# STRANGE AND UNSTABLE BODIES: SHIFTING MATERIALITIES IN EARLY AMERICAN NATURAL HISTORY CORRESPONDENCE NETWORKS

by

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DISSERTATION

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ABSTRACT

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This dissertation fills a gap in the study of early American natural history literature by investigating the representation of animal bodies within early American natural history writing and attending to the role animal bodies play in shaping natural history knowledge and how natural history in turn shapes animal bodies. It also examines the effect the shifting materiality of animal bodies has on constructions of race and ethnicity in early America, as well as the ways non-white, non-male, and non-human persons exercise agency via natural history correspondence networks. Employing animal studies, posthumanism, and new materialism, I contend that, within natural history's correspondence networks, there occurs a constant circulation of ideas and information, as well as materials and bodies. Providing a crucial link between real animals and representations of them, specimens offer convincing, tangible proof of the natural world, allowing a more effective vicarious experience of American animals than just words or images. They enrich and enliven verbal and visual descriptions of them, but at the same time serve as reminders of how incomplete and partial a grasp natural history has over animals. *Strange and Unstable Bodies* incorporates media theory concepts of recursive feedback loops and media materiality, arguing that there exists a similar interplay in natural history discourse between information and materiality. Animal bodies complicate

this interplay; in circulating through correspondence networks, they exist both as abstract symbols and as real material, alternately embodied, disembodied, and re-embodied. Attending to the circulation of information and material and how it affects and is affected by nonhuman bodies shows how the shifting materiality of animal bodies in natural history results in changing forms of nonhuman agency and creaturehood, and offers a reevaluation of how humans construct knowledge from the material world.

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DEDICATION

I dedicate this work to my family for their love, support, and patience, and to my writing buddies, Albie, Alice, and Winnie who kept me company at every stage of the writing process.

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# Chapter 1

## Introduction: Specimens and Networks

Natural history was a key discipline and genre of texts in early America – from Europeans' first discovery of the New World to the founding of the United States and its early years as a nation. It allowed Europeans to learn about the new natural world they encountered, a world that included both the North American continent and the West Indies. Seen as imposing order and control over the natural world, natural history provided a way of codifying and legitimating the natural world, as well as a way of exerting power and authority over that natural world and its native inhabitants. Natural history, far from being a politically neutral activity, carried political and social importance in the colonies and in the greater Atlantic world. Early American natural history texts show early Americans wrestling with the New World and their place within it. These texts also provide a fertile ground to examine the role of silent or silenced actors – Native Americans, African Americans, women, and nonhumans – in the formation of American identity and scientific knowledge. Harriet Ritvo describes natural history as "a human struggle against the chaotic and unfathomable variety of nature" and "an expression of human domination" (*Animal Estate* 11, 14). American naturalists at this time were concerned about being at the periphery of knowledge-making, taking a back seat to London as a center of scientific knowledge. Ellen Valle notes that, although correspondence networks between American naturalists and European scientists strove to be "equitable and fair" to both parties, "the only area in which there is a serious lack of balance is the cultural one of centre vs. periphery" (321). Moreover, Joyce E. Chaplin draws an important distinction between American naturalists before and after the American Revolution in which a deference to "European-defined theories of nature" and British power was replaced by a struggle to overcome that colonial framework by using

natural history's "descriptive methods of study to argue for their nation's distinctiveness" (76).

Natural history texts also exemplify the interconnectedness of the British Atlantic world. Natural history, as a discipline, was conducted primarily through transatlantic correspondence. People in North America would collect and record observations of the natural world (both actual specimens and verbal and visual descriptions); this collected material was sent most frequently to London and the Royal Society, the pre-eminent society for scientists and naturalists, who then codified and legitimated the raw data from North America and sent it back in the form of published books and pamphlets. In her discussion of correspondence's importance to the work of natural history, Valle argues:

> These exchanges can be seen as performing the work of natural history, in two ways. The first involves observing, reporting, interpreting and discussing occurrences in nature; the intended end result is the creation of codified, reliable knowledge about nature, which can be incorporated into written documents (chiefly books) and becomes the collective property of the knowledge community. The second is the concrete, physical redistribution of species, more particularly the transfer of North American plant and animal species to Europe, where they are appropriated in various ways. (322)

Valle goes on to distinguish between two forms of appropriation of nature, "as tangible property (which also serves to enhance the proprietor's social status), and as immaterial property, i.e. scientific knowledge, which in theory at least belongs to the entire community. The latter can then be re-exported to the periphery, in the form of information and books" (322). Within natural history discourse, natural specimens become both tangible and immaterial property, both actual physical specimens and abstract sets of facts and observations about those animals. This dual appropriation becomes more complicated when considered in conjunction with Susan Scott Parrish's argument that "the letter and the shipped specimens" as the "mediums of transatlantic natural history" functioned as stand-ins for colonial naturalists, "[reflecting] rhetorics of self-presentation"

(107). Parrish introduces the possibility that natural specimens also maintain, in addition to Valle's proposed tangible and immaterial property, an abstract personal property in which the specimen acts as a surrogate for the naturalist

It is this interplay between physical and symbolic representations of bodies that I will explore in the following chapters. What happens to animal bodies when naturalists incorporate them into the discourse and networks of early American natural history-- as they move from physical to symbolic representations and back again? How do natural history texts reflect the co-constitutive and recursive relationships between humans and nonhumans? What effect does the shifting materiality of animal bodies have on constructions of race and ethnicity in early America? How do non-white, non-male, and non-human persons exercise agency via natural history correspondence networks? In answering these questions, I fill a gap in the study of early American natural history literature. Although previous scholars have written about early American natural history and its networked construction of scientific and natural knowledge, they have not paid enough attention to the role animal bodies play in shaping natural history knowledge and how natural history in turn shapes animal bodies. Employing animal studies, posthumanism, and new materialism (theories applied frequently to literary periods before and after early American literature, but very rarely to American texts in the seventeenth and eighteenth centuries), I contend that, within natural history's correspondence networks, there occurs a constant circulation of ideas and information, as well as materials and bodies. In natural history texts (and texts that make use of natural history), animal bodies undergo numerous processes of constitution, transmission, and transformation. Natural history constitutes bodies in the sense that they are identified, defined, and articulated. It transmits bodies in the sense that they are transmitted across correspondence networks and mediated via natural history texts,

illustrations, drawings, and specimens. And it transforms bodies in the sense that they become something other and more than they would be without the discipline of natural history. Within these processes, the materiality of animals changes, resulting in the creation of new bodies, new material. Providing a crucial link between real animals and representations of them, specimens offer convincing, tangible proof of the natural world, allowing a more effective vicarious experience of American animals than just words or images. They enrich and enliven verbal and visual descriptions of them, but at the same time serve as reminders of how incomplete and partial a grasp natural history has over animals. On some level, these creatures always remain beyond complete control and mastery and exert their own forms of nonhuman agency. *Strange and Unstable Bodies* incorporates media theory concepts of recursive feedback loops and media materiality, arguing that there exists a similar interplay in natural history discourse between information and materiality. Animal bodies complicate this interplay; in circulating through correspondence networks, they exist both as abstract symbols and as real material, alternately embodied, disembodied, and re-embodied. The transmission and circulation of animal bodies in natural history networks is both an early prototype of the linking of animals and technology that Akira Mizuta Lippit argues takes place with the advent of cinema, as well as an example of Nicole Shukin's theory of animal capital. Attending to the circulation of information and material and how it affects and is affected by nonhuman bodies shows how the shifting materiality of animal bodies in natural history results in changing forms of nonhuman agency and creaturehood, and offers a reevaluation of how humans construct knowledge from the material world.

## Animal Studies And Media Theory

In early American natural history, animal bodies function as a type of media that become, as Marshall McLuhan argues of all media, "active metaphors in their power to

translate experience into new forms" (57). Translating firsthand experience with and knowledge of New World animals, animal bodies as media are transmitted across natural history correspondence networks. Moreover, this process of translation and transmission can be viewed as an early prototype of the linking of animals and technology that Akira Mizuta Lippit argues takes place with the advent of cinema. Lippit argues that, at the turn of the twentieth century, "while animals were disappearing from the immediate world, they were reappearing in the mediated world of technological reproduction. Undying, animals seemed to fuel the phantom thermodynamic engines that would run perpetually" (25). Lippit further contends that "because animals are unable to achieve the finitude of death, they are also destined to remain 'live,' like electrical wires, along the transferential tracks. Unable to die, they move constantly from one body to another, one system to another" (192). A similar process occurs with animals in natural history correspondence networks. Animals disappear from the immediate material world and reappear in the mediated world of correspondence networks, which themselves become imbued with a kind of animal life. The move from material to mediated world does not, however, completely efface the material animal body, which remains the foundation and underlying reality of mediated animals. While this emphasis is partly informed by Friedrich Kittler's media materialism that insists upon paying attention to the material instantiation of media (369-70), it also incorporates Nicole Shukin's theory of animal capital. Shukin deploys her notion of animal capital, which "simultaneously notates the semiotic currency of animal signs *and* the carnal traffic in animal substances," to critique Lippit's portrayal of undying animal specters in technological media, arguing that such "promise[s] of virtual 'touch'" elide the real animal bodies that materially underpin such discorporative fantasies (7, 149). As a medium that circulates through correspondence networks, animals possess semiotic currency as abstract symbols; they have seemingly transcended their physical

embodiments and, like Lippit's undying specters, are free to move across correspondence networks. Yet, underwriting this transmission are the real, physical animals, whose bodies are the foundation for the animal both as an abstract symbol and as real material to be traded across natural history correspondence networks.

In forming my argument, I draw on theorists in animal studies including Cary Wolfe, Stacy Alaimo, Donna Haraway, and Dominic Pettman. Wolfe's discussion of the unexamined framework of speciesism in *Animal Rites* helps elucidate the entwined fates of nonhuman animals and oppressed peoples in early American texts. Wolfe stresses:

> as long as this humanist and speciesist *structure* of subjectivization remains intact, and as long as it is institutionally taken for granted that it is all right to systematically exploit and kill nonhuman animals simply because of their species, then the humanist discourse of species will always be available for use by some humans against other humans as well, to countenance violence against the social other of *whatever* species—or gender, or race, or class, or sexual difference. (7-8)

Part of Wolfe's theory of posthumanism outlined in *What is Posthumanism* involves the necessity of "acknowledging that [the human] is fundamentally a prosthetic creature that has coevolved with various forms of technicity and materiality, forms that are radically 'not-human' and yet have nevertheless made the human what it is" (xxv). Wolfe also delineates two kinds of shared finitude, "two kinds of passivity and vulnerability": "The first type (physical vulnerability, embodiment, and eventually mortality) is paradoxically made unavailable, *inappropriable*, to us by the very thing that makes it available — namely, a second type of 'passivity' or 'not being able,' which is the finitude we experience in our subjection to a radically ahuman technicity or mechanicity of language" (88). Stacy Alaimo's theory of trans-corporeality in *Bodily Natures* illuminates how human and nonhuman bodies interact with each other and the more-than-human world, and this concept is central not only to my argument, but informs many of the scholars I engage with, including Monique Allewaert and Susan Scott Parrish. To a certain extent, trans-

corporeality and its conception of the environment as “a world of fleshy beings with their own needs, claims, and actions” (2) as well as Alaimo’s concept of toxic bodies that “encourage us to imagine ourselves in constant interchange with the environment” (22), share many commonalities with humoral theory of the seventeenth and eighteenth centuries. Donna Haraway’s arguments about the mutually constitutive quality of science and culture (in *Simians, Cyborgs, and Women* and other works) is also a foundational concept in my argument, which takes as a given the social construction of science, nature, and bodies. Furthermore, Haraway’s arguments about co-constitutive entanglement and companion species from *When Species Meet* will provide a useful frame of reference for discussing how in early America human and nonhuman animals coevolved in reciprocal relationships. Dominic Pettman’s arguments about human exceptionalism and persistent anthropocentrism in *Human Error: Species-Being and Media Machines* is relevant to how human perception and understanding is an inseparable part of all natural history texts, illustrations, or specimens.

My argument also pulls from media theorists including Mark Hansen and N. Katherine Hayles, applying their ideas about mediated bodies and feedback loops to early American natural history texts and correspondence networks. In *Bodies in Code*, Hansen consider how the body, as the first “medium,” is both submitted to and constituted by technology (15). In *New Philosophy for New Media*, Hansen characterizes the body, which is modified through interaction with technology, as an active framer of image and information, as an interpreter for information systems. Building on Hansen’s arguments, Hayles argues that technology and the body are mutually constitutive and dependent upon one another. In *My Mother Was a Computer*, Hayles argues that “in certain contexts the body itself becomes a medium at the same time as it is informed by other media” (35-36). In *Electronic Literature*, Hayles introduces the concept of recursive

feedback loops between humans and computers; “Humans engineer computers and computers reeingeer humans in systems bound together by recursive feedback and feedforward loops” (48). Both humans and technology, Hayles argues, are embodied and entangled, and “human agency operates within complex systems in which nonhuman actors play important roles” (131). Just as I push Lippit’s and Shukin’s concepts further back into history, I utilize the concepts of recursive feedback loops and media materiality in crafting my argument about how animal bodies circulate in early American natural history correspondence networks and how those bodies both shape and are shaped by the networks and discourse of natural history.

The concept of networks has been previously applied to early American texts, but in a slightly different way from my conception of the term. In a recent article in *Early American Literature*, Wai Chee Dimock discusses how network can be a productive term for early American literature: “Such an interactive field suggests that, rather than being stable, unchanging, and interference free, the past might be better understood to be continually entangled and compounded, subject to connectivity and interactivity from the present” (105). Dimock’s focus is on how the concept of network connects texts in a temporal sense: “what a network of signals, interference, and noise might look like as a template for the literary traffic between the twentieth and twenty-first centuries and the seventeenth” (109). Matt Cohen’s recent book *The Netwworked Wilderness* also uses the concept of networks, this time focusing on networks or systems of communication of indigenous peoples and English colonists in colonial New England. In contrast to Dimock and Cohen, my focus is on the discipline of natural history, specifically on how animal bodies shape and are shaped by the network of early American natural history.

## Environment And Early America

While *Strange and Unstable Bodies* is based in animal studies and posthumanism, it also is informed by ecocritical arguments about American nature, particularly in regards to ideas about wilderness and pastoral ideology. Critics including Lawrence Buell, Annette Kolodny, Leo Marx, and Roderick Nash provide insight into the founding ideas, or what Marx calls root metaphors, of America: pastoralism and wilderness. Nash argues that wilderness is the basic ingredient of American culture (xi); he stresses that in early America wilderness was frequently characterized as a threat, speaking to "the long Western tradition of imagining wild country as a moral vacuum, a cursed and chaotic wasteland" (24). Early American wilderness was also seen, Buell explains, as an "inexhaustible resource waiting to be transformed" (301). Buell speaks of the pastoral ideology as the desire to represent "the essential America as exuberant, green, pastoral, even wild" (32-33); yet the Romanticized dream of pastoral nature is problematic and creates what Kolodny refers to as a pastoral paradox in which humans' mastery of the land through cultivation and realization of the pastoral ideal comes "only at the cost of emotional and psychological separation from [the land]" (28). It is against this background that early American natural history engages with and encounters animal bodies.

Scholarly interest in and examination of issues of the environment in early America is a relatively recent, but growing, field. Critics who explore early American environmental texts often begin by making arguments about the value of studying this earlier period of texts that precedes the more commonly researched writings of mid-nineteenth century naturalists and transcendentalists. For example, Michael Branch claims "early American natural history writing gives us a remarkable window onto the American land in its earliest stages of European occupation" (xxii). Early American

writers, Branch writes, “anticipate modern environmental sensitivity by showing genuine concern for the aesthetic, spiritual, and intellectual value of the natural world” (xxiii). Along with advocating for the value of these early texts about the American natural world, Branch presents two additional observations that bear noting. First, he touches on a central issue for many scholars of early American environmental writing: how nature is constructed or filtered through human understanding and perception. Characterizing the sensibility of early American nature writers as “the complex and often distorted lens through which the natural world is invariably experienced and understood,” Branch emphasizes “the wonderful, fallible lens of language itself” (xiv). As I will discuss below, many other scholars emphasize the potential for distortion or misrepresentation of nature when described, represented, or otherwise captured by humans. For example, Michael Gaudio argues that it was common for natural historians in the colonial period to be suspicious of language’s ability to accurately record their observations (58). While verbal descriptions of nature, such as Linnaean binomial naming, did offer the promise “to transform the visible world into words and thus discover the underlying structure of nature,” they were still seen by many naturalists of the time as artificial and abstract systems that were removed from nature itself (59). In contrast to verbal descriptions, “images brought the viewer back to earth from the abstract ‘notions’ of philosophy, or quite simply they offered the visual particulars in a way that even the most down-to-earth verbal description could not equal. It was for this reason that authors of eighteenth-century natural histories included, when they could afford it, illustrations in their texts” (61).

The second important point Branch makes that I want to emphasize is his expanded definition of nature writing. Branch argues that “when we say ‘nature writing,’ we often mean to indicate (however unintentionally) the work of writers who share with us

certain philosophical or ideological assumptions about nature and our relationship to it—assumptions that can rarely be assumed to guide the environmental values of the writers (especially pre-nineteenth-century writers) included in [*Reading the Roots*]" (xix). He also aims to include under the category "nature writing" a broader variety of texts, both literary and nonliterary, including scientific reports, religious tracts and sermons, captivity and slave narratives, letters, and diaries (xxv). Richard Judd also looks towards early, pre-Darwinian natural science texts as important precursors to the American conservation movement. Early American naturalists, Judd argues, were responsible for placing "the idea of nature […] at the core of our national consciousness" (8). Within the writings of early American naturalists, Judd locates three essential ideas about nature and its intrinsic value that would influence the conservation movement that would emerge at the end of the nineteenth century: "a practical concern for protecting those species of birds, animals, and trees deemed useful to human society; a romantic appreciation for the beauty of natural form and primitive landscape; and a close understanding of the complex biological interdependencies that sustain all natural systems" (9-10). *Strange and Unstable Bodies* further makes the case for the importance of early American natural history texts by expanding the field's scope to consider the role nonhuman animals play in natural history discourse and practice. My work also joins recent contributions to the field such as Michael Ziser's *Environmental Practice and Early American Literature*, which focuses on presenting ecocultural histories of various early American environmental practices (tobacco farming and beekeeping, to name two examples), resulting in what Ziser refers to as an "Environmental New Historicism" (15).

One of the first critical texts to focus fully on natural history in literary studies, Pamela Regis's *Describing Early America: Bartram, Jefferson, Crevecoeur, and the Influence of Natural History* looks at Bartram's *Travels*, Jefferson's *Notes on the State of*

*Virginia*, and Crevecoeur's *Letters from an American Farmer* as examples of natural history texts, not as examples of travel literature or for their novelistic elements (xiii). In discussing the genre of natural history, Regis argues that the method of natural history "led to depict human beings as if they were just another type of natural production" (xii). This, in turn, had consequences for Native Americans and African Americans; Regis argues:

> Natural historical representation present America at its most characteristic—its unique plants, animals, peoples, and scene—and as outside of time. America seems new; it is a place where events have not intruded. Native Americans are subsumed under this natural historical description, becoming entries on a list, links on the chain. The rhetoric of this description denies them any history, individual or cultural, because that rhetoric did not include a way to represent time. (25)

Furthermore, Regis argues that "the rhetoric and method of natural history provided a context and a framework for the representation of a country" (157). Although I agree with Regis's assertion that natural history tends towards a collapsing of distinctions between human and nonhuman, I resist her characterization of this feature as negative. There does exist a connection between the abuse of the natural world and the oppression of minority peoples, and arguments about "nature" have been used to justify the treatment of those minorities (both arguments that I take up in more detail below). However, these problems are not consequences of a collapse in the border between human and nonhuman. Rather, it is the insistence on adhering to and maintaining such borders that exacerbates these problems.

In *Passions for Nature*, Rochelle Johnson explores the divide or paradox between metaphorical representations of nature and physical nature itself, arguing that metaphors of nature alienate humans from nature. She examines what she refers to as a counteraesthetics that finds the value of nature in its physicality, focusing on the writings of Susan Fenimore Cooper and Henry David Thoreau as examples of this

counteraesthetic valuation of nature. Representing the natural world "as a metaphor for a specific aspect of American experience [creates] an aesthetic that renders nature's meaning abstract by positing it as a feature of humanity" (2). Looking at nineteenth-century texts, Johnson argues that "many people believed that they understood nature's truth in this era, yet their notions of truth were grounded in metaphorical conceptions of the physical environment, each of which had something to do with humanity. […] The 'truth' of nature was therefore inevitably more about humanity than about nature itself" (18). These mid-nineteenth-century American texts reveal, according to Johnson "the metaphorical transposition of a material reality into the abstract realm of human affairs. In witnessing this process, we are watching part of the means by which our young country undertook the ideological work of distancing itself from material reality" (22). Also emphasizing the material reality of American nature, Myra Jehlen focuses on "the physical fact of the continent" as important to the founding conceptions of America (3). Jehlen further argues that "it is precisely because the concept of America is rooted in the physical finite that it can be infinitely metaphysical. The concept of the New World could not come to everyday life as a pure abstraction; it had to interpret some actual territory, a real place" (9-10). Early American natural history texts, in their treatment of animal bodies, create a similar type of metaphorized, symbolic representation of nature. Contrary to Johnson's argument, I suggest that, even in metaphorical representations of nature, traces or remnants of materiality remain.

Echoing the counteraesthetics discussed by Johnson, Kevin Hutchings stresses the need "to imagine non-human creatures and natural environments as they exist apart from their relationship to culture," while still acknowledging that any "imaginings are themselves products of human consciousness, representational artifacts reflecting the discursive or ideological practices that shape our subjectivity" (11). Hutchings also

delineates two concerns in ecocriticism: understanding "The materiality of nature on the one hand, *and* the politics of nature's representation on the other" (11). Hutching argues that "concepts of nature were constantly invoked to naturalize colonial regimes that simultaneously exploited people *and* landscape, leading to forms of genocide and ecocide, inseparable sides of the same imperialist coin" (69). Yet, Hutchings observes that there was the potential for agency for marginalized peoples: "despite the existence of a coercive colonial hierarchy, one must consider transatlantic influences in terms of a more complicated structure of relations, according to which marginalized peoples exerted subtle influences upon the dominant power, affecting its notions of cultural identity and its concepts of nature and human-nature relations" (22).

Similar to Hutchings's focus on how representations of nature served imperialist goals, Jeffrey Myers examines the entwinement of race and ecology. Myers argues that "Euroamerican racism and alienation from nature derive from the same source and result in the joint and interlocking domination of people of color and the natural world" (15). Myers emphasizes the constructed nature of the Euroamerican self:

> Just as the formation of whiteness in opposition to the racial Other is a construction with no basis in the natural word, the formation of the Western, individual, subjective self in opposition to nature is an equally fictional construction. The very existence of the Euroamerican subject depends on imagining not only the racial Other, but a priori on imagining the essential 'otherness' of the physical world—of the human body, the bodies of plants and animal, and the body of the earth itself. (15)

Myers further asserts that, in order to maintain this constructed sense of superiority and difference, "the Euroamerican self must constantly display its mastery over the material world, denigrating beings, human and nonhuman, whose essential physical sameness to the animal body to which it itself is bound threatens its erasure" (16). Myers call for "an ecocentric repositioning of humanity as on equal terms with other elements of the natural

world [… that still respects] both the materiality of the natural world and the very real differences in identity and culture that come with the ideas of ethnicity and race" (17).

Another area of interest for scholars of early American nature is the shifting relationships of humans to nature. For example, William Cronon argues that "the shift from Indian to European dominance in New England […] involved fundamental reorganizations […] in the region's plant and animal communities" (xv). Moreover, this reorganization constituted "as much an ecological as a cultural revolution, and the human side of that revolution cannot be fully understood until it is embedded in the ecological one. Doing so requires a history no only of human actors, conflicts, and economies, but of ecosystems as well" (6). Cronon also puts forward the idea that only is there "no timeless wilderness in a state of perfect changelessness, but that there is no nature or wilderness removed from humans: the choice is "between two human ways of living, two ways of belonging to an ecosystem" (11-12). Ultimately, Cronon argues that "the transition to capitalism alienated the products of the land as much as the products of human labor, and so transformed natural communities as profoundly as it did human ones" (170). Also concerned with the shifting human relations to nature in early America, Carolyn Merchant identifies two ecological revolutions (a colonial ecological revolution in the seventeenth century and a capitalist ecological revolution occurring between the American Revolution and 1860) that constituted "major transformations in human relations with nonhuman nature" (2-3). These revolutions result in "new constructions of nature, both materially and in human consciousness" (23). Merchant also contends that "an ecological approach to history reasserts the idea of nature as historical actor" (7). Nature, of which humans are a part, is "an active complex that participates in change over time and responds to human-induced change" (8). Because nonhuman nature is an active force, Merchant argues, "the relation between human beings and the nonhuman

world is thus reciprocal. Humans adapt to nature's environmental conditions; but when human alter their surroundings, nature responds through ecological changes" (8). Merchant also voices the familiar idea of nature as a cultural or social construction: "Viewed as a social construction, nature as it was conceptualized in each social epoch (Indian, colonial, and capitalist) is not some ultimate truth that was gradually discovered through the scientific processes of observation, experiment, and mathematics. Rather it was a relative changing structure of human representations of 'reality'" (23). Building on Merchant's arguments about nature as a historical actor and the idea of reciprocity in the relationship between humans and the nonhuman world, my project concentrates on how reciprocity (or recursivity) occurs in early American natural history networks through the exercise of agency by nonhuman actors.

While Cronon and Merchant look at pivotal points or reorganizations of humans' relationships to nature, Thomas Hallock focuses on American frontiers as a contested spaces or contact zones where "authors from the colonial and early national periods forged their impressions of the physical environment against still populated frontiers" (24). While Merchant emphasizes nonhuman nature as an active force and historical actor in a reciprocal relationship with humans, Hallock argues many ecocritics emphasize the nonhuman and do not fully account for still populated landscapes: "ecocritics need a broader tradition to move beyond pat explanations. To imply that the 'nature' of this continent was ever vacant (or inhabited by unchanging civilization that did not impact the land) bypasses what one frontier historian calls the 'longer, grimmer, but more interesting story' of the American West" (19). Hallock argues that "by recasting wilderness as a contested (rather than emptied) space, colonial and early national texts become not only readable but essential to understanding a nation's literary heritage and self-definition" (21).

Along with Hallock, Joyce Chaplin takes up the idea that American nature and representations of it were crucial to the definition and identity of America as a nation. Chaplin argues that the texts of naturalists were influenced by their national loyalties in ways that were "bot intentional (promoting the American-ness of certain phenomena and practices) and unintentional as when socioeconomic realities dictated which practices had precedence" (76). Commenting on the transatlantic correspondence networks of natural history, Chaplin further argues that, "if circulation of specimens replicated colonial relations between Britain and America, the promotion of natural history likewise reinforced imperial goals" (79). Lee Alan Dugatkin also discusses issues of national identity that were interwoven with natural history discourse. Dugatkin focuses on the theory of degeneracy put forward by Count Georges-Louis Leclerc Buffon, the preeminent natural historian of the time, in his *Historie Naturelle*, which held that, "as a result of living in a cold and wet climate, all species found in America were weak and feeble. What's more, any species imported into America for economic reasons would soon succumb to its new environment and produce lines of puny, feeble offspring. America, Buffon told his readers, is a land of swamps, where life putrefies and rots" (ix). This theory posed numerous political and economic consequences – people wouldn't want to immigrate to America, countries wouldn't want to trade with America, etc. (x). Jefferson was one of the more outspoken opponents of the theory of American degeneracy, and his efforts to disprove Buffon's theory included not only *Notes on the State of Virginia*, but also procuring and sending to Buffon specimens of American wildlife, including a dead stuffed moose, as physical, material proof that Buffon was incorrect" (xi). Hallock, Chaplin, and Dugatkin illustrate the connection between conceptions of identity and the underlying materiality of the natural world. This sort of connection or interplay between symbolic and material representations of nature is

central to my argument's focus on how animals are rendered symbolically and materially in the discourse and practice of early American natural history.

## Animals And Early America

Exploring the same transitional period as Cronon, Virginia DeJohn Anderson emphasizes the role that animals played in the English colonization in early America. Similar to Merchant assertion that nature is a historical actor, Anderson emphasizes the importance of animals as historical actors, arguing that human-animal interactions shaped the course of colonial history (3-4). Anderson explores the direct interactions between humans and livestock: "the animals not only produced changes in the land but also in the hearts and minds and behavior of the peoples who dealt with them" (5). Anderson characterizes English livestock as "the advance guard and primary motive for [the] relentless expansion" of English onto Native American lands and "agents of empire" that occupied land in advance of settlers (11, 211). While Cronon contrasts the different human interactions with the environment (Indian mobility to English fixity), Anderson contrasts the different relationships Native Americans and English settlers had with animals. The Native Americans relationship with animals was based on mutual support and reciprocity, not dominance (42); the English emphasized dominance and control, regarding animals as property who played a passive, subservient role (77,105).

Also featuring discussions of early American animals, Colleen Glenney Boggs's work is concerned with the role of affect in human-animal relations and subjectivity. Boggs argues that subjectivity "is not self-sufficient but relies on affective relationships that cross the species line" (6). Thus, for Boggs, "the human is a relational category that cannot be separated from the animal" (27). Boggs also argues that "language is not a medium for representing animals, but a grounds for encountering them", and that literature is the means of encounter (20). Among other topics, Boggs discusses the

instances of bestiality at Plymouth Plantation as reported by William Bradford. She writes: "By criminalizing a crossing of the species barrier, the law tries to establish and naturalize ontological categories that it simultaneously reveals to be highly unstable" (55). Boggs also observes: "reading becomes an act of encountering the bodies of others and of needing to come to terms with their proximity and alterity. This encounter with animal bodies challenges us to expand our understanding of the work sentimentalism can do for cross-species relations" (142).

Scholarly interest in animals in early America extends beyond human-animal interactions and relationships to interest in animals as material, physical bodies, entities, or specimens. In *The Breathless Zoo: Taxidermy and the Cultures of Longing*, Rachel Poliquin examines Western culture's fascination with taxidermy, including the works of natural historians in early America. As already mentioned, specimens played a critical role in natural history and were frequently exchanged across continents. Early specimens were often only fragments, "enigmatic bits and pieces […] shards, morsels, wondrously strange fragments of nature that teased along the edges of reason and confounded all belief" (13). Poliquin also emphasizes the material nature of these fragmented specimens, and the reality that "what lingered on display was dependent on the appetite of moths, ants, and maggots and the progress of rot, dampness and mold" (22). The physical quality of the taxidermied animal specimens also raises questions about the "truth" of nature (a point already discussed by Branch, Johnson, among others) and contact or communion between living human and dead animal specimen. According to Poliquin, despite appearing to function as a "direct access to truth, to a reality that exists above, beyond, prior to representation," animals are always filtered through human perceptions and relation to them (81). Poliquin further adds that "transmuting human desire through the materiality of animal bodies reveals a great deal about ourselves and

often little about the animals themselves" (174). Poliquin describes a "strangely queasy sense of knowing that develops during encounters with taxidermy" that she refers to as "visceral knowledge: a bodily knowing that occurs in contact with physical things, a knowing that blurs emotion with materiality and may even defy reason, logic, and explanatory language" (39). Poliquin's argument about the connection between physical animal specimens and written descriptions of them adds to Gaudio's argument about the role of illustrations in natural history texts. Poliquin asserts: "without the physical proof of the animal itself, words are mere words. In short, taxidermy and taxonomy have remained twin soldiers in the quest for a comprehensive catalogue of nature's diversity. With taxonomy and taxidermy together, the dream of a total ark becomes a possible, or even a thinkable, project" (118). In both natural history texts and taxidermied specimens, there exists a compelling mixture of human perception and lingering materiality.

## Natural History Networks And Early America

Along with scholarship on nature, the environment, and animals in early America, I also draw on scholarly work concerning early American information and knowledge creation, correspondence, and natural history. This includes work by Jim Egan, who shows how experience became a foundational quality in American literature studies that carried great rhetorical authority (7), and Richard Brown who examines the information and communication revolution in early America in which information moved from more constricted patterns of diffusion in the eighteenth century to freer circulation by the mid-nineteenth century (271). My work on early American natural history networks is also informed by Konstantin Dierks's idea of myopia and the normalization of power inequalities via eighteenth-century letter writing practices. In discussing practices of letter writing in early America, Dierks characterizes letter writing as a way of making history and constructing a "powerful myopia" or "blindness to an accumulation of social and

cultural power" (xii). Dierks's argument centers on concepts of human agency and how power inequalities between white middle-class Americans and Native American and Africans were normalized in eighteenth-century America through the practice of letter writing (7). Letter writing has the ability to obscure or deny the presence of agency of those who do not write or circulate letters. The privilege of the white, male naturalist letter writers obscures the voices of non-white humans who, despite their silence in written natural history, played a vital part in creating and establishing knowledge of the early American natural world.

Freighted with anxieties about place and national identity, letter writing in early American natural history, as Sarah Irving explains, reflected a science that "was deeply embedded in its geographic context" (73). Irving explains how "while naturalists in the New World were placed at the ideal location for empirical information gathering, they occupied a marginal, and problematic, space in the reality of seventeenth- and eighteenth-century natural philosophy. This caused a degree of anxiety among natural philosophers on both sides of the Atlantic" (83-84). Along with letter writing, early American natural history specimens were influenced by the commercialization of natural history in the early modern period. As Daniel Margocsy explains, the creation of natural history knowledge had a distinct "mercantile orientation":

> Early modern Europeans learned about the natural world through the mediation of colored prints, atlases, and prepared specimens. Yet these two- and three-dimensional representations were expensive luxury items, traded on the international markets of curiosities. They were created, shaped, and preserved by entrepreneurial naturalists, physicians, printmakers, and artisans, who claimed ownership over their inventive, and often secret, methods of production and preparation. As a result, the sciences of natural history and anatomy, these predominantly visual disciplines, became infused with commercial interests. Financial considerations deeply influenced how scientific practitioners portrayed and represented nature. (6)

The idea of a networked Atlantic world in which natural history was conducted also informs Christopher Iannini's work. He looks at the relationship between two transformations in the eighteenth-century Atlantic world: "the growth of the West Indian plantation as a social institution and economic engine of the Caribbean region" and "the rise of natural history as a new scientific discipline, intellectual obsession, and literary form" (3). Iannini argues that these two transformations were "were inextricably linked and that together they established fundamental conditions for what we might call 'the practice of letters' in the eighteenth-century Americas, in ways that have significant, if surprising, implications for understanding the culture and literature of American Enlightenment" (3). A medium of self and social transformation, natural history became a "crucial medium" for the circulation of knowledge and for "assessing the moral significance of colonial slavery" (9). "Authors such as William Bartram, Crevecoeur, and Jefferson conceived of the Greater Caribbean," Iannini argues, "not only as a source both of economic value and of potential cultural corruption but also as a source of colonial science and letters" (126).

The networked quality of natural history also impacted the field itself, lending it a broad, diffuse scope, while at the same time the discipline focused in on the details and specifics of individual organisms. Mary Terrall argues that, in the practice of eighteenth-century natural history:

> Everything from the realms of animal, vegetable, and mineral became grist for the mill of its investigations. This science was so extensive and multifaceted, and practice by such a variety of people around the globe, that it could hardly be considered a discipline, nor did its practitioners necessarily share institutions, training, or theoretical predilections. They were, however, unified by their dedication to observing, cultivating, chasing, collecting, experimenting, dissecting, preserving, drawing, and describing all manner of creatures (as well as plants and fossils and rocks). Pursuing these activities with varying degrees of intensity, they formed elaborate clusters and networks of exchange, collaboration, and debate. (2)

Terrall also stresses that natural history texts were revealing not just in terms of increasing knowledge of the natural world, but also of the naturalists themselves: “These texts were histories of human investigations and histories of animal life at the same time, so that the hero of the narrative could be the naturalist or his subject, or both, depending on circumstances. The attentive reader of natural history books could learn as much about how to be a naturalist as about the habits and attributes of a particular or worm or spider” (7).

The importance of material specimens in natural history is also a focus of Susan Scott Parrish’s work in *American Curiosity*. Parrish argues against the traditional assumption that the English “[created] modernity singlehandedly, whether in epic triumph or brutal domination” (23). Instead, she argues that “various peoples, issuing from around the Atlantic world, made facts about America in vexed chains of communication” (23). Or, as she puts it more succinctly in the conclusion: “Natural history in colonial America was a polycentric and internally riven empirical enterprise, rather than merely an imperial imposition of an abstract system” (315). She also argues that natural history discourse works to destabilize the nature-culture binary by suggesting that the two are not diametrically opposed concepts but, rather, mutually constitutive. For example, in the introduction, Parrish makes the claim that, “in North America before 1800, almost all questions of culture circulated through nature” (20). She cites Crevecoeur’s “men are like plants” observation from *Letters from an American Farmer* as one of the more salient examples of the way this circulation occurs, but this claim runs throughout her book. Additionally, Parrish makes the case that early Americans were very much concerned with how the physical environment acted on or impinged on their minds and bodies, and nature was not merely an inert backdrop. Humoral theory helps to explain the colonists preoccupation with how the environment “had the power to alter and constitute” their

bodies and minds; “Nature was thus not only understood as a potential stock of resources or a plot of property or as the new location of an old drama between God and humanity; it was also breathed in, drunk, eaten, absorbed under the skin, and incorporated into one’s faculties” (78). Parrish also emphasizes the material quality of natural history, and how letters and specimens functioned as the medium through which natural history was conducted and the way in which people presented themselves and gained identity and authority. Discourses of natural history were highly mediated by physical objects. Parrish’s analysis of how direct experience of nature went through several levels of mediation reveals how correspondence networks created highly mediated system of knowledge. Similar to Hutchings, Parrish notes that, while women, Native Americans, and Africans all had a certain amount of authority and agency, but it had to be filtered through specimens, letters, and people (64). Finally, echoing Branch’s and Judd’s arguments about the value of early American nature writing Parrish, by arguing that writers of the American Renaissance “failed to see the dynamic cultures of colonial nature appreciation and representation that preceded and, in many ways, anticipated them” (311), Parrish shows how natural history in the colonial period is a crucial precursor to 19$^{th}$ century American literature. This connection is made even stronger when Parrish talks specifically about the Cetology chapter of *Moby-Dick* and how “much like British Americans naturalists since the late seventeenth century, Ishmael was working within local, experientially derived, and multiracial epistemologies” (313). In choosing connecting her argument to what many critics consider to be one of the greatest American novels, Parrish points to the larger relevance and importance of her argument and how literary scholars can situate Parrish’s argument within literary history. While Parrish’s study provides a broad, comprehensive look at natural history in the colonial British Atlantic world, my work focuses in greater detail on the movements of nonhuman

bodies in correspondence networks, taking a more explicitly posthumanist approach that is also more heavily influenced by media theory.

## Bodies And Early America

In discussions of the body in early America, critics characterize the body as both a cultural or textual construction and a material or physical entity (see Kathleen Brown 3; Lindman and Tartar 2). Indeed, Brown's and Lindman's and Tartar's discussion of the body as both metaphor and material resemble previously mentioned arguments critics make about nature in early America as both metaphor and physical fact and nature as tied to identity, both personal and national. The body also becomes an important idea in scholarship dealing with race in early America. Critics such as Joyce Chaplin, Dana Nelson, and Roxann Wheeler have put forth arguments about how ideas of race were based, to varying degrees, on supposedly "natural" arguments about differences in skin color. For example, Wheeler argues "that skin color emerges as the most important component of racial identity in Britain during the third quarter of the eighteenth century, particularly noticeable in natural history and other scientific texts, distinguishes this study from others, especially literary interpretations, which have generally assumed that complexion is already the most significant factor" (9).

