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‘The Indians Say’: Settler Colonialism and the Scientific Study of North America, 1722 to 1848

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Abstract

"'The Indians Say': Settler Colonialism and the Scientific Study of North America, 1722 to 1848" examines the issue of evidence and credibility within natural history by following the circulation of Indigenous testimony through Anglophone networks of scientific knowledge production. By merging the history of science with Native American and Indigenous studies, this dissertation makes two interrelated arguments: first, that during the eighteenth and early nineteenth centuries information sharing between Indigenous peoples and Anglophone naturalists was both controlled by Indigenous actors and political in nature; and second, that the scientific credibility of Indigenous testimony was informed by colonial ideology and politics. Instead of prevailing scientific norms shaping American settler science, the reverse was true.

Using four chronological case studies centered in the early eighteenth-century Carolina piedmont, the late eighteenth-century Eastern Woodlands, the early nineteenth-century Upper Mississippi River valley, and mid nineteenth-century Samoa, this dissertation demonstrates that colonial politics influenced naturalists' decisions to cite Native American sources. In all four cases, Anglophone naturalists only had access to Indigenous testimony as a result of Indigenous diplomacy and information sharing practices. Moreover in each of these instances, Anglophone naturalists Mark Catesby, Benjamin Smith Barton, John James Audubon, and Titian Ramsay Peale each relied on Indigenous testimony and expertise, but the intellectual value these naturalists ascribed to this same information waxed and waned in direct response to settler colonial Indian policy.

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To my cohort-bestie, untiring personal editor, and LBP: Alana Marie Toulin

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Introduction

John Gottlieb Ernestus Heckewelder, a Moravian missionary working in present-day Ohio, knew the problems of storytelling well. In the late eighteenth and early nineteenth centuries, Heckewelder became an accepted authority on the Lenni Lenape, or Delaware Indians, acting as a regular correspondent for the American Philosophical Society (APS). In his book *History, Manners, and Customs of the Indian Nations Who Once Inhabited Pennsylvania and the Neighbouring States (1819)*, Heckewelder chided the "indiscriminate" traveler who related "strange and wondrous things for the mere purpose of exciting admiration," attributing this habit to a lack of understanding of both the customs and language of the very people these indiscriminate travelers purported to observe.[1] Heckewelder went on to articulate a pressing problem for both American travelers and the natural historians who relied on their information, stating that:

> There are men who relate incredible stories of the Indians and think themselves sufficiently warranted because they have Indian authority for it […] but they [the Indians] are fond of the marvelous, and when they find a white man inclined to listen to their tales of wonder, or credulous enough to believe their superstitious notions, there are always some among them ready to entertain him with tales. […] They laugh at the same time at their being able to deceive a people who think themselves so superior to them in wisdom and knowledge.[2]

Heckewelder's comments indicated that the use of "Indian" stories permeated Early American natural history. But Heckewelder also issued a timely warning for aspiring American naturalists: Indigenous people were not passive sources of natural historical knowledge and moreover had

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[1] John Heckewelder, *History, Manners, and Customs of The Indian Nations Who Once Inhabited Pennsylvania and the Neighboring States* (Philadelphia: The Historical Society of Pennsylvania, 1888), 318.
[2] Heckewelder, 321–2.

personal motivations for sharing information with—or hiding information from—colonial naturalists.[3]

Heckewelder stopped just short of explicitly articulating the larger implication of his observation: Indigenous peoples, not colonial naturalists, controlled the transmission of information between these two groups in Anglophone North America. Although many aspects of that knowledge transmission would change over the course of the eighteenth and nineteenth centuries—for Anglophone naturalists the desirability, availability, and utility of Indigenous testimony all waxed and waned—Indigenous control over the flow of information remained constant. Information was (and continues to be) a valuable resource that some Indigenous peoples in different times and places used to negotiate their relationship with Anglo-American colonists and settlers. This dissertation examines four instances where Anglophone naturalists wanted access to Indigenous expertise but had to navigate the diplomatic and social conditions created by Indigenous peoples. In some cases, like in the early eighteenth-century Carolina piedmont, political relationships between British colonists and Southeastern Indians blocked the flow of information from Indigenous Carolinians to Anglophone naturalists. In other cases, like the Eastern Woodlands of the late eighteenth century, changing Indigenous responses to colonization increased Anglophone naturalists' access to Indigenous testimony. By examining the flow of information from Indigenous people to colonial naturalists across disparate sets of

[3] Throughout this dissertation I use "Indigenous peoples" to describe the Native American and Pasifika peoples who the naturalists I examined relied on for information and guidance. No one term adequately describes the complexity and diversity of Indigenous peoples. Additionally, the inclusion of Samoa in the final chapter of my dissertation precludes narrowing in on one linguistic or geographic sub-grouping like Algonquian-speaking peoples or Eastern Woodlands Nations—groupings that are themselves insufficient. I chose Indigenous (capitalized) as a nod to contemporary politics and activism surrounding issues like decolonization, sovereignty, and climate change where the term Indigenous fosters international solidarity.

circumstances, this dissertation demonstrates how Indigenous peoples' participation in natural history was strategic, diplomatic, and deeply political.

This dissertation makes two interrelated arguments: first, that during the eighteenth and early nineteenth centuries information sharing between Indigenous peoples and Anglophone naturalists was both controlled by Indigenous actors and political in nature; second, that the scientific credibility of Indigenous testimony was informed by colonial ideology and politics. In making these arguments, my dissertation engages cutting-edge scholarship in both Native American and Indigenous studies (NAIS) and in the history of colonial science. During the eighteenth and nineteenth centuries, the natural historical study of North America was frequently contingent on Indigenous permission and assistance. Anglophone naturalists could not simply extract information concerning American flora and fauna from Indigenous sources; information had to be given.

Following the Flow of Information

The methods and ethical tenets of NAIS as outlined by Alyssa Mt. Pleasant, Caroline Wigginton, and Kelly Wisecup, helped me gain significant insights about both the history of scientific evidence and the role of information in Indigenous diplomacy.[4] Mt. Pleasant, Wigginton, and Wisecup call on NAIS scholars to analyze "Indigenous peoples' intellectual traditions, literatures, histories, and sociopolitical formations," foreground "Native perspectives," and know "that what they say about the past and how they say it had an ethical obligation to and tangible impact upon descendant communities, and polities."[5] My argument that natural historical information held political value was a direct product of these principles. In identifying

[4] Alyssa Mt. Pleasant, Caroline Wigginton, and Kelly Wisecup, "Materials and Methods in Native American and Indigenous Studies: Completing the Turn" *The William and Mary Quarterly* 75, No. 2 (April 2018): 210.
[5] Alyssa Mt. Pleasant, Caroline Wigginton, and Kelly Wisecup.

the names of Indigenous informants, I moreover took Christin De Lucia's invitation for historians of early America to embrace epistemological uncertainty and include rather than exclude Indigenous actors.[6] Like many other colonial records, the naturalists' papers I used in this dissertation rarely named Indigenous people or even identified individual nations. Instead of treating these archival omissions as impediments, I chose to draw inferences and make logical conclusions based on corroborating sources. As a result, the chapters that follow occasionally use probabilistic language to incorporate more Indigenous perspectives and histories.

This dissertation began as a project of historical recovery: who were the Indigenous people that provided Anglophone naturalists with information concerning American nature and what motivated their collaboration with these same naturalists? This recovery approach had obvious limitations as collaborations between Anglophone naturalists and their Indigenous informants were almost always documented by the naturalists and colored by their colonial biases. These biases, however, did not prevent naturalists from recording Indigenous perspectives or ways of knowing.[7] Moreover, through the act of historical recovery, scholars can "reverse the narrative of absences and reveal the persistence of Indigenous adaptation and survival."[8] Borrowing methodological insights from the work of Kelly Wisecup and Lisa Brooks, I used naturalists' descriptions of their Indigenous sources as a point of departure and placed

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[6] Christin De Lucia, "A Bible with Whales and an Indigenous Sawmill: Entangled Lives, Material, and Memories from the Native and Colonial Northeast" (online, 2020 Vast Early American Lecture, Omohundro Institute, William and Mary College, Williamsburg, VA, 29 September 2020).

[7] Kelly Wisecup, for example, argues that new historicist and postcolonial approaches to colonial texts often took an overly skeptical approach to European writing about the New World by assuming that Indigenous and African viewpoints cannot be recovered from these sources. According to Wisecup, this type of reductive thinking both overstates European authority in colonial spaces and inaccurately exaggerates the differences between colonial, Indigenous, and African bodies of knowledge. See Kelly Wisecup, *Medical Encounters: Knowledge and Identity in Early American Literatures* (Amherst: University of Massachusetts Press, 2013), 7–9.

[8] Lisa Brooks, *Our Beloved Kin: A New History of King Philip's War* (New Haven: Yale University Press, 2018): 6.

each information exchange within its larger social and political context.[9] The dates and places naturalists mentioned in their writing, the colonial communication networks they used to gather information, and the ideas and information they cited allowed me to recover the often unrecorded names of nations, villages, and even individuals who shared information with Anglophone naturalists.

In addition to stressing a history of Indigenous persistence, retrieving this identifying information also revealed that Indigenous informants often had political motivations for sharing information with settler naturalists. In order to elucidate the Indigenous social and political contexts for these collaborations, I attempted to identify what (if any) interdictions existed around knowledge and information in the at the moment of exchange: did an individual need special training to access certain information? Were practices like lying and gossip stigmatized? How were children educated? Many of these questions were inspired by social constructivist histories of science that examine how training and initiation, proprietary relationships, gender, and more determined who knew what about the natural world in early modern Europe.[10] In two of the exchanges I analyzed—one involving a late eighteenth century Lenape man and one involving the Western Shawnee residents of Cape Girardeau, Missouri—I found that many of these questions had not been answered directly by other scholars.[11] By pairing contemporary histories of Indigenous peoples, traveler's descriptions, missionary histories, and Indigenous

[9] See Wisecup and Brooks.

[10] See for example Pamela Smith, *The Body of the Artisan: Art and Experience in the Scientific Revolution* (Chicago: University of Chicago Press, 2004); Deborah Harkness, *The Jewel House: Elizabethan London and the Scientific Revolution* (New Have: Yale University Press, 2008); Katherine Park, *Secrets of Women: Gender, Generation, and the Origins of Human Dissection* (Princeton: Princeton University Press, 2006).

[11] In the other two instances I examined—the early eighteenth-century Carolina piedmont and mid-nineteenth century Samoa—I was unable to identify a specific individual who provided information to the naturalists involved and as a result could not do the same deep analysis. In those cases, strategic military information was secret, but it may not have been the only protected category.

memoirs, I answered some of these question and also found that, as a general rule, during the eighteenth and nineteenth centuries the most carefully protected category of information within most Indigenous societies was strategic military intelligence.[12] This profoundly political prohibition drew my attention to how information, including natural historical information, was a valuable diplomatic resource during the eighteenth and nineteenth centuries. Indigenous allies shared information with each other about the locations of enemies and resources and trade valuable plant and animal products as a way of cementing their relationships. Information exchanges between Indigenous people and Anglophone naturalists was similarly political, with information being shared with potential allies and concealed from potential enemies.

By arguing that Indigenous information sharing was a form of diplomacy, my project builds on existing scholarship which demonstrates that Indigenous peoples wielded profound political, economic, and cultural power in North America until the mid-to-late nineteenth century. Numerous American historians have claimed that the "New World was, in effect, created through a process of mutual discovery" between Indigenous peoples and European colonists, correcting older Whiggish histories of colonization that exaggerated the power and influence of European empires.[13] During the early modern era, Indigenous social formations held

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[12] I did find several exceptions to this general observation. In some cases, like among the eighteenth-century Lenape, spiritual adepts guarded their individual knowledge but on in any given village or clan, religious beliefs were still openly discussed both within the society and with outsiders. For the most part, military intelligence was the only information categorically defined as secret. Additionally, chapter one of this dissertation examines an instance where Indigenous people used secrecy as a political strategy to prevent colonial encroachment, sharing little to no information with naturalists.

[13] Michael Witgen, *An Infinity of Nations: How the Native New World Shaped Early North Americ*a (Philadelphia: University of Pennsylvania Press, 2013), 26. Michael Witgen's *An Infinity of Nations* is just one recent example of this type of scholarship but elsewhere in this dissertation I cite other texts that make similar claims such as James Merrell, *The Indians' New World: Catawbas and Their Neighbors from European Contact through the Era of Removal* (Chapel Hill: University of North Carolina Press, 1989); Francois Furstenberg, "The Significance of the Trans-Appalachian Frontier in Atlantic History" *The American Historical Review* 113, No. 3 (June 2008), 647–677; See Gregory Evans Dowd, *A Spirited Resistance: The North American Indian Struggle for Unity, 1745–1815* (Baltimore: Johns Hopkins University Press: 1992).

the political upper hand in North America, shaping the course of European empires and determining the outcomes of numerous wars.[14] Although some Indigenous cultures selectively incorporated European practices and goods, European colonists also adapted to Indigenous demands by participating in political rituals, borrowing terminology, and even importing and manufacturing trade goods designed to appeal to Indigenous consumers.[15] Field-defining studies within Native American history have redefined how contemporary scholars understand interactions like trade and marriage between colonists and Indigenous peoples; while Europeans often viewed these exchanges as transactional, Indigenous people frequently saw them as political.[16] My dissertation complements existing scholarship that underscores historical contingency and emphasizes Indigenous authority by analyzing natural historical information as a valuable diplomatic resource. By examining Indigenous testimony in this way, I was able to productively combine a number of superb histories of Native American politics and diplomacy with the history of colonial science.[17]

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[14] See for example Witgen.

[15] One well-known version of this argument is Richard White's "middle ground," which argues that creative misunderstandings led to mutual accommodation between colonists and Indigenous peoples in particular times and places. White provides examples where French colonial officials engaged in gift-giving rituals and political ceremonies to forge alliances with Indigenous peoples. The information exchanges I describe would not be classified as products of the "middle ground," but White's larger observations about mutual adaption are still salient. See Richard White, *The Middle Ground: Indians, Empires, and Republics in the Great Lakes Region, 1650–1815* (Cambridge: Cambridge University Press, 2011). Daniel Richter similarly proposes if early American historians reverse their intellectual orientation and proverbially face east, they would see more complex process of cultural exchange where Indigenous peoples acted strategic and selective consumers of European ideas and goods. See Daniel Richter, *Facing East From Indian Country: A Native History of Early America* (Cambridge: Harvard University Press, 2001). James Merrell similarly describes Indigenous Carolinians as discerning consumers who not only molded European goods into their existing lifestyle but also created market economic demand for certain commodities. See Merrell. White, Richter, and Merrell are of course not the only scholars to make these arguments, but their studies are foundational texts in early American history.

[16] For example, Brooks describes how seventeenth century Wabanaki leaders understood the exchange of goods or land as entangled within social obligations. European colonists in the Northeast thus had to be brought into "right relations" with the Wabanaki ways. See Brooks, 17–23.

[17] I describe the history of colonial science in more detail in the next section of this introduction.

My dissertation also aligns with a scholarly push within Native American history to examine not just settler-Indigenous relationships but also inter-Indigenous politics. Recent studies that focus on Indigenous understandings of kinship, language, politics have "dramatically revised our understanding of Native-Native relationships in the eastern North America in the opening centuries of colonization" and changed how early Americanists identify historical continuity and change.[18] Studies of inter-Indigenous politics have additionally demonstrated the autonomy and agency of Indigenous peoples, who brought their own ideas about human similarity and difference to settler-Indigenous relations.[19] Attending to inter-Indigenous diplomacy allowed me to identify how Anglophone natural history benefitted from pre-existing information sharing practices. Instead of assuming natural historical information moved from Indigenous sources into colonial peripheries and finally arrived in imperial metropoles, my dissertation considered what factors encouraged or stymied the flow of Indigenous testimony and how these factors also changed over time. This attention to historical change also allows me to add nuance and depth to Neil Safier's call for scholars of colonial science to place itineraries – or the circulation of information—at the center of colonial histories of science in order to avoid reproducing imperial hierarchies.[20]

In addition to borrowing methodological and theoretic insights from NAIS, I also took seriously many of the ethical considerations the field raises. My dissertation benefits from

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[18] Sean Harvey, "Native Views of Native Languages: Communication and Kinship in Eastern North America, ca. 1800-1830," *William and Mary Quarterly* 75, Issue 4 (October 2018), 652. In addition to Harvey's writing on "Native-Native" relationships, Dowd's writing on pan-Indianism was deeply influential for my project.
[19] See for example Nancy Shoemaker, "How Indians Got to Be Red," *The American Historical Review* 102, Issue 3 (June 1997), 625–644.
[20] See Neil Safier, "Global Knowledge on the Move: Itineraries, Amerindian Narratives, and Deep Histories of Science," *Isis* 101, No. 1 (March 2010): 133–145.

Maureen Konkle's critique of settler colonial "culturalist scholarship."[21] Konkle argues that both in the nineteenth century and today, "EuroAmerican intellectuals" emphasized Native cultural difference as a way of displacing "Native peoples' political struggle—their struggle for history and autonomy—while maintaining the ideological coherence of the United States."[22] My study avoids this flawed culturalist model in two ways. First, by historicizing and contextualizing the oral transmission of natural knowledge within eighteenth- and nineteenth-century Indigenous societies, I emphasize that Indigenous responses to settler colonialism were highly dynamic and changed over time. This analytical focus on change rejects the essentialist argument that there was an authentic or static form of Indigenous information sharing.[23] Second, I argue Indigenous peoples often shared information as way to advance clear political goals, avoiding a specious distinction between culture and politics. According to Konkle, settle colonialism frequently frames "Native peoples' connection to land […] [as] cultural" and avoids acknowledging how that connection "is also political—about governments, boundaries, authority over people and territory."[24] My dissertation demonstrates that Indigenous information sharing was both cultural and political, echoing Konkle's claim that Indigenous leaders after the onset of European colonization used the invocation of "historical accounts of their traditions and experiences of European colonization and settlement […] to write themselves into a political future."[25] Within this framework, acting as an natural historical informant and sharing information was part of an Indigenous political struggle to be seen and recorded as diplomatic equals.

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[21] Maureen Konkle, *Writing Indian Nations: Native Intellectuals and the Politics of Historiography, 1827-1863* (Chapel Hill: University of North Carolina Press, 2004), 28
[22] Konkle, 28.
[23] Responding mainly to the field of literary criticism and quoting Charles Mills, Konkle argues that many contemporary intellectuals writing about Native American literature implicitly argue that there is an authentic or traditional Native American perspective that is distinct from a syncretic, Americanized one. See Konkle, 26–35.
[24] Konkle, 2.
[25] Konkle, 6.

Nullius in verba [26]

When Heckewelder was writing in 1819, Indigenous expertise was somehow both ubiquitous and unreliable. Building on this apparent contradiction, the primary question my dissertation set out to answer about American natural history was: why did Indigenous testimony cease to be a credible form of scientific evidence? To answer this question, however, I first needed to examine how Indigenous testimony was legitimized and used within Anglophone natural histories written about North America. In doing so, I found that ultimately political relationships between Indigenous nations and settlers determined if, when, and how Anglophone naturalists cited Indigenous testimony as evidence, meaning that U.S. Indian policy in the mid-nineteenth century eventually rendered Indigenous testimony suspect within American natural history. Although Indigenous people still controlled the flow information in the mid-nineteenth century, policies like Indian Removal attempted to subordinate Indigenous nations and removed any diplomatic appeal for information sharing. This observation conforms to a now ubiquitous claim within the history of science: that the social, geographic, and political context of scientific knowledge production shaped the practice and content of natural history and philosophy.[27] It additionally supports the prevailing scholarly argument that Europeans and Americans constructed racial categories not to explain phenotypical differences but as a tool of power and as a justification for enslaving, colonizing, and massacring people of color.[28] The repudiation of

[26] The Royal Society of London adopted *Nulius in verba* or "On no man's word" as their motto. See Steven Shapin, *A Social History of Truth: Civility and Science in Seventeenth-Century England* (Chicago: University of Chicago Press, 1995), 201.

[27] In the 2011 edition of *Leviathan and the Airpump: Hobbes, Boyle, and the Experimental Life*, Steven Shapin and Simon Schaffer provide an exceptional historiographic essay on the "social constructivism" model of the history of science, a methodological turn that focused scholarly attention on the social, political, and historical context of knowledge making. See Steven Shapin and Simon Schaffer, *Leviathan and the Airpump: Hobbes, Boyle, and the Experimental Life* (Princeton: Princeton University Press, 2011), xi–xlx.

[28] Shoemaker writers that "As a system of categorizing people, race fulfilled Europe's ideological needs by creating the illusion that human difference was biologically ordained" but cautions that a history which only analyzes "how

Indigenous expertise was explicitly tied to the scientific construction of racial difference during this period, as theories of racial difference often claimed mental ability corresponded to race and thus people of color could not provide scientific expertise. Building on this scholarship, my dissertation elucidates historical moments when Indigenous people controlled the transfer of natural knowledge between themselves and Anglophone naturalists.

Reliance on Indigenous knowledge about North American flora and fauna was part of a broader effort on the part of English naturalists during the sixteenth and seventeenth centuries to determine how their community would define truth and devise mechanisms for sorting information and beliefs.[29] These English naturalists initially used preexisting norms surrounding gentility and honor to determine veracity: gentlemen, due to their social and economic status as well as their distinguished pedigrees, could be trusted to both sense and tell the truth.[30] This system, however, had its pitfalls—what happened, for example, when two gentlemen made contradictory truth claims? Civility and gentility dictated that man of higher rank had the final say but over the course of the seventeenth century English naturalists created exceptions and workarounds to managed disagreement and maintain courteousness. Epistemic modesty, probabilistic thinking, and the emphasis on neutral facts allowed seventeenth century English naturalists to disagree while still protecting the decorum of gentlemanly society.[31] These management strategies, however, also allowed English naturalists to authenticate information

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whites constructed images of other […] replicates what it purports to critique" (Shoemaker, 652). According to Shoemaker, in the eighteenth century Indigenous definitions of race, like early European ones, were flexible and tailored to particular historic and geographic circumstances. In the nineteenth century, Americans and Europeans needed an ideological justification for slavery and colonialism, they cemented and monopolized definitions of race.

[29] On social definitions of truth, see Shapin, 3–41.

[30] See Shapin, 74–86.

[31] On epistemic modesty, see Shapin, 179–89; on probabilistic thinking, see Shapin, 214–7; on neutral facts, see Lorraine Daston, "Baconian facts, academic civility, and the prehistory of objectivity," *Annals of Scholarship* 8 (1991): 337–63.

outside of their own immediate sensory experiences and paved the way for outside testimony to become a form of scientific evidence.[32]

Testimony on its own was, in the eyes of many English naturalists, an unpredictable thing. Seventeenth-century naturalists thus developed seven maxims for evaluating the truthfulness of a piece of scientific testimony: was the testimony plausible; was the testimony corroborated by other similar, accounts; was the testimony logically consistent; was the testimony immediate (or based on first-hand experience as opposed to retellings); did the testimony come from a source with special skill or knowledge; was the testifier confident in what they perceived, and did the testifier possess disinterest and integrity?[33] The fifth of these maxims—did the testifier have specialized knowledge or skill—allowed elite English naturalists to use the expertise of "unlearned" laborers, craftspeople, merchants, travelers, and others who, by virtue of their vocations, were more familiar with the natural world than cloistered gentlemen.[34] This ability to extend limited trust to non-gentlemanly experts became crucial for the members of the Royal Society of London for Improving Natural Knowledge, who faced a deluge of new information and objects from the remote parts of Britain's expanding overseas empire.[35] Authorizing the testimony of individuals with specialized knowledge or skills, like travelers, merchants, and colonists, would allow Anglophone natural history to encompass the known world.[36]

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[32] See Shapin, 201.
[33] Shapin, 212.
[34] Shapin, 235.
[35] Shapin argues philosophers found ways to expand trust "at a distance" to times and places they were not in and that this ability to project trust over space also supported the rise in English experimentation. Robert Boyle, for example, relied on the written testimony of Dutch, Swedish, and English travelers when studying extreme cold. Whenever possible, Boyle preferred to interview travelers directly and probe their accounts. See Shapin 245-51.
[36] Richard Drayton coined the term "nature's government" to describe how British imperialism and natural science converged during the sixteenth and eighteenth centuries, with the study of the natural world promising new tool for

Defining who was an expert on nature in the colonies, however, was a fraught endeavor for metropolitan naturalists. Travelers, who undertook expensive, arduous, and dangerous journeys, were a logical source of information about faraway places but beginning in the mid-seventeenth century, travelers' narratives had been regarded as dubious at best and fraudulent at worst.[37] English naturalists thus had to find ways of identifying "credible travelers"—those who employed a "philosophical" (or educated) approach and whose narratives demonstrated internal coherence and disinterest.[38] European colonists were another logical source of colonial intelligence but prevailing medical theories cautioned that Englishmen's senses and even their intellect could degenerate in the new climate of the Americas, possibly rendering them untrustworthy. Most British colonists, moreover, came from less-than genteel backgrounds and had a decidedly commercial interest in American nature that made their testimony doubly suspicious.[39] To salvage the testimony of European colonists, metropolitan naturalists instead focused on drawing out the "deracinated particulars" of colonial accounts—bits of fact or information detached from theory or interpretation by the relater.[40] This practice transformed colonial naturalists, particularly those in the British Atlantic world, into subordinate compilers, collectors, and suppliers of natural history for their philosophizing English superiors.[41] In England, incorporating information from the Americas into the corpus of natural history shifted

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control as well as a justification for colonialism. See Richard Drayton, *Nature's Government: Science, Imperial Britain, and the 'Improvement' of the World* (New Haven: Yale University Press, 2000), xiv–xvii.

[37] See Shapin, 243–7.

[38] Shapin, quoting Robert Boyle, uses the phrase "credible travelers" (Shapin 249) while Jorge Cañizares-Esguerra argues that that new, reliable, educated traveler, which he terms the "philosophical traveler," emerged at the beginning of the eighteenth century to counteract the older, mendacious traveler. Although Cañizares-Esguerra is writing primarily about Iberian natural history, his arguments about the philosophical travelers incorporate pan-European sources. See Cañizares-Esguerra, *How to Write the History of the New World: Histories, Epistemologies, and Identities in the Eighteenth-Century Atlantic World* (Stanford: Stanford University Press, 2001), 11–26.

[39] See Susan Scott Parrish, *American Curiosity: Cultures of Natural History in the Colonial British Atlantic World* (Chapel Hill: University of North Carolina Press, 2006), 72–89.

[40] Daston, 345.

[41] See Parrish, 118–28.

how naturalists evaluated evidence and knowledge between the sixteenth and eighteenth centuries.[42]

Metropolitan demand for intelligence and objects from the Americas increased alongside the expansion of Britain's North American colonies during the late seventeenth and early eighteenth centuries. After the death of Royal Society president Isaac Newton in 1727, Sir Hans Sloane, his successor, molded the Royal Society's interests around his own areas of expertise: botany and the natural history of the West Indies. To this end, Sloane strengthened the Royal Society's existing ties with colonial naturalists and used prominent merchants to enhance trans-Atlantic patronage networks.[43] These improved patronage and communication networks between British North America and England brought a multitude of letters and objects within the purview of English natural history.[44] Together with observations, measurements, reports, minerals, seeds, skins, and other North American particulars, this torrent of evidence also included the transcribed oral testimony of the Indigenous peoples of the Americas.

Information *about* Indigenous peoples was nothing new in natural history—but the inclusion of testimony *by* Indigenous peoples was relatively novel.[45] Travel literature had long incorporated portraits of local "manners and customs," a precursor to ethnography, as part of a text's larger narrative.[46] Natural history inherited this practice of documenting Indigenous

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[42] See Parrish, 24–5.
[43] See Thomas Wirth, "'So Many Things for His Profit and for His Pleasure': British and Colonial Naturalists Respond to an Enlightenment Creed, 1727–1777," *The Pennsylvania Magazine of History and Biography* CXXXI, No.2 (April 2007): 136–7.
[44] See Parrish, 118–28.
[45] It is not my contention that this was the first or only time Indigenous testimony was used as a form of scientific evidence—only that by the early eighteenth century, the use of information authored by Indigenous peoples as a form of credible testimony was relatively conventional or acceptable. Cañizares-Esguerra explores how Iberian naturalists began using Mesoamerican scripts and record keeping tools in the sixteenth century and there are likely other examples as well. See Cañizares-Esguerra, 60–129.
[46] Mary Louise Pratt, "Scratches on the Face of the Country; or What Mr. Barrow Saw in the Land of the Bushmen," *Critical Inquiry* 12, 1 (Fall 1985): 120.

manners and customs, particularly in scientific studies of imperial frontiers where Europeans hoped to "codify difference" and use literary representations of Indigenous peoples as a tool of colonial domination.[47] But presumably, under the English system that determined credible testimony, Indigenous people would, like women, children, and the lower classes, be classified as categorically untrustworthy.[48] Although eighteenth century Europeans had yet to develop a biological theory of race, the enslavement and colonization of Indigenous peoples was often justified through environmental and social theories of human difference that posited warmer climates impeded rational thinking.[49] Metropolitan naturalists had, however, already implemented a successful strategy for dealing with potentially compromised information from the colonies: a focus on particulars. Extending this logic to Indigenous informants allowed metropolitan naturalists "to collect only specimens and specific facts about those specimens rather than [Indigenous] worldviews, schemas of usage, or alternative ways of ordering and understanding the world"—at least in theory.[50]

By the eighteenth century, most Europeans viewed Indigenous peoples as experts on North American nature, although this perceived expertise notably did not prevent English

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[47] Pratt, 120; see also Pamela Regis, *Describing Early America: Bartram, Jefferson, Crevecouer and the Rhetoric of Natural History* (Philadelphia: University of Pennsylvania Press, 1999), 5.

[48] Women, children, and the working classes were believed to naturally lack the mental faculties to think rationally due to both inborn traits and a lack of training, with elite, male, children eventually outgrowing this issue; See Shapin, 89–93.

[49] Kelly Wisecup writes that while "theories of [human] difference remained flexible and interchangeable throughout the eighteenth century," environmental and social theories allowed colonial writers to speculate that warm climates made the minds of those living there less rational and thus, in the case of Native Americans, more susceptible to diabolic influence, explaining Indigenous medical knowledge as a form of witchcraft. Wisecup, 20; see 20–9.

[50] Londa Schiebinger, *Plants and Empire: Colonial Bioprospecting in the Atlantic World* (Cambridge: Harvard University Press, 2004), 87. Although the goal for many English natural philosophers was to gather neutral facts devoid of theory, that does not mean they were necessarily able to efface Indigenous worldviews or remove Indigenous agency from these exchanges. See Wisecup, 32–3.

colonists from disparaging, displacing, enslaving, or killing Indigenous Americans.[51] English travelers, colonists, and naturalists had long relied heavily on Indigenous guidance and knowledge to navigate strange geography and survive in the New World. More importantly (at least the eyes of metropolitan naturalists), Indigenous expertise successfully led English colonists to new foodways, medicines, and sources of wealth.[52] In practice, many Europeans were willing to (at least temporarily) set aside their views on human difference when they realized Indigenous peoples possessed valuable "knowledges worth recruiting."[53] The established use of Indigenous guides all over the British empire elevated Indigenous knowledge of North America and predisposed English travelers and colonists to see Indigenous testimony as credible and worthy of particularizing.

In addition to focusing on the particulars gleaned from Indigenous testimony—the uses of a specific plant, the behavior of a particular animal, the timing of a certain season—English

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[51] Although there is some scholarly debate surrounding how colonial violence should be described—genocide, ethnic cleansing, extirpation—no scholar would deny that state-sponsored violence against Native Americans took place during both the colonial and national periods of U.S. history. On terminology see Gary Clayton Anderson, *Ethnic Cleansing and the Indian: The Crime That Should Haunt America* (Norman: University of Oklahoma Press, 2014), 3–22. Alongside overt violence, English colonists also enacted other, gradual forms of marginalization, displacement, and erasure including what historian Jean O'Brien has termed "dispossession by degrees." See Jean O'Brien, *Dispossession by Degrees: Indian Land and Identity in Natick, Massachusetts, 1650–1790* (Lincoln: University of Nebraska Press, 2003). These settler-colonial acts took place alongside the legitimization of Indigenous testimony and the understanding of Indigenous peoples knowledgeable in no way mitigated colonial violence.

[52] It would be impossible to name here the multitude of excellent historical studies that address the roles Indigenous guides like Tisquantum, La Malinche, and others played in European colonization. Historians of science and medicine have been equally attuned to the contributions of Indigenous peoples in traditionally Eurocentric narratives of exploration and discovery. Collections like *The Brokered World: Go-Betweens and Global Intelligence, 1770–1820* (Sagamore Beach: Uppsala Studies History of Science, 2009) show just how widespread and vital the imperial practice of using local knowledge was. In writing this dissertation, I have mainly used Schiebinger's writing on bioprospecting to contextualize how Indigenous expertise benefitted colonial commercial endeavors and Parrish and Wisecup's writing to contextualize both how English writers conceptualized Indigenous knowledge and applied Indigenous knowledge to the study of natural history. Along the way, however, I have been influenced by a number of scholars whose work structured my thinking about Indigenous expertise even if I did not cite it directly. The writing of Christin De Lucia, Christopher Ianinni, Amy Morris, Joshua Piker, Neil Safier, Cameron Strang, and countless others helped me identify what was important and distinct in the cases I examined in this dissertation.

[53] Schiebinger, 75. Schiebinger, quoting Richard Drayton and Harold Cook, argues that in several colonial different colonial contexts, Europeans were willing to set aside their nascent ideas about race in the pursuit of profit. See Schiebinger, 75–6.

writers also constructed alternate explanations for the source of Indigenous natural knowledge. Some of these explanations ultimately rendered Indigenous testimony more credible in the eyes of Anglophone naturalists. Instead of possessing the temperate reason of the English, colonial writers speculated that Indigenous knowledge could be diabolic in origin, an explanation that conveniently exaggerated the differences between English colonists and Native Americans.[54] Over the course of the seventeenth and eighteenth centuries, perceived Indigenous diabolism blended with the concept of "sagacity," something akin to heightened instincts with an ambiguous (possibly preternatural) origin.[55] Eventually, Native American sagacity became synonymous with the belief that Indigenous people could see or reveal secret and hidden aspects of the natural world.[56] For metropolitan naturalists, Indigenous knowledge did not seem "wholly legitimate, because it does not preserve the proper epistemological distance between the observer and the observed" so in transcribing, recording, and sometimes corroborating Indigenous testimony, colonial observers added the necessary epistemological distance that transformed Indigenous testimony into credible natural historical evidence.[57] Significantly, sagacity did not stop naturalists from studying or writing *about* Native Americans but allowed them to understand Indigenous peoples as both an object of study and source of knowledge, provided that information so gleaned was legitimated by a colonial intermediary.[58] English colonial writers embraced the concept of sagacity as it not only divided European colonists from Native

[54] Wisecup argues that "colonists classified Native and African knowledge as diabolic, inappropriate magic as part of a defense strategy with which they hoped to counter metropolitan biases against colonial minds and medical knowledge" (Wisecup, 31). Mesoamerican scripts and records were similarly accused of diabolism as these texts did not adhere to biblical chronology (See Cañizares-Esguerra, 95).
[55] Parrish argues that beginning in the mid-sixteenth century, "the term sagacity was curiously associated with both animal acumen (particularly smell) and a hoary human wisdom" (Parrish, 239).
[56] See Parrish, 241–7.
[57] Parrish, 230.
[58] See Parrish, 218.

Americans but also balanced their contradictory beliefs that Indigenous Americans were both mentally inferior and exceptionally knowledgeable.

Sagacity paradoxically made Indigenous testimony not just credible but valuable in the eyes of Anglophone naturalists. Under the logic of sagacity, Indigenous peoples allegedly possessed "knowledge the English did not and could not have" due to an indistinct mixture of familiarity with the natural world, diabolical influence, and physiological differences.[59] Sagacity thus gave English naturalists motivation to credit Indigenous sources in their published writing—by claiming information came from a sagacious source, naturalists demonstrated the exhaustiveness of their study instead of their own credulity.[60] Within colonial trade and expansion, the "sensory acumen" of Indigenous guides was already considered a profitable resource.[61] The entire concept of Native American sagacity implicitly denied the commercial mindset of most colonial writers by couching calculated Indigenous secrecy in occult terms; under the logic of sagacity, Indigenous sources were not consciously guarding proprietary information but supernaturally knew things that could not be explained.[62] During the eighteenth century, sagacity transformed Indigenous testimony into not just usable evidence but the entire vague category of "*Indians*" into experts on North American flora and fauna.

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[59] Parrish, 216.

[60] Parrish notes that citing Indigenous sources was beneficial to both metropolitan and colonial writers; see Parrish, 216.

[61] Parrish, 247. Parrish points out that Native American sagacity was also used to justify colonial warfare against Indigenous peoples as it exaggerated differences and allowed colonists to frame Native Americans as "atmospherically toxic" (Parrish, 247).

[62] Parrish notes that Native Americans "diagnosed the British gaze as, not disinterested, but proprietary" and thus "chose to underrepresent what they did know" (Parrish, 236, 237). Chapters 1 and 2 of this dissertation explore this issue in more detail; Chapter 1 examines a moment when the Indigenous peoples of the Carolina piedmont used secrecy as a response to colonization while Chapter 2 explores how some eighteenth-century Lenape people used information sharing as a diplomatic tool.

In other words, Indigenous testimony become a form of scientific evidence because larger epistemological reforms within English natural history ultimately turned Indigenous testimony into evidence while the use of Indigenous guides within related colonial ventures established that Indigenous testimony was both authoritative and valuable. The concept of sagacity, which simultaneously elevated Indigenous testimony while subordinating Indigenous people, grew out of the entwined histories of English colonialism and natural history. However, just because English colonists decided that Indigenous knowledge was credible under the right circumstances, did not mean that they had free access to Native informants. Indeed, Native Americans controlled the flow of information in ways that could enable or hinder European knowledge about the Americas, his first two chapters of this dissertation argue that deciding factor in whether or not an eighteenth-century Anglophone naturalist used Indigenous testimony was not credibility but availability; naturalists could only cite highly desirable Indigenous testimony when Indigenous people agreed to provide it.

Things began to change, however, during the nineteenth century when the consolidation of U.S. federal Indian policy coincided with structural changes within natural history. After the American Revolution and into the mid-nineteenth century, the American political and intellectual view of Native Americans grew more rigid and more pejorative in conformity with U.S. political goals. Although eighteenth-century Anglophone naturalists believed Indigenous people possessed sagacious, expert knowledge about North American nature, they still maintained that European ideas and people were superior. Most early modern naturalists operated under the "Enlightenment theory of Indians' difference," which posited that "Native peoples inherently did not have the moral or intellectual capacity to form governments."[63] Politicians and thinkers in the

[63] Konkle, 9.

newly formed United States inherited this Enlightenment theory of Indigenous inferiority but struggled to reconcile this idea with the practical application of federal Indian policy. Henry Knox, the architect of U.S. Indian policy, argued that in order for land-cessions and treaties between Indigenous nations and the U.S. government to be legally binding, Native Americans had to be treated as autonomous political actors with the sovereign "right of the soil."[64] Historical, political, and legal writing at the end of the eighteenth century thus began to claim Native Americans were ignorant, backwards, and in need of support and tutelage as a way of resolving this contradiction between the theory of Indigenous inferiority and the legal construction of Indigenous autonomy.[65] By the mid-nineteenth century, the U.S. government promoted an intellectual view that Indigenous nations were both racially different and racially inferior to white Americans.

Indigenous nations politically and militarily defied this view throughout the early national period. In the 1820s and 1830s, the Cherokee nation mounted a series of legal challenges against U.S. interference in their national affairs. The U.S. Supreme Court decisions in these cases famously articulated the federal government's view that Indigenous nations were "domestic dependent nations," reiterating the American infantilization of Indigenous peoples.[66] Parallel to these and other legal challenges, pan-Indian confederacies were testing the military limits of U.S authority in the late eighteenth and early nineteenth centuries. During the Northwest Indian Wars (1785–1795), Knox identified multiethnic social formations as a major obstacle to federal Indian policy because such multiethnic settlements made it difficult to forge treaties and thwarted the U.S. acculturation and civilization programs meant to eradicate

[64] Konkle, 14.
[65] Konkle, 19–20.
[66] See Konkle, 17–26.

Indigenous societies. After Tecumseh's War (1811–1813), federal officials also became acutely aware of the military threat posed by multiethnic configurations such as Tecumseh's pan-Indian confederation and as a result made the destruction of multiethnic settlements a cornerstone of federal Indian policy in the 1820s and 1830s.[67] In the face of continuous Indigenous resistance, proponents for American territorial expansion had to find novel ways to construct and assert the argument Native Americans were supposedly inferior.

American naturalists at the end of the eighteenth century and beginning of the nineteenth century absorbed and supported the politically motivated argument that Native Americans were inherently ignorant. They had their own pecuniary reasons for doing so. Colonial naturalists since the early eighteenth century had complained about the want of patronage for natural history and philosophy but after the American Revolution most British sources of scientific funding disappeared. Newly independent American naturalists increasingly turned to state and federal governments to finance the study of North American nature in the form of scientific surveys and territorial expeditions, but these opportunities were few and far between. The first generation of post-Revolutionary American naturalists thus framed their studies as patriotic in part to demonstrate natural history's utility to the federal government.[68] In addition to mapping, surveying, and documenting the U.S., American naturalists also demonstrated their value to the federal government by writing on "the subject of race with a marked prolixity."[69] Scientific writing on race gave American naturalists international recognition and defended the federal

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[67] See Warren, 18–23.
[68] Joyce E. Chaplin, "Nature and Nation: Natural History in Context," p. 83 in *Stuffing Birds, Pressing Plants, Shaping Knowledge Natural History in North America, 1730–1860,* edited by Sue Ann Prince (Philadelphia: American Philosophical Society, 2003).
[69] Kariann Yokota, "'To Pursue the Steam to its Fountain': Race, Inequality, and the Post-Colonial Exchange of Knowledge Across the Atlantic," *Explorations in Early American Culture: A Journal of MidAtlantic Studies*, Volume 5 (2001): p. 212.

government's approach to both Indian policy and slavery.[70] Eventually, this American political and scientific fixation on defining racial difference and establishing white superiority delegitimized Indigenous expertise and challenged the scientific credibility of Indigenous testimony.

