.
- Morgan, Kenneth. "Bristol West India Merchants in the Eighteenth Century." *Transactions of the Royal Historical Society* 3 (1993): 185-208.
- Morgan, Kenneth. 'Long, Edward (1734–1813)'. *Oxford Dictionary of National Biography*. Oxford University Press, 2004.
- Morgan, Kenneth. *Slavery and the British Empire: From Africa to America*. Oxford: Oxford University Press, 2007.
- Morgan, Philip D. "Slaves and Livestock in Eighteenth-Century Jamaica: Vineyard Pen, 1750-1751." *The William and Mary Quarterly* 52, no. 1 (1995): 47-76.
- Morgan, Philip D., and Michael L. Nicholls, "Slaves in Piedmont Virginia, 1720-1790," *The William and Mary Quarterly* 46, no. 2 (1989): 212-251.

Mtubani, Victor C. D. "The Black Voice in Eighteenth-Century Britain: African Writers against Slavery and the Slave Trade." *Phylon* 45, no. 2 (1984): 85-97.

Mukharji, Projit Bihari. *Doctoring Traditions: Ayurveda, Small Technologies, and Braided Sciences*. Chicago: University of Chicago Press, 2016.

Mukharji, Projit Bihari. "Occulted Materialities." *History and Technology* 34, no. 1 (2018): 31-40.

Mulcahy, Matthew. *Hurricanes and Society in the British Greater Caribbean, 1624–1783*. Baltimore: Johns Hopkins University Press, 2010.

Mulcahy, Matthew, and Stuart Schwartz. "Nature's Battalions: Insects as Agricultural Pests in the Early Modern Caribbean." *William & Mary Quarterly* 75, no. 3 (2018): 433-464.

Müller-Wille, Staffan. "Nature as a Marketplace: The Political Economy of Linnaean Botany." *History of Political Economy* 35, no. 5 (2003): 154-172.

Murphy, Kathleen S. "Collecting Slave Traders: James Petiver, Natural History, and the British Slave Trade." *William & Mary Quarterly* 70, no. 4 (2013): 637-67.

Murphy, Kathleen S. "A Slaving Surgeon's Collection: The Pursuit of Natural History through the British Slave Trade to Spanish America." in *Curious Encounters: Voyaging, Collecting, and Making Knowledge in the Long Eighteenth Century*, edited by Adriana Craciun and Mary Terrall. Toronto: University of Toronto Press, 2019: 138-158.

Murphy, Trevor. *Pliny the Elder's Natural History: The Empire in the Encyclopedia*. Oxford: Oxford University Press, 2004.

Myers, Jefferey. "Other Nature: Resistance to Ecological Hegemony in Charles W. Chesnutt's 'The Conjure Woman'." *African American Review* 37, no. 1 (2003): 5-20.

Nagl, Dominik. "The Governmentality of Slavery in Colonial Boston, 1690-1760." *Amerikastudien / American Studies* 58, no. 1 (2013): 5-26.

Nelson, George H. "Contraband Trade Under the Asiento, 1730-1739." *The American Historical Review* 51, no. 1 (1945): 55-67.

Nelson, John K. *A Blessed Company: Parishes, Parsons, and Parishioners in Anglican Virginia, 1690-1776*. Chapel Hill: University of North Carolina Press, 2003.

Nelson, Louis P. *Architecture and Empire in Jamaica*. New Haven: Yale University Press, 2016.

Nelson, Louis P. "Architectures of West African Enslavement." *Buildings & Landscapes: Journal of the Vernacular Architecture Forum* 21, no. 1 (2014): 88-125.

Newman, Simon. *A New World of Labor: The Development of Plantation Slavery in the British Atlantic*. Philadelphia: University of Pennsylvania Press, 2013.

Newson, Linda A., and Susie Minchin. "Diets, Food Supplies and the African Slave Trade in Early Seventeenth-Century Spanish America." *The Americas* 63, no. 4 (2007): 517-50.

Newton, John, eds. Bernard Martin, and Mark Spurrell. *The Journal of a Slave Trader (John Newton) 1750-1754*. London: Epworth Press, 1962.