The entwining of ideas about nature, race, and bodies is central to Monique Allewaert's argument in *Ariel's Ecology*. Allewaert focuses on the body as a "disorganized and disorganizing" entity and how the "rendering of the body in parts did not signal the end of personhood but the origin of a minoritarian and anticolonial mode of personhood that was largely developed by Afro-Americans" (2). This mode of personhood, Allewaert argues, results from an entwinement or enmeshment of human bodies with the more-than-human world (6). Allewaert's argument about personhood formed in the tropicalized body considers how the body, as a medium, interacts with other media. She writes:

> there is no medium of exchange like the money form that remains conceptually outside of the process of relation. Instead, everything including that which is conventionally understood as a medium—for instance, the sea—is bound up in processes of touching and proximity. Here, one entity touches upon and intensifies or exhausts or even decomposes another: this first entity's relation to the second is that of touching, of constituting, of perhaps in turn being constituted by it, all of which precludes exchanging one for the other. What this suggests is that relation, far from being a synonym for exchange, names a process through which bodies and parts punctuate themselves against larger fields that they also decompose. Relation, then, describes an enmeshment that is not a merging and that forecloses the possibility of exchange. (8)

This relationality creates what Allewaert terms "an ethics of relationality," which she defines as "an engagement in which a body is recognized as a medium that extends into (and is extended into by) media that are proximate to it, and sometimes even into media that are not proximate to it. This process of mediation can strengthen, weaken, or eliminate that body, but in all cases it continually transforms and diversifies that body" (19). While Allewaert focuses more on personhood, my argument focuses more on networks and processes of transmission and how animal bodies are implicated in them.

## Overview Of Chapters

In Chapter 2, I begin by exploring how British American natural history texts published in the seventeenth and eighteenth centuries incorporated new animals into the discourse and practice of natural history and, as a result, changed humans' relationship to and interaction with those animals. Adding to previous scholars' discussion of the underlying violence of this process, I argue that, within these narratives of violence and death, nonhuman animal bodies, through their strangeness and instability, exercise a large amount of agency and power. Without excusing or condoning the violence, I offer an alternative narrative that resists depicting the natural world as a powerless and helpless entity acted upon by humans. By focusing on the work of five writers, William Wood, Cotton Mather, Hans Sloane, Mark Catesby, and Unca Eliza Winkfield, this

chapter shows how early natural history texts and networks begin the process of pinning down animals, creating order in the natural world, and fixing the identities of beings within it. Beginning with Wood's *New England's Prospect* (1634), I argue that Wood exemplifies how naturalists translated firsthand experience with New World animals into verbal descriptions in print, stressing the effort to pin down these new animals and create order and meaning from them. Mather, in contrast to Wood, is less interested in firsthand experience and observations. Eschewing the material world of flesh-and-blood animal bodies in favor of textual descriptions of them, Mather's *The Christian Philosopher* (1721) shows how the long-standing textual tradition of Western science can be placed on top of the real, material world. Adding to Christopher Iannini's arguments about emblematic specimens and the importance of interdependence and contingency between plants and animals in the early natural history texts in Sloane and Catesby, I examine the mutual dependencies and influences of all actors in these networks: published natural history texts, correspondence about specimens (both descriptions of specimens and discussions of shipping specimens), the specimens themselves, nonhuman animals, humans, and the environment. The movement between physical and symbolic representations of bodies becomes more entangled with Sloane's *A Voyage to the Islands Madera, Barbados, Nieves, S. Christophers and Jamaica* (1707, 1725) and Catesby's *The Natural History of Carolina, Florida, and the Bahama Islands* (1754). Sloane places more emphasis on the visual, particularly with his specimen illustrations as well as the actual specimens themselves that he collected, which creates a tension between things and ideas; it also introduces the processes of extraction and reinsertion of animal bodies into the natural world. Catesby draws attention to the role of interdependence and contingency in natural history discourse and networks. Winkfield's novel *The Female American* (1767) provides a fictionalized look at natural history, which, not only shows the far-reaching influence of

natural history discourse in the eighteenth century but also shows how it could be used to draw attention both to shifting materiality of animal bodies and the fact that women could function as careful and attentive observers of those animal bodies.

In confronting the implications of vitalist and new materialisms on transmitted and circulated animal bodies in natural history discourse and networks, Chapter 3 analyzes the works of five writers: Thomas Jefferson, William Bartram, Benjamin Rush, and Richard Allen and Absalom Jones. My argument extends Monique Allewaert's discussion of vitalist materialism and parahumanity more fully to nonhuman animals and how (parts of) their bodies participate in and are transmitted and circulated through natural history correspondence networks. Yet, while Allewaert stresses how the parahuman leads to a broader understanding of personhood, I resist that term's unavoidable speciesist bias, as it inevitably leaves humans as the locus and apex of our attention. Departing from Allewaert, I emphasize *creature*hood, as a term that recognizes both the nonhuman actors and beings and the quality of being created, as opposed to a stable, static existence. Beginning with Jefferson's Query VI from *Notes on the State of Virginia* (1785) and his correspondence about acquiring a moose specimen to send to George-Louis Leclerc, Comte de Buffon, I explore the importance of mammoth and moose body parts and how they are entangled and entwined with humans. Analyzing Bartram's *Travels* (1791), I focus on his encounters with alligators, arguing that alligator bodies become both a medium for him to explore personal and national identities, as well as a valuable commodity to be circulated across correspondence networks. While not a natural history text, Rush's 1799 "Three Lectures on Animal Life" shows his engagement with vitalist materialist thought, and his 1794 "An Account of the Bilious Remitting Yellow Fever, as it Appeared in the City of Philadelphia, in the Year 1793" provides a window into considering the agency of pathogens in the transmission of deadly diseases throughout

the Greater Caribbean. Richard Allen and Absalom Jones's "A Narrative of the Proceedings of the Black People, During the Late Awful Calamity in Philadelphia, in the Year 1793" (1794) provides a complement to Rush's concern with yellow fever contagion; I argue that, in their narrative, shifting animal materiality and interspecies encounters create diseased bodies that, in turn, facilitate a vexed form of citizenship for African Americans.

Chapter 4 analyzes a number of texts in which shifting animal materiality and the permeability of human and nonhuman bodies heightens the visibility of bodies as such and raises questions about definitions of agency, personhood, and creaturehood. Shifting animal materiality makes non-white and non-male bodies more visible because it weakens or destabilizes existing dualities and hierarchies, calling into question the hegemony of the white male naturalist as sole arbiter of natural history knowledge creation. As critics such as Susan Scott Parrish have argued, non-white, non-male individuals were vital participants in the production of natural historical knowledge. Moments of shifting animal materiality, which weaken and destabilize existing dualities and hierarchies, reveal another way in which non-European, non-white, and non-male individuals participated in the discipline of natural history, calling into question the hegemony of the white male naturalist as sole arbiter of natural history knowledge creation. Beginning with J. Hector St. John de Crevecoeur's writings, including *Letters from an American Farmer* (1782) and *Sketches of Eighteenth-Century America* (1923), I show how moments of shifting materiality and inter-species encounters lead to an increased visibility of black bodies, with troubling consequences for the human and more-than-human world. Turning then to Leonora Sansay's *Secret History; or, the Horrors of St. Domingo* (1808), I argue that the novel is notable not just for its exploration of issues of race and gender as they relate to domestic and colonial issues, but how these issues

are invariably tied to bodies and the more-than-human world. In *Secret History* networks coalesce and overlap, providing moments of dissolve where the distinctions and boundaries between bodies and species become uncertain and permeable and highlighting alternative modes of natural history description based more on sound and touch than vision and influenced by reporting of local knowledge and experience than firsthand empirical evidence. I conclude the chapter by examining Audubon's 1827 essay "Observations on the Natural History of the Alligator," as well as *The Birds of America* (1827-1838), *Ornithological Biography* (1831-1839), and other selected essays and correspondence by Audubon, who emphasizes the material underpinning of the mind, vision, and perception of both humans and nonhumans. In every stage of the circulation of animals, he foregrounds the physical and the material.

My final chapter extends beyond early America, looking at two nineteenth-century female naturalists, Mary Treat and Martha Maxwell. Differing from earlier female nature writers in her direct focus on animals and their bodies, Treat's writings on insects, arachnids, and carnivorous plants reveals multiple instances where discrete boundaries between human and nonhuman, plant and animal dissolve. In Maxwell's taxidermy work, corporeality takes center stage, both with the bodies of the dead animals she worked with and, as a result of that work, Maxwell's own body. *On the Plains and Among the Peaks; or, How Mrs. Maxwell Made Her Natural History Collection* (1879), written by Maxwell's sister Mary Dartt, blends the violent, shifting corporeality of animals with feminized sentimentality. In encountering nonhuman animals and the accompanying shifts in animal materiality, Treat and Maxwell increase their visibility as women and reveal the way humans' construction of natural and scientific knowledge is entangled with animal bodies, both living and dead. I conclude the final chapter by exploring what happens to animal specimens in natural history in the twenty-first century, how the role and purpose of such

specimens shifts in the digital era. Websites such as *In Pieces – 30 Endangered Species, 30 Pieces* and *What is Missing?*, and, to a lesser extent, *Crappy Taxidermy*, show how animal specimens have become increasingly disembodied and their digital presence becomes, in many ways, more vital than their original materiality.

## Chapter 2

### Redundant Representations: Making Sense Of Strange Live Animals

In discussing transatlantic specimen transport in the eighteenth century, Christopher Parsons and Kathleen Murphy argue that "ships were imagined as complex ecosystems, as intricate assemblages of people, animals, and climatic conditions" (507). Ships, they argue, become another space of natural history that, like the more familiar spaces of museums and botanical gardens, shaped and structured scientific knowledge (507). Moreover, Parsons and Murphy raise two important concepts crucial to my argument in this chapter: redundancy and movement. In the world of eighteenth-century specimen transport, "[r]edundancy was the only sure solution when years' or even lifetimes' worth of work collecting and preparing specimens could be lost in an instant" (538). Redundancy, I argue, can be seen as an important concept in early American natural history more generally, evident in the rather repetitive nature of the order, structure, and descriptions of animals in many (if not most) early American natural history texts. This repetition or redundancy is not the shortcoming or failing it might appear to be at first glance. Instead, it functions as a powerful way of creating, solidifying, and reinforcing new knowledge of American nature. If there were endless variations and innovations in these texts, it would be difficult to gain (or attempt to gain) control and command of New World flora and fauna. Yet repetition and redundancy also makes it all the more obvious when specimens resist or fail to live up to human systems and controls. The second important observation made by Parsons and Murphy is the role of movement in natural history: "new natural knowledge emerged from the circulation of specimens, instruments, and narrative descriptions; natural history was, in essence, a science of objects in motion. If movement was a mode of knowledge production, we must also attend to the social and material processes that made objects mobile" (539). Early

American natural history was a discipline dependent on movement (enhanced and strengthened by redundancy), both the literal movement of specimens, correspondence, and texts, as well as the more symbolic movement between animal, specimen, and verbal/visual description. Natural knowledge, then, is created both through redundancy and movement.

This chapter examines how animal bodies first become part of early British American natural history correspondence networks in the seventeenth and eighteenth centuries. By focusing on the work of five writers, William Wood, Cotton Mather, Hans Sloane, Mark Catesby, and Unca Eliza Winkfield, I show how early natural history texts and networks began the process of pinning down animals, creating order in the natural world, and fixing the identities of beings within it. Beginning with Wood's *New England's Prospect* (1634), I argue that Wood exemplifies how naturalists translated firsthand experience with New World animals into verbal descriptions in print, stressing the effort to pin down these new animals and create order and meaning from them. At the same time, however, it displays an implicit awareness and acknowledgement of the power and agency of the nonhuman world. Although still focused on ordering and fixing the natural world, Mather, in contrast to Wood, is less interested in firsthand experience and observations. Eschewing the material world of flesh-and-blood animal bodies in favor of textual descriptions of them, Mather's *The Christian Philosopher* (1721) shows how the long-standing textual tradition of Western science can be placed on top of the real, material world. In de-emphasizing firsthand experience and privileging written representations, Mather's writing influences and shapes how humans treat or interact with the natural world, which creates a sense of separation between humans and animal bodies. The movement between physical and symbolic representations of bodies becomes more entangled with Sloane's *A Voyage to the Islands Madera, Barbados,*

*Nieves, S. Christophers and Jamaica* (1707, 1725) and Catesby's *The Natural History of Carolina, Florida, and the Bahama Islands* (1729-1743). In *Voyage to . . . Jamaica*, Sloane places emphasis on the visual, particularly with his specimen illustrations as well as the actual specimens themselves that he collected. This emphasis creates a tension between things and ideas; it also introduces the processes of extraction and reinsertion of animal bodies into the natural world. By focusing on animal bodies and the kinds of autonomy and authority these processes and movements grant them, I build on Christopher Iannini's argument about emblematic specimens in Sloane's text. Iannini also analyzes Catesby's *Natural History*, focusing on Catesby's interest in interdependence and contingency between plants and animals. Adding to Iannini's argument, I examine the role of interdependence and contingency in natural history discourse and networks more broadly, acknowledging the mutual dependencies and influences of all actors in these networks: published natural history texts, correspondence about specimens (both descriptions of specimens and discussions of shipping specimens), the specimens themselves, nonhuman animals, humans, and the environment. The emphasis on specimen collection and preservation in Sloane's and Catesby's texts marks a move away from consuming animal bodies to preserving them. Winkfield's novel *The Female American* (1767) provides a fictionalized look at natural history, which, not only shows the far-reaching influence of natural history discourse in the eighteenth century but also shows how it could be used to draw attention both to shifting materiality of animal bodies and the fact that women could function as careful and attentive observers of those animal bodies. Although brief and seemingly inconsequential, the appearance of natural history in *The Female American* coincides with the potential for cross-species combinations and assemblages of bodies. Taken together, these five writers and their texts provide an

overview of the movements within the discipline of natural history in the seventeenth and eighteenth centuries.

British American natural history texts published in the seventeenth and eighteenth centuries provide some of the first (albeit not the very first) comprehensive descriptions and discussions of New World animals. By identifying and fixing animals in print, humans change both their understandings of those animals as well as how humans interact and relate to them. These early natural history texts attempt to assign a set meaning or identity to each animal, signaling that they can be figured out or mastered; this undertaking changes human understanding of each animal by elevating the animal's position in the human world. The animal is not merely another entity with whom humans inhabit the world, but a subject *and* object with which humans must contend and make sense. Examining these early natural history texts demonstrates how this process occurs, how these writers, when confronted with new animals, attempt to make sense of and account for them. By taking these new animals into the discourse and practice of natural history, these writers changed humans' relationship to and interaction with those animals. In creating printed texts and specimens, natural history creates a greater awareness of how those animals function in the world and how they shape human lives and activities. While there is an underlying violence to this process, a violence noted by numerous critics (as discussed later in the chapter), the by-product of that violence is an increased awareness of and sensitivity to the natural world. Of course such an interpretation can be potentially problematic, as it could be seen as excusing the violence, explaining it away. Yet within these narratives of violence and death, nonhuman animal bodies, through their strangeness and instability, exercise a large amount of agency and power. And while this does not excuse or condone the violence, it offers an alternative narrative that resists depicting the natural world as a powerless and helpless entity acted upon by humans.

The act of pinning down, creating order, and fixing identities changes not only animals, but humans as well by introducing a concept of recursivity. Creating knowledge from and about animals depends upon shipments of specimens, and, in turn, those specimen shipments and the knowledge created from them by naturalists influence demand for specimens. The materiality of animals changes as they are sent across the Atlantic (preservation techniques quite literally change animal bodies), resulting in the creation of new bodies, new material. Material specimens provide a crucial link between real animals and written and visual representations of them. They offer convincing, tangible proof of the natural world, allowing a more effective vicarious experience of American animals than just words or images. While the specimen is built on the violence of animal death and specimen preparation, they also exude a kind of generative force, creating something new, but fragile. They enrich and enliven verbal and visual descriptions of them, but at the same time serve as reminders of how incomplete and partial a grasp natural history has over animals. On some level, these creatures always remain beyond complete control and mastery. Nonetheless, the writers analyzed in this chapter insist on the illusion that humans can successfully order, and thus control, animal bodies and, by extension, the natural world, and it is this insistence that leads them to incorporate animal bodies into natural history networks.

## Experiencing New World Bodies

Before delving into Wood's *New England's Prospect*, it is important to understand how earlier authors dealt with the natural world and differed from Wood in their approach to New World animals. Some of the earliest written descriptions of the New World came from Spanish explorers in the sixteenth century such as Amerigo Vespucci, Gonzalo Fernandez de Oviedo y Valdes, and Pietro Martire d'Anghiera. Vespucci's *Mundus Novus* (1503) and Oviedo's *Natural History of the West Indies* (1526) offer descriptions of the

abundant natural resources of the New World, both plants and animals, emphasizing their usefulness as commodities. Ascertaining the exact usefulness for some of the natural resources was not entirely important; for example, Vespucci offers a vague description of how New World herbs, roots, and trees "all produce gum or oil or some liquor" that if their properties were known would be beneficial, "salubrious for the human body" (12). Highly influential, Oviedo's *Natural History* was, according to Michael Branch, the "first book to describe the wonders of New World nature methodically, carefully, and on the basis of firsthand observations" (22), making it an important precursor to Wood's text. Martire's *De Orbe Novo* (1511-1530), eschewed firsthand, empirical observation in favor of wild, outrageous stories and fantastical descriptions that synthesized "the many findings of Spanish explorers in the New World" (14); this practice of relying on previous findings and observations in crafting a new text would be imitated later by Cotton Mather in *The Christian Philosopher*.

Along with the writings of Spanish explorers, Wood's text was also preceded by a few English promotional tracts about the New World, especially Thomas Hariot's *A Briefe and True Report of the Newfound Land of Virginia* (1588) and John Smith's *A Description of New England* (1616), that would shape and influence Wood. Both Hariot and Smith provide lists of natural resources that stress the use-value of animals and display an increased attempt to fix and stabilize the seemingly chaotic wilderness of the New World. These lists share a similar structure and order that Wood later mirrors in *New England's Prospect*. As with the Spanish explorers, Hariot, in *A Briefe and True Report*, stresses the importance of firsthand experience and observation: "that you seeing and knowing the continuance of the action by the view hereof you may generally know & learne what the countrey is, & therupon consider how your dealing therein if it proceede, may returne you profit and gaine; bee it either by inhabiting & planting or otherwise in furthering thereof"

(7). Hariot goes on to list various merchantable commodities including animal products, particularly furs from otters, martens, deerskins, and civet cats. In the section titled “Of Beastes,” Hariot lists mammals primarily from the standpoint of the quality of their meat or skin; he mentions deer, “conies,” “saquenuckot” and “maquowoe,” squirrels, and bears. After listing these animals and providing brief descriptions, Hariot concludes this section by noting, “And thus have I made relation of all sortes of victuall that we fed upon for the time we were in *Virginia*, as also the inhabitants themselves, as farre foorth as I knowe and can remember or that are specially worthy to bee remembred.” For Hariot, unless an animal serves a particular use to humans, either as food, clothing, or commodity, it is not “worthy” of being remembered or written down in his account. Similar to Hariot’s text, Smith’s *A Description of New England*, relies heavily on listing New England’s natural resources, resulting in a text that reads less like a natural history and more like what Branch refers to as a “ledger book in which the economic value of the land and its creatures is constantly being reckoned” (51). In his lists of animals, Smith spends hardly any time in describing the animals, preferring instead to quickly list the abundant species and varieties he observed. He makes separate lists for birds (“Eagles Gripes [vultures], diverse sorts of Haukes, Cranes, Geese, Brants, Cormorants, Ducks, Sheldrakes, Teale, Meawes, Guls, Turkies, Dive-doppers, and many other sorts, whose names I knowe not”), fish (“Whales, Grampus, Porkspices [porpoises], Turbut, Sturgion, Cod, Hake, Haddock, Cole [Coalfish, Pollock], Cusk, or small Ling, Shark, Mackerell, Herring, Mullet, Base, Pinacks, Cunners, Pearch, Eels, Crabs, Lobsters, Muskles, Wilkes, Oysters, and diverse others etc”), and mammals (“Moos, a beast bigger than a Stagge; deere, red, and Fallow; Bevers, Wolves, Foxes, both blacke and other; Aroughconds [Racoons], Wildcats, Beares, Otters, || Martins, Fitches, Musquassus [musquash, muskrat], and diverse sorts of vermine, whose names I know not”) (342). By enumerating

the abundant number of animals in the New World, Smith foregrounds the unfulfilled potential of the New World for Europeans to take advantage of; he concludes his listing of animals by noting that "All these and diverse other good things do here, for want of use, still increase, and decrease with little diminuition, whereby thy growe to that abundance" (342). The promotional tract's strategy of enumerating the many animal commodities in the Americas would be imitated by Wood, but with more emphasis on natural description, less on animals as edible commodities, and more symbolic and poetic representations of the New World animals.

As Alden T. Vaughn explains in his critical introduction to *New England's Prospect*, very little is known about Wood as few records exist; there is no known date or place of his birth or death (3-4). Most information that scholars do know about Wood comes from *New England's Prospect* and its publication history. Based off of his residency in New England between 1629 and 1634, Wood's book offers hints both at his level of education and his religious affiliation; his writing style suggests he was a native Englishman and the secular tone of his writing suggests he was not a Puritan (Vaughn 4-5). Wood's lucid and readable prose was purely descriptive, intended to both offer practical information and knowledge as well as to entertain (10). Initially published by John Bellamie in London in 1634, Wood's book sold well and was published in two subsequent editions (in 1635 and 1639) in London with minor updates, corrections, and alterations. The first American edition was published in 1764, and was a reprint of the 1639 edition; two additional editions were published in 1865 and 1898 before the book fell out of print. *New England's Prospect* was well-received by writers such as Judocus Hardy and Thomas Morton, and it was referenced and quoted in various anonymous pamphlets and promotional materials (Vaughn 3). Along with being "the earliest comprehensive, firsthand description of New England geography, climate, flora, and

fauna" (Branch 57), *New England's Prospect* offered a level of accuracy unseen in earlier tracts on the Americas, an accuracy that was due, in part, to Wood's reliance on firsthand experience, as well as his emphasis on providing "primarily a 'description'—not a history, not a chronicle of events, not an argumentative tract—of the region inhabited by 'our new-come English planters' and their Indian neighbors" (Vaughn 2). The novel qualities of Wood's text must have resonated with English readers, as *New England's Prospect* went through "three separate editions in five years" (Vaughn 3). And yet, despite Branch's assertion that *New England's Prospect* makes Wood an "important forerunner of Henry Thoreau" (57), virtually no critical discussion of Wood's text exists. Wood's text, I argue, offers an important insight into the shift from earlier promotional tracts to later natural history and nature writing texts. Functioning as a bridge between these different genres of writing, *New England's Prospect* does more than just display what Branch calls a "genuine appreciation for the intellectual and aesthetic value of nature" (57). While this appreciation does appear in *New England's Prospect*, it coexists with discussions of flora and fauna as natural resources and commodities to be used by humans. Furthermore, Wood's text offers a glimpse of how human bodies were permeable entities that meshed and blended with the climate, environment, and nonhuman animals.

As with many other early accounts of the New World, Wood emphasizes firsthand experience, allowing readers to vicariously live through his text. Throughout *New England's Prospect*, Wood is concerned with the veracity of his descriptions. At the beginning of the text, Wood addresses this concern directly to his readers: "but my conscience is to me a thousand witnesses, that what I speak is the very truth, and this will informe thee almost as fully concerning it, as if thou wentest over to see it" ("To the Reader" n. pag.). Wood also emphasizes his hope that his firsthand account will inspire

others to journey to America and acquire their own experience: “As I have observed, so doe I desire to publish what I have written, desiring it may be beneficiall to posteritie; and if any man desire to fill himselfe at that fountaine, from whence this tasting cup was taken, his owne experience shall tell him as much as I have here related” (55). This translation of firsthand observations into an account that can be experienced vicariously by others is a guiding principle in natural history discourse. The readers of a text like *New England’s Prospect*, primarily English men and women interested either in becoming colonists or simply in learning about the New World, by and large would not have had their own personal encounters with American nature, opting instead to experience and learn about it secondhand. In naturalists’ efforts to make these experiences seem more and more real, they inevitably turn to specimens, extracting parts of the natural world to function as stand-ins for the whole. And while Wood did not make use of specimens, his writing shows a fascination with achieving a “real” account of nature, which, in later texts, leads to the impulse to extract specimens, an impulse acted upon by naturalists such as Sloane and Catesby.

Before describing New England’s plants and animals, Wood first focuses on human bodies, particularly how climate affects them.[1] Winifred E. A. Bernhard observes that Wood “makes vividly clear the intense impact that the land and its inhabitants had on the earliest settlers” (x). Wood carefully stresses how human bodies corrupted at sea become “crazed bodies” that cannot withstand life in New England, thereby countering claims that New England was a place detrimental to human health:

> and whereas many died at the beginning of the plantations, it was not because the Country was unhealthfull, but because their bodies were

[1] Other naturalists after Wood were also concerned about the role of climate in human health. Susan Scott Parrish argues that “Sloane and others […] attested to the ‘facts’ of greater physical health of longevity in the Caribbean and to the local inventions and practices that ameliorated any potentially negative effects of the climate. Environment was not ignored by the generality of promotional writers; it was instead represented in a countertheoretical, experiential frame of health” (88-89).

> corrupted with sea-diet, which was naught, their Beefe and Porke being tainted, their Butter and Cheese corrupted, their Fish rotten, & voyage long, by reason of crosse Windes, so that winter approaching before they could get warme houses, and the searching sharpnes of that purer Climate, creeping in at the crannies of their crazed bodies, caused death and sicknesse. (5)

The "unhealthful" diet, environment, and climate of transatlantic voyages does not just corrupt human bodies, but deranges them and renders them vulnerable and porous; the "crazed bodies" are full of "crannies" that can be penetrated by the pure, sharp New England climate. For Wood, a "healthy" body is one that can withstand the corruption and harsh conditions of the natural world; the human body can indeed become enmeshed with the nonhuman world, but to do so, in Wood's view, risks sickness and death. Yet, despite such concerns about the creeping corruption of bodies from external forces, Wood does recognize that, given the right circumstances and right bodies (white and English), the right climate (New England) can be salutary for human health. Wood touts the benefit of cold, New England weather that results in an increased healthfulness for New Englanders: "it is for certaine the best ground and sweetest Climate in all those parts, bearing the name of *New England*, agreeing well with the temper of our *English* bodies, being high land, sharpe Ayre, and though most of our *English* Townes border upon the Seacoast, yet are they not often troubled with Mists, or unwholesome fogges, or cold weather from the Sea" (3). He contrasts the healthy New England bodies with the corruption of bodies in Virginia:

> *Virginia* having no Winter to speake of, but extreame hot Summers, hath dried up much *English* blood, and by pestiferous diseases swept away many lusty bodies, changing their complexion not into swarthinesse, but into Palenesse; so that when as they come for trading into our parts, wee can know many of them by their faces. This alteration certainely comes not from any want of victuals or necessary foode, for their soyle is very fertile and pleasant, yeelding both Corne and Cattle plenty, but rather from the Climate, which indeede is found to be hotter than is suiteable to an ordinary *English* constitution. (8-9)

Wood belies concerns that warmer, more humid and tropical climates might threaten the whiteness of English bodies, emphasizing instead that colonists in Virginia become, not darker, but paler and more sickly. In contrast to Virginia's climate, New England's climate supports, according to Wood, both the inward and outward appearance of health:

> In *New England* both men and women keepe their naturall complexions, in so much as Sea men wonder when they arrive in those parts, to see their Countrey-men so fresh and ruddy: If the Sunne doth tanne any, yet the Winters cold restores them to their former complexion; and as it is for the outward complexion, so it is for the inward constitution; not very many being troubled with inflammations, or such diseases as are encreased by too much heate: and whereas I say, not very many, yet dare I not exclude any; for death being certaine to all, in all Nations there must be something tending to death of like certainty. The soundest bodies are mortall and subject to change, therefore fall into diseases, and from diseases to death. (9)

While *New England's Prospect* is still very much a promotional tract trying to make the New World seem as good as possible, Wood still reveals that the natural world and forces outside of the human body can impact and influence the make-up or constitution of human bodies. In Wood's text, human bodies are permeable, fluctuating entities subject to change.

After discussing human bodies in New England, Wood shifts to discussing the region's flora and fauna. At the beginnings of Chapters 5-9, Wood includes sections of verse that list the plants or animals to be described in that chapter (trees, mammals, birds, and fish), poetic reworkings of the simple lists of Hariot's and Smith's texts. For example, in presenting his description of mammals (referred to as "beasts"), Wood introduces them with a brief justification, followed by the list set in verse:

> it will not be amisse to informe you of such irrationall creatures as are daily bred and continually nourished in this country, which doe much conduce to the well being of the Inhabitants, affording not onely meate for the belly, but cloathing for the backe. The beasts be as followeth.
>
> *The kingly Lyon, and the strong arm'd Beare*
> *The large lim'd Mooses, with the tripping Deare,*
> *Quilldarting Porcupines, and Rackcoones bee,*
> *Castelld in the hollow of an aged tree;*

*The skipping Squerrell, Rabbet, purblinde Hare,*
*Immured in the selfsame Castle are,*
*Least red-eyd Ferrets, wily Foxes should*
*Them undermine, if rampird but with mould.*
*The grim fac't Ounce, and ravenous howling Woolfe,*
*Whose meager paunch suckes like a swallowing gulfe.*
*Blacke glistering Otters, and rich coated Bever,*
*The Civet sented Musquash smelling ever.* (18-19)

Furthermore, Wood's listing of fish closely follows the order of Hariot's and Smith's lists of fish.

The king of waters, the Sea shouldering Whale,
The snuffing Grampus, with the oyly Seale,
The storme presaging Porpus, Herring-Hogge,
Line shearing Sharke, the Catfish, and Sea Dogge,
The Scale-fenc'd Sturgeon, wry mouthd Hollibut,
The flounsing Sammon, Codfish, Greedigut:
Cole, Haddocke, Hage, the Thronebacke, and the Scate,
Whose slimie outside make him selde in date,
The stately Basse old Neptunes fleeting post,
That tides it out and in from Sea to Coast.
Comforting Herrings, and the bony Shad,
Big bellied Alewives, Machrills richly clad
With Rainebow colours, th' Frost fish and the Smelt,
As good as ever lady Gustus felt.
The spotted Lamprons, Eeles, the Lamperies,
That seeke fresh water brookes with Argus eyes;
These waterie villagers with thousands more,
Doe passe and repasse neare the verdant shore.
Kinds of all Shel-fish.
The luscious Lobster, with the Crabfish raw,
The Brinish Oister, Muscle, Periwiggo,
And Tortoise sought for by the Indian Squaw,
Which to the flats daunce many a winters ligge [Jigge],
To dive for Cocles, and to digge for Clamms,
Whereby her lazie husbands guts shee cramms. (32-33)

Elaborating on the simple lists of Hariot and Smith, Wood combines the utilitarian value of animals as commodities with the aesthetics of poetry. Wood's poetic lists attest to the two-part goal of his book, to inform and entertain. The poems are clearly fanciful sections that would no doubt entertain readers; yet they possess an educational value at the same time. The close repetition of Hariot's and Smith's lists help solidify their catalog of animals as a reliable accounting of the species colonists could expect to find in New England. The

rhyming and verse could potentially help readers remember and recall the numerous species listed. The descriptions Wood includes with many of the mentioned species offer additional information that would both entertain and provide practical advice for colonists. His lists offer hints at animals' behavior (the porcupines' "quilldarting," the wolves' "ravenous howling," the sharks' "line shearing"), their use-value as commodities for humans ("rich coated Beaver," "oyly Seale"), and other potentially useful information("the storme presaging Porpus").

Following these verse sections, Wood provides detailed descriptions that mix empirical descriptions with anecdotes. His descriptions emphasize the appearance, size, and behaviors of the creatures, with comparisons to European animals when possible, such as in his descriptions of porcupines and raccoons:

> The Porcupine is a small thing not much unlike a Hedgehog; something bigger, who stands upon his guard and proclaimes a *Noli me tangere* [Do not touch me], to man and beast, that shall approach too neare him, darting his quills into their legges, and hides. The Rackoone is a deepe furred beast, not much unlike a Badger, having a tayle like a Fox, as good meate as a Lambe; there is one of them in the Tower. These beasts in the day time sleepe in hollow trees, in the moone shine night they goe to feede on clammes at a low tide, by the Sea side, where the *English* hunt them with their dogges. (22)

Such descriptions appear alongside anecdotes of encounters with animals, especially those animals deemed pests (wolves, mosquitoes, and snakes). Wood characterizes these animals as evil "and of most annoyance to [New England] inhabitants" (44).

Throughout his descriptions, Wood largely considers animals for their potential use value to humans. He intimates that he only focused on and included the useful animals in his text: "To omit such of these as are not usefull, therefore not to be spoken of, and onely to certifie you of such as be usefull" (33). There are some exceptions to this pragmatic treatment of animals as commodities, such as the flying squirrel, "a creature more for sight and wonderment, than eyther pleasure or profit" (22). Wood also remarks

on the overabundance of animals; he laments that there is little hope of eliminating wolves and marvels at the millions of passenger pigeons. In descrying the nuisance posed by wolves and the difficulty in eradicating them, Wood notes that “these be killed dayly in some place or other, either by the *English*, or *Indian*; who have a certaine rate for every head: Yet is there little hope of their utter destruction, the Countrey being so spacious, and they so numerous, travelling in the Swamps by Kennels: sometimes ten or twelve are of a company” (24). In discussing pigeons, Wood notes:

> These Birds come into the Countrey, to goe to the North parts in the beginning of our Spring, at which time (if I may be counted worthy, to be beleeved in a thing that is not so strange as true) I have seene them fly as if the Ayerie regiment had beene Pigeons; seeing neyther beginning nor ending, length, or breadth of these Millions of Millions. The shouting of people, the ratling of Gunnes, and pelting of small shotte could not drive them out of their course, but so they continued for foure or five houres together. (28)

These two perceptions of unceasing abundance are nothing new; much of Smith’s discussion of New World animals emphasizes their abundance. Yet despite this shared commonality with previous texts, *New England’s Prospect* attempts to improve England’s knowledge of the New World, correcting erroneous beliefs and reports and showing how animal bodies permeate the human on both material and symbolic levels.

Following the chapters on the different animal groups, Wood discusses snakes in a separate chapter about the evils of New England. He begins by mentioning the use of “a root called snakeweed, which must be champed, the spittle swallowed, and the root applyed to the fore; this is present cure against that which would be present death without it: this weed is ranck poyson, if it be taken by any man that is not bitten: whosoever is bitte by these snakes his flesh becomes as spotted as a Leaper untill hee be perfectly cured” (45). He goes on to discuss snakes, mixing myths and stories with observation and fact:

> It is reported that if the party live that is bitten, the snake will dye, and if the partie die, the snake will live. This is a most poysonous and dangerous creature, yet nothing so bad as the report goes of him in *England*. For whereas he is sayd to kill a man with his breath, and that he can flye, there is no such matter, for he is naturally the most sleepie and unnimble creature that lives, never offering to leape or bite any man, if he be not troden on first, and it is their desire in hot weather to lye in pathes, where the sunne may shine on them, where they will sleep so soundy that I have knowne foure men stride over one of them, and never awake her: 5 or 6 men have been bitten by them, which by using snakeweede were all cured, never any yet losing his life by them. (45)

Wood's discussion of snakebites and snake encounters highlights the interconnectedness of humans, animals, and plants. It also shows how animal bodies' introduction into natural history discourse began to shift existing knowledge about animals. As naturalists came into contact with these new animals, their descriptions of them changed. These descriptions would in turn change and alter how humans would interact with those animals. Descriptions and anecdotes about New World animals raised interest in them. Naturalists and readers of natural history texts would not (or could not) be satisfied with mere verbal and visual representations of these animals. People needed contact with the real thing, with the physical animal bodies, which led to an increased interest and demand for animal bodies as specimens, as opposed to animals as wearable and edible commodities.

## Repeated And (In)Corporeal Bodies

While less interested than Wood in firsthand experience and observation, Mather still focuses on ordering and fixing the natural world. He achieves this partly by eschewing the material world of flesh-and-blood animal bodies in favor of textual descriptions of them. Mather's *The Christian Philosopher* shows how a long-standing textual tradition, such as that of Western scientific discourse, can be placed on top of the real, material world. When it was first published, *The Christian Philosopher* was read only by a small number of educated readers, mostly within Massachusetts and surrounding

New England colonies. Although it was the first American-written book to champion the design argument of natural theology, *The Christian Philosopher* was overshadowed by English natural theology texts (such as the writings of John Ray) that were better received. "Too formidable for most readers," Winton Solberg argues, Mather's book, with its "baroque style and learned allusions […] seemed impenetrable" to many readers, both modern and eighteenth-century (xxi). Reflecting Mather's upbringing in an atmosphere of piety and intellect," *The Christian Philosopher*'s primary purpose was "to enkindle piety" (xxii, xci). Within his book, the meshing of textual tradition with the material world influences and shapes how humans treat or interact with the natural world; it de-emphasizes firsthand experiences and interactions, privileging instead written representations, which creates a sense of separation between humans and animal bodies. In *The Christian Philosopher*, Mather does not so much incorporate animals into natural history discourse as bring Old World knowledge to the New World as a frame of reference from which to consider the natural world of the Americas. In doing so, *The Christian Philosopher* shows heavy reliance on classical learning. As Judd observes, "Mather turned to antiquity to understand the deeper logic in natural events" (23-24). This reliance on antiquity includes extensive citations and references to ancient writings, as well as modeling the book's structure and order on ancient texts. Unlike the ordering systems used by Hariot, Smith, and Wood, Mather follows the classical tradition, beginning his text with studies of light, stars, planets, earthly phenomena, soil, plants, and finally moving to insects, reptiles, fish, birds, mammals, and humans (moving from astronomy to physics to life sciences). Along with classical sources, Mather makes extensive use of biblical scripture as well as his naturalist contemporaries as sources that bolster his arguments and further display his erudition. His borrowing from other sources is so extensive that Winton Solberg estimates that seventy-nine percent of *The Christian*

*Philosopher* came from other authors (xlix). While its aggregate or "derivative" quality might appear to be a shortcoming, it also plays an important role in the text's transmission of Old World knowledge to the New World. Solberg argues that *The Christian Philosopher* "is a bridge by which the ripe learning of the ages passes from the Old World to the New" (cxv). Not only does Mather occupy an important place between Old and New, but he is also a transitional figure between a Puritan worldview and Enlightenment science.

*The Christian Philosopher* was an important text in promoting a providential view of the natural world, also known as the "argument from design."[2] This focus on seeing God's providence in the natural world is apparent in the opening paragraph of Mather's text:

> The Works of the Glorious GOD in the *Creation* of the World, are what I now propose to exhibit; in brief *Essays* to enumerate *some of them*, that He may be glorified in them: And indeed my *Essays* may pretend unto no more than *some of them*; for *Theophilus* writing, *of the Creation*, to his Friend *Autolycus*, might very justly say, That if he should have a *Thousand Tongues*, and live a *Thousand Years*, yet he were not able to describe the admirable Order of the Creation. (17)

This worldview has the potential to set up an ecological consciousness that acknowledges the need for humans to care for and respect the natural world and move beyond a model in which animals function simply as human commodities. Judd argues that this emphasis on divine providence makes Mather an important figure in early American science because it "[gave] natural history a theological problematic [which] helped liberate Americans from their status as 'mere field agent[s] for European scientists in the New World.' The idea of nature as an ecological system owes much to his Puritan way of thinking" (28). The importance of Mather as a transitional figure in American science and natural history rests on Mather's preference for the written word over direct

[2] According to Branch, the argument from design is "the assertion that the natural world should be studied as evidence of the Creator" (111). See also Judd, 25.

experience with the physical world. Mather's writing reveals an underlying tension between words and matter. His letters to the Royal Society were not well received because he was more concerned with crafting his prose than providing and reporting empirical observations. Susan Scott Parrish writes: "Mather knew at some level that his London correspondents wanted American matter more than book-bound erudition. But, ultimately, he could not control his greater orientation toward language's immaterial capacities for play rather than toward the material intricacy of nature's workings" (121). Indeed, Mather is more concerned with the transmission of Old World knowledge to America than with transmitting material animal bodies across the Atlantic. Yet *The Christian Philosopher* provides an important link and contrast between early works by writers like Wood and naturalists that would come after him. The aggregate quality of *The Christian Philosopher* speaks to the repetition and redundancy of many natural history texts in the seventeenth and eighteenth centuries. Countless examples of texts and correspondence, especially in the published *Transactions* of the Royal Society, all share numerous similarities and qualities. This repetition and enumeration works to reinforce a sense of order and command over the natural world. Such repetition and derivation have the effect of creating distance between natural history discourse and correspondence, and real animal bodies. The animals' verbally described bodies become separate from their corporeal selves, which creates a sense of dissonance.