The institutionalization and professionalization of American natural history that took place during the second half of the nineteenth century supported the delegitimization of Indigenous testimony. By the mid-nineteenth century natural history was increasingly being "compartmentalized into modern-day [scientific] disciplines."[71] Among these new, discrete disciplines was the field of ethnology, whose practitioners started to form independent professional organizations and journals in the 1840s.[72] Prior to the emergency of biological definitions of race, naturalists used language as a way to both define and rank human difference.[73] Ethnology built on the study of linguistics and philology as well as on the practice of describing local manners and customs within natural history. Ethnology also claimed authority over the study of Native American people, language, and ideas, isolating Indigenous testimony from fields like botany or zoology. As natural history became more compartmentalized, it also grew more professional—naturalists were no longer educated amateurs but acquired degrees in their areas of expertise.[74] Like the Royal Society two centuries before, nineteenth century American naturalists found new ways to demonstrate their credibility and separate professional

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[70] See Yokota 212–29.
[71] Sue Anne Prince "Introduction," p. 3 in *Stuffing Birds, Pressing Plants, Shaping Knowledge Natural History in North America, 1730–1860*, edited by Sue Ann Prince (Philadelphia: American Philosophical Society, 2003).
[72] See Robert Lawrence Gunn, *Ethnology and Empire: Languages, Literature, and the Making of the North American Borderlands* (New York: New York University Press, 2015), 3–4.
[73] See for example Gunn; Harvey.
[74] Scientific professionalization is a complex and contentious topic within the history of science but was an undeniable reality of nineteenth century natural history. On professionalization see for example, Andrew Lewis, *A Democracy of Facts: Natural History in the Early Republic* (Philadelphia: University of Pennsylvania Press, 2011), 154–6.

naturalists from amateurs and hobbyists. Distinguishing between information *about* Native Americans and information *from* Native Americans was one way that professional naturalists asserted their expertise and authority.

By the time the Smithsonian Institution, a deliberately national organization, was created in 1846, Indigenous testimony was losing credibility as a form of scientific evidence with regards to North American flora and fauna. Field researchers still used Indigenous guides and still relied on local knowledge, but this information appeared less frequently within published natural history. Instead, Indigenous testimony was transformed into the raw data of ethnology and Indians were deemed fit to give information only about themselves and the peculiar customs that affirmed the theories of racial difference that ethnologists trucked in. The delegitimization of Indigenous testimony was as political as it was intellectual: Indigenous peoples were only treated as experts when it benefitted colonial policies. And by the mid-nineteenth century, American colonial goals had changed.

Overview of Chapters

My study begins in the British colony of Carolina during the early eighteenth century with the writing of British naturalist Mark Catesby. Catesby travelled to British North America at the request of his aristocratic English patrons and while studying the flora and fauna of the Carolina piedmont, he relied heavily on the assistance and support of Indigenous guides and porters. Catesby was, however, stymied in his attempts to gather testimony from his Indigenous guides, reflecting the tense political relationship between British colonists and Indigenous Carolinians in the 1720s. My first chapter argues that in the 1720s, Indigenous Carolinians had little to gain from sharing information with agents of the British Empire and as a result disclosed very little to naturalists like Catesby.

In contrast, my second chapter examines a moment when some Indigenous peoples saw an advantage in sharing their expertise concerning American flora and fauna with Anglophone naturalists. This chapter focuses on Leni Lenape (Delaware) diplomacy during the late eighteenth century and argues that the calculated sharing of information was an established part of Lenape politics that ultimately benefitted Anglophone naturalists who sought access to Indigenous testimony and expertise. This chapter uses the relationship between William Henry Killbuck, a Lenape-Moravian informant, and Benjamin Smith Barton, an influential American naturalist, as a case study in how Indigenous testimony was both accessed and used within American natural history. My third chapter analyzes another moment when Indigenous peoples—in this instance, the Western Shawnee—elected to share information with an American naturalist—John James Audubon—as part of a larger cultural and political practice of alliance building during the 1810s and 1820s. In this case, however, Audubon opted not to cite his Indigenous sources and this chapter argues that by the 1830s, Indigenous testimony was losing the credibility it held mere decades before.

My fourth and final chapter studies the exception that proves the rule: the delegitimization of Indigenous testimony hinged on political relationships between settled naturalists and Indigenous peoples. In 1836, Titian Ramsay Peale accompanied the United States Exploring Expedition (or U.S. Ex Ex) across the globe and while in Samoa, Peale used Pasifika expertise and testimony to study the local animal species. Like his friend Audubon, however, Peale also erased Indigenous expertise from his published writing. In this chapter, I argue that Peale's contradictory approach to Indigenous expertise—simultaneously relying on it in the field but also removing it from his writing—reflected larger changes taking place within both American natural history and U.S. Indian policy. To rationalize the U.S. government's

increasingly violent actions towards Indigenous people, white Americans looked to natural history for justification. New theories of immutable racial difference provided validation for U.S. expansion and colonization. The published reports created by members of the U.S. Ex Ex as well as Peale's effacement of Samoan expertise all supported the U.S.'s larger imperial goals for the Pacific by depicting Samoan people as both racially inferior and in need of tutelage. Peale relied on Indigenous expertise in the field because the U.S lacked political authority in the Pacific but in doing so, Peale came dangerously close to undermining scientific claims of Pasifika inferiority. Removing Samoan expertise from his writing neutralized this threat. By including Samoa in a study of American natural history, I gesture towards the continuities between U.S. settler expansion and U.S. imperialism overseas.

In the four cases I examined, Indigenous people controlled the flow of information between themselves and Anglophone naturalists and moreover used natural historical information as a diplomatic resource. During the eighteenth and early nineteenth centuries, Anglophone naturalists developed different rhetorical strategies to justify and explain their own reliance on Indigenous expertise about the natural world—information they had limited access to. Eventually, Anglophone naturalists ceased citing Indigenous testimony as a way of denying Indigenous expertise entirely. Ironically, it was Indigenous peoples' survival, perseverance, power, and authority that ultimately undermined the credibility and reliability of Indigenous testimony in the minds of settler naturalists. Unable to integrate a view of Indigenous peoples as experts on the one hand with claims that Indigenous people were racially inferior on the other hand, American naturalists decided to remove Indigenous expertise from the study of North American flora and fauna.

Chapter 1

"Friendly Indians:" Indigenous Knowledge Transfer during the Colonization of the Carolina Piedmont

Mark Catesby, a pioneering English gentleman and naturalist, did *not* want to write about Native Americans. Catesby *wanted* to write about North American plants but he also considered "Forest-Trees and Shrubs," birds, "Serpents," "Quadrupeds," "Fish," and "Insects" to be worthy subjects for his natural history of Carolina, Florida, and the Bahama Islands.[75] Unfortunately for Catesby, by the time he was writing in the early eighteenth century, accounts of the manners and customs of Indigenous peoples were an expected part of colonial natural histories. Catesby thus *had* to write about Native Americans despite his misgivings that it was "impertinent" to provide an "Account of the Indians" in a book where the subject was "Natural History."[76] In the end, Catesby's book, *The Natural History of Carolina, Florida, and the Bahama Islands* (1747) not only devoted several pages to describing Native Americans, it also repeatedly cited Native American ideas and testimony as evidence.

Catesby's reticence in writing about Native Americans, however, was not philosophical but practical—even if his reproachful remarks implied otherwise. Catesby claimed that information about Native Americans was "too often the Product of Invention, or Credulity in the Relater" and did not belong—or was "impertinent"—in a factual work of natural history.[77] According to Catesby, even "the most inquisitive" Europeans resorted to either fabricating

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[75] Mark Catesby, *The natural history of Carolina, Florida and the Bahama Islands : containing the figures of birds, beasts, fishes, serpents, insects, and plants : particularly, the forest-trees, shrubs, and other plants, not hitherto described, or very incorrectly figured by authors : together with their descriptions in English and French : to which, are added observations on the air, soil, and waters : with remarks upon agriculture, grain, pulse, roots, &c. : to the whole, is prefixed a new and correct map of the countries treated of*, 2 vols. (London, 1731–1743 [1729–1747]), *I*, "Account," ix–x.
[76] Catesby, *I*, "Account," xvi.
[77] Catesby, xvi.

information or printing unfounded rumors about Native Americans because "the *Indians*" were "so reserv'd and avers'd to reveal their secret Mysteries to *Europeans.*"[78] Although Catesby's comments were directed at other, more credulous naturalists, he could have just as easily been talking about himself and the difficulties he faced in communicating with Native Americans while exploring North America.

Catesby, like other British naturalists of his generation, valued scientific evidence based on "personal Knowledge" and first-hand experience.[79] This need for first-hand experience ultimately led Catesby to spend more than a decade in Britain's North American colonies during the early eighteenth century, observing, drawing, and collecting native flora and fauna.[80] When it came to gathering first-hand knowledge about the Indigenous peoples of North America, however, Catesby ran into some difficulty. In British North America, colonists and Native Americans lived in tense proximity, and in most parts of North America, Native American nations remained the dominant political power.[81] This arrangement was very much true in the fledgling colony of Carolina, where Catesby made "several Journeys with the *Indians* higher up the Rivers toward the Mountains," away from the coast settlements of the British and into the Indigenous-controlled piedmont region.[82] In the 1720s, Catesby was only able to enter the

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[78] Catesby, *I*, "Account," xvi.
[79] Catesby, xvi. On the value of direct experience in English natural history and philosophy, see Steven Shapin, *A Social History of Truth: Civility and Science in Seventeenth-Century England* (Chicago: University of Chicago Press, 1995), 375–8.
[80] Catesby cumulatively spent a decade in the American colonies—six and a half years from 1712–1719, and four years from 1722–1726.
[81] For example, see Michael Witgen, *An Infinity of Nations: How the Native New World Shaped Early North* America (Philadelphia: University of Pennsylvania Press, 2011). Numerous Native American historians have argued that until "the middle of the nineteenth century autonomous Native peoples occupied the vast majority of North America," meaning that English colonists had to contend with geographically, socially, and politically dominant Indigenous people (Witgen, 14). James Merrell makes a similar argument about eighteenth century Carolina, stating that in the first decade of the eighteenth century "Indians were masters of the piedmont;" James Merrell, *The Indians' New World: Catawbas and Their Neighbors from European Contact through the Era of Removal* (Chapel Hill: University of North Carolina Press, 1989), 7.
[82] Catesby, *I*, "Preface," viii–ix.

piedmont with the permission of and assistance from the Indigenous peoples who lived there.[83] And when it came to learning about those same peoples' "Religious Ceremonies, Burials, Marriages &c.," Catesby was stymied by the secrecy of his hosts.[84] Even if he had wanted to write about Native Americans, he could not gather the evidence he needed to do so. Catesby's jabs at credulous Europeans, more than reflecting a problem with other naturalists, drew attention away from his own shortcomings.

Catesby's conundrum revealed a fundamental truth about colonial natural history during the eighteenth century: knowledge about North American nature was produced in collaboration with Indigenous peoples. Moreover, in places like 1720s Carolina where Indigenous peoples dominated, they—not European colonists and explorers—controlled the flow of valuable resources like information. Had he been able to collect more information, Catesby likely would "have been more prolix" in his writing on Native Carolinians.[85] For eighteenth century naturalists and for British colonial officials, information about both the land and people of North America was not only extremely valuable but also instrumental to the colonization process.[86] Catesby, as a student of natural history and as an informal agent of the British empire, knew this. In *The Natural History*, Catesby was clearly unable to compel Indigenous people to act as sources, but he still attempted to use pieces of Indigenous testimony as evidence throughout his natural history. Catesby's inconsistent use of Indigenous testimony as evidence in *The Natural History* revealed that in the eighteenth century, colonial natural history was often contingent on

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[83] See Merrell, 7; 8–48.
[84] Catesby, *I*, "Account," xvi.
[85] Catesby, xvi.
[86] Several historians have pointed out the connection between natural history and colonization; for example, see Richard Drayton, *Nature's Government: Science, Imperial Britain, and the 'Improvement' of the World* (New Haven: Yale University Press, 2000); Londa Schiebinger, *Plants and Empire: Colonial Bioprospecting in the Atlantic World* (Cambridge: Harvard University Press 2004).

Indigenous geopolitics. For Catesby, this meant that the Indigenous peoples of the Carolina piedmont restricted European access to information and as a result, limited the scope and thoroughness of *The Natural History.*

When Catesby set out for Carolina in 1722, he had no way of knowing that this would be the case. Before Catesby was even born, British colonists in Carolina began a pattern of settlement, trade, and abuse that would politically and geographically divide the coastal settlement in the Low Country from the Indigenous-controlled Upper Country or piedmont. This divide ultimately transformed the piedmont into a proverbial hole on the British map of Carolina that made it the ideal research site for a young and ambitious naturalist like Catesby as well as a desirable site for British colonial expansion. Catesby's study of the piedmont depended on very recent diplomatic agreements between British officials and the Indigenous peoples of Carolina, which allowed Catesby to enter the piedmont but did not guarantee him access to Indigenous knowledge or information. Catesby's struggle to find Indigenous sources was, however, not unique to him. British explorers and travelers in the decades before and after Catesby's research expedition complained of the suspicion and secrecy of the Indigenous people of the piedmont. What they did not recognize was that Native reticence was a direct response to the abuses British settlers inflicted on their Native neighbors. The creation of *The Natural History* was conceptually and pragmatically intertwined with the history of settler expansion in Carolina. The relative weakness of British colonial power—not yet able to overpower or expel Indigenous Carolinians but unwilling to live peacefully with them—in 1720s Carolina resulted in the contradictions seen in Catesby's approach to Indigenous peoples within *The Natural History.*

In his writing, Catesby simultaneously dismissed information about Indigenous peoples, criticized Indigenous secrecy, and celebrated Indigenous perceptiveness and intuition—or what

he referred to as Indigenous "sagacity."[87] The central claim of this chapter is that Catesby's incongruous view of Indigenous people as both cryptic and knowledgeable demonstrated the limits of Anglophone natural history in early eighteenth-century North America. In places like the eighteenth-century Carolina piedmont, Indigenous people set the conditions of knowledge transfer. Catesby's description of Indigenous peoples as "sagacious" tacitly reflected his awareness of Indigenous political and intellectual authority in the places he explored. To prove this claim, this chapter first examines how the Carolina piedmont became a site of both scientific and imperial importance for the British empire. Next, this chapter argues identifies Catesby's Indigenous guides in the piedmont as most likely Cherokee or Chickasaw due to existing political alliances between the Carolina colonists and these two nations. Finally, this chapter places Catesby's research methods and beliefs surrounding in Indigenous sagacity in the larger context of eighteenth-century Anglophone natural history. By the time Catesby travelled to North America, Indigenous testimony was already a legitimate form of scientific evidence but one that was rare and valuable as a result of Indigenous politics and diplomacy. Catesby thus did not need to defend his use of Indigenous testimony in his writing but instead had to find rhetorical tools, like the concept of sagacity, to explain why he did not use more of it.

"The Flower of Carolina"

Writing retrospectively in 1747, Mark Catesby claimed that intellectual "curiosity" and a "passionate Desire" to study nature inspired both his research expeditions to Britain's North American colonies as well as his magnum opus, *The Natural History of Carolina, Florida, and the Bahama Islands* (1747).[88] Catesby was intimately aware, however, that this was a rose-

[87] Catesby, *I,* "Account," xii. The concept of sagacity will be explored in detail in the final section of this chapter.
[88] Catesby, *I,* "Preface," v. Catesby cumulatively spent a decade in the American colonies—six and a half years from 1712–1719 and four years from 1722–1726,

colored appraisal of his decades-long research and writing process. Catesby made two major trips to North America – a preliminary self-funded trip to Virginia and the West Indies between 1712 and 1719 and a sponsored expedition to Carolina and the Bahamas between 1722 and 1726. Catesby's second research trip was paid for by aristocratic British patrons and—to his chagrin—these sponsors dictated Catesby's movements and activities while in the field.[89] Catesby's journey to Carolina took place during a period of acute crisis and transformation for the colony and while these were less than ideal conditions for scientific research, the timing was no coincidence. South Carolina governor Francis Nicholson was Catesby's most generous (and most controlling) patron. Colonial leaders like Nicholson hoped natural histories would identify new resources that would increase white settlement and stabilize Carolina.

In *The Natural History*, Catesby championed the thoroughness of his observations, the exactness of his illustrations, and the value of his skepticism. He also eschewed the meandering, narrative style favored by other eighteenth-century British naturalists in favor of more concise, clinical descriptions divided into individual sections.[90] Catesby avoided explicit reference to Carolina's tumultuous past in his writing, but that history dictated where Catesby went and what he studied. The founding of the Carolina colony and the subsequent decades of conflict between British settlers and the Indigenous peoples of the Southeastern Woodlands created regional pockets where British explorers and settlers could not go. These were the same regions Catesby

[89] On Catesby's patrons, see David Brigham, "Mark Catesby and the Patronage of Natural History in the First Half of the Eighteenth Century." *In Empire's Nature: Mark Catesby's New World Vision*, ed. Amy R.W. Meyers and Margaret Beck Pritchard (Chapel Hill: University of North Carolina Press, 1998), 91–146.

[90] When compared to the writing of Sir Hans Sloan or John Lawson, two sources Catesby cited frequently, Catesby did not narrate his own journey and rarely described the moment he discovered or encountered new species, distinguishing *The Natural History* from other narrative colonial natural histories. On Catesby's terse narrative style see Joyce Chaplin, "Mark Catesby, a Skeptical Newtonian in America," in *Empire's Nature: Mark Catesby's New World Vision*, ed. Amy R.W. Meyers and Margaret Beck Pritchard, (Chapel Hill: University of North Carolina Press, 1998), 47.

was hired to study—a study that gained epistemological and economic value within the framework of British settler colonialism.

Catesby's study of Carolina had both intellectual and political appeal in the 1720s as the British were relative newcomers to the Southeast. In 1663, the British crown granted eight political favorites known as the Lord Proprietors the right to colonize the region between Spanish Florida and British Virginia. But it was not until Charleston (known then as Charles Town) was founded in 1670 that the British colonists flocked to the colony of Carolina, which included present-day North Carolina, South Carolina, and Georgia.[91] Even after fifty years of British settlement, however, Carolina was not as developed as colonial investors and leaders like Nicholson wanted. Catesby's natural history had the potential to change this by describing the untapped resources of the little-explored Carolina piedmont.

The Carolina piedmont—the hilly, elevated country located northwest of the fertile coastal lowlands—eluded white settlement during the Carolina colony's first fifty years because this region did not fit within the Lord Proprietors' initial vision for Carolina.[92] Carolina was famously founded as the colony of a colony: the earliest British settlers exported primarily lumber, tar, and cattle to densely populated Barbados as well as other undersupplied West Indian

[91] Catesby referred to the region he visited as Carolina throughout *The Natural History*, although North Carolina and South Carolina separated in 1712, before Catesby's expedition. Most of Catesby's time in Carolina, however, was spent along the present-day Georgia-South Carolina border. Georgia would not become an independent colony until 1732. Mirroring Catesby, I use the term Carolina in this chapter instead of South Carolina.

[92] The name piedmont, which roughly translates to "the foot of the mountains," was borrowed from the region of Italy that occupies the eastern base of the Alps. The Carolina piedmont similarly sits at the base of the Blue Ridge Mountains. Prior to Carolina splitting into South Carolina, North Carolina, and Georgia, only the westernmost border of the Carolina colony included mountains, meaning the majority of Carolina between the coastal plain and the mountains was categorized as "upper country" or piedmont. When South Carolina became a distinct colony, very little of the new colony included mountains, meaning the vast majority of South Carolina was either coastal plains or piedmont.

colonies.[93] These resources could easily be extracted from the lowlands, which were also conveniently suited to cattle ranching. Carolina, however, was in desperate need of colonists to maintain its settlements and defend British interests from both Spanish and French attacks so the Lord Proprietors created incentives to attract settlers. These incentives rapidly increased the white population of Carolina, which jumped from 200 to 3,800 between 1670 and 1700. These new, ambitious colonists not only increased the size of Carolina, they also sought out new sources of profit and in the process transformed Carolina from a colonial supply-house into one of Britain's wealthiest colonies.[94] By 1700, however, the majority of Carolinians still lived in the lowland region, leading British explorer John Lawson to lament in 1707 that "The Savages do, indeed, still possess the Flower of *Carolina,* the *English* enjoying only the Fag-end of that fine Country."[95] A comprehensive natural history of all of Carolina that included the piedmont promised to change that.

Prior to Catesby's 1722 trip to Carolina, the piedmont repelled European settlers. Any British traders or explorers wishing to safely enter the piedmont needed both an Indigenous invitation and an Indigenous guide to navigate the unfamiliar geographic and social terrain. Although aspiring European settlers faced environmental barriers, like sandy desert-like expanses and hilly forests, these obstacles paled in comparison to the social and political barriers created by settler-Indian relations. Before rice became South Carolina's major export, Carolina's

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[93] Peter Wood uses the phrase "colony of a colony" to describe the creation of the Carolina Colony; see Peter Wood, *Black Majority: Negroes in Colonial South Carolina From 1670 through the Stono Rebellion* (New York: Knopf, 1974).

[94] On the history of the Carolina colony, see Alan Taylor, *American Colonies: The Settling of North America*, Vol. I (New York: Penguin, 2002), 222–44.

[95] John Lawson, *A New Voyage to Carolina: Containing the Exact Description and Natural History of That Country: Together with the Present State Thereof. And a Journal of a Thousand Miles, Travel'd Thro' Several Nations of Indians. Giving a Particular Accounts of Their customs, Manners, &c*. (London: 1709, electronic edition), 56.

earliest colonists turned their commercial attention to two resources: deerskins and Indigenous slaves, both of which came mainly from the Upper Country. Few Carolinians personally hunted deer or captured slaves, however, and instead relied on partnerships with Indigenous peoples who traded prepared skins and captured rivals for finished goods like firearms and fabric.[96] This client system allowed rich and powerful Carolinians to extract additional wealth from the piedmont for a time, but paradoxically the client system also increased the divide between the Carolina Low Country and the Upper Country for white settlers. The Indigenous slave trade destabilized the region, favored militarized nations, and eventually plunged all of Carolina into multiple wars, destroying any frontier settlements and preventing British expansion.[97]

After the devastating Yamasee War (1715–1716), the barriers between the Low Country and piedmont began to shrink. The Yamasee War nearly destroyed the Carolina colony and unscrupulous British traders were largely to blame. Abused by traders and raided by rivals, the Yamasee and their Indigenous allies rose up to expel the British from the Upper Country, destroying plantations and executing any white settlers they encountered. The Yamasee nearly succeeded, forcing almost all of Carolina's settlers to seek shelter in British forts and at Charleston until reinforcements from Virginia and the Cherokee ultimately defeated the Yamasee.[98] Even before the Yamasee War broke out, however, British officials knew that they needed trade reform to protect their Indigenous allies from their own colonists. In 1707, the Carolina House of Commons passed a series of laws intended to pacify the Upper Country by

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[96] See Taylor, 228–36.
[97] On the destabilizing effect enslaving Indigenous peoples had in the Southeast, see Merrell, 8-91; Eric Bowne, "A Bold and Warlike People: The Basis of Westo Power" and Robbie Ethridge, "Creating the Shatter Zone: Indian Slave Traders and the Collapse of the Southeastern Chiefdoms" in *Light on the Path: The Anthropology and History of the Southeastern Indians,* ed. Thomas J. Pluckhahn and Robbie Ethridge (Tuscaloosa: The University of Alabama Press, 2006), 123–32 and 207–18.
[98] See Merrell, 68–75.

enacting licensing requirements for all Indian traders and creating a Board of Indian Trade.[99] These measures were too little too late and ultimately failed to stop the Tuscarora War from erupting in 1711.[100] Nevertheless, the Lord Proprietors resurrected these trade regulations in 1717 in response to the Yamasee War and outlawed "all unchaperoned contacts between colonist and Indian."[101] Within a year, Carolina's colonists overthrew the most severe of these restrictions, as well as the Lord Proprietors themselves, but the Yamasee War made it clear to all involved that collaboration was key to governing Carolina.[102]

In 1721, when Francis Nicholson became the first royal governor of South Carolina—the successor to the Proprietary Government of Carolina—he knew that peacefully settling the piedmont would gain him the support of both the British crown and South Carolina's colonists. But Nicholson also recognized that this could only be accomplished with the support of select Indigenous allies. Indigenous peoples not only dominated the Upper Country—they also provided a necessary buffer between the British and their European rivals to the south and the west. One of the unintended consequences of Carolina's decades-long trade in enslaved Native Americans was that it depopulated the frontier and made British settlements more vulnerable to attacks by the French and their Indigenous allies, the Muskogee. To reestablish this Indigenous buffer, Nicholson made several strategic treaties with the Cherokee. Nicholson also renewed

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[99] See Merrell, 52.

[100] Similar to the Yamasee War, the Tuscarora War began in 1711 in response to the numerous abuses the Carolina colonists and traders unleased on the Tuscarora. Realizing the English would continue to illegally encroach on Tuscarora land and resources, a group of Tuscarora warriors executed surveyor John Lawson before attacking outlying plantations and settlements. Lasting for over three years, the Carolina colonists were only able to defeat the Tuscaroras with assistance from their Indigenous allies and ultimately the Tuscarora were expelled from the Southeast, resettling among their northern kin and becoming the sixth nation of the Haudenosaunee Confederacy. On the Tuscarora War, see Merrell, 53–6.

[101] Merrell, 81.

[102] In 1719, the Carolina assembly revolted, and the colonists overthrew the proprietary government, petitioning the crown for a royal administration. See Taylor, 226.

South Carolina's involvement in Indian trade. The 1717 Indian trade laws enacted by the Proprietary Government included the creation of a trading factory system, a new Board of Indian Trade, and a public monopoly over the sale of deerskins and enslaved Native Americans.[103] By 1721, most of these measures had been abandoned, and while a state-subsidized public monopoly no longer existed, Nicholson still wanted to regulate contact between settlers and Indigenous peoples in South Carolina. Accordingly, Nicholson still licensed traders, hired interpreters, and distributed gifts while he simultaneously encouraged British settlers to expand in the region.

Nicholson also knew that knowledge was power. As a fellow of the Royal of Society of London, Nicholson valued natural history as an intellectual pursuit but had also witnessed first-hand how natural historical knowledge profited colonization projects.[104] Another colonial official, William Bird II of Virginia, was already grooming Catesby to take over a botanical survey of Virginia from the late John Bannister when Nicholson was introduced to the promising young naturalist with a keen interest in American flora and fauna in 1720.[105] Nicholson instantly recognized the advantage of becoming Catesby's patron, while Catesby was "much delighted to see" the Upper Country of Carolina, a region poorly documented by British naturalists.[106] It was thus intentional, and not incidental, that Catesby travelled to a Carolina only just recovering from

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[103] On the need for an Indigenous frontier buffer zone, see Taylor, 235–6. On Nicholson's role in rebuilding alliances between South Carolina and Indigenous peoples, see Angela Calcaterra, *Literary Indians: Aesthetics and Encounter in American Literature to 1920* (Chapel Hill: University of North Carolina Press, 2018), 21–5; Ian Chambers, "A Cherokee Origin for the 'Catawba' Deerskin Map (c.1721)," *Imago Mundi: The International Journal for the History of Cartography* 65, No. 2 (1 June 2013): 207–216; John P. Reid, *A Better Kind of Hatchet: Law, Trade, and Diplomacy in the Cherokee Nation during the Early Years of European Contact* (University Park: Pennsylvania State University Press, 1976), 74–97.

[104] On the overlap between members of the Royal Society and colonial investors, see for example Brigham, 119-29.

[105] Amy R.W. Meyers and Margaret Beck Pritchard, "Introduction: Towards an Understanding of Catesby," in *Empire's Nature: Mark Catesby's New World Vision*, ed. Amy R.W. Meyers and Margaret Beck Pritchard (Chapel Hill: University of North Carolina Press, 1998), 3-4; Brigham, 97–8.

[106] Catesby, I, "Preface," viii–ix.

the Yamasee War, despite the disorganization and danger that remained in the region. The timing of Catesby's expedition promised to help his main benefactor, Nicholson, who wanted to consolidate the colony's power over all parts of South Carolina while maintaining (relative) peace.

In his writing, Catesby assumed the role of a disinterested scientific observer, but his research process was anything but.[107] When explaining his time in the New World, Catesby always framed his role there as a temporary resident and not an inhabitant or settler.[108] Catesby furthermore named "*London*, the Center of all Science" and labelled all new world flora and fauna as "strangers to *England*."[109] These qualifiers implied that Catesby was somehow divorced from colonial life and supported his tendency to chastise the "too credulous Relaters" frequently found in the colonies.[110] Methodologically, Catesby claimed he carefully "observed" and took "notice of" of New World species and rendered these same specimens in an "exact manner," but it was the approval of London's scientific elite that validated his findings.[111] This rhetorical distancing, however, was all for naught. What Catesby studied, where Catesby went, and even who he met in Carolina had everything to do with the historical divide between the piedmont and the Low Country, the legacy of the Yamasee War, and Nicholson's new vision of a united South Carolina. Catesby, whether he liked or not, was working at the heart of imperial politics and these politics showed in *The Natural History* despite Catesby's disinterested tone.

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[107] Steven Shapin, *A Social History of Truth: Civility and Science in Seventeenth- Century England* (Chicago: University of Chicago Press, 1995), 83–5. Shapin argues that in the eighteenth century, "the disinterestedness of the English gentlemen's situation that was the most importantly identified as the basis of his truth-telling" (83). Disinterestedness in this era meant independence from bias—a gentleman could be disinterested because he did not have to bow to the opinions of others and was not motivated by profit or debt. Catesby, as an English gentleman, adopted this posture in his writing.
[108] Catesby, *I*, "Preface," v. For example, Catesby used the term "resided" to describe his tenure in Virginia.
[109] Catesby, *I*, "Preface," v.
[110] Catesby, *I*, "Account," xxvii.
[111] Catesby, *I*, "Preface," ix.; xi–xii.

Thanks to Nicholson's generous, if domineering, patronage, Catesby spent thirty-six out of forty-four months during his second sponsored trip to America in Carolina—more than two thirds of the entire trip. And of his time in Carolina, Catesby spent approximately fourteen months (a little more than one third of the Carolina trip) exploring the Upper Country, using a government-run fur trading factory in the piedmont, Fort Moore, as his base of operations.[112] Many of the novel plant and animal species Catesby identified in *The Natural History* unsurprisingly came from the yet-undocumented Carolina piedmont.[113] But this scientific novelty was quite literally the product of settler colonialism: had Carolina's colonists *not* alienated their Indigenous neighbors or participated in the Indigenous slave trade, the piedmont would have likely been a less dangerous place that could have been studied years before Catesby even set foot in North America.

On top of this, Catesby's research was directly funded by settler expansion. The British crown appointed Nicholson to manage the turbulent South Carolina colony precisely because he had previous experience governing the Maryland, Virginia, and Nova Scotia colonies.[114] During his tenure as the governor of Maryland, Nicholson commissioned two naturalists to survey the Chesapeake region because he firmly believed that natural history could drive the economic development of a colony. Nicholson was so convinced that natural history could do for South

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[112] Catesby made three distinct trips to Upper Country between 1723 and 1724 that in total lasted approximately fourteen months: the first from mid-March to mid-September 1723, the second from approximately March 1724 to the end of July 1724, and the third from September 1724 to December 1724. See Meyers and Pritchard, xv–xviii.
[113] Catesby was technically writing before the taxonomic system of Carl Linnaeus entered into widespread use, making hard to measure the precise number of novel species Catesby described. Contemporary botanists have identified that at least twenty-five of Catesby's plates served as reference type for new taxa and many of those were plants found in the Southeast. On Catesby's novel contributions to natural history, see David Yih, "Mark Catesby: Pioneering Naturalist, Artist, and Horticulturist," *Arnoldia* 70, issue 3 (February 2013): 29–30.
[114] Nicholson additionally had a reputation for cruelty, violence, and ruling with an iron fist, which would have made him a good candidate to helm unruly Carolina. See Kevin Hardwick, "Narratives of Villainy and Virtue: Governor Francis Nicholson and the Character of the Good Ruler in Early Virginia," *The Journal of Southern History* 72, No. 1 (Feb. 2006): 39–74.

Carolina what it had done for Maryland that he advanced Catesby's research funds from his own pocket.[115] And Nicholson made sure Catesby knew that funding came with certain expectations. When investors in the Royal African Company attempted to lure Catesby away to work on a botanical survey of Africa, Nicholson delivered an ultimatum: if Catesby "hath altered his mind of comeing hither […] I desire that he will repay the Ten pounds which I advanced him," adding that Catesby would receive "the Rate of Twenty pounds Sterl[ing] per annum while I remain Govr" if he did travel to South Carolina.[116] Similarly, after his first year in Carolina, Catesby proposed a botanizing trip to New Spain with Dr. Thomas Cooper instead of continuing in Carolina or proceeding to the Bahamas, but without endorsement of his patrons, Catesby was forced to stay the original course.[117] Although Catesby disdained the fact that the natural productions of Carolina were "very little known except what barely related to Commerce," he was well aware that pecuniary interests guided his own research agenda.[118] Catesby's emphasis in his writing on the pursuit of knowledge did not erase that his natural history also pursued profit.

The writing style of *The Natural History* removed Catesby's study from a particular moment in time. Catesby's preface briefly mentioned the years during which he travelled, but the body of *The Natural History* included very little contextual or narrative information. Even without a description of Catesby's journey, however, the history of Carolina directly shaped *The Natural History* in inextricable ways. Carolina's creation as the colony of a colony favored dense settlement along the coasts over colonial expansion into the rich Upper Country. Carolina's

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[115] See Brigham, 97.
[116] Francis Nicholson to Sherard, as quoted in Brigham, 98.
[117] Catesby lobbied his patrons in England but never received their permission to travel to New Spain and thus abandoned his plans. See Brigham, 107–8.
[118] Catesby, I, "Preface," vi.

involvement in the trade of Indigenous slaves moreover destabilized the Upper Country, blocking future attempts at settler expansion and ultimately plunging the Southeastern Woodlands into several bloody wars. This history isolated the Piedmont and made a natural historical survey of the Upper Country that much more pressing and promising for an up-and-coming naturalist like Catesby. Settler colonialism conceptually defined *The Natural History*. And settler colonialism also guided Catesby's course while in Carolina.

"Friendly Indians"

Given his close ties to Carolina's administrators, Catesby understandably used colonial networks and infrastructure to navigate Carolina's Upper Country. After the Yamasee War, Nicholson and his predecessors worked tirelessly to rebuild British America's Indigenous buffer zone and restabilize the Upper Country, regulating all trade between settlers and Indigenous peoples and forging new alliances with powerful Indigenous nations. Licensed traders, government-run forts and factories, and defined trails for transporting goods to market were all valuable resources to foreign naturalists like Catesby who had neither the geographic knowledge nor the linguistic abilities to navigate the Indigenous-controlled Upper Country. And thanks to Nicholson's patronage, Catesby had access to all these resources and more.

Catesby knew he owed Nicholson a great deal. To this end, Catesby dutifully thanked Nicholson as well as his elite British patrons and American hosts by name in his preface to *The Natural History*. Alongside these illustrious names, Catesby also acknowledged the assistance he received from Native American guides and porters, writing "To the Hospitality and Assistance of these Friendly *Indians*, I am much indebted."[119] Although Catesby never specified who these "Friendly Indians" were, by thanking them he tacitly recognized that without their help creating

[119] Catesby, I, "Preface," viii–ix.

The Natural History would not have been possible. *The Natural History* portrayed Catesby's Indigenous assistants as kindly strangers when in reality, Catesby's guides were more accurately allies of the British empire; their aid was likely not a selfless gift but a political gesture.[120] The entire category of "friendly Indians" imbricated Catesby and his natural history within the politics of British empire.

In one of *The Natural History*'s rare narrative passages, Catesby described his reliance on Indigenous guidance and expertise to traverse the Piedmont. In his preface, Catesby noted that he made "several Journeys with the *Indian*s higher up the Rivers toward the Mountains, which afforded not only a Succession of new vegetable Appearances but most delightful Prospects imaginable, besides the Diversion of Hunting Buffalo's [sic], Bears, Panthers, and other wild Beasts."[121] Catesby additionally "employ'd 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" and "not only subsisted on what they [the Indians] shot, but their First Care was to erect a Bark Hut, at the Approach of Rain to keep me and my Cargo From Wet."[122] The only thing Catesby did not thank "these Friendly *Indians*" for was their expertise and the information they provided him—two things Catesby drew on extensively throughout the body of *The Natural History.*

Catesby's identity and politics directly shaped his approach to Native Americans in *The Natural History.* Writing as a removed, metropolitan traveler and agent of the British empire,

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[120] Although this chapter argues the phrase "friendly Indians" carried political meaning for Catesby and other Anglophone explorers, the trope of the "friendly Indian" also had a dense cultural and literary meaning. Numerous accounts of European colonization retroactively depicted Indigenous peoples as friendly and welcoming, obscuring both Indigenous diplomacy and militancy. Lisa Blee and Jean M. O'Brien note that the dominant U.S. narrative of peaceful colonization shapes how figures like Massasoit are depicted—or "staged"—to this date. See for example Lisa Blee and Jean M. O'Brien, *Monumental Mobility: The Memory Work of Massasoit* (Chapel Hill: University of North Carolina Press, 2019).

[121] Catesby, I, "Preface," viii–ix.

[122] Catesby, I, "Preface," viii–ix.

Catesby amalgamated published sources with his own first-hand observations to create a confusing, generalized portrait of the "*Indian"* that was contradicted by other highly specific descriptions. Catesby claimed that all Native Americans—from southernmost point in South America to the Arctic circle—were identical, writing that the Indigenous peoples of North America "seem to be the same People, or spring from the same Stock […] in regard to Resemblance, in Form and Features, but their Customs, and Knowledge of the Arts are in a manner the same."[123] Catesby, however, never travelled north of Virginia or west of the Appalachian Mountains, something he admitted in *The Natural History*. Catesby's assurances that his generalizations were based on "many opportunities of seeing and observing the various Nations of Indians" were thus undermined by his own writing.[124] Catesby's use of the vague phrase "Friendly *Indians*" was symptomatic of his larger, flawed view that Native Americans were all the same.

Catesby's attempts to conflate all Indigenous nations reinforced his position as a metropolitan writer, but his references to "Friendly *Indians*" belied Catesby's awareness of colonial politics. The distinction between friendly and unfriendly Indians was based on the alliances between European empires and Indigenous peoples and not, as Catesby's writing implied, the personality of individuals. In *The Natural History* Catesby specifically named the Muscogee, Cherokee, Tutelo, Meherrin, Choctaw, Chickasaw, and Seneca nations in addition to the countless others he simply called "*Indians*." Although Catesby never specified who his

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[123] Catesby, I, "Account," vii.

[124] Catesby, I, "Account," vii. Immediately after making these generalizations, Catesby expressed doubt concerning the veracity of Spanish reports of the Aztec and Inca empires and suggested these reports were exaggerated to aggrandize the Spanish empire but admitted he had no direct knowledge of the Indigenous peoples of New Spain and Peru. Similarly, in *The Natural History*, Catesby lamented that he was not able to observe northern plants and animals like waterfowl or the infamous moose—making it clear to his reader that his research was far from exhaustive. See Catesby, I, "Account," vii.

Indigenous hosts were, based on who Catesby knew, when he travelled, and where he went, Catesby's guides in the Piedmont were most likely Chickasaw or Cherokee hunters working in service of the British empire. Catesby's base of operations for his three journeys to the "Upper Country," Fort Moore, catered to Chickasaw and Cherokee hunters while Nicholson, Catesby's main patron in Carolina, had the strongest ties to the Cherokee. In the wake of the Tuscarora and Yamasee wars, the Chickasaw and Cherokee were moreover in the process of establishing a foothold in Carolina and had the most to gain by collaborating with British explorers and naturalists like Catesby. The flow of information from his guides to Catesby further limited which nations he encountered.

In one of the only places Catesby named his Indigenous guides, he stated they were five Chickasaw warriors, but Catesby's identification of Indigenous nations was dubious at best.[125] Catesby spoke no Native American languages and likely employed a translator on his expedition.[126] In some places, Catesby clearly misidentified different Indigenous nations. For example, Catesby claimed that the "only *Indian* nation that has a constant residence upon any Part of this whole Range of Mountains" was "the *Tallipooses*, a Clan of the *Cherikee* [Cherokee] Nation of *Indians.*"[127] "*Tallipooses*," however, most likely referred to the Tallapoosa Creeks, members of the Upper Creek confederacy and rivals of both the Upper Cherokees and the British.[128] Catesby similarly embedded Indigenous words in his text that would have been

[125] Catesby, I, "Account," vi.
[126] Catesby never explicitly stated that he used a translator but Carolina court records for this era mention the use of interpreters or "linguisters." Reid also mentions that the factors employed at Cherokee trading posts had to hire interpreters, see Reid, 93.
[127] Catesby, I, "Account," vi.
[128] Contemporaneous colonial documents from Georgia use Tallipooses to mean Tallapoosa Creek, a historic Muskogee band. It is possible Catesby meant Cherokee—the Cherokee did in fact reside in the mountains "in the Latitude of 34" but they probably would not have used the name Tallapoosa, a Muskogee name. On the Muskogee, see Steven C. Hahn, "The Cussita Migration Legend: History, Ideology, and the Politics of Mythmaking" in *Light*

unintelligible to his guides. When describing the mockingbird, Catesby claimed "The *Indians,* by way of eminence or admiration, call it *Cencontlatolly* [Cenzontle], or *four hundred tongues*"[129] Although *cenzontle* does indeed mean "four hundred tongues," the word comes from classical Nahuatl, a language spoken in New Spain.[130] Cumulatively, these misidentifications and elisions made Catesby an unreliable narrator when it came to Native Americans.