Norman, Neil L. "Hueda (Whydah) Country and Town: Archaeological Perspectives on the Rise and Collapse of an African Atlantic Kingdom." *The International Journal of African Historical Studies* 42, no. 3 (2009): 387-410.

Norton, Marcy. "Going to the Birds: Animals as Things and Beings in Early Modernity." in *Early Modern Things: Objects and their Histories, 1500-1800* edited by Paula Findlen. London: Routledge, 2013: 53-83.

"Notes and Queries." *The Pennsylvania Magazine of History and Biography* 58, no. 4 (1934): 378-84.

Nussbaum, Felicity, editor. *The Global Eighteenth Century*. Baltimore: Johns Hopkins University Press, 2005.

Offen, Karl. "Puritan Bioprospecting in Central America and the West Indies." *Itinerario* 35, no. 1 (2011): 15-48.

Ogborn, Miles. "The Power of Speech: Orality, Oaths and Evidence in the British Atlantic World, 1650–1800." *Transactions of the Institute of British Geographers* 36, no. 1 (2011): 109-125.

Ogborn, Miles. "Streynsham Master's Office: Accounting for Collectivity, Order and Authority in 17th-Century India," *Cultural Geographies* 13, no. 1 (2006): 127-155.

Ogundiran, Akinwumi. "Of Small Things Remembered: Beads, Cowries, and Cultural Translations of the Atlantic Experience in Yorubaland." *The International Journal of African Historical Studies* 35, no. 2/3 (2002): 427-457.

Orejas Miranda, Braulio R. "The Snake Genus *Lystrophis* in Uruguay." *Copeia* 1966, no. 2 (1966): 193-205.

O'Shaughnessy, Andrew Jackson. *An Empire Divided: the American Revolution and the British Caribbean*. Philadelphia: University of Pennsylvania Press, 2000.

Otremba, Eric. "Inventing Ingenios: Experimental Philosophy and the Secret Sugar-Makers of the Seventeenth-Century Atlantic." *History and Technology* 28, no. 2 (2012): 119-147.

Palmer, Colin A. "The Company Trade and the Numerical Distribution of Slaves to Spanish America, 1703-1739" in *Africans in Bondage: Studies in Slavery and the Slave Trade*, edited by Philip D. Curtin and Paul Lovejoy. Madison: African Studies Program, University of Wisconsin-Madison, 1986: 27-43.

Palmié, Stephan. "Other Powers: Tylor's Principle, Father Williams's Temptation, and the Power of Banality," in *Obeah and Other Powers: The Politics of Caribbean Religion and Healing*, edited by Diana Paton and Maarit Forde. Durham: Duke University Press, 2012: 316-340.

Parrish, Susan Scott. *American Curiosity: Cultures of Natural History in the Colonial British Atlantic World*. Chapel Hill: University of North Carolina Press, 2012.

Parsons, Christopher M., and Kathleen S. Murphy. "Ecosystems under Sail: Specimen Transport in the Eighteenth-Century French and British Atlantics." *Early American Studies: An Interdisciplinary Journal* 10, no. 3 (2012): 503-529.

Pasierowska, Rachael L. "'Screech Owls Allus Holler'round the House before Death": Birds and the Souls of Black Folk in the 1930s American South." *Journal of Social History* 51, no. 1 (2016): 27-46.

Paton, Diana. "The Afterlives of Three-Fingered Jack." in *Slavery and the Cultures of Abolition: Essays Marking the Bicentennial of the British Abolition Act of 1807*, edited by Brycchan Carey and Peter J. Kitson. Suffolk: Boydell and Brewer, 2007: 42-63.

Paton, Diana. *The Cultural Politics of Obeah: Religion, Colonialism and Modernity in the Caribbean World*. Cambridge University Press, 2015.

Paton, Diana. "Obeah Acts: Producing and Policing the Boundaries of Religion in the Caribbean." *Small Axe* 13, no. 1 (2009): 1-18.