This division or tension between the word and matter of animal bodies can be analyzed in greater detail by turning to Essay 29 "Of Reptils [sic]" from *The Christian Philosopher*. Rather than exhibiting Mather's own thoughts and observation on reptiles, the bulk of this essay displays his ability to synthesize a wealth of sources ranging from classical Greek and Roman authors to biblical scripture to contemporary scientists, naturalists, and physicians. Yet throughout this synthesis of others' work, Mather

expresses his own providential worldview as embodied in the reptiles. This worldview can be seen first in Mather's appreciation of the beauty, neatness, and perfection in the bodily movement of reptiles, particularly snakes:

> There is abundance of *geometrical* Neatness and Niceness in the Motion of *Serpents*; their *annular Scales* lie cross their Belly, contrary to those in the Back and the rest of the Body: the Edges also of the *foremost Scales* lie over the edges of the *following Scales*; and every Scale has a *distinct Muscle*, one end of which is tack'd to the middle of the Scale, the other to the upper Edge of the following Scale. (177)

By closely considering the physiology of snakes' bodies, Mather is able to trace his belief in Providence. His religious beliefs come filtered through mathematical and scientific analyses of the "*geometrical* Neatness and Niceness" of snake anatomy. Mather's natural world is harmonious and ordered from the celestial heavens down to the individual scales of a single snake. Yet this discussion of reptilian movement predictably gives way to citations of numerous authors:

> The *Magnitude* whereto some *Serpents* have grown, is prodigious. *Bochart* will astonish you with a Collection of Relations found in Antiquity concerning *Serpents*, particularly *Dragons*, of a most enormous Magnitude. *Gesner* too will quote us Authors for some so large, that the little Book I am now writing will afford no room for them.
>
> Yea, *Suetonius* affirms, that one was exposed by *Augustus*, which was no less than fifty Cubits long. *Dio* comes up with him, and affirms, that in *Herturia* there was one that was fourscore and five Foot long, which, after he had made fearful Devastations, was kill'd with a Thunderbolt. *Strabo* out-does him, and affirms, that in *Coelo-Syria* there had been one which was a hundred Foot long, and so thick, that a couple of Men on horseback on each side of him, could not see one another. Yea, one that was an hundred and twenty foot long, was kill'd near *Utica* by the Army of *Regulus*. Well might *Austin* say of these dreadful Animals, *Majora non sunt super Terram* [Greater there are not on earth]. (179)

In his turn towards citation, Mather's focus moves from the physical material of animal bodies to words, disembodied representations of animal bodies. He also stresses his belief in providence and the goodness of God by highlighting the redeeming value of venomous reptiles: "The *poisonous Tribes* have been made an Objection against the

Divine Providence, as being destructive to the rest of the World. […] Let it be considered, that the venomous Creatures have their great *medicinal Uses*" (180). Mather goes on to detail a number of cures derived from venomous snakes:

> we see a *Treacle* fetch'd out of a *Viper*; the *Viper's* Flesh cures *Leprosies*, and obstinate Maladies. The *Gall* of a *Rattle-snake* (which we take out of him in the more early Months of his yearly appearance, and work into *Troches* with *Chalk* or *Meal*) is a rich *Cordial* and *Anodyne*, for which purpose I have often taken it, and given it: it invigorates the Blood into a mighty *Circulation*, when fatal Suppressions are upon it; it is highly *alexipharmick*, and cures *Quartan-Agues*. (180)

Within all of the erudition Mather displays, he presents brief glimpses of his personal experience with the natural world, such as his testimony that he had often taken medicine derived from the rattlesnake. Despite these brief glimpses, Mather's reliance on written discourse results in a blindness to the physical world and firsthand observations of it, which, while not inherently problematic, opens up the possibility of a dissociative and damaging relationship with nonhuman nature. His writing both pushes natural science forward, as Judd argues, but also foregrounds a problem inherent in it: the division between representation and reality, or the belief that there exists a stable division between those two categories. This tension between representation and reality, thing and idea, also permeates Sloane's writings.

## Extracted And Dissected Specimens

In contrast to *The Christian Philosopher*, the writings of Sloane and Catesby focus on the physical world[3]; direct observation becomes important again and specimens take on an increasingly important role as they combine reality and representation

[3] Naturalists such as Sloane represented, according to Tony Rice, "'new' men of science [who] had no difficulty in accepting the standard religious view that the world and its populating plants and animals were the immutable creation of God, but saw the detailed observation, recording and interpretation of natural phenomena as a legitimate, indeed worthy pursuit" (14). Sloane argues that natural history texts "afford great Matter of Admiring the Power, Wisdom and Providence of Almighty God, in Creating, and Preserving the things he has created . . .. And conclude them, very ignorant in the History of Nature, who say, they were the Productions of Chance" (Vol. 1 preface).

simultaneously, complicating the relationship between the representation and reality of American animal bodies. Sloane and Catesby build on the idea of categorizing and fixing animals, but recognize the inherent problems involved in doing so, including the notion that materiality cannot ever be completely effaced, that it haunts and affects natural history. Animals' materiality also affects their symbolic representations, creating a mutual constitution in which the material and symbolic shape each other.

Hans Sloane was a physician and naturalist interested in many scientific fields, especially botany. He was elected a Fellow of the Royal Society in 1685, and by 1687, at the age of 27, he was a well-known figure in medical and scientific communities and had a well-established medical practice. He first arrived in Jamaica in 1687 as the physician to the Duke of Albemarle and his family. While in Jamaica, Sloane kept detailed journals and notes, which would eventually become *Voyage to . . . Jamaica*. Upon the Duke of Albemarle's death in 1688, Sloane returned to England and resumed his medical practice. *Voyage to . . . Jamaica* took a long time to publish; the first volume, which mostly focused on plants, was published in 1707 and the second volume, about Jamaica's animals, was published in 1725. Sloane's enhanced reputation from the positive reception of the book influenced his election in 1727 as President of the Royal Society.

In *Voyage to . . . Jamaica*, Sloane heavily emphasizes the visual, both in illustrations of specimens as well as the actual specimens themselves. This emphasis creates a tension between things and ideas; it also introduces the processes of extraction and reinsertion of animal bodies into the natural world. While my argument here largely draws from Christopher Iannini, I add to his argument from *Fatal Revolutions* by focusing on animal bodies and the kinds of autonomy and authority granted them by their involvement in natural history discourse. Iannini emphasizes how in the introduction to

*Voyage to . . . Jamaica*, Sloane imbues things or "curiosities" with "some strange power" that impinges on and affects human bodies and minds (36). In the preface to Volume 1, Sloane writes:

> I had from my Youth been very much pleas'd with the Study of Plants, and other Parts of Nature, and had seen most of those Kinds of Curiosities, which were to be found either in the Fields, or in the Gardens or Cabinets of the Curious in these Parts. The Accounts of these strange Things, which I met with in Collections, and, was inform'd, were common in the West-Indies, were not so satisfactory as I desired. I was Young, and could not be so easy, if I had not the pleasure to see what I had heard so much of, especially since it had been a great contentment to me, to see many things cultivated in *English* Gardens which I had seen grow wild in other Countries, whereof I conceived my self afterwards to be better appris'd, than I was of such as I had not seen common in the Fields, and in plenty, I thought by that means the *Ideas* of them would be better imprinted in my Mind, and that, upon occasion, both the knowledge of them and their Uses might be afterwards more familiar to me. These Inclinations remain'd with me some time after I had settled my self to practice Physic in *London*, and had had the Honour to be admitted a Fellow of the College of Physicians, as well as of the Royal Society. These unmerited Favours did not at all alter my mind, but rather incited me to do what I could to be no useless Member . . . and by that means endeavor to deserve a Place amongst so many Great and Worthy Persons. (n. pag.)

Introducing a distinction between things and ideas, Sloane writes how he was not content with "the Accounts of these Strange Things, which [he] met with in Collections" and desired to see these curiosities firsthand in the West Indies. The things themselves, their material, physical presence, would more effectively imprint "the *Ideas*" of those things in his mind. While this concept echoes the importance Wood placed on firsthand experience, it differs markedly from Mather's privileging of the written word over the material world. It also speaks to a tension Iannini highlights in Sloane's writing between two different kinds of representation: 1) an accurate or real representation of things how they really are, and 2) a more symbolic or emblematic idea of representation where material objects can be looked through for some kind of "underlying pattern or essence" (40). This tension emerges largely because of the increased prominence of specimens at

this time. As Iannini notes, by the early eighteenth century, the value of natural history specimens had shifted from sources of natural knowledge to "vendible commodities" and that "printed natural histories had become commodities in their own right, amid the myriad new consumer goods derived from the region" (37). In discussing Sloane's process of describing specimens, Iannini outlines a process of extraction and reinsertion of specimens that occurs in their description. In order for a specimen to "yield evidence of hidden providential patterns," it needs to be extracted, "isolated from the contingencies of time and context so that its visible surface may be rendered in minute detail" (41-42). Yet, as Iannini continues, "things have a history that unfolds in time and that cannot be grasped through observation alone," so a specimen must also "be reinserted into that setting and traced through the sequence of events that brought it there for the naturalist to observe in the first place" (43). Iannini does not, however, consider how this extraction and reinsertion changes the thing itself, whether or not the thing is still the same thing that it was before it was observed.

Iannini also raises the issue of unstable boundaries between specimen and naturalist and its accompanying questions of agency. He contrasts "the steadiness and industry of Britons in their progressive march toward ever-greater civility and power" with the "counterimage of Caribbean nature as capable of arresting progress, whether through its degenerative effects on residents of the colonies or, later in the century, its corrupting influence on English consumers of tropical goods" (48-49). Natural history specimens produce a grounding effect that counters the "terrifying fluidity" of a society "in which the new object of its knowledge (namely, the medium of exchange) was not entirely real" (56). They also provide "a rich conceptual vocabulary for grappling with some of the questions that most perplexed and concerned [naturalists]" (60). Iannini argues that, in Sloane's *Voyage . . . to Jamaica*, "the emblematic specimen travels to the reader

freighted with troubling knowledge, not only of local conditions within colonial plantation societies but also of the new cultural and economic practices that link the West Indies to developments in the wider circumatlantic world" (73). I argue instead that it is not so much that the specimens are not extracted, but that they are extracted and re-inserted into their local conditions; they are not static, but they are not what they were before being including in natural history discourse. Iannini focuses on "problems" with the study of nature, taking up the issue of "tropical degeneracy and mental torpor" (47-49). He argues that Sloane's text "contends with special problems of authority arising from the possibility of planter dissipation and degeneracy" (48). Iannini seems to accept the characterization of these phenomena as "problematic," as "arresting progress," instead of challenging it. While many people in the eighteenth century (especially while male naturalists) thought of these issues as problematic and troubling, I believe it can be read another, more positive way. The "problematic" and "threatening" reading encourages and perpetuates those problems to the present day. An alternative must exist to the "problematic" and "threatening" narrative of New World nature.

Monique Allewaert argues for such an alternative. She focuses on the body in the American tropics as a "disorganized and disorganizing" entity and how the "rendering of the body in parts did not signal the end of personhood but the origin of a minoritarian and anticolonial mode of personhood that was largely developed by Afro-Americans" (2). This mode of personhood, Allewaert argues, results from an entwinement or enmeshment of human bodies with the more-than-human world (6). Allewaert's argument about personhood formed in the tropicalized body considers how the body, as a medium, interacts with other media. She writes:

> there is no medium of exchange like the money form that remains conceptually outside of the process of relation. Instead, everything including that which is conventionally understood as a medium—for instance, the sea—is bound up in processes of touching and proximity.

> Here, one entity touches upon and intensifies or exhausts or even decomposes another: this first entity's relation to the second is that of touching, of constituting, of perhaps in turn being constituted by it, all of which precludes exchanging one for the other. What this suggests is that relation, far from being a synonym for exchange, names a process through which bodies and parts punctuate themselves against larger fields that they also decompose. Relation, then, describes an enmeshment that is not a merging and that forecloses the possibility of exchange. (8)

Bodies are mediums that are in constant contact with each other and other mediums surrounding them. Yet this constant contact does not create merged or hybrid entities or bodies that replace one another. Bodies and parts mesh with and mutually constitute each other while still remaining distinct entities. This enmeshment creates what Allewaert terms "an ethics of relationality," which she defines as "an engagement in which a body is recognized as a medium that extends into (and is extended into by) media that are proximate to it, and sometimes even into media that are not proximate to it. This process of mediation can strengthen, weaken, or eliminate that body, but in all cases it continually transforms and diversifies that body" (19). While the possibility of weakness, decomposition, and destruction are indeed always present threats with which human bodies must contend, characterizing this possibility as problematic, as Iannini does, reveals an underlying anthropocentric, speciesist bias in which the human body is strongest when it exists as a stable, unified whole. Yet Allewaert's argument offers an alternative to this view; bodies and parts are active powerful agents that can operate independently of "the human," resulting in transformations and diversifications of bodies. In this way, American climate and specimens do not problematically threaten the human body; instead, they strengthen and enrich it.

For Iannini, a certain amount of violence is involved in the interplay between the physical and the symbolic, thing and idea. Yet I question if it is really violent or if there is

a generative, productive angle in addition to or besides the violence. In one passage, Sloane discusses the effects of the natural world on human flesh:

> The burial place at *Port Royal* is a little way out of Town, in a sandy Soil, because in the Town or Church, it is thought unhealthy for the living. Planters are very often buried in their Gardens, and have a small Monument erected over them, and yet I never heard of any of them who walk'd after their deaths, for being buried out of Consecrated ground.
>
> An ampurated Member buried there, and dug up some days after, was found eaten by the Ants all but the Bones. In the Caves where the *Indians* used to bury, the Ants would eat the whole Flesh off of the Bodies, and would perforate the Bones, and eat up the Marrow, of which I have a proof, having brought with me from thence the Bone of the Arm of an *Indian* so perforated, and its Marrow eaten by them. (xlviii, Vol. 1)

Despite the violence in this passage, there exists a kind of regenerative power and force in the natural world, particularly the ants who eat the flesh off of the bone Sloane buried as an experiment. The human body has been dismembered and destroyed, first by humans (the arm had to be severed and it and other bodies had to be buried), then by ants, and finally dissolved and absorbed by the soil's various microbial life forms. Yet the decomposing human bodies return to the natural world, generating and sustaining their own kind of life and ecosystem in the soil in which they are buried. The passage also raises issues of race, as Sloane contrasts the concern of being buried on consecrated ground with the Indians' burial practices that seem more in tune with natural processes (although Sloane ignores or remains ignorant of the fact that perhaps the caves were sacred ground for the Indians). Sloane's scientific observations of the ants' role in decomposition also reveal an unspoken disregard for Indians and their customs and beliefs. After all, he records his observations after digging up and removing the arm bone of an Indian from its resting place.

Along with this passage, Sloane emphasizes elsewhere that the climate and nature of the West Indies is always poised to reclaim lands settled and cultivated by humans:

> 'Tis a very strange thing to see in how short a time a Plantation formerly clear'd of Trees and Shrubs, will grow foul, which comes from two causes; the one the not stubbing up of the Roots, whence arise young Sprouts, and the other the Fertility of the Soil. The Settlements and Plantations of, not only the *Indians*, but even the *Spaniards*, being quite overgrown with tall Trees, so that there were no Footsteps of such a thing left, were it not for old Palisadoes, Buildings, Orange-Walks, *etc.* which shew plainly the formerly clear'd places where Plantations have been. (xiv, volume 1)

This passage, along with the previous one, shows how despite humans' alterations to the natural world, nature inevitably outlasts humans. Without continual human presence and interference nature regenerates and flourishes. While this might seem to reinforce the need to control and order nature through natural history discourse, it also calls attention to the ultimate futility of such undertakings, as nature, in the end, seems unaffected and unconcerned by humanity's alterations. Sloane's interest in exploring the converging, intersected worlds of humans and nonhuman nature carries over to the engravings in *Voyage . . . to Jamaica*, especially one plate Iannini discusses at length that "pictures a strange assemblage of mysterious objects, including a jellyfish, three coral-encrusted coins, and a piece of ship timber containing an iron bolt and also encrusted with coral" (69, see Fig. 1). Iannini argues that the plate blurs the boundary between human and nonhuman: "In the same way that the coins and timber fragment at first appear to be natural objects, the viewer is also prompted to regard the jellyfish as an object of human contrivance" (69). This plate also speaks to Allewaert's argument about touch, constitution, and enmeshment, as well as the ability of nature to overtake and reclaim human artifacts. The coins and timber fragment have become encrusted, or enmeshed, with coral, altering their material composition in such a way that they become something else not entirely animal or object.

Along with Iannini, Kay Dian Kriz also emphasizes the role of violence in cultural productions of the British West Indies, including Sloane's text. She examines how a

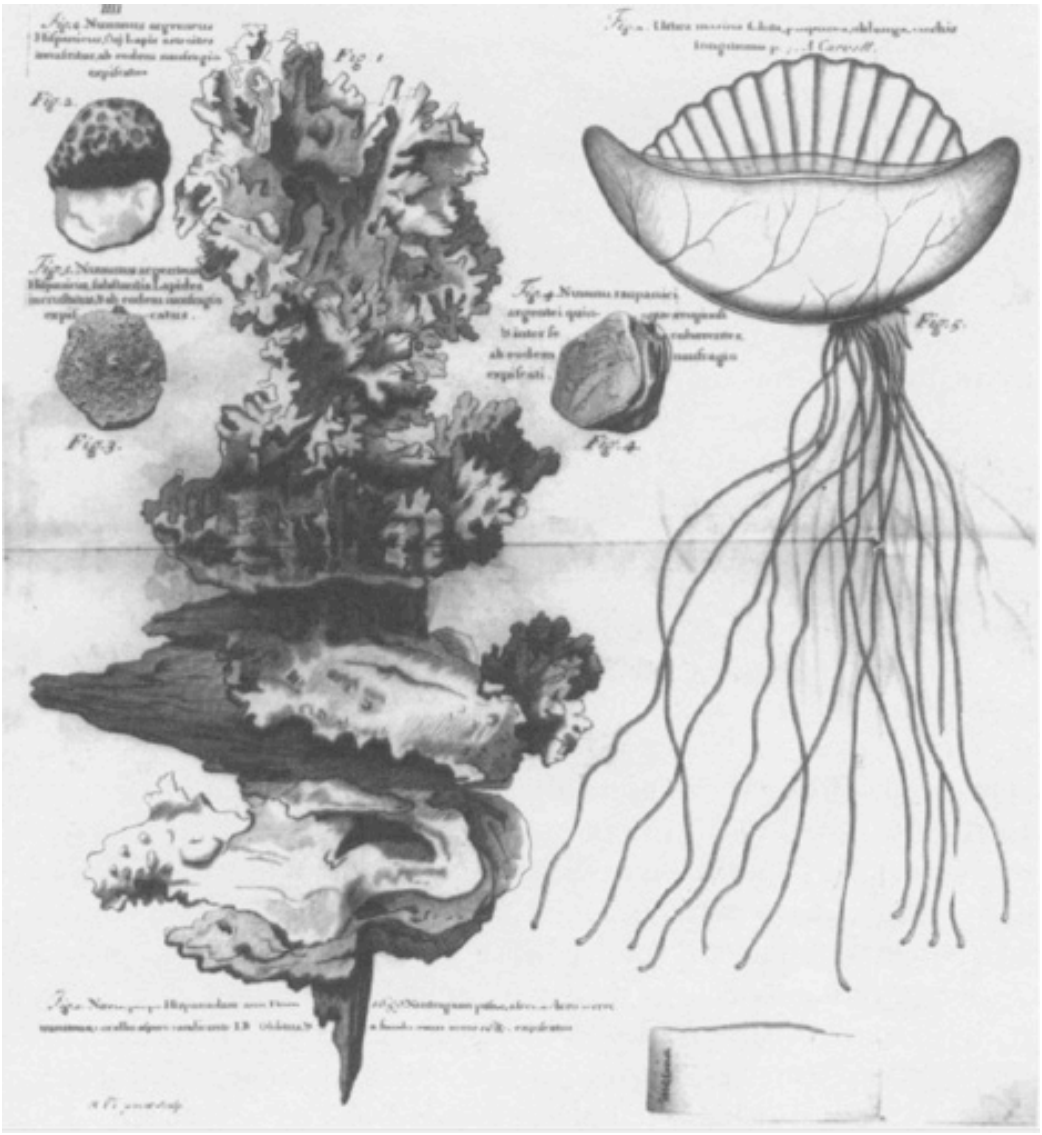

Figure 1. Engraving of coral-encrusted coin, jellyfish, and timber. Hans Sloane, *Voyage to . . . Jamaica*.

process of refinement takes place in Sloane's text, a process "involving the transformation of plants, animals, and artifacts into specimens, and specimens into engraved images designed to edify and delight" (5). Kriz argues that this refining process is built on a commodification of violence in which refinement becomes "an exercise in containing, disavowing, and even commodifying an all-pervasive violence emanating from the entire colonial ecosystem" (5). She emphasizes the transformation and replacement or displacement of physical bodies, both animal and human. Natural history, as described by Kriz, depended "heavily on the destruction of living plants and animals, their transformation into inert specimens, and their eventual 'replacement' by textual descriptions and full-scale engravings" (15). Yet this conception of natural history, based on a linear progression or movement of bodies (they are destroyed, transformed, and replaced), also marks a loss of agency. I disagree with this conception; the movement is more circular and recursive, and physical bodies continue to exert agency at all points in the circulation of natural history knowledge. For example, the quality and condition of bodies affect the kinds of specimens they become and how much knowledge naturalists will be able to glean from them, as I discuss below.

Unlike Wood and Mather, Sloane's writings are much more concerned with physical animal bodies, and Sloane himself was a prolific collector of animal specimens. As Rachel Poliquin notes, Sloane's early collection consisted of "more than eight hundred specimens of animals, plants, and minerals" (12). This collection would grow tremendously, eventually including:

> almost 6,000 shells, more than 9,000 other invertebrate specimens (half of them insects), 1,500 fished, about 1,200 birds, eggs and nests, and more than 3,000 vertebrate specimens ranging from stuffed whole animals, through hundreds of skeletons – including that of a young elephant and a whale skull five-and-a-half-metres (18 feet) long – [as well as] a grisly assortment of bizarre human "curiosities." (Rice 20)

In Volume 2 of *Voyage … Jamaica*, Sloane describes the difficulties he encountered in attempting to ship live specimens across the Atlantic, "some uncommon Creatures alive, such as a large yellow Snake, seven Foot long, a *Guana* or great Lizard, a Crocodile, *&c*" (346). Sloane's recounting of his failed shipment of live specimens (his description of each animal and their individual demise aboard the ship) showcases his attempt to make sense of animal bodies by incorporating them into natural history's discourse and networks. Sloane begins his discussion of live specimens with the snake:

> I had the Snake tam'd by an *Indian*, whom it would follow as a Dog would his Master, and after it was deliver'd to me, I kept it in a large earthen Jarr, such as are for keeping the best Water for the Commanders of Ships, during their Voyages, covering its Mouth with two Boards, and laying Weights upon them. I had it fed every Day by the Guts and Garbage of Fowl, *&c*. put into the Jarr from the Kitchen. Thus it liv'd for some time, when being weary of its Confinement, it shov'd asunder the two Boards on the Mouth of the Jarr, and got up to the Top of a large House, wherein lay Footmen and other Domesticks of her Grace the Dutchess of *Albermarle*, who being afraid to lie down in such Company, shot my Snake dead. (346)

Sloane further comments:

> It seem'd before this Disaster, to be very well pleas'd with its Situation, being in a part of the House which was fill'd with Rats, which as the most pleasing Food for these sort of Serpents. 'Tis upon this Account that the *European* Nations inhabiting the Countries producing Sugar, do not molest these Creatures, because they destroy the Rats (which came originally from Ships cast away on the Coast, *&c*.) multiply strangely there, and do infinite Mischief to the Sugar Canes, not only by eating them, but spoiling the Juice of those the gnaw. (346)

This anecdote reveals the problematic and complex nature of incorporating animals into natural history discourse. The snake, despite being tamed and well cared for, escapes from its confinement. Rather than functioning as an inert specimen or object of study, the snake, Sloane allows, has its own mind. While at first it seemed "very well pleas'd with its Situation," the snake became "weary" of its confinement in the jar. Sloane also acknowledges the complex interactions and relationships between animals and humans. Beyond the desire to use the snake as a specimen of natural historical study, his

description reveals both how humans and snakes have entered into symbiotic relationships and how an adversarial or violent relationship still persists. Along with the suggestions that the snake had become dog-like in its domestication, Sloane generalizes to snakes that coexist with humans in a mutually beneficial arrangement, as the snakes' eating of rats protects the sugar cane crop. (The presence of rats, introduced by Europeans, also attests to the entwining of humans and animals.) Yet in the end, the fear of snakes overrides any benefit or domestication, and the snake is killed. The snake's death occurs not just because people are afraid of snakes, but because the snake resisted and escaped human control. Like Sloane's snake, other animals from the New World would face the confluence of competing interests, desires, relationships, and agencies as naturalists began incorporating them into natural history discourse and correspondence.

Moving to the iguana, Sloane spends comparatively little time discussing the animal. This paucity could be attributed to the fact that the iguana, who "liv'd very well aborard of the Yacht, till one Day when it was running along the Gunnel of the Vessel, a Seaman frighted it, and it leap'd over board and was drown'd" (346). More so than the other two animals described in this passage, the iguana maintained its bodily autonomy by escaping human control and, with it, Sloane's attempt at that particular moment to record natural historical observations. While the iguana leaps overboard and drowns, the alligator dies suddenly on the ship (Sloane does not specify the cause of death). Sloane immediately launches into a very detailed anatomical description of the alligator, almost as if he immediately dissected the creature upon its death and had to quickly record its description before the body decayed:

> The *Crocodile* or *Alligator*, I kept in a Tub of Salt-water towards the Forecastle, and fed it with the same sort of Food as the Snake, but it died on the 14th of *May*. It had Five Toes join'd with a Webb. The Armour he was defended with, or large thick Scales, were Quadrangular over the

> upper part of his Body and Sides. The Ribs were Cartilaginous, and towards the *Abdomen* were crooked, and made one with another the Figure of Lozenges. The Lungs were nothing but Vesicles and Blood Vessels. The Heart had two large Auricles. The Stomach was thick and large, the Guts had many Circumvolutions, one within another and several coaglomerated as well as separate Glands. These fine Circumvolutions were near the *Pylorus*, and into them was inserted the Duct of the Gall Bladder. I observ'd no Spleen, but two Lobes of a Liver triangular and large, one to the left Side; and the other on the right. The small Guts had a great many Circumvolutions. The Testicles were small, long and redish, and lay over the Kidnies which were long, and like a Bears, and in their Surface resembled the *Gyri* of the Brain. Thus I lost, by this time of the Voyage, all my live Creatures, and so it happens to most People, who lose their strange live Animals for want of proper Air, Food, or Shelter. (346-347)

Whereas the body of the iguana completely escapes Sloane's grasp and the snake must be discussed more in terms of its behavior and function than as a physical body, the crocodile is reduced completely to its physical body, an assemblage of separate, distinct organs. Sloane's detailed description of crocodilian anatomy jars with his more narrative-oriented focus in the surrounding paragraphs. It also underscores the objectification inherent in natural history as a discipline; while animals might have noteworthy or curious behaviors and display some degree of agency, in the end, their primary function is as physical specimens. Sloane's anatomical description abruptly ends as he sums up, rather reductively, that most live animals die in transport for want of air, food, or shelter; however, none of the three deaths Sloane describes seem to result from the simple lack of air, food, or shelter. Moreover, these factors ignore the agency and desires of the animals as well as the behaviors of humans aboard the ship. Sloane's live animals died due to problems with the ecosystem of the ship, and the circumstances of their deaths shaped and influenced the kind of information and knowledge he was able to derive from them.

Although Sloane did make attempts to ship live specimens, his specimen collection consisted primarily of dead animals, quite often bits and pieces of dead animals:

> Among the more intriguing items in Sloane's collection were two cataracts taken out of the eyes of a Greenland fox, the bill of a toucan, the back part of an ostrich's eye, the skin of a polecat, a condor feather, the head and hock of a red-headed Bengal crane, the trunk and eyes of an elephant, a buffalo horn, a beaver's tail and the pickled remains of her genitalia in a glass jar, a patch of skin from a lion, and a hair ball from the stomach of a local cow—shards, morsels, wondrously strange fragments of nature that teased along the edges of reason and confounded all belief. (Poliquin 13)

Poliquin goes on to argue that specimen collections such as Sloane's "acted as warehouses of raw potentiality. Each curious fragment offered the possibility of some unknown, undiscovered clue about nature's laws, and together the parts of a curious collection quivered not with wisdom but its anticipation. Whether collectors were seeking allegorical or empirical truths, the objects themselves were never transparent enough, never clear enough" (36). Indeed, within natural history discourse, specimens only provided partial, fragmented glimpses of the animals from which they came. Naturalists like Sloane aimed to use a combination of specimens, visual depictions, and verbal descriptions of American flora and fauna to provide as close to a complete, truthful version of reality as possible. But this version would always remain partial and, thus, to some degree unsatisfactory.

Despite its partial, unsatisfactory version of nature, Sloane's text serves as a reminder of the centrality of animal bodies to natural history, and how its reliance on them gives those animals a certain degree of power and authority. In another alligator-centric passage of *Voyage*, Sloane recounts a story in which Jamaican natives killed an alligator "which had done them much Mischief" and offered Sloane the stuffed skin "as a Rarity and Present, but [he] could not accept it because of its Largeness, wanting Room to stow

it" (Vol. 2, 332). This passage reveals how specimens were reduced to parts and pieces as described by Poliquin, as well as the reality of the many problems involved in collecting and shipping animal specimens, including issues of available space aboard ships. Sloane follows this anecdote with a detailed anatomical description of the alligator, similar to the passage discussed above:

> In an Allagator of seven Foot long, there were four Glands, Musk Pods, or Scent Bags, two under the Jaws, and to near the *Anus*, the vision before its entring the Lungs, which were nothing but Vesicles with Blood Vessels intermix'd, there were two great Lobes, one of each side the Spine, the Heart was little, had Auricles and a Pericardium, in which was a great Quantity of Water, Diaphragma seem'd Membranaceous, or rather Tendinous or Nervous, the Liver on the right Side mostly, with one Lobe reaching to the left Side, it was long and triangular, and had a great Gall Bladder, full of yellow thin Bile, I observ'd the Spine, appearing in several Sections; It had no Tongue, one large Stomach, with a rugous Coat within, containing many round smooth Stones and Sand, such as is on the Sea Shore, and some Bone in it. There were many Circumvolutions of the Intestines, and the *Rectum* was divided as it were into Joints. The Eye was cover'd below with a strong Membrana nictitans and was Sphaerical, the Pupil was long like a Cats. (Vol. 2, 332)

Sloane quantifies and catalogues the alligator's parts (four glands, two lobes, etc.), effectively creating an inventory of the animal that echoes the obsessive accounting of natural resources featured in seventeenth-century promotional tracts discussed earlier. But the detailed anatomical descriptions pull the passage further away from those early texts of American nature. Sloane applies his medical training and knowledge to the alligator specimen. Along with dividing and segmenting the alligator's body, Sloane's detailed observations reveal the animal to be not a unified, whole entity, but an assemblage, not just of organs, but other natural materials seemingly absorbed from its surrounding environment (water, stones, sand). All of these glands, lobes, tendons, organs, membranes, stones, and fluids combine and coalesce to create the large animal, which in its dissection becomes less terrifying yet stranger and more powerful. Because the physical specimens were so fragile and unpredictable and the largeness of the

alligators made shipment of whole bodies problematic, Sloane falls back on these detailed descriptions (providing two in the span of fifteen pages). The need for repetitive or redundant descriptions to supplement the animal bodies demonstrates how bodies manage to escape and elude total control by natural history discourse.

## Contingent And Harmonious Specimens

In *Natural History*, Mark Catesby engages with specimens in a similar manner to Sloane. However, while Sloane's writing emphasizes the movement (and redundancy) of specimens, Catesby's examines the interdependencies and contingent nature of specimens. Rather than view interdependence and contingency as a source of vulnerability and fragility, as Iannini does, I argue that they can be read as strengths. The contingency, dependence, and even fragility of specimens strengthens both bodies and correspondence networks, giving bodies a stronger sense of agency and autonomy and networks a more vital role in knowledge production. Contingency and interdependence permeate many aspects of Catesby's work as a naturalist including his conception of Caribbean ecosystems and how the human world affects them, his pairing of animals and plants in the verbal and visual descriptions of *Natural History*, his reliance on an extensive network of correspondents, and the contingent nature of his efforts at specimen collection and transport.

Although he was from a family of lawyers, Catesby was inspired by his maternal uncle Nicholas Jekyll to take an interest in botany. Jekyll introduced Catesby to the writings of naturalists such as John Ray and to the apothecary Samuel Dale who "would eventually provide Catesby with an entrée into an important community of botanists, horticulturists, and gardeners in and around London who would offer him his first opportunity to exercise his talents as a naturalist professionally" (Meyers and Pritchard 2). Catesby made multiple trips to North America: he accompanied his sister to Virginia in

1712 and stayed until 1719, and in 1722 he traveled to South Carolina to conduct research and collect botanical specimens. Upon his return to England in 1725, Catesby began working on *Natural History*, a work that would continue for twenty years. Patrons such as Peter Collinson and Hans Sloane supported the book. Sold by subscription, *Natural History* was published in parts and volumes. Volume 1, focused mainly on birds and plants, was published in five parts between 1729 and 1732. Volume 2, which covered a broad array of animals, was published between 1734 and 1743. His work served as a guide for other naturalists in the eighteenth and early nineteenth centuries (Meyers and Pritchard 17). A complete *Natural History*, David Brigham notes, was extremely expensive by eighteenth-century standards, costing 22 guineas; in total "Catesby received subscriptions for 166 copies of the book from 155 subscribers" (93).

While Catesby's work did, as Therese O'Malley points out, "[engage] in systematic transformation of the physical world into manageable and ordered representations" (181-182), he was also sensitive to how human efforts to order and control the natural world changed and altered it. Amy R.W. Meyers notes that "Catesby was, in fact, highly conscious of the active role that he himself had taken in trafficking organic materials around the globe and in testing the efficacy of cultivating exotic species in England as well as in America" (248). Although this recognition would appear to signal a tremendous amount of human agency in ecological change, Iannini argues that, while, in Sloane's writing, human agency played the central role in shaping animal bodies, in Catesby, the disjointed reorganization of natural bodies is "an inherent characteristic of the tropics, a natural 'order' that verges on chaotic violence" (89). Catesby downplays human agency, emphasizing the agency of the natural world as a destructive, yet creative force.

Throughout *Natural History*, Catesby stresses how plants and animals are interrelated and dependent upon each other, as well as the contingent nature of recording observations of the natural world, demonstrating what Branch terms "a proto-ecological sensibility [by arranging] his plates to depict animals in natural association" (132).[4] For example, in the Preface to Volume 1 of *Natural History*, Catesby describes some of the challenges he encountered in painting the animals and plants he observed:

> In designing the Plants, I always did them while fresh and just gathered: and the Animals, particularly the Bird, I painted while alive (except a very few) and gave them their Gestures peculiar to every kind of Birds, and where it could be admitted, I have adapted the Birds to those Plants on which they fed, or have any relation to. Fish, which do not retain their colours when out of their Element, I painted at different times, having a succession of them procured while the former lost their colours: I do not pretend to have had this advantage in all, for some kinds I saw not plenty of, and of others I never saw above one or two. Reptiles will live many months without sustenance; so that I had no difficulty in painting them while living. (vi)

This passage shows Catesby's desire to exhibit the natural associations between animals and the plants they either ate or "[had] any relation to." It also shows many of the problems Catesby encountered in working with live (and dead) animals: uncooperative live animals who would not remain still for observation; dead animals who lose their "liveness," correct appearance, or color; and the questionable treatment of living animals (confining and starving reptiles). This passage also reveals a curious mixture of agencies and contingencies. The animals are not rendered completely helpless and subjected to humans; rather they retain some power or agency through their resistance. In Volume 2 of *Natural History*, Catesby, in an extended section, provides illustrations and accompanying descriptions of pairs of reptiles and plants. One notable and often discussed example is his painting and discussion of a Brown Viper and arum plant (see Fig. 2).

[4] See also Judd, 29. Judd points out that Catesby was one of the first naturalists to adopt this method of "illustrating subjects in their natural surroundings" (29).

Figure 2. Brown Viper and Arum Plant. Mark Catesby.

Iannini argues that this image:

> implies not only that plantation management has failed to mitigate the unruly tropical characteristics of lowcountry swamps but also that conditions conducive to violence have been manufactured in Carolina, however inadvertently. The historical trajectory of the plantation appears at this moment to have run, not forward to refinement, but backward to primordial chaos. (104)

Taking into consideration the accompanying descriptions of the plants and animals Catesby so dramatically stages in the painting can attenuate Iannini's somewhat exaggerated reading of the image. The threatening posture of the Brown Viper is undercut by Catesby's assertion that "it is also a very slow moving and sluggish reptile, advancing deliberately, even to escape danger" (45). Furthermore, his description of the

*Arum Maximum AEgyptiacum* downplays the "violent primordial chaos" by emphasizing the cultivation of arum in Carolina:

> Sir *Hans Sloane* has so amply treated of this useful Plant, that I shall ask leave only to add a few remarks more. It is a *Tropick* Plant, not caring to increase much in *Carolina*, and will grow no where north of that colony; yet the negroes there (who are very fond of them) by annually taking up the roots to prevent rotting, get a small increase. They are of so acrimonious a quality, that there is a necessity of boiling them eight or ten hours before they are eatable. A little before I left *Carolina*, there was introduced a new kind, wholly without that bad quality, and requiring no more than common time to boil them; and may be eat raw, without offending the throat or palate. This was a welcome improvement among the negroes, and was esteemed a blessing; they being delighted with all their *African* food, particularly this, which a great part of *Africa* subsists much on. (45)

The emphasis in this passage is on adding to or building on existing knowledge in an effort to create a greater sense of control and mastery over the natural world. Not only is Catesby adding to Sloane's discussion of the arum plant, but he also discusses the introduction of a new type of arum plant that is a more palatable food source for African Americans (most likely slaves). So although the plantation Iannini refers to is indeed a product of violence, both on the part of humans as well as nature itself, Catesby aims to show a regenerative, redeeming quality to that violence, a quality dependent upon contingency and interdependence.

When Catesby moves on to his discussion of the alligator paired with the mangrove tree, his painting and description show both his indebtedness to prior naturalists as well as his own new emphasis on interdependence and contingency (see Fig. 3). In the painting, the alligator looks considerably less threatening than the brown

Figure 3. Alligator and Mangrove Tree. Mark Catesby.

viper (this is partly because Catesby chose to depict a juvenile alligator); the animal looks inert and inanimate and is dwarfed by the mangrove tree behind it. While Catesby contrasts the violent, active illustration of the Brown Viper with the subdued verbal description, Catesby does the reverse with this painting, as the calm subdued image of a juvenile alligator contrasts with the verbal description of the terrible, violent, and monstrous qualities of its adult counterparts. As with his description of the arum plant, Catesby begins his discussion of the alligator by acknowledging the contributions of previous naturalists: "The largeness, strength, and terrible appearance of this formidable animal, occasioning it to be so often observed and described, I conceive it less necessary to be so particular in its description as otherwise I should be in so remarkable a creature: I shall therefore endeavor to observe some things which have been omitted by others" (63). The work of previous naturalists freed up Catesby to focus on other aspects of the alligators' behavior and situatedness in nature. Yet Catesby's discussion of the alligator still shares many qualities with the writing of naturalists that came before him. For example, Catesby echoes Mather's sentiments about the wisdom of Divine Providence when he discusses the limitations of alligators' movement and hunting skills:

> as Providence, for the preservation, or to prevent the extinction, of defenceless creatures, hath, in many instances, restrained the devouring appetites of voracious animals, by some impediment or other; so this destructive monster, by the close connection of the joints of his *vertebra*, can neither swim, nor run any other ways than strait forward, and is consequently disabled from turning with that agility, requisite to catch his prey by pursuit. (63)

Not only does this passage pick up the belief in a providential worldview, but it also mirrors Mather's interest in *The Christian Philosopher* in reptilian movement. Catesby explores a different kind of perfect movement; while Mather viewed reptilian movement as perfect in its "*geometrical* Neatness and Niceness" that supported his providential worldview, Catesby sees perfection in the way reptilian movement preserves harmony in

nature. The various part and joints of the alligator work to restrain or disable it from being a too dangerously efficient predator, thus preserving an ideal harmony or balance between different species and within the ecosystem as a whole. Catesby also echoes Sloane's emphasis on the physical anatomy of alligators, as Catesby's discussion of alligator eating habits incorporates his own dissection of the animals:

> Alligators swallow stones and other substances to distend and prevent the contraction of their intestines when empty, and not to help digestion, which they seem to be in no need of. For in the greater number of many I have opened, nothing has appeared but clumps of light wood and pieces of pine-tree coal, some of which weighted eight pounds, and were reduced and wore so smooth from their first angular roughness, that they seemed to have remained in them many months. (63)

Catesby also discusses the alligator as a potential food source, echoing the emphasis of earlier writers like Wood, Smith, and Hariot on the value of animals as edible commodities: "The hind part of their belly and tail are eat by the *Indians*. The flesh is delicately white, but has so perfumed a taste and smell, that I could never relish it with pleasure" (63).