Some of Catesby's confusion can be attributed to Carolina's recent troubles. The previous two decades of Indian wars had changed the ethnic make-up and Indigenous balance of power in the region. Recent arrivals, like Cherokee, expanded into the Carolina piedmont while others, like the Catawba and Muskogee, were in the process of forming new interethnic confederacies during the same period.[131] Added to this was the use of marriage and adoption to cement alliances between Indigenous villages.[132] When Catesby arrived in the piedmont in 1723, an Indigenous person might have several, equally true answers to the question "to which nation do you belong?" Some of Catesby's errors, like saying the Tallapoosa Creeks were Cherokees, were thus understandable.

Catesby wrote that in at least one instance, he travelled with some Chickasaw hunters as guides – something that was entirely possible. According to Catesby, "Some *Chigasaws* [Chickasaw], a Nation of *Indians* inhabiting near the *Mississippi* river, being at Variance with the *French,* seated themselves under Protection of the *English* near Fort *Moor* on *Savanna* River." [133]

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on the Path: The Anthropology and History of the Southeastern Indians, ed. Thomas J. Pluckhahn and Robbie Ethridge (Tuscaloosa: The University of Alabama Press, 2006), 57–93.

[129] Catesby, I, 27.

[130] Although it is not impossible that Catesby's Cherokee or Muskogee informants knew some Nahuatl words, it is much more likely that Catesby took this appellation from Francisco Hernández de Toledo's writing as Catesby cited Hernández in his mockingbird entry. There are additionally distinct names for the mockingbird in Tsalagi (skadagisgi or hu-hu) and Muscogee (fusvhayv).

[131] On the Catawba, see Merrell 92-13; on the Muskogee, see Hahn, 57–93.

[132] See Merrell, 24–5.

[133] Catesby, I, "Account," xiii.

While studying the piedmont, Catesby used Fort Moore as his base of operations, camping in hinterlands as needed before returning to the fort with specimens and drawings. In one memorable incident, Catesby set out:

> With five of these [Chickasaw] *Indians* and three white Men […] to hunt; after some Days Continuance with good Success, at our returning Back, our *Indians* being loaded with Skins, and Barbacued Buffello, we espied at a Distance a strange *Indian,* and at length more of them appeared following one another in the same Tract as their Manner is: Our five *Chigasaw* [Chickasaw] *Indians* perceiving these to be *Cherikee* [Cherokee] *Indians* and their Enemies, being alarm'd, squatted, and hid themselves in the Bushes, while the rest of us rode up to the *Cherikees* [Cherokees], who then were increased to above twenty.[134]

Catesby and the three white men proceeded to amicably "Parley" with the Cherokee party as "the *Cherikees* [Cherokees] were also our Friends" before setting off without their Chickasaw companions.[135] Catesby complained that the diversion forced the white explorers to travel "with much Difficulty and a long March, for Want of our *Indian* guides."[136] According to Catesby's anecdote, the area surrounding Fort Moore was dominated by the Chickasaw and the Cherokee when he visited in 1723 and 1724.

Historical records corroborate Catesby's observation about the Chickasaws and Cherokees' activities in and around Fort Moore. Fort Moore—which Catesby sometimes referred to as "Fort Savannah" likely due to its location near the source of the Savanah River—was one of three forts built between 1715 and 1716 by British officials during the Yamasee War. Forts Congaree, Royal, and Moore were placed at strategic locations along both Carolina's borders and along common trading routes, reflecting their dual military and economic purposes. Fort Moore was the southernmost of the three forts, located near Augusta on the present-day South Carolina-

[134] Catesby, I, "Account," xiii.
[135] Catesby, I, "Account," xiii.
[136] Catesby, I, "Account," xiii.

Georgia border and named for former colonial governor James Moore. Fort Moore served three major purposes: "to sustain, regulate, and control trade along Carolina's southwestern frontier; to maintain and nourish friendly relationships with Native Americans residing along the Carolina frontier; and to establish an English presence along the southwestern boundary of South Carolina in the face of encroaching Spanish influences from the south and French influences from the west."[137] After South Carolina abandoned its monopoly over trade with Indigenous peoples in 1721, Fort Moore was still maintained as a military outpost as well as diplomatic center, with members of the South Carolina militia and the British army distributing gifts to the "friendly tribes" until the 1740s.[138] Licensed English traders still frequented Fort Moore after 1721 and settler-Indian trade still took place there.

When Catesby visited Fort Moore in 1723 and 1724, it primarily catered to Chickasaw and Cherokee emissaries. Throughout Fort Moore's history, the outpost welcomed all of Britain's allies but was mainly visited by the Muskogee (Creek), Choctaw, Cherokee, Chickasaw, and Yuchi peoples due to the fort's location.[139] Although the Chickasaw historically resided in Northern Mississippi, they began trading with Charleston as early as 1685. In 1723, a band of approximately forty Chickasaw families led by Fani' Minko' (also known as Chief Squirrel King) resettled in the area surrounding Fort Moore. Nicholson invited Fani' Minko' and his followers in order to populate South Carolina's southwestern frontier with Indigenous allies.[140]

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[137] Stephanie Sapp, "Fort Moore, Aiken County, SC (38AK4/5): Evidence of Creolization Along the South Carolina Frontier" (masters' thesis, University of South Carolina, 2009), 34.
[138] See Sapp 50-1; Sapp, 49.
[139] See Sapp, 57.
[140] Fani' Minko' or Squirrel King may have been a Chickasaw title and not a name. British explorer Thomas Nairne claimed that "The Chickasaws call thes[sic] protectors Fane Mingo or Squirrel King;" see Thomas Nairne *Nairne's Muskhogean Journals,* ed. Alexander Moore (Jackson: University Press of Mississippi, 1988), 40. The Muscogee word for village leader is moreover "mico." But British colonial sources from the eighteenth century use the name "Chief Squirrel King" to refer to the Chickasaw leader who relocated to Fort Moore. See Sapp, 57–8.

Catesby alluded to this relocation when he stated that some Chickasaws "seated themselves under Protection of the *English* near Fort *Moor* on *Savanna* River."[141] If Catesby's "friendly *Indian*" guides were in fact Chickasaw, they almost certainly among the Chickasaw who relocated with Fani' Minko'.

Given Catesby's misidentification of the Tallapoosa Creeks, it is equally possible his guides were not Chickasaws or that Catesby drew on support of several different Indigenous nations during his time in the piedmont. Catesby's anecdote alluded to the other major Indigenous group that frequented Fort Moore in the 1720s: the Cherokee. After the Chickasaws, the Cherokees were the next most logical source for Catesby's guides. After becoming governor of South Carolina, Nicholson immediately began to court the Cherokees as an ally. Prior to the Yamasee War, Virginia and Carolina had been involved in a trade war, competing not only over the deerskin and Indigenous slave trade but also to secure the most powerful Indigenous allies.[142] In the 1720s, the two Indigenous powers "of consequence" in the Southeast were the Muskogee Creek Confederacy and the Cherokee, and according to Nicholson, of the two an alliance "might with less difficulty be secured" with the Cherokee due to "these being still at enmity with the French."[143] Nicholson made wooing the Cherokee a priority of his governorship.[144] And it was mostly likely Nicholson who secured guides and porters on Catesby's behalf.

Although Fani' Minko''s band of Chickasaws settled outside of Fort Moore in 1723, Fort Moore was arguably built to court the Cherokees. The location of Fort Moore was determined

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[141] Catesby, I, "Account," xiii.
[142] James Merrell uses the phrase "trade war" to describe the conflict between Virginia and Carolina in the late seventeenth and early eighteenth centuries. See James Merrell, ""Our Bond of Peace" Patterns of Intercultural Exchange in the Carolina Piedmont, 1650-1750" in *Powhatan's Mantle: Indians in The Colonial Southeast*, ed. Gregory Waselkov, Peter Wood, and Thomas Harley (Lincoln: University of Nebraska Press, 2006), 287.
[143] Francis Nicholson as quoted in Chambers, 211.
[144] See Chambers, 211.

through an agreement between Col. Maurice Moore, brother of Carolina governor James Moore, and Charitey Hagey, the headman of the Lower Cherokee town Tugaloo, during the Yamasee War. The Lower Cherokee led by Caesar of Echota and Charitey Hagey ultimately determined the outcome of the Yamasee War when they executed a group of Muskogee and Yamasee diplomats at Tugaloo, dramatically turning the war in favor of the British. During the war, the British used Savannah Town (sometimes called Savano Town) as an outpost, constructing Fort Moore there in 1715 partially as a military garrison for British soldiers. When the war ended, the British continued to use Fort Moore to trade with their new Cherokee allies, insisting Charitey Hagey and other Tugaloo Cherokees travel more than 130 miles to the fort to trade.[145] The Lower Cherokee repeatedly complained to Theophilus Hastings and William Hatton, two British factors stationed at Tugaloo, about the difficulty and danger of travelling to Fort Moore but as late as 1718, South Carolina officials insisted all official trade happen at the fort.[146] After 1720, South Carolina still used Fort Moore to distribute diplomatic gifts to their allies, including the Cherokee.[147]

In addition to the Cherokee presence in and around Fort Moore, Nicholson has some of his strongest diplomatic ties with the Lower Cherokee. One of Nicholson's first acts as governor of South Carolina was to bolster the bond between the Cherokee and the British first forged during the Yamasee War. In 1721, Nicholson summoned representatives from influential Cherokee and Catawba towns to Charles Town in order to sign a new treaty with the newly formed colony of

[145] See Reid, 61–73. A historic marker in Stephens County, Georgia further notes that at "Old Tugaloo Town […] Col. Maurice Moore treated with Charity Hague."
[146] The Lower Cherokee probably continued to trade out of Fort Moore until South Carolina dissolved its public monopoly over the deerskin trade in 1720 but extant records only extend until 1718. On complaints by the residents of Tugaloo see Reid, 88–97.
[147] See Sapp, 50–1.

South Carolina. At this meeting, Nicholson was presented with a map "painted on a deer skin by an Indian Cacique" and showing "the scituation [sic] of the several nations of Indians to the NW of South Carolina."[148] For many years, scholars attributed this map to the Catawba delegates due to the visual prominence of Catawba towns.[149] Recent scholarship, however, has compellingly argued the author was more likely Cherokee and the map reflected the Lower Cherokees' recorded demands for a new, more central trading route between Charles Town and Tugaloo.[150] Although not drawn to scale, the 1721 map placed the Cherokee roughly southwest of Charles Town – the same general region as Fort Moore. As a diplomatic gift, the map moreover testified to the Nicholson's bonds with the Lower Cherokee.

[148] Text comes from the map's inscription. [Map of the several nations of Indians to the Northwest of South Carolina] (also known as the Catawba deerskin map), digital facsimile; 79 x 117 cm. Library of Congress Geography and Map Division Washington, D.C. 20540-4650 USA dcu (https://www.loc.gov/item/2005625337/?loclr=blogmap).
[149] For example, see Merrell (1989), 92–5.
[150] For example, see Calcaterra and Chambers; on Cherokee demands see Reid, 88–97.

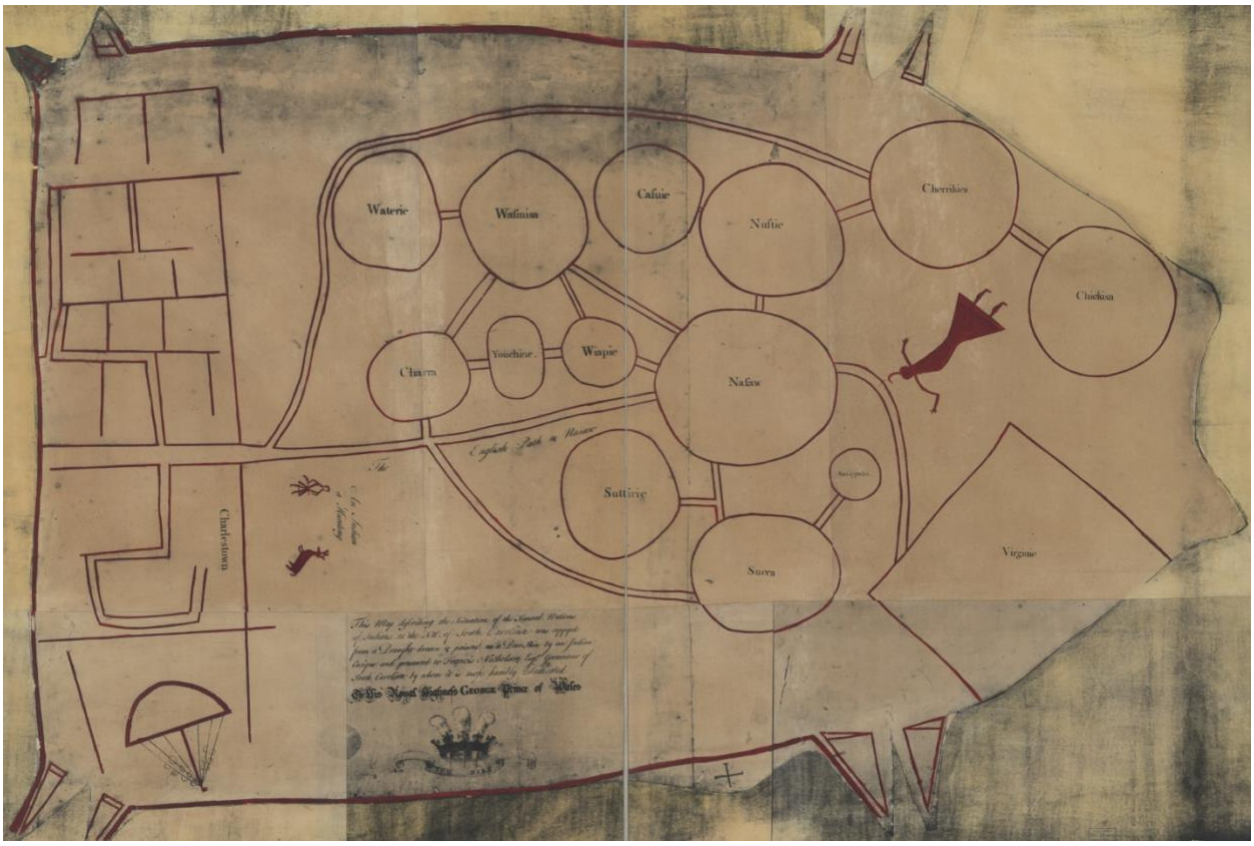

Figure 1: 1721 Deerskin Map presented to Francis Nicholson

Nicholson likely had more opportunities to partner Catesby with a Cherokee guide than he did with a Chickasaw one. Between 1723 and 1724—roughly the same period Catesby was moving between Charles Town and Fort Moore—Nicholson was in the process of restructuring South Carolina's Indian affairs. Although South Carolina abandoned its public monopoly over the deerskin trade in 1720, Nicholson knew trade between English settlers and Indigenous peoples had to be handled with the utmost care; memories of the Yamasee War and the abuses that caused it loomed large in the minds of most Carolinians. To cement his friendship with the Cherokee and to hear complaints, Nicholson and a committee of three councilors entertained emissaries from South Carolina's allies and between 1723 and 1724, several Cherokee

delegations made the trek to South Carolina.[151] These delegations, who received gifts after each visit with the governor, would have been opportune escorts for Catesby's trips to Fort Moore.

In addition to being convenient guides for Catesby, Nicholson's Cherokee allies also promised greater protection for the English naturalist. Nicholson needed to defend his investment in Catesby and knew that sending Catesby into the piedmont was a risk. Two botanists that Nicholson had previously hired to do surveying work in Virginia and Maryland—John Bannister and Hugh Jones—were killed while in the field.[152] John Lawson, a surveyor and explorer from Carolina, was famously killed by the Tuscarora in 1711 while working on behalf of the colony.[153] Nicholson thus needed to guard Catesby to receive a return on his investment. The Cherokee were, according to Nicholson, "a warlike nation" that wielded considerable power in the Upper Country and could in theory guarantee Catesby safe passage.[154] In 1717, Carolina officials had employed Cherokee warriors to act as "guide and Guard" for an agent of the colony.[155] Around the same time, Carolina had also employed several "linguisters," or interpreters, to assist Hastings and Hatton, the British factors to the Lower Cherokee, who could not speak or understand any Cherokee dialects.[156] Nicholson could have drawn on these pre-existing economic relationships between South Carolina and the Lower Cherokee in arranging assistance for Catesby.

Catesby's biggest advantage while in the Carolina piedmont was his relationship to Nicholson. Decades of conflict in the Upper Country had not only kept naturalists out of the

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[151] See Reid, 131-8.
[152] Bruce McCully, "Governor Francis Nicholson, Patron 'Par Excellence' of Religion and Learning in Colonial America," *The William and Mary Quarterly* 39, No. 2 (April 1982): 324.
[153] See Calcaterra, 34.
[154] Francis Nicholson, as quoted in Chambers, 211.
[155] Robert Daniell, as quoted in Reid, 79.
[156] It is unclear if these interpreters were themselves Cherokee. At least two of South Carolina's regular Cherokee interpreters, Eleazer Wigan and Nathaniel Parrot, were white. See Reid, 93.

piedmont but also allowed colonial officials like Nicholson to restrict contact between British settlers and their Indigenous neighbors. By referring to his guides as "friendly *Indians*," Catesby tacitly acknowledged his imbrication in Carolina diplomacy. By thanking Nicholson, Catesby further invoked the governor's alliances with Indigenous peoples, limiting the possible identity of Catesby's guides. And by using Fort Moore as his base of operations between 1723 and 1724, Catesby's "friendly *Indians*" were almost certainly from Fani' Minko''s band of Chickasaws or Lower Cherokee. Regardless of whether or not Catesby identified his assistants, the delicate diplomatic networks of the Carolina piedmont did the naming for him. Only a handful of nations would have been willing to escort an agent of the British government through the Indigenous controlled Upper Country. Just as Carolina officials tried to regulate the flow of settlers into the piedmont, Indigenous leaders tried to thwart English probes into the region.

"Not So Well Acquainted"

When Catesby wrote that it was "impertinent" to provide an "Account of the Indians" and when he erroneously claimed that all Indigenous peoples "seem to be the same People" his own insecurities may have bled into his metropolitan prejudices.[157] Catesby after all could not speak any Indigenous languages, could not move freely about the Piedmont without protection, and could not even set his own travel itinerary. And Catesby's shortcomings were only exacerbated by the fact that the Indigenous peoples of the piedmont were "so reserv'd and avers'd to reveal their secret Mysteries."[158] Catesby embedded snippets of Indigenous-authored information throughout his species descriptions despite his prefatory warning that information *about* Indigenous peoples was "too often the Product of Invention, or Credulity in the Relater."[159]

[157] Catesby, I, "Account," xvi; vii.
[158] Catesby, xvi.
[159] Catesby, xvi.

Catesby's belief that information *by* Indigenous people was more trustworthy than information *about* Indigenous people was partially shaped by the Native Americans he met in the piedmont. During the first half of the eighteenth century, the Indigenous peoples of the piedmont carefully restricted the amount of information they shared with European colonists including explorers like Catesby. Catesby's defensiveness when writing about "the Indians of Carolina and Florida" was born from his awareness that Native Americans, not Europeans, controlled the flow of information in the piedmont.

Catesby was not the first Englishman frustrated by the reticence of the Indigenous peoples of Carolina. Eighteenth-century missionaries to Carolina found that the "Indians generally met [their] barrage of questions with silence."[160] In 1700, British explorer John Lawson entered the piedmont with the assistance of "three *Indian* men," eventually using this preliminary expedition to gain a position as surveyor general of Carolina in 1705.[161] Lawson's most valuable intelligence from his 1700 trip, however, was not geographic but ethnographic. Lawson and his party visited fifteen different Indigenous villages and at each, the travelers received the hospitality extended to any diplomat.[162] In addition to his superficial visual observations, Lawson was invited to witness ceremonial feasts and orations. Among the Congaree, for example, Lawson and his party were offered "victuals" by their "Queen" and with the help of a translator were able to interview community elders.[163] Among the Waxhaws, Lawson's party was "invited by the Grandees" to attend an important feast where "strange" music, gestures, and dancing took place.[164] But when Lawson asked his Waxhaw hosts where

[160] Merell, 99.
[161] Lawson, 6; see Calcaterra, 34.
[162] See Merell, 3
[163] Lawson, 28; see Lawson, 27-30.
[164] Lawson, 37-8.

they obtained " one of the largest Iron Pots I had ever seen in *America*[…] They laugh'd at my Demand, and would give me no Answer."[165] Although Lawson felt "*Enoe-Will*," one of his guides, held "real Affection" for the English, Lawson could not compel him to explain why "the *Indians* […] [put] some Tobacco into the Concavity [of a particular great stone], and spitting after it."[166] Despite the fact that many of the Indigenous peoples of the Piedmont welcomed Lawson, they still controlled what Lawson did and did not learn.

Lawson's Indigenous hosts had good reason to be cautious. Five years after his initial journey, Lawson became the surveyor general of South Carolina and used this role to defraud the Tuscarora. In 1708, Lawson illegally sold Tuscarora land to Swiss baron Christoph von Graffenried. Then in 1711, Lawson entered the Tuscarora's homeland without permission from Tuscarora headman King Hancock, ultimately leading to Lawson's execution, the Tuscarora War (1711-1715), and the expulsion of the Tuscarora people from Carolina.[167] Even before Lawson's transgressions, however, the Tuscaroras and their neighbors knew all about English duplicity and abuse thanks to the deerskin and slave trade. Lawson thus found that the Indigenous people he met *could* "draw Maps, very exactly, of all the Rivers, Towns, Mountains, and Roads, or what you shall enquire of them" but only *would* if you were "very much in their Favour, otherwise they will never make these Discoveries to you."[168] The reason Lawson's informants gave for this secrecy was that "if we should discover these Minerals to the *English*, they would settle at or near these Mountains, and bereave us of the best Hunting-Quarters we have, as they have already

[165] Lawson, 40.
[166] Lawson, 57.
[167] The Iroquoian Tuscarora found refuge with their Haudenosaunee kinfolk, joining the Six Nations confederacy as the sixth nation. See Calcaterra, 34-5.
[168] Lawson, 205.

done."[169] The Tuscarora may have also learned from the Haudenosaunee, their northern allies and kin, to conceal things from the English.[170] Based on first-hand experience, the Indigenous peoples of the piedmont knew the English would use any information they gained as a means to enrich themselves at the expense of their Indigenous neighbors.

James Adair, an English trader and diplomat to the Chickasaw and Choctaw, echoed Lawson's complaints that the Indigenous peoples of the piedmont were overly taciturn. When Adair worked as a trader in the 1730s and 40s, he struggled with "the secrecy and closeness of the Indians as to their own affairs, and their prying dispositions into those of others."[171] Adair was additionally "obliged to conceal his papers […] [because] the traders letters of correspondence always excited their suspicions, and often gave offence."[172] Like the Tuscarora, the Chickasaw and Choctaw had reason to be suspicious. Carolina officials had long used its factors to gather intelligence on their Indigenous neighbors and, after the dissolution of the public monopoly, leaders like Nicholson turned to traders to provide reliable information.[173] Hastings and Hatton, the traders at Tugaloo in the 1710s, were frequently pressed by officials in

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[169] Lawson, 205.
[170] Virginia and New York officials repeatedly questioned the Haudenosaunee about the antagonistic relationship between themselves and the Catawba but the Haudenosaunee "refused to disclose the particulars" (Calcaterra 26). Moravian missionary John Heckewelder similarly commented "they (the 6 nations) for political reasons, will keep a secret from the Americans as long as they possibly can," indicating that at least by the eighteenth century the Haudenosaunee guarded information in their dealings with Europeans. (John Heckewelder to Samuel Miller, Feb. 26th, 1801, Mss Collection BV Miller papers, New York Historical Society, 13).
[171] James Adair, *The history of the American Indians; particularly those nations adjoining to the Missisippi East and West Florida, Georgia, South and North Carolina, and Virginia: containing an account of their origin, language, manners, religious and civil customs, laws, form of government, punishments, conduct in war and domestic life, their habits, diet, agriculture, manufactures, diseases and method of cure... With observations on former historians, the conduct of our colony governors, superintendents, missionaries, & c. Also an appendix, containing a description of the Floridas, and the Missisippi lands, with their productions--the benefits of colonizing Georgiana, and civilizing the Indians--and the way to make all the colonies more valuable to the mother country* (London: E. and C. Dilly, 1775), 3.
[172] Adair, 3.
[173] See Reid, 88.

Charles Town for detailed reports on Cherokee news and society.[174] By the 1740s, the Indigenous peoples of the piedmont had clearly learned English traders were both collecting and leaking valuable information.

When Catesby arrived in the Piedmont, South Carolina officials were still grappling with how to overcome their lack of knowledge about Indigenous politics and properly manage the colony's Indian affairs. In 1720, factor to the Cherokee William Hatton wrote a scathing report on the many failures Carolina's factory system. One of Hatton's major criticisms was that the commissioners of the Indian trade were "not so well acquainted with the ways of Indians and their Trade as might have been wish'd" and as a result both diplomacy and trade between the English and the Cherokees had suffered.[175] When Nicholson became governor of South Carolina in 1721, he discovered that Hatton's criticisms to be all too true.

In addition to the breaches of etiquette and flagrant abuses committed by licensed Carolina traders that Hatton outlined in his report, Nicholson found that without a working knowledge of Indigenous politics previous governors had entered into unenforceable treaties. The agreements Carolina made with Cherokee leaders Caesar of Echota and Charitey Hagey during the Yamasee War, for example, proved to be nearly worthless as neither Ceasar nor Charitey Hagey represented the Cherokee people as a whole or even the Lower Cherokee. Both men exerted a non-coercive leadership in their individual towns, Echota and Tugaloo, and even that did not guarantee Cherokee compliance.[176] The decentralized structure of Cherokee society

[174] Although the requests for information still exist, Hastings and Hatton's responses were sadly lost. See Reid, 93.
[175] Rena Vasar, "Some Short Remarkes on the Indian Trade in the Charikees and in Management thereof since the Year 1717," *Ethnohistory* 8, No. 4 (Autumn 1961): 405.
[176] See Reid, 74-87.

in the 1720s made unilateral agreements between South Carolina and the Cherokee nearly impossible.

Unsurprisingly when Nicholson summoned Cherokee and Catawba representatives to Charles Town in 1721, he ordered them to send "A Head man out of each Town of each Nation" and later pressured the Cherokee to designate a "Governor or Chief Commander of the said Nation" to make Indian affairs more manageable.[177] Nicholson, however, lacked the leverage to compel the Cherokee or any other Indigenous nation for that matter to do anything. When Catesby arrived in 1723, the Indigenous peoples of piedmont were still a decentralized web of "politically independent but culturally related" polities.[178] Despite the regular movement of people and ideas between piedmont cultures, this autonomy further restricted the flow of information between Indigenous Carolinians and English colonists.[179] In the 1720s, the Indigenous peoples of the piedmont stood to gain more from talking to each other than they did from talking to the English.

Even if Catesby spoke an Indigenous language and even if he had free reign in the Upper Country, he still had to contend with both the Indigenous cultures' principles of secrecy and autonomy in the piedmont in researching that region. *The Natural History's* contradictory approach to Native Americans reflected the obstacles Catesby faced in gathering reliable information both *about* and *by* Indigenous peoples. Catesby claimed that when it came to "the

[177] Francis Nicholson as quoted in Chambers, 211; Nicholson as quoted in Reid, 135.
[178] Merell, 9.
[179] Chapters 2 and 3 of this dissertation explore in more detail how the Indigenous multi-ethnic confederacies and villages that formed in the late eighteenth and early nineteenth centuries facilitated the movement of information from Lenape and Shawnee men to colonists and settlers. Although not all multi-ethnic settlements were open to white naturalists and explorers, pre-existing ideas about diplomacy and knowledge made it easier for naturalists to access Indigenous expertise in communities where the incorporation of strangers was more routine and partnerships with colonists more vital. This is not to say that autonomous villages never shared information with naturalists, only that they had fewer practices that normalized this type of exchange and fewer incentives to share.

Indians" he chose "to confine myself to what I learn'd by a personal Knowledge," but his passages concerning Indigenous people collaged his first-hand experience with information borrowed from his hosts and published accounts. [180]

When writing *about* Native Americans, Catesby's use of a detached third-person narration hid how little first-hand knowledge he possessed. Catesby's ethnographic writing was peppered with omniscient blanket statements: "Their annual Custom of Fire-Hunting is usually in *October*"; "They are very politick in carrying on their War"; "They never face their Enemies in open Field (which they say is great Folly in the English)," and so on.[181] These removed statements were frequently based not on Catesby's "personal Knowledge" of Native Americans but on published writing Catesby deemed reliable.[182] Catesby acknowledged that in general he drew on several texts—mainly John Lawson's *A New Voyage to Carolina* (1714), John Josseyln's *New England's Rarities, discovered in Birds, Beasts, Fishes, Serpents, and Plants of that Country* (1671), and Francisco Hernández de Toledo's *Plantas y Animales de la Nueva Espana* (1615)—but did not tie specific pieces of information to these sources. For example, Catesby wrote that for all Native Americans "the Business of their Lives being War and Hunting, they trouble themselves with little else, deeming it ignominious for a *Coccorous*, that is, a War-Captain, or good Hunter, to do mechanic Works"—a statement as authoritative as it was untrue.[183] *Coccorous*, an Algonquian term, more accurately means "orator," while *werowance* means war-chief or captain. In his *The Generall Historie of Virginia* John Smith famously

[180] Catesby, *I*, "Account," xvi.
[181] Catesby, xii; xiii; xiv.
[182] See Catesby, viii.
[183] Catesby, xi.

mistranslated *Coccorous* as war-chief.[184] Catesby probably copied Smith and then projected Smith's observations of the Powhattan people to all Native Americans. By using general omniscient statements, Catesby exaggerated the reach of his ethnographic knowledge.

Catesby also borrowed ethnographic information from white colonists he met while in the field. In his section on Indigenous warfare, Catesby related an anecdote about a ""A warlike crafty *Indian*, call'd *Brims* [Hoboyetly]."[185] Catesby described how "*Brims*" was "taken Prisoner, and deliver'd up to the *English*, who, for Reasons more political than humane, return'd him back again to be put to Death by the *Indians* that took him." [186] Before he could be executed, however, Brims made a harrowing escape and "afterwards made Peace with the *English*, and liv'd many Years after with Reputation in his own Country." [187] Muscogee *mico* Hoboyetly, known in English as Emperor Brims, was a real person, and numerous colonial officials, including Nicholson, had dealings with him.[188] Catesby was not in North America during Hoboyetly's legendary escape and thus probably heard this second-hand story from one of his esteemed hosts. In Catesby's description of the "Purple Bind-Weed of *Carolina*," he similarly noted that "Col. *Moore*, a Gentleman of good Reputation in *Carolina*" – probably Maurice Moore, who led negotiations with Charitey Hagey and the Lower Cherokee—"told me, that he has seen an Indian daub himself with the Juice of this Plant." [189] According to Moore "immediately after which he [the Indian] handled a Rattle-Snake with his naked Hands without receiving any harm from

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[184] In a 1907 article, anthropologist William R. Gerard noted that a number of English loanwords came from Algonquain, including "cockarouse," a mistranslation of *Coccorous* originating from John Smith. See William R. Gerard "Virginia's Indian Contributions to English," *American Anthropologist* 9, No. 1 (Jan.–Mar. 1907): 87-112.
[185] Catesby, *I*, "Account," xiv.
[186] Catesby, xiv.
[187] Catesby, xiv.
[188] Catesby, xiv. On Brims' connection to British officials, see Joshua Piker, *The Four Deaths of Acorn Whistler: Telling Stories in Colonial America* (Cambridge: Harvard University Press, 2013), 79; 85.
[189] Catesby, *I*, 35.

it."[190] Catesby wove ethnographic information from published sources with information he learned from British colonists.

In a few instances, however, Catesby made clear that he did in fact meet with and interview Indigenous people by switching to the first person. Catesby insisted he could speak authoritatively about Native Americans because "I have often travelled with them 15 and 20 miles a Day, for many Days successively," "I have often partook of […] their Cookery," and "I have seen the *Indians* boil […] their Venison" among other day-to-day tasks.[191] But Catesby still used published sources to homogenize and flatten the Indigenous peoples he met. Catesby sensually described "A Town of *Totero* [Tutelo] *Indians,* seated on *Meherin* River"—the "sultry Weather" and the "Heat of the Sun," which warmed the gum tree beams of the Tutelos' *ati* (home in the Tutelo-Saponi language).[192] Catesby wrote "I gathered more than my Hat full of the fragrant Rosin that trickles from between the Bark and the Wood," placing himself in an *ati* on the Meherrin River, likely during his 1712 trip to Virginia.[193] But Catesby confusingly prefaced this description of a Tutelo *ati* by repeatedly calling these structures "Wigwams, or Cabbins of the *Indians."*[194] The term Wigwam was an anglicization of wigwôm – an Algonquian term used predominantly by Abenaki and Ojibwe peoples of the Northeast. Catesby probably borrowed the term Wigwam from John Josselyn, a British traveler in New England, who introduced the term wigwam to English readers in *New England's Rarities*.[195] Entwining his own experiences with

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[190] Catesby, 35.
[191] Catesby, *I,* "Account," x; viii; 35.
[192] Catesby, xi.
[193] The Meherrin River transects the Virginia-North Carolina border but in 1705 the colony of Virginia created one of the earliest Indian Reservations for the Meherrin Indians on the river that shares their name. The Byrd family of Virginia was instrumental in creating this reservation and Catesby and William Byrd II visited Indigenous settlements in Virginia between 1712 and 1713, meaning this anecdote probably came from one of those trips.
[194] Catesby, x; xi.
[195] Most dictionaries state that wigwam entered the English language in 1628, but Catesby explicitly cites John Josselyn, who was one of the earliest English writers to use the term.

those of writers like Smith or Joesselyn allowed Catesby to expand his authority to people and places he never encountered.

Despite Catesby's warning that information *about* Native Americans was "too often the Product of Invention, or Credulity in the Realter," he still embedded information ostensibly *by* Native Americans in his plant and animal descriptions. In addition to his use of Indigenous intelligence in his description of the purple bind-weed, Catesby's entry on the "largest white-bill Wood-pecker," noted that "The Bills of these Birds are much valued by the *Canada Indians*, who make Coronets of 'em for their Princes and great warriors." [196] Catesby added that "The *Northern Indians* having none of these Birds in their cold country, purchase them of the Southern People," using ethnographic information to establish the geographic range of the Ivory-billed woodpecker.[197] Catesby even included Indigenous information he found suspicious. In his passage on the "Coach-Whip Snake," Catesby relayed that "the Indians report (not without gaining many proselytes to their silly belief) that they [the snake] will, by a jirk of their tail, separate a man in two parts" in spite of his obvious reservations.[198]

Catesby not only relied on Indigenous information for his natural history but also on Indigenous labor while in the field. Catesby based his entire description of the "hooping crane" on the "Skin of the Bird, presented to me by an *Indian* who made Use of it for his Tobacco-Pouch." [199] According to Catesby, the "*Indian* […] told me, that in the Spring great Multitudes

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[196] Catesby, *I*, 16.
[197] Catesby, 16.
[198] Mark Catesby, *The natural history of Carolina, Florida and the Bahama Islands : containing the figures of birds, beasts, fishes, serpents, insects, and plants : particularly, the forest-trees, shrubs, and other plants, not hitherto described, or very incorrectly figured by authors : together with their descriptions in English and French : to which, are added observations on the air, soil, and waters : with remarks upon agriculture, grain, pulse, roots, &c. : to the whole, is prefixed a new and correct map of the countries treated of*, 2 vols. (London, 1731–1743 [1729–1747]), *II*, 54.
[199] Catesby, *I*, 75.

of them [cranes] frequent the lower Parts of the Rivers near the Sea; and return to the Mountains in the Summer," adding that "This relation was afterwards confirmed to me by a white Man" who has seen whooping cranes "at the Mouths of the *Savanna, Aratamaha*, and other Rivers nearer St. *Augustine*, but never say any so far North as the Settlements of *Carolina*."[200] Thwarted in his attempts to capture the "very shy" yellow-breasted chat, Catesby found that "after many Hours Attempt to shoot one, I was at last necessitated to employ an Indian, who did it not without the utmost of his Skill."[201] Despite Catesby's misgivings and despite the numerous obstacles he faced in gathering information from Indigenous people, Catesby (or at least his audience) clearly believed that his natural history needed information from Indigenous sources.

Travelling in the years between the murder of Lawson and the appointment of Adair, Catesby had to contend with the tense relationship between information and diplomacy in the piedmont. English factors, trades, and surveyors had all acted as emissaries of the Carolina government, telling "fine stories" in the name of the Governor, delivering messages from the British crown, and mediating legal disputes.[202] These same agents had also surreptitiously gathered intelligence, disregarded local etiquette, and defrauded Indigenous peoples. In the 1720s, the Indigenous peoples of the piedmont were autonomous and cautious when it came to the English. And still with all of those barriers, Catesby attempted to use Indigenous testimony about plants and animals in *The Natural History*. Catesby's determination to use Indigenous

[200] Catesby, 75; It is possible that Catesby's informant in this case was a Catawba man, as William Byrd II recorded that the Catawba travelled annually to a place known as Crane Creek "so nam'd from its being the rendezvous of great Armies of Cranes," located between the Yadkin and Catawba Rivers (Byrd as quoted in Calcaterra, 36). Without more information, however, it is impossible to determine which culture the pouch originated from as many Southeastern Woodlands nations used tobacco.
[201] Catesby, 50.
[202] Vassar, 412.

testimony despite the obstacles he faced in obtaining it begs the question: why did Catesby consider Indigenous ideas valuable to natural history?

"Accounts of the *Indians"*

By 1723, information about Indigenous people was a common and expected component of colonial natural histories while evidence gleaned from Indigenous testimony was an accepted form of evidence. By the beginning of the eighteenth century, colonial natural history as a genre frequently blended precise and static descriptions of foreign flora and fauna with the historic conventions of travel literature.[203] Travel literature had long incorporated portraits of local "manners and customs," a precursor of ethnography, as part of a larger narrative. [204] Natural history inherited this practice of documenting Indigenous manners and customs, particularly in scientific studies of imperial frontiers where Europeans hoped to "codify difference" and use literary representations of Indigenous peoples as a tool of colonial domination.[205] Catesby, following in the footsteps of other seventeenth and eighteenth century English naturalists, dutifully included a section titled "Of the *ABORIGINES* of America" within his larger, overview of the "*Carolina* and the *Bahama* Islands."[206] Within this discrete "manners and customs" passage, Catesby explained the possible origins of Native Americans, "Their Persons," "Their Habits," "their Arms," "Food and Cookery," "Habitations" "Arts and Manufactures," "Hunting," "Sagacity," "Wars," and "little Knowledge of Physick and Surgery," among other topics.[207]

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[203] See Pamela Regis, *Describing Early America: Bartram, Jefferson, Crevecouer and the Rhetoric of Natural History* (Philadelphia: University of Pennsylvania Press, 1999), 5.
[204] Mary Louise Pratt, "Scratches on the Face of the Country; or What Mr. Barrow Saw in the Land of the Bushmen," *Critical Inquiry* 12, issue 1 (Fall 1985): 120.
[205] Pratt, 120.
[206] Catesby, *I*, "Account," vii.
[207] Catesby, viii-xvi.

Even though "manners and customs" passages were an expected part of colonial natural history, Catesby grappled with both the legacy of travelers' tales and with epistemological reforms happening within natural history during the seventeenth and eighteenth centuries. Catesby couched his "Account of the *Indian*s" by qualifying that information *about* Native Americans within natural histories was "too often the Product of Invention, or Credulity in the Realter."[208] By including this caveat, Catesby was echoing other European intellectuals at the turn of the eighteenth century who approached travel literature with skepticism.[209] Instead of focusing on external criteria—the social standing of the author, for example—to determine the veracity of a source, naturalists in the eighteenth century began to value a source's internal coherence as well as the "philosophical" (or educated) approach of the author.[210] In England particularly, colonial accounts of the Americans shifted how naturalists evaluated knowledge between the sixteenth and eighteenth centuries.[211] Throughout *The Natural History*, Catesby mocked the credulity of other writers, signaling to his audience that he was not a mere traveler but a new type of trustworthy observer.[212] To satisfy the expectations of his readers and the requirements of the natural history genre, Catesby included a hedged and abbreviated "manners and customs" section.