Paton, Diana. "Punishment, Crime, and the Bodies of Slaves in Eighteenth-Century Jamaica." *Journal of Social History* 34, no. 4 (2001): 923-954.

Patterson, Orlando. *Slavery and Social Death: A Comparative Study*. Cambridge: Harvard University Press, 1982.

Pattullo, Polly. *Your Time Is Done Now: Slavery, Resistance, and Defeat: The Maroon Trials of Dominica (1813-1814)*. New York: New York University Press, 2015.

Paugh, Katherine. *The Politics of Reproduction: Race, Medicine, and Fertility in the Age of Abolition*. Oxford: Oxford University Press, 2017.

Paul, Helen J. *The South Sea Bubble: An Economic History of its Origins and Consequences*. London: Routledge, 2010.

Perdue, Charles L., Thomas E. Barden, and Robert K. Phillips, eds. *Weevils in the Wheat: Interviews with Virginia Ex-Slaves* (Charlottesville: University of Virginia Press, 1992).

Perry, Tony C. "In Bondage When Cold Was King: The Frigid Terrain of Slavery in Antebellum Maryland." *Slavery & Abolition* 38, no. 1 (2017): 23-36.

Pestana, Carla Gardina. *Protestant Empire: Religion and the Making of the British Atlantic World*. Philadelphia: University of Pennsylvania Press, 2009.

Peterfreund, Stuart. "From the Forbidden to the Familiar: The Way of Natural Theology Leading Up to and Beyond the Long Eighteenth Century." *Studies in Eighteenth-Century Culture* 37, no. 1 (2008): 23-39.

Peters, Tacuma. "The Anti-Imperialism of Ottobah Cugoana: Slavery, Abolition, and Colonialism in Thoughts and Sentiments on the Evil of Slavery." *The CLR James Journal* 23, no. 1/2 (2017): 61-82.

Petley, Christer. *White Fury: A Jamaican Slaveholder and the Age of Revolution*. Oxford: University Press, 2018.

Pettigrew, William A. *Freedom's Debt: The Royal African Company and the Politics of the Atlantic Slave Trade, 1672-1752*. Chapel Hill: University of North Carolina Press, 2013.

Pettigrew, William A. "Free to Enslave: Politics and the Escalation of Britain's Transatlantic Slave Trade, 1688-1714." *William and Mary Quarterly* (2007): 3-38.

Phillips, Ulrich B. "Slave Crime in Virginia." *The American Historical Review* 20, no. 2 (1915): 336-40.

Pietz, William. "The Problem of the Fetish: Bosman's Guinea and the Enlightenment Theory of Fetishism." *Res: Anthropology and Aesthetics*, no. 16 (1988): 105-24.

Platt, Virginia Bever. "The East India Company and the Madagascar Slave Trade," *The William and Mary Quarterly: A Magazine of Early American History* (1969): 548-577.

Pluymers, Keith. "Atlantic Iron: Wood Scarcity and the Political Ecology of Early English Expansion." *The William and Mary Quarterly* 73, no. 3 (2016): 389-426.

Pollitt, Ronald. "John Hawkins's Troublesome Voyages: Merchants, Bureaucrats, and the Origin of the Slave Trade." *Journal of British Studies* 12, no. 2 (1973): 26-40.

Porter, Charlotte. "Natural History Discourse and Collections: The Roles of Collectors in the Southeastern Colonies of North America." *Museum History Journal* 1, no. 1 (2008): 129-146.

Pybus, Cassandra. *Epic Journeys of Freedom: Runaway Slaves of the American Revolution and their Global Quest for Liberty*. Boston: Beacon Press, 2006.

Raman, Bhavani. *Document Raj: Writing and Scribes in Early Colonial South India*. Chicago: University of Chicago Press, 2012.

Ratcliff, Marc J. "Temporality, Sequential Iconography and Linearity in Figures: The Impact of the Discovery of Division in Infusoria." *History and Philosophy of the Life Sciences* 21, no. 3 (1999): 255-92.

Rauschenberg, Roy A. "John Ellis, Royal Agent for West Florida," *The Florida Historical Quarterly*, 62 no.1 (1983), 1-24.