Along with these elements that refer back to earlier naturalists, Catesby's description of the alligator and the mangrove tree offers his own, new contribution to natural history: highlighting the complex interrelationships between plants and animals within an ecosystem. He writes:

> In shallow salt-water, these impenetrable woods of Mangroves are frequented by great numbers of Alligators, which being too big to enter the closest recesses of these thickets, the smaller ones find a secure retreat from the jaws of their voracious parents. These watery woods are also plentifully stored with ravenous Fish, Turtles, and other animals, which prey continually one upon the other, and the Alligators on them all; so that in no place have I ever seen such remarkable scenes of devastation as amongst these Mangroves in *Andros*, one of the *Bahama Islands*, where the fragments of half-devoured carcasses were usually floating on the water. They grow in most parts of the earth under the *Torrid Zone*, and are found but little north or south of the *Tropicks*. (63)

Rather than appearing in isolation, extracted from their environment, the alligators remain firmly situated in the natural world. In Catesby's discussion, the mangrove trees themselves take on an active role in the ecosystem; their impenetrable woods aid the predatory animals in their efforts. While this description does suggest a kind of primordial chaos of the sort Iannini puts forward, it also gestures to the power and agency of the nonhuman world, and how the nonhuman is very much an actor in natural history discourse.[5]

One of the consequences of Catesby's reliance on the work of previous naturalists was that several of his contemporaries took issue with the accuracy of his depictions of American flora and fauna in *Natural History*; they argued that Catesby clearly had not spent enough time experiencing American nature firsthand. As Parrish points out:

> In the minds of many of the naturalists who were either born in or who had naturalized themselves to the colonies, though, Catesby was an imperial interloper who had got everything wrong. He received acclaim for accurately representing New World biota only because he had extensive contacts at home in London while they in fact were the long-term observers who knew what the plants, trees, birds, fish, and quadrupeds actually looked like. Invoking the long European heritage of denouncing travelers' tales, colonials ridiculed Catesby and established their own environmental entitlement to a superior knowledge of nature. (131)

Parrish further notes that "Garden wrote to Ellis in 1764 that Catesby's 'whole book is an Ideal deceptive Creation existing no where and which never did exist, but in his own Brain'" (131). Yet, Catesby is still important because he had such widespread influence. Furthermore, American naturalists' desire to correct or counter Catesby's errors sends them, inevitably, back into nature, back to firsthand experiences with animals. They were not content to rely on specimens, illustrations, and descriptions. This return to direct

[5] See Carolyn Merchant's argument about how "an ecological approach to history reasserts the idea of nature as historical actor" (7).

contact with animals returns a certain amount of power back to the physical animal body, as it is looked to as the definitive authority in determining accuracy and veracity of natural history texts.

Such critiques also speak to how Catesby's work as a naturalist was a contingent and interdependent undertaking that relied on an extensive network of correspondents, collectors, and investors. According to Amy Meyers and Margaret Beck Pritchard, "as parts of *The Natural History* were issued, the work became increasingly important as a reference for British and Continental naturalists who were attempting to order the natural world according to the ambitious taxonomic systems that characterized mid-eighteenth-century science" (17). They further argue that "the bearing of community on the welfare of animals and plants and the importance of organic relationships to the definition of flora and fauna as they are found in specific environments absorbed Catesby's attention both in the field and back in London as he crafted his *Natural History*" (27). Community and relationships were important both within Catesby's *Natural History* and in the circumstances that allowed him to conduct and complete that work. In discussing Catesby's "complex web of interdependent social, economic, and intellectual communities" that made up his subscribers, David R. Brigham argues that "Catesby's *Natural History* offers a fixed point for examining the fluid network of labor, capital, and personalities that sustained the study of natural history in the eighteenth century" (94-95). Moreover, Brigham notes that "Catesby's book was a record of the natural stores of the American colonies, an engine for converting them into intellectual and economic capital, and a validation of those who held the power necessary to make those conversions" (140). The fluid network that Brigham identifies should be extended to include animal bodies and how they function, along with plants (the focus of Brigham's argument), as intellectual and economic capital in natural history correspondence networks.

Within Catesby's correspondence networks, animal bodies (as specimens) play a vital role and frequent topic of discussion. The importance of specimens to correspondence can be seen in *Natural History* as well as in actual correspondence, written by and to Catesby as well as on his behalf. In a 1738 letter from Peter Collinson to John Bartram (two well-known botanists of the time), Collinson, on behalf of Catesby, asks Bartram to collect certain plant specimens Catesby was unable to acquire while in America:

> I have formerly Requested In behalf of a Curious Naturalist—who to Ingage thy memory sends thee a Specimen of his prformance [sic]—He neglected when in Virginia to Draw the Papaw, and as this is a Curios plant, In Flower and Fruite and not Figur'd by any Body. Now there is no Ways to Convey to us perfect Ideas of this plant but by gathering the Blossoms and Leaves and drying them between paper, but as the Colour and figure of the Flower is Liable to Change, then he begs a short Discription of its Colour. (81)[6]

As with Sloane, Collinson's letter suggests that physical specimens possess a certain power to influence and affect human memory and thought. Collinson's similar language suggests that physical things help create "perfect Ideas" of those things. There is also recognition that physical specimens are fragile and unstable; the specimen itself will not be enough to be satisfactory. Collinson requests that Bartram also include a description of the plant's color. Neither the specimen nor its description can function successfully on their own; they are dependent and contingent upon each other to create as close to a "perfect Idea" of the real natural world as possible. Catesby also corresponded directly with John Bartram, and, in addition to requesting specimens from Bartram, Catesby also proposed an exchange or payment for Bartram's work: "Thought I shall set a due value on your labours, the whole book would be too considerable to send you at once;

[6] Peter Collinson to John Bartram, Jan. 27, 1737/8, in *The Correspondence of John Bartram, 1734-1777*. Eds. Edmund Berkeley and Dorothy Smith Berkeley.

Therefore, I propose to send you, annually, a Part (i.e. twenty plates with their descriptions), for what you send me" (132-133).[7]

These kinds of exchanges and Catesby's reliance on the contributions of others are also discussed in the preface to Volume 1 of *Natural History*. Catesby writes: "I chiefly gratified my inclination in observing and admitting the various Productions of those Countries; only sending from thence some dried specimens of plants and some of the most specious of them in tubs of earth, at the request of some curious friends" (i). Catesby's work was in large part spurred on by his "curious friends" and their requests for specimens. He goes on to note the importance of Native Americans in his collecting and painting of specimens:

> In these Excursions I employed an *Indian* to carry my Box, in which, besides Paper and materials for Painting, I put dry'd Specimens of Plants, Seeds, &c.—as I gather'd them. To the Hospitality and Assistance of these Friendly *Indians*, I am much indebted for I not only subsisted on what they shot, but their First Care was to erect a bark hut, at the approach of rain to keep me and my Cargo from wet. (iv)

Catesby's work was built on interdependent and contingent networks that included not just wealthy white patrons, subscribers, and fellow naturalists, but also native inhabitants of the Americas and nonhuman nature and the environment. Moreover, Catesby writes:

> Both in *Carolina* and on these Islands, I made successive collections of dried Plants and Seeds, and at these Islands more particularly I collected many Submarine productions, as Shells, Corallines, *Frutices Marini*, Sponges, *Astroites*, &c. These I imparted to my curious Friends, more particularly (as I had the greatest Obligations) to that great Naturalist and Promoter of Science Sir *Hans Sloane*, Bart. to whose goodness I attribute much of the success I had in this undertaking. (v-vi)

Again, Catesby indicates that the impetus for his specimen collecting came from "curious Friends," particularly Hans Sloane. This network of friends and interested parties leads to animals being incorporated as specimens into natural history correspondence.

[7] Mark Catesby to John Bartram, May 20, 1740, in *The Correspondence of John Bartram, 1734-1777*.

Catesby also corresponded frequently with Sloane, discussing both animal specimens themselves as well as the various factors that affected Catesby's collection and shipment of them. In a letter to Sloane from May 1723, Catesby writes:

> I hope before I return to send you (a) greater Variety from the Bahamas if health permits - I would have with ^ gone Mr. Rogers in November last had not (dark) long fit of ilness prevented me, which has indeed influenced my not sending you a better collection. […] The few seed are all I could find yet (dark) except 4 kinds which are of last years production gathered at Christmas in the Next cargoe Ile Send Specimens of them back. […] Here are twelve different kinds of Snakes that I have seen. I am in great Wourt [sic] of kinds mouthed bottles to put them in I find Rome will not preserve large ones. If your inportand [sic] affairs will let you think out Sr I desire a I have to order me a Case of large Bottles for Reptiles with a few proper boxes for for Birds and Insects and to Honour e with what particular commands you have for them. (MS 4046 Fol. 352, *Sir Hans Sloane's Correspondence Online*)

This letter showcases many problems that could confront specimen-collecting naturalists, including personal illness and lack of adequate supplies for the preservation and shipment of specimens.[8] Physical bodies, both Catesby's own and those of the quickly decaying, deteriorating specimens, affect the quality of information and knowledge being collected and transmitted.[9] In another letter to Sloane in March 1724, Catesby writes:

> Honble Sr. I hope you have ere this received & Capt. Rowe (who sailed from hence the 10 of may last) a Box of fryed Birds, Shels, and Insects. Some which I have done my selfe the honour of writing ye Capt. Clark in ye Crowley Nov 14 last with 2 Books of dried plants. Concluding you have recd those by Capt Rowe I doe not repeat sending any of the same again. […] for want of hearing from you whether all kinds of Birds thus preserved will be acceptable to you or whether those only that are remarkable (crossed out) for colour or shape; […] I shall Sr send you a Collection of Reptiles as soon as I can procure glasses to put them in […] I am now setting out for the Cherikees a Nation of Indians 300 miles from this place & who have lately declared War with another Nation which diverts them from inquireing us and gives me an opertunity of going with more safety. (MS 4047 Fol. 147, *Sir Hans Sloane's Correspondence Online*)

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[8] See John E. Simmons's *Fluid Preservation: A Comprehensive Reference* for detailed history of fluid preservation techniques and methods, especially pp 10-23.

[9] Parts of physical bodies were also essential to the effective preservation of specimens; Simmons notes that a common material used to seal specimen jars at this time were pigs' or sheep's bladders (21).

In this letter, Catesby highlights his uncertainty about the safe arrival of his specimens and whether or not they will be adequately preserved, again calling attention to his need for glass jars. Whereas in the previous letter, Catesby worried about his bout of personal illness, in this letter the concern for his personal well-being arises from his proposed journey to the Cherokee and the threat of danger from the conflicts between Native American tribes. Similar issues arise again in a letter to Sloane from August 1724 in which Catesby writes:

> I shall according to your order make a Collection of Snakes & but the season is so far spent before I received the Bottles to put them in that I fear I shall make but a small progress this summer especially in larger Snakes, for which I have not had beofe now bottles large enough to put them in I send Now the first half of the summers collection whcich I hope will afford you many new plants for many of them are ye same of those destroyed by the Pyrates. The Bird's head in the Box has a Body as big as a goose clad wil footed, I call the fisher from its preying on fish, which it does after the manner of the kingsfisher precipitating it self from on high into the water with great violence and there remaining about a minute, they are never seen but at sea Bays and the mouths of large Auers. The large skin is that of a black Toa, they are very rare and are caught only in the mountains. The small skin is that of a Poleat, they all vary in their marks two being never seen alike some almost all white, others mostly Black with but little white […] My sending Collections of plants and especially Drawings to every of my Subscribers is what I did not think would be expected of me My design was Sr til you'l plans to give me your arrival to keep my Drawing intire that I may get them aproved, in order to give a gent History of the Birds and other Animals, which to distribute separately would wholly frustrate that designe and be of little value to those who linse so small fragments of the whole. Besides as I must be obliged to draw Duplicates of whatever I send, that time will be loss which otherwise I might proceed in the design and consequently be so much short in proportion to what is sent. (MS 4047 Fol. 213, *Sir Hans Sloane's Correspondence Online*)

Along with the now familiar request for more specimen jars, Catesby's letter touches on several ways in which the specimens were contingent and dependent upon various forces, including the threat of pirates.[10] Catesby also hints at how his network of

[10] Parsons and Murphy discuss how naturalists tried to minimize potential specimen losses by pirates and during times of war using multiple methods including: "transporting specimens on ships traveling in convoy, sending duplicates, and splitting their collections into multiple lots to be carried by more than one ship. When all

correspondents and subscribers shapes both his collecting of specimens and his production of drawings and descriptions from those specimens. He also lists in detail the contents of his specimen shipment, which consists primarily of fragments and pieces of animal bodies, heads, and skins of various animals. In being transformed from real flesh-and-blood animals to specimens in natural history discourse, these animals are reduced to their pure physicality. They become objects and fragments whose pieces must now stand in for and represent whole animals.

## Strange Animal Assemblages

Often characterized as a female version of *Robinson Crusoe*, *The Female American* by Unca Eliza Winkfield is an early American novel that offers a broad and rich array of possibilities for critical interpretation. First published in London in 1767, *The Female American* did not get much attention or praise when first published, although it did gain popularity "among a specifically post-colonial, early national *American* audience," with two subsequent American editions published in 1800 and 1814 (Burnham and Freitas 26). Although Winkfield is a pseudonym and the "true" author remains unknown, the novel clearly fits within most critical definitions of early American literature, especially when considered in light of William Spengemann's definition, which "[construes] the word *early* to mean something other than 'less,' *American* to denote something more literary than the citizenship conferred retroactively upon colonial authors, and *literature* to designate something at once more historical than 'timeless beauty,' less prejudicial to colonial documents than 'poetry' or 'fiction,' and more alert to discriminations than just plan 'writing'" (26). As Michelle Burnham and James Freitas note in the introduction to the Broadview second edition of the text, it is Winkfield's stated identity as an American

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else failed, naturalists hoped that the practice of counter-directing packages would prevent their specimens' destruction. The second address on a counter-directed package instructed the enemy's sailors to send the specimens to one of their countrymen in case of capture" (531).

female that allows the author to provide "readers on both sides of the Atlantic an often radical vision of race and gender through an account of a biracial heroine who is able to indulge in a kind of 'rambling' mobility and 'extraordinary' adventure" (26-27). One of the features most frequently noted by critics is the range of identities embodied in the novel's narrator and protagonist, Unca Eliza Winkfield, although none of these critics discuss the identity of the naturalist and the role natural history plays in the novel. As Stephen Wolfe argues, Unca Eliza "takes on a series of provisionally constructed identities within the space of colonial representation: as a daughter to an Indian princess or 'Pocahontas'; as the exotic 'other' in British society; as a female Crusoe; as a missionary teacher and finally as an author" (18). This ambiguity is present in the novel as a whole, not just with the narrator. Wolfe contends that *The Female American* "uses so many different conventions of colonial representation that its much-touted ambiguity is in fact a study of ideological evasion" (18). The novel combines numerous genres including captivity narrative, island survival narrative, and spiritual autobiography (Wolfe 19). Janina Nordius also focuses on the presence of multiple colonial identities in *The Female American*, though once again neglecting to mention the colonial identity of naturalist (15).[11] Betty Joseph discusses the novel's unique position as neither entirely British nor American. She argues that *The Female American* is part of a "new community of texts that remain in the liminal spaces between national boundaries or that represent the unassimilated spaces within national narratives" (319-320).[12] *The Female American*, she argues, "is neither the last English novel nor the first American novel but rather a story of the founding of a third space" (326). The novel "speaks the impossibility of being either [British or American] fully" (330). Mary Helen McMurran points out that the novel is at

[11] See also Kristianne Kalata Vacarro's analysis of Unca Eliza's performance of identity and its reliance on the body (128).
[12] See also Scarlet Bowen who argues that *The Female American* is "obsessed with cultural liminality, mediated texts, multi-media performances, and intermediaries" (192).

least partly a parody, arguing that “we must question when or whether Unca Eliza’s story is to be taken seriously for her adventures may be […] an intentionally artificial and implausible construction” (326). The novel, she argues, makes “pervasive use of allusions to the visual and discursive materials by which European readers came to know the Americas” (326). McMurran further characterizes the novel as “a fanciful arrangement of textual and visual images familiar to educated and urbane eighteenth-century British readers,” “a knowing play on transatlantic narratives,” and “a set of intentional oddities” (326, 327, 339). She argues that “the novel is also a comment about Europeans’ supposed knowledge of the new world: their use of empirical description to authorize strange and surprising places and stories was itself partly artifice” (340).

What the critics tend to overlook is natural history. None of the critics cited above discuss Chapter 1 in Volume 2, a chapter entirely indebted to natural history texts. At the chapter’s start, Winkfield’s natural historical observations begin simply enough by describing beautiful birds she observes: “Among the various kinds of birds I found one sort exceeding beautiful. It was about the size of a large parrot; its feathers delightfully variegated with the colours of the rain-bow, those of its tail spreading like those of our peacock; but not near so large, nor numerous” (109). Her description of the bird, although indicative of an attentive observer possessing some knowledge of animals, is relatively unremarkable and seems more concerned with detailing the aesthetic beauty of the natural world than with extracting scientific knowledge and information from it. Such observations also seem safely ensconced within a restricted “feminine” space of natural history. Yet Winkfield’s observations quickly shift when she turns her attention to an “extraordinary” mammal “the size of a large dog, as to its body, but its legs, which were very long, were by no means proportioned to the bulk of this strange animal, being so slender as to bend under him, insomuch that it could move only with the utmost

slowness" (109). The animal's "uncommonly large" eyes "excite fear" in her and other animals "who no sooner saw it than they ran from it, as if afraid of being destroyed by it" (109-110). Winkfield's observations move from the "exceeding beautiful" to the extraordinary, strange, uncommon, and frightening. The strange animal appears unnatural, a sensational chimera sprung from Winkfield's imagination.

Yet her observations also stand as an early precursor to later nineteenth-century women naturalists who, as Tina Gianquitto explains, "believed that women had a responsibility to be educated observers of the scientific as well as the moral and sentimental intricacies of nature, encouraging their female audience to interrogate their ways of seeing and interacting with the world around them" (13). After providing a general description of its appearance, Winkfield proceeds to a description of its behavior; the animal at first appears to play dead:

> Having sat about a quarter of an hour, I saw a great number of field-mice come up to him, who presently began to nibble at these tufts, the animal continuing to lie still; but after a very considerable number of mice had thus employed themselves, he got up, and shook himself violently, when, to my great astonishment, I found these mice, some way or other so fastened and secured to these tufts, that very few of them could disengage themselves. And now, his neck being very long, he turned his head, and devoured them very greedily, one after another. I dare say that in a few minutes, he ate near three hundred of them; for his body was almost covered with them. (110)

Winkfield's examination reveals the animal's anatomy, which, at first glance, appears an awkward mistake of nature, to be perfectly designed to meet the animal's needs (a long neck ingeniously suited to retrieve the stuck field-mice). Burnham and Freitas briefly suggest (but do not explain in any detail) that the animal's "very physiology might be read as an allegory of exploitative colonialist relations" (20). That is certainly a valid reading worthy of more discussion; yet to only read the animal's physiology allegorically means losing the scene's engagement with scientific discourse and the importance of permeable and shifting material bodies. The choice of this strange, apparently fictional animal is

significant; out of all the numerous possibilities the author could have selected, Winkfield chose an animal whose description combines the elements of several different animals and whose behavior leads to a creation or assemblage in which other animals become fastened to or an extension of that animal's body before being consumed by it.

Winkfield concludes the chapter by offering her hypothesis on the mechanism by which the mice were fixed to the animal's fur:

> I will hazard my own conjecture upon the occasion. As we know, by the assistance of the microscope, that the hairs of animals are pervious, or hollow, and that they are pervaded by some kind of liquid matter, for their growth and nourishment, perhaps that with which the hairs of this animal are filled and nourished may be of a more extraordinary glutinous kind, and as the tufts formed by the extremities of these hairs are pretty big, a large quantity of this glutinous matter being lodged there, the nibbling of the mice breaking the hairs, this glutinous matter may so fasten the hairs to the inside of their mouths, as to render it exceeding difficult for them to disengage themselves, at least soon enough to prevent their being devoured. […]
>
> this motion prevents them from fixing their feet against his body, which would assist them in disengaging their mouths from the tufts, and being thus in a hanging state, their fear may make them bite the tufts the closer, upon the motion of the beast, and thereby render them a still easier victim: so that nature seems to have endowed him with this artifice the more effectually to secure his prey. (111-112)

While not as explicit as the analysis of the dissected anatomized alligators in Sloane's *Voyage*, Winkfield's analysis of the animal moves from surface-level observations to a hypothesis on the inner workings, or anatomy, of the creature. The in-depth discussion of how the animal's hairs and their "glutinous matter" attach to the mice shows a careful attention to how the physical matter and components of animal bodies can shift and change and combine in various ways. Winkfield theorizes that the strange animal's body is open and permeable ("pervious, or hollow"); this innate permeability facilitates another kind of openness, as its body combines with the bodies of the field-mice who become permanently (if only for a brief moment) attached to the physical body of the animal before being consumed by it (another form of altered materiality in which the mice, as

food, merge with the strange animal). Before continuing her narrative, Winkfield notes: "Thus did I busy or amuse myself, and indeed I cannot imagine to myself any situation in which a thinking being, free from pain of body, and great anxiety of mind, cannot divert itself" (113). While Winkfield's parting thought seems to trivialize this exercise in natural history (which could also be trivialized by the fantastical animal itself), possibly suggesting that natural history becomes inconsequential when done by a woman, it also shows the natural history's ubiquity as a genre and discourse. As McMurran points out, for the novel to be a successful parody, readers would need to be familiar enough with the genres and narratives being parodied, which includes natural history. Yet despite the parodic quality, this brief chapter yields important insights to my argument. This chapter in *The Female American* not only shows the far-reaching influence of natural history discourse in the eighteenth century but also shows how it could be used to draw attention both to shifting materiality of animal bodies and the fact that women could function as careful and attentive observers of those animal bodies. Moreover, Winkfield's engagement with natural history, whether parodic or not, underscores the role redundancy plays in early American natural history. Through redundant specimens and representations of them, naturalists forged a discipline that helped solidify knowledge of New World nature, creating, in the process, a discourse that became familiar enough to work its way into literary fiction. Underwriting that discourse were the myriad animal bodies, which, once incorporated into natural history, continue to move and shift in both symbolic and literal ways. The next chapter takes up this movement, examining the transmission and circulation of animal bodies, and how that movement impacts ideas about creaturehood and nonhuman agency.

## Chapter 3

### Contagious Decomposition: Animal Specimens And Agency

In discussing the transportation of British American paintings and prints in Early America, art historian Jennifer Roberts argues that early American pictures "could and did register the complications of their own transmission" (1). Such complications appeared both externally ("crushed corners, craquelure, and other indexical injuries") and within the images themselves ("their formal preprocessing of the distances they were designed to span") (1-2). Similarly, early American animal bodies also register the complications of their own transmission. The transmission of animal bodies through natural history correspondence networks is always, on some level, embodied and dependent upon touch or contact. The embodied transmissions of natural history are recursive, circulating and affecting both human and animal bodies. Transmission can either be embodied or disembodied; circulation can be viewed as a type of transmission dependent upon touch and contact, a kind of embodied transmission. The two terms can also be read in more narrow biological terms, such as the transmission of contagious pathogens (bacteria, viruses, microorganisms, etc.) and the circulation of blood and other bodily fluids within an organism. Transmission refers more to unidirectional movement; circulation implies a circling, or returning, movement. Transmitted and circulated animal bodies can be appropriated and used for various personal, national, and scientific purposes. However, those same bodies, enabled by the very networks that objectify and commodify them, exert a returning agential force on humans. Animal bodies are transmitted by and through human bodies as both symbols and specimens, but animal bodies also transmit themselves. Within natural history networks, animals retain some form of physicality or materiality; they never become totally disembodied. Their lingering material traces allow animal bodies to retain or reclaim a degree of agency and

autonomy, facilitate their role as actors in natural history discourse, and allow for the creation of parahumanity, a term borrowed from Monique Allewaert.

Parahumanity, as theorized by her, challenges the hierarchical, anthropocentric organization of life, placing plant, animal, parahuman, and human beside each other (86). Yet parahumanity is not a type of hybridity; "instead it fantasizes a series of negotiations that allow both construction and intimacy as well as dissolution and alienation" (99). The figure of the parahuman, Allewaert argues, is not a closed or unified body; rather, it is an "opened and dispersed series of parts" whose openness enables touch and participation across bodies, allowing the parahuman to achieve agency and resist hybridity (98-99). The parahuman exists as a "category that is parasitic on and thus after and also beside the human [… that] recognizes the horizontal relations and mutual dependence of life forms" (110). In Allewaert's theorization, the parahuman represents a new kind of personhood that "describes the slave and maroon persons who seventeenth- through nineteenth-century Anglo-European colonists typically proposed were not legally or conceptually equivalent to human beings while at the same time not being precisely inhuman" (6). Parahumanity rejects the notion of personhood as an a priori category, seeing personhood as emergent and contingent, "a composition produced through the relation of (para)humans, artifacts, and ecological forces" (119). Yet, while Allewaert stresses how the parahuman leads to a broader understanding of personhood, I resist that term's unavoidable speciesist bias. The parahuman might encourage a lateral, as opposed to hierarchical relationship between animals, parahumans, and humans; however, *person*hood inevitably leaves humans as the locus and apex of our attention. Obviously there is a certain inevitability to this bias towards the human – as can be seen in arguments by Jakob von Uexkull about the experiential boundedness of beings' perceptual life-worlds and Dominic Pettman about the prime error of humans'

anthropocentric bias. As Pettman notes, we must always seek "to acknowledge our persistent errors for what they are: a somewhat expedient category mistake, an often productive delusion" (198). In that light, I emphasize *creature*hood, as opposed to personhood, as a term that recognizes both the nonhuman actors and beings and the quality of being created, as opposed to a stable, static existence. In this respect, my position is similar to and draws inspiration from Donna Haraway's concept of companion species and co-constitutive entanglement, as well as Stacy Alaimo's concept of toxic bodies that "encourage us to imagine ourselves in constant interchange with the environment" (22). This turn towards creaturehood is not meant to downplay or trivialize the importance and value of reclaiming power and agency for the groups of silenced and repressed humans that Allewaert spotlights. Rather, it serves as a nod toward arguments by critics such as Cary Wolfe about the entwinement of animal and human oppression. As Wolfe notes in *Animal Rites*, "as long as this humanist and speciesist *structure* of subjectivization remains intact, […] then the humanist discourse of species will always be available for use by some humans against other humans as well, to countenance violence against the social other of *whatever* species—or gender, or race, or class, or sexual difference" (7-8). Allewaert's discussion of parahumanity forms part of her larger engagement with vitalist materialist theories, in which "any part—whether a unit of matter or an organized form like a plat or an animal that contributes to some larger system—possesses agency and autonomy, even outside of the systems in which it participates. Parts, then, possess attributes that cannot be reduced or subordinated to the larger systems in which they participate" (53). In conceiving of bodies and systems as a series of parts each possessing agency, vitalist materialism, she argues, diverges from concepts of personhood built on the assumed "centrality of human life and the human body" that informed the thinking of eighteenth-century naturalists (80). While Allewaert's

argument about vitalist materialism primarily focuses on nonhuman plant life, I extend more fully her examination to nonhuman animals and how (parts of) their bodies participate in and are transmitted and circulated through natural history correspondence networks.

In confronting the implications of vitalist and new materialisms on transmitted and circulated animal bodies in natural history discourse and networks, this chapter analyzes the works of five writers: Thomas Jefferson, William Bartram, Benjamin Rush, and Richard Allen and Absalom Jones. Beginning with Jefferson's Query VI from *Notes on the State of Virginia* (1785) and his correspondence about acquiring a moose specimen to send to George-Louis Leclerc, Comte de Buffon,[13] I explore the importance of mammoth and moose body parts and how they are entangled and entwined with humans. In analyzing Bartram's *Travels* (1791), I focus both on his introduction, which exemplifies vitalist materialist thought, and on his encounters with alligators, arguing that alligator bodies become both a medium for him to explore personal and national identities, as well as a valuable commodity to be circulated across correspondence networks. While not a natural history text, Rush's 1799 "Three Lectures on Animal Life" shows his engagement with vitalist materialist thought, and his 1794 "An Account of the Bilious Remitting Yellow Fever, as it Appeared in the City of Philadelphia, in the Year 1793" provides a window into considering the agency of pathogens in the transmission of deadly diseases throughout the Greater Caribbean. This look at Rush's medical writings, as well as the role of mosquitoes in disease transmission, might first appear at odds with my analysis of Jefferson and Bartram; however, Rush focuses on similar interactions

[13] Comte de Buffon (1707-1788) published the widely read work *Historie Naturelle* (1749-1804). He was also the main figure behind theories of American degeneracy. Buffon argued both that the American climate produced "weak and feeble" species and that imported species would degenerate, becoming similarly smaller and less robust than their European counterparts. See Lee Alan Dugatkin, *Mr. Jefferson and the Giant Moose: Natural History in Early America* (Chicago: U of Chicago P, 2009), ix.

between humans with the nonhuman world in which animals function simultaneously as symbolic abstractions and real actors that impinge on human bodies. Furthermore, "medical knowledge in the United States," notes Janie Hinds, "circulated similarly [to natural history knowledge], cross-fertilizing in various discourse practices—letters, books, lectures public and professional—among Europe and England's more famous doctors" (642-643). Richard Allen and Absalom Jones's "A Narrative of the Proceedings of the Black People, During the Late Awful Calamity in Philadelphia, in the Year 1793" (1794) provides a complement to Rush's concern with yellow fever contagion; I argue that in their narrative the diseased bodies, created through shifting animal materiality and interspecies encounters, facilitate a vexed form of citizenship for African Americans. All of these writers reveal how the construction of knowledge from the natural world in early America was never simple, straightforward, or complete. The shifting materiality and openness of bodies, both nonhuman and human, produced knowledge that was situated, contingent, and partial, knowledge that simultaneously promised progress and achievement and threatened corruption and decay.

## Mammoth Teeth And Moose Skeletons

Much of Jefferson's interest in natural history spurred from his desire to refute European theories of American degeneracy, which were most famously put forth by Buffon. Underlying the dispute over American degeneracy was a debate over what constituted proof or evidence of the theory's (lack of) validity. Jefferson objected to Buffon's theories, Chiara Cillerai argues, partly because Buffon privileged rhetorical artifice and construction over clear presentations of facts (60). Similarly, Richard Judd highlights how the degeneracy debate called attention to the importance of "firsthand observation in American natural history because Europeans speculated about American fauna largely in absentia" (107). Jefferson marshaled such firsthand observations and

exposition of facts about the falseness of American degeneracy in Query VI of *Notes on the State of Virginia*, his most sustained and complete written argument against Buffon's claims. Looming large over this debate were the fossilized bones and teeth of the mammoth.[14] In Query VI, Jefferson provides an extended meditation on the mammoth, explaining that "It is well known that on the Ohio, and in many parts of America further north, tusks, grinders, and skeletons of unparalleled magnitude, are found in great numbers, some lying on the surface of the earth, and some a little below it" (44). He returns frequently to the size, scale, and magnitude of the mammoth as evidenced by their teeth, tusks, and other bones: "When the Creator has therefore separated their nature as far as the extent of the scale of animal life allowed to this planet would permit, it seems perverse to declare it the same, from a partial resemblance of their tusks and bones. But to whatever animal we ascribe these remains, it is certain such a one has existed in America, and that is has been the largest of all terrestrial beings" (47). The fascination with mammoth bones and their size is evident also in Jefferson's correspondence. In a letter dated November 26, 1782, Jefferson writes to George Rogers Clark[15] asking him to procure such bones:

> I received in August your favour wherein you give me hopes of your being able to procure for me some of the big bones. I should be unfaithful to my own feelings were I not to express to you how much I am obliged by your attention to the request I made you on that subject. A specimen of each of the several species of bones now to be found is to me the most desireable object in Natural history, and there is no expence of package or of safe transportation which I will not gladly reimburse to

[14] Jefferson believed (based on Native American accounts) that the mammoth was still living in some parts of North America. Cillerai argues that Jefferson "assumes that the animal still exists because nature has a never-changing character. This particular character determines continuity between America and Europe and, at the same time, elevates America to a more important level as the country where the largest animal on earth still lives" (62).

[15] Clark was an adventurer, explorer and correspondent of Jefferson, as well as the older brother of William Clark from the Lewis and Clark expedition; see Dugatkin, *Mr. Jefferson and the Giant Moose*, 66.

> procure them safely. Elkhorns of very extraordinary size, petrifactions, or any thing else uncommon would be very acceptable.[16]

Although Jefferson expresses his desire for a wide variety of bone specimens or "any thing else uncommon," the "big bones" invariably refer to mammoth ones. Notable in Jefferson's use of language here is the phrase "species of bone" as opposed to "species of *animals*." With this phrase Jefferson enacts either a reduction of the animal to its parts or an extraction of the part from the whole of the animal body.

Along with the emphasis on mammoth bones, Jefferson further segments and divides animal bodies into parts visually with the numerous tables he includes in Query VI. As Jefferson explains:

> Let us then take a comparative view of the Quadrupeds of Europe and America, presenting them to the eye in three different tables, in one of which shall be enumerated those found in both countries; in a second those found in one only; in a third those which have been domesticated in both. To facilitate the comparison, let those of each table be arranged in gradation according to their sizes, from the greatest to the smallest, so far as their sizes can be conjectured. (50)

After these three tables, Jefferson offers yet another additional table, this time of the "between ninety and an hundred" birds of Virginia as described by Mark Catesby in *The Natural History of Carolina, Florida, and the Bahama Islands* (71).[17] In this table, Jefferson includes the Linnaean designation, Catesby's designation, and the popular names for each bird, as well as a reference to each bird's description in Buffon's *Historie Naturelle* (72-76).[18] Unlike Catesby's careful depiction of animals and their interactions with each other and the environment (as evidenced by both his verbal descriptions and illustrations in *Natural History*), the animals in Jefferson's tables are measured, ordered,

[16] Thomas Jefferson, "From Thomas Jefferson to George Rogers Clark, 26 November 1782," *Founders Online*, National Archives, http://founders.archives.gov/documents/Jefferson/01-06-02-0193.
[17] Catesby's work served as a guide for other naturalists in the eighteenth and early nineteenth centuries; see Amy R.W. Meyers and Margaret Beck Pritchard, "Introduction: Toward an Understanding of Catesby," in *Empire's Nature: Mark Catesby's New World Vision*, eds. Amy R. W. Meyers and Margaret Beck Pritchard (Chapel Hill: U North Carolina P, 1998), 17.
[18] Measurement and numbers were of great importance to eighteenth-century naturalists' empirical arguments; see Cillerai, p 62; and Dugatkin, p 70.

divided, and cordoned off from one another, each animal serving as a distinct part or piece in Jefferson's argument about American animals. Unlike in Catesby's text, the birds in Jefferson's are now ordered in columns, individual boxes assigned for each name and reference; gone are the descriptions, associations, and environmental context.

Yet this abstraction of the real animal, its reduction to a series of names, ordered in a table, was not Jefferson's final word against degeneracy theories. While he did value the quantification of animals and the data he presented, Jefferson also recognized the power of tangible, physical evidence. "Jefferson's most concerted effort in terms of hands-on evidence," Lee Alan Dugatkin argues, "was to procure a very large, dead, stuffed moose—antlers and all—to hand Buffon personally, in effect saying 'see.' This moose became a symbol for Jefferson—a symbol of the quashing of European arrogance in the form of degeneracy" (xi). Dugatkin emphasizes the dramatic and cinematic quality of Jefferson's quest for the moose, recounting:

> [It] is the stuff of movies. The plotline involved teams of twenty men hauling a giant dead moose through miles of snow and frozen forests, a carcass falling apart in transit, antlers that didn't quite belong to the body of the moose but could be 'fixed on at pleasure,' crates lost in transit, irresponsible shippers, and a despondent Jefferson thinking all hope of receiving this critical piece of evidence was lost. Eventually, though, the seven-foot-tall stuffed moose made it to Jefferson, and then to Buffon. (xi-xii)

While Dugatkin is not wrong in this respect, this quest for the moose more importantly speaks to the many ways in which animals and their bodies were incorporated into natural history and, in many cases, disassembled by it.

Jefferson's struggle to acquire a moose specimen does not appear in the pages of *Notes*; instead his correspondence between 1784 and 1787 reveals his obsession with the moose, both as an abstract figure that could definitively disprove American degeneracy, and as a real, physical entity who proved both elusive to find as well as

cumbersome, difficult, and expensive to transport.[19] In a letter dated March 15, 1784 from Portsmouth, New Hampshire, William Whipple[20] writes to Jefferson, answering his queries about the moose (he had distributed a questionnaire with 22 questions to gather knowledge about the animal); Whipple begins the letter by expressing his regret at being somewhat late in his reply, noting: "I now inclose you such answers to Your questions as I have been able to procure, also a small parcel of the hair of the Moose sent me by a Gentleman of whom I have been making inquiry respecting that Animal."[21] His writing shows how the production of natural historical knowledge about the moose results from a mix of verbal descriptions and tangible evidence (the moose hair in this case). Whipple goes on to discuss his plans to procure in the summer "a pair of Horns and some of the principal Bones which probably may be sent to Virginia or Maryland." He is also careful to note when he is relating knowledge second-hand, using phrases like "as it has been described to me" and noting that the enclosed answers he provides Jefferson with come from another unidentified gentleman, and that he believes that man "is something mistaken in the size. I have heard some hunters say they have seen them more than six feet high." In a similar, but more expansive letter, John Sullivan,[22] writing on June 22 of the same year in Durham, New Hampshire, provides answers to Jefferson's queries regarding the moose. As in Whipple's letter, Sullivan encloses responses to the queries from two hunters in the area. In both Whipple's and Sullivan's letters the arrival of natural historical knowledge about the moose comes filtered through multiple sources, often with

[19] Christopher Iannini, among others, has noted the importance of Jefferson's correspondence as a supplement to *Notes*. Iannini argues that the medium of correspondence provided "the necessary fluidity" Jefferson needed to revise and expand on his ideas from *Notes*; Iannini, *Fatal Revolutions: Natural History, West Indian Slavery, and the Routes of American Literature* (Chapel Hill: U of North Carolina P, 2012), 225.
[20] Whipple was a general in the Revolutionary War and a signer of the Declaration of Independence; see Dugatkin, p 90.
[21] William Whipple, "From William Whipple, with Answers to Queries concerning the Moose, 15 March 1784," *Founders Online*, National Archives, http://founders.archives.gov/documents/Jefferson/01-07-02-0031.
[22] Sullivan "was a representative at the Second Continental Congress and had been a prisoner during the battle for independence, was attorney general of New Hampshire at the time that Jefferson approached him about the moose for Buffon"; Dugatkin, p 91.

contradictions and questions being raised at each point in the information's transmission. While the observers all stress the authority of their firsthand observation and perception, so many levels of remove introduce a degree of doubt about the "realness" of their facts.

After explaining the provenance of the enclosed answers to the moose queries, Sullivan details his efforts at procuring specimens:

> I have procured from the head of the province of Main [sic] a Large pair of Mooses horns and a pr. of the Calibous [sic], together with a pair of our Largest Deers horns and will send them to Philadelphia agreably to your directions by the first vessel that sails from hence. This will Demonstrate the great difference between these Animals. The Caribous horns are much smaller than either and differently formed. His hoofs and his manner of Living differs so much from the Moose that it cannot be supposed that they are the same Animal. I fear I shall not be able to obtain the skeletons of a Moose untill the next winter though if I had seasonably known that General Whipple would not have done it I should have procured one last Winter.[23]

Sullivan's statements express an implicit faith in the ability of physical evidence to definitively settle scientific debates. The tangibility of physical specimens would seem to quell all doubt and uncertainty, yet, as evidenced by future letters, the physical specimens often proved just as frustrating.