Catesby's writing concerning Native Americans, however, was not confined to his manners and customs section; Catesby also wove bits of information attributed to Indigenous

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[208] Catesby, xvi.
[209] See Jorge Cañizares-Esguerra, *How to Write the History of the New World: Histories, Epistemologies, and Identities in the Eighteenth-Century Atlantic World* (Stanford: Stanford University Press, 2001), 11-15.
[210] Jorge Cañizares-Esguerra calls this new, reliable, trained traveler the "philosophical traveler," see Cañizares-Esguerra, 11-26.
[211] See Susan Scott Parrish, *American Curiosity: Cultures of Natural History in the Colonial British Atlantic World* (Chapel Hill: University of North Carolina Press, 2006), 24-5.
[212] Catesby, for example, pointed out several ideas he deemed the products of "credulous Relaters," including the size of a moose (Catesby, *I*, "Account," xxvii) and the virulence of the water viper (Catesby, *II*, 43).

sources throughout his descriptions of plant and animal species. Catesby used these pieces of Indigenous testimony to further bolster his status as a trustworthy observer by carefully evaluating Indigenous testimony, and in some cases, by rejecting it. Catesby only accepted Indigenous testimony when it was either novel or confirmed existing European ideas. In his entry on passenger pigeons, for example, Catesby included extensive testimony from British colonists on the prodigious numbers and flight patterns of these prolific birds. Catesby added, however, that "The only information I have had from whence they come, and their places of breeding, was from a *Canada Indian*, who told me he had seen them make their Nests in Rocks by the sides of Rivers and Lakes far North of the River *St. Lawrence*, where he said he shot them."[213] In this instance, the testimony of Catesby's "*Canada Indian"* informant added to existing European knowledge about the passenger pigeon but did not contradict it. When writing about the whooping crane, Catesby based his description of the bird on his own visual examination on "the entire Skin of the Bird, presented to me by an *Indian* who made Use of it for his Tobacco-Pouch."[214] But without first-hand knowledge of the whooping crane's behavior, Catesby had to cite the testimony of this same man who told Catesby "that in the Spring great Multitudes of them [whooping cranes] frequent the lower Parts of the Rivers near the Sea; and return to the Mountains in the Summer."[215] Catesby used this Indigenous testimony because "This relation was afterwards confirmed to me by a white Man."[216] Both of Catesby's accepted Indigenous informants conformed to existing English knowledge of North America.

[213] Catesby, *I*, 23.
[214] Catesby, 75.
[215] Catesby, 75.
[216] Catesby, 75.

Catesby dismissed Indigenous information that conflicted with his own observations or those of his European sources, even if he included this suspicious Indigenous-authored information in *The Natural History*. Catesby scoffed that "the Indians report (not without gaining many proselytes to their silly belief)" that the "inoffensive" coach-whip snake "will, by a jirk of their tail, separate a man in two parts."[217] Because Catesby observed the coach-whip snake himself, he did not credit these reports. Similarly, when it came to herbal and medical cures for rattlesnake venom—a topic Europeans devoted considerable attention to—Catesby measured potential Indigenous cures against his own experience. According to Catesby, "The most successful remedy the *Indians* seem to have [for rattlesnake bites], is to suck the wound, which, in a slight bite, has sometimes a good effect" but "They have likewise some roots, which they pretend will effect the cure."[218] According to Catesby, his experience "travelling much with *Indians*" made it apparent "that the good effects usually attributed to these their [herbal] remedies, is owing more to the force of nature, or the slightness of the bite of a small Snake in a muscular part &c."[219] Inasmuch as Indigenous testimony supported European ideas about New World flora and fauna, it was valuable as scientific evidence.[220]

Catesby's approach to evaluating Indigenous testimony exemplified Anglophone methods for assessing testimony within natural history. Catesby looked for things like plausibility, logical consistency, corroboration, and impartiality when crediting Indigenous testimony in *The Natural History*.[221] Catesby was moreover not the only naturalist to apply a

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[217] Catesby, *II,* 54.
[218] Catesby, *I,* 41.
[219] Catesby, 41.
[220] This would not always be the case, however. Chapter 2 of this dissertation explores how the American Revolution and the development of a distinctly American identity encouraged American naturalists to challenge European ideas and accounts of North America using Indigenous testimony.
[221] Shapin argues that in the seventeenth century, English naturalists developed seven maxims for evaluating any testimony: was the testimony plausible; was the testimony corroborated by other similar, accounts; was the

critical ear to Indigenous testimony. The reforms that discredited travelers' tales during the sixteenth and seventeenth centuries also changed how Europeans perceived and valued evidence attributed to Indigenous peoples. During the sixteenth century, European scholars subjected Mesoamerican textual sources, like quipus and codices, to such intense scrutiny that by the late seventeenth century, these same objects were deemed unreliable as historical evidence.[222] Catesby may have been aware of these critiques of Mesoamerican codices but at the very least he agreed with their conclusions. Catesby wrote in *The Natural History* that "for my own part, I cannot help my Incredulity" at the grandeur of Spanish descriptions of Mesoamerican civilizations, adding that these accounts seemed "calculated to aggrandize their [Spanish] Achievements in conquering a formidable people."[223] While Catesby's rebuke of the Spanish was partially fueled by Anglocentric anti-Iberian sentiments, it revealed that Catesby did not see Indigenous testimony as universally credible.[224] For Catesby, Indigenous testimony could augment but not supersede established European ideas concerning the New World.

When Catesby wrote that information *about* Native Americans was "too often the Product of Invention, or Credulity in the Realter," his rationale focused not on European writers

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testimony logically consistent; was the testimony immediate (or based on first-hand experience as opposed to retellings); did the testimony come from a source with special skill or knowledge; was the testifier confident in what they perceived, and did the testifier possess disinterest and integrity; see Steven Shapin, *A Social History of Truth: Civility and Science in Seventeenth-Century England* (Chicago: University of Chicago Press, 1995), 212. Catesby was clearly using some of these maxims as criteria for evaluating Indigenous testimony.

[222] Much of the criticism of Mesoamerican texts centered on the perceived diabolicalness of the authors, whose texts did not adhere to biblical chronology and thus could be dismissed as illogical and untrue; see Cañizares-Esguerra, 99.

[223] Catesby, *I*, "Account," viii.

[224] Canizares-Esguerra argues that the devaluation of Mesoamerican textual sources was part of a complex, decades-long process that was inextricably linked to a larger European refutation of Spanish writing on the New World; see Canizares-Esguerra, 1-10. Although the Mesoamerican sources in Canizares-Esguerra's study were material and textual objects distinct from the oral testimony used by Catesby, Catesby's filtering of Indigenous testimony employed a similar logic to not only the biblical scholars described by Canizares-Esguerra but also to other instances, like the early modern Italian debate concerning heliocentrism, where early modern thinkers had to weigh the accepted hierarchy of disciplines and methods against the information being used.

but on their sources: Native Americans.[225] Catesby stated that he mistrusted Indigenous testimony primarily because he suspected Indigenous people were too secretive or duplicitous to always provide reliable information. Catesby claimed that the "*Indians* being so reserv'd and avers'd to reveal their secret Mysteries to *Europeans,* that the Relations of the most inquisitive [European] can be but little depended on," implying (correctly) that previous European travelers had been intentionally misled by their Indigenous guides.[226] Catesby's belief that some "*Indians*" hid information from Europeans was likely influenced by his own experiences in the piedmont but this idea was also cemented by the texts Catesby cited on Native Americans in *The Natural History*. John Lawson, for example, mentioned several instances where his Indigenous hosts refused to answer his questions or allow him to view private religious ceremonies.[227] Catesby's mistrust of Indigenous sources stemmed from the fact that in the piedmont of the 1720s, Native Americans directed how—or even if—information flowed. Catesby could not compel or control what kind of knowledge he received from Indigenous Carolinians.

Catesby's frustration at Indigenous secrecy bled into how he wrote *about* Native Americans, who he described as being sagacious. Starting in the seventeenth century, English writers began attributing Native Americans with an extrasensory ability to perceive and understand nature often classified as Indian "sagacity" and attributed to an indistinct mixture of familiarity with the natural world, diabolical influence, and physiological differences.[228] Sagacity, under this logic, made Indigenous peoples an invaluable source of information about

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[225] Catesby, *I*, "Account," xvi.
[226] Catesby, xvi; For example, Canizares-Esguerra describes how Francisco Hernandez was "constantly misled" by his Indigenous informants while studying the medicinal properties of New World plants (63). Londa Schiebinger similarly describes how Amerindians secrecy frustrated bioprospectors see Londa Schiebinger, *Plants and Empire: Colonial Bioprospecting in the Atlantic World* (Cambridge: Harvard University Press, 2004), 90-3.
[227] See for example Lawson, 40; 57.
[228] On sagacity and Native Americans see Parrish, 241–7.

American nature as they allegedly possessed "knowledge the English did not and could not have."[229] Catesby was part of the first generation of Anglophone naturalists to comment extensively on Indigenous sagacity in their writing.[230] Catesby dedicated an entire section of his manners and customs passage to "their Sagacity" and claimed that "The Indians are generally allowed to have a good Capacity which seems adapted and even confined to their savage Way of Life."[231] According to Catesby, "*Indians*, who as they have sharper Sight, hear better, and are endowed with an Instinct approaching that of Beasts" made better hunters and trackers than Europeans.[232] Catesby's faith in Native sagacity even drove him to hire "an *Indian"* to procure the elusive yellow-breasted chat, a task that required *"*the utmost of his Skill."[233] The alleged sagacity of Native Americans led Catesby to simultaneously seek out information *by* Native Americans while also dismissing information *about* Native Americans.

In Catesby's mind—and in the minds of many other eighteenth century naturalists – sagacity transformed Indigenous testimony into desirable evidence with considerable epistemological worth. In the eighteenth century, Native sagacity was synonymous with the ability to see or reveal secret and hidden aspects of the natural world.[234] Thus, the same preternatural abilities that made Indigenous guides and informants into sources of natural knowledge also hid that same knowledge from inquisitive white naturalists like Catesby. The rareness and inaccessibility of Native American expertise did not diminish the epistemological

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[229] Parrish, 216.
[230] Parrish uses Catesby, as well as his collaborator William Byrd II, as an exemplary source for English ideas of Native American sagacity, see Parrish, 243–7.
[231] Catesby, *I*, "Account," xii.
[232] Catesby, xxx.
[233] Catesby, *I*, 50. According to Catesby, sagacity made Native Americans better suited to beaver hunting than white colonists, as Indigenous hunters were "so much the better enabled to circumvent the Subtleties of these wary Creatures" (Catesby, *I*, "Account," xxx.).
[234] See Parrish, 216–8.

value of that same information. On the contrary, Catesby went to significant trouble to procure the few pieces of Indigenous testimony he cited in *The Natural History.* Catesby relied on the "Traders and *Indians*" at Fort Moore to corroborate the observations he made in the field.[235]

For Catesby, however, Native sagacity was a double-edged sword. Although Anglophone naturalists believed Native sagacity had both physiological and spiritual origins, Catesby's blanket observation that Indigenous peoples were "so reserv'd and avers'd to reveal their secret Mysteries" indicated that British definitions of sagacity also had a political dimension.[236] Catesby's time in the piedmont reinforced the idea that Indigenous peoples had access to a body of secret or concealed knowledge. As both a pioneering Anglophone naturalist and an early adopter of the concept Native American sagacity, Catesby's experiences in the piedmont infused sagacity with implicit political meaning: Indigenous peoples knew and perceived information that white naturalists could not and did not always share their knowledge. Catesby and other Anglophone writers who used the concept of sagacity downplayed their political disadvantage by shrouding Indigenous natural knowledge in occultism and ineffability.

Catesby, a decidedly British naturalist, was not interested in challenging prevailing European methods for writing natural history but in embracing the accepted conventions of the genre while producing novel scholarship. Catesby thus included an obligatory manners and custom section in his natural history but qualified this information in recognition of the changes happening within the field of natural history. Catesby moreover incorporated emerging ideas

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[235] Catesby, *I,* "Account," v.

[236] Catesby, xvi. In Parrish's groundbreaking analysis of sagacity, she notes that Native Americans "diagnosed the British gaze as, not disinterested, but proprietary" and thus "chose to underrepresent what they did know," acknowledging sagacity had some basis in Indigenous practices (Parrish, 236; 237). This chapter builds on Parrish's analysis by exploring in more detail a moment when Indigenous peoples may have "underrepresented" or withheld "what they did know."

about Indigenous sagacity and the value of Indigenous testimony into *The Natural History* but did so in a way that supported European ways of knowing the natural world. Catesby's warning that information about Native Americans was "too often the Product of Invention, or Credulity in the Relater" was not a critique of natural history methodology, but an acknowledgement of Indigenous authority: Europeans did not control the flow of information in North America.[237] Catesby's experiences in piedmont demonstrated that pioneering naturalists in early eighteenth century were both reliant on and beholden to their Indigenous guides. In order for natural historical knowledge of North America to expand, the geopolitics of North America had to change.

In the early eighteenth century, colonial natural history—like British colonial authority—was contingent on support of Native Americans. Naturalists like Catesby could not simply extract information from Britain's colonies and were instead imbricated in the geopolitics of regions they described. *The Natural History of Carolina, Florida, and the Bahama Islands* could not have been written without the patronage of Francis Nicholson, who in turn would not have been the governor of Carolina if the Yamasee War had not happened, which was caused by a long history of abused directed towards Native Carolinians, all of which separated the Carolina piedmont from the Low Country. Catesby's numerous journeys into the piedmont, the assistance he received from "Friendly *Indians*," and his use of Indigenous testimony all depended on the settler-Indians relationships in British North America. Catesby's resolve to use Indigenous testimony as evidence, even with political and linguistic obstacles he encountered, demonstrated that Indigenous testimony held high epistemic value in eighteenth-century Anglophone natural history. Catesby's experiences moreover underscored how Indigenous peoples controlled the

[237] Catesby, *I*, "Account," xvi.

conditions of knowledge transfer in eighteenth century North America. Concepts like sagacity emerged not as way of legitimizing Indigenous testimony but as way of explaining the rareness and value of that same testimony.

Chapter 2

"Our Indians:" Lenape Diplomacy and American Natural History during the Long War for the West

Contrary to popular opinion during the eighteenth century, "our Indians," Dr. Benjamin Smith Barton emphatically argued, were not "the beginning of this ridiculous notion" of rattlesnake fascination.[238] For almost three hundred years, European colonists and travelers marveled at the exceedingly strange animals of the New World, including an unusual species of snake "with a Rattell […] somewhat like the chape of a Rapier […] from the taile."[239] And for nearly two hundred of those years, Euro-American writers—including the Reverend Cotton Mather and Linnaean disciple Pehr Kalm—claimed that rattlesnakes were not just impressively large and exceptionally venomous but that rattlesnakes also had the ability to "fascinate"—hypnotize, mesmerize, or otherwise enchant—their prey.[240] Mather, Kalm, and other prominent writers and naturalists bolstered their belief in "the fascinating faculty which has been ascribed to the rattle-snake" by stating that rattlesnake fascination was "constantly affirmed by the *Indians*."[241] In 1799, an exasperated Barton published a 39-page paper to halt the expansion of "the empire of this error" by going back to the specious source of this myth: "our Indians."[242]

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[238] Benjamin Smith Barton, "A memoir concerning the fascinating faculty which has been ascribed to the rattle-snake, and other American serpents," *Transactions of the American Philosophical Society* 4 (1799), 78.
[239] Although pit vipers (*Crotalinae*), a sub-family of venomous snakes, inhabited Europe, Asia, and Africa, rattlesnakes (genera *Crotalus* and *Sistrurus*) only inhabit North and South America; John Smith, *The generall historie of Virginia, New England & the Summer Isles : together with The true travels, adventures and observations, and A sea grammar*, engr. John Barra (1624), 30.
[240] See Barton, 74–13. On the number of rattlesnake reports see Laurence Monroe Klauber, *Rattlesnakes: Their Habits, Life Histories, and Influence on Mankind* (Berkeley: University of California Press: 1956), 1221–9. On exaggerated descriptions of colonial animals, see for example Susan Scott Parrish, "The British Metropolis and Its 'America' 1584–1763," *American Curiosity: Cultures of Natural History in the Colonial British Atlantic World* (Chapel Hill: University of North Carolina Press, 2006), 24–76.
[241] Mather, 67.
[242] Barton (1799), 86. Tragically for Barton, as late as 1952, writers still claimed to have witnessed rattlesnake fascination; see Klauber, 1254.

Although rattlesnake fascination became a uniquely American folktale, it had European—and not Indigenous—origins; accordingly, instead of describing a new rattlesnake experiment, dissection, or field encounter, Barton's paper carefully contraposed the published writing of "credulous" European and Euro-American authors with ethnographic interviews conducted by Barton or his collaborators.[243] As a general rule, Barton was not opposed to using Native American expertise within natural history; on the contrary, Barton placed a high value on Indigenous sources. In an 1807 lecture he even stated that "I am of the opinion, that no people, in their state of society, were ever better naturalists than the Indians."[244] Rather, Barton objected to the "slight and superficial manner" in which some naturalists used Native American sources, failing to either corroborate these sources or cite Native Americans with any precision.[245] And this slight and superficial practice showed no signs of stopping: twenty years later, one of Barton's closest collaborators noted that "[t]here are men who relate incredible stories of the Indians and think themselves sufficiently warranted because they have Indian authority for it."[246] Rattlesnake fascination was one of many such incredible (or, more accurately, *uncredible*) stories attributed to the categorical authority of "Indians" within eighteenth- and nineteenth-century American natural history, and Barton's paper served as a pointed indictment of the epistemic weight many naturalists placed on dubious "Indian authority" at this time.[247]

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[243] Barton (1799), 78.
[244] Benjamin Smith Barton, *A Discourse on Some of the Principal Desiderata in Natural History and on the Best Means of Promoting Science in the United States* (Philadelphia: Denham & Town, 1807), 28.
[245] Barton (1799), 74.
[246] John Heckewelder, *History, Manners, and Customs of The Indian Nations Who Once Inhabited Pennsylvania and the Neighboring States* (Philadelphia: The Historical Society of Pennsylvania, 1888), 321–2.
[247] Building on existing scholarship within the history of colonial science, Parrish argues that "because of the English construction of the native as sagacious, English naturalists typically trusted the botanical knowledge they drew from indigenous testifiers even while they culturally distanced themselves from the testifiers themselves" (Parrish, 258). The English belief that natives, as a racial category, were naturally "sagacious" added epistemic weight to claims attributed to Native Americans. See Parrish, 215–258.

Barton's critique was thus a timely one: by 1799, natural histories of the Americas abounded with vague and sometimes dubious "Indian" sources. Anglophone naturalists had been using Indigenous testimony as a form of scientific evidence since at least the late seventeenth century.[248] Authors like Mark Catesby moreover made Indigenous testimony a cornerstone of Anglophone natural histories of North America. Over the course of the eighteenth century, however, the amount of information attributed to Native Americans increased, in part because certain Indigenous peoples shared more information with traders, missionaries, and naturalists.[249] In Barton's case, he relied heavily on information from "the Delawares" (Leni Lenape) to refute the claim that Indigenous sources corroborated the existence of rattlesnake fascination.[250] Most, if not all, of Barton's Lenape rattlesnake information can be traced to single man: William Henry Killbuck, a Lenape leader during the American Revolutionary War who later converted to the Moravian Church. The circumstances of Killbuck's life, including his eventual decision to collaborate with naturalists affiliated with the American Philosophical Society in Philadelphia, were profoundly shaped by Lenape responses to the colonial invasion of the Eastern Woodlands

[248] Chapter 1 of this dissertation explores how pioneering Anglophone naturalists like Mark Catesby successfully used select Indigenous testimony as a form of scientific evidence. See Chapter 1.

[249] Notably, however, not all nations shared information with colonists and settlers. For example, John Heckewelder noted that "they (the 6 nations) for political reasons, will keep a secret from the Americans as long as they possibly can," echoing British reports that the Haudenosaunee were notoriously secretive (John Heckewelder to Samuel Miller Feb. 26 1801, Mss Collection BV Miller papers, New York Historical Society, 13. On the alleged secrecy of the Haudenosaunee, see Chapter 1 of this dissertation.

[250] Barton used the common English name for the *Leni Lenape* (original people): Delaware Indians. The name Delaware is still used by both English speakers and the members of the Delaware nation, including the Delaware Tribe of Indians. Gunlöng Fur, however, has argued that projecting the term Delaware backwards to the seventeenth and eighteenth centuries is anachronistic, as the term Delaware more accurately describes the political entity of the Delaware nation as it emerged in eighteenth century and not the loosely allied people of *Lenapehoking* who used the term *Lenape* (or "human being") to describe themselves. Although my project focuses on a transitional period when the name "Delaware Indians" became both more common and more historically accurate, I opt use the term Lenape instead of Delaware because, as Fur notes, "to give preference to the name Delaware is […] an anachronistic favoritism toward the English appellation, suggesting an English dominance in the region." See Gunlöng Fur, *A Nation of Women: Gender and Colonial Encounters Among the Delaware Indians* (Philadelphia: University of Pennsylvania Press, 2012), 6; Barton (1799), 80.

during the "Long War for the West."[251] Eighteenth-century Lenape leaders and diplomats began to strategically share information as way to build alliances, including alliances with representatives of the fledgling United States. Barton used the increased availability of Indigenous testimony to not only refute European claims about North American nature—like rattlesnake fascination; he also used his better access to Indigenous testimony to establish the superiority of American naturalists like himself.

Understanding Barton and Killbuck's relationship entails a thorough understanding of the profound impact of colonization not only in this region, but more broadly on American natural history. Both the authority imputed to Native American sources and Barton's critique of the categorical acceptance of Indian sources derived from the inescapable fact that American natural history at the end of the eighteenth century was a direct product of American settler colonialism. Barton developed his approach to assessing scientific evidence in a region shaped by centuries of colonization—the Eastern Woodlands of North America.[252] In doing so, Barton not only benefitted from colonial infrastructure and agents like missionaries, traders, and soldiers to obtain information and specimens, but also from the impact colonization had on Indigenous societies. Moreover, as a prominent and respected member of Philadelphia's scientific elite,

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[251] Francois Furstenberg argues that the period of North American history in the Trans-Appalachian West from 1754 to 1815 should be reclassified as a period known as the Long War for the West due to the significant political and historical continuities seen between colonial and early national periods in this region. This chapter employs Furstenberg's periodization. See Francois Furstenberg, "The Significance of the Trans-Appalachian Frontier in Atlantic History," *The American Historical Review* 113, No. 3 (June 2008): 647–677.

[252] Throughout this chapter, I use the term Eastern Woodlands to describe the region of North America between the Atlantic Ocean and the Mississippi River, extending from north of the Great Lakes to the southern limits of continent. "Eastern Woodlands" was a term initially used by anthropologists to describe a cultural region made up of Algonquian, Iroquoian, Muskogean language speakers, among others. I use it as a placeholder for a region that had several Indigenous names including *Lenapehoking* (or "the land of the Lenape") but Lenape occupation of the Ohio River Valley was contested by other Indigenous people including members of the Haudenosaunee confederacy. The Eastern Woodlands also had many named in settler cultures; state names and boundaries during the Long War for the West were still undefined at the time Barton was writing. So the term Eastern Woodlands denotes the both the people and the region under study here.

Barton and his practices both reflected and influenced American natural history.[253] Barton's intellectual and material dependence on settler colonialism was, in essence, a synecdoche of the relationship between American natural history and settler colonialism at the end of the eighteenth century.

This chapter makes two interrelated claims: first, that Indigenous responses to the Long War for the West increased the amount of information some Lenape leaders shared with colonists and settlers; second, that American-born naturalists like Barton used this increased access to Indigenous testimony to support their own claims of natural historical expertise. In order to prove these claims, I start by analyzing how naturalists writing about rattlesnakes used Indigenous testimony. I then describe the larger context of the Long War for the West and its impact on the lives and careers of William Henry Killbuck and Benjamin Smith Barton. Finally, I demonstrate that Barton's use of Indigenous testimony was only possible with the assistance of Killbuck and only conceivable within the colonial context of the Long War for the West. Although Barton and Killbuck were two remarkable individuals—one the scion of a Philadelphia scientific family, the other a reviled former principal chief of the Lenape—their collaboration

[253] Although Barton's professional trajectory was anything but a straight line, he still occupied a prominent position within the Philadelphia scientific community. Barton was professionally mentored from a young age by his maternal uncle, David Rittenhouse, a well-known Philadelphia inventor, astronomer, and surveyor. He studied under Benjamin Rush and Thomas Shippen at the College of Philadelphia School of Medicine before traveling to Edinburgh to complete his doctorate in 1786, like many Americans of his generation. Barton never actually completed his medical degree in Scotland and instead falsely claimed to have obtained a degree in Germany. Regardless, when Barton returned to Philadelphia in 1789, he was awarded a professorship first at the College of Pennsylvania and then at the University of Pennsylvania. He spent most of his career in Philadelphia dedicated to scientific publishing both in journal and monograph form. Barton additionally served as vice president of the American Philosophical Society from 1802 until his death in 1815. So, while Barton's name is not well-known today, his influential role as both a publisher and an educator in Philadelphia during the late eighteenth and early nineteenth centuries indicates means that Barton's views and methods can be construed as orthodox for the era. On Barton's career and professional status, see Kariann Yokota, "'To Pursue the Steam to its Fountain': Race, Inequality, and the Post-Colonial Exchange of Knowledge Across the Atlantic," *Explorations in Early American Culture: A Journal of MidAtlantic Studies* 5 (2001): 173–229; and Joseph Ewan and Nesta Ewan, *Benjamin Smith Barton: Naturalist and Physician in Jeffersonian America* (Missouri: Missouri Botanical Garden Press, 2007).

can only be understood within the broader cultural and political changes that influenced many living in the Eastern Woodlands during the eighteenth century. Unlike Anglophone naturalists at the beginning of the eighteenth century who claimed Indigenous expertise was rooted in sagacity, Barton attributed Indigenous expertise to autochthony—the presumed endemism of Native Americans in the New World.[254] This shift from endorsing Indigenous sagacity to emphasizing Indigenous autochthony supported the politically motivated argument that Native American nations possessed the legal "right of the soil" and thus could legitimately cede land to the United States.[255] Barton's use of Indigenous testimony demonstrated the intellectual flexibility of scientific credibility in the late eighteenth century, which expanded and adapted to changing political and cultural contexts. In Barton's case, the natural historical rationale for legitimizing Indigenous testimony transformed to better suit the settler colonial ambitions of the nascent United States.

The Original, or Source, of this Belief

Barton's first task in his 1799 paper on rattlesnake fascination was "to discover the original, or source, of this belief."[256] Fascination—synonymous with enchantment, enthrallment,

[254] In this chapter, I use the term autochthony (meaning the Indigenous inhabitants of a place, or the "people born from the soil" in ancient Greek) somewhat anachronistically to refer to the perceived relationship between Native Americans and North America. I use autochthony because of the ambiguity this term has today, conceptually encompassing both so-called original peoples and long-standing, historic populations. This ambiguity more accurately reflects how both Anglo and Native Americans in the eighteenth century understood Indigenous populations. Although eighteenth-century naturalists hotly debated how the Native Americans they encountered came to inhabit North America, most agreed that the Indigenous peoples they met had deep historical ties to the continent. Additionally, not all Indigenous peoples claimed to be the autochthonous inhabitants of a region—some Indigenous creation stories, for example, documented migration instead of the origination of people in a particular locale. Many Lenape creation stories do describe the first people emerging from soil, which was itself part of land formed on the back of a great turtle, but when Barton communicated with Killbuck, Killbuck no longer resided in *Lenapehoking* (the Lenape homeland), further obscuring how Barton understood indigeneity and nativeness. Autochthony thus best approximates Barton's view of Indigenous natural expertise: it came from Native Americans' historical precedence as inhabitants of North America.

[255] Maureen Konkle, *Writing Indian Nations: Native Intellectuals and the Politics of Historiography, 1827–1863* (Chapel Hill: University of North Carolina Press, 2004), 14.

[256] Barton (1799), 78.

or hypnotism—was the idea that animals could be immobilized or mesmerized by the gaze of another animal. It was generally believed that venomous snakes used their eyes to fascinate, and by "keeping their Eyes fix'd [sic] on any small Animal […] shall, by such stedfast [sic] or earnest Looking, make or cause it to fall dead into their mouths."[257] In the early seventeenth century, multiple European texts attributed a piercing or immobilizing gaze to old-world vipers—not rattlesnakes—but the concept of fascination was transported to the New World in 1672 and from then on applied almost exclusively to rattlesnakes.[258] "Testimonies" and "word of Mouth" from "*Virginia*, *Carolina*, and the neighboring Countries," driven by existing fears and cultural ideas about rattlesnakes, spread the idea of rattlesnake fascination.[259] Although rattlesnake fascination appeared throughout seventeenth- and eighteenth-century English literature, poetry, and art, Barton was correct in blaming "Reverend Dr. Cotton Mather, Mr. Dudley, and other persons, who had resided in North-America" for introducing the myth of rattlesnake fascination into Anglophone natural history.[260] Mather and Dudley not only published

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[257] Sir Hans Sloane, "Conjectures on the charming or fascinating power attributed to the Rattle-Snake: grounded on credible accounts, experiments and observations," *Philosophical Transactions* (31 December 1733): 321. Although some authors proposed alternative, non-optical mechanisms for the rattlesnake's fascinating faculty, including an immobilizing "infectious breath" emitted from the snake's mouth and a hypnotic sound made by "its rattle, which it shakes," most English readers in 1799 would have understood rattlesnake fascination to mean the immobilization of small birds and mammals through the snake's eyes, Barton (1799), 87, 79.

[258] Technically, rattlesnakes are in a sub-family of the viper family, pit vipers. Paduan surgeon Marcus Aurelius Severinus, for example, made this claim in 1651. For other examples, see Klauber, 1252. John Lederer is credited with publishing the first English account of rattlesnake fascination in 1672 and Lederer claimed he had learned about fascinations from the Indigenous people in western Virginia. Rattlesnake fascination, however, as a belief not only had early references in Europe but also strong Christian overtones. On Lederer, see Whitney Barlow Robles, "The Rattlesnake and the Hibernaculum: Animals, Ignorance, and Extinctions in the Early American Underworld," *The William and Mary Quarterly* 28, No. 1 (January 2021): 35. On the Christian overtones and roots of serpent fascination, see Zachary Mcleod Hutchins, "Rattlesnake in the Garden: The Fascinating Serpents of the Early, Edenic Republic," *Early American Studies* 9, No. 3 (Fall 2011): 677–715.

[259] Sloane, 323.

[260] Barton (1799), 78.; English readers initially met rattlesnakes in early seventeenth century promotional literature for colonization projects, which placed rattlesnakes alongside "ravenous Woolves" and "troublesome flies," classifying them as either nuisances or, at worst, a source of mortal danger (see William Wood, *New-England's Prospect* (1634). From there, satirical poems, plays and humorous newspaper articles like those found in February 19, 1720 edition of The *Ludlow Post Man or the Weekly Journal* published incorporated the metaphor of the rattlesnake's arresting gaze. British colonial writers also adopted the image of rattlesnake fascination, leading

some of the earliest scientific papers that claimed rattlesnakes were capable of fascinating their prey—they both claimed Indigenous testimony supported this claim. In doing so, Mather and Dudley both drew on the existing credibility attributed to Indigenous testimony and reinforced the value of this same information.

Mather and Dudley, however, were not the first English naturalists to write about rattlesnakes, just some of the first to mention fascination. For roughly eighty years, between 1635 and 1714, European natural history concerning rattlesnakes did not mention fascination. The earliest scientific accounts published on rattlesnakes focused primarily on simple descriptions, anatomical studies, and, most significantly, experiments involving rattlesnake venom.[261] For the readers of the *Philosophical Transactions of the Royal Society of London*, there was "Indeed scarce any Subject in Philosophy [that] has admitted more controversy's [sic] than this of the Poyson of *Vipers*."[262] British naturalists both in the colonies and in the metropole replicated Italian and French viper experiments in order to learn about rattlesnake venom and

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literary scholar Zachary Mcleod Hutchins argues that American writers and artists depicted the early American Republic as a paradisiacal second Eden, complete with a dangerous and enthralling serpent in the form of the rattlesnakes although his study also includes pre-national examples of this trope. Hutchins points out the image of the paralyzing or hypnotic rattlesnake was very much linked to the biblical story of the garden of Eden. See Hutchins.

[261]One of the earliest published descriptions of a rattlesnake was in Juan Eusebio Nieremberg's widely cited 1635 natural history of the New Spain, which described the rattlesnake as the "mistress of snakes," and noted that while "the bite is fatal unless treated promptly […] it does not bite unless provoked" (Juan Eusebio Nieremberg, *Historia Naturae, Maxime Peregrinae* [Antwerp: Officina Plantiniana Moreti, 1635], Jay I. Kislak Collection, Rare Book and Special Collections Division, Library of Congress, https://www.loc.gov/exhibits/exploring-the-early-americas/interactives/historia-naturae/). Nowhere did Nieremberg discuss fascination, nor was he the only seventeenth century Iberian writer to describe rattlesnakes without mentioning fascination (ie. Francisco Hernández in *The Natural History of New Spain* and Willem Piso in *Historia Naturalis Brasiliae* both described rattlesnakes but not fascination.) In his 1731 opus, *The Natural History of Carolina, Florida and the Bahama Islands*, British naturalist Mark Catesby similarly mentioned and even illustrated the rattlesnake but did not describe fascination. Famed anatomist Dr. Edward Tyson published a rather lengthy account of a dissection he conducted he conducted in 1683 after obtaining a live snake "from Virginia" courtesy of merchant Henry Loades (Edward Tyson, "Vipera caudi-sona Americana, or the anatomy of a rattle-snake, dissected at the repository of the Royal Society in January 1682," *Philosophical Transactions* [31 December 1683]: 26). Despite the fact that Edward Tyson published an anatomical study of the rattlesnake conducted in London, he still managed to include Indian stories as part of his report (see Tyson, 48–9).

[262] Tyson, 46 (emphasis mine).

"[of] what it consists, what it is, and how it produces it's [sic] dire Effects."[263] For metropolitan naturalists, venom experiments spoke to cutting edge medical theories concerning blood and the circulatory system while for colonial naturalists, venom studies could possibly reveal ways of treating potentially-fatal rattlesnake bites.[264] Fittingly, the myth of rattlesnake fascination was injected into Anglophone scientific discourse via studies of venom and reports of remedies, gradually poisoning the legitimate study of rattlesnakes, in Barton's estimation.

During the seventeenth and eighteenth centuries, the *Philosophical Transactions of Royal Society of London* published at least eight different scholarly papers on rattlesnakes. Of those eight papers, *Philosophical Transactions* only published accounts of rattlesnake fascination when those accounts also included novel information about remedies indicating that belief in rattlesnake fascination was an unintended consequence of the larger debate concerning snake venom.[265] In 1714, Rev. Cotton Mather provided a recipe for "a proper Medicine against the

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[263] Tyson, 46. Hans Sloane reported on two related experiments pertaining to rattlesnake venom, one in South Carolina and one in London. See Captain Hall and Sir Hans Sloane, "An Account of Some Experiments on the Effects of the Poison of the Rattle-Snake. By Captain Hall. Communicated by Sir Hans Sloane, Bar. Med Reg &c.," *Philosophical Transactions* (01 January 1728); and John Ranby, "The anatomy of the poisonous apparatus of a rattle-snake, made by the direction of Sir Hans Sloane, Bart. Præs. Soc. Reg. & Coll. Med. Together with an account of the quick effects of its poison; by John Ranby, Esq; Surgeon to his Majesty's Houshold, and F. R. S.," *Philosophical Transactions* (01 January 1728).

[264] French and Italian naturalists began studying the effects of Old-World viper venom during the sixteenth and seventeenth centuries, conducting public experiments using live animals to identify the cause (venom) and symptoms of fatal snakebites. Leading Enlightenment thinkers across Europe investigated viper venom not simply to increase their knowledge of the natural world but also as a means to refine their new experimental methods. Jutta Schickore analyzes the relationship between snake venom and methodological innovation in European natural philosophy in *About Method: Experimenters, Snake Venom, And The History Of Writing Scientifically* (Chicago: University of Chicago Press, 2017).

[265] Prior to publishing their first paper to mention rattlesnake fascination, the Royal Society *declined* to publish an account on the rattlesnake written by Thomas Walduck, even though Walduck's botanical observations had previously been published in *Philosophical Transactions*. The Royal Society never stated why they declined to publish Walduck's rattlesnake paper, but unlike other rattlesnake papers, Walduck described a common and widely dismissed snakebite remedy, rattlesnake root (*Nabalus albus*). On Walduck's legacy, see R.P. Stearns, *Science in the British colonies of America* (Champaign; University of Illinois Press, 1970), 351–355. Walduck's paper was published in 1938 by James Masterson in *Zoologica: Scientific Contributions of the New York Zoological Society* 23 (1938). Masterson transcribed the paper from a manuscript in the British Museum and added that Walduck wrote down "the mendacities of Indians and fur traders" and "perhaps the editors doubted the authenticity of the Captain's information" (Masterson, 213). Subsequent sources, like Klauber, described the Walduck paper as "too fanciful"

venomous Bite of this Snake" called "*Trochiset Connecticotiani,*" a mixture of "acid azure coloured Juice" removed from the snake's gallbladder and "powder'd Chalk or *Indian* Meal."[266] Mather's novel recipe and detailed instructions ensured his letter would be published regardless of the status of his other information. Massachusetts lawyer and fellow of the Royal Society Paul Dudley similarly provided his own remedy for snakebites in his 1723 rattlesnake paper, this one involving bloodroot (*Sanguinaria canadensis*). According to Dudley, "our people" devised a technique where:

> they bruise the Root, and bind it above the Place that is bit, to prevent the Poison's going farther at the same Time scarifying the Place affected, some of the root is also boiled, and the Person poisoned drinks the Water.[267]

Dudley's paper added not only a new snake bite remedy but also detailed instructions on how to administer this remedy. Even though Mather and Dudley's papers were likely published for their information on snakebite remedies, their writing both introduced and legitimized the idea of fascination within anglophone natural history.[268]

Mather and Dudley both used Indigenous testimony to validate the efficacy of their snakebite remedies and shore up their accounts of rattlesnake fascination. According to Mather, "the *Indians* often perform very great Cures with their Plants" including a "Specifick for the Bite

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(see Klauber, 1230). Walduck's paper, however, was no more fanciful or mendacious than other published accounts of rattlesnake.

[266] Cotton Mather, "An extract of several letters from Cotton Mather, D. D. to John Woodward, M. D. and Richard Waller, Esq; S. R. Secr," *Philosophical Transactions* (01 January 1714): 67.

[267] Paul Dudley, "An account of the rattlesnake," *Philosophical Transactions* (31 December 1723): 295.

[268] For example, after Dudley's paper was published a classified advertisement appeared in the *London Daily Post and General Advertiser* on April 23, 1738, proclaiming that "A Female RATTLE-SNAKE alive and full of Vigour [sic]" was "to be SEEN At the Apollo Coffee-house at Temple-Bar." The advertisement notably promised that "the Probability of the fascination of these Serpents will be demonstrated, agreeable to the Description given of them by Dr. Horsman, which being the best hitherto published, will be given Gratis" (*London Daily Post and General Advertiser* [April 23, 1738].*)*.

of the *Rattle-Snake* […] call'd by the *Indians, Taututtipang*."[269] Moreover, in a 1712 letter to Richard Waller (reprinted in the *Philosophical Transactions* in 1714), Mather relayed:

> a Story, as he [Mather] says, constantly affirmed by the *Indians*, that these Snakes frequently lie coiled at the Bottom of a great Tree, with their Eyes fixed on some Squirril[sic] above in the Tree; which tho' seeming by his cries and leaping about, to be in a Fright, yet at last runs down the Tree, and into the Jaws of the Devourer.[270]

Dudley similarly cited Indigenous ideas and testimony in his rattlesnake paper, including the belief that "the Indians don't care to travel in the Woods in a Time of Rain, for fear of being among these Snakes before they are aware" as the sound of rain obscured the sound of the rattle.[271] Dudley described the sources he used in his paper as "A Man of undoubted Probity," "my own Brother," "A Man of Credit," and "the *Indians*."[272] More importantly, Dudley stated that "I am abundantly satisfied from many Witnesses, both *English* and *Indian*, the Rattlesnake will charm both Squirrels and Birds," placing the value of Indian witnesses on par with English ones.[273] Mather and Dudley both positioned themselves not as experts in their own right but as intermediaries who shared and corroborated Indigenous testimony.[274] Consequently, naturalists looking to challenge rattlesnake fascination had to also challenge the increasing authority placed on Indigenous testimony within eighteenth-century natural history.

In response to Mather and Dudley's papers, president of the Royal Society Sir Hans Sloane published a paper in 1733/4 that emphatically refuted the "Charming or Fascinating Power attributed to the Rattle-snake" and "grounded on credible accounts, Experiments and

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[269] Mather, 67.
[270] Mather, 67.
[271] Dudley, 293.
[272] Emphasis original; Dudley, 293, 293, 295, 293.
[273] Dudley, 293.
[274] Parrish explores how intermediaries like Mather and Dudley "provided buffer zones between the metropolitan place of knowledge ratifications and the volatile site of exotic secrets" by transcribing and transmitting Indigenous oral testimony (217). For more on the importance of white colonial mediators in Anglophone natural history, see Parrish, 103–35; 215–30.

Observations." Sloane's paper recognized the "various Relations […] of curious and credible Authors" but proposed an alternative explanation: those who claimed to have witnessed fascination first-hand mistook the delayed effects of rattlesnake venom for fascination.[275] In Sloane's opinion, "the whole Mystery of their enchanting or charming any Creature is chiefly [that] […] [snakes] bite them; and the Poison allows [their prey] […] to run a small Way […] where the Snakes watch them with great earnestness, 'till they fall down, or are perfectly dead."[276] Sloane did not use Indigenous testimony; rather, he used the statements of "several Men of Integrity" and only cited second-hand information that "the *Indians* pretend to charm them [birds and squirrels]," implying Native American sources could be duplicitous.[277] Sloane and other members of the Royal Society grappled with how to define a trustworthy witness during the seventeenth and eighteenth centuries, often equating high social standing with reliability.[278] Sloane's refutation of rattlesnake fascination simply dismissed Native Americans sources as unreliable without considering how compelling readers of *Philosophical Transactions* found Indigenous testimony to be.