Rawley, James A. "Richard Harris, Slave Trader Spokesman." *Albion: A Quarterly Journal Concerned with British Studies* 23, no. 3 (1991): 439-58.

Rangan, Haripriya, Judith Carney, and Tim Denham. "Environmental History of Botanical Exchanges in the Indian Ocean World." *Environment and History* 18, no. 3 (2012): 311-342.

Rediker, Marcus. "History from Below the Water Line: Sharks and the Atlantic Slave Trade." *Atlantic Studies* 5, no. 2 (2008): 285-297.

Reese, Ty M. "'Sheep in the Jaws of So Many Ravenous Wolves': The Slave Trade and Anglican Missionary Activity at Cape Coast Castle, 1752-1816." *Journal of Religion in Africa* 34, no. 3 (2004): 348-72.

Richardson, Bonham C. *Caribbean Migrants: Environment and Human Survival on St. Kitts and Nevis*. Knoxville: University of Tennessee Press, 1983.

Richardson, Bonham C. *The Caribbean in the Wider World, 1492-1992: A Regional Geography*. Cambridge: Cambridge University Press, 1992.

Richardson, Patrick. *Empire & Slavery*. New York: Harper and Row, 1968.

Riley, Charles, and Leland Howard, *Insect Life: Devoted to the Economy and Life-habits of Insects, Especially in Their Relations to Agriculture*. Washington: United States Government Printing Office, 1892.

Ritvo, Harriet. *The Animal Estate: The English and Other Creatures in the Victorian Age*. Cambridge: Harvard University Press, 1987.

Robbins, Louise E. *Elephant Slaves and Pampered Parrots: Exotic Animals in Eighteenth-Century Paris*. Baltimore: Johns Hopkins University Press, 2002.

Roberts, Jonathan. "Medical Exchange on the Gold Coast during the Seventeenth and Eighteenth Centuries." *Canadian Journal of African Studies / Revue Canadienne Des Études Africaines* 45, no. 3 (2011): 480-523.

Roberts, Justin. *Slavery and the Enlightenment in the British Atlantic, 1750-1807*. Cambridge: Cambridge University Press, 2013.

Roberts, Mark S. *The Mark of the Beast: Animality and Human Oppression*. West Lafayette: Purdue University Press, 2008.

Robles, Whitney Barlow. "Flatness." in *The Philosophy Chamber: Art and Science in Harvard's Teaching Cabinet, 1766-1820*, edited by Ethan W. Lasser. New Haven: Yale University Press, 2017: 190-209.

Rodgers, Nini. *Ireland, Slavery and Anti-Slavery: 1612-1865*. New York: Palgrave Macmillan, 2007.

Røge, Pernille. "A Natural Order of Empire: the Physiocratic Vision of Colonial France after the Seven Years' War," in *The Political Economy of Empire in the Early Modern World*, edited by Sophus Reinert and Pernille Røge. London: Palgrave Macmillan, 2013.

Romeiras, Maria M., Maria Cristina Duarte, Arnaldo Santos-Guerra, Mark Carine, and Javier Francisco-Ortega. "Botanical Exploration of the Cape Verde Islands: From the Pre-Linnaean Records and Collections to Late 18th Century Floristic Accounts and Expeditions." *Taxon* 63, no. 3 (2014): 625-40

Ross, Doran H. "'Come and Try': Towards a History of Fante Military Shrines." *African Arts* 40, no. 3 (2007): 12-35.

Rountree, Helen C., *The Powhatan Indians of Virginia: Their Traditional Culture*. Norman: University of Oklahoma Press, 1989.

Rucker, Walter C. "Earth from a Dead Man's Grave: Ritual Technologies and Mortuary Realms in the Eighteenth-Century Gold Coast Diaspora", in *Slavery and its Legacy in Ghana and the Diaspora*, edited by Rebecca Shumway, and Trevor R. Getz. London: Bloomsbury Publishing, 2017: 62-84.