Another two years would go by without a successful acquisition of a moose specimen. Writing in Paris on January 7, 1786, Jefferson, in identical letters, renews his applications to both Sullivan and Whipple:

> to endeavor to get for me the skin, the skeleton, and the horns of the Moose, the Caribou, and the Orignal or Elk, emboldens me to renew my application to you for those objects, which would be an acquisition here, more precious than you can imagine. Could I chuse the manner of preparing them, it should be to leave the hoof on, to leave the bones of the legs and of the thighs if possible in the skin, and to leave also the bones of the head in the skin with the horns on, so that by sewing up the neck and belly of the skin we should have the true form and size of the animal. However I know they are too rare to be obtained so perfect;

[23] John Sullivan, "To Thomas Jefferson from John Sullivan, with Memoranda on the Moose, 22 June 1784," *Founders Online*, National Archives, http://founders.archives.gov/documents/Jefferson/01-07-02-0259.

> therefore I will pray you to send me the skin, skeleton and horns just as you can get them, but most especially those of the moose.[24]

Jefferson's request signals a noteworthy configuration of the moose body as simultaneously a series of divisible parts and a unified form necessary to comprehend the "true" animal. The ideal moose specimen will be one that can be disassembled and reassembled but still retain and convey some original essence of the living animal.[25] Yet Jefferson shows some recognition that his "perfect" specimen may not be feasible; however, any skin, skeleton, or horns will be of some value to his efforts to defeat notions of American degeneracy.[26]

By April of 1787 Sullivan had finally succeeded in acquiring a moose specimen for Jefferson. As with his answers to the moose queries, Sullivan obtains his moose specimen from another person: "But upon receiving your Letter I immediately applied to Capt. Colborn of Lebanon on Connecticut River to procure me one and Transport him to my House with only the skins opened and the Entrails taken out, and such thick parts of the flesh cut off as would not injure the skin or skeleton."[27] However, any sense of triumph at this success is tempered both by the financial and logistical problems of acquiring the moose and the already damaged, deteriorating quality of its corpse. Of the moose's corpse, Sullivan reports:

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[24] Thomas Jefferson, "From Thomas Jefferson to John Sullivan, 7 January 1786," *Founders Online*, National Archives, http://founders.archives.gov/documents/Jefferson/01-09-02-0145; Thomas Jefferson, "From Thomas Jefferson to William Whipple, 7 January 1786," *Founders Online*, National Archives, http://founders.archives.gov/documents/Jefferson/01-09-02-0147. Jefferson also repeats much of the same language in a similar request he sent to Archibald Stuart later that month. See Thomas Jefferson, "From Thomas Jefferson to Archibald Stuart, 25 January 1786," *Founders Online*, National Archives, http://founders.archives.gov/documents/Jefferson/01-09-02-0192.

[25] The disassembling of animals' bodies is evoked also in Jefferson's passing reference at the end of the letter to "the new call for whale oil in France."

[26] Such concerns about American degeneracy and the resolution promised by physical animal bodies and specimen creation would later resurface in the early twentieth century with Theodore Roosevelt and the American Museum of Natural History. As Haraway notes in *Primate Visions*: "In the upside down world of Teddy Bear Patriarchy, it is in the craft of killing that life is constructed, not in the accident of personal material birth. Roosevelt is the perfect *locus genii* for the museum's task of regeneration of a miscellaneous, incoherent urban public threatened with genetic and social decadence" (28-29).

[27] John Sullivan, "To Thomas Jefferson from John Sullivan, 16 April 1787," *Founders Online*, National Archives, http://founders.archives.gov/documents/Jefferson/01-11-02-0285.

> The remaining flesh began to be in a state of putrefaction. Every Engine was set at work to preserve the Bones and Cleanse them from the remaining flesh, and to preserve the skins with the hair on, with the hoofs on and Bones of Legs and thighs in the skin without putrefaction, and the Jobb was both Expensive and Difficult, and such as was never before attempted, in this Quarter. But it was at Last Accomplished exactly agreable to Your Directions, except that the bones of the head are not Left in the skin agreably to your Directions, as it was not possible to preserve them in that Connection, but the head of the skin being whole and well dresst it may be Drawn on at pleasure. The Horns of the Deer, the Elk and the Caribou I also send. They are not the horns of this Moose but may be fixed on at pleasure. The horns of those animals are not in perfection at this season of the year. The skeleton of the other Animals I have not procured and am much mortifyed and no doubt you will be very greatly surprized at the Expence of what I now send.

Despite spending additional time and money, the specimen is far from perfect. Its disassembly and putrefaction inhibit the ability to reconstruct the whole moose once it arrives in France. Furthermore, the horns, which can "be fixed on at pleasure," do not belong to the moose, thus ensuring a strange recombination of animal parts, a violation of the original bodily integrity of the animals.

The cost and difficulty cause Sullivan to question the merits of procuring additional specimens:

> The Skeletons of the other Animals, though they might be procured with Less expence, I could not think of hazarding it without your consent. These animals are generally taken far in the woods and very often, as was the Case with this, Twenty miles from any road. A way must of course be cleared through the wilderness to transport them whole and halled by hand, to some common road. The flesh of them which is considered as of considerable value is mostly Lost. The meat of a moose is generally Esteemed equal in value to that of a Large ox. However if the present Expence is not discouraging I will endeavour to procure the others as Cheap as possible, and although they must fall far short of this will be considerable.

Obtaining a specimen involves a certain degree of enmeshment and entanglement with the nonhuman world; people must physically carry ("halled by hand") the moose and forge paths through the wilderness. Sullivan also suggests a certain level of waste involved in the process: flesh that could otherwise serve as food ends up rotting, and all

for an uncertain end result. In a separate letter dated ten days later, Sullivan provides Jefferson with an itemized list of the expenses accrued in procuring the moose, including the transport of the moose's skeleton from the woods where it was killed to Sullivan in Portsmouth, the "cleansing of the skeleton from flesh and salting and tending the same to prevent putrefaction," a "Tanner for fleshing the Skins," the "Dressing of the Skins to preserve it with the hair on, free from worms &c with expence of Allum brick Dust & Tobacco," and packaging, shipping, and storing the specimen.[28]

After some delay in shipment, Jefferson did obtain the moose specimen he so fervently sought and was able to present it to Buffon. On October 1, 1787, Jefferson wrote to Buffon, presenting him with:

> the bones and skin of a Moose, the horns of [another] individual of the same species, the horns of the Caribou, the el[k,] the deer, the spiked horned buck, and the Roebuck of America. They all come from New Hampshire and Massachusets. I give you their popular names, as it rests with yourself to decide their real names. The skin of the Moose was drest with the hair on, but a great deal of it has come off, and the rest is ready to drop off. The horns of the elk are remarkeably small. I have certainly seen of them which would have weighed five or six times as much.[29]

Despite having to offer excuses and qualifications for the specimens, Jefferson ends the letter with an expression of his confidence that Buffon will agree with his claims about the size and magnitude of American animals: "I really suspect you will find that the Moose, the Round horned elk, and the American deer are species not existing in Europe. The Moose is perhaps of a new class. I wish these spoils, Sir, may have the merit of adding any thing new to the treasures of nature which [have] so fortunately come under your observation."[30]

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[28] John Sullivan, "To Thomas Jefferson from John Sullivan, with Account of Expenses for Obtaining Moose Skeleton, 26 April 1787," *Founders Online*, National Archives, http://founders.archives.gov/documents/Jefferson/01-11-02-0304.

[29] Thomas Jefferson, "From Thomas Jefferson to Buffon, 1 October 1787," *Founders Online*, National Archives, http://founders.archives.gov/documents/Jefferson/01-12-02-0191.

[30] Dugatkin notes "Whether he [Buffon] would have actually changed his mind on the whole degeneracy issue, as Jefferson had been led to believe he might, is hard to know. In any event, Jefferson's timing here was poor.

Writing to Sullivan four days later, Jefferson notes the somewhat deteriorated condition of the moose specimen but confirms "there remained still enough to give a good idea of the animal, and I am in hopes Monsieur de Buffon will be able to have him stuffed and placed on his legs in the king's cabinet. He was in the country when I sent the box to the Cabinet, so that I have as yet no answer from him. I am persuaded he will find the Moose to be a different animal from any he had described in his work."[31] He concludes the letter by stating that further acquisitions aside from the Moose "would not be worth the expence they would occasion," and only asks for future specimens "on the condition they should occasion you no trouble, and me little expence." Such attention to financial matters was quite typical of natural historians at the time. As Daniel Margocsy notes, "financial considerations deeply influenced how scientific practitioners portrayed and represented nature" (6). Yet the financial costs of the moose acquisition cannot fully explain or account for the questionable success of Jefferson's undertaking. The decrepit specimen, on the surface, only seems to confirm Buffon's degeneracy theory. In obtaining, preparing, and shipping the moose, it becomes a degraded, pathetic shell of the enormous, impressive animal it was in life.

But in looking closer at the dividing and recombining of animal parts and their accompanying tactile encounters between humans and the nonhuman world, one can observe how such parts and matter are active and animate, a key concept in both vitalist materialist thought as well as new materialist theories. As Diana Coole and Samantha Frost argue, matter has an "immanent vitality," and, rather than being static, it is "constantly forming and reforming in unexpected ways" (8-10). Although decomposition is not an unexpected process where dead animal bodies are concerned, it still functions as

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No next updated volume with corrections would appear. Within six months of receiving Jefferson's moose, Count Buffon was dead"; Dugatkin, *Mr. Jefferson and the Giant Moose* (above, n. 1), 100.

[31] Thomas Jefferson, "From Thomas Jefferson to John Sullivan, 5 October 1787," *Founders Online*, National Archives, http://founders.archives.gov/documents/Jefferson/01-12-02-0208.

proof of a nonhuman agency not based on easily identifiable persons or actors. Jefferson's moose also evokes Allewaert's argument about vitalist materialism, in which parts have agency and "possess attributes that cannot be reduced or subordinated to the larger systems in which they participate" (53). While the disassembly of animal bodies by humans seems initially to uphold traditional understandings of matter as inert and waiting to be acted upon by obvious actors such as humans, the struggles to avoid decomposition and decay show matter acting outside and independent of human control. Jefferson's quest for a moose specimen makes visible the increase in nonhuman agency and autonomy, an agency and autonomy founded on the transmission of material parts and fragments from one being to another, one place to another.

## Carnivorous Vegetables And Alligator Mediums

The son of well-known botanist John Bartram, William Bartram was a self-educated farmer and Quaker. As a child, William assisted his father in his practice of collecting and selling American plants and seeds to Europeans. As a young man, Bartram attempted or was offered numerous occupations that he was either uninterested in or unsuccessful at such as merchant, trader, printer, engraver, and indigo farmer. Bartram's patron, Dr. John Fothergill, "a physician and botanist and owner of the largest private botanical garden in England," financed Bartram's four-year (1773-1777) expedition to the Southern territories that would provide the experience and material to publish his book fourteen years later (Rice 123). *Travels Through North and South Carolina, Georgia, East and West Florida* (1791) was initially met with mixed reviews, with many readers calling into question the accuracy of Bartram's accounts and descriptions. The work was better received by readers outside of the scientific community

proving very influential to British Romantic writers such as William Wordsworth and Samuel Taylor Coleridge.[32]

In the introduction to *Travels*, William Bartram offers a series of lengthy and tedious lists of Latinate plant names. Most of the time, these names are rattled off with no further description or context and very little preamble:

> It is difficult to pronounce which division of the earth, between the polar circles, produces the greatest variety. The tropical division certainly affords those which principally contribute to the more luxurious scenes of spelndour, as Myrtus communis, Myrt. caryophyllata, Myrt. pimenta, Caryophyllus aromaticus, Laurus cinnam. Laurus camphor, Laurus Persica, Nux mosch. Illicium, Camellia, Punica, Cactus melo-cactus, Cactus grandiflora, Gloriosa superba, Theobroma, Adansonia digitata, Nycthanthes Psidium, Musa paradisiac, Musa sapientum, Gacinia mangostana, Cocos nucifera, Citrus, Citrus aurantium, Cucurbita citrullus, Hyacinthus, Amaryllis, Narcissus, Poinciana pulcherrima, Crinum, Cactus cochinellifer. (15-16)

While these lists, on one level, participate in the tradition of listing and naming the productions of the natural world (of the kind seen in the works examined in the previous chapter), on another level, they seem to be crafted intentionally to confuse, bewilder, or amaze readers:

> But there remain of the vegetable world several tribes that are distinguished by very remarkable properties, which excite our admiration, some for the elegance, singularity, and splendor of their vestment, as the Tulipa, Fritillaria, Colchicum, Primula, Lilium superbum, Kalima, &c: others astonish us by their figure and disposal of their vesture, as if designed only to embellish and please the observer, as the Nepenthes distillatoria, Ophrys insectoria, Cypripedium calceolus, Hydrangia quercifolia, Bartramia bracteata Viburnum canadense, Bartsia, &c. (17)

"The easy flow of sentences is sometimes interrupted and encumbered by plodding taxonomic detail," notes Christoph Irmscher of *Travels*, further adding that "Bartram's language bulges with strange, cumbersome words" (37). Although Irmscher contends that these "careless catalogues are offset by many passages wrought of beautifully

[32] For more on Bartram's influence on Romantic writers see Nichols, "Roaring Alligators and Burning Tygers" (305-306), and Mark Van Doren (5).

crafted sentences with evocative visual detail and alliterative sonority" (38), I argue that the "cumbersome" and "careless" lists are themselves interesting and meaningful, not just in the delight and pleasure of reading unusual odd-sounding words that display Bartram's scientific knowledge, but as a linguistic window into Bartram's conception of the interaction between humans, animals, and plants. For example, *Ophrys insectoria* blurs the distinction between plant and animal both on a word level and in actuality, as the fly orchid is so named because the flower of the plant resembles a fly. And while the Bartramia bracteata does not look like Bartram, the use of his name prompts an association and blending of the botanical and the human. This blurring effect between human-animal-plant is brought to the fore as Bartram moves away from lists into a discussion of carnivorous plants, including pitcher plants and Venus flytraps. On the latter, he muses:

> But admirable are the properties of the extraordinary Dionea muscipula! […] Astonishing production! see the incarnate lobes expanding how gay and sportive they appear! ready on the spring to intrap incautious deluded insects! what artifice! there behold one of the leaves just closed upon a struggling fly; another has gotten a worm; its hold is sure, its prey can never escape—carnivorous vegetable! Can we after viewing this object, hesitate a moment to confess, that vegetable beings are endued with some sensible faculties or attributes, familiar to those that dignify animal nature; they are organical, living, and self-moving bodies, for we see here, in this plant, motion and volition. (19)

Carnivorous vegetables, as he terms them, force Bartram to question the previously self-evident and obvious distinction between the realms of plants and animals. Even though he goes on to question the distinction between animals and humans, citing the "parental and filial affections" that can be observed in animals (21), his discussion of carnivorous plants offers a more striking and radical questioning of such species distinctions. Bartram opens the possibility that plants, even those of the non-carnivorous variety, are imbued with bodies that exert some form of agency, evidenced by the "motion and volition" of the

Dionea muscipula. These passages also attest to the influences of vitalist materialist thought on Bartram's ideas about the natural world.

Iannini argues that, in Bartram's *Travels*, "specimens become literal agents in the narrative, transforming both the landscape of East Florida and the mind and body of the naturalist in ways that are increasingly difficult to predict and manage" (181). Such authority and power shows how natural history networks become recursive feedback loops in which naturalists shape and are shaped by specimens. The agency of specimens testifies, Iannini says, to the "clearly articulated and widely circulated" notion that Caribbean nature was "endowed with the revolutionary capacity to alter bodies and corrupt sensibilities" (190). This ties into arguments about American degeneracy, which does yield a significant amount of agency and power to the nonhuman world. It also gestures towards the ability of the nonhuman world to disorganize and corrupt the integrity of human bodies. The environment of the American South, Allewaert argues, alters the human body: "The heat that changed the orientation and movements of bodies, the diseases that the atmosphere was thought to carry, and the bites that the region's insects and venomous snakes inflicted, all compromised bodily and metaphysical integrity" (33). She further contends that, within the plantation zone,[33] agency is gained "by combining with ecological forces," rather than "through an abstract and abstracting print culture" (30).[34] While she is concerned primarily with the agency of slaves and maroons, a similar achievement of agency and power can be seen in Bartram's enmeshment, not with ecological forces, but with nonhuman bodies, such as alligators.

[33] Allewaert defines the plantation zone as a tropical or subtropical zone in which "animals, persons, plants, artifacts and their histories, and even land were penetrating, fusing with, transforming one another" (31).
[34] This argument runs counter to what Mary Louise Pratt argues is a defining feature of natural history writing in which "the system of nature as a descriptive paradigm was an utterly benign and abstract appropriation of the planet" (37).

Within the discourses of natural history in the eighteenth and nineteenth centuries, carnivorous wild animals in general troubled the British-American imagination. Natural history texts during this time viewed predatory animals, Harriet Ritvo argues, "as both dangerous and depraved, like alien or socially excluded human groups who would not acknowledge the authority of their superiors" (25). Yet, out of the wide array of natural specimens, crocodilians (the general term for all members of the order Crocodilia),[35] with their associations with monstrosity and alterity, appear particularly well-suited as figures through which to explore natural history correspondence networks. Rajani Sudan argues that crocodilians are "crossover creatures (in the sense that they are both real and fantastic animals) […]; they function as both material creatures and monsters. […] They give material shape to abstract fears about boundaries, about what lies beyond, and about the increasingly destabilized position with which England had to contend in the face of its continual accrual of colonial territories" (70). In Bartram's text, alligators give material shape to borders, both physical and imaginary, as well as the anxiety and fear surrounding those borders. The material shape the alligators give to these borders is enabled or made possible through the correspondence networks of natural history. Alligators function as active metaphors that translate firsthand experience with and knowledge of alligators, which can then be transmitted across natural history correspondence networks. Alligators possess semiotic currency as abstract symbols; they have seemingly transcended their physical embodiments and, like Lippit's undying specters, are free to move across correspondence networks. Yet, underwriting this disembodied crocodilian transmission are the real, physical alligators, whose bodies are the foundation for the crocodilian both as an abstract symbol and as real material to be

[35] Dan Wylie points out that crocodilians include all members of the order Crocodilia including "not only what are sometimes called 'true crocodiles,' but the closely related species of alligators, caimans and gharials. The latter are not 'false crocodiles,' but equally respectable members of the same family" (7).

traded across natural history correspondence networks. Over the course of the nineteenth century, the symbolic value of crocodilians transforms into an economic value as well, both in terms of the demand for stuffed, preserved crocodilian specimens and the demand for crocodilian skin products, which was first recorded around 1800 but peaked in the late nineteenth and early twentieth centuries.[36]

In *Travels*, readers are presented with both an account of Bartram's literal journey through the southern United States and a metaphor of Bartram's self-doubt and questioning of identity, both personal and national. As Judd puts it, "attracted to nature's Edenic possibilities, […] he was never completely convinced of its essential goodness. Fearsome creatures still roamed the transmontane wilderness" (52). In Part 2 Chapter 5 of *Travels*, Bartram, while traveling alone through the Florida swamp, encounters a nearly endless series of alligators. These alligators become his antagonists, threatening not just Bartram's life, but also his identity as a competent naturalist exploring the wilderness of the American South. Previous critics have addressed the psychological component to Bartram's journey into the Florida swamplands. Thomas Hallock describes how Bartram, through his solitary wanderings in a hostile wilderness, "forges an identity for himself" as he moves across a "difficult psychological landscape" ("On the Borders" 116, 122).[37] This hostile wilderness is epitomized by the alligator, an animal frequently depicted as monstrous, terrifying, and horrific. The alligator's horrific quality centers largely on its mouth and the possibility that humans can become prey for it. Such emphasis on alligators' mouths leads Rod Giblett to argue that "the typecasting of the alligator and the crocodile as orally sadistic monsters is a projection of human desires and fears on to these non-human beings" (300). Giblett's argument that humans project the idea of monstrosity onto these animals is crucial to my reading of Bartram's encounters with the

[36] See Leighton and Surridge, p. 259; Karlheinz H.P. Fuchs, et al, p. 188; Ted Joanen, et al, pp. 467-468.
[37] See also Hallock, *From the Fallen Tree* pp 165-166.

alligators. The way in which Bartram regards and discusses the alligators reflects his interior psychological state. When isolated, Bartram's doubts and fears color and shape his encounters with the alligators; when integrated into society, he returns to his more characteristic desire to depict alligators as sentient beings. In both cases, the alligators give material shape to Bartram's doubts and fears. Specific anxieties become externalized in and projected on the alligator and thus can be transmitted more easily across transatlantic correspondence networks.

Bartram's extended encounter with alligators begins with him witnessing a fight between two alligators, which alarms him greatly: "It was obvious that every delay would but tend to increase my dangers and difficulties, as the sun was near setting, and the alligators gathered around my harbour from all quarters" (115). Bartram quickly moves from the position of spectator of crocodilian violence to victim of their attacks. Much of the following ten pages feature accounts of close calls where Bartram finds himself repeatedly assaulted by alligators against which he struggles to defend himself. In these assaults, Bartram's depictions of the terrifying alligators focus on their heads and jaws:

> I was attacked on all sides, several endeavouring to overset the canoe. My situation now became precarious to the last degree: two very large ones attacked me closely, at the same instant, rushing up with their heads and part of their bodies above the water, roaring terribly and belching floods of water over me. They struck their jaws together so close to my ears, as almost to stun me, and I expected every moment to be dragged out of the boat and instantly devoured. But I applied my weapons so effectually about me, though at random, that I was so successful as to beat them off a little; when, finding that they designed to renew the battle, I made for the shore, as the only means left to me for my preservation. (116)

The alligators in this passage clearly embody Giblett's concept of "orally sadistic monsters." Horribly loud noises and deluges of water issue out of the jaws of the alligators, and Bartram worries that those same jaws will drag him out of the boat and consume him. Although he narrowly and rather luckily escapes, Bartram senses that the

alligators “designed to renew the battle,” a conjecture that proves true as the chapter progresses.

On the surface, each of these crocodilian assaults might appear in isolation to be simple illustrations of the hackneyed “man vs. nature” scenario and therefore not symptomatic of a deeper psychological journey, in which Bartram’s fears and anxieties are displaced onto the natural world, allowing him to simultaneously travel through physical and mental space. The assaults, however, occur in a wilderness that effectively isolates Bartram from civilization, leaving him stuck with the alligators. After setting up camp in the safest possible spot he could find, Bartram explores his surroundings and concludes that “there was no other retreat for me, in case of attack, but by either ascending one of the large oaks, or pushing off with my boat” (118). The physical isolation in the swamps, coupled with the continual threat of being eaten by alligators, mentally exhausts Bartram. His language evokes dread and uncertainty that speaks both to his perilous physical condition and the psychological crisis he endures. These feelings manifest themselves in a concern for accurately representing and reporting the vast number of alligators he encounters in the swamp:

> How shall I express myself so as to convey an adequate idea of it to the reader, and at the same time avoid raising suspicions of my veracity? Should I say […] the alligators were in such incredible numbers, and so close together from shore to shore, that it would have been easy to have walked across on their heads, had the animals been harmless? What expressions can sufficiently declare the shocking scene that for some minutes continued, whilst this mighty army of fish were forcing the pass? (118)

This awareness of audience introduces an additional level of doubt and uncertainty that compounds Bartram’s experience of dread in his interaction with the alligators. Bartram worries that readers will doubt the veracity of his account, possibly believing that his experience alone in the swamps resulted in exaggerated claims. Such accusations would be damaging to a naturalist because they run counter to natural history’s status as a

scientific discipline built on the collecting and reporting of objective, empirical observations and data.

In between accounts of beings attacked and pursued by alligators, Bartram shifts into a series of empirical observations where he attempts to contain and control the monstrous, unwieldy alligators through codified systems of knowledge. In doing so, Bartram participates in the conception of natural history that Ritvo describes as "a human struggle against the chaotic and unfathomable variety of nature" and "an expression of human domination" (11, 14). Bartram reports on the alligator, offering readers a general description of the animal. As with his concern about readers believing his narrative, this section displays an awareness of audience, which reveals that Bartram is conscious that his writing will be distributed to and read by others, both in America and across the Atlantic. Although he strives for a distanced, learned discourse, Bartram still returns to the language of monstrosity to describe the alligators: "The alligator when full grown is a very large and terrible creature, and of prodigious strength, activity and swiftness in the water. I have seen them twenty feet in length, and some are supposed to be twenty-two or twenty-three feet. Their body is as large as that of a horse; their shape exactly resembles that of a lizard" (122). The alligator is monstrous because Bartram describes the "very large and terrible creature" as possessing physical qualities of numerous animals, evoking the idea of monsters as hybrid creatures that blur distinctions between species. Bartram's description of alligators further engages in this blurring of distinct categories when he describes their "loud and terrifying roar": "It most resembles very heavy distant thunder, not only shaking the air and waters, but causing the earth to tremble; and when hundreds and thousands are roaring at the same time, you can scarcely be persuaded, but that the whole globe is violently and dangerously agitate" (123). As Giblett notes: "The alligator mixes the elements of earth, air, water and fire

(thunder and lightning are the fire in the sky) just as the wetland does more generally […]. Instead of these elements staying put in their proper place, the alligator and the wetland mix them up and violate the order of things that assigns them to a fixed and stable category" (306). The monstrous specter of the alligator as a creature that violates traditional boundaries of species and elements persists throughout Bartram's attempts to offer empirical observations about the animal.

The alligator' obfuscation and violation of the order of things, I argue, creates a productive tension in Bartram's writing; his attempts to codify and legitimate knowledge about the alligator are stymied by the inherent disruptive quality of the monstrous alligator. Even the fact that Bartram vacillates between "crocodile" and "alligator" to refer to the animals attests to their power as monstrous "crossover creatures." In a footnote, Bartram explains: "I have made use of the terms alligator and crocodile indiscriminately for this animal, alligator being the country name" (94). Such confusion was not restricted to Bartram, but, rather, indicative of an eighteenth-century taxonomic ambiguity surrounding crocodilians. Dan Wylie observes: "In his pioneering taxonomic system of 1758, Linnaeus lumped almost all crocodilians under one composite species, *Lacerta crocodiles*. A decade later, J.N. Laurenti proposed four species in the genus *Crocodylus* (a spelling more recently revived), but these were based on vague and derivative drawings executed by one Albertus Seba in 1734" (23). This confusion and ambiguity in Bartram's text not only marks a still developing taxonomy, but serves as a reminder that, in Michael Gaudio's words, "natural history is Bartram's natural language, and the doubts he raises about it are doubts about his own ability to set a coherent identity before the common sense of the world" (11). Gaudio connects this doubt back to the alligator: "Bartram's fear of being devoured puts his own identity into the interplay of visibility and invisibility: it is a fear of not becoming self-evident, a fear of being swallowed into

shadows, of not making oneself legible in an emerging social order that demands absolute legibility" (13). Bartram's fear of being eaten by alligators becomes a metaphor for his fear of losing his identity as a public figure in the discourse of natural history. This threat to his identity comes not just from the possibility of being eaten, but also by being unable to legibly and accurately account for and describe his encounters with the alligators. While Bartram's *Travels* was well received in Europe,[38] the sense of fear and uncertainty in the text indicates that a positive reception was not necessarily a foregone conclusion at the time of its composition.

The same threat of illegibility and loss of identity can also be seen as a wider concern about American national identity. American naturalists at this time were concerned about being at the periphery of knowledge-making, taking a back seat to London as a center of scientific knowledge. Ellen Valle notes that, although correspondence networks between American naturalists and European scientists strove to be "equitable and fair" to both parties, "the only area in which there is a serious lack of balance is the cultural one of centre vs. periphery" (321). Moreover, Joyce E. Chaplin draws an important distinction between American naturalists before and after the American Revolution in which a deference to "European-defined theories of nature" and British power was replaced by a struggle to overcome that colonial framework by using natural history's "descriptive methods of study to argue for their nation's distinctiveness" ("Nature and Nation," 76). If Bartram had been unable to hold up his end of the correspondence network in *Travels*, he would have become even more peripheral and marginal to the center of knowledge-making than he would be otherwise. Fortunately, Bartram's writing was well-received across the Atlantic, and Chaplin notes:

> Bartram's emphasis on nature's ineffable qualities was strikingly different from the focus in Britain (and western Europe generally) on science as

[38] See Joyce E. Chaplin, "Nature and Nation: Natural History in Context," p. 92.

> an instrument of authority over nature. This difference was an indication of the distinctive national character that natural history had acquired in the United States as citizens of the republic sought to redefine their relation to the natural world and to Old World culture. (76-77)

The threat to identity in *Travels* also speaks to ideas about American expansion and exploration. Bartram was increasing European Americans' knowledge of the North American continent, suggesting the possibility of Western civilization expanding further into the wilderness of the American South. At the same time, however, Bartram also sought to respect and preserve both the natural ecosystems and Native American settlements he encounters. These competing interests, according to Hallock, lead Bartram to "[establish] an identity that is fully attached to neither Anglo nor Native American societies but somehow capable of embodying them both" ("On the Borders" 120). The alligator-filled swamp is a perfect location for exploring this dual embodiment Hallock describes. Giblett has noted how alligators in Bartram's *Travels* function "as figures for the British colonial and American cultural unconscious. Florida and the American South more generally with its swamps have been repressed in the collective psyche of the American North and have functioned as a figure of the primitive and backward […]. In Bartram's case he is returned to this repressed only to try to continue to repress it" (307). Yet Bartram does not so much repress the alligator and the swamp as wrestle with competing desires to repress and liberate the alligator. His dichotomous representation of national and natural interests is embodied in his conflicted interactions with the alligators, which reflect the tension between the alligator as a physical, material specimen and the alligator as an abstract symbol.

In addition to Bartram's previously discussed encounters with alligators in the isolation of the swamps, Bartram encounters alligators later in the text after he has returned to society. Two particular instances exhibit Bartram's conflicted interactions with alligators, and how they mirror larger national anxieties. Following a hurricane, Bartram

emerges from the swamp and reconnects with other people at a plantation; this change in society alters Bartram's perception of alligators. Shortly after returning to civilization, Bartram, while exploring around the plantation, observes alligators (in this passage he refers to them as crocodiles) as part of a peaceful, idyllic water scene: "This amazing and delightful scene, though real, appears at first but as a piece of excellent painting; there seems no medium; you imagine the picture to be within a few inches of your eyes, and that you may without the least difficulty touch any one of the fish, or put your finger upon the crocodile's eye, when it really is twenty or thirty feet under water" (151). Bartram's sudden return to the safety of society gives the illusion of nature's complete transparency and artificiality. The alligators are no longer threatening to eat him, but can be observed at a safe distance; paradoxically, this safe distance allows for imagining "the picture to be within a few inches of your eyes." In discussing this passage, Irmscher comments on this illusion of closeness and distance: "The reader becomes a museum visitor; putting her finger on the eye of the alligator, she relishes the illusion of proximity and tangibility suggested by specimens that appear to be 'within a few inches' of her eyes yet are 'really' beyond her reach, 'twenty or thirty feet' away" (41). Irmscher's point about the illusion of closeness and the reality of distance proves relevant to a consideration of the alligator as a medium of exchange. As a medium of exchange, the alligator can be figured as an immediate threat to identity while the actual animal is far removed from the scene, if not entirely forgotten. While the alligator gives material shape to fears and anxieties, readers remain free from the imminent threat of bodily harm that Bartram experienced. In this scene, however, Bartram is still conscious of the reality of the animals he observes; he acknowledges that the only reason the scene he witnesses is peaceful is because the clearness and transparency of the water has necessarily altered the conduct of the animals:

> And although this paradise of fish may seem to exhibit a just representation of the peaceable and happy state of nature which existed before the fall, yet in reality it is a mere representation; for the nature of the fish is the same as if they were in Lake George or the river; here the water or element in which they live and move, is so perfectly clear and transparent, it places them all on an equality with regard to their ability to injure or escape from one another […] here is no covert, no ambush; here the trout freely passes by the very nose of the alligator, and laughs in his face. (151)

While this scene emphasizes the natural world, it also reveals how Bartram uses nature to construct and reflect a vision of democracy in American society. In examining Bartram's blending of natural history observation and political discussion, Douglas Anderson argues that the remoteness of nature in Bartram's text "enables Bartram to place his own eventful times in a context wide enough to provide a basis for measured skepticism as a corrective for patriotic fervor" (5). Furthermore, this idyllic scene conveys its own sense of monstrosity, of disturbance, because it does not fit with the earlier encounters Bartram described in the preceding pages. Readers are left with the challenge of determining which image should be given more weight. The paradise of fish exemplifies both a harmonious, pastoral view of nature that does not threaten human society and a model of an idealized democratic citizenry; the earlier encounters with alligators suggest a threatening natural world that humans would be wise to conquer and subjugate. By presenting readers with these competing visions, Bartram's text calls attention to the interplay between the reality of physical, material animals in real nature and animals as abstract symbols of human society. Similarly, this interplay is inherent in the natural history correspondence networks Bartram participates in, networks that depend on nature's dual role as specimen and symbol.

In the second instance of a conflicted crocodilian encounter, Bartram, as part of a group of travelers, comes upon an alligator. During this encounter, Bartram does not emphasize his individual terror and uncertainty in the face of the monstrous alligator, but

rather the cruel treatment of the alligator by humans. As an alligator threatens the travelers' camp, Bartram watches as the other men taunt and torture the alligator before killing him:

> It was a rare piece of sport. Some took fire-brands and cast them at his head, whilst others formed javelins of saplings, pointed and hardened with fire; these they thrust down his throat into his bowels, which cause the monster to roar and bellow hideously […]. Some were for putting an end to his life and sufferings with a rifle ball, but the majority thought this would too soon deprive them of the diversion and pleasure of exercising their various inventions of torture: they at length however grew tired, and agreed in one opinion, that he had suffered sufficiently; and put an end to his existence. (210)

This scene differs markedly from Bartram's earlier descriptions of alligators invading his camp when he was alone in the swamps. In the earlier scenes, the emphasis was on his survival, not on the violence inflicted on the alligator. This discrepancy reflects Bartram's larger distaste for humans killing animals, a distaste readers are first conscious of in the Introduction when Bartram expresses his sadness when one of his companions shoots and kills a mother bear and her cub.[39] Furthermore, the discrepancy supports my argument that his early solitary encounters with alligators were closely linked with his personal, psychological journey. He was so consumed with his own interior experiences that he fails to comprehend fully the alligators' existence as sentient beings. In the scenes with Bartram alone with the alligators, the alligators become abstract symbols of his doubts and anxieties. In this later scene when Bartram, in company with other travelers, meets an alligator, he is able to acknowledge the physical animal and not the monstrous abstraction. Yet, by recounting his experience in *Travels*, Bartram transforms the real alligator into a medium of exchange. In other words, the alligator is no longer

[39] In discussing Bartram's attitudes towards animals, Kerry S. Walters writes that Bartram "is horrified at the human disregard for animal life and well-being exemplified in the wasteful bloodsport so popular among his contemporaries" (157).

merely an animal, but an object invested with symbolic and economic value that is traded across the transatlantic correspondence networks of natural history.

In recording his experiences with alligators (both his narrative accounts and empirical observations), Bartram turns representations of alligators into a medium of exchange, which he can distribute via the correspondence network of natural history discourse. Hallock remarks that, "with the publication of *Travels* in 1791, Bartram presents what began as a private journey for public consumption" ("On the Borders" 112). His encounters with alligators would become a memorable and vivid component of his private journey made public. According to Gaudio, Bartram's battles with alligators in *Travels* serve "as a testament to his triumph over these fears. It was a book that announced more than the self-evidence of nature to an American public; it was also an announcement of Bartram's own self-evidence as a naturalist. As a public declaration of self, […] it was indeed the result of a long struggle to establish a professional identity for himself" (13). Although Bartram may indeed have triumphed over the alligators by avoiding injury or death, the fears and doubt he expresses about the alligator would become a dominant and enduring image of crocodilians. Despite Bartram's later attempts in *Travels* to recoup alligators and paint them as quasi-sympathetic victims of human cruelty, their representation as "orally sadistic monsters" that plague his psychological journey becomes the enduring image proliferated in transatlantic correspondence networks. A prime example of this is Bartram's drawing "Alegator of St. Johns," which depicts two alligators eating fish in the St. Johns River. Gaudio describes the alligators in this drawing "as dragonlike creatures straight from a bad dream" (12). The power of this image of "dragonlike" alligators overpowers Bartram's other, less monstrous depictions of them. With the publication and circulation of Bartram's *Travels*, these verbal and visual images of alligators enter into the body of knowledge and cultural ideas about

crocodilians that would influence future naturalists and literary writers.[40]

Less dramatically terrifying than the alligators (yet potentially presenting a more immediate threat), Bartram also faced encounters with biting, stinging insects, including horseflies:

> They are armed with a strong sharp beak of proboscis, shaped like a lancet, and sheathed in flexible thin valves; with this beak they instantly pierce the veins of the creatures, making a large orifice from whence the blood springs in large drops, rolling down as tears, causing a fierce pain or aching for a considerable time after the wound is made; there are three or four species of this genus of less size but equally vexatious, as they are vastly more numerous, active and sanguineous; particularly, one about half the size of the first mentioned, the next less of a dusky colour with a green head; another yet somewhat less, of a splendid green and the head of a gold colour; the sting of this last is intolerable, no less acute than a prick from a red-hot needle, or a spark of fire on the skin; these are called the burning flies. (310)

While the alligators symbolically mesh with Bartram, they never bite or seriously molest him as the insects do. Perhaps the flies are not as provocative or alluring an animal as the alligator (an echo of Jefferson's preference for size and magnitude in animal specimens), or perhaps it is the fact that there is physical contact and intimacy with the fly – it touches, bites, takes blood, and leaves a mark on the skin – that renders it less worthy or less desirable of sustained attention. This overlooking of the insect world plays a major part in early Americans' ignorance over causes of yellow fever, discussed in the next two sections.

## Animal Abstractions And Agential Pathogens

Echoing the dual conceptions of alligators in *Travels* as both abstract symbols and material specimens, animals within the writings of Benjamin Rush operate simultaneously as abstractions and as material, physical agents that exert force and

[40] Including Romantic writers William Wordsworth, Samuel Taylor Coleridge, and Thomas De Quincey. See Ashton Nichols, "Roaring Alligators and Burning Tygers: Poetry and Science from William Bartram to Charles Darwin," 304-15, pp. 305-306; Mark Van Doren, editor's note in *Travels of William Bartram* p. 5.

pressure on the human body. Although both conceptions are at play in Rush's work, he only makes explicit reference to animals as abstractions. Janie Hinds analyzes Rush's deployment of the animal as "a flexible model for health and sickness" in the human body (641). The nonhuman animal, in its abstraction, she writes, functioned "as a window into health and fitness," that was "nominally free of 'culture' and thus a model of nature's intentions for the body" (655). Throughout *Three Lectures Upon Animal Life*, Rush makes hardly any mention of specific animal species, and then only briefly and generally such as the following: "The elephant, the fox, and the ant, exhibit strong proofs of thought; and where is the school boy that cannot bear testimony to the anger of the bee, and the wasp?" (71). In passages such as this, Rush is not interested in any specific animals, nor is he personally interacting with them; the elephant, fox, ant, bee, and wasp are purely symbolic figures that assist him in laying out his argument about animal life. The idea of animal abstractions was also crucial to vitalist materialist ideas about animate matter and circulating fluids. Rush uses the general figure of the animal as a way of discussing the animating forces of matter as it relates to human life. Hinds refers to this as iatromechanics, or a modified humoral system that involved the circulation or "free movement of what some called 'animal spirits,' the basic animating fluid of life" (647). Rush's theorization of animal life also bears traces of the vitalist materialism Allewaert discusses: "Vitalist materialism and the animism that preceded and sometimes inflected it […] suggest that atoms and other invisible particles and fluids (for instance, the 'seeds' of disease as well as phlogiston or mesmeric fluid) possess agency that is not dependent on their organization into bodies" (52). Central to vitalist materialism and crucial to Allewaert's arguments is the belief that "the organized body as such [was not considered] to be the sole locus of human agency" (53).