Even if Sloane found Native American sources to be unreliable, by the mid-eighteenth century many Anglophone naturalists disagreed with him. In the years following Sloane's rebuke of fascination, *Philosophical Transactions* published significantly more papers that described or cited Indigenous Americans, indicating Anglophone naturalists did not share Sloane's

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[275] Sir Hans Sloane, "Conjectures on the charming or fascinating power attributed to the Rattle-Snake: grounded on credible accounts, experiments and observations," *Philosophical Transactions* (31 December 1733): 321; see Sloane, 323.
[276] Sloane, 323.
[277] Sloane, 325.
[278] On the importance of social standing for witnessing within early modern natural history, see Steve Shapin, *A Social History of Truth: Civility and Science in Seventeenth-Century England* (Chicago: University of Chicago Press, 1995).

indifference.[279] Moreover, the supposed sagacity attributed to Native Americans by English writers made Indigenous peoples an invaluable source of information about American nature.[280] Edward Tyson, a surgeon and anatomist working in London, managed to include Indigenous testimony in his report on a 1683 dissection of a rattlesnake. When weighing in on continental debates concerning viper venom, Tyson mentioned "a Relation […] lately had from an Intelligent and knowing Person" who met "an *Indian* with several sorts of Serpents […] [who] offered to shew them some Experiments about the force of their Poyson [sic]."[281] Tyson could have easily cited similar European accounts of venom experiments but instead referenced Indigenous testimony to bolster his own argument about snake venom.[282] British field naturalists like Mark Catesby similarly used Indigenous testimony both in his papers in *Philosophical Transactions* and in his magnum opus, *The Natural History of Carolina, Florida, and the Bahama Islands*, published in installments between 1729 and 1747—something explored in the

[279] Between 1665 and 1799, Philosophical Transactions published seventy-eight papers that mentioned Indigenous Americans as either a subject or a source. Of that seventy-eight, fifty-two papers were published in the eighteenth century, with eighteen papers being published before 1750 and thirty-four being published after 1750—meaning the number of papers mentioning Native Americans nearly doubled in the second half of the eighteenth century.
[280] On sagacity and Native Americans see Parrish, 241–7.
[281] Tyson, 48–9. According to Tyson's source, the Indian promised to demonstrate the difference between different snake species and their venoms, first allowing himself to be bitten by a large common snake that "the I*ndian* told him […] would do no harm." The man then continued his demonstration by "making a Ligature on his Arm, as they do in letting blood, he exposed it naked to the Serpent […] to make him bite it. The blood that came out of the wounds made by his Teeth he gather'd with his Finger, and laid it on his naked Thigh till he has got near a Spoonful. After this he takes out another call'd *Cobras de Cabelo*, […] grasping it about the Neck he expresses out some of the Liquor in the *baggs* of the *Gums* […] this he puts to the coagulated Blood on his Thigh, which as soon as mixt with it straight put into a great Fermentation, and […] changed it into a Yellowish Liquor. Tyson argued this experiment confirmed what "has been likewise observed by others, and does seem to give us some light, how 'tis that this Poyson acts" (Tyson, 49). Although not specified here, Tyson was likely speaking with a South American correspondent. *Cobras de Cabelo* (hair snake) was probably a corruption of the Portuguese name for rattlesnake, cobra de cascavel (bell or rattlesnake).
[282] Tyson referenced the experiments of Redi and Charas, who debated if the material of venom or the snake's intent produced harm. Tyson's experiments pointed to the venom itself being a harmful substance. On the mechanism of venom in early modern natural history, see Shicktore. Tyson mentioned repeating experiments done by other physicians with healing stones in the same paper; See Tyson 49–50.

previous chapter of this dissertation.[283] Tyson, Catesby, and others used Indigenous testimony to bolster their own scientific arguments and in the process legitimated Indigenous authority.

Rattlesnakes, in particular, were associated with Native Americans. English colonists frequently wrote of the hidden dangers native to the forests of the Eastern Woodlands—dangers that took the form of either rattlesnakes or Native Americans, depending on the era.[284] Colonists even rhetorically linked the extermination of rattlesnakes with the extermination of Native Americans, a "part of a related colonial project of violence."[285] Barton, quoting from John Heckewelder and John Bartram, argued that "certain North-American tribes" venerated the rattlesnake and refused to kill them out of both deference and fear of retribution, spiritually connecting rattlesnakes and Native Americans.[286] According to Linnaean disciple Pehr Kalm, Native Americans "are always running to and fro in the forests, have been most subject to the fangs of this dangerous snake" so logically "Europeans since their recent arrival to the New World have been forced to study and expand the knowledge" of Indigenous people.[287] Moreover, thanks to English colonists' coordinated extermination campaigns, rattlesnake populations dramatically declined over the course of the eighteenth century.[288] This disappearance of rattlesnakes from European settlements likely explained why Kalm wrote in 1752 that "among

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[283] Parrish uses Catesby, as well as his collaborator William Byrd II, as an exemplary source for English ideas of Native American sagacity; see Parrish, 243–7.
[284] Whitney Barlow Robles examines how the fear of rattlesnakes deterred eighteenth century naturalists entering woods and forests. Over the course of the eighteenth century, however, extermination efforts dramatically reduced the number of rattlesnakes in these places, possibly explaining why Native Americans superseded rattlesnakes as America's native danger. During the nineteenth century, this association between Indigenous people and rattlesnakes grew so strong that many novelists wrote about Native American men using an enthralling gaze on white protagonists. See Robles and see Hutchins.
[285] Robles, 33.
[286] Barton (1799), 79. Robles points out that several Eastern Woodlands peoples possessed similar ideas about rattlesnakes rooted in interspecies kinship and obligation. See Robles, 25–30.
[287] As quoted in Esther Louise Larsen, "Pehr Kalm's Account of the North American Rattlesnake and the Medicines Used in the Treatment of its Sting," *The American Midland Naturalist* 57, No. 2 (Apr. 1957): 503.
[288] See Robles.

hundreds who told these [rattlesnake fascination] tales, only 10 or 12 assured me they had witnesses it with their own eyes."[289] Mather, Dudley, Kalm, and others used the perceived affinity between Native Americans and rattlesnakes as well as the authority given to Indigenous testimony as evidence to support the existence of rattlesnake fascination.

The problem with the use of Indigenous testimony within the debate on rattlesnake fascination was there was no general consensus among naturalists that fascination was even possible. When Tyson and Catesby, for example, used Indigenous testimony, they did so to corroborate their own findings or beliefs. In Tyson's case, Indigenous testimony confirmed that rattlesnake venom was lethal and in Catesby's, Indigenous testimony identified the migration and nesting patterns of North American birds. Neither of these naturalists attempted to use Native American expertise to challenge the claims of other naturalists. Conversely, proponents of fascination like Kalm were willing to use Indigenous testimony to contradict an established metropolitan authority like Sloane. In his 1799 paper, Barton similarly used Indigenous testimony to explicitly denounce Mather, Dudley, and Kalm, ironically vindicating Sloan while placing Indigenous authority above the "superstition and credulity" of three well-known European writers.[290] Barton, as a settler-naturalist, made sure to maintain his own superiority to his Indigenous sources, writing that rattlesnake fascination "is a tale which seems nicely adapted to the wit and society of rude and uncivilized nations" but his use of Indigenous testimony challenged European accounts of rattlesnakes instead of confirming them.[291]

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[289] Larsen, 507.
[290] Ibid., 77
[291] Ibid., 82. Barton's use of Indigenous testimony and recognition of Indigenous intelligence did not negate his larger participation in settler-colonial projects, particularly as a surveyor, nor did it prevent him from holding white supremacist views. Barton's relationship to Indigenous people is discussed later in this chapter.

Ironically, Barton was only able to mount this type of challenge because of a *proliferation* of Indigenous sources during the eighteenth century. Writers like Mather, Dudley, and Kalm alluded to a vague, collective body of Indigenous ideas about snakes instead of references specific groups, places, and ideas. Barton instead investigated the claims of Mather, Dudley, Kalm, and others by going directly to their purported sources: the "*Indians*" themselves. Barton asked "several intelligent gentlemen, who are well acquainted with the manners, with the religious opinions, and with the innumerable superstitious prejudices of the Indians," as well as at least two Native American men directly: do Indians believe rattlesnakes fascinate their prey?[292] Barton's sources—cited more specifically as "Mr. John Heckewelder," "Mr. William Bartram," "A Mohegan-Indian," "a Choktah-Indian," and "the Delawares"—did "not think these people [the Indians] believe in the notion in question," although Barton allowed that "at present" some *individual* Indians may have picked up a belief in rattlesnake fascination from their credulous white neighbors.[293] Barton conceded that some naturalists may have mistranslated or miscommunicated Indigenous ideas about the rattlesnake's ingenuity as a hunter but he was adamant that none of the Native Americans he spoke with believed rattlesnake fascination was connected to the eyes.[294] Unlike Catesby a generation before, Barton could easily access Indigenous testimony. This increased availability of Indigenous sources changed how American

[292] Barton (1799), 79.
[293] Barton (1799), 79, 78.
[294] The unnamed "Mohegan-Indian" man Barton spoke to directly expressed some ambivalence concerning fascination, telling Barton that "the Indians are of opinion that the rattle-snake can charm, or bewitch squirrels and birds, and that it does this with its rattle, which it shakes." Barton added, however that this was distinct from the European concept of fascination as "this Indian, [and] his countrymen do not think that the snake, in any manner, accomplishes the business with its eyes." The Choctaw man Barton communicated with through an interpreter similarly thought that the "rattlesnake does charm birds &c. […] by means of its rattle." Barton, however, prefaced this information by noting that Heckewelder "has frequently heard them [the Indians] speak of the ingenuity of these reptiles in catching birds, squirrels, &c," implying there might be a miscommunication. By adding Heckewelder's comments, Barton insinuated that his Mohegan and Choctaw sources misunderstood or mistranslated the word charm, implicitly categorizing the snake's rattle as an ingenious but easily understood hunting lure used to draw in prey. Barton, 79.

naturalists like Barton used Indigenous testimony as evidence, challenging Europeans who lacked the same access. Although at first glance Barton appeared to dismiss Indigenous expertise, Barton more accurately emphasized Indigenous familiarity with North American nature as well as his own familiarity with Native Americans.

One Who Has Many Opinions

Despite the fact that Barton did not name his Native American sources in his paper, his Indigenous information too had an original, or source. And in at least one case, Barton's information can be traced back to one author: William Henry Killbuck, a Lenape man. Killbuck's collaborations both with Heckewelder and with naturalists affiliated with APS were the direct result of Lenape response to the Anglo-American colonialization of the Eastern Woodlands. Gendered divisions of expertise within Lenape society, decades of interethnic settlements, and new Lenape diplomatic strategies centered on information exchange following the French and Indian War all motivated Killbuck to share information with Euro-American interlocuters. The methodological and epistemological interventions Barton made within American natural history thus benefitted directly from not only colonial relationships but settler colonialism itself. Despite the unique details of each man's life, the worldviews and practices of both Barton and Killbuck were shaped by the colonial context of the eighteenth-century Eastern Woodlands, and it was this shared context that brought naturalists like Barton into conversation with sources like Killbuck.

For information regarding Lenape spiritual beliefs concerning rattlesnakes, Barton drew upon the expertise and assistance of his friend, Moravian missionary and American Philosophical Society (APS) correspondent John Gottlieb Ernestus Heckewelder. Rattlesnakes, according to Heckewelder's letters, were:

> once held in particular esteem by the Delawares. He [Heckewelder] was several times prevented, by these Indians, from killing the rattle-snake, being told that it was their grand-father, and therefore, must night be hurt. At other times, he was told, he must not kill this snake, because the whole race of rattle-snakes would row angry, and give order to bite every Indian that might come in their way.[295]

In his footnotes, Barton specified that his information on the Delawares came from "MS. By Mr. John Heckewelder, *penes me*."[296] Although Barton likely did not know this, it is probable that most, if not all, of Heckwelders's Lenape rattlesnake information came from Killbuck.

Heckewelder served as a regular correspondent for multiple naturalists at the APS in Philadelphia. In a letter to a different member of the APS, Heckewelder mentioned that one "Willm. Henry (alias John Killbuck) an aged, sober, and intelligent Indian gives the following account on snakes."[297] Heckewelder attempted to transcribe Killbuck's account, which included extensive information about the mating habits, life cycles, and hunting style of rattlesnakes as well as a detailed list of Lenape snake classifications and terms.[298] It was Killbuck who told Heckewelder that "the rattles are of no service at all to them in obtaining their food" and Killbuck who stated to Heckewelder that most alleged cases of fascination were instead incidents where rattlesnakes gave prey "a slight bite so as to lame them, then watching closely the animal will grow weak & fall down, they devour them."[299] Barton devoted two full pages to Lenape rattlesnake ideas and owed a large intellectual debt to Killbuck, a man he probably never met.

Killbuck was born around 1740 near the Ohio River in Pennsylvania, approximately two and a half decades before and two hundred and fifty miles west of Barton. Originally named

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[295] Barton (1799), 80.
[296] Barton (1799), 81, note "±".
[297] John Ernestus Gottlieb Heckewelder to Peter Stephen Du Ponceau, *Communications to the Historical and Literary Committee of the American Philosophical Society*, 1816-1821 (Mss.970.1.H35c), American Philosophical Society Library.
[298] Ibid.
[299] Ibid.

Gelelemend, likely meaning "one who has many opinions," Killbuck preferred to use the English name John Killbuck Jr., or simply Killbuck, throughout most of his life.[300] It was only in 1788 that Killbuck was baptized William Henry (sometimes recorded as "William Henry Killbuck") after he converted to Moravian Christianity. The name William Henry was chosen to honor his former commander during the French and Indian War, American gunsmith and politician William Henry, who, like Barton, was a resident of Lancaster, Pennsylvania. Once the principal chief of the Lenape, Killbuck was at the time of his conversion a pariah among the Lenape, stripped of all titles and threatened with death.[301] Although Killbuck's meteoric rise and fall within Lenape society was unusual, Killbuck's formative experiences among the Lenape of the eighteenth century were characteristic of a larger cultural response to European colonization that directly resulted in his work as a scientific source for Anglo-American naturalists later in life.

Killbuck was raised in a society that valued the open exchange of information and placed gendered expectations on the sharing of knowledge, and this training and education complemented Anglo-American natural history. Lenape society during the eighteenth century had a fairly open relationship to information and secret topics were few, with strategic military information unsurprisingly restricted to war captains and the decision to go to war

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[300] In the eighteenth century, Lenape people typically received multiple names throughout their lives with cultural restrictions on the use of their birth name or true name. Thus, Killbuck rarely used the name Gelelemend, and its meaning and spelling are unclear. The closest contemporary Lenape word to Gelelemend is "Gelelendamen" meaning "to be of opinion." Throughout this chapter, I will use the name Killbuck, as this is the last name his descendants use. On Lenape naming practices, see John Ernestus Gottlieb Heckewelder, *History, Manners, and Customs of the Indian Nations who Once Inhabited Pennsylvania and the Neighboring States* (Philadelphia: Historical Society of Pennsylvania, 1881), 41.

[301] Gregory Evans Dowd argues the Killbuck's leadership demonstrates the failure of neutrality as a diplomatic policy for Indigenous nations. Although Killbuck's decision to ally with the United States during the American Revolutionary War was controversial, Killbuck's crimes in the eyes of his fellow Lenape went beyond this crisis of leadership. As a scout for the U.S., Killbuck participated in several attacks on Native American settlements, including on women and children. As a result, Killbuck was stripped of his titles and a bounty was placed on him by his countrymen, leading him to petition the U.S. government for protection. See Gregory Evans Dowd, *A Spirited Resistance: The North American Indian Struggle for Unity, 1745-1815* (Baltimore: Johns Hopkins University Press, 1992), 65–89.

confidential.[302] Outside of this prohibition, however, secrecy was itself somewhat taboo; in eighteenth-century Lenape society, duplicity and subterfuge were associated with malignant sorcery or witchcraft.[303] Individuals like medicine men, for example, broadcast the fact that they possessed specialized knowledge about curative herbs even if they did not disclose their specific recipes; in contrast, potential witches denied any knowledge of poisons or their cures.[304] Gossip was an accepted part of day-to-day life in Lenape villages where, according to missionaries, "hunting or the news of the day" as well as "all manner of reports true or false, furnish material for discussion."[305] Lenape women were most often credited with spreading both gossip and misinformation, but doing so was not seen as a source of shame or warranting punishment as in colonial English society.[306]

As a man, Killbuck was trained to be a skilled hunter and possessed an extensive knowledge of American flora and fauna. Like most of their Indigenous neighbors and kin, the Lenape divided labor—and, by extension, expertise—between genders: men specialized in hunting and war, while women specialized in agriculture. Specialized knowledge, such as ceremonies, dances, and medicine, in addition to hunting and agriculture techniques, passed generationally along gendered lines or was received by individuals through dreams.[307] European

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[302] It is worth noting that Killbuck had the unfortunate distinction of being both a war chief and a principal chief, something that rarely happened and in Killbuck's case only happened because of the American War of Independence and the assassination of principal chief White Eyes. See Hermann Wellenreuther, "The Succession of Head Chiefs and the Delaware Culture of Consent: The Delaware Nation, David Zeisberger, and Modern Ethnography," *Ethnographies and Exchanges: Native Americans, Moravians, and Catholics in Early North America* (University Park: Pennsylvania State University Press, 2010), 31–48.
[303] David Zeisberger, *History of the Northern American Indians* (Columbus: Ohio State Archaeological and Historical Society, 1910), 125.
[304] On secrecy and medicine, see Dowd, 19.
[305] Zeisberger, 110.
[306] Ibid., 124–5.
[307] Like most Eastern Woodlands societies, the Lenape divided labor—and, by extension, expertise—between genders: men specialized in hunting and war while women specialized in agriculture. Medicine, meaning the treatment of physical, spiritual, and environmental ailments, was practiced primarily by the elderly of both genders with older men providing general care and older women specializing in childbirth and love medicine; On the

observers like Zeisberger mistakenly assumed that "boys are not held to work […] [as] they are to become hunters," but Lenape boys actively trained to hunt "as soon as they are able to run […] by shooting at a mark with a bow and arrow."[308] To an eighteenth-century Lenape man like Killbuck, hunting was a spiritual and practical pursuit that required preparation and training.

Euro-American missionaries and naturalists, who were exclusively male, benefitted from gendered divisions of labor within Lenape society, and zoological information in particular flowed readily from Lenape men like Killbuck to missionaries and naturalists. Lenape men and boys learned to hunt by joining homosocial hunting parties that also included chiefs and members of the council who provided guidance and expertise in exchange for a portion of the hunt.[309] Every year between roughly November and May, hunting parties made up of either a single family or an interethnic and intergenerational group of men set out from Lenape villages to hunt deer, elk, buffalo, and bear. Learning to hunt meant learning to track, shoot, and butcher animals but also included information about when and where to find the best quarry as well as instruction on the necessity of hunting ceremonies and medicine used to restore ecological balance and attract prey.[310] Education, and, by extension, the free exchange of information, was thus an integral part of homosocial hunting parties. Killbuck likely gained much of the zoological knowledge he later shared with Heckewelder while hunting.

Lenape hunting parties traded information and stories and, using "their marks on the trees" would communicate their tribal affiliation and recent successes to other hunters.[311]

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gendered division of labor among Eastern Woodlands nations see Dowd, 1–23; Fur, 15–50.; Zeisberger, 83. Girls similarly learned agriculture from their mothers' and additionally mastered astronomy to calculate planting schedules. See Fur, 17.

[308] Zeisberger, 16, 119.

[309] Zeisberger, 91.

[310] Zeisberger, 23–4.

[311] Zeisberger, 114.

Hunters told exaggerated stories of their exploits, including "matter that has no foundation in fact […] and even though all may be aware of this, the narration continues uninterrupted […] [and] they may laugh now and again."[312] The masculine camaraderie of hunting parties, which were made up of men of different ages, who spoke different languages, and who possessed different levels of experience, encouraged homosocial exchanges of knowledge, especially knowledge about animals, regardless of affiliation. The practice of traded and sharing information within spaces like hunting camps normalized information sharing with missionaries and naturalists.

In addition to generational instruction, Lenape men also learned information, particularly ceremonial and medicinal knowledge, from dreams. Unlike hunting skills, ceremonial knowledge was not taught directly from one man to another because it was believed to be less efficacious when done by someone who was not directly given ritual knowledge through dreams.[313] Dream knowledge was not secret, however, so Lenape men like Killbuck could and sometimes did share the detail of certain their own ceremonies, feasts, and medicines.[314] While Lenape society was matrilineal, individual families generally had a male head who led the family in annual feasts meant to prevent "all manner of disease and misfortune" and ensure future prosperity.[315] Zeisberger claimed that "worship and sacrifices […] [have been] handed down from their ancestors" but also noted that "in the detail of ceremony there has been change" as

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[312] Zeisberger, 110
[313] Zeisberger, 25.
[314] According to Zeisberger (and to his great frustration), individuals known as healers or medicine men were less likely to disclose the details of their herbal cures and remedies to others. Zeisberger speculated that this was because they were all "charlatans" who lived off the disproportionately high payments they received for providing treatment to the sick. Although greed could have certainly prevented medicine men from sharing their recipes, in denouncing their "superstitions" Zeisberger may have ignored the fact that they had provided him with a lot of information. Zeisberger described, for example, how healers would "make horrible grimaces" or "breathe upon" on the sick in what he classified useless performance. To the healers, however, this blowing and contortion may have been more essential than herbs and oils in the art of healing. Because Zeisberger sought familiar Western remedies like poultices or tonics, he may have incorrectly assumed that the medicine men were hiding these things from him. See Zeisberger, 25–6.
[315] Zeisberger, 136.

these details were "revealed […] to them in dreams."[316] The format of the ceremony, contents of the meal, the dances and songs performed after the feast, and the individual "animals, elements, and plants" the feasts intended to honor were revealed to the heads of families through dreams and it was their duty to protect the family by initiating feasts.[317] Individual men, moreover, made contact with "*Mannito*" spirits through dreams where they were given instruction for needed sacrifices and prophetic information including portents that indicated he should serve as a captain or council speaker.[318] A Lenape man's duty to both his family and his community was thus not simply to acquire ceremonial knowledge but also to publicly share this information and instruct others. Killbuck, accustomed to acquiring and sharing knowledge both within and outside of his own community as part of his masculine social prerogative, was thus an ideal source of information for missionaries and naturalists.

Killbuck was not just raised within this open information society, he was also trained to serve as a political leader and facilitate information sharing. Through his mother, Killbuck was born into the Turtle tribe, the political and diplomatic center of Lenape society, and was also the grandson of the early eighteenth-century principal chief, Netawatwees (anglicized as Newcomer). Although the title of principal chief was not inherited, it was generally understood that the current chief would train a male descendant, like a nephew or grandson, who was a member of the Turtle tribe to take his place.[319] Netawatwees groomed Killbuck to lead after him,

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[316] Zeisberger, 136–7.
[317] Zeisberger, 137.
[318] Zeisberger, 139.
[319] Lenape marriage conventions dictated a chief's own sons (women could not serve as chiefs) would not be members of his clan but would be members of their mother's clan—thus, Netawatwes children would have been members of the Turkey or Wolf Clan (Killbuck's father was likely a member of the Wolf clan) and could not assume leadership of the Turtle Clan. There are some indications, however, that normal succession practices may have been disrupted during this time and that naming Netawatwes's successor was an especially fraught process. Netawatwes was initially succeeded by White Eyes, who was murdered shortly thereafter by an American militia officer, and White Eyes was succeeded by Killbuck, as it was determined Killbuck was one of the only living

and two Euro-American missionaries, Presbyterian David Jones and Moravian David Zeisberger, visited Netawatwees and Killbuck at Newcomerstown, one of the largest eighteenth-century Lenape villages, shortly after the French and Indian War.

Killbuck's collaborations with naturalists were not simply a consequence of his Lenape heritage but also a result of his historic and geographic circumstances. Killbuck grew up in a period of acute crisis for the Lenape—the French and Indian War constituted a paradigm shift for not just the Lenape but most Indigenous nations in the eighteenth-century Eastern Woodlands. Lenape political life prior to the 1750s was in no way static; intermittent conflict between the Lenape, Cherokee, Iroquois League, and Shawnee in the late seventeenth and early eighteenth centuries resulted in continuous upheaval and migration. But as historian Gregory Evans Dows observed, "the Seven Years' War involved Indians from the St. Lawrence River to the Mississippi Delta, demanding deep changes in the diplomatic relations among and the social relations within Indian peoples."[320]

Killbuck's training as a leader and diplomat was defined by the Seven Years' War. For the Lenape, their primary settlements were transformed both geographically and socially by the conflict, moving further west and becoming more multi-ethnic in response to war. In his study of Indigenous spiritual revivals during the eighteenth and nineteenth centuries, Dowd describes the world Killbuck grew up in as one of inter-tribal, polyglot settlements. This description was especially apt for the Lenape, and a culture built from interwoven and allied ethnic groups fundamentally defined how Killbuck understood identity and information-sharing. The Lenape of the eighteenth century viewed themselves as a collective of three tribes or clans—the Turtle,

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candidates. Regardless of these issues, however, prior to the death of Netawatwes it was clear Killbuck was being trained in Lenape leadership. On the crisis of Netawatwes's succession, see Wellenreuther.

[320] Dowd, 25.

Wolf, and Turkey tribes—that spoke different languages (Unami, Munsee, and Unalachtigo), resided in separate settlements, and took specific political roles.[321] These three Lenape tribes, however, shared resources, went to war together, and followed the central leadership of the Unami or Turtle tribe. Strict Lenape marriage taboos furthermore specified that one could only marry a member of a different tribe, meaning Lenape settlements were strongly connected through marriage and experienced the frequent movement of people between villages.[322] Beyond this pre-existing structure for Lenape society, Dowd notes that during the eighteenth century, Indigenous nations in the Eastern Woodlands increasingly incorporated new people and ideas into their cultures both out of necessity and as part of pan-Indian nativist movements.[323] Meeting cultural outsiders, learning new languages, and incorporating new ideas was a regular and encouraged aspect of Killbuck's life among the Lenape.

Netawatees transformed Lenape diplomacy in response to the French and Indian War, radically shifting from a policy of neutrality to one of solicitousness. Sometime after the outbreak of the Beaver Wars in the 1630s but prior to the Seven Years' War, the Lenape formed an alliance with the Iroquois League by agreeing to assume a neutral position—or, as has famously been recorded, the Lenape agreed to "be the woman."[324] By becoming metaphorical women, the Lenape would "not go to war but endeavor to keep the peace with all" and would additionally remind their neighbors that "your wives and children must perish unless you

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[321] Because of the historic importance of these Lenape three tribes or clans, historians have grappled with how to speak singularly about the Lenape of the past. Fur argues by the eighteenth century, indigenous people actively identified as Delaware or Lenape, making the collective label of Lenape accurate as an actors' category. See Fur, 5–8.

[322] On marriage taboos, see Fur, 61. Zeisberger notes that the Lenape described themselves as three united nations (see Zeisberger, 27).

[323] Beyond Dowd's study, other historians have pointed out how Iroquois "Mourning Wars" during the same period had the explicit goal of repopulating decimated cultures. See Dowd, 1–22.

[324] Zeisberger, 34; For more on the Delaware-as-women metaphor, see Fur, 160–198.

desist."[325] This policy of neutrality ended abruptly, however, in 1755 "when war broke out between the Indians and the white people" and "the Delawares were enticed by the Six Nations" to take up arms.[326] As the Lenape were no longer politically neutral after the French and Indian War, Netawatwes undertook the extensive diplomatic project of solidifying alliances and fostering regional friendships while building on pre-existing Lenape hospitality and gift-giving practices. "Through the wise management of the Chief Netawatwes," the Lenape in the 1760s "amazingly increased in their reputation," sending emissaries to "all the [Indigenous] nations," allying with nearby English colonists, and inviting missionaries into their settlements.[327]

Zeisberger identified the equal distribution of resources, hospitality, protecting the material and oral archive of the community, holding public councils, and delivering formal speeches as the primary duties of a Lenape chief.[328] Zeisberger contrasted this model of chieftainship to leaders who are defined by the "[material] advantages above others" and who rely on public "obligation to supply his wants" and to the military leadership provided by Lenape captains or war chiefs.[329] When Jones visited Newcomerstown in 1773, he met a young Killbuck and confirmed the "sensible" Killbuck was training to be the type of leader Zeisberger described.[330] This leadership training made Killbuck an ideal informant for American naturalists.

Eighteenth-century Lenape people celebrated hospitality and linked it to leadership in order to increase both members and allies. European visitors to Lenape settlements like Jones and Zeisberger noted what they perceived as extreme generosity from the families they met and,

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[325] Zeisberger, 34.
[326] Zeisberger, 35, 36.
[327] Zeisberger, 111.
[328] See Zeisberger, 93.
[329] Zeisberger, 93.
[330] David Jones, *Journal of Two Visits Made to the Nations of Indians on the West Side of the River Ohio, in the Years 1772 to 1773* (Burlington: Isaac Collins, 1774), 73.

in particular, the hospitality provided by the local (as opposed to principal) chief and his family. Zeisberger described Lenape chiefs as "generally friendly, gracious, hospitable, communicative, affable and their house is open to every Indian."[331] Jones noted that Killbuck spoke "good English" and assisted Jones in his missionary work, serving as a translator and explaining Lenape religion and cosmology to Jones.[332] The fact that Killbuck entrained Jones, an outsider, partially indicated Killbuck's distinguished position at Newcomerstown. Before Killbuck met Heckewelder or even before Killbuck rose to the position of principal chief, he conversed regularly with English-speakers as part of Lenape politics.

Netawatwes taught Killbuck that information was a resource to be distributed and shared by chiefs. Domestically, Netawatwes preferred to "lay all affairs of state before his council for consideration" and make council meetings and speeches public.[333] Like other principal chiefs before him, Netawatwes held "the council bag" which "constitute[d] the archives where all messages and reports are kept" along with treaties and wampum belts.[334] In addition to physical archives, chiefs and captains were expected to memorize important information and speeches, possibly using mnemonic devices when speaking.[335] Zeisberger remarked on the incredible memories of Lenape orators who were "being constantly trained" from a young age.[336] Lenape chiefs were also expected to "to carry on a kind of correspondence" with "the other Indian nations and the Europeans."[337] In the eighteenth century, young men were "admitted as hearers

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[331] What Zeisberger and Jones saw as generosity could have also been a form of diplomatic gift giving. Zeisberger, 93.
[332] Jones, 73; see Jones, 73–81.
[333] Zeisberger, 93.
[334] Zeisberger, 94.
[335] Zeisberger describes Lenape orators as holding objects, most often Wampum belts, while speaking and moving or manipulating these objects at key moments. He moreover notes if a speaker does not have a physical object, he will still move his hands to aid in recall. See Zeisberger, 97.
[336] Zeisberger, 149.
[337] Zeisberger, 99.

to the council" as a form of instruction and "employed as ambassadors" or messengers to practice both memorization and speaking in preparation for becoming a chief or captain.[338] In preparing to be a chief, Killbuck not only memorized a large archive of knowledge but also learned to strategically share this knowledge with council members and diplomatic envoys.

Emulating Netawatwes, Killbuck shared religious information with Jones in order to advance the political goals of the Lenape. Jones noted that "Killbuck and Swallowhead were chosen messengers to *Sir William Johnson,*" the British Superintendent of Indian Affairs for the Northern colonies, who resided near Niagara.[339] According to Killbuck, the people of Newcomerstown met with Johnson in part because they "intended to have both a minister and schoolmaster, but would not have [English] Presbyterians, because their ministers went to war against them" during the French and Indian War.[340] Killbuck added that the Moravians, however, were welcome as they "did not belong to our [Jones's] kingdom, being from Germany."[341] Killbuck's exchange with Jones demonstrated that information sharing was a form of strategic trade: the Lenape wanted a schoolmaster to teach their children English and clearly recognized missionaries as not only potential teachers but also as political intermediaries.[342]

Killbuck's desire to have a minister and schoolmaster for the Lenape was part of a larger Lenape political project in the 1770s. Killbuck told Jones in 1773 that he "intended to go to England and see our [Jones's] king, and tell him that they would be of the same religion that he

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[338] Zeisberger, 143.
[339] Jones, 74.
[340] The Lenape primarily allied with the French during the French and Indian War; Jones, 74.
[341] Jones, 74.
[342] Although Killbuck did not explicitly mention this in his exchange with Jones, throughout his life Killbuck attempted to negotiate for English education for the Lenape. His requests (as they were recorded by missionaries and politicians) typically couched this desire in assimilationist terms—the Lenape wanted to embrace the gospel and emulate White society. Although this may have been true, there were also obvious strategic benefits to English education that would have justified Killbuck using this as the general Lenape position. See Wellenreuther.

is" to obtain English protection.[343] Killbuck presumably said this to encourage Jones to advocate on the Lenape's behalf, but neither Jones nor Killbuck ever secured an alliance between the English and the Lenape. Instead, in 1778, Lenape principal chief White Eyes and war captains Pipe and Killbuck signed an alliance with the rebelling Americans. In exchange for Lenape military support, White Eyes asked the Americans to provide a "minister and a school teacher […] [as well as] a sober man to instruct the Delaware in agriculture."[344] White Eyes moreover "envisioned the foundation of an Indian State under the leadership of the Delaware Nation that to join the Confederation [United States] at some future time," connecting European-style education with political sovereignty.[345] While Jones recorded Killbuck's request for missionaries as part of his larger ethnographic observations on Lenape religion, Killbuck clearly saw his conversations with Jones as the means to a political end.

While Lenape social practices generally encouraged linguistically and ethnically diverse settlements, Killbuck embraced these values as part of his leadership training. In the aftermath of the Seven Years' War, principal chief Netawatwes pushed a new style of Lenape diplomacy that centered on alliance building and used information sharing to build relationships. The fact that missionaries and naturalists were male furthermore influenced the kind of information they received. As Netawatwees' grandson and eventual successor, Killbuck emulated his practice of strategic information sharing, trading ceremonial knowledge and hunting expertise with missionaries and naturalists to further Lenape political goals. Killbucks's collaboration with Moravian missionaries Zeisberger and Heckewelder—and by extension, with Barton and other naturalists—resulted from Lenape responses to colonization.

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[343] Jones, 74.
[344] As quoted in Wellenreuther, 152.
[345] See Wellenreuther.

Fascinating Origins

Approximately twenty-nine years after and one hundred miles south-west of Killbuck's birth, Benjamin Smith Barton was born to a similarly distinguished pedigree in Lancaster, Pennsylvania. Like Killbuck, the Long War for the West profoundly altered Barton's life and worldview, albeit in a way that ultimately benefitted men like Barton as much as it harmed men like Killbuck. Also like Killbuck, Barton was part of a generation of elite American-born men who came of age during the Revolutionary Era and grappled with how to rectify their pre- and post-revolutionary identities.[346] Barton grew up in both a community and a home entrenched in the conflict between settlers and Indigenous people seen throughout Pennsylvania during the eighteenth century.[347] Barton's father championed the colonization of Eastern Woodlands by white settlers and his political and intellectual views were deeply influential on a young Barton. As he matured intellectually, Barton's political opinions on Native Americans diverged somewhat from his father's but Barton still maintained a deeply colonial relationship to Indigenous people throughout his career, capitalizing on his purported expertise surrounding Native Americans. As much as colonization influenced Killbuck's relationship with the sharing of information, this colonial dynamic informed Barton's approach to the receipt of information and use of evidence, including the evidence deployed in his 1799 rattlesnake paper.

The Seven Years' War polarized Pennsylvania, entrenching ethnic divisions between white settlers and their Indigenous neighbors.[348] Although Barton was not born until 1766, three

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[346] Kariann Yokota has described how intellectual of the Revolutionary generation, including Barton, struggled with their new American identity. See Yokota, *Unbecoming British: How Revolutionary America Became a Postcolonial Nation* (Oxford: Oxford University Press, 2011), especially chapters four and five.
[347] On frontier conflict in Pennsylvania, see for example William Pencak and Daniel Richter, eds., *Friends and Enemies in Penn's Woods: Indians, Colonists, and the Racial Construction of Pennsylvania* (University Park: Pennsylvania State University Press, 2004).
[348] See Pencak and Richter.

years after the end of the Seven Years' War, his father, Reverend Thomas Barton, was an active participant in the conflict and wrote extensively about settler-Indian relationships in Pennsylvania. The elder Barton's experiences of the Seven Years' War and views of inter-ethnic conflict in Pennsylvania influenced his son's approach to the study of natural history, including his interest in the Indigenous peoples of Eastern Woodlands. As the local minister and tutor in Lancaster, the Reverend Barton not only educated his children but also introduced them to the study of natural history. Despite their estrangement after the American Revolutionary War, Benjamin Smith Barton wrote fondly of his father, claiming he was a talented but unappreciated naturalist.[349]

Born to an English family living in Ireland, Thomas Barton was a devout Anglican who, after studying at Trinity College, became an ordained minister in 1755 for the express purpose of converting the Indigenous peoples of Pennsylvania.[350] Thomas felt that "poor Pennsylvania" was in spiritual and mortal danger, as it had "felt incessantly the sad effects of Popish Tyranny and Savage Cruelty" after "a set of abandon'd profligate men […] who defrauded and cheated them [the Indians] […] set the English and the Protestant Religion in such a disadvantageous light" there.[351] Undoubtably galvanized by his formative experiences as a member of the Protestant Ascendancy in Ireland, Thomas believed the Church of England would act as a stabilizing force on the Pennsylvania frontier.

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[349] Barton (1807), 86.
[350] Technically, the Church of England did not have mission in Pennsylvania at the time, so Barton was ordained through the Society for the Propagation of the Gospel in Foreign Parts in order to fulfill what he saw as his divine mission in Pennsylvania. See Marvin Russel, "Thomas Barton and Pennsylvania's Colonial Frontier," *Pennsylvania History* 46, no. 4 (October 1979): 315.
[351] Thomas Barton, as quoted in Russel, 315.

Thomas quickly abandoned his mission of converting the Indians in favor of saving the white settlers of Pennsylvania. His experiences during the Seven Years' War cemented his intense anti-Catholicism (now associated with the French and Indians instead of the Irish) and added a deep antipathy to Pennsylvania's Quaker elite, as Thomas felt they had abandoned frontier settlers to Indigenous depredation.[352] After accepting a clergy position at Lancaster in 1759, Thomas planned to return to original vision of converting Native Americans but was once again foiled in 1783 by Pontiac's Rebellion, deepening Thomas's resentment towards Indigenous peoples. Thomas not only condoned the proposed Pennsylvania "scalp act," in 1764 he published a pamphlet titled *The Conduct of the Paxton-Boys*, defending the actions of the white settlers responsible for the Conestoga Massacre by blaming both the Quakers and the "Pack of Villainous, faithless Savages" they supposedly protected for frontier violence.[353] Despite his desire to convert Indigenous people, Thomas's sympathies unsurprisingly lay with the colonizers instead of the colonized.

Nonetheless, Thomas persisted in trying to convert Indigenous peoples after the Paxton Affair but instead focused on acculturation programs. In Thomas's mind, colonization and the pursuit of knowledge intertwined, with education 'civilizing' the frontier and natural history research expanding that same frontier. Thomas collaborated with Sir William Johnson, British Superintendent of Indian Affairs in the Northern Colonies, to establish schools in Mohawk

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[352] During the Seven Years' War, Thomas along with other clergymen in Pennsylvania organized informal bands of armed to defend frontier settlements in places like Carlisle, Pennsylvania. In 1758, Thomas served as a volunteer on the Forbes Expedition, keeping journals of the countryside where he noted both natural curiosities and the possibility for expanded white settlement. Disillusioned with both military service and what Thomas saw as a Presbyterian bias within the British army, he accepted a Society for the Propagation of the Gospel position at Lancaster in 1759. See Russel, 316–7.

[353] Thomas recognized that the vigilante violence of the Paxton Boys was unacceptable but argued it was caused by political mismanagement by the Quakers as well as duplicity on the part of the praying Indians at Conestoga, who Thomas claimed were not all innocent victims. Thus, while it condemned violence, *The Conduct of the Paxton-Boys* shifted responsibility from white settlers to Pennsylvania's leadership. See Russel, 323–8.

country with the eventual goal of training young Indigenous men to be members of the Anglican clergy. Thomas also expressed interest in personally tutoring Indigenous men and in 1767, when his son Benjamin was only a year old, Thomas took in one of Johnson's Mohawk sons, Tagcheunto, as a live-in pupil in Lancaster.[354] There is no evidence, however, that any of Thomas's Indigenous pupils became members of the clergy, and he ultimately dedicated more of his energy to educating white settlers. To this end, he joined the board of the Julianna Library Company of Lancaster along with none other than gunsmith William Henry, who Killbuck served under during the Seven Years' War.[355] When the Julianna Library Company was dedicated in 1766, the same year Benjamin was born, the library produced a printed catalogue with a preface that claimed "the rude Barbarians of our Country may be led, by the light of Knowledge, to lay aside their savage Nature."[356] While the Julianna Library's mission primary was to foster an intellectual community among Lancaster's white settlers, this itself was framed within the larger project of colonizing the Eastern Woodlands.

Thomas was also a devoted naturalist who focused on the economic potential of the Eastern woodlands. Thomas actively collected plant, animal, and mineral specimens from the Pennsylvania region, sending them to correspondents in England. Thomas was especially dedicated to geology—according to Benjamin, his father "paid more attention to this part of natural history than, so far as I know, any other person in the (then) colonies"—and he couched

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[354] Despite Tagcheunto's demonstrated ability and "thirst for knowledge," the arrangement ended due to his "difficult" personality as well as inter-ethnic tensions in Lancaster during the 1760s. According to Thomas, Tagcheunto (whom he called William) "challenged almost every person he met with and boxed half the young Dutchmen [Germans] in town" and was "sullen, reserved, and unsociable." Thomas ignored the role anti-Indian sentiment may have played in Tagcheunto's behavior and his assessment of Tagcheunto drew heavily on Thomas's own biases towards Indigenous peoples. Thomas Barton as quoted in James Thomas Flexner, *Mohawk Baronet: A Biography of Sir William Johnson* (Syracuse: Syracuse University Press, 1989), 321.