Rucker, Walter C. *Gold Coast Diasporas: Identity, Culture, Power*. Bloomington: Indiana University Press, 2015.

Rucker, Walter C. *The River Flows On: Black Resistance, Culture, and Identity Formation in Early America*. Baton Rouge: Louisiana State University Press, 2006.

Rushforth, Brett. *Bonds of Alliance: Indigenous and Atlantic Slavery in New France*. Chapel Hill: University of North Carolina Press, 2012.

Russo, J. Elliott. "'Fifty-Four Days Work of Two Negroes': Enslaved Labor in Colonial Somerset County, Maryland," *Agricultural History* 78, no. 4 (2004): 466-492.

Salmon, Michael. *The Aurelian Legacy: British Butterflies and Their Collectors*. Berkeley: University of California Press, 2000.

Samford, Patricia. "The Archaeology of African-American Slavery and Material Culture." *The William and Mary Quarterly* 53, no. 1 (1996): 87-114.

Saunt, Claudio. "'The English Has Now a Mind to Make Slaves of Them All': Creeks, Seminoles, and the Problem of Slavery." *American Indian Quarterly* 22, no. 1/2 (1998): 157-80.

Savage, John. "Black Magic" and White Terror: Slave Poisoning and Colonial Society in Early 19th Century Martinique." *Journal of Social History* 40, no. 3 (2007): 635-662.

Schaffer, Simon, Lissa L. Roberts, Kapil Raj, and James Delbourgo, eds. *The Brokered World: Go-Betweens and Global Intelligence*. Sagamore Beach: Science History Publications, 2009.

Schavelzon, Daniel. "On Slaves and Beer: The First Images of the South Sea Company Slave Market in Buenos Aires." *African and Black Diaspora: An International Journal* 7, no. 2 (2014): 119-128.

Schwartz, Stuart B. *Sea of Storms: A History of Hurricanes in the Greater Caribbean from Columbus to Katrina*. Princeton: Princeton University Press, 2015.

Scott, James C. *Domination and the Arts of Resistance: Hidden Transcripts*. New Haven: Yale University Press, 1990.

Scott, W.R. "The Constitution and Finance of the Royal African Company of England from Its Foundation Till 1720." *The American Historical Review* 8, no. 2 (1903): 241-59.

Seed, Patricia. *Ceremonies of Possession in Europe's Conquest of the New World, 1492-1640*. Cambridge: Cambridge University Press, 1995.

Senior, Emily. *The Caribbean and the Medical Imagination, 1764-1834: Slavery, Disease and Colonial Modernity*. Cambridge: Cambridge University Press, 2018.

Seth, Suman. *Difference and Disease: Medicine, Race, and the Eighteenth-Century British Empire*. Cambridge: Cambridge University Press, 2018.

Seth, Suman. "Materialism, Slavery, and The History of Jamaica." *Isis* 105, no. 4 (2014): 764-772.

Shapin, Steven, and Simon Schaffer, *Leviathan and the Air-Pump: Hobbes, Boyle, and the Experimental Life* Princeton: Princeton University Press, 1985.

Sharrer, Terry G. *A Kind of Fate: Agricultural Change in Virginia, 1861-1920* (West Lafayette: Purdue University Press, 2002)

Shaw, Rosalind. *Memories of the Slave Trade: Ritual and the Historical Imagination in Sierra Leone*. Chicago: University of Chicago Press, 2002.

Shepherd, Verene. *Livestock, Sugar and Slavery: Contested Terrain in Colonial Jamaica*. Kingston: Ian Randle Publishers, 2009.

Sheridan, Richard B. "From Chattel to Wage Slavery in Jamaica, 1740-1860," in *The Wages of Slavery: From Chattel Slavery to Wage Labour in Africa, the Caribbean, and England*, edited by Michael Twaddle. New York: Frank Cass and Co., 1993: 13-40.

Sheridan, Richard B. "The Guinea Surgeons on the Middle Passage: The Provision of Medical Services in the British Slave Trade." *The International Journal of African Historical Studies* 14, no. 4 (1981): 601-625.