In *Three Lectures*, originally delivered to Rush's students at the University of Pennsylvania and later published in 1799 at his students' request, Rush divides animal life into three parts: "*motion—sensation—*and *thought*. These three, when united, compose perfect life. It may exist without thought, or sensation; but neither sensation, nor thought, can exist without motion" (5). Rush describes how the human body is comprised of a series of interrelated parts:

> The whole human body is so formed, and connected, that impressions made in the healthy state upon one part, excite motion, or sensation, or both, in every other part of the body. From this view, it appears to be an unit, or a simple and indivisible quality, or substance. Its capacity for receiving motion, and sensation, is variously modified by means of what are called, the senses. It is external, and internal. (6-7)

The body, as defined by Rush, is made of distinct, yet integrated, parts that all affect and impinge on one another. While describing the body as unified, simple, and indivisible, Rush emphasizes the "perfect" body in good health. Yet, as I show below, that was not always the case. The focus on how the body functions as a unit made of parts opens the possibility that those parts can be replaced, taken out, modified, or altered by stimuli. Rush breaks down such stimuli based on how they affect the different parts of the body:

> the action of the brain, the diastole, and systole of the heart, the pulsation of the arteries, the contraction of the muscles, the peristaltic motion of the bowels, the absorbing power of the lymphatics, secretion, excretion, hearing, seeing, smelling, taste, and the sense of touch, nay more, thought itself, are all the effects of stimuli acting upon the organs of sense and motion. These stimuli have been divided into external, and internal. The external are light, sound, odors, air, heat, exercise, and the pleasures of the senses. The internal stimuli are food, drinks, chyle, the blood, a certain tension of the glands, which contain secreted liquors, and the exercises of the faculties of the mind. (8)

All stimuli and resulting effects involve movement, the circulation or embodied transmission of fluids or signals. Stimuli are taken into the physical body and produce changes in the way it operates, either by animating the "mass of dead matter" that is the

body (2), or, in times of sickness, by disrupting the normal flow or circulation of animal life.

Odor as a stimulus holds an important place for Rush's conception of the human bodily system and how external forces can dismantle it (as shown below in Rush's writings about the Yellow Fever). In *Three Lectures*, Rush asserts:

> Odors have a sensible effect in promoting animal life. The greater healthiness of the country, than cities, is derived in part from the effluvia of odoriferous plants which float in the atmosphere in the spring and summer months, acting upon the system, through the medium of the sense of smelling. The effects of odors, upon animal life, appear still more obvious in the sudden revival of it, which they produce in cafes of fainting. Here the smell of a few drops of hartshorn, or even of a burnt feather, ahs frequently in a few minutes restored the system, from a state of weakness bordering upon death, to an equable and regular degree of excitement. (13)

Focusing on the restorative effects of odor, Rush's writing here nonetheless reveals how outside particles and matter can enter and subsequently alter the human body. It follows that, if odors can restore animal life, they can also disorder it. In concluding *Three Lectures*, Rush speculates:

> It is not necessary to be acquainted with the precise nature of that form of matter which is capable of producing life, from impressions made upon it. It is sufficient for our purpose, to know the fact. It is immaterial moreover whether this matter derive its power of being acted upon wholly from the brain, or whether it be in part inherent in animal fibres. The inferences are the same in favour of life being the effect of stimuli, and of its being as truly mechanical, as the movements of a clock from the pressure of its weights, or the passage of a ship in the water, from the impulse of winds, and tide. (74)

Commenting on this passage Allewaert argues that Rush's writing "suggests that matter's germinal power is not at all immaterial because it is a property inherent to 'brains' or 'fibres.' That brain matter or fibrous matter might hold germinal power invokes a materialist cosmology in which agency is a power implicit in all matter, even if its germination requires the impression of stimuli" (55). Allewaert contends that the figure of the ship Rush alludes to, a figure that "is not simply an independent, well-organized

machine but rather one composed of and pressed upon by a number of other material forces, […] is the more apt metaphor for Rush's conception of bodies and other systems" (55). She further notes, as I have already pointed out, that he "leaves open the possibility that certain forms of matter might also disorganize bodies" (55). To be more specific, Rush, in *An Account of the Bilious Remitting Yellow Fever*, identifies exhalations and putrid air as exactly the kind of matter that disorganizes and effects profound changes in human bodies.

In *An Account*, Rush repeatedly connects the fever to "noxious effluvia," "a peculiar smell," "offensive smell," and "exhalations" (12-13). While some medical professionals, he notes, believe "the contagion originated from some damaged coffee, or other putrified vegetable and animal matters," Rush adamantly believed "that the disease originated in the putrid exhalations from the damaged coffee" (19, 24). In either case, there is a change or shift in matter (be it animal- or plant-based) that releases contagion or putrid exhalations that invade and infect the human body. Allewaert argues:

> Rush's account of dense exhalations comes close to imagining a shapeless material force born from American air and plants and emanating from swamps, gutters, and marshes, but he was not particularly interested in tracing the monstrous effects of agencied matter. Instead, he attempted to determine how human 'reason and labor' can combat the production of the exhalations that cause yellow fever. (59)

However, I would argue that Rush went to great pains to detail "the monstrous effects of agencied matter" and trace its effects on human bodies. Not only does he offer detailed discussions of the debility brought about by the contagion (28-30), but he also believed that the contagion combined with other stimuli and forces to sicken bodies: "The contagion when received into the body, was frequently innocent, until it was aided by the addition of a new, or by the abstraction of a customary stimulus" (31). These aiding causes included fear, grief, cold, sleep, and excessive purging and bleeding, all of which

Rush explains in detail (32-35). Rush also spends forty-three pages describing the physical effects Yellow Fever has on every part of the body, both when it is still living and after death (39-72, 112-122).

Despite all of his efforts to understand both the effects of yellow fever and how to combat the putrid exhalations he thought caused it, Rush never discovered the fever's true cause and agents of transmission. Complicating the vitalist materialism in Rush's writing are mosquitoes and viruses, two largely overlooked historical actors in the Greater Caribbean world in the eighteenth century. J.R. McNeill argues that "ecological change resulting from the establishment of a plantation economy improved breeding and feeding conditions for […] mosquito species, helping them become key actors in the geopolitical struggles of the early modern Atlantic world, if not, strictly speaking *dramatis personae*" (3).[41] The role of actors in yellow fever transmission also includes the virus itself, whose uncomplicated motivations, McNeill argues, contrast markedly from human motivations (3-4). While they were essentially silent actors, "the mosquitoes and pathogens were there, flitting around the Greater Caribbean, and in pursuit of their uncomplicated goals they had effects on human affairs that we can see reflected in archives and memoirs" (8). Allewaert argues that, with vitalist materialist thinking "no material body was ever emphatically solid […], and no material body could be definitively fixed because its animate matter was always connecting it with other substances" (61-62). McNeill's argument about mosquitoes and pathogens extends Allewaert's argument; it is not just "other substances" that connect with material bodies through animate matter, but other bodies as well.

[41] McNeill's argument shares similarities with Carolyn Merchant's claim that nature operates as a historical actor (7-8) and Virginia DeJohn Anderson's argument about the role of domestic animals as actors in the English colonial conquest of the New World (3-5).

The yellow fever virus inhabited the bodies of mosquitoes; McNeill calls mosquitoes "the primary habitat for yellow fever virus" (39). Mosquitoes then transmit the virus to human via the physical contact of bites – the embodied transmission of the virus – "female *A. aegypti* are finicky eaters: They bite humans over 90 percent of the time" (42). Some species of monkeys (who "immigrated" to the Caribbean) could also act as hosts to the yellow fever virus, which helped increase the ability of mosquitoes to transmit the yellow fever virus to humans (49-50). The virus also introduces another combining and blending of creatures. McNeill also looks at the role of ships in transmitting mosquitoes and yellow fever viruses: "Ships in effect were super-vectors, efficiently moving both mosquito and virus from port to port. And ports in effect were super-hosts, providing warm welcomes for mosquito and virus alike. Thus the sugar revolutions created a new world of plantations, population increase, ships, and ports – a world almost tailor-made for the yellow fever vector and virus" (51-52). The figure of the ship is once again evoked as the primary mode of transport for any and all objects, beings, and entities across the transatlantic world. Unlike Allewaert's figurative use of the ship as a model for Rush's conception of the human body, McNeill shows how a ship could literally play a crucial role in altering and changing human and nonhuman bodies.[42] The relationship between viruses, mosquitoes, humans, and other nonhuman animals attests to the entanglement and enmeshment of beings in the natural world. The mosquitoes themselves become a kind of assemblage of virus-mosquito-human- (and sometimes other mammals) – almost the mosquito version of a parahuman. Similarly, human bodies are also altered through their tactile, physical encounters with virus-carrying mosquitoes,

[42] Parsons and Murphy, as shown in the last chapter, similarly show how real ships, as "ecosystems," could affect the material specimens of natural history.

either through death or the development of immunity from the Yellow Fever.[43] Either way, contact with these nonhuman others prompts a radical change in the constitution and integrity of the human body as a self-contained system. Although Rush's writing does not attend to the mosquito-human enmeshment, the ideas he expresses are not entirely incompatible or averse to such thinking. As Rush notes before his extensive catalogue of the fever's effects on the body, "Whatever be the specific quality of the matter which produced the fever, it is certain that it acted as a stimulus upon the whole system" (28). Such sentiments echo the earlier cited passage from *Three Lectures* in which Rush emphasizes the importance of animate matter to larger bodily systems. As discussed above, Rush's theories fit with vitalist materialist thought; Rush believed there were real, material actors present, although not immediately visible, that entered into human bodies and disorganized and altered them. So while Rush incorrectly identified the historical actors that caused the Yellow Fever, he was on the right track, and his writing shows a willingness to account for nonhuman forms of agency.

## Diseased Bodies And Contagious Sympathy

"A Narrative of the Proceedings of the Black People, During the Late Awful Calamity in Philadelphia, in the Year 1793," written by Richard Allen and Absalom Jones[44] provides an interesting counterpart to the many white-authored accounts of Philadelphia's 1793 yellow fever epidemic, including Benjamin Rush's account discussed above. Allen and Jones assisted Rush in aiding victims of the Yellow Fever, and their narrative was written partly as a refutation of allegations made by the successful

[43] Similarly, the process of inoculation shows how human bodies can be altered significantly through contact with the injection of live virus/infected tissue as a way of generating immunity – while inoculation was not a part of the Yellow Fever epidemic, smallpox inoculation was the source of fierce debate in the Boston Inoculation Controversy of 1721. See Kelly Wisecup's article "African Medical Knowledge, the Plain Style, and Satire in the 1721 Boston Inoculation Controversy."

[44] Both born into slavery, Allen and Jones were influential abolitionists, clergymen, and writers. In 1794, Allen founded the African Methodist Episcopal Church, and Jones was the first African American to become an ordained priest in the Episcopal Church.

Philadelphia publisher Matthew Carey in his widely read and distributed pamphlet *A Short Account of the Malignant Fever* (1793) in which Carey accused Philadelphia's black citizens of unfairly profiting from the epidemic by charging inflated prices for their services and stealing from the recently deceased. Building on the small body of existing scholarship on Allen and Jones's "Narrative," I suggest that their depictions of diseased bodies, created through shifting animal materiality and interspecies encounters, facilitate a form of citizenship and increased visibility for African Americans. As Philip Gould notes, Allen and Jones's text's "major premise and rhetorical design make an invisible history […] eminently visible" (174). He argues that Allen and Jones individualize black sympathy in order to enhance it: "Refusing to perpetuate the anonymity of the suspect black masses […], Jones and Allen require readers to acknowledge black subjectivity" (175-176). This acknowledgement is achieved, I argue, through the body and its materiality. Also addressing the concept of African Americans "social invisibility" in the early national period, Julia Stern notes "the way in which blacks are excluded from the community's imagination of sympathy" (221). She argues that Allen's and Jones's "narrative efforts re-circulate the blood of sympathy throughout the public body—both imagined and real" (235). Stern also discusses fellow feeling in terms of contagion: "sentimental fellow feeling itself unfolds on an affective continuum also occupied by cohabitation, inhabitation, and, ultimately, possession. Verging precariously close to parasitism, heightened sympathy can blur into dispossession, estrangement, and alienation—social death and live burial—for the overtaken host" (237). While Stern speaks of contagion and the circulation of blood more symbolically, the very real, corporeal processes of the circulation of blood and contagious pathogens across multiple species is crucial to the way in which African American bodies became increasingly visible and recognized as citizens within "A Narrative." The diseased bodies produced by contagious circulation

across species lines operate as a path to citizenship for African Americans, a path predicated on shifting materiality of animal bodies. Yet the form of citizenship and identity that emerges from diseased bodies is a vexed form of citizenship, as it is inherently unstable and opens up the troubling potential for African Americans to be dehumanized in ways that further entrench systems of oppression and prejudice.

Previous critics have discussed the visibility of poor and non-white bodies in early America. Gwenda Morgan and Peter Rushton show how "the bodies of subordinated groups were more visible to those who ruled, owned, or controlled them, and could therefore be made known to a wider 'public' through representations of different kinds in private and public communications (mostly printed)." (42). Simon P. Newman argues that the bodies of the poor were "marked, contained, and disciplined" by early national Philadelphia institutions (11). The emphasis on bodies in these arguments revolves around how humans, human society, and human institutions shape and control bodies, both their own and others'. They have not examined how those human bodies, societies, and institutions are undeniably influenced and shaped by nonhuman forces and actors. In discussing yellow fever concerns during this period, Debbie Lee draws similarities between anxieties over yellow fever and anxieties over slavery and the slave trade, arguing both issues "kindled a series of specific concerns […] about what happened when 'foreign' matter, or 'foreigners,' became part of the physical or political body" (676). Such entry of foreign matter into bodies threatens to dissolve both personal and national borders, as yellow fever turns the body against itself (679-680).[45] Lee further argues that "yellow fever putrefied or dissolved the body's vital organs and thus confounded definitions of the self and its alterity (or abjection) in a biological and completely empirical

[45] Lee focuses on Europeans infected with yellow fever. However, contrary to the common belief that blacks were immune to certain diseases such as yellow fever, Harriet A. Washington observes that slaves were quite vulnerable to respiratory infections and that their immune systems "were unfamiliar with, or naïve to, microbes that caused various pneumonias and tuberculosis" (29).

sense" (694). This definition of self, I argue, should be altered or adjusted to acknowledge the enmeshment with the more-than-human world. Yet it is not just that the body is turned against itself; rather, yellow fever reveals that humans' bodies are not entirely their own, but rather assemblages made up of many organisms that combine, mesh, and interact with each other.

Allen's and Jones's "A Narrative" also employs sentimentality (particularly the concept of sentimental wounding) as a way to claim citizenship. Allen and Jones utilize the horror of the diseased body and the pain of familial separation to generate sympathy from readers and reinforce African Americans' inclusion as citizens in American society. Throughout "A Narrative," Allen and Jones emphasize the horrific effects the yellow fever has on the human body. The sick are so "loathsome" that even "nature shuddered at the thoughts of the infection" (8). Moreover, people's indifference to diseased bodies is as repulsive, if not more, then the sick people themselves. In one passage reporting the conditions at a hospital, Allen and Jones remark: "The dying and the dead were indiscriminately mingled together. The ordure and other evacuations of the sick, were allowed to remain in the most offensive state imaginable. Not the smallest appearance of order or regularity existed. It was in fact a great human slaughter house, where numerous victims were immolated at the altar of intemperance" (9). Scenes like this provide a field for Allen and Jones to exhibit their sympathy for this outrageous treatment. It also allows them to attest to the ability of other African Americans to feel a sense of horror and sympathy for the diseased body. When discussing the hardships the nurses had to bear when taking care of sick patients, they explain that "the patient raging and frightful to behold; it has frequently required two persons, to hold them from running away, others have made attempts to jump out of a window, in many chambers they were nailed down, and the door was kept locked, to prevent them from running away, or breaking their

necks, others lay vomiting blood, and screaming enough to chill them with horror" (14). In this passage and several others in "A Narrative," Allen and Jones demonstrate that they, as well as other African Americans, feel the horrors of the illness the same as their readers, and are apparently more feeling than many of the white individuals they write about.

Along with holding up the diseased body as a site of mutual horror, Allen and Jones also utilize the pain of familial separation as a source of sympathy that reinforces their status as feeling members of the American republic. In *The Masochistic Pleasures of Sentimental Literature*, Marianne Noble argues:

> In sentimentalism, readers 'enter, as it were, into another person,' not simply by imaginatively observing others' suffering, in particular the painful interpersonal separations that to some degree or other are part of their own past experiences. Sentimentalism does not simply idealize the compassionate observation of another; it offers an intuitive and visceral understanding of the other's fear and anguish. (65)

We do not just imagine or experience another person's pain; such identification triggers our memories of our own past experiences, which allows for an embodied, "gut-reaction" understanding of another's suffering. According to Noble, "sentimentality exploits the pain of that ontological wound; ironically, allusions to loss in this genre function as a unifying mechanism" (66). In "A Narrative," this unifying mechanism validates the character and experiences of African American citizens. Scenes of mother and child separation, which exist as the predominant wound in sentimental literature, provide Allen and Jones with what they refer to as "several affecting instances" (18). They describe entering a house and finding dead parents and "none but little innocent babes to be seen, whose ignorance led them to think their parent was asleep; on account of their situation, and their little prattle, we have been so wounded and our feelings so hurt, that we almost concluded to withdraw from our undertaking, but seeing others so backward, we still went on" (18). This first scene is then repeated twice more as they note "the distress of the

child was so great, that it almost overcame us," and "their cries and the innocent confusion of the little ones, seemed almost too much to bear" (18). Allen and Jones figure their emotional response to these orphaned children as a wound that threatens to overwhelm them. In fact, this wound seems of even greater concern than the threat that the fever will overwhelm and infect their bodies. Furthermore, this threat is something that readers can feel and respond to as well; it facilitates a sense of community and connectedness in the face of these tragic scenes of mother-child separation as a result of the epidemic. More importantly, it places African Americans within the bounds of this sympathetic community, not outside of it (which was what was partly implied in Matthew Carey's writings to which Allen and Jones were responding directly). Such a framing of the emotional and sympathetic actions of African Americans forms an implicit argument against slavery, which becomes explicit in the addendums included at the end of "A Narrative," particularly "An Address to those who keep Slaves, and approve the practice," "To the People of Colour," and the untitled poem that concludes the text. Allen and Jones filter the rhetoric and tropes of sentimental literature, which would become so prominent in nineteenth-century antislavery texts, through the experience of diseased bodies, which became diseased as a result of shifting animal materiality of virus-mosquito-human assemblages. These assemblages, while not known or understood at the time, and following their own motivations independent of human society, nonetheless shape and influence the course of human events. In the case of the yellow fever epidemic, their actions created the opportunity in which African Americans could become more visible as valuable citizens and members of society. Allen's and Jones's "A Narrative" rightly emphasizes the diseased body as the site where this transmission and transformation takes place. Constantly transmitted and circulated bodies in all of the texts examined in this chapter combine and mesh with each other to create new assemblages and bodies.

The new forms of craturehood that result are never static or finalized, and always remain open to the influence of new actors. The constant transmission of animal bodies in natural history and the attendant shifts in materiality have the power not only to transform bodies, but to dissolve them as well. The dissolving of bodies and boundaries between bodies paradoxically leads to the increased visibility of bodies as such, as shall be explored in the following chapter.

## Chapter 4

## Dissolving Into Visibility: Bodies In Interspecies Encounters

The shifting materiality of animal bodies reveals the human body to be an open porous entity. Susan Scott Parrish notes how seventeenth- and eighteenth-century Europeans and European-Americans worried about the possibility that American climate and nature would alter and degenerate their bodies (89). This potential corruption of English bodies by American nature was viewed negatively, something to either be prevented or disproved (as in the case of Jefferson's efforts to disprove degeneracy theories). The porosity of the human body in early America raised concerns about the nature and construction of race. As Katy L. Chiles argues, race in early America was transformable, not a fixed biological identity:

> Because one might morph from one status to another (in the sense of visible alteration of the exterior body), potential changeability constituted a central aspect of race. These examples point up a *temporal* component particular to racial formation in early America. Because of beliefs about the plasticity of one's body, race is less a statement about what one 'is' internally (and how that might or might not be visible on the skin), but, rather, what one *remains*—for a shorter or longer period of time—externally. Rather than a 'truth' that might or might not be displayed on the body, racial identity is a condition of the body that one manages to sustain. This accounts for the differentiation between later understandings of passing as a certain kind of misidentification of an unchanging racial identity versus an earlier one as a type of transforming into another racial identity. (110)

Key to influencing racial identity, Chiles argues, is the environment and individuals' relation to and interaction with it, including, I would add, nonhuman animals. My emphasis on porous bodies, race, and the environment also pulls from recent discussions of obeah in early America. Justine Murison, discussing obeah's influences on eighteenth-century tropical medicine, theorizes a distinction between porous and buffered selves, using Bruno Latour's distinction between facts and fetishes in conjunction with Charles Taylor's concept of the modern "buffered" self and pre-secular "porous" self (145-

147).[46] Murison focuses on late eighteenth-century Western medicine and African-influenced obeah practices, arguing that a pattern emerges in texts that deal with both obeah and Western medicine: "While the ostensible goal in these texts is to cordon off enchantments from reality (the creation of that 'ponderous and formidable reality') this division does not hold firm in practice. Tropical disease becomes one vector for modern enchantment, in which mysterious spirits invade, possess, and disrupt the Western body" (156). Although concerned with medical texts and religious and spiritual influences on the body, Murison's argument is relevant to my focus in a number ways. First, it theorizes a body that has been and is always open and porous, despite modern or Enlightenment claims to the contrary, a porosity not just to spiritual forces, but to the matter and bodies of the more-than-human world. Second, it attends to non-white bodies and non-Anglo systems of knowledge production.

Attending to shifting animal materiality reveals one way in which non-European, non-white, and non-male individuals were figured in the discipline of natural history. As other critics such as Parrish, have argued, non-white, non-male individuals were vital participants in the production of natural historical knowledge (15-16). Early American natural history was not created solely by Europeans, but, as Parrish observes, from "various peoples, issuing from around the Atlantic world, [who] made facts about America in vexed chains of communication" (23). The "vexed chains" Parrish describes bear similarity to the "long chain of transformations" involved in Latour's concept of circulating reference. Discussing how scientific knowledge is created (using the specific example of soil samples from the Amazon forest), Latour argues that the transfer from soil out-in-the-world to soil as represented by words, numbers, graphs, etc. is produced, not through correspondence or gaps, but through a phenomenon he terms "circulating reference"

[46] See Latour, *On the Modern Cult of the Factish Gods*, 11-12; Taylor *A Secular Age*, 27-41.

(24). Latour contends that “through successive stages [science] link us to an aligned, transformed, constructed world. We forfeit resemblance, in this model, but there is compensation: by pointing with our index fingers to features of an entry printed in an atlas, we can, through a series of uniformly discontinuous transformations, link ourselves to Boa Vista” (79). This chain of transformations circulates or flows both ways, Latour argues, “and in this way the double direction of the movement of reference is amplified. To know is not simply to explore, but rather is to be able to make your way back over your own footsteps, following the path you have just marked out” (74). But what happens if some other actor destroys or alters that path? How are the animal specimens of natural history differ from the soil samples Latour discusses? Becoming an animal specimen in early American natural history most commonly meant the death of the animal, resulting in a change in materiality either through decay or preservation. Such a change in materiality necessarily alters the chain of transformations, creating either a triangular relationship between word, specimen, and world, or creating dead ends at the animal specimen and making it impossible to trace the specimen back to the natural world from which it came.

The permeability of human-nonhuman boundaries and the entanglements produced by it lend greater visibility to non-white and non-male bodies. In natural history discourse, bodies that might commonly evade notice by both present-day readers and critics and early American writers and readers become noticeable, or visible, at points where animal materiality shifts. The bodies can literally become more noticeable or visible or there occurs a more generalized awareness of physicality and materiality as qualities that should to be recognized as playing a fundamental role in the creation of natural knowledge. The moments of shifting animal materiality make non-white and non-male bodies more visible because it weakens or destabilizes existing dualities and hierarchies, calling into question the hegemony of the white male naturalist as sole arbiter

of natural history knowledge creation. My analysis does not intend to equate or reduce non-white humans to the status of animals; rather I draw on and build from the previous chapter's discussion of parahumanity and creaturehood. The parahuman who is not fully human yet not fully animal is not less than or inferior to the human, but beside the human. This chapter analyzes a number of texts in which shifting animal materiality and the permeability of human and nonhuman bodies heightens the visibility of bodies as such and raises questions about definitions of agency, personhood, and creaturehood. Shifting animal materiality makes non-white and non-male bodies more visible because it weakens or destabilizes existing dualities and hierarchies, calling into question the hegemony of the white male naturalist as sole arbiter of natural history knowledge creation. Beginning with J. Hector St. John de Crevecoeur's writings, including *Letters from an American Farmer* (1782) and *Sketches of Eighteenth-Century America* (1925), I show how moments of shifting materiality and inter-species encounters lead to an increased visibility of black bodies, with troubling consequences for the human and more-than-human world. Turning then to Leonora Sansay's *Secret History; or, the Horrors of St. Domingo* (1808), I argue that the novel is notable not just for its exploration of issues of race and gender as they relate to domestic and colonial issues, but how these issues are invariably tied to bodies and the more-than-human world. In *Secret History* networks coalesce and overlap, providing moments of dissolve where the distinctions and boundaries between bodies and species become uncertain and permeable and highlighting alternative modes of natural history description based more on sound and touch than vision and influenced by reporting of local knowledge and experience than firsthand empirical evidence. I conclude the chapter by examining selected writings and correspondence by Audubon, including *The Birds of America* (1827-1838) and *Ornithological Biography* (1831-1839), among many others. Audubon's work shares with

Crevecoeur's a concern both about race as a fluid, transformable category and about inter-species encounters brought about through shifting materiality. Moreover, Audubon's work is preoccupied by the idea of embodied transmission. In transmitting representations of animals, he emphasizes the material underpinning of the mind, vision, and perception of both humans and nonhumans, and in every stage of the circulation of animals, he foregrounds the physical and the material. Yet the embodied transmissions of Audubon's work are founded on the dissolve of animal bodies, simultaneously increasing their visibility as natural history specimens and dissolving their physical bodies.

## Consumed And Consuming Bodies

The focus of extensive critical attention, Crevecoeur's *Letters from an American Farmer* is frequently analyzed in terms of its epistolarity. Regarding early American epistolarity in general, the critical discussion often focuses on the connection between the letter-writer's body and the letter.[47] However, these critics do not attend to other bodies (both human and not) that are depicted and discussed in letters. If the letter is regarded as a stand-in for or representative of the letter writer's body, does the same hold true for the animal specimens described in natural history correspondence? With a work of epistolary fiction, such as *Letters*, the correspondence between letters and corporeality becomes more complicated, yet is still of central concern. Elizabeth Heckendorn Cook argues that, with Crevecoeur's *Letters*, "corporeality can no longer be abstracted or transcended, its politically masculine status guaranteed by participation in the public sphere. Instead, the body in all its vulnerable materiality […] returns to center stage as the site of a cultural anxiety about power and authority" (143). She further contends that in *Letters*, "the body becomes a vehicle of sympathy, which is all that is left in a society

[47] See Elizabeth Hewitt, 2; Elizabeth Heckendorn Cook, 2.

where citizenship is impossible" (171). Such an attention to corporeality, I argue, coincides with interspecies encounters and the dissolve of bodily boundaries. As I will show in my analysis of Letter IX, corporeality is most visible in *Letters* in moments where bodily boundaries begin to dissolve in the face of and as a result of interspecies encounters. This dissolve creates a kind of strength through permeability and vulnerability, and heightens the visibility of non-white bodies in natural history discourse. Such permeability is distinct from ideas about humoral theory in which climate and atmosphere influence the physical body.[48] While those forces do indeed influence and shape corporeal bodies in meaningful and substantial ways, attention must also be paid and credit given to other species that combine and mesh with human bodies.

This acknowledgement of the interconnection between humans and the natural world differs markedly from earlier considerations of Crevecoeur's engagement with the natural world. For example, Pamela Regis elaborates on Crevecoeur's comparison of humans to plants:

> When James describes the 'type' of American in the manner of a natural historical specimen, by implication he takes all Americans out of history, too. Like plants, they exist in certain climates and assume certain characteristics because of their environments. […] They are the natural produce of the countryside; they are not the product of historical circumstance, nor do they, themselves, make history, aside from their unremarkable personal histories. (129)

While she rightly identifies the role environment plays in shaping both plants and humans, she erroneously separates nature from history, culture, and time. Plants and people are products both of their natural environments and historical circumstances. Crevecoeur might fantasize a world in which nature stands apart, but he remains all too aware that this is merely a fantasy that is at odds with the world around him. Unlike Regis, Paul Outka, in discussing Crevecoeur, acknowledges that "the American

[48] Parrish argues that "Crevecoeur stood at the end of a long tradition of theorizing about the climate's effects on race, sex, intelligence, generation, politics, and cultural achievement" (20).

landscape is inescapably and explicitly political" (79). Natural history does not sit apart from the social and political realm; it is engaged actively in it. Similarly, Iannini argues that, in Crevecoeur's work, "the natural history specimen […] served as a lens for contemplating West Indian slavery" (136). In part, the physicality and materiality of natural history specimens facilitates such contemplation, as it creates a tangible presence that cannot be easily ignored. Since Crevecoeur's text is a work influenced by natural history and not a natural history text itself, it does not feature specimens. It emphasizes, however, the physical, material bodies that populate the natural world. These bodies are not merely lenses for contemplation of slavery, but become visible as material entities that interact and combine with the natural world that surrounds them. In discussing obeah and its influence on bodies and relationship to the plantation system, Michelle Burnham draws on Didier Deleule and Francois Guery's concept of the "productive body" that represses the social body and emphasizes the individual isolated "biological body," arguing that it is "analogous to [the process] of rendering buffered bodies out of porous ones" ("Obeah's Unproductive Bodies" 241). Burnham concludes:

> I find this description especially helpful in this context because it allows us to see that the Enlightenment knowledge systems that rejected and ridiculed obeah were part and parcel of the capitalist economic systems that created productive bodies out of enslaved men and women – not only in the factories of Europe but also in the plantations of the West Indies. Guéry writes: " The stage that capital must reach in its work of parasitic appropriation is the complete dissociation of the productive body and the biological body, the displacement outside the biological body of all the productivity it previously contained," leaving the biological body as, in the words of Guéry, an " empty envelope, terminally mutilated": in other words, a buffered, contained body.[49]

Yet, as I will show below in discussing the caged slave scene from Letter IX, the terminally mutilated slave body in Crevecoeur's texts is anything but a buffered, contained body. The plantation system creates a body that is simultaneously open and

[49] See Deleule and Guery, *The Productive Body*, 14, 30.

porous, buffered and contained. This paradox is rendered visible, in part, through the shifting materiality of bodies.

Furthermore, *Letters* seems to possess a fundamental instability and ambiguity that makes it an ideal vehicle for examining the shifting materiality of bodies; indeed, Iannini points out the role of shifting identities and itinerancy in shaping Crevecoeur's work (134). Such instability and ambiguity also impact Crevecoeur's sense of masculinity as it relates to American identity and the natural world. James Bishop argues that *Letters* "reveals the deep ambivalence that American men felt about the burgeoning American nation, about their identities as men, and about the natural environment" (361). Yet the masculinity Bishop discusses seems to be white by default. Bishop also insists that stability and fixity are crucial, necessary components in American (white) men's successful relationship with the land or natural world. Bishop contends that Crevecoeur, because he never settled in a particular place or location, "tends to see the landscape as a backdrop from exploring his precarious masculine identity, rather than as a unique place with its own stories and peculiarities" (372). Bishop's reading here, however, seems at odds with parts of *Letters*, such as Letter X, which focuses more fully on the nonhuman world and its agency and actions independent of the human world. Moreover, Bishop argues that "the indeterminate state of American manhood was an important factor in preventing men like James from achieving a deeper, more intimate relationship with the land. […] As a result, their impact on the land was at times thoughtless and at other times plainly destructive" (372). I question why an ethical, deep, or mature understanding of the land has to come from a position of stability and certainty. Nature itself is neither stable nor certain, and it is quite possibly humans' attempts at certainty and stability that result in environmental degradation and destruction. Bishop also fails to account for the

different conceptions and performances of masculinity between white and black men and their relationships to the natural world.

In discussing early American masculinity, Kathleen Brown does distinguish between black masculinity, which depended on bodily performance, and white masculinity, which "was developing alternative foundations and expressions of male authority and self-assertion derived from landed property, literacy, emotional refinement, and evangelical religion" (174). The body, Brown argues, was a central and important site for the enactment of black masculinity, where "achieving [manhood] was a matter of constant performance aimed at a bodily aesthetic that defied subordination and stirred the admiration, the fear, the mindfulness of observers, black and white, of the potential for male self-assertion" (189). In a similar vein to Brown, Outka looks at differing constructions of and relationships to nature between black and white Americans, "[focusing] on the specific material intersection between racial construction and natural experience as a central 'normative structure' in producing white—and black—racial identity in nineteenth-century America" (13). He argues that there exist:

> moments of instability in the relation between human and natural, times when the division between the subject and nature breaks down and the identities of both become uncertain. This breakdown, when the human is poised on the brink of a collapse into the natural, is also a moment of unspeakability, of blankness, a linguistic collapse that depends in an absolutely material way on the nonhuman natural. (13)

Outka describes moments of instability and uncertainty in which the "absolute materiality" of trauma reveals the inadequacy of language. Such a moment also opens up the potential for posthuman recognition of nonhuman Others and the kind of shared double finitude Cary Wolfe argues is at the core of posthuman thinking.[50] Moments of "absolute materiality" expose both the shared corporeal vulnerability of humans and nonhumans

[50] See Wolfe, *What is Posthumanism*, 88.

and the fundamentally artificial quality of language and its inability to fully account for lived bodily experience, especially experience based or founded on flesh.

Such focus on flesh as a touchstone of shared corporeal vulnerability is not uncommon in animal studies' theory. Wolfe's discussion of biopolitics in *Before the Law* emphasizes how beings, both human and animal, are reduced to flesh, which he labels a communal substrate that is manipulated and acted upon (50). This reduction of beings to flesh is also a key part of Reviel Netz's theory about barbed wire, which he argues exploits the misfortune of our (humans' and animals') skin, a misfortune characterized by the fact that our skin, which contains pain-causing nerves, can be used against us as a form of control and exploitation (39). Barbed wire, Netz writes, reduces its victims to flesh, which becomes "a mere biological receptacle of pain and disease" (130). Shared corporeal vulnerability is also the cornerstone of Anat Pick's theory of creaturely poetics or creaturely ethics. Pick emphasizes the shared material, physical quality of humans and nonhuman animals as bodily creatures and, in doing so, tries to recast dehumanization as a potentially beneficial process (3-6). Pick advocates a creaturely poetics or ethics which aims to move beyond a kind of defensive humanism based on upholding "uniquely human" traits such as language, reason, empathy, etc., and move towards a recognition of the shared experience of corporeal vulnerability shared by all creatures (193). Applying these theories to the scenes from Crevecoeur's writing I examine below, I argue that, through the shared corporeal vulnerability of flesh, Crevecoeur's white readers can connect to and sympathize with black slave bodies because they see the human body dehumanized and vulnerable, not to barbed wire, but to the animal consumption of the natural world. Readers feel a shared revulsion that human bodies can be so reduced to raw matter, an attitude that poses potentially disastrous consequences for the natural

world. Yet such moments also prompt a recognition that all matter is subject to the natural world and its cycles of predation, consumption, and decay.

At the end of Letter IX – On Charles Town and Slavery, Crevecoeur, writing as his persona/narrator James, describes a scene that he hopes will "account for these melancholy reflections and apologize for the gloomy thoughts with which [he has] filled this letter" (177). James describes traveling through the woods on his way to dinner at a friend's planation:

> I was leisurely travelling along, attentively examining some peculiar plants which I had collected, when all at once I felt the air strongly agitated, though the day was perfectly calm and sultry. I immediately cast my eyes toward the cleared ground, from which I was but a small distance, in order to see whether it was not occasioned by a sudden shower, when at that instant a sound resembling a deep rough voice, uttered, as I thought, a few inarticulate monosyllables. Alarmed and surprised, I precipitately looked all round, when I perceived at about six rods distance something resembling a cage, suspended to the limbs of a tree, all the branches of which appeared covered with large birds of prey, fluttering about and anxiously endeavouring to perch on the cage. Actuated by an involuntary motion of my hands more than by any design of my mind, I fired at them; they all flew to a short distance, with a most hideous noise, when, horrid to think and painful to repeat, I perceived a Negro, suspended in the cage and left there to expire! I shudder when I recollect that the birds had already picked out his eyes; his cheek-bones were bare; his arms had been attacked in several places; and his body seemed covered with a multitude of wounds. From the edges of the hollow sockets and from the lacerations with which he was disfigured, the blood slowly dropped and tinged the ground beneath. No sooner were the birds flown than swarms of insects covered the whole body of this unfortunate wretch, eager to feed on his mangled flesh and to drink his blood. I found myself suddenly arrested by the power of affright and terror; my nerves were convulsed; I trembled; I stood motionless, involuntarily contemplating the fate of this Negro in all its dismal latitude. (177-178)

The slave, who James later informs us was being punished for killing the plantation's overseer, first begs James for water and then for James to poison the water or otherwise kill him (178). Yet James finds himself "unable to perform so kind an office" and merely offers him water before continuing on his way, "oppressed with the reflections which this shocking spectacle afforded [him]" (178). In commenting on this infamous scene, Parrish

argues that Crevecoeur's mental faculties are dilated, not disturbed, by "the curiosities of nature" found in the "peculiar plants" James examines immediately before coming upon the caged slave (292). She goes on to argue that by designating the plants as peculiar, Crevecoeur turns them into "a sign of the human depravity induced by hot climates. Indeed, James's act of specimen collecting is about to be eclipsed and even discredited as his impulse to reify nature in a 'disinterested' way become associated with the horrific reification of the slave" (292). Parrish also draws comparisons between "the slave's pinioned and caged body and that of the captive specimen" (293). Regarded as "a turning point within *Letters*," Iannini argues the cage scene marks "the moment when the relatively coherent narrative voice of the early section suffers an irrevocable collapse. […] the encounter provides the immediate impetus for the series of bleak global meditations that pervade his account of Charleston" (164). But this scene is also the moment where bodily materiality becomes most viscerally active and prominent, as readers are made hyper-aware of the slave's body and how, as a physical entity, it can be consumed by other bodies.

Iannini characterizes this scene as simultaneously one of increased "cosmopolitan awareness" and loss of "cosmopolitan optimism" (164). Such awareness and disillusionment comes at the recognition of the "necessary complicity in a triangular system of slavery-driven commerce that [cosmopolitan intellectuals] regarded as both the material foundation of intellectual progress and a contradiction to the professed moral and political ideals of the Enlightenment" (167). He charts the movement and progression of the caged slave scene: "The passage as a whole moves from the beauty and plentitude of botanical creation to the violence of the plantation, as the object of the narrator's attention shifts from curious southern plants to scavenging birds, to the bleeding eye sockets of an individual being" (167). The shift from beauty to violence

coincides with a shift from plant to animal bodies, a more apparent and volatile materiality. Iannini does not fully explore what this shift from plant to animal might mean. He argues that James's "empirical examination of the natural landscape reveals the human violence underlying the plantation landscape" (167). Studying the natural world opens up the potential to see bodies of the oppressed and dispossessed. Iannini further contends that this violence generates an overabundance of life forms and natural energy as evidenced by the large numbers of birds and swarms of insects devouring the slave (168). Within this scene, natural history plays a crucial role, Iannini argues, "in explaining and rendering the transition from local phenomenon to planetary pattern, from a particular incident in South Carolina to a sweeping theory of the nature of man and the brutality of nature" (168). It also increases visibility of non-white bodies.