[355] On the Julianna Library Company, see Charles I. Landis, "The Juliana Library Company in Lancaster," *The Pennsylvania Magazine of History and Biography* 43, No. 1 (1919): 24–52.

[356] As quoted in Russel, 320.

most of his observations in the economic value local minerals.[357] Thomas joined the American Philosophical Society in 1768 and remained an active albeit remote participant through his brother-in-law, David Rittenhouse, connecting Lancaster with metropolitan intellectual circles in Philadelphia. Both Thomas and his esteemed Rittenhouse relatives instructed Benjamin and his brothers in natural history, a formative experience Benjamin attributed to his later love of American natural science.[358] Benjamin's approach to natural history was informed by the settler mentality of his father and of the intellectual community in Lancaster. Within this worldview, the production of natural knowledge, ranging from geology to ethnography, was tied to the colonization and settlement of the Eastern Woodlands.[359]

Although Thomas instructed Benjamin in natural history from an early age, Benjamin developed into a staunch American patriot during the Revolutionary era, something that not only distinguished him from his loyalist father but also transformed his approach to natural history. As a devout Anglican, Thomas refused to sign a loyalty oath to the Revolutionary government, and in 1788 he fled from Pennsylvania to New York, abandoning his eight children (six of whom were minors) to be raised by relatives.[360] After their father's exile, Benjamin's older brothers, William and Matthias, became not only father-like figures for Benjamin, but also intellectual collaborators, sending Benjamin specimens, creating illustrations for Benjamin's writing, and even loaning Benjamin the money needed to pursue the study of natural history. William, who served proudly in the Lancaster militia during the Revolutionary War, as well as Benjamin's Rittenhouse relatives, inculcated Benjamin with a strong sense of American patriotism that

[357] Barton (1807), 86; See Russel, 322.
[358] See Ewan and Ewan, 6.
[359] The belief that knowledge production and colonization worked in tandem was not unique to Thomas or to Lancaster but was a fundamental part of the British Empire. See for example Parrish.
[360] Thomas's wife, Esther Rittenhouse, had died in 1774. See Russell, 332–3.

Barton frequently tied to the production of natural historical knowledge.[361] William, Matthias, and Benjamin corresponded frequently throughout their lives on both natural history and American politics, often moving seamlessly between these topics in their letters. In 1806, for example, Benjamin wrote to Matthias that George Washington was "one of the greatest men of the 18th century: one of the fathers of this country, and one of the highest benefactors of mankind" before immediately asking Matthias to think "of me and of my fish," a reference to Barton's planned but never completed natural history of American fishes, which Matthias, a successful lawyer, was illustrating as a favor to his brother.[362] While his father, Thomas, viewed knowledge and education as tools of British colonization, Benjamin claimed natural history as a decidedly patriotic pursuit.

Although Benjamin was always interested in natural history, the years immediately following the American Revolutionary War inspired him to transform natural history into an avocation. Using his family connections, Benjamin started a medical apprenticeship with William Shippen in 1783 and began attending classes at the College of Philadelphia with the goal of becoming a doctor. Once in Philadelphia, however, Benjamin almost immediately became enamored with the study of botany, complaining about the lack of Linnean scholars in the college faculty and spending numerous hours with the Bartram family at their famous botanical garden.[363] In 1785, he accompanied his uncle, David Rittenhouse, on a government-

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[361] See Ewan and Ewan, 59–77.

[362] Barton, Benjamin Smith "to Matthias Barton" 12 Oct. 1806, Series I (Correspondence), Box 1, The Benjamin Smith Barton papers, American Philosophical Society Library. Curiously, Thomas wrote to Sir Johnson that his son William was especially close with young Tagcheunto, "constantly instructing him [Tagcheunto] at night." It is unclear how William's friendship with Tagcheunto impacted his views on Native Americans, especially considering William's other ideological differences from his father. Thomas Barton as quoted in Ewan, 7.

[363] Barton's love the Linnean system might have also been driven by his American identity. Pamela Regis argues that the Linnean Revolution gave many American naturalists after the Revolutionary War a reason to rewrite older British histories. See Pamela Regis, *Describing Early America: Bartram, Jefferson, Crévecoeur, and the Influence of Natural History* (Philadelphia: University of Pennsylvania Press, 1992): 3–39.

commissioned boundary survey in the Pennsylvania and Ohio backcountry. It was on this expedition that Benjamin began to formally compile observations of both Native Americans and Indigenous languages in his notebooks, eventually transforming this material into the basis for his first major publication.[364] American naturalists like Benjamin or Rush were employed by state governments to map territory and expand settler-state authority—a continuation of the British colonial practice of employing surveying naturalists like Catesby. It was not accidental that on this government-sponsored survey Benjamin began documenting Indigenous people and ideas in a manner similar to how he described pharmacological plants or how his father had had described profitable minerals.

It was not until Benjamin traveled to Europe that he truly began to commodify his knowledge of Indigenous peoples. Like most American-born doctors of his generation, Benjamin traveled to Europe in order to both obtain an esteemed European degree and strengthen social and intellectual ties between American and European scholars. Benjamin was also motivated to study abroad by his love of botany and natural history, subjects that he frequently complained were undervalued in American universities.[365] Benjamin quickly gained entrance into elite learned societies in Edinburgh by presenting on the "natural history of the American savages," a topic that catapulted his career.[366] While Benjamin ironically never completed his doctorate, leaving Edinburgh due to personal disputes and later falsifying a degree from the University of Gottingen, he secured an international reputation in Europe as an expert on all things Native

[364] See Ewan and Ewan, 61, 65–6, 71.
[365] See Yokota, "To Pursue the Steam to its Fountain."
[366] In Yokota, "To Pursue the Steam to its Fountain," 201. Yokota argues that Barton achieved more success and acceptance in Europe than other American-born students did precisely because he exploited this expertise. She further argues Barton was part of a larger school of American naturalists who made "racial science" the primary intellectual export of American intellectuals after the Revolutionary War.

American. This expertise translated into professional success for Benjamin back in the U.S.[367] His first major publication in 1797, *New Views of the Origin of the Tribes and Nations of America*, dealt with Native American philology and ethnography not botany, Benjamin's professed field of interest.[368] As an American naturalist working in both North America and Europe, Benjamin learned to value information tied to Indigenous sources as a distinctly American practice.

When Barton wrote about rattlesnake fascination in 1799, his approach to both scientific evidence and to Indigenous sources was informed by the settler ideology forged in Pennsylvania during the Long War for the West. In Lancaster, Barton was raised to view education and knowledge as positive tools for colonization and settlement. During the American Revolution, Barton applied this framework to the American cause and, by working in Philadelphia and on government surveys, learned to see the production of natural knowledge as a patriotic service. Finally, while working in Europe, Barton narrowed in on Native Americans as a productive resource for American natural history to extract and export. Barton moreover was not unique. In the late eighteenth century, Philadelphia served as an intellectual capital of North America. Other Philadelphia-based naturalists followed a similar career trajectory to Barton—including living

[367] Barton went to Edinburgh to study natural history, writing about his admiration of and interest in working with botanists trained by Linnaeus. His early success speaking on Native Americans gained him not only membership to elite societies but also administrative positions within these societies that ultimately enable his downfall. The exact circumstances that forced him to leave Edinburgh before completing his degree are somewhat unclear, as Barton himself attempted to hide his shameful exit, but it appears he may have embezzled funds given to him as the treasurer of a learned society. This embezzlement curiously did not tarnish his intellectual reputation but made it impossible for him to continue in Edinburgh, so he travelled throughout Europe, spending some time in Germany, but never completing a degree. Based on letters to his brother William, Barton was planning on finishing his doctorate when he returned to Philadelphia but discovered upon his arrival a professorship had already been arranged for him courtesy of his mentors. Yokota argues his lack of degree did not limit Barton's career in anyway and actually transformed Barton into a caricature of the ambitious American intellectual. See Yokota, 198–201.

[368] Eventually, Barton did publish several successful monographs on American botany and *Materia medica* but given his youthful commitment to Linnean botany, it is noteworthy that he published first on Native Americans. Chapter four of this dissertation explores how demand for books on Native American topics may have motivated some naturalists, including Barton, to cite Indigenous sources as a publishing strategy.

through the Long War for the West, attending European universities, and publishing scholarship on Native Americans.[369] Far from being unrelated, American naturalists learned to approach natural history within the process of colonization and settlement.

Compelling Evidence

Writing at the end of the eighteenth century, Barton benefitted from the credibility already attributed to Indigenous testimony by English naturalists like Mark Catesby. In his 1799 rattlesnake paper, Barton drew on Indigenous testimony to refute the argument that rattlesnake fascination must be true because Indigenous sources supported it. In doing so, Barton assumed that Anglophone readers trusted and believed Indigenous testimony. Barton elsewhere used Indigenous testimony similarly to how Catesby did: to support or supplement European knowledge. In his 1804 *An Essay Towards A Materia Medica Of The United-states* Barton demonstrated "that our Indians are in possession of many useful medicines."[370] Like English colonists and explorers a century earlier, Barton recognized the commercial applications of Indigenous testimony.[371] Between the careers of Catesby and Barton, the epistemological value of Indigenous testimony remained consistently high. The perceived source of Indigenous expertise, however, changed. Unlike Catesby, who attributed Indigenous expertise to sagacity, Barton emphasized Native Americans' long-standing familiarity with North American nature as the source of their expertise. In doing so, Barton aligned his scientific methods with American settler colonialism. If Indigenous testimony was credible due to Native American autochthony,

[369] In "To Pursue the Steam to its Fountain," Yokota compares Barton's career to the careers of other Philadelphia-based naturalists and doctors of the same generation. See Yokota.
[370] Barton (1807), 44.
[371] On the value of Indigenous guides see for example Parrish; Londa Schiebinger, *Plants and Empire: Colonial Bioprospecting in the Atlantic World* (Cambridge: Harvard University Press, 2004).

then white Americans could eventually cultivate similar expertise and replace the intellectual authority ascribed to Indigenous peoples.

Barton's emphasis on the historicity of Indigenous testimony conformed to the dominant political view Americans were constructing at the end of the eighteenth century in order to legitimize federal Indian policy.[372] Writing on the state of American natural history in 1807, Barton advocated for the use of Indigenous testimony, stating that "I am of the opinion, that no people, in their state of society, were ever better naturalists than the Indians."[373] Barton claimed that Indigenous "traditions" and "names" were potent tools in the hands of a skillful naturalist, who could interpret and analyze them.[374] When crafting a geological history of North America, for example, Barton used "the Indian [Haudenosaunee] tradition of a vast serpent which passed through Lake-Erie, and over the cataract of Niagara, unquestionably refers to some great changes which has taken place."[375] Barton deemed "these traditions highly important" as they revealed how the course of the Hudson River had changed.[376] Barton similarly used the "veneration or regard, which has been paid to the rattle-snake by certain North-American tribes" to dismiss the argument that Native Americans believed in rattlesnake fascination.[377] As opposed to sagacity, which underscored the perceived differences between Native Americans and Anglo-American settlers, Barton stressed the autochthonous expertise of Native Americans, which accentuated their historic relationship to the land. In Barton's view, Indigenous testimony was credible

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[372] Maureen Konkle writes that "In the United States, the early policy for relationships with Indian nations attempted to reconcile that [Enlightenment] theory of difference with practical conditions," namely that to make a legally binding treaty with an sovereign nation, Indigenous peoples first had to be construed as the original inhabitants of North America (9). See Maureen Konkle, *Writing Indian Nations: Native Intellectuals and the Politics of Historiography, 1827–1863* (Chapel Hill: University of North Carolina Press, 2004), 1–41.
[373] Barton (1807), 28.
[374] On names, see Barton (1807), 27-8; On traditions, see Barton (1807), 60.
[375] Barton (1807), 59.
[376] Barton (1807), 60.
[377] Barton (1799), 79.

because Indigenous people were the original inhabitants of North America and thus had built their understanding of North American flora and fauna over many generations. Under this logic, the first generation of American naturalists could eventually usurp this type of autochthonous expertise.

Barton used his increased access to Indigenous testimony to distinguish his patriotic American natural history from its inferior European predecessors. When Barton advocated for the use of Indigenous "traditions" he claimed that to the "discerning and virtuous naturalist" Indigenous testimony was "like mines, among the rubbish of which we dig, with success, for the most precious metals."[378] It was only the "sneers of little, intemperate philosophers, who without candour to receive, or ability to discuss, traditional tales, would throw a veil of doubt upon those very points."[379] Implicit in this critique was Barton's belief that American naturalists like him had the virtue and discernment to dig while European "philosophers" were too stuck in their ways to even try. Barton said as much in his 1799 rattlesnake paper when he named the exceedingly "credulous" writing of Samuel Johnson, Pehr Kalm, and even the esteemed Linnaeus.[380] Nor was Barton alone in criticizing European naturalists. American-born colonial naturalists like Thomas Jefferson, John Bartram, Alexander Gardener, and Cadwallader Colden began to form a distinct epistemological identity as early as the 1740s.[381] A core of this American epistemological identity was these naturalists' insistence "on their ability to observe American specimens better than foreigners."[382] Barton added to this identity another purported

[378] Barton (1807), 60
[379] Barton (1807), 60
[380] On Samuel Johnson, see Barton (1799), 83; On Kalm and Linnaeus, see Barton (1799), 84–5.
[381] See Parrish, 128–35.
[382] Parrish, 134.

advantage: American naturalists' superior access to and ability to analyze Indigenous testimony.[383]

Although Barton viewed Indigenous testimony as both valuable and beneficial for American natural history, he was still careful to exaggerate the differences between settler naturalists like himself and the Native American informants he used. In the early eighteenth century, the concept of Indigenous sagacity implicitly argued that ineffable racial differences between Europeans and Native Americans produced Indigenous expertise.[384] In contrast, arguing that Indigenous autochthony created expertise had the potential to dangerously blur the distinctions between Anglo-Americans and Native Americans. Barton thus cautiously couched his use of Indigenous testimony in recent racial ideology. When Barton cited Indigenous testimony in his 1799 rattlesnake paper, he demeaned "the unnumerable superstitious prejudiced of the Indians."[385] Barton additionally conceded that rattlesnake fascination "is a tale which seems nicely adapted to the wit and society of rude and uncultivated nations," explaining why so many naturalists believed the myth had Indigenous origins.[386] By using Indigenous testimony, Barton was not elevating Indigenous people but diminishing European writing about North America, placing American naturalists on top. Even Barton's compliment—"no people, in their state of society, were ever better naturalists than the Indians"—underscored the ostensible backwardness of Indigenous societies.[387] Using Indigenous testimony within natural history did not challenge American settler colonialism but supported it.

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[383] Parrish notes that Barton challenged Linnaeus's binomial name for the opossum, substituting a hybrid Latin-Lenape name that demonstrated "the American scientist stood at a privileged epistemological site, in his mind able to internalize the languages of two ancient races (native American and Roman) and surrounded by specimens neither language could adequately describe" (Parrish, 135).
[384] See chapter one of this dissertation.
[385] Barton (1799), 79.
[386] Barton (1799), 82.
[387] Barton (1807), 28.

The fact that Barton was only able to mount his attack on European naturalists because he had more access to Indigenous testimony further demonstrated that American natural history and settler colonialism were entangled at the end of the nineteenth century. The colonial invasion of the Eastern Woodlands transformed the social and political landscape of the region. Some Indigenous peoples, like the Lenape, constructed multi-ethnic polities where strategic information sharing cemented political and social relationships.[388] This historic environment encouraged Lenape people, like Killbuck, to act as informants for naturalists. Conversely the history of the Long War for the West enabled settlers like Barton to gain new information from their Indigenous neighbors. Building on the existing credibility attributed to Indigenous testimony, American naturalists like Barton claimed new expertise on North American nature based in part on their appropriation of Indigenous expertise, now redefined to suit American settler ideology. Without this history of colonial invasion and Indigenous reorganization, Barton would not have had access to this evidence.

Although Anglophone naturalists at the beginning and end of the eighteenth century had different rationales for valuing Indigenous testimony, the scientific credibility of Indigenous testimony remained consistent. It was the relative availability of Indigenous testimony that changed. Like Catesby, Barton valued Indigenous testimony and treated it as a credible source of scientific evidence. Unlike Catesby, however, Barton believed the credibility of Indigenous testimony was the result of familiarity and not occult racial differences. Barton, however, was only able to challenge European claims about both North American nature and Native American expertise because Barton because people like Killbuck were willing to share information.

[388] Chapter 3 of this dissertation examines how the Shawnee, an ally of the Lenape, also employed information sharing.

Ambitious, upstart American naturalists like Barton used this increased access to Indigenous testimony to weigh in on decades-old debates like rattlesnake fascination. In doing so, this first generation of U.S. naturalists transformed their proximity to Indigenous people into epistemic authority about North American nature, gradually displacing Indigenous expertise. When it came to Indigenous testimony, Barton changed the meaning of scientific credibility to suit the cultural and political context he operated within.

Chapter 3

Indian Brethren: Interethnic Hunting Camps and Scientific Knowledge Production in the Mississippi River Valley

John James Audubon loved to tell a tall tale. According to Reverend John Bachman, Audubon's dearest friend and intellectual collaborator, Bachman would "find the newspapers teaming with your yarns," the picaresque tales Audubon used to promote his magnum opus, *The Birds of Americ*a.[389] Audubon's writing was full of romantic exaggeration and narrative embellishment, and these qualities largely made Audubon a literary success. But Audubon's proclivity for fabulation also subjected him to criticism and ridicule by his naturalist peers, and one of Audubon's most disastrous fabulations was the Bird of Washington.

In 1828, Audubon published his first description of the new North American eagle species he named *Falco washingtonii*, or the Bird of Washington—a species modern ornithologists now believe never existed. According to Audubon, the chestnut brown Bird of Washington stood a staggering three feet seven inches and possessed a ten-foot wingspan—at least seven inches taller and four feet wider than North America's largest raptor species, the bald eagle. Living around the Great Lakes and nesting along rocky cliffs, Audubon claimed the Bird of Washington mainly hunted fish, diving sharply at "a very acute angle with the surface line of the water" instead of gradually circling prey like the bald eagle or osprey.[390] Although Audubon's discovery initially met with the excitement and celebration of some naturalists, the existence of a gigantic but yet-undiscovered bird in the heart of North America raised the

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[389] John Bachman to John James Audubon, 22 Sept. 1833, Morris Tyler family collection of John James Audubon, Beinecke Rare Book and Manuscript Library, Box 3, Folder 82, letter 1 of 5, Yale University.
[390] John James Audubon, *Ornithological Biography, or An Account of the Habits of the Birds of the United States of America; Accompanied by Descriptions of the Objects Represented in the Work Entitles The Birds of America Interspersed with Delineations of America Scenery and Manners* (Philadelphia: E.L. Carey and A. Hart, 1832), 61.

suspicions of others. How, his detractors asked, had no other explorer or naturalist in the Mississippi River valley noticed even a trace of this purported colossal raptor?

If we accept modern ornithologists' assertion that the Bird of Washington never existed, then it is clear that *Falco Washingtonii* was a cultural fabrication—something in between a tall tale and a hoax—that formed at the intersection of early nineteenth century American natural history and the frontier culture of the Mississippi River Valley. Since Audubon's death, many people have attempted to explain what exactly the Bird of Washington was: a now-extinct species, an innocent mistake, a malicious fraud, or even a very real but elusive uncaptured animal.[391] It is impossible to ever know if Audubon intentionally lied at first or if, in an ironic twist of fate, he swallowed the same kind of whopper he often told to play practical jokes on other hunters and naturalists.[392] Regardless, by the 1830s and 40s, Audubon had staked his scientific reputation on proving that the Bird of Washington, an imaginary creature, existed.

As early as 1830, Audubon's ornithological colleagues began to privately express doubt in regards to the Bird of Washington's existence even as some of these same critics included the

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[391] The existence of the Bird of Washington continues to be debated to this day. In 2006, Scott Maruna published an article in the Ohio Ornithological Society's journal, *The Ohio Cardinal*, that tried to substantiate Audubon's discovery and called for ornithologists to approach the topic with open-mindedness rather than skepticism; see Scott Maruna, "Substantiating Audubon's Washington Eagle," *The Ohio Cardinal* 29, Issue 3 (2006): 140–150. In response, Matthew Halley published a refutation of both Maruna's claims and the Bird of Washington in the *Bulletin of the British Ornithologists' Club* entitled "Audubon's Bird of Washington: unravelling the fraud that launched *The birds of America*"; see Matthew Halley, "Audubon's Bird of Washington: unravelling the fraud that launched *The birds of America*," *Bulletin of the British Ornithologists' Club* 140, Issue 2 (2020): 110–141. Today, the Bird of Washington also appears on websites dedicated to American cryptozoology, the para-scientific field dedicated to study of hidden or lost animals. Much of the present-day disagreement surrounding the Bird of Washington ironically mirrors the debates that took place during Audubon's lifetime. Historian Mark Barrow notes that "Ornithology provides a classic example of an inclusive field" where recognized professionals have tolerated and incorporated the observations of amateurs and enthusiasts since the professionalization of the field in the second half of the nineteenth century; Mark Barrow, *A Passion for Birds: American Ornithology After Audubon* (Princeton: Princeton University Press, 2000), 5. This inclusiveness has of course resulted in public disagreements exactly like the one between Maruna and Halley.

[392] Audubon famously pranked Constantine Rafinesque and led his scientific colleague on a snipe hunt as revenge for Rafinesque breaking Audubon's favorite violin. See Neal Woodman, "Pranked by Audubon: Constantine S. Rafinesque's description of John James Audubon's imaginary Kentucky mammal," *Archives of Natural History* 43, Issue 1 (2016): 95–108.

species in their own monographs on North American avia.[393] Aware of this disbelief, Audubon admitted the Bird of Washington (*Falco washingtonii*) was exceedingly "rare" but asserted that he had seen the creature on five separate occasions over his career. Audubon additionally claimed to have physical evidence to back up his discovery: a taxidermy specimen of the legendary bird. But Audubon curiously did *not* use a key piece of evidence to defend his discovery: the testimony of Indigenous people. This omission was especially strange considering that Audubon alleged that he first encountered the Bird of Washington in the winter of 1810 when a French-Shawnee fur trader and riverboat pilot, Louis Lorimier Jr., drew his attention to the bird. Audubon moreover spent most of the winter of 1810 with the Western Shawnee, who could have similarly corroborated his claims. Why did Audubon ignore this viable source of scientific evidence when Benjamin Smith Barton used Indigenous testimony to great success a generation earlier?

In 1831, when Audubon published his edited description of the Bird of Washington in *Ornithological Biography*, the text-based accompaniment to his "great work," *The Birds of America*, Indigenous testimony was becoming less scientifically credible in the eyes of Audubon's peers. Changes to both American natural history and U.S. federal Indian policy taking place during the first half of the nineteenth century made Indigenous testimony harder to obtain and delegitimized Indigenous expertise. Thus, while Audubon relied on Indigenous testimony and guidance while conducting his field research in the 1810s and 1820s, by the time he responded to the Bird of Washington controversy in the 1830s and 1840s, citing Indigenous expertise held less authority. To explain how and why the credibility of Indigenous testimony decreased, this chapter uses the Bird of Washington controversy as a case study. First, I examine

[393] On subsequent naturalists recognizing the Bird of Washington, see Maruna, 141, 148.

the creation of the Bird of Washington in Missouri's interethnic winter hunting camps during the winter of 1810, where Audubon lived among a group of mainly Shawnee and Osage families. In these camps, information flowed easily between Shawnee hunters and American naturalists. Additionally, Audubon's own proclivity for yarn-spinning complemented his Western Shawnee hosts' humor and storytelling styles. Second, I analyze why Audubon failed to cite either Lorimier or the Shawnee two decades later in his published writing.

In the mid-nineteenth century, Indigenous testimony became both rarer and less credible within American natural history as a direct result of American settler colonialism. The emerging federal policy of Indian removal made collecting Indigenous testimony more difficult for American naturalists by destroying multiethnic settlements east of the Mississippi River and eliminating the utility of diplomatic information sharing for Indigenous nations. Audubon was a notable and conspicuous exception to this pattern, travelling during a time and to a place where this type of Indigenous-settler information exchange was still possible. Audubon's subsequent effacement of Shawnee testimony from his published writing on the Bird of Washington, however, demonstrated that Indigenous testimony was not just scarce but was also scientifically discredited. Concurrent with Indian removal, the creation of new theories of racial difference made citing Indigenous testimony less authoritative and less credible to settler naturalists. Audubon's simultaneous reliance on Indigenous expertise but expungement of Indigenous testimony within his description of the Bird of Washington revealed how politically contingent the use of this evidence was.

Journeys Up the Mississippi

Audubon gave at least four distinct published accounts—*The Magazine of Natural History* (1828), *The Winter's Wreath* (1829), *Ornithological Biography* (1831), and *The life of*

John James Audubon, the naturalist (1869)—of his journey of discovery to the Upper Mississippi where he first encountered the Bird of Washington. When read together, these four accounts underscore the importance of interethnic hunting camps to Audubon's natural historical writing. Audubon was at best an unreliable narrator—and at worst an outright liar—who interspersed real people, places, and animals into his romantic, self-aggrandizing writing. Audubon's unedited letters and journals from before 1820 no longer exist, making it difficult (possibly by Audubon's own design) to establish a precise timeline for his discoveries, including his discovery of the Bird of Washington. When it came to the Bird of Washington, Audubon gave different, contradictory dates—either 1810, 1811, or 1814—for his first encounter with this majestic bird. Based on corroborating details Audubon provided, it was in 1810, not 1814, that Audubon "first saw the great eagle that I have named after our good and great General Washington."[394]

Audubon's four versions of his journey up the Mississippi River each offered a different piece of the Bird of Washington puzzle. Audubon's 1828 account established that he first saw the Bird of Washington on his 1810 trip, while his 1829 description of his Mississippi River trip provided more contextual details but strangely failed to mention the Bird of Washington. Audubon framed his 1829 "Journey Up the Mississippi" article as an amusing "account of a

[394] John James Audubon, *The Life of John James Audubon, the naturalists, edited by His Widow with an introduction by Jas. Grant Wilson* (New York: G.P. Putnam's Sons, 1901), 45. After his death, Audubon's widow, Lucy Green Bakewell Audubon, and editor Robert Buchanan published *The life of John James Audubon, the naturalist* (1869) purportedly based on the late naturalists letters and journals that were subsequently destroyed, making it a posthumous autobiography. It was in his edited autobiography that Audubon contradicted his earlier writing on the Bird of Washing and dated its discovery to 1810 and not 1814. Additionally, Audubon's earlier claim that he first sighted the bird of Washington in February of 1814 while "on a trading voyage, ascending the Upper Mississippi" was suspicious considering that the Upper Mississippi region in 1814 was western theater of the War of 1812 during the height of the conflict. Moreover, Audubon described meeting Louis Lorimier Sr during his 1814 trip, but Louis Lorimier Sr died in June of 1812, meaning Audubon could not have met him on an 1814 riverboat trip like his first account claimed. So it is much more likely the date Audubon gave elsewhere, 1810, was the date Audubon purportedly discovered the Bird of Washington.

Christmas which I spent some years ago in the land that I call my own" and punctuated his narrative with social encounters in the backwoods of the Mississippi River Valley.[395] Audubon's 1869 autobiography confirmed, however, that the trip described in "Journey Up the Mississippi" was the same journey of discovery mentioned in both Audubon's 1828 account and his 1831 formal description of the Bird of Washington in *Ornithological Biography*. Collectively, Audubon's four versions described the rich social context of his so-called discovery of the Bird of Washington.

Audubon's descriptions of his journey implicitly portrayed the Shawnee winter hunting camp as a central space for the production of natural historical knowledge. Like most of his published writing, Audubon's earliest description of the Bird of Washington in *The Magazine of Natural History* provided a thrilling but factually opaque account of the eagle's discovery. According to Audubon, in February of 1814:

> My patroon [river-boat captain], a Canadian, had been engaged many years in the fur trade; he was a man of much intelligence, who, perceiving that these birds had engaged my curiosity, seemed only anxious to find some new object to divert me. The sea eagle flew over us. "How fortunate!" he exclaimed: "this is what I could have wished. Look, Sir! The great eagle, and the only one I have seen since I left the lakes." I was instantly on my feet, and, having observed it attentively, concluded, as I lost it in the distance, that it was a species quite new to me. My patroon assured me that such birds were indeed rare; that they sometimes followed the hunters, to feed on the entrails of the animals they had killed, when the lakes were closed by the ice, but, when open, they would dive in the daytime after fish, and snatch them up in the manner of the fishing-hawk; that they roosted generally on the shelves of the rocks, where they built their nests, of which he had discovered several by the quantity of white exuviae scattered below. His account will be found to accord with the observations which I had afterwards an opportunity of making myself.[396]

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[395] John James Audubon, "Journey Up the Mississippi," *The Winter's Wreath for MDCCCXXIX* (London and Liverpool, 1829), 104.

[396] John James Audubon, "'Notes on the Bird of Washington (Fálco Washingtoniàna), or Great American Sea Eagle' (fig. 53.)," *The Magazine of Naturel History and Journal of Zoology, Botany, Mineralogy, Geology, and Meteorology* 1 (1829): 115–6.

This description provided several key pieces of contextual information for Audubon's discovery. Audubon's 1828 description acknowledged that a second person—the "Canadian" fur-trader and riverboat captain—facilitated his discovery of the Bird of Washington. This description also made clear that this discovery took place in the dreary depths of winter during a moment of boredom when "keen wintry blasts […] had, in a great degree, extinguished the deep interest" Audubon normally had for the teeming environment of the Mississippi region.[397] Audubon's entry on the Bird of Washington in *Ornithological Biography* (1831) reiterated the support of Audubon's unnamed pilot and similarly noted the discovery took places in winter.

Although Audubon never named this "intelligent Canadian" patroon in his writing on the Bird of Washington, Audubon's other writing made clear that the patroon mentioned above was none other than Louis Lorimier Jr., an American-born French-Shawnee fur trader and riverboat pilot.[398] Audubon and Lorimier spent more than twelve weeks together, from late December 1810 to late March 1811, travelling by boat from Cache Creek to Ste. Genevieve in present-day Missouri. At least six of those weeks were spent camped among a winter hunting party mainly Shawnee and Osage families while Audubon and his trading party waited for the river to thaw.

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[397] Audubon (1831), 58.

[398] In the journal excerpts used in Audubon's biography, he misidentified (or more likely illegibly wrote) Lorimier as "Loume […] son of the Spanish governor of Louisiana, and a good pilot on the river" and established that it was Lorimier who piloted the boat that transported him from "Cash [Cache] Creek" to "St. [Ste.] Genevieve" (Audubon [1901], 39). It was immediately before landing in Ste. Genevieve with Lorimier that Audubon "first saw the great eagle that I have named after our good and great General Washington" (Audubon [1901], 45). In the "Journey Up the Mississippi" article, Audubon said his pilot on this same trip was "Lorimié, the son of the Spanish Governor of Louisiana […] a good pilot" who transported him from Cache Creek to Ste. Genevieve (Audubon [1829], 112.) Audubon's pilot could only have been Louis Lorimier as the biographical details Audubon provided matched Lorimier. Lorimier's father, Pierre-Louis de Lorimier was not, as Audubon believed, the Spanish Governor of Louisiana but he was a colonial attendant in Spanish Louisiana who later founded the settlement Cape Girardeau. In "Journey Up the Mississippi," Audubon described meeting "the father of our patroon" at Cape Giradeau in detail, calling Lorimier senior a "ludicrous caricature" of the New French frontiersman (Audubon [1829], 121). The 'Canadian' fur-trader and patroon, Loume, and Lorimier were thus the same person: Louis Lorimier Jr.

Lorimier likely guided Audubon's entrance into the interethnic world of Southern Missouri, although Audubon never acknowledged Lorimier's support.[399]

Lorimier was a member of an elite French-Shawnee family that exemplified a larger pattern of intermarriage and alliance among the Western Shawnee. Born in 1783, Louis Lorimier Jr. (referred to as Lorimier throughout this chapter) was the son of infamous New French fur trader Pierre-Louis Lorimier and Charlotte Penampieh Bougainville, a prominent French-Shawnee woman and relative of the Shawnee war leader Nenessica (also known as Blackbeard).[400] Although little is known about Louis Lorimier Jr., his father's diplomatic activities on behalf of the Shawnee were well documented and make clear the Lorimier grew up among the Indigenous peoples of Cape Girardeau, Missouri. In 1806, Lorimier graduated from West Point with the rank of ensign, an education his father negotiated for his son in exchange for services provided to the American government on the behalf of Meriweather Lewis and William Clark's Corps of Discovery. Lorimier resigned from the U.S. army in 1809 in order to manage his father's Missouri fur trading post and river ferry business.[401] It was near the Lorimier family's fur trading post in 1810 that Audubon met Lorimier.

Curiously, Audubon failed to mention in writing that Lorimier was Shawnee. It was unlikely, however, that Audubon was unaware of Lorimier's background. Audubon claimed to understand Shawnee "habits and a few words of their language" but it was more likely that Lorimier may have acted as an interpreter for Audubon, filling a role his father frequently played

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[399] Audubon was notorious for downplaying the contributions of his many collaborators; on Audubon's collaborators see Gregory Nobles, *John James Audubon: The Nature of the American Woodsman* (Philadelphia: University of Pennsylvania Press, 2017), 115-9; 141–8.

[400] Linda Clark Nash "Chronology," *The Journals of Pierre-Louis de Lorimier, 1777-1795*, ed. Linda Clark Nash (Quebec: Baraka Books, 2012), 16; Sami Lakomäki, *Gathering Together: The Shawnee People through Diaspora and Nationhood, 1600–1870* (New Haven: Yale University Press, 2014), 173.

[401] See Arlen J. Large, "Captain Lewis and the Hopeful Cadet," *We Proceeded On: The Official Publication of the Lewis and Clark Trail Heritage Foundation* 15, No. 4 (November 1989): 4-7.

for American explorers, traders, and politicians.[402] In 1804, Lorimier helped escort a delegation of Osage leaders to Washington D.C., indicating Lorimier spoke Osage as well as Shawnee.[403] At the very least, Audubon would have probably heard Lorimier speak Shawnee during the six weeks they spent together camped with a mixture of Shawnee and Osage hunters. Despite this, Audubon never mentioned using an interpreter or mentioned that Lorimier had any connection to the Shawnee.

Audubon and his contemporaries described Lorimier as a person of color, again indicating Audubon was probably aware of Lorimier's Indigenous parentage. When Lorimier attended West Point, the captain who recommended his admission warned that Lorimier might face social obstacles as the "mixture of his [Lorimier's] blood" was apparent and Lorimier "exhibited too much of the Indian in his color."[404] Audubon's physical descriptions of Lorimier similarly insinuated Lorimier was a person of color. In his journal, Audubon described Lorimier as "a robust yellow man," while in his 1829 article Audubon called Lorimier "a stout dark coloured man" who possessed specialized navigation skills Audubon attributed to Indigenous people elsewhere.[405] But Audubon never stated in writing that Lorimier was Shawnee or had an affinity with the Shawnee people. By the time Audubon published *Birds of America*, he no

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[402] Audubon (1829), 106. Audubon claimed to understand Shawnee and noted that many Shawnee people "spoke French passably" but was disappointed he could not communicate with the Osage as he was "ignorant of their language" and the Osage "spoke no French and very little English" (Audubon [1829], 106; 114.). Although Audubon was fluent in French and English, it is unclear how or when Audubon learned Shawnee prior to the 1810 trip. Given Audubon's propensity for self-aggrandizing, it is possible he spoke no Shawnee or only knew a handful of terms acquired while working as a dry goods merchant. Audubon may have relied on either Lorimier's or another interpreter's skills throughout his journey.

[403] Very few records concerning Lorimier exist today, but he would have been unable to run his father's Indian trading post without being conversant in Shawnee, a language spoken by both of his parents.

[404] Stoddard, in Large, 7.

[405] Audubon noted that Lorimier piloted a canoe, used a tree marking system called a "blaze" to retrace his steps, and knew direct routes through the woods well; see Audubon [1829], 112; Audubon (1901), 39; Audubon (1829), 112.

longer mentioned Lorimier's complexion and simply (and erroneously) identified Lorimier as "a Canadian" who "had been engaged many years in the fur trade."[406]

Although only Lorimier's expertise was specifically cited by Audubon in his description of the Bird of Washington, Shawnee ideas and cultural practices shaped Audubon's knowledge of nature in the Trans-Mississippi West. Descriptions of Shawnee hunters dominated Audubon's narrative of his 1810 trip, occupying considerably more text than his descriptions of Missouri flora and fauna. Despite the fact that Audubon attributed his immediate bond with the Shawnee hunters to "an apparent sympathy [that] connects those fond of the same pursuit […] whatever be their nation," the Western Shawnee Audubon camped with had been forging amicable relationships with Francophone colonists for generations.[407] Lorimier, Audubon's travelling companion, was one of numerous métis children who acted as economic and political intermediaries between the Western Shawnee and American officials.[408] Unbeknownst to Audubon, the natural historical information he ostensibly discovered on this Mississippi River trip was actually imbricated in the larger diplomatic history of the Western Shawnee, who used politically autonomous villages and alliance building to protect their cultural and political sovereignty. Interethnic hunting camps advanced Shawnee diplomacy and provided a productive intellectual space for Audubon and other American naturalists at the beginning of the nineteenth century.

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[406] Lorimier was born near Vincennes, Indiana to New French parents in 1783, meaning he was technically American.
[407] Audubon (1829), 106.
[408] Here, I use métis (uncapitalized), as Warren does, to denote a person of mixed Indigenous and French ancestry and not a member of the Métis First Nation. On the relationship between métis families and the Western Shawnee, see Stephen Warren, *The Shawnees and Their Neighbors, 1795-1870* (Urbana: University of Illinois Press, 2009), 80.

Whether or not Audubon acknowledged it, Western Shawnee politics and culture supported the incorporation of cultural outsiders and empowered specific villages to distinguish friend from foe. During the 1810s, the Western Shawnee entered a period of acute crisis that encouraged them to seek out new and more powerful allies against American encroachment. The Western Shawnee of Southern Missouri additionally placed a high value on their economic relationships with white traders, especially those who spoke French. Audubon, as a French-born Kentucky merchant, would have merited consideration as a potential ally. These factors explain *why* Audubon was able to move freely among the Western Shawnee. But the timing of Audubon's journey exposed him to particular Shawnee ideas and knowledge that ultimately inspired Audubon's fabrication of the Bird of Washington.

By Audubon's 1810 visit, the Western Shawnee living in what is now Missouri had developed diplomatic strategies for dealing with American officials and settlers that informed how they addressed Audubon. Some of these strategies came from larger Shawnee practices of alliance-building but others were unique to the Western Shawnee, who had only recently arrived in Missouri. Beginning in the early 1600s, the Shawnee nation began a concerted pattern of migration and dispersal that eventually caused eighteenth century Indian agents to label the Shawnees "the greatest travelers in America."[409] Audubon and his nineteenth century contemporaries erroneously attributed the peripatetic ways of the Shawnees to desperation, unaware that the Shawnee used migration and resettlement as tools to maintain their cultural identity and political autonomy while drawing on intertribal kinship ties and alliances.[410]

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[409] Lakomaki, 13.

[410] Archeological evidence indicates that the Shawnee initially inhabited the Ohio River Valley but abandoned the Ohio region in the mid-1600s due to attacks by the Haudenosaunee Confederacy as well as Catawba-led slaving raids. Most Shawnee bands relocated among either their Muskogee or Lenape allies but notably did not assimilate to their host cultures and maintained a distinct cultural and political identity tied to their now-diasporic nation. In the

Generations of migration, intermarriage, and alliance-building created a multiethnic and multilingual Indigenous community in Southern Missouri that was more open and accessible to naturalists like Audubon in the early nineteenth century.[411]

The Shawnee people were able to maintain a diasporic identity for several centuries and across thousands of miles in part because of the internal value Shawnee culture placed on local autonomy. Shawnee villages operated as independent but allied units with local village chiefs. Shawnee *hokimas* (civil chiefs) strove for consensus and could not wield coercive power over any other Shawnee person.[412] Attempts by one Shawnee village to dominate neighboring settlements were met with suspicion and hostility by almost all Shawnees.[413] Language, spirituality, and oral history, however, continued to bind the Shawnee diaspora together; an Absentee Shawnee man reminisced that when several Shawnee bands met in the mid-1860s

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1720s, the Shawnees who had settled alongside the Lenape and Muskogee decided to reclaim the Ohio River Valley and began a gradual process of re-migration. Some of their Lenape and Muskogee allies joined the Shawnee as pressures from colonists in Britain's Mid-Atlantic colonies made life untenable for many Indigenous peoples. Despite the opposition from neighboring white and Indigenous peoples, ancestral ties to the Ohio River Valley motivated Shawnee resistance, aided militarily by their alliances, to removal for several decades. Indigenous allies of the Shawnee from across the Eastern Woodlands migrated to the perceived safe haven of the Ohio Country, enlarging Shawnee villages into vibrant multiethnic settlements. Unfortunately for the Indigenous peoples of the Ohio Country, imperial conflict between Britain and France consumed the region during the mid-eighteenth century that erupted into the Seven Years' War. Most Indigenous peoples living in the Ohio River Valley eventually allied with the French in order to preserve their territorial claims in the region. A little over a decade later during the American Revolutionary War, most Ohio Shawnee warriors similarly allied with the British as repeated conflicts with land-hungry Pennsylvania settlers inculcated the Shawnee with an intense distrust of Americas. The Shawnee fear of Americans was validated during the Northwest Indian War (1785–1795) when Americans attempted to remove Indigenous people from the Ohio Country in order to open the Northwest Territory to U.S. settlers. It was during the period between the Seven Years' War and the end of the Northwest Indian War that some Shawnee people migrated to the Trans-Mississippi West, including the future Apple Creek Shawnee. Not all Ohio Shawnee supported this decision, leading to a future division between the future Loyal Shawnee of Ohio and the Absentee Shawnee of Missouri, some of whom are the descendants of Audubon's hunting companions. See Lakomäki 232-3 and Warren 69-74.