Sheridan, Richard B. "Letters from a Sugar Plantation in Antigua, 1739-1758." *Agricultural History* 31, no. 3 (1957): 3-23.

Sheridan, Richard B. "The Rise of a Colonial Gentry: A Case Study of Antigua, 1730-1775." *The Economic History Review* 13, no. 3 (1961): 342-357.

Sheridan, Richard B. "Samuel Martin, Innovating Sugar Planter of Antigua", *Agricultural History* 34, no. 3 (1960): 126-139.

Shumway, Rebecca. *The Fante and the Transatlantic Slave Trade*. Rochester: University of Rochester Press, 2011.

Silverman, David J. "'We Chuse to Be Bounded': Native American Animal Husbandry in Colonial New England." *The William and Mary Quarterly* 60, no. 3 (2003): 511-48.

Skabelund, Aaron. "Animals and Imperialism: Recent Historiographical Trends." *History Compass* 11, no. 10 (2013): 801-807.

Sluyter, Andrew. *Black Ranching Frontiers: African Cattle Herders of the Atlantic World, 1500-1900*. New Haven: Yale University Press, 2012.

Sluyter, Andrew. "The Ecological Origins and Consequences of Cattle Ranching in Sixteenth-Century New Spain." *Geographical Review* (1996): 161-177.

Sluyter, Andrew. "The Role of Blacks in Establishing Cattle Ranching in Louisiana in the Eighteenth Century." *Agricultural History* 86, no. 2 (2012): 41-67.

Sluyter, Andrew. "The Role of Black Barbudans in the Establishment of Open-Range Cattle Herding in the Colonial Caribbean and South Carolina." *Journal of Historical Geography* 35, no. 2 (2009): 330-349.

Smalley, Andrea. *Wild By Nature: North American Animals Confront Colonization*. Baltimore: Johns Hopkins University Press, 2017.

Smallwood, Stephanie E. "The Politics of the Archive and History's Accountability to the Enslaved." *History of the Present* 6, no. 2 (2016): 117-132.

Smallwood, Stephanie E. *Saltwater Slavery: A Middle Passage from Africa to American Diaspora*. Cambridge: Harvard University Press, 2009.

Smith, Beatrice Scheer. "Hannah English Williams: America's First Woman Natural History Collector." *The South Carolina Historical Magazine* 87, no. 2 (1986): 83-92.

Smith, David Chan. "Useful Knowledge, Improvement, and the Logic of Capital in Richard Ligon's *True and Exact History of Barbados*." *Journal of the History of Ideas* 78, no. 4 (2017): 549-570.

Smith, Justin E.H. *Nature, Human Nature, and Human Difference: Race in Early Modern Philosophy*. Princeton University Press, 2015.

Smith, Kimberly K. *African American Environmental Thought: Foundations*. Lawrence: University of Kansas Press, 2007.

Smith, Robert. "Peace and Palaver: International Relations in Pre-Colonial West Africa." *The Journal of African History* 14, no. 4 (1973): 599-621.

Smith, Theophus H. *Conjuring Culture: Biblical Formations of Black America*. Oxford: Oxford University Press, 1994.

Snyder, Christina. *Slavery in Indian Country: The Changing Face of Captivity in Early America*. Cambridge: Harvard University Press, 2010.

Sperling, John G. *The South Sea Company: An Historical Essay and Bibliographical Finding List*. Cambridge: Harvard University Press, 1962.

Spicksley, Judith. "Pawns On the Gold Coast: The Rise of Asante and Shifts in Security for Debt, 1680-1750," *The Journal of African History* 54, no. 2 (2013): 147-75.

Stearns, Raymond P., "James Petiver, Seventeenth-Century Promoter of Natural Science", in *Proceedings of the American Antiquarian Society*, 62, no. 2, (1952), 243-365.

Stearns, Raymond P. *Science in the British Colonies of America*. Urbana-Champaign: University of Illinois Press, 1970.

Stewart, Mart A. *What Nature Suffers to Groe: Life, Labor, and Landscape on the Georgia Coast, 1680-1920*. Athens: University of Georgia Press, 1996.