Iannini argues that in the Letter following the caged slave scene, James's perspective of nature is significantly altered: "Upon his return to Pennsylvania in Letter X, for instance, James depicts a volatile and predatory natural environment that is at odds with the celebratory early letters" (173). However, I would argue that it is not actually at odds with earlier letters, in which James demonstrates an awareness of the nonhuman world and humans' connection with it. For example, in Letter II, James recognizes the interconnectedness of humans and nonhumans and the always-present potential for destruction. For example, when reflecting on the practice of eating eggs James notes:

> I never see an egg brought on my table but I feel penetrated with the wonderful change it would have undergone but for my gluttony; it might have been a gentle, useful hen leading her chicken with a care and vigilance which speaks shame to many women. A cock perhaps, arrayed with the most majestic plumes, tender to its mate, bold, courageous, endowed with an astonishing instinct, with thoughts, with memory, and every distinguishing characteristic of the reason of man. (55)

Letter X continues this recognition of the nonhuman by acknowledging the agency of nonhuman nature that acts independently and regardless of human actions, which can

actually be viewed positively as nature can exist apart from and outside of the corrupting influences of human society. The concluding scene in Letter X featuring the fight between two snakes bears mentioning here as well. James's intense study of animals fighting brings to mind the ant war Thoreau describes in the "Brute Neighbors" chapter of *Walden*. Ian Finseth also draws a parallel between *Letters* and Thoreau's *Walden* (although he doesn't draw a comparison between Crevecoeur's snake battle and Thoreau's ant war). He argues that "*Walden* actually serves as a revealing touchstone, for Thoreau more clearly, consistently, and self-consciously articulates an ethic of reciprocity whereby he recognizes what we might call the subjectivity of nature, that is, the idea that nature has its own integrity of meaning that transcends human definition or interpretation" (84). Finseth further distinguishes *Walden* and *Letters* by pointing out that James's "sense of ethics involves his obligations to his fellow human beings rather than a reciprocal obligation to nature" (84). However, James actually does display a "reciprocal obligation to nature," that is at least equal, if not greater, than Thoreau's in *Walden*. While Thoreau anthropomorphizes the ants and draws overt parallels between the battling ants and humans, James's description of the snake battle refrains from such sentimentality. Thoreau concludes his retelling of the ant battle by relating, "I never learned which party was victorious, nor the cause of the war; but I felt for the rest of that day as if I had my feelings excited and harrowed by witnessing the struggle, the ferocity and carnage, of a human battle before my door" (188-89). In contrast, James's concluding remarks about the snakes appears disconnected: "The victor no sooner perceived its enemy incapable of farther resistance than, abandoning it to the current, it returned on shore and disappeared" (186). While this at first might seem to confirm Finseth's assertion that James engages in detached analysis of nature, this scene also shows how James allows

nonhuman nature to have an agency and subjectivity of its own, rather than imposing human subjectivities on the snakes by anthropomorphizing them.

To return to Letter IX, Outka argues that the caged slave scene "renders the pastoral horrific and unnatural in the images of the inverted predation of the birds and insects, the suspended cage, the slave's desire for water and then poison" (39). He contends that "the conflation of blackness and nature remains: the slave remains in the cage, remains part of the landscape, remains conflated with the natural world" (40). Yet the cage stands as a marker of society; it is not a complete and total collapse of the human into the natural world. He is there in the cage because of human society, so he is both part of and apart from nature. Outka asserts that the violence of this scene marks racial difference, and is "a violence that, however disturbing, Crevecoeur accepts […] rather than rescuing the man from his unspeakable torments" (41-42). The slave's body, he argues, "becomes no longer individual but representative, forced to manifest white terrorism to other slaves, and serving as an object of moral and physical horror for Crevecoeur and presumably his contemporary white readers" (51). The slave's body and plight only becomes acutely visible to James through its violent rendering into parts, its dissolve into the surrounding natural world. The dissolve of a slave's body by and into the surrounding natural world is repeated again in Crevecoeur's *Sketches of Eighteenth-Century America*.[51] At one point in the book, Crevecoeur turns his attention to mosquitoes. After discussing the nuisance of mosquitoes to humans, he concludes his consideration of the animal by relating the following story:

> Mr. ----- informed me that a farmer of ----, in order to punish his Negro, had thought proper to tie him naked to a stake in one of his salt meadows. He went home, where he stayed but twenty-three minutes. At his return, he found his Negro prodigiously swelled, in consequence of

[51] First published in 1925, *Sketches*, discovered in 1923 in Normandy France by Henri Bourdin, features twelve essays similar in subject and tone to *Letters*, but which Crevecoeur "omitted either by design, necessity, or accident from both the English and French versions of *Letters*" (Stone 23).

> the repeated stings of millions of mosquitoes which he had received. He brought him back to his house, but all his care could not prevent an inflammatory fever, of which he died. (288)

As with the concluding scene of Letter IX, this anecdote depicts a slave owner using the natural world to punish a slave. However, this anecdote is more detached, empirical, and objective and less sensationalized than the scene in Letter IX. This marked contrast in tone helps to highlight how these interspecies encounters increase the visibility of non-white bodies.

In analyzing the scene from *Letters*, Chiles argues that James "naturalizes what is a *social* institution in order to abnegate himself from agency and responsibility" (119). Chiles continues:

> slavery's human parasitism is literalized. The decomposing flesh and blood of the black slave feed the natural landscape which supports the plantlike white men who seek natural "American" transformations, but the sweat, tears, and blood of black slaves enter the ground and ironically also become part of the environment that can darken whites in the New World. In James's world, then, nature at once fails to eliminate the system of slavery while its own nurturing and transformative capabilities are enabled by James's naturalized version of [end of page] that very same system. In James's depiction, the American metamorphosis available for European men is predicated on the suspension and fixity of the black "Negro." (120-121)

Yet while Chiles views the slave's dissolve metaphorically, it is important, I argue, to regard it as the very real processes of consumption, decay, and death in which nonhuman actors exert their influence on the slave's body. Nature is not, as Chiles personifies it, benevolent in possession of "its own nurturing and transformative capabilities"; nature does not "fail" to eliminate slavery because that is a distinctly anthropocentric motivation. What Chiles's otherwise convincing analysis fails to acknowledge is the dual exploitation of slave and nature by the plantation system. These scenes in *Letters* and *Sketches* both give the illusion of nature's complicity in the slave's punishment, when, in reality the birds and insects are exercising their own agency,

following their own drives and motivations independent of the white slave owners'. While scenes like these two make readers more aware of black bodies and how they are made to suffer within slave-owning societies, they also risk promoting a damaging view of the natural world, as nonhuman animals become the evil agents who inflict pain and suffering on slave bodies. Yet by recognizing the autonomy and agency of those nonhuman animals, we can see how in the shifting materiality and dissolve of distinct body boundaries, the vulnerability and permeability provides an alternative reading that acknowledges the link between nonhuman animal bodies and the increased visibility of black bodies, a visibility that calls attention to their mistreatment and degradation under slavery. Such a reading provides a recuperative and regenerative quality to a scene that would remain otherwise hauntingly violent and destructive.

## Bodily Circuits And Crab Invasions

Born in 1773, Leonora Sansay grew up in Philadelphia; by the end of the century, she would become the lover of Aaron Burr before marrying "Louis Sansay, a French creole from Saint-Domingue, who in 1796 had sold his coffee plantation to Toussaint Louverture and fled the ongoing Haitian revolution" (Allewaert 150). A fictionalized account of Sansay's real-life travels through the Caribbean, Sansay's *Secret History; or, the Horrors of St. Domingo* is an epistolary novel set during the beginnings of the Haitian Revolution. Yet it is not so much a novel about the revolution and slave rebellion, although they do occur in the background of the novel's main plot, which is a domestic struggle between American-born Clara and her controlling, abusive French husband St. Louis. In discussing the novel's unexpected juxtaposition of political and social drama with domestic drama, Elizabeth Maddock Dillon argues:

> the focus of the novel on elite, white domestic relations against the backdrop of warfare over colonial race slavery does not bespeak delusion (or colonial nostalgia) so much as an astute analysis of the relations of production and social reproduction that stand at the core of

> colonial politics. Just as striking as the initial disparity between the narrative of domestic intrigue and that of anti-colonial revolution is the extent to which the two strands of narrative cross, recross, and displace one another as the novel unfolds. (78)

For my purposes, the novel is notable not just for its exploration of issues of race and gender as they relate to domestic and colonial issues, but how these issues are invariably tied to bodies and the more-than-human world. Both Michelle Burnham and Monique Allewaert emphasize the importance of women's bodies to understanding the novel. Introducing the idea of regarding female bodies in *Secret History* as points of contact in circuits, Burnham argues that women's bodies "repeatedly function in this novel as a kind of switch that exposes the dynamic interrelation between individual desire and capitalist drive" ("Female Bodies and Capitalist Drive" 178). Women's bodies, according to Burnham, are positioned as transistors between economic and sexual circuits and exposes the pursuits of desire as inseparable from the motions of drive" (182). The kind of circuits that Burnham describes here are similar to the circuits of networks constructed by the practice of early American natural history. As Parrish notes:

> Natural history in colonial America was a polycentric and internally riven empirical enterprise, rather than merely an imperial imposition of an abstract system. This enterprise involved the recognition of scientific expertise in politically dominated individuals. The individuals […] in turn parlayed their expertise for public recognition and reward. With public acknowledgement of the epistemic authority of these individuals and their methods came perpetual adjustments in the social terms and in the processes of scientific truth making. (315)

Even as women's bodies are crucial in the circuits Burnham describes, natural history specimens are also crucial to the networks of early American natural history. I argue that in *Secret History* these networks coalesce and overlap, providing moments of dissolve where the distinctions and boundaries between bodies and species become uncertain and permeable. My argument also draws, in part, from Allewaert's consideration of Sansay's novel and how African American "cultural forms and modes of agency […]

impacted the ways Anglo-American women moving through the tropics came to imagine their own personhood" (147). This personhood, Allewaert argues, "[conceives] the human body as an always open collation of more than human forces" (160). Such a conception of personhood is not about "pure disorder, fragmentation, or total loss. Rather, it is a theme and practice of dividing and differentiating that fantasizes diversity as the originary American event" (179-180). This open, new-materialist mode of personhood increases visibility for both African Americans and women. Yet, crucially, as Allewaert qualifies, in *Secret History*, Sansay "is not interested in tracing cross-racial alliances as the basis of a utopian communitarianism, [… and instead] attempts to deploy surrogatory operations that ossify racial divisions, closing down the potentiality for cross-raciality and dissolutions of identiy" (155). Nonetheless, Allewaert's argument about Sansay's novel focuses on the bodies of women and African Americans and does not attend fully to how those human bodies interact and mesh with nonhuman bodies.

Such encounters with nonhuman bodies serve to highlight and draw attention to non-white and non-male bodies. One particular scene in *Secret History* reveals how these various bodies influence and shape each other. In this scene set on Cuba, Clara, who is fleeing from her husband with the help of a friend, Madame V—, stops for the night at a hut in the forested part of the island. In the middle of the night "a most unaccountable noise" awakens her, "which seemed to issue from all parts of the room, not unlike the clashing of swords; and, as I listened to discover what it was, a shriek from Madame V— increased my terror. In sounds scarcely articulate, she said a large cold animal had crept into her bosom, and in getting it out, it had seized her hand" (145). The "large cold animal" is one of a large number of "land crabs, which, at this season, descend in countless multitudes from the mountain, in order to lay their eggs on the sea shore" (145). The crabs are first detected when one comes into contact with Madame V—

's body, and they remain largely unseen throughout the scene: "When I asked for a light to search for what had disturbed us, he said it was nothing but land crabs" (145). This reliance on senses other than vision highlights an alternative mode of natural history description based more on sound and touch than vision and influenced by reporting of local knowledge and experience than firsthand empirical evidence. The land crabs, Clara learns, proceed single-mindedly on their journey to the sea, undeterred by humans and their buildings: "Had they not found a passage through the house they would have gone over it; and one finding Madame V— in his way, had crept into her bosom" (145). Continued discussion of the crabs blurs distinctions between the animals and both humans and natural phenomena. The guide helping Clara and Madame V— through the forest tells them a story of how English soldiers were tricked into thinking the crabs and the noise their claws made were "a body of Spaniards who, apprized of their descent, were preparing to attack them" (145). In the paragraph immediately following this anecdote, Clara describes how the crabs "appeared like a brown stream rolling over the surface of the earth. Towards morning they gradually disappeared, hiding themselves in holes during the day" (146).

This brief scene presents readers with many different possibilities for how to read or interpret the crabs' appearance. Burnham, who offers multiple readings, begins by stating that "the metaphor here appears to be rather obvious, considering the context of Saint Domingue's nearly 500,000 black slaves rising up against their approximately 40,000 white French slave masters" (195). Burnham counters this reading of the scene "as a violation of the female body" by pointing out the scientific facts about the crabs: "These crabs […] would have been female, since each spring millions of them migrate several miles from the forested interior of the island to the sea, the only environment in which the eggs they are carrying will hatch" (195-196). Such an alternative reading, she

contends, aligns Clara with the crabs and their "revolutionary counterparts," suggesting that "the descent of the revolutionaries was as natural and instinctive an act as that of the crabs making their way toward the island's beaches" (196). Burnham argues: "That scene suggests that black revolutionary power and white female liberation are not neatly analogous so much as hopelessly entangled within a spinning circuit that repeatedly turns power into violence and liberation into oppression" (196). It is through the crabs, I would add, that black bodies and women's bodies become more visible and prominent. Burnham asserts: "The contradictions embedded in this Cuban land-crab scene reflect the multi-layered effects of the modern world system's foundational violence and reveal that agents and victims of power often rapidly trade places as these circuits continue to turn" (196). While Burnham offers several astute readings of this scene, all of her interpretations rest on viewing the crabs metaphorically or symbolically, rather than as their own actors that stand apart from human actions and motivations.

Adding to Burnham's analysis, Abby L. Goode points out that "the crabs, moreover, seem to represent every faction of revolutionary Saint Domingue—white European colonials, black revolutionaries, and Creole—and their meaning becomes impossible to pin down. They become strangely ungraspable; the features of what they symbolize—the characters in the revolutionary story—become hazy and unfamiliar" (450). In further discussing the scene, Goode argues that "Clara reacts to the horrible ecological presence of the land crabs by allegorizing them as humans, attempting to 'control' and distance them by elevating them as a symbol" (463). Yet Goode is referring to the story told to Clara by the guide, who, not at all frightened by crabs, laughs at Clara's fright and tells her they are nothing to worry about. Rather than an "attempt at mastery through abstraction," as Goode argues (463), the story is another iteration of the blurring (or nonexistent) boundary between human and nonhuman. Yet, Goode does

proceed to rightly state that “ultimately, these crabs are neither villain nor hero; they are an awful and persistent reminder of a messy, entangled ecological world that makes no distinction between crab, Creole, or Clara” (463). And while Goode’s argument focuses on female reproduction and fertility, as opposed to my interest in natural history and animal bodies, she similarly recognizes the enmeshment of humans with the nonhuman world. Yet I challenge her overall emphasis on horror and terror. In theorizing her concept of “gothic fertility” as it relates to *Secret History*, she describes “a deeply enmeshed existence where the boundaries between human and nonhuman, organism and environment become *terrifyingly* blurred” (460-461, emphasis added). Furthermore, Goode stresses that the crab scene “evokes a distinctly ecological horror that conceives of the environment as *frighteningly* close-knit, interactive, and multidimensional” (449, emphasis added). By coding these scenes of enmeshment and entanglement as frightening and terrifying, Goode privileges the viewpoint of the white female protagonist. Yes, Clara and Madame V— are frightened; however the other human in the scene, the non-white guide, is not, and made preparations for the crab-invasion, choosing to sleep in a hammock rather than on the floor as the women did. It also obscures the observations and knowledge gathering Clara engages in in this scene by focusing on the stereotypical image of a white woman in distress when faced with “wild” nature, rather than how Clara’s initial terror gives way to curiosity: “I asked the guide if it was common to see them in such numbers. He said that it was” (145). Over-emphasizing terror and fright risks slipping back into, not just an Anglo-centric and sexist viewpoint, but one that is speciesist and anthropocentric. I do not posit that Goode’s argument is consciously or intentionally Anglocentric, sexist, sepciesist, or anthropocentric, but, rather, that the discourse she chooses to employ in discussing this scene carries with it these problematics that can all too easily creep into such arguments. By de-emphasizing terror

and fright, our critical gaze can remain focused on bodies and how the encounter between human and crab bodies facilitates a consideration of race and gender as well as the broader ecological realities of the entangled natural world and its blurred and dissolved boundaries that, rather than being terrifying, simply are.

## Embodied Perception And Dissolving Birds

The violence and turmoil of the Haitian Revolution also impacted the life and work of John James Audubon, who was born and raised in Les Cayes, Saint-Domingue, and, at the start of the Haitian Revolution, fled with his family to New Orleans. Although the Haitian Revolution is not the explicit subject or focus of Audubon's work, "an event as traumatic as a slave revolution," Iannini argues, maintains a strong presence despite its banishment from the foreground of Audubon's work (255). Indeed, in Audubon's writings, African Americans only occasionally appear, and, then, only in ancillary roles such as assisting Audubon in hunting and retrieving specimens. Despite this absence, however, Audubon's writings reveal a similar preoccupation with transformable race and dissolving bodies as Crevecoeur's *Letters*. In two entries from the *Mississippi River Journal*, Audubon reveals an awareness of the fluid nature of racial identity and the role the environment or climate can play in altering it. In an entry from January 14, 1821 in New Orleans, he writes:

> the Levee early was Crowded by people of all Sorts as well as Colors, the Market, very aboundant, the Church Bells ringing the Billiard Balls knocking, the Guns heard all around, What a Display this is for a Steady quaker of Philad[a] or Cincinnati—the day was beautifull and the crowd Increased considerably—I saw however no handsome Woman and the Citron hue of allmost all is very disgusting to one who Likes the rosy Yankee or English Cheeks. (in *Wiritngs and Drawings* 77)

Regarding this passage, Iannini writes that "Audubon perceives the full spectrum of national, racial, and ethnic types in the city as a threatening and disorienting surplus. He recoils from the 'Citron hue' of its denizens as he conjures the consoling memory of a

racially pure visage" (274). The passage, however, does not quite show Audubon himself threatened or disgusted; rather, Audubon makes these observations at a distance, reflecting on how it would be disorienting for a Quaker from a Northern state or disgusting to someone who preferred Northern complexions.

In defining her concept of transformable race, Chiles claims: "Drawing on natural historical thinking, early Americans largely considered race—exactly as the *dye* metaphor suggests—to be potentially mutable: it was thought to be an exterior bodily trait, incrementally produced by environmental factors (such as climate, food, and mode of living) and continuously subject to change" (2). Audubon's observations reveal an awareness of the fluidity of racial identity and its potential to upset or discompose some Americans. This focus on transformable race continues in another entry in New Orleans from March 21, 1821: "going through the Streets Not unlike (I dare Say) a Wild Man thinking too much to think at all My Eyes were attracted by a handsome faced Man, I knew it was My Old Acquaintance & Friend George Croghan, We Met freely and I was eased, he […] Invited Me with such forcible Kindness to go and spend Some time at his Plantation that I Accepted his offer—see me again Walking fast and Looking Wild" (*Mississippi River Journal* 90-91). Quoting only the first part of this passage, Iannini connects Audubon's use of the phrase "Wild Man" to an anecdote at the beginning of his autobiographical sketch "Myself" in which Audubon uses the same phrase to refer to an orangutan: "If we read the episode from 'Myself' as an allegory, with the orangutan as a representation of the insurrectionary slave, then Audubon's use of the terms also betrays uneasiness about his own racial identity" (275). By including the rest of the passage, I include not only an additional reference to "Looking Wild" but also Audubon's "forced" invitation to his friend's plantation, which once again connects Audubon's writing back to Crevecoeur's Letter IX. Although Audubon's invitations does not lead to the discovery of

a caged and dissolving slave body, his larger body of work engages with issues of materiality and the dissolution of animal bodies that echoes my discussion of Crevecoeur's text

Published in 1827 in the *New Edinburgh Philosophical Journal*, a publication of the Royal Society of Edinburgh, Audubon's "Observations on the Natural History of the Alligator" presents animals as physical beings with agency and autonomy that can be broken down into parts, divided and segmented both for commercial purposes and for furthering natural historical knowledge. Audubon begins his essay by naming alligators as "one of the most remarkable objects connected with Natural History of the United States" (270). "Objects" obviously gestures towards the objectified, commodified nature of alligators, although Audubon does go on in the essay to suggest they possess their own mind and autonomy. But "objects" also suggests the psychological separation between Audubon and the alligators. Audubon does not conceive of alligators as mediums through which to confront fears and anxieties. In fact, he corrects previous misconceptions of the alligators' danger to humans: "unless shot at, or positively disturbed, they remained motionless, suffering boats or canoes to pass within a few yards of them, without noticing them in the least" (271). Much of the essay reveals Audubon discussing the various ways alligators' bodies can be divided, segmented, and separated in parts. He touches on how parts of alligators are used as commodities, such as turning their skin into "shoes, boots, or saddle seats," and breaking down the alligator and rendering it for oil "for greasing machinery of steam engines and cotton-mills" (271, 277).

Audubon also relates anecdotes about how alligators, as specimens, become commodities in the world of natural history, reducing the alligator to its physical body and constitutive parts as a source of knowledge for naturalists. These anecdotes are the most graphic and gory of the descriptions Audubon offers in the essay. In the first example,

Audubon describes a botched attempt to kill and ship an alligator for study. He first shoots the alligator "immediately on the skull bone," then drags the apparently lifeless corpse home: "Some young ladies there, anxious to see the inside of his mouth, requested that the mouth should be propped open with a stick put in vertically; this was attempted, but at this instant the first stunning effect of the wound was over, and the animal thrashed and snapped its jaws furiously, although it did not advance a foot" (276). Audubon then hangs the alligator by the neck from a tree:

> [I] hauled the poor creature up, swinging free from all about it, and left it twisting itself, and scratching with its fore-feet to disengage the rope. It remained in this condition until the next morning, when finding it still alive though very weak, the hogshead of spirits was put under it, and the alligator fairly lowered into with a surge. It twisted about a little, but the cooper secured the cask, and it was shipped to Philadelphia, where it arrived in course. (276)

This anecdote is followed by another story of shooting an alligator that details "the flow of a great quantity of blood out of the wound, and mouth and nostrils of the animal" after being shot so that Audubon could take measurements of it and "knock off some of its larger teeth" (277). Audubon forces readers to confront the corporeal reality of specimen creation, the violent drama involved in the shift from life to death. Even when Audubon turns to more objective, scientific musings on alligator anatomy, he still foregrounds his role as the killer of alligators, as well as the necessary dismantling of the animals to acquire knowledge of their internal structure: "In those that I have killed, and, I assure you, I have killed a great many, if opened, to see the contents of the stomach, or take fresh fish out of them, I regularly have found round masses of a hard substance, resembling petrified wood" (280).

"Observations on the Natural History of the Alligator" also emphasizes the physical animal body in another way: it highlights the importance of embodied perception and vision. In this essay, as well as his other writings, Audubon embodies and

materializes the mind, vision, and perception, giving material, bodily form to processes commonly conceived of as immaterial and disembodied; in this way he epitomizes the idea of embodied transmission. Audubon emphasizes his own embodied perception in the essay by presenting himself as a medium or conduit with which to experience the alligator. With phrases such as "I shall take you to their more private haunts, and relate what I have experienced and seen respecting them and their habits," Audubon emphasizes how he has seen and experienced what he will relate in his essay with his own eyes and will allow readers to vicariously enter into the embodied space of his memory (271). Audubon strongly emphasizes the alligators' eyes, the perfect entry point, her argues, for bullets (275).[52] In describing an alligator hunting its prey, Audubon notes how it "approaches the object sidewise, body and head all concealed, till sure of his stroke; then, with a tremendous blow, as quick as thought, the object is secured" (273). Equating the alligator's quick movements with the rapidity of thought suggests a desire to embody or materialize thought. In materializing thought, Audubon's writing serves to destabilize notions of Cartesian dualism and the separation of mind and body, which, in turn, works to destabilize anthropocentric and speciesist frameworks.

Phrases that materialize thought occur throughout Audubon's work. For example, in *Ornithological Biography*, Audubon describes the White-Headed Eagle (bald eagle): "In an instant the Eagle, accurately estimating the rapid descent of the fish, closes his wings, follows it with the swiftness of thought, and the next moment grasps it" (in *Writings and Drawings* 241). This materialization is repeated again: "swiftness of thought" is used with the Ruffed Grouse, "quick as thought" with the Red-tailed Hawk, and "passes like thought" with the Passenger Pigeon (218, 256, 262). These instances of materialized thought frequently appear alongside scenes of great corporeal violence. As in the

[52] It should be noted that the two alligators from the above anecdotes were not shot cleanly through the eye as Audubon advises.

example of the White-Headed Eagle, Audubon takes great care to reveal "the cruel spirit of this dreaded enemy of the feathered race," detailed how one eagle hunts, kills, and feasts, with his mate, on a swan: "He shrieks with delight, as he feels the last convulsions of his prey, which has now sunk under his unceasing efforts to render death as painfully felt as it can possibly be […] they together turn the breast of the luckless Swan upwards, and gorge themselves with gore" (239-240). The physical violence heightens readers' awareness of corporeality. In turn, this awareness of the corporeal and material world provides an opening to understanding materialized thought. It makes it easier to recognize and acknowledge that the processes of thought and perception, commonly conceived of as immaterial and disembodied, actually have foundations in the same corporeal body the is being violently rent to pieces by both human and nonhuman actors.

Such violence is one of the most commented upon features of Audubon's *Ornithological Biography* and *The Birds of America*. "A work of extravagant violence," *The Birds of America*, Christopher Iannini argues, features "full-spread images of birds of prey [that …] provide detailed renderings of interspecies violence" (255, 276). The interspecies violence extends beyond bird-on-bird violence to include humans' (specifically Audubon's) violence towards birds. Audubon's role as a "mass murderer," "inveterate destroyer," "or "lethal father figure," as Christoph Irmscher variously describes him, exists simultaneously with his role as "protector of birds, as their ardent admirer" (208, 214). Irmscher argues that although "Audubon's birds never kill their prey or each other on the same scale that Audubon kills them, the overall effect of Audubon's literary strategy is to make himself part of what he describes" (217). Similar to the alligators' depictions, the scenes of avian violence center on vision and the eyes; "most depict the bird of prey performing one (or both) of two characteristic behaviors: consuming the eyes of its prey and returning the gaze of the viewer" (Iannini 276). For example, in the image for the

Osprey, viewers are confronted with the gaze of both the osprey and the fish it captured (See Fig. 4). As Amy R. W. Meyers explains: "Both predator and prey appear startled by our presence, the hawk glaring at us with an aggressive eye and the fish staring at us plaintively" (48). This meeting of gazes and the way it prompts viewers to connect and identify with the animals alters viewers' relationship to the image and its production. Meyers argues that "we become more than passive voyeurs; we are active participants evoking distinctly different responses from the two animals" (48). Audubon also makes us "active participants" in the sense that he makes readers complicit in his mass killing of birds, arguing that the killing is necessary to provide readers with an accurate depiction of the birds.[53] Eyes are also a prominent motif in the image of the Black Vulture (See Fig. 5). Iannini's reading of this image highlights the importance of eyes and vision in the scene:

> Even in a corpus marked by graphic, at times, morbid, scenes of scavenging and predation, the image stands out. The vulture on the right holds down the deer's antler, peering with an unnerving blend of disinterest and curiosity into a not-quite-lifeless eye. With the deer perhaps still breathing (its pink tongue hangs from its jaw), the vulture pauses in a seemingly reflective attitude as it prepares to consume the eye. The upheld black wings create a somber frame and lend an air of theatricality. It is as if the vulture has just retracted its wing to reveal this scene to us or is about to lower the wing and conceal it from our view. (277)

Viewers are reminded that the eye is a material object, mere flesh that can be consumed by others. Iannini argues that "the challenge to 'the conceptual separation' between bird and viewer depends on [Audubon's] Gothicized images of birds and prey, with their focus on mutilated eyes and arresting gazes" (276). But this conceptual separation becomes a tactile separation that is thoroughly violated and erased in Audubon's activities.

[53] Irmscher observes that, for Audubon, "alas, the only way to procure the readers sympathy, as it were, is by procuring specimens" (208).


Figure 4. *Fish Hawk or Osprey*, Plate 81 in *The Birds of America*. John James Audubon, engraved by Robert Havell, Image Courtesy of University of Pittsburgh.

Figure 5. *Black Vulture of Carrion Crow and American Deer*, Plate 106. *The Birds of America*. John James Audubon, engraved by Robert Havell. Image courtesy of University of Pittsburgh.

Embodied perception and transmission involve physical touch and contact between substances and bodies, whose boundaries are necessarily permeable. Touch and contact are central to Audubon's work. Iannini emphasizes the breakdown of temporal and geographic boundaries in Audubon's work, arguing that "the formal organization of *The Birds of America* reflects back on the long and brutal history of 'Caribbean accumulation,' [… a] term [that] refers primarily to the temporal compression that results from this process, as the effects of past action—economic, ethical and epistemological—accumulate in specific geographic locations" (255-256). Iannini's ideas about Caribbean accumulation and the breakdown of temporal and geographic boundaries should be considered in light of Allewaert's concept of the parahuman as an "opened and dispersed series of parts" (98).[54] Audubon's work is founded not just on the Caribbean accumulation, but also on the quite literal accumulation of bird bodies. Each finished bird plate in *Birds of America* represents multiple, sometimes dozens, of individual birds killed in the pursuit of a perfect representation of their species, which comes into being through the breakdown of boundaries between human and bird, physical body and symbolic representation. In her analysis of the transport of early American images, Roberts emphasizes the important constitutive role space had on images, including Audubon's. Emphasizing how early American artists "lived in a world governed by absolute, intractable separations that we now associate only with interstellar distances," she maintains:

> Distances and delays […] were not merely passive intermissions or negative spaces between active sites of production: by putting pressure on styles and systems of production, they served as productive themselves. Because long, uncertain intervals beset every incident of transmarine communication in the eighteenth-century Atlantic world, for example, systems had to be devised to minimize the effects of decay, delay, and mistransmission. (3)

[54] Allewaert does not consider Audubon in her analysis.

Such distances and delays seem to heighten the need for touch and contact or embodied transmission.

Embodied perception and physical touch were crucial to Audubon's process of observing, killing, and drawing birds. In *Account of the Method of Drawing Birds*, Audubon stresses the need for firsthand observation of birds in order to achieve accurate drawings; he utilizes his "own ocular opportunities" and states that "nature *must* be seen first alive, and well studied, before attempts are made at representing it" (in *Writings and Drawings* 755-756). At the same time Audubon privileges vision, he decries the "tiresome descriptions" of specimens: "more anxious that those who study ornithology should compare at once my figures with the living specimen, than with a description so easily made to correspond with the drawings by any person who merely knows the technical appellations of each part and feathers, with the name of the colours chosen by authors for that purpose" (757). "Why should the reader be tormented with description?" Audubon asks (757). Well-executed images, Audubon implies, offer a sense of truth and immediacy sorely lacking in verbal descriptions.

The immediate, true-to-nature, material presence of Audubon's drawings works to reinforce *The Birds of America* as a physical, material object in its own right. Roberts notes that *The Birds of America* was "one of the largest and heaviest and most outrageously material works of illustration ever made. Each of its four volumes weighed more than forty pounds, requiring, as Audubon put it, 'two stout arms to raise it from the ground'" (78). Iannini argues, "The book was intended, on one level, as an expression of national self-confidence, a printed artifact commensurate with the nation's material and human potential. But because it is modeled on works by Sloane, Catesby and others, the book also stands as visual testament to a history of West Indian plenitude" (259). Yet the book was an "American" expression produced across the Atlantic in London. As Roberts

explains: “One of the reasons that the project had to be printed in London was that it was impossible to obtain large enough copper sheets for the engravings in America” (78). *The Birds of America* becomes thoroughly embodied as an optical device in which “the attitudes and poses of the birds must obey the size of the page, whose stubborn constancy thereby becomes evident” (Roberts 86). Roberts also refers to the book as a container that holds the birds (86). The book becomes a kind of assemblage like the body, composed of the different birds or parts.[55] Audubon also emphasizes the physical quality of *The Birds of America* in his correspondence. For example, in a letter to his wife Lucy, he references physically transporting his collection of paintings across England and the rest of Europe to gain subscribers.[56] These letters also draw attention to how *The Birds of America* functioned as commodity. Audubon keeps track of the number of subscribers he has and how much money they bring in, as well as the money he makes from selling copies of his work.[57] The images of the birds not only have more physical heft and weight than the original animals, but are also worth far more money.

The aspect of Audubon’s work that speaks most directly to Allewaert’s arguments about parahumanity is the physical touch and contact, the embodied transmission, from bird to Audubon to bird image. In “My Style of Drawing Birds,” Audubon explains, “Reader this was what I Shall ever call my first attempt at Drawing actually from Nature, for then Even the eye of the Kings fisher was as if full of Life before me whenever I pressed its Lids aside with a finger.—” (in *Writings and Drawings* 761). Touch becomes necessary to restore “life.” Audubon explains the importance of contact in his drawings: “My drawings

[55] See Whitney Anne Trettein’s argument about “nature was becoming *more* like a book,” and book became translation of nature that “[translate] the matter of plants (in both senses of that phrase) into descriptive text and precise visual representations, thereby materializing human knowledge of the vegetable world. The physical book participates in this reconstitution of nature’s matter, turning the fibers of the flax plant into paper, nut oils and lampblack into ink, animal bones into glue and animal skins into a cover” (103-104.)
[56] See John James Audubon, “To Lucy Audubon, December 9, 1826,” in *Writings and Drawings*, 799; and “To Lucy Audubon, May 15, 1827,” in *Writings and Drawings*, 803.
[57] See “To Lucy Audubon, May 15, 1827,” 803.

have all been made after individuals fresh killed, mostly by myself, and put up before me by means of wires, &c. in the precise attitude represented, and copied with a closeness of *measurement* that I hope will always correspond with *nature* when brought into contact" (*Account of the Method* 754). Touch and contact become entangled with vision as embodied perception. In analyzing Audubon's method of drawing, Roberts details the role of touch in Audubon's creation of his bird drawings:

> Note that for Audubon natural-size representation entails an adamantly non-optical method of apprehension and transfer. He explicitly rejects vision as a method of measurement, insisting, in so many words, that he does not 'eyeball' his dimensions, disavowing the 'eye of the delineator' as only 'more or less' precise. He claims, instead, to have effected a near-indexical transfer from body to page, compass touching bird touching paper. (81)

Although I agree with Roberts's assertion about the "transfer from body to page, compass touching bird touching paper" and the kind of embodied transmission that this transference implies, I argue that it is not so much that Audubon rejects vision, as he embodies it. Touch, in Audubon's work, combines with tactile sensation, and the eyes themselves are material, bodily parts (both in Audubon and in the birds).

Yet Audubon's insistence on working with freshly killed specimens (as well as his refusal to work with stuffed specimens) meant that his reanimating touch and contact with bird corpses necessarily came with time constraints; "He often completed an image just when the carcass had putrefied beyond the point of formal integrity or olfactory endurance" (Roberts 109). Such inevitable corruption of the bird corpses, Roberts argues, introduces a relationship between referent and representation in which the "representation wholly eclipses the referent, destroying it in the process. The life of the bird seems to shift from one body to another; the image is not an immaterial copy that goes out into the world, but the original referent itself, transmitted to the page, with its old organic body left behind to decompose" (109-110). The body of the bird is left to

decompose and the representation lives on; this point is where most analyses of Audubon's work end, where the transmission and transformation of bodies ends. However, the decomposition process, I argue, can be viewed as its own kind of animation and reclamation of the material animal body, a disassembling of the bird body into fluids and parts that can be reclaimed by the nonhuman world; just as the human body is not a stable, fixed entity, the bird body is not either.[58] Losing the "referent" stands as proof of the agency and animateness of matter that exists independent of easily identifiable actors, and that emerges from the shifts in materiality produced by Audubon's artistic process. Audubon shows how touch and contact create new assemblages of parts and entities, new forms of creaturehood. In doing so, his work reveals how the transmission of animal bodies in natural history is embodied, dependent on touch and contact across species. Audubon's bird plates become creatures in their own right, especially since, to create the images, enormous numbers of birds had to be destroyed. Unlike in the taxidermy and preserved specimens of naturalists who came before him, no physical body remains – only the terribly decomposed remnants of bird bodies – left to be reclaimed and reintegrated into the natural world. Audubon's practice of natural history leaves behind decaying animal corpses, both as reminders of the physical cost of the pursuit of scientific knowledge and as sites where the nonhuman world exerts a radically nonhuman form of agency and creaturehood.

This tension between cost and knowledge, agency and identity, runs throughout the writings examined in this chapter. In the face of violence and turmoil brought about by slavery and the plantation system, the natural world maintains it cycles of predation, consumption, decay, and, ultimately, regeneration. The two systems operate sometimes

[58] This decomposition as transformation can also be seen in Audubon's description of the Black Vulture in *Ornithological Biography*, where the vultures wait until the alligator decomposes "in an almost fluid state" in order to be able to "perforate the tough skin of the monster" (305).

in concert, sometimes concurrently. Crevecoeur, Sansay, and Audubon portray moments with these two systems overlap and converge, where animal materiality shifts, making visible the systems and the effects they have on non-white and non-human bodies. These moments, informed by natural history discourse, feature careful, attentive observations of bodies and the natural world. As the nineteenth century progressed, the materiality of animal specimens continued to play an important role in natural history, especially in the work of female naturalists such as Mary Treat and Martha Maxwell.

# Chapter 5

## Epilogue: Feminized And Digitized: The Role Of Animal Specimens Beyond Early America

The issues and tensions involved in natural history animal specimens extend well beyond early America. In the 2009 exhibition *Maxwell's Lair*, Emilie Clark presents paintings and sculptures featuring animal bodies in various states of "evisceration, reanimation and disintegration" (*Maxwell's Lair*). For example, one untitled painting depicts a carcass of horse-like animal whose abdomen is open, revealing unidentifiable bloody viscera and animal parts (see Fig. 6). Other paintings feature animals' open mouths that reveal inner fleshy tissue, red and bloody (see Fig. 7), while yet another painting reveals the inner skeletal structures of a bird-like animal (see Fig. 8). Although not comprised of actual animal bodies, Clark's paintings with their depiction of animals' visceral corporeality produce in viewers a hyperawareness of animals as fleshy, material beings rather than disembodied symbols. By eviscerating the animal body, Clark renders it more visible and palpable, even in a two-dimensional representation of that body. In contrast to the paintings, the sculptures created by Clark for *Maxwell's Lair* create and combine animal bodies, albeit the bodies of plush stuffed animals. In one sculpture, Clark creates a new animal creature by combining and stitching together numerous stuffed animals (see Fig. 9). The sculpture both evokes and defamiliarizes taxidermy. It engages in a similar process of deconstructing the animal body in order to reconstruct or recreate it as an object for visual consumption. Yet the use of plush stuffed animals and the fact that viewers can see within the new creature the original stuffed animal bodies that have been fused together defamiliarizes taxidermy; it compels viewers to reconsider animal materiality and how humans use and manipulate animal bodies in the service of both art and science. As Clark explains, her work attempts "to highlight a stranger, more fluid

Figure 6. Untitled painting. Emilie Clark. *Maxwell's Lai*r. 2009.

Figure 7. Untitled painting. Emilie Clark. *Maxwell's Lair*. 2009.

Figure 8. Emilie Clark. Untitled painting. *Maxwell's Lair*. 2009.

Figure 9. Untitled Sculpture. Emilie Clark. *Maxwell's Lair*. 2009.

natural world latent within the materials of the one we think we know" (*Maxwell's Lair*). The stuffed animal bodies in Clark's sculptures are inanimate objects that have never been alive (unlike the animal specimens of early American natural history), which allows a consideration of animal materiality at a "safe" distance. Viewers can contemplate the materiality of animals and the ethics of utilizing animal bodies without having to face the actual animal bodies themselves, which no longer seem required in Clark's work. *Maxwell's Lair*, which draws inspirations from and engages with the work of the late nineteenth-century American naturalist and taxidermist Martha Maxwell, reveals the lasting influence of natural history's animal specimens, and succeeds in further blurring the boundary between alive and dead, animate and inanimate.