[411] This was not true of all Indigenous peoples of Missouri—Audubon described being frustrated by his inability to observe or communicate with the Osage hunters he met. Audubon's differing views of the Shawnee and Osage will be explored later in this chapter.

[412] See Lakomäki, 18-24.

[413] For example, a Pequa Shawnee leader named Opessa presumed to speak on behalf of all Shawnee people living in Pennsylvania in the early 1700s. Several years after making this promise, Pennsylvania officials discovered Opessa had been deposed because he "took the Government upon him"; in Lakomäki, 37.

"though the two bands had been separated for more than fifty years each had held so tenaciously to their creeds, customs, and traditions that neither had changed at all," reunifying with relative ease.[414] Shawnee village autonomy meant political independence but also cultural persistence when faced with new neighbors and new places. Shawnee villages were moreover relatively free to welcome visitors, like wandering Franco-American naturalist-traders, as they saw fit.

The Western Shawnee embraced kinship and autonomy when building their new community in Southern Missouri and these values facilitated knowledge exchanges between American naturalists and Shawnee hunters. Audubon claimed to have first spotted the Bird of Washington near Tower Rock, a natural landmark on the current Missouri-Illinois border and equidistant from Cape Girardeau and Ste. Genevieve.[415] In the late eighteenth and early nineteenth centuries, this region of Southern Missouri was home to an interethnic coalition of Kishpokos, Pekowis, Thawikilas Shawnee, Lenape, Kickapoo and Mingo (Ohio Wyandot) refugees who began migrating to Upper Louisiana from the Ohio River Valley in the 1780s at the invitation of the Spanish empire. Spanish officials hoped the migrants would create a buffer against the powerful Osage nation that dominated the region and raided Spanish outposts.[416] The Western Shawnee, "who typically moved in family bands […] established seven villages just beyond the Mississippi" in Missouri, with Cape Girardeau as the population center.[417] By 1825 U.S. Indian Agent Henry Rowe Schoolcraft "estimated that Missouri and Arkansas Territory had a combined Indian population of 18,917 […] noting that there were 1,383 Shawnees, 2,200

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[414] Thomas Wildcat Alford, *Civilization and the Story of the Absentee Shawnee* (Norman: University of Oklahoma Press, 1979), 12.
[415] Audubon (1901), 45.
[416] Although these Shawnee settlements were themselves new, some Shawnee leaders claimed an ancestral tie to the trans-Mississippi West, see Lakomäki, 14-7.
[417] Warren, 75.

Kickapoos, and 1,800 Delawares […] [and] 6,000 Cherokees."[418] Despite the diversity of Indigenous peoples living together in Southern Missouri at this time, most settlements were labeled "Shawnee villages," thanks in part to the political prominence and strategic marriages of the Shawnee people living there.[419]

Exogamous marriage was a central form of Shawnee alliance building in Western Missouri. Historically, Shawnee leaders described "alliances and traditional friendships […]in kinship terms," underscoring the centrality of family in the Shawnee political landscape.[420] Thus, like most Algonquian-speaking peoples, the Shawnee referred to the Lenape as "grandfather," a designation that especially meaningful to the Shawnee who held elders in high esteem.[421] The Lenape were the simultaneously the closest allies and relatives of the Western Shawnee. Lenape war-leader Hopocan (also known as Captain Pipe), who along with Killbuck and White Eyes signed a 1788 treaty with the American government, was related to the Ohio Shawnee war-leader Lawachkamicky, one of numerous intermarriages that bound the two peoples together.[422]

The Western Shawnee also relied heavily on marriages between French fur traders and elite Shawnee women to protect their political interests in a "confusing milieu of competing colonial powers and tribal adversaries." [423] In 1692 Martin Chartier, a French trader married to a Shawnee woman, was instrumental in helping a group of Shawnee families resettle among their Lenape allies at Pequea, later known as Lancaster, Pennsylvania.[424] Following the Battle of

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[418] Warren, 73.
[419] Warren, 74.
[420] James H. Howard, *Shawnee! The Ceremonialism of a Native American Tribe and its Cultural Background* (Athens: Ohio Univeristy Press 1981), 113.
[421] See Warren, 76 and Lakomäki, 48–51.
[422] It is unclear if Lawachkamicky's relatives were among those who settled in Apple Creek or those who stayed in Ohio during the Northwest Indian War. See Lakomäki, 49.
[423] Warren, 80.
[424] Lancaster was coincidentally where naturalist Benjamin Smith Barton was born and raised. On Chartier, see Howard, 8–9.

Fallen Timbers in 1794, Pierre-Louis Lorimier, Lorimier's father, persuaded his Shawnee kinfolk by marriage to accept Spain's invitation and relocate from Wapakoneta, Ohio to Southern eastern Missouri to escape increased hostility from American frontiersmen. The elder Lorimier was instrumental in securing a formal land grant from the Spanish crown on behalf of the Shawnee people in the vicinity of Cape Girardeau, Missouri.[425] Martin Chartier, Pierre-Louis Lorimier, and later their métis children notably did not make decisions for their Shawnee relatives but instead "acted as intermediaries between the tribes and American officials on the lower Missouri River."[426] The longstanding relationship between French fur traders and the Western Shawnee smoothed Audubon's journey through Southern Missouri.

Although white captives and adoptees among the Shawnee often served as interpreters and emissaries throughout Shawnee history, Francophone colonists were especially esteemed by the Western Shawnee.[427] As a French immigrant to the United States, Audubon would have received preferable treatment among the Western Shawnee. The Indigenous residents of Southern Missouri were driven west in large part due to "American aggression in the eastern half of the United States," generating hostility towards Americans as a group.[428] The Spanish empire provided some protection but after the Louisiana Purchase in 1803, the Western Shawnee were once again at the mercy of land-hungry Americans who used theft, vandalism, and property destruction as a tool of intimidation against the Western Shawnee.[429] Western Shawnee residents

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[425] See Lakomäki, 173–6.
[426] Warren, 80.
[427] The captivity narratives of both O.M. Spencer and Thomas Ridout noted that their Shawnee captors trusted French messengers and traders, tolerated British captives, and loathed Americans. See for example O.M. Spencer, *The Indian Captivity of O.M. Spencer* (Chicago: The Lakeside Press, 1917), 128–30; see Thomas Ridout, "Narrative of the Captivity Among the Shawanese Indians in 1788, of Thomas Ridout, Afterwards Surveyor-General of Upper Canada, from the Original Manuscript in Possession of the Family," *Ten Years of Upper Canada in Peace and War*, ed. Lady Matilda Ridout Edgar (New York: Garland Publishers, 1977), 359-60.
[428] Warren, 72.
[429] Warren, 61.

of one village "reported a loss of over sixty-five hogs, forty-nine cattle, and forty-eight horses" at the hands of their America neighbors between 1811 and 1814.[430] The Western Shawnee relied on their ties to influential French fur traders like Pierre-Louis Lorimier to resist these attacks, secure their claims to land in Southern Missouri, and eventually negotiate amicable relationships with American Indian agents and traders.[431] The relationship between the Western Shawnee and French traders, combined with the political autonomy of Shawnee villages, ultimately led most Missouri Shawnee to prioritize their relationships with white traders over Tecumseh's call for pan-Indian unity.[432]

Although Audubon's writing about the winter of 1810 was factually muddy, his multiple accounts of that Mississippi River trip make one thing very clear: Audubon relied on Lorimier and his Western Shawnee kin to study the natural history of Missouri. Audubon actively benefitted from the Shawnees' long history of strategic dispersal, which prioritized local autonomy and expansive definitions of kinship to preserve Shawnee sovereignty. Audubon's French heritage moreover predisposed the Western Shawnee to accept him into their winter camp. Even though Audubon downplayed both Lorimier's assistance and his Shawnee heritage in his published writing, Audubon owed his success in the winter of 1810 to the Western Shawnee. Audubon additionally gained vital natural historical knowledge and information from his time with Lorimier and his Shawnee kin.

Fish Stories and *M'Shoma* Jokes

[430] Warren, 81.
[431] Warren, 81.
[432] The Western Shawnee were comparatively wealthy, owning land, livestock, and even slaves. This prosperity no doubt led the Missouri Shawnee to reject Tenskwatawa's religious vision of a culture free from polluting influences. Tenskwatawa's attack on Indigenous-white marriages moreover may have alienated the people of Apple Creek who had benefitted from such marriages; see Warren, 75–7.

Given the close ties between the Lenape and the Western Shawnee, it is possible the Indigenous peoples Audubon met emulated the Lenape practice of using information sharing as a diplomatic strategy.[433] But Audubon's account of his winter with the Western Shawnee pointed to a different avenue of information exchange between the Western Shawnees and Euro-American naturalists: winter hunting camps. Winter hunting camps were not only spaces of Shawnee education, knowledge production, and information sharing—these camps were also socially porous, with visitors and guests moving in and out of these same knowledge production spaces. For the nineteenth century Western Shawnee, their annual cycle of agricultural and hunting was vital to both their political sovereignty and economic survival. Winter hunting camps were socially structured spaces that accommodated visitors like Audubon and gave them access to Shawnee ideas about nature, history, and cosmology in the form of evening stories told around the camp's central cooking fire. The Western Shawnee moreover possessed a genre of story—a sort of animal fable—that could have been familiar to any Euro-American hunter used to swapping tall tales around the campfire. Audubon in particular was a master storyteller whose fondness for tall tales and "fish stories" put him at odds with American scientific elites.

Audubon recognized the Western Shawnee settlements he visited were temporary winter encampments, set up to "reap the benefit of a good harvest of pecan nuts; and to hunt the innumerable deer, bears and raccoons, which […] congregated here."[434] Prior to the 1830s and excepting wartime, Shawnee life revolved around an annual cycle of agriculture and hunting that carried both social and spiritual significance.[435] Springs and summers were spent in permanent

[433] See chapter 3 for more information on Lenape diplomatic information sharing.
[434] Audubon (1829), 106.
[435] Beginning in the 1830s, U.S. Indian policy became more aggressive and revolved around abolishing multiethnic coalitions and eliminating traditional subsistence patterns like seasonal hunts. See Warren, 8-9.

settlements while late fall and winter were spent in hunting camps, a pattern embraced by nineteenth century Western Shawnee. The transition between seasons was marked by ritual feasts and dances.[436]

Like other Algonquian-speaking peoples, the Shawnee divided labor and expertise along gendered lines: "women maintained their traditional control over the planting of crops, gathering nuts and roots, and process animal skins" while men oversaw war and hunting. [437] Although hunting was a masculine prerogative, "patrilineally related family bands left their large summer villages […] Women and children assisted the men by establishing austere camps along creek and river bottoms."[438] Only the very old and very young remained in the winter villages. In nineteenth-century Missouri, Shawnee hunters first pursued big game like deer before turning to smaller fur-bearing mammals in late December and finally gathering sugar from maple trees in February and March. [439] Throughout this entire cycle "women played a vital, though secondary role: processing the skins, gathering firewood, and cooking the meals for their families."[440] In March, Shawnee families returned to their summer villages and in April "leading Shawnee women" convened a ritual feast and dance to celebrate both the hunt and the reunification of the community.[441] As a group, the Shawnee may have placed higher value on "hunting and male activities" than their Algonquian kinfolk due to "the fact that descent was reckoned in the male line among the Shawnees."[442]

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[436] See Warren, 50.
[437] Warren, 76.
[438] Warren, 51.
[439] See Warren, 51.
[440] Warren, 51.
[441] Warren, 51.
[442] Howard, 100.

Maintaining access to and control of their ancestral hunting grounds was a key Shawnee political goal during the Long War for the West.[443] The Shawnee valued their cultural and political autonomy and throughout the eighteenth and nineteenth centuries they protested colonial attacks on their traditional gender roles and on the seasonal lifestyle linked to these same gender roles.[444] Although many of the Western Shawnee appropriated select features of white culture, building "cabins and kitchen gardens [that] resembled those of their white neighbors in style," the differences "between the Shawnees and their American neighbors became even more extreme during the winter months, at the height of hunting season."[445] Seasonal hunting trips additionally gave nineteenth-century Western Shawnee villages a pretext to distance themselves from their predatory white neighbors and undertake a new migration.[446]

For the Shawnee, hunting was simultaneously a form entertainment, a source of sustenance and wealth, and a spiritual practice. The gendered division of labor was itself a religious idea tied to the distinction between life giving and life taking.[447] Religious laws handed down by *Kokomthena* (Our Grandmother) and relayed orally by Shawnee elders centered on "a particular animal such as deer, dog, bear, bird, wolf, buffalo, raccoon, turtle, turkey, and crow, spelling out the service it preforms for humans and the manner in which it should be treated," including the proper way to kill and thank potential prey.[448] The average nineteenth century Shawnee hunter would take the time after a hunt to cut a small piece of tobacco and "with great

[443] See Howard, 11.
[444] See Warren, 44, 74.
[445] Warren, 76.
[446] Thomas Wildcat Alford, an Absentee Shawnee translator and teacher, stated that in the 1860s, his family and neighbors used a hunting expedition as a cover to not only meet and devise a concerted response to American predation but also to relocate away from American influence. See Alford, 7.
[447] See Gregory Evans Dowd, *A Spirited Resistance: The North American Indian Struggle for Unity, 1745-1815* (Baltimore: Johns Hopkins University Press: 1992), 1–22.
[448] Howard, 169.

solemnity and apparent devotion sprinkled a few grains of it on the coals, an offering […] to the Great Spirit, moving his lips as if uttering some petition"[449] Hunting medicine, often in the form of songs, was sometimes also used to enhance hunting abilities.[450]

Shawnee hunters moreover possessed a strict hunting etiquette. Shawnee villages "use[d] neither bolts nor locks, and that when they leave for a time their cabins," "deceitfulness was a crime," and theft was prohibited.[451] A Shawnee hunter could trust "that no Indian will interrupt what he finds hanging which others have killed," although stories of white hunters breaking this code were common.[452] Tradition dictated that two or more Shawnee men "went hunting together or happened to come together when hunting in the woods, the first game killed or trapped by either of them was graciously offered to the other, with the remark "Gi tap-il-wa-ha-la" which signifies "I enliven your spirit"."[453] Choice cuts of meat were offered to captives and guests, including white ones.[454]

Despite this strict etiquette, descriptions of eighteenth and nineteenth century Shawnee hunting camps indicated winter camps were relatively open social spaces where friendly outsiders came and went; enemies were, of course killed or captured. Eighteenth century Shawnee hunters occasionally stumbled across other hunting camps and could easily identify "what nation of Indians the party were of" based on the arrangement of the central cooking fire and through the use of a "*totem* which is marked upon a tree" that identified both the nation and band.[455] In 1787 a British trader held captive among the Western Shawnee in noted hunting and

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[449] Spencer, 54.
[450] Howard, 46.
[451] Spencer, 68–9; Alford, 19.
[452] Harvey as quoted in Howard, 44. See for example Alford, 46–7.
[453] Alford, 53.
[454] See Ridout, 352.
[455] C.C. Trowbridge, *Shawnese Traditions*, ed. Vernon Kinietz and Erminie W. Voegelin (Ann Arbor: Univeristy of Michigan Press, 1939), 48.

war parties were routinely "composed of Shawnese [sic], Pottawatamies, Ottawas and Cherokees, but chiefly of the first," as interethnic kinfolk hunted together.[456]

White captives, adoptees, and traders were also common and vital part of Western Shawnee hunting camps. Two captivity narratives from the late eighteenth century—Thomas Ridout's and O.M. Spencer's—described both white intermediaries and their own introduction to Western Shawnee life at a winter hunting camp.[457] Not all white captives were embraced equally and Ridout's life was saved twice by white intermediaries, first by "an interpreter, a white man, who several years before had been taken prisoner" and then again by "a white man about twenty-two years of age, who had been taken prisoner when a lad and has been adopted, and was now a chief among the Shawnese [sic]."[458]

Western Shawnee hunting camps were vital educational and intellectual spaces and select captives and guests, like Ridout, Spencer, and Audubon, were instructed in Shawnee hospitality, manners, cooking, hunting, and dancing while living there. A typical masculine education among the Western Shawnee included "the knowledge of warfare, if history, of nature, to know the habits of wild creatures, to know about trees, wild plants and fruits, to be able to judge whether a cold winter or a dry summer—there were signs one might learn to read all these things by."[459] These subjects were orally handed down by Shawnee "elders; all of our [Shawnee] histories, traditions, codes, were passed from one generation to another by word of mouth."[460] Around the age of sixteen, "old men" would begin instructing Shawnee boys in "all the traditions of their

[456] Ridout, 345.
[457] See Ridout; see Spencer.
[458]Ridout notably saw other captives executed while he was among the Shawnee. Ridout later discovered that only American captives were being executed but his status as a British trader protected him; Ridout, 348, 359.
[459] Alford, 23.
[460] Alford, 21.

ancestors."[461] Repetition was an essential part of Shawnee childhood education, with Shawnee history, myths, and legends being told "at different times & by different persons, and by frequent repetition they become familiar to the young man, who in his turn relates them to his children" until a young man could "hardly distinguish between" his personal recollections of events and things that were told to him.[462]

Although masculine education could happen at any time, the evening fires in Shawnee hunting camps were an essential site of oral knowledge transmission. Eighteenth century Shawnee people "often assemble[d] in considerable number during the long winter evening to pass the time in conversation of to hear traditions or fabulous stories of ancient days."[463] White guests and captives were moreover privy to these moments of knowledge transmission and repetition. Ethnographic studies of contemporary absentee Shawnee camps note that space is still reserved for welcome visitors to "camp in," while cooking fires are seen as a "friendly invitation to "come and sit" or "drink some coffee with us."[464] Like their Lenape kinfolk, the Western Shawnee placed few restrictions on information, excepting sacred ritual knowledge and strategic political and military information.[465] Spencer, a white captive and adoptee of the Western

[461] Trowbridge, 28.
[462] Trowbridge, 28; Alford, 6.
[463] Trowbridge, 47.
[464] Howard, 83–5.
[465] Certain ritual knowledge, particularly the content of medicine bundles or entrance to sacred lodges, was restricted to religious adepts or band-specific custodians (see Howard, 213). More conservative Shawnees, like the Prophet Tenskwatawa, also guarded information concerning the names of roots and herbs used in the treatment of diseases (see Trowbridge, 35). Some "religious songs of a much higher order […] have been so closely guarded that no white man has ever come in possession of any of them; Joab Spencer, "Shawnee Folk-Lore," *The Journal of American Folklore* 22, No. 85 (Jul-Sept. 1909), 326. But not all ritual knowledge was restricted. Unlike the Lenape, "the Shawnees practiced rainmaking at a public ceremony" (Howard, 195). Visitors—both Indigenous and white—were moreover invited to join in on annual feasts and dances and were present during meaningful season orations (See Howard, 307; see Warren, 76). Ridout was accused by Chief Captain John of being a "spy and that I knew the whole country" during his captivity, indicating that in the 1780s the Shawnee did guard certain strategic information (Ridout, 367). Alford described several "secret councils" held during his lifetime by village leaders in order to determine a course of action in response to American predation. These councils appear to have concerned sensitive, strategic information and were thus restricted for practical reasons (see Alford, 43-5). Gossip was stigmatized but

Shawnee, vividly described that once he "acquired a sufficient knowledge of the Shawnee tongue to understand all ordinary conversation," he would the spend the long winter evenings listening "with much pleasure and sometimes with deep interest to Cooh-coo-cheeh," his guardian.[466] Cooh-coo-cheeh told Spencer:

> of the bloody battles of her nation, particularly with the Americas; of the great prowess of her ancestors, their chivalrous exploits and "deeds of noble daring," or related some interesting events of her early life; […] Her memory seemed a great storehouse out of which she brought "things new and old." In almost all her tales, however, […] she mingled many superstitious ideas and spoke much of supernatural agency and of her own frequent intercourse and conversation with departed spirits. To the beaver she not only gave the faculty of reason, but the power of speech […] and song, said by her to have been sung by a beaver to an almost desponding hunter, stayed by a freshet and half starved; encouragingly telling him that the high water would soon subside and that beyond the stream he would find plenty of game.[467]

Spencer also remembered Cooh-coo-cheeh sharing her knowledge with a French messenger one evening who "listened with that attention which among the Indians is inseparable from good manners," and with George Ironside, a licensed Indian trader.[468] White guests like Audubon were thus frequently party to Western Shawnee oral storytelling around the hunting campfire.

Audubon described in lavish detail the "great fire" at the winter camp where he resided in the winter of 1810. It was beside this powerful fire, made up of "logs […] ten feet in length" and with "a flame that would roast you at the distance of five paces," that Audubon daily drew the "wild turkeys, bears, congars [sic], racoons, and many other animals" that he studied.[469] Audubon relied on the Shawnee to both pass the winter and to study the natural history of the region, noting that "as soon as they [the Shawnee] learned my anxiety for curiosities of natural

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not outlawed in Shawnee villages (see Alford, 49). Combined, these social conventions indicate that the Western Shawnee had a fairly open relationship to information in the eighteenth and nineteenth centuries.

[466] Spencer, 120–1.
[467] Spencer, 120–1.
[468] Spencer, 128, 103.
[469] Audubon (1829), 115.

history, the discovered the most gratifying anxiety to precure them for me," adding that even the women "set small traps for the smaller animals," in gratitude for which Audubon would present them "with a small knife, a pair of scissors, etc."[470] The Shawnee winter campfire was a logical place for Audubon to study natural history. According to Alford, when Western Shawnee hunters sat "about a campfire at night and talk[ed] […] natural history was a subject that always was interesting."[471] Skilled Shawnee storytellers moreover were celebrated for the ability to tell comedic animal parables, whose humor stemmed from the teller passing them off as facts.[472] Audubon was intimately familiar with this genre—the naturalist was, after all, infamous for spinning yarns, pulling hoaxes, and telling tall tales about the backwoods of America. The Bird of Washington was one such tall tale, plucked from the winter hunting camp and placed in the literary world of published natural history.

The Western Shawnee and American backwoods hunters like Audubon shared storytelling style predicated on humorous exaggeration and observations of nature. For the Shawnee, these stories were known as *m'shoma*—or animal name group—jokes while for white hunters and traders like Audubon, these stories were called yarns, whoopers, fish stories, or frontier anecdotes—all forms of the American tall-tale.[473] *M'shoma* jokes were frequently told around the evening fires of eighteenth and nineteenth century hunting camps at the expense of uninitiated listeners, who believed these fictional stories were fact, and for the entertainment of the group. It is likely that Audubon not only heard *m'shoma* jokes while staying with the

[470] Audubon (1829), 107.
[471] Alford, 66.
[472] Alford, 66.
[473] Although Audubon preferred the term "yarn," literary scholar Henry Wonham classifies yarns, whoppers, and frontier anecdotes as forms of tall tales. See Wonham, "In the Name of Wonder: The Emergence of Tall Narrative in American Writing," *American Quarterly* 41, No. 2 (Jun. 1989): 284-7.

Western Shawnee but that this same genre informed his purported discovery of the Bird of Washington.

The topic of conversation around the Western Shawnee campfire varied but *m'shoma* jokes and natural history were among the most popular subjects. Part of the humor and success of a *m'shoma* joke came from the fact that vital and factual information was also shared on winter evenings. Intelligence reports—the presence of other Indigenous peoples, the movements of American settlers and traders, the location of military outposts—were shared not only with local leaders but with the rank-and-file members of a Shawnee hunting camp, where "inhabitants flocked out to meet" returning expeditions of warriors and hear "the story" of their exploits.[474] These exchanges were moreover not just about the information conveyed by but also celebrated the exploits of returning parties.[475] Conversation around the winter campfire also included history and "a great many stories of white people, stories of wars, of deceptions."[476] Cultural traditions, natural historical knowledge, and mythology also occupied long winter nights.[477]

The Shawnee esteemed both the ability to remember vast bodies of knowledge and the skill to tell a compelling story. Greeting "all visitors in a friendly way" was chiefly prerogative and this often included both feeding guests and "entertaining them with diverting stories."[478] Knowledgeable elders, like Spencer's guardian Cooh-coo-cheeh, were compensated with "presents of venison and skins and brooches" from "the Indians, who consulted her on most

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[474] Spencer, 74.
[475] Spencer recalled an exchange of this type that took place early in his captivity: "About the middle of the afternoon we met a small company of Indian hunters, the first human beings we had seen since we left the Ohio. Here, resting awhile, after making, as I supposed, various inquiries about their own families, Wawpawmawquaw related all the particulars of their late expedition, describing by the most significant gestures their abuse, our approach, their firing, the fall of one man and the escape of the other by swimming, their take me prisoner, and finally exhibiting the scalp as a trophy of their exploit" (Spencer, 72).
[476] Alford, 26, 66.
[477] Both Alford and Spencer recalled learning about these topics around a winter's fire. See for example Alford, 66.
[478] Mary Spoon as quoted in Howard, 105; Ridout, 354–6.

important matters" and listened to her oral wisdom.[479] When a good storyteller visited a Shawnee village the community "would all sit about the campfire and listen for hours" to their tales.[480] A good storyteller was defined by both their subject matter and their wit and "lively imagination."[481]

Shawnee storytelling blended serious histories, factual information, and important religious ideas with jokes and humor. During the annual Green Corn and Bread feasts, which were also open to visitors, after ceremonial songs, dances, and orations were performed "the serious side of the occasion is over, and the people begin the dance […] [and] the dances that follow the Bread Dance, such as the Green Corn dance, are for frolic and fun."[482] Although twentieth century Shawnees distinguished between secular "nighttime dances" and ceremonial "daytime dances" the social dances were "nevertheless considered an integral part of the whole ceremonial occasion."[483] Like ceremonial and secular dances, stories moved between serious and humorous in a single sitting.[484]

In masculine winter hunting camps, stories about animals were the most popular. According to Thomas Wildcat Alford, an Absentee Shawnee man born in the 1860s, hunting parties would "sit about a campfire at night and talk. Natural history was a subject that always was interesting; traditions often told were embellished with the lively imagination of the

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[479] Spencer, 86.
[480] Alford, 67.
[481] Alford recalled a Robert Deer "had traveled a good deal and had a store of interesting stories to tell" (Alford, 27).
[482] According to Howard, a Shawnee dance "is not considered a total success unless the locals and visitors in the assembled crown are able to provide enough song leaders and dancers to continue the dancing through the night and past sunrise the following morning" (Howard, 307). Historical documents, including both Ridout and Spencer's captivity accounts, mention white captives participating in these dances, indicating visitors were included in ceremonial dances during the eighteenth and nineteenth centuries as well; Alford, 60–1.
[483] Howard, 307.
[484] Spencer described Cooh-coo-cheeh meandering from historical tales to descriptions of the afterlife to animal parables. See Spencer, 127–8.

speaker."[485] But Alford remember the most popular and lively stories were *m'shoma* jokes. It was "during the winter" and "about the campfire" men would tell "stories" and:

> the most lively jokes were told about one's Um-so-ma [*m'shoma* or name group], when groups line up and thought up things that would make their adversaries appear ridiculous. Those storytellers were masters of the art. They could tell offhand a story that would contain suspense, mystery, surprise, with never a change of countenance to betray the fact that it was fiction of the purest kind, until it might be accepted, swallowed whole, by those listening. Then the merriment that would follow![486]

Alford was careful to point out that these stories were not mean-spirited but "a kind of fellowship which afforded much merriment and innocent fun among both old and young."[487] Theses stylized jokes always centered on animals as Shawnee surnames all derived from animal-based *m'shoma.* Unrelated members of *m'shoma* were "taught to feel a bond of affinity for others of the same name group" and the jokes were "based upon physical and mental attributes of the creatures after which the groups are named. […] Thus a member of the Horse name group might be chided for "always kicking, and a Turtle for being too slow."[488] *M'shoma* jokes were typically traded between paired rival groups: turtle and turkey (synonymous with all birds), horse and rounded-feet (carnivorous animals), rabbit and wildcat.[489]

In the late 1850s, American Missionary Joab Spencer interviewed Richard Bluejacket, Methodist minister, Shawnee chief, and grandson of war-leader Weyapiersenwah (also known as Bluejacket). Spencer "once asked Bluejacket how [Shawnee] friends and neighbors entertained each other when they were together […] [and] He said sometimes in telling jokes on each other."[490] When Spencer asked for an example, Bluejacket told him the following *m'shoma* tale:

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[485] Alford, 66.
[486] Alford, 62–3.
[487] Alford, 52.
[488] Howard, 87.
[489] See Howard, 96–7.
[490] Joab Spencer, "The Shawnee Indians: Their Customs, Traditions, and Folk-Lore," *Collections of the Kansas State Historical Society* 10 (1908): 393.

> A long time ago a wildcat pursued a rabbit and was about to catch him, when the rabbit ran into a hollow tree The wildcat took a position in front of the entrance and told the rabbit that he would remain there until the rabbit from hunger would be induced to come out; that he need not think of escape After a time the rabbit said he would come out and let the wildcat make a meal of him on one condition, and that was that the wildcat should make a fire in front of the tree, saying that as soon as a bed of coals sufficient to roast him had been prepared, that he would come out and be roasted; that he did not want to be eaten raw. The cat built the fire as directed, and when the sticks were burned into coals, he settled himself on his haunches and notified the rabbit that all was ready. Whereat the rabbit gave a spring, striking all his feet into the coals and knocking them into the face and even over the breast of the cat, and then escaping. This burned the hair in spots in the cat's breast, and when it grew out it was white. This is why the wildcat has white spots on his breast.[491]

According to Spencer "the joke is apparent when it is understood that the Indians all belonged to different clans […] of course, it was a member of the Rabbit clan, to which Bluejacket belonged, who told this joke or myth at the expense of a member of the Wildcat clan who happened on such occasion to be present."[492] Bluejacket's example of a *m'shoma* joke featured anthropomorphized animals common in other folktales but according to Alford, these stories were sometimes blended with observations to lure the listener in to believing.

Audubon claimed he first spotted the Bird of Washington when Lorimier, "anxious to find some new object to divert" Audubon's attention and engage his "curiosity," pointed out a bird flying over them.[493] According to Audubon, Lorimier exclaimed ""How fortunate! […] this is what I could have wished. Look, sir! the Great Eagle, and the only one I have seen since I left the lakes."[494] Lorimier moreover assured Audubon that:

> such birds were indeed rare; that they sometimes followed the hunters, to feed on the entrails of animals which they had killed, when the lakes were frozen over, but that when the lakes were open, they would dive in the daytime after fish, and snatch them up in the manner of the Fishing Hawk; and that they roosted generally on the shelves of the rocks,

[491] Richard Bluejacket, in Spencer (1908), 393–4.
[492] Spencer (1908), 394.
[493] Audubon (1831), 58.
[494] Audubon (1831), 58.

> where they built their nests, of which he had discovered several by the quantity of white dung scattered below.[495]

By Audubon's own admission Lorimier told him a story about a rare, giant bird to break up the boredom of a long winter journey by boat. *M'shoma* jokes were told under similar circumstances—as a form of entertainment between male hunters in the doldrums of winter.

Audubon likely listened to conversations and *m'shoma* about birds while camped with the Western Shawnee. Members of *m'shoma* "preferred to tell animal stories that selected its own animals as the actors or heroes of the stories."[496] It is unclear if Lorimier had a Shawnee surname or was ever part of an *m'shoma* but it is highly likely Lorimier knew several *m'shoma* tales connected to the Turkey group, which represented "all forms of bird life, and is the same as Chicken, Eagle, Chicken-Hawk, or Fowl."[497] The Turkey group was well represented among the Western Shawnee. The Kishpoko and Thawikila Shawnee, two of the three primary bands that made up the Western Shawnee carried sacred bundles associated with Thunderbirds.[498] Shawnee oral histories moreover maintained that members of the Turkey *m'shoma* were instrumental in the Thawikila migration to Southern Missouri, carrying sacred objects and knowledge north "because a turkey is ready to fly quickly."[499] Birds, moreover, were associated with war as "the Thunderbirds are the patrons of war and hence are honored in the War Dance of the Kishpoko division."[500] Lorimier, as a graduate of West Point and retired member of the U.S. military, probably heard stories both by and at the expense of Shawnee warriors, often members of the Turkey *m'shoma*. It is possible Audubon even heard stories about thunderbirds, who "are

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[495] Audubon (1831), 58.
[496] Howard, 97.
[497] Howard, 90.
[498] See Howard, 216.
[499] Howard, 96.
[500] Howard, 176.

thought to frequent certain deep pools of water […] [and] carry on a never-ceasing warfare with the Giant Horned Snakes, Horsehead snakes, and other water dwelling creatures."[501] Both thunderbirds and the Eagle of Washington lived near deep lakes, diving dramatically into bodies of water in search of prey.

If Lorimier, or any other member of the Western Shawnee, told Audubon an *m'shoma* joke or thunderbird story, it was out of camaraderie not malice. By his own admission, Audubon thought of the Western Shawnee as not only "friends" but as "brethren."[502] In one memorable incident, Audubon and his travelling companion John Pope became lost in the woods and wandered in circles, and as a result "the boatman laughed, and the Indians joined in the chorus."[503] Another evening, Audubon and Pope played violin and flute for their hosts, dancing around the fire to the amusement of the Western Shawnee women who "laughed heartily at our merriment."[504] Audubon and his companions "passed six weeks in this matter:" during the day, Audubon studied the fauna of Southern Missouri while at night, he socialized with the Western Shawnee.[505] The Western Shawnee were diplomatically and culturally predisposed to swap stories with Francophone travelers like Audubon, who by his own admission enthusiastically "joined both their [the Western Shawnee's] "talks and their avocations."[506] The question, then, was not *how* Audubon learned about a giant fishing eagle living in the Great Lakes and bearing a suspicious resemblance to a thunderbird, but why did Audubon fail to mention Lorimier's race or Western Shawnee witnesses in his published description of Bird of Washington?

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[501] Howard, 176.
[502] Audubon (1829), 115, 120.
[503] Audubon (1829), 116.
[504] Audubon (1829), 120.
[505] Audubon (1829), 120.
[506] Audubon (1829), 106.

The Mightiest of the Feathered Tribe

When Audubon published *Ornithological Biography* in 1831, the Bird of Washington gained new prominence and with it, new scrutiny. Audubon was no stranger to scientific controversy, but the Bird of Washington scandal was unique in its audacity. Audubon had previously been embroiled in disputes concerning animal behavior—most famously if rattlesnakes could climb trees or vultures could smell—and in these instances, he had marshalled anecdotal evidence to support his assertions.[507] But in the case of the Bird of Washington, Audubon fabricated (if his critics are to be believed) a type specimen to bolster his claims. In defending his discovery, Audubon never mentioned the weeks he spent camped with the Shawnee and never appealed to the authority of Indigenous testimony.

Curiously, Audubon had additional anecdotal evidence concerning the Bird of Washington at his disposal but chose to rely instead on physical proof in this instance, possibly due in part to the concerns of his supporters. In an 1838 letter, Audubon's collaborator John Bachman admitted that "I should like to have some ocular proof of its [the Bird of Washington's] existence."[508] Bachman hastily added however that the Bird of Washington's existence was "pretty well established—Louis & Clark—the naturalists in the Long Expedition all speak of it familiar to the Indians & of a different species," indicating Audubon had corroborating testimony that he opted not to use.[509] This begs the question: why did Audubon not use the findings of

[507] On Audubon's numerous social and empirical controversies, see Nobles, 120–48.
[508] John Bachman to John James Audubon, 24 April 1837. Morris Tyler family collection of John James Audubon, Beinecke Rare Book and Manuscript Library, Box 3, Folder 84, letter 4 of 6, Yale University.
[509] Ibid. Coincidentally, Titian Ramsay Peale, the subject of the fourth chapter of this dissertation, was one of the naturalists with the Long Expedition. When Bachman said the Bird of Washington was "pretty well established" by Lewis and Clark, he was probably alluding to what Meriweather Lewis called the "grey eagle." Most scholars now believe that what Lewis called the "the grey eagle" was in fact a juvenile golden eagle (*Aquila chrysaetos*). See Joseph Mussulman, "Two Eagles," *Discovering Lewis & Clark* (online, 2009), http://www.lewis-clark.org/article/3051.

these other naturalists, their Indigenous sources, or even his own collaboration with Native peoples to substantiate his discovery in print, particularly when these sources were easier to come by than the remains of a non-existent bird?

Notably, according to Bachman, Audubon neglected the testimony of "the Indians" interviewed by Meriweather Lewis, William Clark, Thomas Say, and Titian Ramsay Peale, as opposed to the naturalists themselves, to defend his discovery. Technically, Audubon did not need to consult Lewis and Clark's journals to speak with their Indigenous sources. Between November 16 and December 11 of 1803, Lewis and Clark travelled the same stretch of the Upper Mississippi River where Audubon claimed to have first seen the Bird of Washington in February 1814—the portion of the river between Tower Rock and Ste. Genevieve in present-day Missouri. Like Lewis and Clark a decade before him, Audubon spent six weeks at the same interethnic Osage, Shawnee, and Lenape settlements near Apple Creek.[510] The Corps of Discovery and Audubon even relied on the assistance and hospitality of the same man: Louis Lorimier, father of Audubon's patroon, Lorimier. In theory, Audubon could have very easily used his own conversation with "the Indians" to corroborate the Bird of Washington's existence but chose not to.

Audubon moreover had a long history of collaboration with Indigenous hunters and traders. When in the field, Audubon knew Indigenous informants would "afford me much

[510] After the American Revolutionary War, a group of Shawnee refugees who refused to participate in the war (known later as the Absentee Shawnee) relocated to Cape Girardeau in the Northwestern Territory and settled along Apple Creek. Although Lewis and Clark noted a large village of Shawnee and Lenape people, when Audubon travelled to Apple Creek, he mentioned Shawnee and Osage people living there. Lewis wrote "we found here som Shawnees and Delewars incamped; one of the Shawnees a respectable looking Indian offered me three beverskins for my dog with which he appeared much pleased;" Meriweather Lewis, "November 16, 1803," *Journals of the Lewis and Clark Expedition* (online, University of Nebraska Press). Lewis added in his entry for November 25, 1803, that this was the Apple River settlement of Absentee Shawnee "a settlement of Shawnees, which more than any other in this quarter deserves the name of a village I could not ascertain their number;" Lewis, "November 25, 1803."

information […] [and] would assist me in procuring the objects of my search."[511] In addition to his time with Lorimier and the Western Shawnee, Audubon hunted with a Owen Mackenzie (a Blackfoot guide), travelled with the Florida Seminole, and visited the Indigenous residents of Labrador.[512] Bachman, Audubon's collaborator and confidant, chided Audubon for his affection towards "the red skins," which Bachman claimed were Audubon's "particular favorites" even as they went to war against the U.S.[513] In "Journey Up the Mississippi," Audubon even claimed he had a special affinity with Indigenous people, lamenting that he could not "like many Europeans call them savages."[514] Audubon thus had more than enough material to provide his readers with detailed and nuanced portraits of Indigenous peoples. Audubon's omission of Lorimier and his Western Shawnee was a conscious choice.

Audubon's decision not to cite Indigenous sources was the result of changes in both Audubon's relationship to Indigenous people and the evidentiary value of Indigenous testimony. Over the course of his career, Audubon's personal views on Native Americans appeared to change from sympathetic to disparaging, a change that paralleled a similar transformation taking place within both American politics and American natural history. Between 1789 and 1815, U.S. federal Indian policy was "designed to extinguish Indian cultures through the steady assimilation of Indians into American society."[515] After 1820, however, assimilation programs were gradually

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[511] Audubon as quoted in Nobles, 219.
[512] On Audubon's interactions with Indigenous peoples, see Nobles, 219–24.
[513] John Bachman to John James Audubon, 22 January 1836, Morris Tyler family collection of John James Audubon, Beinecke Rare Book and Manuscript Library, Box 3, Folder 83, letter 2 of 5, Yale University. Bachman was writing in this instance about the Second Seminole War, implying Audubon's sympathies lay not with the white settlers of Florida but with the fearsome Seminole.
[514] Audubon (1829), 106.
[515] Warren, 83. In the immediate aftermath of the American Revolutionary War, U.S. officials wanted to expel Indigenous peoples from the newly acquired Northwest territories but recognized that an open war of extermination would be costly and likely unsuccessful in the face of organized pan-Indian resistance. Instead, American politicians like Henry Knox and Thomas Jefferson posited that assimilation programs would be more effective at expropriating Indigenous land. On assimilation and U.S. Indian policy, see: Reginald Horsman, "American Indian Policy in the Old Northwest, 1783-1812," *The William and Mary Quarterly* vol. 18, No. 1 (Jan., 1961), pp. 35-53.

replaced with a policy of Indian Removal that relied on new scientific theories of racial difference for legal justification; Native Americans had to be defined as categorically different than white Americans in order to be stripped of their legal rights.[516] American natural history both contributed to and absorbed this ideological transformation by providing new theories of immutable racial difference. Audubon's about-face when it came to Native Americans was undoubtably the product of these changing ideas about race during the early nineteenth century.