Stockland, Etienne. "Policing the Oeconomy of Nature: The Oiseau Martin as an Instrument of Oeconomic Management in the Eighteenth-Century French Maritime World," *History and Technology* 30, no. 3 (2014): 207-231.

Stoll, Steven. *Larding the Lean Earth: Soil and Society in Nineteenth-Century America*. New York: Hill and Wang, 2003.

Swank, James M. *History of the Manufacture of Iron in All Ages*. Philadelphia: The American Iron and Steel Association, 1892.

Swingen, Abigail Leslie. *Competing Visions of Empire: Labor, Slavery, and the Origins of the British Atlantic Empire*. New Haven: Yale University Press, 2015.

"Tales of Old Barbados", *Journal of the Barbados Museum and Historical Society*, 12 no. 4, (1945): 171-178.

Thomas, Hugh, *The Slave Trade: The Story of the Atlantic Slave Trade: 1440-1870*. New York: Simon & Schuster, 1997.

Thomas, T.C., and J.B. Legg, "Archaeological Evidence of Afro-Barbadian Life at Springhead Plantation, St. James Parish, Barbados," *Journal of the Barbados Museum and Historical Society* 43 (1996/1997): 32-49.

Thompson, Peter. "Henry Drax's Instructions on the Management of a Seventeenth-Century Barbadian Sugar Plantation." *The William and Mary Quarterly* 66, no. 3 (2009): 565-604.

Thornton, A.P. "The Organization of the Slave Trade in the English West Indies, 1660-1685." *The William and Mary Quarterly* 12, no. 3 (1955): 399-409.

Thornton, John. *Africa and Africans in the Making of the Atlantic World, 1400-1800*. Cambridge: Cambridge University Press, 1998.

- Thornton, John. *Warfare in Atlantic Africa, 1500-1800*. London: University College London Press, 1999.
- Tillson Jr, Albert H. *Accommodating Revolutions: Virginia's Northern Neck in an Era of Transformations, 1760-1810*. Charlottesville: University of Virginia Press, 2010.
- Trigg, Heather B., and David B. Landon. "Labor and Agricultural Production at Sylvester Manor Plantation, Shelter Island, New York." *Historical Archaeology* 44, no. 3 (2010): 36-53.
- Trouillot, Michel-Rolph. *Silencing the Past: Power and the Production of History*. Boston: Beacon Press, 1995.
- Tyler, Lyon G., "Pedigree of a Representative Virginia Planter, Edward Digges, Esq." *The William and Mary Quarterly* 1, no. 4 (1893): 208-213.
- Verdesio, Gustavo. *Forgotten Conquests: Rereading New World History from the Margins*. Philadelphia: Temple University Press, 2001.
- Walsh, Lorena S. *Motives of Honor, Pleasure, and Profit: Plantation Management in the Colonial Chesapeake, 1607-1763*. Chapel Hill: University of North Carolina Press, 2010.
- Walsh, Lorena S. "Plantation Management in the Chesapeake, 1620-1820." *The Journal of Economic History* 49, no. 2 (1989): 393-406.
- Walsh, Lorena S. "Slave Life, Slave Society, and Tobacco Production in the Tidewater Chesapeake, 1620-1820," in *Cultivation and Culture: Labor and the Shaping of Slave Life in the Americas*, edited by Ira Berlin and Philip D. Morgan. Charlottesville: University of Virginia Press, 1993: 170-202.
- Walvin, James. *Slavery in Small Things: Slavery and Modern Cultural Habits*. Chichester: Wiley and Sons, 2017.
- Warsh, Molly A. "A Political Ecology in the Early Spanish Caribbean." *The William and Mary Quarterly* 71, no. 4 (2014): 517-548.
- Watson, Alan D. "North Carolina Slave Courts, 1715-1785." *The North Carolina Historical Review* 60, no. 1 (1983): 24-36.
- Watts, David. *The West Indies: Patterns of Development, Culture and Environmental Change Since 1492*. Cambridge: Cambridge University Press, 1987.
- Wax, Darold D. "'A People of Beastly Living': Europe, Africa and the Atlantic Slave Trade." *Phylon* 41, no. 1 (1980): 12-24.