This chapter extends beyond early America and begins by looking at two nineteenth-century female naturalists, Mary Treat and Martha Maxwell. Women naturalists prior to the 1860s did not engage with animal specimens in the same way as their male counterparts (if they engaged with animals at all). Both Treat and Maxwell proved their legitimacy as naturalists by discovering new species: Treat discovered a new species of lily that would be named after her, *Zephyranthes treatiae*, and Maxwell discovered a new species of owl, *Scops asio* var. *maxwellae*. Differing from earlier female nature writers in her direct focus on animals and their bodies, Treat's writings on insects, arachnids, and carnivorous plants reveals multiple instances where discrete boundaries between human and nonhuman, plant and animal dissolve. In Maxwell's taxidermy work, corporeality takes center stage, both with the bodies of the dead animals she worked with and, as a result of that work, Maxwell's own body. *On the Plains and Among the Peaks; or, How Mrs. Maxwell Made Her Natural History Collection* (1879), written by Maxwell's sister Mary Dartt, blends the violent, shifting corporeality of animals with feminized sentimentality, which, in turn, highlights the tensions inherent in taxidermy

between aesthetics and ethics. In encountering nonhuman animals and the accompanying shifts in animal materiality, Treat and Maxwell increase their visibility as women and reveal the way humans' construction of natural and scientific knowledge is entangled with animal bodies, both living and dead. I conclude the chapter by exploring what happens to animal specimens in natural history in the twenty-first century, how the role and purpose of such specimens shifts in the digital era. Websites such as *Crappy Taxidermy*, *In Pieces – 30 Endangered Species, 30 Pieces*, and *What is Missing?* show how animal specimens have become increasingly disembodied and their digital presence becomes, in many ways, more vital than their original materiality.

## Intimately Blended Animals And Plants

While Treat's research and field experience was largely restricted to her home and yard, her engagement with and study of insects and carnivorous plants especially helped dissolve (sometimes quite literally) distinct bodily boundaries. Her writings reveal a natural world in which bodies are not assumed to be discrete, inviolate entities; the bodies of insects, arachnids, carnivorous plants, and even Treat's own body are profoundly permeable and unstable, able to dissolve, blend, or combine with other bodies, including those of other species. Treat wrote for both popular and scientific audiences, publishing essays regularly in *Harper's Monthly* and *The Atlantic Monthly*, as well as *The American Naturalist* among many others. She was, according to Tina Gianquitto, "one of the most prolific naturalists and nature writers of the late nineteenth century and one of the very few to make a comfortable living from her books and articles" ("Criminal Botany" 254). The two essays of Treat's I discuss below were published in *The American Naturalist*, a scientific journal first published in 1867 by the American Society of Naturalists. Treat's 1885 book *Home Studies in Nature*, a collection of essays (mostly

previously published in *Harper's Monthly*), was a commercial success that generated royalties for Treat for more than twenty years (Gianquitto, "Mary Davis Treat" 384).

In one of the only extended critical examinations of Treat's writings, Gianquitto argues that "Treat distinguished herself from the earlier tradition of women writing about the natural world by her willingness to engage in a systematic and entirely absorbing examination of the natural world, by her investigation of nature based on scientific as opposed to moral principles, and by her active participation in current debates within a community of professional scientists" (*Good Observers of Nature* 138). While Treat's study of the natural world was rigorously empirical and scientific, she did emphasize the home as a concept and focus of her work. Gianquitto observes that "Treat blurs the lines separating human and nonhuman communities, and nature becomes not a model of the home but the home itself" (136). In fact, the concept of home was crucial to Treat's ethical consideration of nonhuman animals and humans kinship to the nonhuman world. As Gianquitto notes: "Treat's discussion of home is truly remarkable precisely because of the prominence of reason—not morality—in holding together the home. […] In depicting the construction of nonhuman homes, Treat questions the supposed substantive difference between human and nonhuman, and she uses nest construction to show kinship through reason" (169). Although Treat did not travel as extensively as naturalists such as Audubon or Bartram, she turned "her house and yard into an active laboratory. Her world features fluid borders between outside and inside: birds nest in the eaves of her porch; 'pet' spiders live in jars in her study; digger wasps inhabit her backyard 'arachnidan menagerie'; and carnivorous plants ingest their prey in her living room" (144). While home and kinship were central to Treat's work, she did not shy away from nature "red in tooth and claw," and would kill various insect specimens as part of her scientific work. Gianquitto observes that "earlier in the century, [naturalists] had argued that the

requirement to kill specimens made studies of living beings unfit subjects for women […]. By the 1860s, however, women who ventured into these fields, like entomologist Charlotte Taylor, made little apology for their necessary actions" (171). But Treat also differs from earlier female nature writers in that she focuses more directly on animals, specifically animal bodies' materiality.

In the 1879 essay "The Habits of a Tarantula," Treat relates her close contact with tarantulas and careful observation of them. She notes that her yearlong study of the spider is notable because "its habits and probably the creature itself, had entirely escaped the attention of naturalists until recently" (485). By establishing close contact and familiarity with the spider, Treat is able to closely and carefully observe the animal and to interfere with its life. She describes picking up a mating tarantula couple and placing the pair in a glass bottle:

> They now remain perfectly still, and I pick them up by their legs and drop them into a wide-mouthed glass bottle. This displaces the male, and he crouches down in a helpless sort of way as if paralyzed with fear, not trying to make his escape at all. For a few moments the female pays no attention to him but makes vigorous efforts to escape. Soon, however, she pounces upon him, seizing him on the under side of the head—literally by the throat. He makes but feeble efforts of resistance, in fact, acts as if he rather enjoyed being eaten! I shake the bottle but she will not let go her hold. She soon makes him into a ball which she holds and sucks, seemingly with great relish. I now place the open bottle by the mouth of her den and she quickly disappears, taking with her the remains of her lover. In a day or two after this another male was at her door behaving in a similar manner. I did not interfere with his movements, and do not know his fate. (487)

Although this scene does not show Treat killing a spider herself, her actions directly encouraged and incited violence that she then carefully observes and records. The patient nurturing Treat bestows on the spider affords her the opportunity to observe the female tarantula in her more domestic duties of building her home, as well as the more gory consumption of her mate. The gendered bodies of both Treat and the tarantula become more visible in this scene because of the heightened physical presence of the

animal body as an entity that can be drastically altered in form and substance. While Treat's body is not explicitly visible in this scene and her dispassionate narration of it seems more masculine than feminine, her body and identity as a woman are invoked implicitly as she transgresses conventional gender expectations. In recording these observations, Treat was out in nature, using her body to closely observe and physically interact with animals that were not viewed as normal or even appropriate for women to come into close contact with, let alone actively seek out.

Along with her interest in insects and arachnids, Treat also studied and wrote extensively on carnivorous plants. Her writings about these plants provide compelling evidence of the permeable and dissolving boundaries between distinct bodies and species. In the 1875 essay "Plants that Eat Animals," Treat discusses the bladderwort plant. She explains how she examine the plant's individual bladders for animals trapped in them:

> The larva of Chironomus was the largest and most constant animal found. On some of the stems that I examined, fully nine out of every ten of the bladders contained this larva or its remains. When first caught it was fierce, thrusting out its horns and feet and drawing them back, but otherwise it seemed partly paralyzed, moving its body but very little; even small larvae of this species that had plenty of room to swim about were soon very quiet, although they showed signs of life from twenty-four to thirty-six hours after they were imprisoned. (661)

Treat's observations highlight the physicality of the animal bodies, as their movement turns from active resistance to paralysis and death as they succumb and begin to become a part of the plant's body. Treat concludes: "Nothing yet in the history of carnivorous plants comes so near to the animal as this. I was forced to the conclusion that these little bladders are in truth like so many stomachs, digesting and assimilating animal food" (662). The emphasis is on physical matter and how it shifts and changes form from animal to food to plant. The description also challenges traditional understandings of the distinction between animals and plants, as plants assume a more

active, animal-like role. While Treat is unable to explain fully or account for the bladderwort's behavior, she notes, "it only goes to show that the two great kingdoms of nature are more intimately blended than we had heretofore supposed" (662). Such acknowledgements of the blurred boundary between plant and animal in the world of insectivorous plants were often gendered. Gianquitto notes: "While male commentators appeared fundamentally disturbed by the radical transformation of the plant from passive object to active subject, many women writers and naturalists seem to have embraced the overturning of traditional, gendered visions of the moral floral commonwealth under the evolutionary rubric" ("Criminal Botany" 253).

Treat continues her examination of carnivorous plants in *Home Studies in Nature*. She opens her chapters on carnivorous plants by noting: "I have devoted much time to a class of plants that seem to have reversed the regular order of nature, and, like avengers of their kingdom, have turned upon animals, incarcerating and finally killing them. Whether the plants are really hungry and entrap the animals for food, or whether it is only an example of the wanton destructiveness of nature I leave the reader to judge" (139). The plant world can no longer be conceived of as entirely inanimate and without agency. The boundaries and distinctions between the kingdoms are no longer certain or distinct. When examining the Venus flytrap, Treat uses her own body as a way to experiment with and understand the mechanisms by which the plant eats animals:

> That I might the more fully test the strength and power of the plant, I one day placed the tip of my little finger in a trap, resolving to become a self-made prisoner for five hours at least. I took an easy-chair, and let my arm rest upon the table and my hand upon the edge of the pot […] In less than fifteen minutes I was surprised at the amount of pressure about my finger, and for more than an hour the pressure seemed slightly to increase, but by this time my arm began to pain me. […] In less than two hours I was obliged to take my finger from the plant, defeated in so simple an experiment, and heartily ashamed that I could not better control my nerves. The slimy secretion had commenced oozing slightly from the inner surface of the trap, and if I could have kept the position for

> five hours, I presume it would have been much more copious, the plant not knowing but that I was as good to eat as a bug! (186-187)

This experiment further collapses boundaries and distinctions, not just between plants and animals, but also between nonhuman and human animals. This collapse occurs through the body and Treat's body's physical contact with the plant and its slimy secretions. In describing the Sarracenia (or pitcher plant), Treat notes that "from all appearance, the terrible Sarracenia was eating its victim alive. And yet, perhaps I should not say 'terrible,' for the plant seems to supply its victims with a Lethe-like draught before devouring them" (198). Again, the plant exercises a certain amount of agency and control over the situation. Her description of the Sarracenia also emphasizes the physical matter of animal bodies and how their materiality shifts as they quite literally dissolve into a putrid, "filthy mass of insects" which the plant absorbs, "save the dry remains of the wings of beetles and other hard parts of the bodies of insects" (202). Thus, Treat reports that "living animals are transformed into trees and flowers" (202). Treat's interest in and focus on carnivorous plants and how they dissolve distinctions between species brought her into the greatest visibility in the scientific world, as she corresponded with noted and respected scientists such as Charles Darwin, who publicly recognized her observational skills.[59]

## Female Bodies In Taxidermy

Working in the same time period as Treat, naturalist and taxidermist Martha Maxell became famous for her skill and expertise in collecting and preserving a wide array of specimens of Colorado's wildlife. Despite her widespread notoriety in the late nineteenth century Maxwell is virtually unknown today.[60] Maxwell's work and the accompanying book describing it written by her sister Mary Dartt, *On the Plains and*

[59] See Gianquitto, *Good Observers of Nature*, 159-160, 174-175.
[60] For example, Rachel Poliquin's excellent comprehensive study of taxidermy, *The Breathless Zoo*, makes no mention of Maxwell.

*Among the Peaks*, provide a fascinating case study of how women practiced natural history and taxidermy. In working with animal bodies, Maxwell achieved a tremendous level of visibility and notoriety; the juxtaposition of creaturely violence and domestic femininity embodied in Maxwell transfixed the public. Martha Dartt was born in Pennsylvania in 1831, and moved to Wisconsin as a teenager. In 1854, she married widower James Maxwell, who had six kids from previous marriage and was twenty years older than Martha. Although wealthy when Martha married him, they lost most of their money shortly after, which prompted them to move west to Colorado, where she would begin teaching herself taxidermy (Moring 175-176). In the exhibit titled "Woman's Work," Maxwell's taxidermy specimens achieved nation-wide fame at the 1876 Philadelphia Centennial Exposition. Marcia Myers Bonta notes that "altogether she collected 224 birds and 47 mammal species, including 3 black-footed ferrets which had been described by John James Audubon but never seen by scientists, and a subspecies of screech owl—the Rocky Mountain screech owl—named *Scops asio* var. *maxwellae*, or Mrs. Maxwell's owl, by ornithologist Robert Ridgway of the Smithsonian Institution" (*American Women Afield* 35).[61]

Laura Browder (one of the only critics to discuss Maxwell) argues that "[Maxwell's] work with the gun in the wilderness caused her to share enough qualities with Indians and men that the public questioned both her whiteness and her femininity" (57). At the Philadelphia Centennial Exposition, spectators and press identified Maxwell variously "as variously white, Native American, a hunter, a housewife, a lady, and an amazon" (57). Many contemporary reviews of Maxwell's exhibit at the Centennial

[61] Bonta describes how Maxwell's collection, which she could not afford to ship back to Colorado after the Centennial exposition, was destroyed as a result of careless storage (*Women in the Field* 40-41). See also Moring, 186.

emphasize her bodily appearance and identity as a "little lady" of "refined sensibility."[62] A review in *Harper's Bazaar* notes: "Mrs. Maxwell is a quiet little blue-eyed woman, shy and unassuming in mien, and not at all like the Amazon that one might expect to find in the Rocky Mountain huntress" (730).[63] For these reviewers, Maxwell's body is worthy of as much, if not more, attention than the taxidermied bodies of the animals she prepared. Maxwell's female identity and body are intertwined with and shaped by the animal bodies she came into contact with in her work. Two photographs of Maxwell help to illuminate the tension or dissonance in her public persona. The first one (see Fig. 10) showcases Maxwell's hunting costume; the second one (see Fig. 11) shows her "at work" in her studio. A rifle appears in the foreground of both photos, as well as a dead fox (clearly dead in the first image and "life-like" in the second). These photographs emphasize the "lady-like" poise of Maxwell, while still gesturing to her work in killing and preserving her specimens. The images are not out in nature, but in an indoor and controlled environment that gives the illusion of safety and feminine propriety; it does not reveal the reality of the strenuous physical exertion required in traversing the Rocky Mountains tracking, shooting, and retrieving specimens of all sizes.

As Mary Dartt notes in *On the Plains, and Among the Peaks*, Maxwell's body and image were inseparable from her animals (209-210); at the Philadelphia Centennial Exposition, Maxwell spent hours answering countless questions from the public about her work (including the questions shown in Fig. 12). The questions either center on how a *woman* could do taxidermy or how she could be so good at it. Indeed, she was highly skilled and made advancements to the art that future taxidermists would copy, including

[62] See Browder, 61-63.
[63] "Mrs. Maxwell's Rocky Mountain Museum," *Harper's Bazaar*, Nov. 11, 1876, 730

Figure 10. Maxwell in her hunting costume.

Figure 11. Maxwell "at work" in her studio.

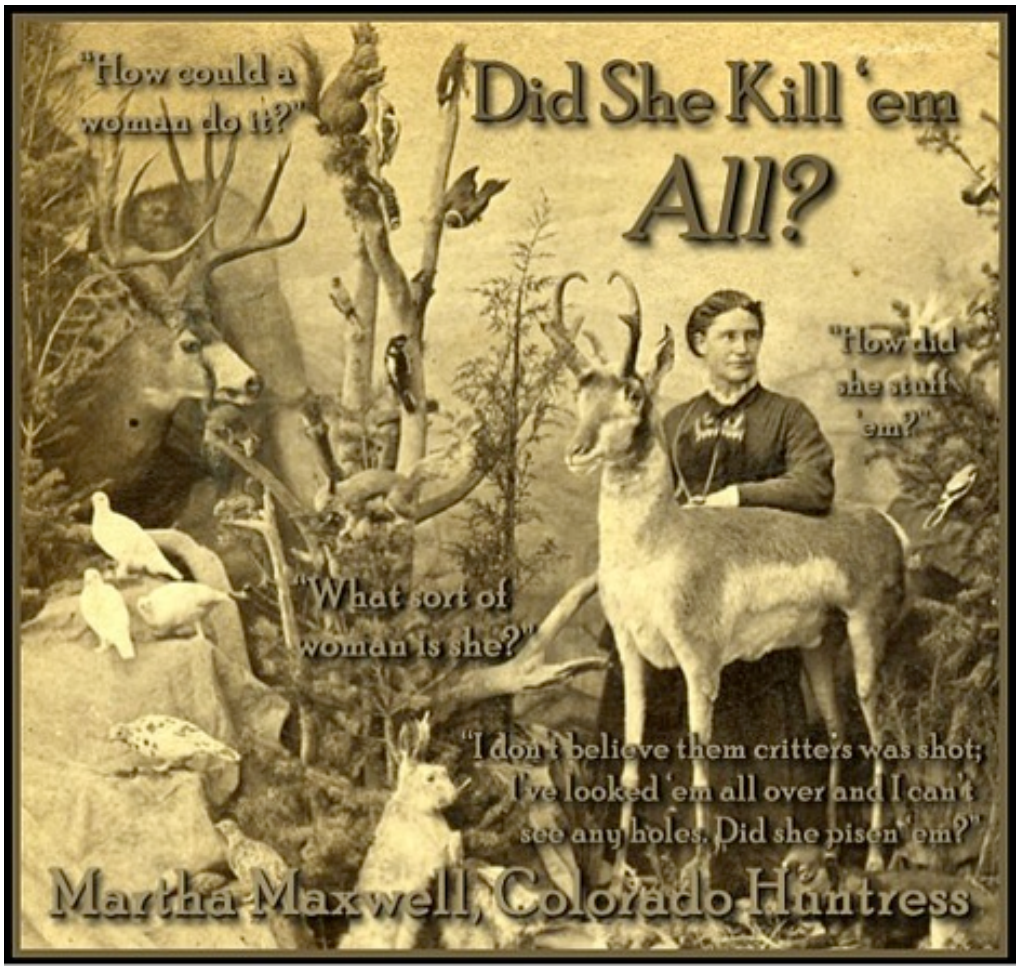
"How could a woman do it?"
Did She Kill 'em All?
"How did she stuff 'em?"
"What sort of woman is she?"
"I don't believe them critters was shot; I've looked 'em all over and I can't see any holes. Did she pisen 'em?"
Martha Maxwell, Colorado Huntress

Figure 12.

Figure 13.

using natural poses for animal specimens, placing animals in natural surroundings, inventing a special pickling solution that both softened and preserved hides, as well as protected against insect predation, and the creation of plaster body molds (Moring 177-179). At the exposition, Maxwell sold images of herself and her animals that were sold at the Philadelphia Centennial exposition (see Fig. 13). Dart explains that, while Maxwell initially found “the idea of selling her likeness” repulsive, she changed her mind as the public’s demand for these images became apparent (210-211). The animal bodies and their shift from living beings to taxidermied specimens increase the visibility of Maxwell’s female body. Animal bodies and gendered bodies are linked together in Maxwell’s “Woman’s Work,” and together they achieved greater fame and public interest than they would on their own.

Although Maxwell did not publish any writings, Dartt’s *On the Plains, and Among the Peaks*, provides important insights into Maxwell’s work and her interactions with

animal bodies.[64] Dartt's book not only "traces the career of a woman unconstrained by conventional gender expectations" as Browder argues (61), but also provides a curious and unsettling combination of feminized sentimentality and corporeal violence. Of particular note in her book are the descriptions of Maxwell's taxidermy work, her killing of specimens, the use of those specimens as commodities, and the juxtaposition of corporeal violence with feminized sentimentality. Dartt's first extended discussion of Maxwell's taxidermy work is rendered in highly physical and visceral terms as she describes the "hours of careful, often intensely disagreeable work" (26). In working with a dead and rotting turkey buzzard specimen, Maxwell found herself battling her own physical disgust and discomfort:

> Too sick to endure its presence a moment longer, she would retreat for a while; but as soon as it was possible to summon the strength and resolution, go to work again. It was more than a week, however, before she recovered from the effects of such a disgusting task enough to be able to eat an ordinary meal; and it was many weeks before the mounted bird could be taken from the outer shed, that gave him shelter, and have a place among her other birds. (29-30)

The physical presence of the dead buzzard and its putrefying corpse is powerful enough to disorder Maxwell's own body as a result of her close contact with it. Maxwell preferred to kill the animals herself both so that she had the opportunity to observe them alive first, which she felt gave her the ability to more accurately and truthfully present the animals after death (33-34), and because "it gave her the opportunity of studying the shape and disposition of prominent muscles, etc. She considered a knowledge of the anatomy of an animal as essential in taxidermy, as in sculpture, to the finest artistic effect" (109). Accurate, well-executed taxidermy, Dartt implies, requires intimate observation and contact with the animal bodies. In discussing advancements in taxidermy in the nineteenth century (but not mentioning Maxwell), Rachel Poliquin notes that "the real

[64] Not commercially successful, Dartt's book only went through one edition and has since fallen out of print.

poetry of taxidermy—was imparting the suggestions of life by capturing an animal's character. Ideally, taxidermy not only protected the carcasses of birds from decay, insects, and the ravages of time but preserved the elegance of life" (72). Maxwell's carefully prepared specimens became commodities that helped support Maxwell financially. On more than one occasion she would sell her specimens only to replenish her collection with new specimens. Dartt also notes that Maxwell always tried to collect "duplicate skins" when she went out hunting: "These, properly cured, could be sent to any part of the world, exchanged for skins from other lands, and were valuable for scientific institutions everywhere" (111). Maxwell's attention to the financial potential of her work shows that she continued the practice of earlier (male) naturalists in recognizing the commercial potential and value of animals' bodies.

Two scenes in Dartt's book epitomize the unsettling combination of violence and sentimentality in Maxwell's work that results from the shifting materiality of animal bodies. In the first scene, Dartt describes how Maxwell collects two baby birds in order to later kill and preserve them:

> Both birds reached Boulder in safety the next day, where they were fed and cuddled, and made happy until their robes of snowy-white down were of the most desirable length, when a little chloroform induced them to stop growing. A nest, like the one they occupied in their native tree, was procured. They were stuffed, and placed in it, with their little mouths open and their necks stretched up toward their mother, which, with a rabbit in her talons, was suspended over them. (73)

The nurturing, maternal quality of this episode is quickly disturbed with the rather euphemistic description of the birds' deaths, only to have the maternal and nurturing image be recreated in the tableaux Maxwell constructs with the dead bird bodies. The second scene concerns two bear cubs rescued by Maxwell:

> The mother of the [cubs] was killed at the same time as their capture. Ten days or more after her death, her skin being mounted, was placed in the museum. Mrs. Maxwell, to test her work and to see whether the cubs still remembered their mother, let them out into the room where she was.

> Selecting her from the other animals, they ran, whining, and jumped about her, licking her face, and seeming overjoyed at finding her again. But when conscious that she would not return their caresses, their grief was touching in the extreme. Standing up and stroking her face with their little paws in the most pleading manner, they licked her nose and cheeks, and moaned like two heartbroken children. It was more than Mrs. Maxwell could endure, and with tears of sympathy for their disappointment, she took them away. (178-179)

This scene shows the changed physical, material, and maternal presence of the mother bear, and how this change results in an increased visibility of the female body, both in the bear's taxidermied skin and Maxwell's display of fellow feeling with her "tears of sympathy." It also highlights the tensions inherent in taxidermy between aesthetics and ethics, a tension theorized extensively by Poliquin.

Taxidermy, Poliquin notes, "requires death of our closest compatriots—our fellow sentient creatures. Looking at dead animals necessarily engages our emotions" (10). She argues that "by creating animal-things, taxidermy necessarily creates encounters. This is the strange, unsettling power of taxidermy; it offers—or forces—intimacies between you and an animal-thing that is no longer quite an animal but could not be mistaken for anything other than an animal" (39). Poliquin uses the term "visceral knowledge" to describe the "bodily knowing that occurs in contact with physical things, a knowing that blurs emotions with materiality and may even defy reason, logic, and explanatory language" (39). This concept of "visceral knowledge" ties in with posthuman theories of shared double finitude and absolute materiality that were at play in Crevecoeur's caged-slave scene. That experience of visceral knowledge "forces each viewer to confront the troubled relationship between the aesthetics and ethics of taxidermy: the compelling urge to look and the worry about what made that looking possible" (50). And while Poliquin rightly identifies the "painfully, powerfully beautiful" quality to taxidermy (50), there also exists a sense of imagination and play that viewers must engage in. In order to appreciate a taxidermy specimen in a museum, viewers must, according to Asma,

"oscillate between knowing that it's a man-made construction and suspending [their] disbelief to enter into a play-along relationship with the display" (38). Yet Poliquin and Asma are focused on the implications of human encounters with taxidermied specimens. The scene of the bear cubs that Dartt depicts introduces the prospect of animals themselves as spectators of taxidermy. What do still-living animals make of taxidermied animal specimens, especially if those specimens were family members?

Because people can very easily recognize and identify with the mother-child relationships in animals, they become a crucial bridge to understanding and appreciating the intelligence, sentience, and emotional richness of the nonhuman world, which, in turn, leads to greater awareness and consideration of humans' ethical responsibility to nonhuman animals. The perverse, disturbing image of dead stuffed mother and living inconsolable cubs combines both the sympathetic identification of animals' familial relationships with the "visceral knowledge" of the taxidermied dead animal specimen. Human perception, emotion, and ethics become embodied and entangled with still-living animals' perception and bodies, and, at the root of that entanglement, is the dead animal-object, the taxidermied animal, whose materiality has shifted and changed—not enough to completely different, but just enough to unsettle and dissolve the boundaries between human and animal, living and dead.

## Distanced And Digitized Animal Bodies

Moving even further away from early America and into the twenty-first century, work by artists like Emilie Clark and websites such as *Crappy Taxidermy* reveal how role the taxidermied animal has changed dramatically. No longer a definitive source of scientific information and knowledge, the taxidermied animal becomes either vehicle for ethical and aesthetic considerations or a source of amusement and entertainment. Such a change in status is partly attributable to changing scientific practices. As Susan Leigh

Star argues, “the industrialization of biology at the turn of the [twentieth] century negative affected the status of taxidermy as a scientific field, in fact returned it to the status of a hobby” (258). The erasure of the “materials and tools” of scientific practice risks the erasure of the “politics of science and technology”: “It is precisely in this mess of practice that much of the gender, class, and racial politics of science are to be found. This is because it is in the selection of materials, the conduct of menial and manual labor in the laboratory, the choice of specimens, and the designation of what is unsavory that specifies whose voice will be heard as the legitimate voice of science” (258-259). In being viewed increasingly as a hobby, and a weird, quirky one at that, taxidermy lends itself to kitsch and humor, including *Crappy Taxidermy*. Started by Kat Su in 2009, *Crappy Taxidermy* proudly proclaims that it is “the Internet's largest image depository of crappy and awesome taxidermy” (*Crappy Taxidermy*). Kat Su started *Crappy Taxidermy* to keep track “of every bug-eyed, misshapen, bizarre, awkward, or just-plain-wrong piece of taxidermy that [she] was able to find online. As the site grew, readers started submitting photographs of their own taxidermy, and sightings of crappy taxidermy that they had found in museums, roadside attractions, stores, art galleries, or people’s homes” (2). The collection of images on the website range from anthropomorphic taxidermy and weird taxidermy creations using various animal bodies (see Fig. 14) to sincere, but failed, attempts at naturalistic taxidermy (see Fig. 15 and Fig. 16).

Unlike in Clark’s paintings and sculptures, *Crappy Taxidermy* features real animal bodies that have been transformed into taxidermy specimens. In discussing the use of taxidermy in contemporary art, Helen Gregory and Anthony Purdy argue that “the biological material of an animal [is treated] as an expressive substance”: “Once an animal is dead, its flesh becomes raw material in the hands of the artist-taxidermist and, although it is still an animal, it can also be classed as an object. It is, however, a very

particular type of object, one that gives rise to an array of semiotic possibilities" (61-62). However, this move towards using an animal's biological material as expressive substance is not restricted to contemporary art, as one of the posts to *Crappy Taxidermy* makes plain. Along with the myriad present-day photographs of crappy taxidermy, the website features a carte de visite of a grizzly-bear chair created by the hunter Seth Kinman and presented to Andrew Johnson in 1865 (see Fig. 17). The grizzly-bear chair attests to humans' long-standing use of animal bodies as material for aesthetic purposes.[65] Yet the chair's inclusion as a digital image shows how such profoundly material and embodied creations become disembodied through digitization. The emphasis in *Crappy Taxidermy* is on the distanced viewing of the taxidermied animal body. Viewers of the website do not come into direct contact with these animals nor are they occupying the same physical space as would be the case in viewing taxidermied animals in person at a museum. The animal bodies of *Crappy Taxidermy* have been photographed and digitized, further removing them from their original embodiment as living creatures. Digitized animal bodies can circulate more freely and widely than the original animal specimens ever could, and are capable of being viewed by anyone with

[65] See William Fitzgerald's 1896 article "Animal Furniture" from *Strand Magazine*, which catalogues several examples of furniture created from animals including a tiger chair and lamps made from swans and emus.

Figure 14.

Figure 15.

Figure 16.


Figure 17.

an internet connection. Physical decay and decomposition no longer pose a threat to the animal body, now preserved as a digital presence. Such freedom and accessibility of the digitized animal body occurs alongside increasing threats to real animals out in the world. In addition to humorous sites like *Crappy Taxidermy*, digitized animal bodies shape more serious-minded projects such as *In Pieces* and *What is Missing?*

Created in 2015 by Bryan James, *In Pieces* is a "CSS-based interactive exhibit celebrating evolutionary distinction" (*In Pieces*). The website features thirty animal species, each one threatened or endangered, largely due to human actions. *In Pieces* embraces a productive tension between ideas of unity and fragmentation. In the website's introduction, James stresses the "fragmented survival" of the thirty species who "share their struggles, and unite together in an interactive exhibition." In the "About This Project" section, James again evokes fragmentation and unity: "Their survivals laying literally in pieces. Each species has a common struggle and is represented by one of 30 pieces which come together to form one another" ("About This Project"). For each of the thirty species, James created a polygon comprised of thirty triangles (see Fig. 18). As the user switches between the different species the triangles shift and rearranges themselves to form the next animal (see Fig. 19). Each of the polygon animals are animated, making slight movements of the head, tail, wings, tongue, or other body parts. Users are also given the option to download each animal as desktop wallpaper: "Give the Vaquita a digital home by downloading a desktop wallpaper." In addition to the polygons, users are provided with statistics about each species and their population decline, as well as brief information about how and why it is threatened and a video that addresses the threat to the species and features the only images of real animals. The animal polygons with their geometric, origami quality function as stand-ins for material animal bodies. Such

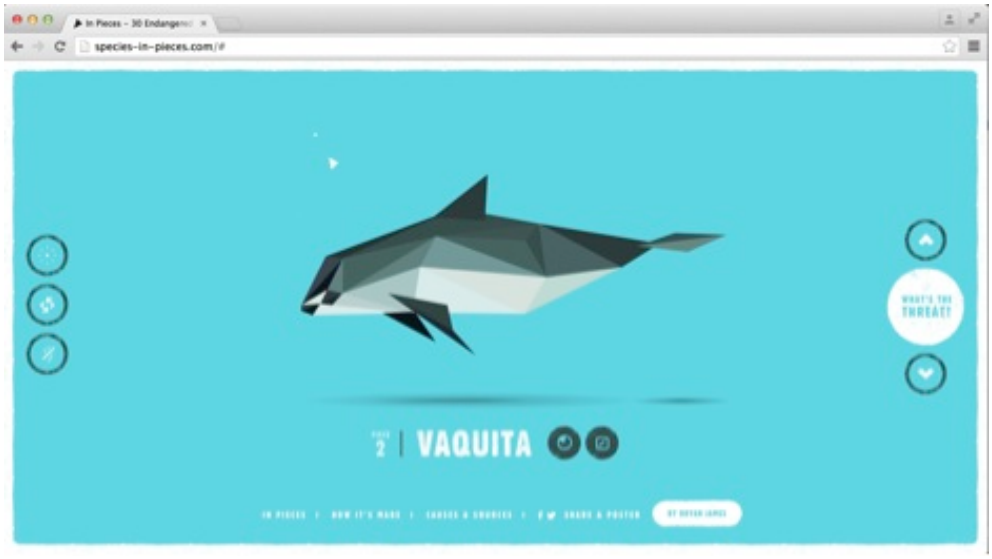


Figure 18.

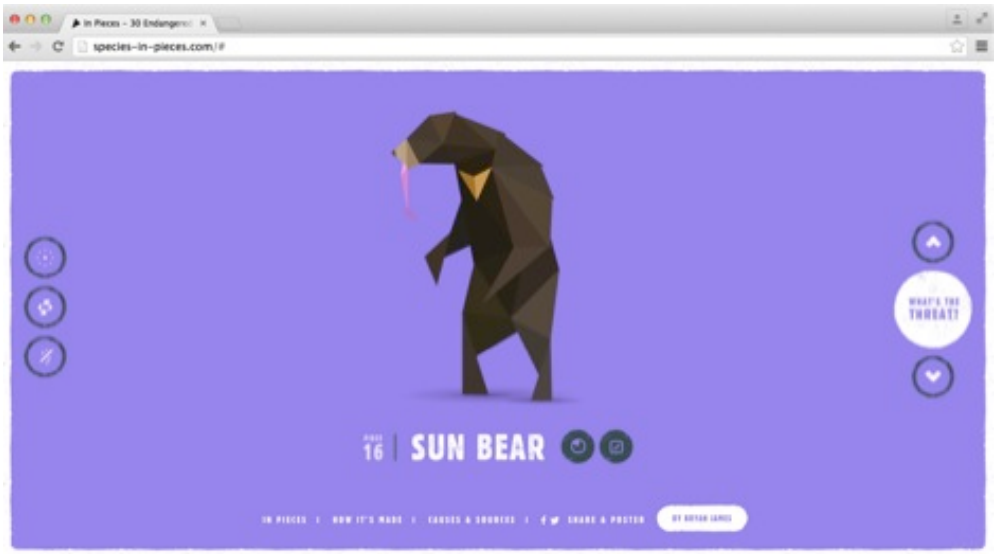


Figure 19.

substitution seems fitting; the real animals themselves are quickly disappearing from the planet leaving only representations and abstractions.

Yet even in their abstraction, the polygon animals speak to the animal body as an entity composed of pieces or parts, symbolic of the viscera, organs, and animate matter of animal bodies discussed in previous chapters. The individual pieces engage in a version of shifting materiality as the thirty triangles shift and alter in switching from one polygon animal to the next. The shifting materiality of the polygon animals, however, is profoundly different from that of early American natural history specimens. Although humans initiated the changes in materiality, nonhuman actors were able to exert their own form and version of agency; they were not merely passive material awaiting human action. The animals of *In Pieces* are entirely man-made stand-ins for the real animal, and the website leaves animal bodies entirely under the control of human users. We can decide which animal to look at, if we want to randomly cycle through the different animals, if we want to "give a home" to one of the digitized animals, or if we want to seek out ways to take action to try to save the real flesh-and-blood animals. The messy entanglements of human and nonhuman actors have been flattened out into thirty triangles.

The focus on species extinction and habitat loss also forms the focus of Maya Lin's website *What is Missing?* Created in 2009, *What is Missing?* Is a multimedia project that functions both as a memorial for lost or threatened species and as a resource to connect people, "presenting plausible future scenarios for a sustainable planet, and showcasing examples of what is already being done around the world to make these ideas a reality, all the while providing people the much-needed feeling that it is within our power to make change" (*What is Missing?*). The site features a combination of videos, interactive maps and timelines, and collections of personal memories that individual

users across the globe can contribute. As the website explains: “These accounts create a collective memory of the planet, giving people an idea of how wondrous the natural world used to be but also how resilient nature can be.” The collective memory function of *What is Missing?* makes it, as Barry Jason Mauer argues, “dynamic and active, allowing visitors, and, indeed, whole online communities, to shape and be shaped by a number or perspectives, narratives, and artifacts” (2). Lauren R. Kolodziejski argues that “by disrupting the human gaze and highlighting tensions within communication about the environment, [*What is Missing?*] creates openings for alternative articulations of the human–nature relationship” (429).

The main page of the site features a map of the world with dots that represent videos, timelines, or memories. The timelines track extinctions and changes to environments and habitats in different locations. For example, one timeline tracks the extinction of different bird species on Hawaii between 1824 and 2008. Another timeline focuses on Chicago, 1674-present day, recording descriptions of the land, natural resources, plants, and animals, ranging from early settler descriptions of the area to recent problems with zebra and quagga mussels and algae blooms. Timelines like these two, according Kolodziejski, “[replicate] othering and connection perspectives simultaneously, creating an interactive experience that draws attention to the tension between them and complicates simplistic framings of nature” (439). Viewers feel connected to the timelines because they can track species loss that has occurred within their lifetime and feel a personal sense of loss, while, at the same time, they maintain distance from the information given in a broad, sweeping representation of space and time (438-439).

*What is Missing?* also features seventy-five videos “on threatened species, habitats, and critical environmental issues” (*What is Missing?*). The videos follow a

pattern: from a blank screen a circle opens up revealing the video, which begins out-of-focus; as the image becomes clear, a series of texts appear superimposed over the video while either ambient noise or the sounds of the animal featured in the video can be heard. Kolodziejski points of that the structure of these videos "disrupts the human gaze and its objectification of nature, inviting visitors to pay closer attention, to engage more deeply and to see the thing being viewed as a subject" (435). While many of these videos are focused on present day threats to species and habitats, others take a more historical viewpoint. For example, "The Abundance of Bison" features an image of a nineteenth-century photograph of a man standing in front of an enormous pile of buffalo skulls. The video slowly pans across the image while a quote by W.T. Hornaday about the amazing abundance of millions of buffalo in the nineteenth century appears in front of the image and the sounds of buffalo grunts provides the video's only audio. The video emphasizes the physical animal body and how it can be separated or disassembled into parts. The buffalo noises remind viewers of the physical presence of the animal and that the mountain of skulls belonged to once living, breathing creatures.

The vast collection of personal memories contributed by visitors to the site are intermixed with excerpts from writings by naturalists such as Audubon. Many of these memories focus on contributors' encounters with or observations of animals and how they have noticed a decrease in their numbers. For example, in one post about owls, contributor Janet Griffiths writes: "When we first moved to Houston,Tx., [sic] in 1976 we would frequently hear or see big owls, barred owls I believe, who perched on tall pylons crossing Buffalo Bayou. Also we saw and had nesting in our yard screech owls. No nests recently and I've only heard one screech owl in the last 12 months." Or this memory written by contributor Cate Moses:

> I saw my first mountain lion in the wild in 1975. Since then I have encountered eight more. As the largest predators in the forest, they order

> our experience of wild. I fear that they may soon be gone. Humans hunt them for sport, running them down with dogs, leaving the skinless carcasses where they lie. Almost every photo you have seen of a mountain lion was taken seconds before the paid guides bring the wealthy hunter in for the pleasure of shooting a treed lion. Often the dogs keep the lion treed for hours or days while the hunter is summoned by cell phone, flies to the site, and is ferried in via air conditioned range rover for the kill.

The personal memories shared on the site feel familiar and accessible, and serve to prompt in readers not just a consideration of species loss, but also a desire to share their own memories as well. Unlike *30 Pieces*, *What is Missing?* provides more opportunities for users to engage with the website's material. They are invited not only to participate, but also are encouraged to be changed or altered by experiencing the site. Such involvement impresses more clearly upon our senses and sensibilities and creates a greater sense of engagement and enmeshment of humans with the nonhuman world. Rather than taking a memory from the site by downloading desktop wallpaper, users give memories and records to be shared and experienced by others around the world. The communal practice of knowledge creation that arises from *What is Missing?* is evocative of the practice of early American natural history.

Boundaries between bodies, between human and nonhuman, between living and dead, between physical and digital are repeatedly evoked and dissolved in these websites, as well as in the works of Treat and Maxwell. While Treat's and Maxwell's work reveal the permeability or collapse of distinctions and boundaries between humans and nonhumans, *Crappy Taxidermy*, *In Pieces*, and *What is Missing?* show how that permeability is complicated in the world of digital animal bodies. The digital presence of the animal bodies in those websites is in many ways more vital than the original materiality of flesh-and-blood animal bodies out in the natural world. Their digital presences travel farther, faster, and more reliably that the specimens of early American natural history. In *What is Missing?* and *In Pieces*, they connect people and raise

awareness about species and habitat loss. Yet digitized animal bodies also separates us from the real animals, a separation with both positive and negative implications. With our focus on digitized animals, we can potentially leave real animals alone and undisturbed, but we can also find ourselves caring les and less about the real animals and their fate. After all, the digitized animals are far easier to control, contain, and manipulate than the real animals that confronted early American naturalists; they do not die, escape, or resist us.

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