Wennerlind, Carl. *Casualties of Credit: The English Financial Revolution, 1620-1720*. Cambridge: Harvard University Press, 2011.

West, Emily. *Chains of Love: Slave Couples in Antebellum South Carolina*. Urbana-Champaign: University of Illinois Press, 2010.

Wertenbaker, Thomas Jefferson. *The Planters of Colonial Virginia*. Princeton: Princeton University Press, 1922.

White, Deborah Gray. *Ar'n't I a Woman? Female Slaves in the Plantation South*. New York: W.W. Norton and Company, 1985.

Williams, Eric. "The Golden Age of the Slave System in Britain." *The Journal of Negro History* 25, no. 1 (1940): 60-106.

Williams, Gomer. *History of the Liverpool Privateers and Letters of Marque: With an Account of the Liverpool Slave Trade*. London: William Heinemann, 1897.

Windley, Lathan A. *Runaway Slave Advertisements*, four volumes. Westport: Greenwood Press, 1983.

Winterbottom, Anna. *Hybrid Knowledge in the Early East India Company World*. Palgrave: London, 2016.

Wisecup, Kelly. "Knowing Obeah." *Atlantic Studies* 10, no. 3 (2013): 406-425.

Wisecup, Kelly. *Medical Encounters: Knowledge and Identity in Early American Literatures*. Amherst: University of Massachusetts, 2013.

Wood, Betty, T. R. Clayton, and W. A. Speck. "The Letters of Simon Taylor of Jamaica to Chaloner Arcedekne, 1765–1775." *Royal Historical Society Camden Fifth Series* 19 (2002): 1-164.

Wood, Peter H. *Black Majority: Negroes in Colonial South Carolina from 1670 through the Stono Rebellion*. New York: WW Norton & Company, 1996.

Wood, W. Raymond, "An Archaeological Appraisal of Early European Settlements in the Senegambia." *The Journal of African History* 8, no. 1 (1967): 39-64.

Wright, Donald R. "Darbo Julia: The Role of a Mandinka Julia Clan in the Long-Distance Trade of the Gambia River and Its Hinterland." *African Economic History*, no. 3 (1977): 33-45.

Wyatt, Edward. "Dr. James Greenway, Eighteenth Century Botanist, of Dinwiddie County, with an Account of Two Generations of His Descendants." in *Genealogies of*

Virginia Families: From Tyler's Quarterly Historical and Genealogical Magazine, volume 1. Baltimore: Genealogical Publishing Company, 2007: 130-140.

Yang, Bin. *Cowrie Shells and Cowrie Money: A Global History*. New York: Routledge, 2019.

Young, Jason R. *Rituals of Resistance: African Atlantic Religion in Kongo and the Lowcountry South in the Era of Slavery*. Baton Rouge: Louisiana State University Press, 2007.

Zilberstein, Anya. "Bastard Breadfruit and Other Cheap Provisions: Early Food Science for the Welfare of the Lower Orders," *Early Science and Medicine* 21, no. 5 (2016): 492-508.

Digital Research Projects

Documenting Runaway Slaves, research project to digitize runaway slave advertisements developed by Max Grivno and Douglas Chambers, University of Southern Mississippi, Hattiesburg, <http://runawayslaves.usm.edu/index.html>

Dissertations and Unpublished Papers

Carrington-Farmer, Charlotte. "Slave Horse/War Horse: The Narragansett Pacer in Colonial and Revolutionary Rhode Island", *War Horses of the World Proceedings*. London: School of Oriental and African Studies, University of London, 2014.

Rebovich, Samantha Anne. "Landscape, Labor, and Practice: Slavery and Freedom at Green Castle Estate, Antigua," PhD dissertation, Syracuse University, 2011.

Paul, Helen Julia. "The South Sea Company and the Royal African Company's Combined Slaving Activities." Paper presented at the Economic History Society Conference, Reading, 2006.