Audubon and his generation of American naturalists inherited a host of sometimes-contradictory ideas about both race and the credibility of Indigenous testimony from their naturalist predecessors like Mark Catesby and Benjamin Smith Barton. In response to eighteenth century scientific theories of animal degeneration, American naturalists of the Revolutionary generation like Barton and Thomas Jefferson found themselves both protecting their own racial identity as white men and celebrating the perceived virtues of Native Americans to emphatically refute any European claims that America was naturally inferior.[517] This placed white Americans at the end of the eighteenth century in "the paradoxical position of intellectually defending, and sometimes identifying themselves with the very people who American settlers had used, killed, and disposed."[518] The American Revolution additionally "let loose a torrent of thinking about race, flowing from theories of natural history and moral philosophy as well as popular prejudices" that eulogized Native Americans while simultaneously offering cultural and political

[516] See Warren, 83; racial difference as a legal justification, see Maureen Konkle, *Writing Indian Nations: Native Intellectuals and the Politics of Historiography, 1827-1863* (Chapel Hill: University of North Carolina Press, 2004), 15-16.
[517] See Kariann Yokota, "'To Pursue the Steam to its Fountain': Race, Inequality, and the Post-Colonial Exchange of Knowledge Across the Atlantic," *Explorations in Early American Culture: A Journal of MidAtlantic Studies* 5 (2001): 215.
[518] Yokota, 215.

assimilation as a form of redemption.[519] Although the exact causes of racial differences were hotly debated, Anglo-American naturalists in the 1790s generally agreed that proximity between white Americans and Native Americans benefitted the later while having no negative effects on the former.[520]

After roughly the end of the War of 1812, however, this view of racial mutability and uplift began to change. During the first three decades of the nineteenth century, the prevalent belief that Native Americans would gradually disappear through assimilation or simply die off was proving deeply incorrect, leading to the emergence of theories of immutable racial difference that posited Indigenous peoples were racially inferior to white Americans and Europeans.[521] Advocates for U.S. territorial expansion agreed with older racial theories that whiteness was unaffected by proximity to other races but they began to argue that descriptions of successful Native American assimilation were falsified, exaggerated, or based on the successes of mixed-race individuals.[522] Instead American politicians and Indian agents contended that, based on natural historical sources like physical ethnology and philology, Native Americans possessed an "indomitable fixity" that resisted "improvement" or acculturation.[523] During the 1820s and 1830s, the concept of racial immutability was moreover debated in American newspapers, in the transactions of learned societies, and in legislative writing, spreading these

[519] Sean P. Harvey, *Native Tongues: Colonialism and Race from Encounter to the Reservation* (Cambridge: Harvard University Press, 2015), 13.
[520] This logic was also applied to Black Americans, see Yokota, 220–8.
[521] See Konkle, 17–20.
[522] Sean Harvey argues that Lewis Cass, the governor of Michigan and political architect of Jacksonian removal policies, was deeply critical of philological studies sympathetic to Indigenous peoples or languages and thus marshalled considerable philological date to prove the exact opposite. See Sean P. Harvey, "'Must Not Their Languages Be Savage and Barbarous Like Them?' Philology, Indian Removal, and Race Science," *Journal of the Early Republic* 30, No. 4 (Winter 2010): 524–9.
[523] Henry Rowe Schoolcraft as quoted in Harvey (2010), 529.

speculative theories far and wide.[524] A belief in racial immutability justified Indian Removal for pro-expansion politicians and led some to even argue a "war of extermination" against Native Americans was necessary.[525] Indian Removal only accelerated after 1825 with the creation of Indian territory.

Audubon created of the Bird of Washington concurrently with this historical trajectory. Audubon camped with the Western Shawnee in 1810—before the War of 1812 broke out and before this conflict removed non-Indigenous barriers to U.S. westward expansion. Audubon began to write and publish his account of that 1810 trip, however, as Indian Removal was accelerating. By the 1830s, when Audubon published *Ornithological Biography*, both Indigenous sagacity and Indigenous autochthony failed to encompass the prevailing political and scientific ideas surrounding Native Americans; sagacity was too antiquated, while autochthony dangerously blurred the purported racial distinctions between white and Native Americans that policies like Indian removal relied on. When Barton was writing at the end of the eighteenth century, his emphasis on autochthony as the source of Indigenous expertise was not yet detrimental to federal Indian policy as these policies were in a state of flux. Under the logic of cultural assimilation, a belief in Indigenous expertise based in autochthony actually supported the argument Native Americans could learn, adapt, and change. Under the logic of immutable racial difference, however, a belief in Indigenous expertise based in autochthony implied there were similarities between white Americans and Native Americans that potentially undermined policies like Indian Removal. By the mid-nineteenth century, instead of offering a new explanation for Indigenous expertise, field naturalists who relied on Indigenous assistance like

[524] See Harvey (2010), 524.
[525] Lewis Cass as quoted in Harvey (2010), 514.

Audubon did either effaced or minimized Indigenous testimony in their published writing—a gesture that ironically mirrored Indian removal.

Audubon's decision not to cite Lorimier or the Western Shawnee was additionally informed by the relative scarcity of Indigenous testimony by the mid-nineteenth century, which was itself a direct result of Indian Removal. Indian Removal policies divided multiethnic social formations into discrete Indian nations as a way of subordinating Indigenous polities to the U.S. government and neutralizing powerful pan-Indian confederations.[526] Spaces that had previously facilitated information sharing, like multi-ethnic villages and seasonal hunting camps, were targeted by these policies. Moreover, the confinement of Native Americans to both reservations and Indian Territory meant that after 1830, naturalists travelling east of the Mississippi River were much less likely to meet Indigenous hunters and traders who could provide them with information and guidance. Added to this was the increasing mistrust of Americans, born of decades of mistreatment, by Indigenous peoples as well as the lack of incentives.

Cutting-edge ideas about race positioned Native Americans not as sources of scientific information but exclusively as the subjects for scientific study, breaking with older practices that allowed Native Americans to simultaneously occupy several roles. This reclassification was moreover reinforced by the creation of the specialized field of ethnology during the 1840s.[527] Indigenous testimony thus became less common at the same time that theories of immutable racial difference effaced Indigenous expertise. Audubon's published descriptions of Native Americans followed a similar trajectory, initially emphasizing his own similarities to Indigenous peoples then later rejecting any common ground between himself and Native Americans. Unlike

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[526] See Warren, 8–9.
[527] See Robert Lawrence Gunn, *Ethnology and Empire: Languages, Literature, and the Making of the North American Borderlands* (New York: New York University Press, 2015), 4–5.

Catesby, it was not that Audubon did not have access to Indigenous testimony. It was that, by the 1830s and 1840s, Indigenous testimony was becoming less scientifically credible. This is not to say that by 1840 Indigenous testimony was epistemologically worthless—Audubon, after all, still drew on the assistance of Indigenous peoples while in the field. Audubon simply employed a more cautious and circumspect approach to scientific evidence in his published writing as he struggled throughout his scientific career to gain recognition from his naturalist peers.[528]

In spite of Audubon's authorial insecurities, his approach to Indigenous testimony was decidedly American. Instead of citing Indigenous testimony in his published writing, Audubon opted to portray the Indigenous people he encountered as romantic stereotypes—the vanishing Indian or the noble savage—and not as the members of specific nations with unique expertise.[529] Audubon relied on these stereotypes because he wanted to merge the literary style of frontier romance with scientific observations and "if possible to make a pleasing book as well as instructive one."[530] As a result, Lorimier's name and identity as well as Audubon's descriptions of his Shawnee kin disappeared entirely from *Ornithological Biography*. While the Audubon of the 1820s called Indigenous hunters his "brethren," Audubon's 1843 journals demeaned the Indigenous peoples he met along the Missouri River as dirty, destitute, and uncivilized.[531] Audubon conceded his change in opinion was partially the result of colonization, arguing that even as early as 1810 the Shawnee were "more reduced, or rather harder pressed upon by the whites."[532]

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[528] See Nobles, 120–48.
[529] See Nobles, 219º24.
[530] Audubon as quoted in Nobles, 179. Nobles argues that Audubon perfected a literary persona known as the American woodsman for promoting his book. See Nobles.
[531] Audubon (1829), 120; on Audubon's1843 impressions of Indigenous peoples, see Noble, 245–6.
[532] Audubon (1829), 114.

Audubon's decision to omit any reference to either Lorimier or his Western Shawnee kin in his published descriptions of the Bird of Washington may have also been a response to American ideas specifically surrounding the Shawnee. Western Shawnee brothers Tecumseh and Tenskwatawa became infamous following Tecumseh's War, and ethnographers who later studied the Shawnee fixated on the legendary leaders.[533] For many nineteenth century Americans, Tecumseh both exemplified the "noble savage" trope—a valiant warrior tragically crushed by American westward expansion—and served as a metonym for all Shawnee people.[534] As a result, post-1815 descriptions of the Shawnee frequently emphasized what Audubon called the "reduced" condition of the Shawnee in his 1829 account, a supposed product of their military devastation by the U.S. government.[535] To depict the Shawnee as anything other than cowed by the U.S. military was to contradict most of the ideological principals of American settler colonialism.

Audubon's descriptions of the Shawnee conformed to this pro-American narrative. Although Audubon clearly enjoyed his time with the Shawnee, his 1829 account portrayed the families he met as disadvantaged and distressed. In contrast to the Shawnee, Audubon described the Osage as "robust" and "of a nobler aspect" but to his great frustration, Audubon was unable to "get acquainted with them."[536] Had Audubon been a resident of Spanish America, however, his depiction of the Osage likely would have been less positive. The Spanish had long known the Osage as a formidable adversary and Spanish accounts often descried the Osage as both vicious

[533] Warren discusses this via Alford, who was annoyed by interviewers' obsession with the Prophet. See Warren, 69–71.
[534] See Warren, 13–42.
[535] Audubon (1829), 114.
[536] Audubon (1829), 114.

warriors and consummate thieves.[537] Audubon's obvious appreciation for the Osage but pity towards the Shawnee was a direct product of his American identity.

The Bird of Washington, as a cultural fabrication, was a product of the late eighteenth and early nineteenth century hunting camps common in the imperial borderlands of the Mississippi River Valley. Audubon's natural history research relied on the social openness of Shawnee winter hunting camps, which for generations had fostered alliance-building, information sharing, and storytelling. Audubon's proclivity for making jokes and telling tall tales complemented Shawnee *m'shoma* humor, and he used winter campfires as a beneficial space for scientific knowledge production. When Audubon's discovery of the Bird of Washington came under fire in the 1830s and 1840s, however, Indigenous testimony was losing credibility within American natural history meaning he could no longer use Indigenous expertise to defend his claims. U.S. officials needed to construe Native Americans as both racially different and racially inferior to white Americans to justify Indian Removal and this representation of Indigenous peoples influenced American natural history. Indigenous sagacity and autochthony failed to legitimize Indigenous expertise under emerging theories of immutable racial difference, which in turn made Indigenous testimony less credible as a form of scientific evidence. Concurrently, federal Indian policy made Indigenous testimony harder to obtain. Audubon's failure to cite Shawnee authority when defending his discovery of the Bird of Washington indicated that by the 1840s, the epistemological value of Indigenous testimony was waning. This decrease in value was a direct response to federal Indian policy that ultimately altered American natural history.

[537] See Warren 87–93.

Chapter 4

Agreeable Natives: Samoan Cosmopolitanism and American Global Science in the Mid-Nineteenth Century

Despite an exceptional pedigree, professional success as a naturalist remained maddeningly out of reach for Titian Ramsay Peale. Peale was the son of famed artist-inventor-curator Charles Wilson Peale, illustrator for Charles Lucien Bonaparte, and official naturalist aboard the 1838-1842 United States Exploring Expedition. Instead of gaining the acceptance of his well-educated contemporaries, Peale faced heavy criticism, mainly surrounding his clumsy use of Latin and lack of taxonomic knowledge.[538] Peale summed up his career problems well in an 1845 letter to his role model, John James Audubon: "you know I care little for the name without a history."[539] By *name*, Peale meant a Latin binomial—the prize most explorer-naturalists received for discovering a new species in the mid-nineteenth century. By *history,* he meant everything else—the habits, life cycle, appearance, folklore, human uses of, and notable encounters pertinent to describing an animal species.[540]

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[538] Early in his career, Peale received several prestigious appointments within government surveys and expeditions. He was also inducted into Philadelphia's elite scientific societies. However, after his participation the United States Exploring Expedition, his public reputation was irreparably damaged by the decision to replace Peale as the author of the expedition's scientific report with John Cassin, a rising star in ornithology who has never been to the Pacific. While this decision can be partially attributed to interpersonal issues between Peale and the expedition's commanding officer, Lieutenant Charles Wilkes, the decision was also driven by Peale's peers, who were concerned he lacked the taxonomical ability to complete the volume, and Cassin would go as far as to critique Peale's misspelled Latin names in the footnotes of his revised volume. For more information on Peale's professional decline, see Jessie Poesch, *Titian Ramsay Peale and His Journals of the Wilkes Expedition* (American Philosophical Society, 1961), especially "The Bitter Years" (94–103).

[539] Titian Ramsay Peale to John James Audubon, 29 Dec. 1845, Morris Tyler family collection of John James Audubon, GEN MSS 85, box 6, folder 278, Beinecke Rare Book and Manuscript Library, Yale University (emphasis mine).

[540] Peale and most of his contemporaries understood history to mean a story or tale as well as the study of events in the past, the way we most often use history today. Novels, descriptions, and treatises were all understood as "histories" in the nineteenth century.

In the 1850s, many American naturalists believed a schism existed between naming naturalists and historicizing naturalists, although, like so many other intellectual feuds, it existed predominantly in the minds of its ostensible victims.[541] Peale's letter referred to the fact that Sir William Jardine claimed priority in naming the genus *Didunculus*—tooth-billed pigeons—despite the fact that Peale was the first naturalist to see—and describe—these birds in the wild.[542] But Peale could have been referring to any number of incidents throughout his career when his Latin names were challenged. Latin taxonomy became a metonym for the new direction of American natural history in the mid-to-late nineteenth century: formal, professional, and institutional. For critics of this transition, such as Audubon and Peale, this meant that vibrant history was being cast aside for dry, stripped writing on morphology and comparative anatomy, things that, in their view, captured only the barest understanding of nature. For proponents of this new way of doing science, sparse, technical language promised clarity, specificity, and international commensurability. However, as Peale sagely and somewhat peevishly noted, "'a rose will smell just as sweet under another name'": naming a species was not the same as knowing or understanding it and, even as late as 1845, official species names were in a constant state of flux.[543]

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[541] The perceived divide between field naturalists and cabinet or closet naturalists was at least as old as the sixteenth century. In the lifetimes of Peale and Audubon, many writers lamented that their way of writing came under heavy criticism, but it is difficult to find any published examples of this criticism—only defenses of the literary and poetic style of natural historical writing. Historian of science Susan Sheets-Pyenson has demonstrated that as commercial natural history publishing became profitable in England during the 1830s, narrative and poetry continued to be used as a marketing strategy, lengthening publications and increasing public consumption; see Susan Sheets-Pyenson, "War and Peace in Natural History Publishing: The Naturalist's Library, 1833–1843," *Isis* 72, No. 1 (Mar. 1981): 50–72. Thus, it is more accurate to say in the nineteenth-century United States, field naturalism and closet naturalism became associated with different reading audiences—the public lay audience and the professional, academic audience, respectively.

[542] Peale was eventually vindicated—today the species name *Didunculus strigirostris* is attributed to Jardine but the genus name *Didunculus* is attributed to Peale.

[543] Titian Ramsay Peale to John James Audubon, 29 December 1845, GEN MSS 85, box 6, folder 278, Morris Tyler family collection of John James Audubon, Beinecke Rare Book and Manuscript Library, Yale University.

Even as Audubon and Peale railed against taxonomy-obsessed naturalists, they both still craved the approval of these same scientific elites and changed their natural historical methods to gain their acceptance. Although Audubon and Peale pinpointed narrative writing style—or history—as the problem, both men also conspicuously neglected citing Indigenous testimony as evidence within their writing even as they relied on Indigenous testimony and expertise in the field. The delegitimization of Indigenous testimony as a form of scientific evidence, however, was a casualty of the same process of professionalization and institutionalization that so frustrated Audubon and Peale. That neither man remarked on the absence of Indigenous testimony in the new style of American natural history speaks to the fact that this absence was both widespread and normalized by the 1840s—a mere fifty years after Benjamin Smith Barton used Indigenous testimony to great success. Both Audubon and Peale knew that by the 1830s and 40s, Indigenous testimony would no longer support their discoveries as Indigenous expertise was now limited to newly specialized fields like ethnology and philology where Indigenous peoples were objects of study rather than sources of knowledge. Like the shift away from narrative and toward technical description, the delegitimization of Indigenous testimony was a tool of exclusion, reinforcing the barrier between amateur and academic natural history. [544]

Peale's scientific career—especially his failures—illustrated the larger changes happening in American natural history in the first half of the nineteenth century. Peale's natural

[544] In reality, the relationship between popular natural history writing and professional academic natural history in the nineteenth century was decidedly more complex as it fed into the centuries-long tension between elite experts and the public. It was true that over the course of the late nineteenth and early twentieth centuries accepted *scientific* writing employed specialized language and technical terms that often required advanced training to parse, in stark contrast to the widely accessible (and very popular) narrative writing of Audubon. But both styles of writing continued to co-exist into the twentieth century, ebbing and flowing with publishing trends and consumer demand, just as they had in the nineteenth century. While outside the scope of this project, the American turn toward technical language in science during the late nineteenth century has been linked to the growth of universities as well as to the Progressive Movement and its valorization of expertise. See for example Theodore M. Porter, "How Science Became Technical," *Isis* 100, No. 2 (June 2009): 292–309.

historical methods were a throwback to his father's generation in part because Peale worked as an explorer-naturalist for several high-profile American scientific expeditions. As a member of these expeditions, Peale travelled to places where colonial infrastructure was sparse and where American authority was at best weak—knowledge production contexts that had more in common with eighteenth century natural history than the comparative methods favored in the nineteenth century. When in the (intellectually remote) field, Peale relied on Indigenous testimony and expertise concerning local flora and fauna, just as Mark Catesby, Benjamin Smith Barton, and even John James Audubon did during the eighteenth and early nineteenth centuries. But when it came to recognizing or citing that same Indigenous-authored information, Peale effaced the contributions of his Indigenous assistants and informants because he knew acknowledging their assistance would undermine his authorial credibility. Peale's automatic erasure of Indigenous testimony was especially meaningful given his struggles to emulate other updated natural historical methods. If even Peale, who railed against many modern conventions in natural history, knew not to cite Indigenous testimony, then by the mid-nineteenth century the delegitimization of Indigenous expertise was ubiquitous.

An especially telling example of Peale's effacement of Indigenous testimony comes from his work as a naturalist with the United States Exploring Expedition. Conceived in the late 1820s, the U.S. Ex Ex—as it was commonly referred to—marked America's foray into global science, traversing the globe between 1838 to 1842 and employing a civilian crew of naturalists, taxidermists, anthropologists, and artists, known as the Scientific Corps or Scientifics for short.[545] Peale was tasked with describing and collecting any mammals and birds the expedition

[545] The U.S. Ex Ex possessed a tripartite mission: to create detailed hydrographic and geographic charts for use by American commercial and naval vessels, to establish diplomatic relationships at various ports of call for these same vessels, and to conduct scientific surveys of the plants, animals, and peoples encountered. For a thorough history of

encountered, but it was not until the squadron arrived in South Seas in late in the summer of 1839 that Peale and the other Scientifics started to produce what they felt was invaluable scientific research.[546] It was even in the South Pacific that Peale made one of his only novel zoological finds on this four year expedition: the discovery of a new species of bat, the Samoan Flying Fox.[547] Peale's journals from U.S. Ex Ex mainly fixated on his many, many grievances but those same journals also made fleeting references to the networks of informants and informal assistants who helped Peale while in the field.

Unsurprisingly, while in Samoa, a scientifically fruitful site for Peale, his journals mentioned collaborating frequently with both native Samoans and British missionaries in addition to complaining about the assistant-sailor he was promised and then subsequently refused.[548] But Peale's reliance on Samoan help was more than material—it was also intellectual. Peale, like so many other naturalists of the nineteenth century, found the Pacific Islands to be intellectually productive spaces, as islands were seen as microcosms of the larger natural world. The many islands of the Pacific were thus ideal sites to conduct studies of the "real order of Nature"—veritable natural laboratories in the words of generations of natural scientists.[549] While

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the U.S. Ex Ex, see William Stanton, *The Great United States Exploring Expedition of 1838 – 1842* (Los Angeles: University of California Press, 1975).

[546] The expedition actually made two trips to the South Pacific, including Samoa, the work was deemed that important: one in 1839 and again in late 1840 and early 1841. The specimens collected on the second trip as well as Peale's journals of the second trip were destroyed in the 1841 wreck of the *USS Peacock*. The documentation of the first survey survived because it was shipped from Hawaii to the United States at the two-year mark of the expedition. See Peale as quoted in Poesch, 167.

[547] In 2009 Dr. Kris Helgen, the curator of mammals at the Smithsonian Institution's National Museum of Natural History, determined that several specimens of flying fox bats in the museum's collections previously identified as a single species were in fact three different species. One of these specimens included a bat Peale collected in Samoa and now serves as the type specimen for *Pteropus samoensis.* See John Barat, "Smithsonian Scientist Discovers Two New Bat Species Hiding In Museum Collections For More Than 150 Years**,"** *Smithsonian Insider*, 29 July, 2009.

[548] See Peale as quoted in Poesch, 161–4.

[549] On islands as microcosms, see Janet Browne, *The Secular Ark: Studies in the History of Biogeography* (New Haven: Yale University Press, 1983), 29. On scientific perception of Pacific as a laboratory, see Sujit Sivasundaram,

Peale and others found the islands of Samoa productive to think with, the idyllic, majestic landscape the U.S. Ex Ex encountered in Samoa was not entirely "natural" (as nineteenth century Americans would have defined it), but carefully produced and maintained by the Samoan people. Land management practices in Samoa dating back centuries cultivated distinct agricultural and forested spaces and favored the proliferation of selected plant and animal species. The Samoan people Peale met thus played a much larger role in the so-called discoveries of the U.S. Ex Ex than just serving as guides or assistants; Samoan land management practices directed Peale's attention the bird and mammal species he was there to ostensibly 'discover.'

Peale's research in Samoa illustrated two important things about the use of Indigenous testimony within mid-nineteenth century American natural history. First: Indigenous peoples still controlled the flow of information between themselves and colonial naturalists. Second: American naturalists relied on Indigenous testimony in places where they lacked both political and intellectual authority, meaning that by the mid-nineteenth century settler colonial politics and culture devalued Indigenous testimony within natural history; as soon as it was no longer expedient, settlers stopped acknowledging Indigenous expertise. Samoan people offered Peale information and expertise because in 1839, sharing information advanced the cultural and political goals of Peale's Samoan hosts. Peale, despite his own scientifically inflected racism, embraced Indigenous testimony as a research tool in the Pacific because few (if any) Americans knew enough to describe Samoa in the 1830s and 1840s. When Peale published his findings, however, he expunged his own reliance on Samoan testimony, conforming to prevailing racial thinking in the 1840s as well as America's imperial ambitions for the Pacific.

"Science," *Pacific Histories: Ocean, Land, People,* ed. David Armitage and Alison Bashford (New York: Palgrave MacMillan, 2014), 237.

Peale's simultaneous reliance on but effacement of Samoan expertise in 1839 demonstrated that the delegitimization of Indigenous testimony during the 1830s and 1840s was at least partially the result of the contradictory American settler colonial idea that Indigenous peoples were both knowing and racially inferior. Peale clearly operated within this contradictory ideology—otherwise, Peale would have likely ignored Samoan testimony in the field entirely. To prove this claim, this chapter examines first how Samoan politics and culture aided Peale while in the field and second, how the publications Peale and the other Scientifics produced from the U.S. Ex Ex expunged Indigenous expertise while also supporting nineteenth century American scientific racism. Peale's natural history benefitted from Samoan culture and politics in two different ways. Pragmatically, Pasifika cosmopolitanism ensured that important visitors like the Scientifics would be welcomed, provisioned, and offered information when in Samoa.[550] Intellectually, Samoan land management practices made Samoa a productive space to think with by drawing Peale's attention to specific animal species. Peale's journals, however, revealed that even while in the field, he tried to fit the Pacific Islanders he met into American racial hierarchies. The writing produced by Charles Pickering and Horatio Hale, two of his fellow Scientifics, ultimately entrenched the Polynesian-Melanesian divide and elevated American racial anthropology during the nineteenth century. Peale validated Pickering and Hale's ideas by not only confirming their observations but also by removing Indigenous testimony from his zoological and ornithological writings.

[550] Nicholas Thomas, borrowing from Kwame Anthony Appiah, argues that histories of the Pacific "might start by noting a particular cultural condition, one rarely attributed to native people at all, and never at this early state of their interactions with the colonial world—that of cosmopolitanism;" Nicholas Thomas, *Islanders: The Pacific in the Age of Empir*e (New Haven: Yale University Press, 2012), 3. I use Thomas's idea of Pacific cosmopolitanism in this chapter as a shorthand for a constellation of political and social practices used by Pacific Islanders to embrace and incorporate foreigners.

Investigating *Talanoa*[551]

When Peale and the other members of the U.S. Ex Ex arrived in Samoa, they entered a culturally and environmentally complex space and not (as they claimed) an earthly paradise characterized by "primitive simplicity."[552] Samoan powerbrokers fed, housed, and assisted Peale and the other Scientifics as part of complicated political machinations that determined if foreigners were even granted access to different islands and regions. Although European and American explorers who visited Oceania mistakenly attributed Pacific Islander hospitality to innocence and simplicity, Polynesian rituals of reception historically served to build intra-regional alliances and consolidate local power.[553] Prior to European contact, Oceanic societies were socially intricate, highly mobile, and profoundly cosmopolitan and this history facilitated European and American exploration of the Pacific during the eighteenth and nineteenth centuries. By the 1830s, Samoan society in particular prized foreign visitors and ideas as a source of needed political capital during several decades of political upheaval and inter-island conflict. The Pasifika ritual of welcoming visitors with *talanoa* (talk or discussion in Fijian, Samoan, and Tongan) additionally aided foreign explorers by providing them with local intelligence and expertise as a normal part of Samoan diplomacy. The members of the U.S. Ex Ex experienced Pasifika cosmopolitanism and benefitted from Samoa's recent history when they

[551] *Talanoa*, which is sometimes translated as casual conversation or chatting, was a concept common throughout the entire Pacific region (see Thomas, 37). Today, *talanoa* is more often translated as diplomatic storytelling and is seen as a tool for creating political consensus through sharing one's perspective. In 2018, the name Talanoa Dialogue was used by Fijian leaders to describe a region-wide meeting concerning the impact of climate change in Oceania, demonstrating the continued cultural significance of *talanoa.*

[552] Charles Wilkes, *Narrative of the United States Exploring Expedition, During the Years 1838, 1839, 1940, 1841, 1842,* Vol. 2 (Philadelphia: Lea and Blanchard, 1845), 140.

[553] Literary scholar Paul Lyons argues that American intervention in the Pacific generated an ideological construct he names Pacificism. While earlier accounts of the Pacific included descriptions of violence, danger, and cannibalism, American Pacificism literally pacified Oceania, turning it into an idyllic site for tourism by erasing this history. See Paul Lyons, *American Pacificism: Oceania in the U.S. Imagination* (New York: Routledge, 2005). The impact of this ideological construct on the writing of U.S. Ex Ex is discussed later in this chapter.

explored Oceania, both of which facilitated their movement in the region. The Scientifics moreover used *talanoa* as an investigative tool to seek out novel plant and animal species.

In the Pacific Islands, cosmopolitanism took the form of both flexible social structures that readily incorporated foreigners and placed a high cultural value on learning and intellectual curiosity. Oceania's long-standing history of inter-island mobility fostered the regional growth of cosmopolitanism as a political and social institution. In recent years, scholars have adopted the Islander perspective that the Pacific Ocean was and is not a barrier but a bridge that connected the hybrid societies of Oceania.[554] For most of Oceanic history, the sea was a symbol and a source of duality—potential rivals as well as resources and riches moved between islands and along the currents of the Pacific Ocean.[555] Although intra-regional war was common, many Islander communities still recognized their relatedness and sustained community ties through tools such as strategic marriages, shared religious rituals, and trade.[556] For example, Fijian, Samoan, and Tongan people all claim a shared history and genealogy that fostered seasonal diplomatic voyages and friendly inter-island trade. Fijians traded bark-cloth to Tongans, who wanted Fijian wood and feathers, while Samoan turmeric and arrowroot were highly desirable

[554] The Pacific Islands are generally divided into three arbitrary groupings: Melanesia, Micronesia, and Polynesia. Many of these classifications rest on racist European views—for example, Fiji shares both linguistic and religious ties to Polynesia but is classified as part of Melanesia as part of a European desire to claim Fijians were both darker in complexion and less civilized than other Pacific Islands. On the partitioning of Oceania, see Thomas, 126-57. On the dynamism of the Pacific Ocean, see David Armitage and Alison Bashford, "Introduction: The Pacific and its Histories," in *Pacific Histories: Ocean, Land, People,* ed. David Armitage and Alison Bashford (New York: Palgrave MacMillan, 2014), 1–30.

[555] See Paul D'Arcy, *The People of the Sea: Environment, Identity, and History in Oceania* (Honolulu: University of Hawai'i Press, 2006), 98-117.

[556] Recently, DNA evidence has vindicated what many oral genealogies in Tonga, Fiji, and Samoa have long claimed. On recent DNA evidence, see Damon Salesa, "The Pacific in Indigenous Time," in *Pacific Histories: Ocean, Land, People,* ed. David Armitage and Alison Bashford (New York: Palgrave MacMillan, 2014), 31–52; on alliances between Tongans, Fijians, and Samoans see D'Arcy, 56–7.

commodities, encouraging peaceful—if tense—exchanges.[557] These oceanic circuits integrated the Pacific into regional and global trade networks long before European contact.

In response to the high level of mobility between islands, Polynesian societies often normalized receiving strangers and guests. For centuries, Islanders undertook "voyages of settlement," war, and trade, resulting in shared histories and epics that centered the exploits of "strangers," who both overthrew rulers and brought new wealth and power.[558] On most islands, it was customary to claim (sometimes violently) any people or objects that washed ashore but larger parties or distinguished individuals received better welcomes. Rituals like the Fijian *solevu*—the presentation of gifts to a different community—or the Tahitian *muli*—the adoption of foreign retainers—celebrated contact and exchange.[559] This Oceania-wide normalization and celebration of strangers enabled European and American voyages of exploration.

Members of the U.S. Ex Ex tacitly understood their research was contingent on the permission of Pacific Islanders, who determined if the expedition's ships could land let alone disembark. When the squadron arrived in Reao, for example, the people living there refused to let the ships land and instead shouted "Go to your own land; this belongs to us, and we do not want to have anything to do with you," preventing any exploration of the small atoll.[560] In Fiji, the situation was much worse. One of the goals of the U.S. Ex Ex as a more comprehensive survey of Fiji, but attempts to capture a murderous Fijian chief, Veidovi, led to the massacre of ten Fijians by members of the U.S. Ex Ex and hamstrung any detailed research on the island. By contrast, in Samoa, where leaders wanted foreigners on their islands and in their villages, the U.S

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[557] See D'arcy, 53.
[558] Thomas, 10. On myths concerning strangers, see D'Arcy, 123.
[559] See D'arcy, 57.
[560] As quoted in Thomas, 147. The words of the residents of Reao were translated by Tuati, a Maori sailor who served as the U.S. Ex Ex's interpreter and navigator. See Thomas, 147.

Ex Ex worked productively and comfortably. Unsurprisingly, Peale and the other Scientifics felt that they conducted their most "profitable" research when they were properly welcomed or "not annoyed by the company of any natives."[561] The U.S. Ex Ex's scientific successes and failures in the Pacific owed much to Pasifika cosmopolitanism.

The complex system of Polynesian chiefdoms added new political capital to the reception and adoption of foreigners during the eighteenth and nineteenth centuries. During the eighteenth century, new chiefdoms formed, Pacific trading systems were realigned, and new inter-island alliances were forged—trends that included (but were not caused by) Europeans and which increased political instability in the region.[562] Long before the eighteenth century, most Polynesian societies developed highly stratified arrangements of chiefs, landowners and commoners with some islands, like Tahiti, also adopting a paramount chief or king.[563] Although most Polynesian chiefs held power based on hereditary rights, they could also use conquest and warfare to increase their influence and consolidate local power, intensifying inter-island warfare.[564] Shrewd Polynesian chiefs recognized that the ability to control strange forces and subordinate foreigners demonstrated their spiritual and political superiority.[565] In response to the turmoil of the eighteenth and nineteenth centuries, all things European and American gained added social capital. Iron, due to its rarity, gained special meaning and reverence after European contact.[566] Christian objects and rituals were similarly selectively adopted with the underlying

[561] Peale as quoted in Poesch, 174.
[562] See Thomas, 12.
[563] See Robert Aldrich, "Politics," in *Pacific Histories: Ocean, Land, People,* ed. David Armitage and Alison Bashford (New York: Palgrave MacMillan, 2014), 312.
[564] See Aldrich, 312.
[565] See D'Arcy, 133.
[566] See Thomas, 43–4.

assumption that new rituals offered new sources of *mana* (generative spiritual power).[567] Ritually adopting visitors from Europe confirmed to a chief's subjects that he could channel *mana*—and by accepting his hospitality, guests were acknowledging their inferiority to the host.

In addition to the political capital that foreign guests and servants offered Polynesian elites, many eighteenth- and nineteenth-century Polynesian chiefs valued cosmopolitanism and learning and thus embraced outsiders as sources of information. Famous Polynesians including Mai, Ahutoru, and Kualelo toured Europe on their own journeys of exploration, while leaders like Pomare II of Tahiti insisted that missionaries instruct him in reading and writing.[568] Pacific Islanders frequently requested passage on foreign vessels—including those of the U.S. Ex Ex—to nearby islands or even Europe and America, augmenting a long history of Pasifika exploration, migration, and mobility.[569] Islanders who returned home with new tales and goods often found their social status raised and in places like Hawaii and Rotuman, long-distance journeys became a rite of passage for young men.[570] This social context where new ideas were valued benefitted and enabled the scientific exploration of the U.S. Ex Ex by normalizing the exchange of information between Islanders and outsiders.

Samoans embraced the mobility and cosmopolitanism that characterized Oceania as a whole. The Navigator Islands—as Samoa was called by Europeans in the eighteenth and nineteenth centuries—were so named because Samoans "are frequently visiting their neighbors on the neighboring islands."[571] Massive Samoan boats, capable of transport hundreds of people,

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[567] See M.D. Olson, "Re-Constructing Landscapes: The Social Forest, Nature And Spirit-World In Samoa," *The Journal of the Polynesian Society* 106, No. 1 (March 1997): 20.
[568] See Thomas, 4; Thomas, 100.
[569] See Thomas, 48–55; on Islanders requesting passage on U.S. Ex Ex vessels, see for example Poesch, 157.
[570] See D'arcy, 137–8.
[571] Missionary Aaron Buzacoot, in D'arcy, 57.

carried entire villages with their chiefs on *malaga* (journeys) of trade and diplomacy.[572] According to Charles Wilkes, the mercurial commander of the U.S. Ex Ex, the Samoans he met in 1839 were "in the habit of make a "faatamilo," or circuit around a portions of these islands" for months at a time, receiving "hospitality and accommodation" wherever they went.[573] Wilkes additionally saw Pasifika cosmopolitanism first-hand and described the Samoans as "very inquisitive," adding "it was amusing to excite their curiosity" by explaining the use of manufactured goods like false teeth, wigs, and globes.[574] According to Wilkes, "all [Samoans], whether young, middle-aged, or old, are anxious to learn, and their perseverance […] is astonishing."[575] Samoan chiefs likely provided guidance Peale and the other Scientifics as part of a (hopefully) reciprocal information exchange.

Samoa in particular experienced significant upheaval in the late eighteenth and early nineteenth centuries that ultimately benefitted foreigners looking for an entrée into Samoa. Political upheaval in Tahiti during the late eighteenth century, inter-island warfare with Tonga in the 1820s, and internal power struggles in 1830 all made Samoan chiefs more receptive to British missionaries when they visited Samoa in 1830.[576] Through Pasifika diplomatic and trading networks, Samoan leaders knew all a lot about British missionaries long before they ever met any.[577] When British missionary John Williams made the London Missionary Society's first foray into Samoa in 1830, he expected to experience resistance from chief and high priest Tamafaiga, but Williams fortuitously discovered Tamafaiga had been assassinated only weeks

[572] See D'arcy. 57
[573] Wilkes, vol. 2, 148.
[574] Wilkes, 127.
[575] Wilkes, 111.
[576] See Thomas, 42 and D'Arcy, 105.
[577] See Thomas, 115.

before he arrived. Malietoa Vai'inupo, a chief vying for control of Tamafaiga's recently vacated seat, embraced Williams, as Malietoa knew that the introduction of a new religion might help legitimize his new regime.[578] It was this series of political events and not divine providence that transformed Samoa into one of the LMS's biggest successes in Polynesia. When the members of the U.S. Ex Ex arrived in Samoa in 1839, they benefitted from the LMS's successes in Samoa as well as the recent history of political upheaval there.

Along with the assistance the U.S. Ex Ex Native Samoans provided, Peale and the other Scientifics used British missionaries stationed in Samoa as interpreters and assistants. Charles Pickering, one of the other naturalists accompanying the U.S. Ex Ex, noted in his journals that the Samoan language posed unique linguistic difficulties as "the [Samoan] language [is] so far from being understood by the Tahitians, or so different that they can never acquire it perfectly."[579] Pickering's own excursions, led by native guides who were provisioned and rewarded for their labor, required missionary translators.[580] Peale similarly recorded encounters with missionaries "Mr. Mills" (William Mills), "Mr. Bachman," and "Mr. Williams" (John Williams).[581] At least one of these missionaries, John Williams, was himself an amateur naturalist and likely relished his time spent with the crew.[582] Peale also mentioned seeking help from a "Mr. Cunningham" (W.C. Cunningham, a British diplomat), an interpreter named William Cowley (formerly a sailor who now lived on Samoa), and a Brazilian Sailor named John

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[578] See Thomas, 113.
[579] Charles Pickering, "Journal : in His Handwriting, Kept by Him While on the United States Exploring Expedition, Wilkes, Commander." (n.p,, 1838–1841), microfilm, 128–9.
[580] See Pickering, 129.
[581] Peale, in Poesch, 163.
[582] Although he posthumously gained a reputation as an explorer, Williams became famous throughout England not because of his natural historical research but because of his death. Williams and another missionary were killed on island of Erromango and widely became known as the first Christian martyrs of the South Pacific. See Thomas, 118–21.

Maitland.[583] British missionaries did much of the social and diplomatic legwork for members of the U.S. Ex Ex by introducing and guiding them through Samoan society and freeing them to focus more singularly on research.

When making inquiries and conducting research, the members of the U.S. Ex Ex found the Samoans helpful and loquacious. This was likely the result of *talanoa* that "loomed large" in almost every Polynesian society.[584] When visitors arrived, when diplomatic gifts were made, or when important events were commemorated, a series of strict ritual protocols were typically followed: first *kava* and refreshments were offered to those present in order of their social rank before an oration was delivered and then the *talanoa* commenced. The topics of *talanoa* included everything ranging from quotidian gossip to foreign intelligence to delicate political negotiation, but the ritual itself reinforced the social hierarchy. Adopted foreigners and visitors were included in *talanoa* and treated according to their rank.[585] Wilkes recalled being received at the village of Sagana by the same Malietoa who welcomed Williams and the LMS. Malietoa (with the help of an interpreter), shared a long and "agreeable talk" with the American naval commander, relishing the topic of war.[586] Wilkes's conversations with Malietoa, which took place over shared refreshments, were a clear example of *talanoa*. Wilkes even described the general Samoan practice of "tala-gota [talonoa], the speech of the lips," by name, explaining it was an event where "principal personages collect and visit the strangers, telling them in a set speech the pleasure they enjoy at their arrival" and consuming "ava [kava"].[587] Wilkes's additionally

[583] Peale, as quoted in Poesch, 163.
[584] Thomas, 37.
[585] See Thomas, 37–8.
[586] Wilkes, vol. 2, 94.
[587] Wilkes, 149.

recorded Samoan histories, songs and, and even a legendary poem concerning an ancient war between the then allied Upolu and Sava'ii—all information likely relayed during *talanoa*.[588]

While Wilkes was the highest ranked member of the U.S. Ex Ex, he was not the only member of the expedition to receive a diplomatic welcome. On the island of Rangiora, Peale described "about 100 natives on the beach" who met them and carried their boats ashore.[589] In Tahiti, Peale mentioned being served "a good supper" with the "great addition in honor of strangers: plates & bowls, some tea, arrow root and Slap Jacks [pancakes]."[590] Based on information from Peale's journals, he was also treated to the conversational parts of *talanoa* but language barriers probably prevented him from recognizing it as such. Instead, *talanoa* protocols were likely modified to accommodate and incorporate the Americans by using translators, who relayed important information for members of the U.S. Ex Ex but could not necessarily replicate the normal flow of *talanoa.*

Both Peale and Wilkes recorded examples of *fanua*—Samoan definitions of place that were simultaneously ecological, spiritual, and historical—that were probably provided during *talanoa*.[591] In his journal, Peale described going in search of a cave on the island of Upolu "formerly dedicated to the God 'Moso' by the natives whom supposed him to reside in it."[592] Peale was interested in Moso's cave because, according to his translator, W.C. Cunningham, the cave was "inhabited by Swallows which never saw the light of day."[593] Peale and his scientific party were additionally guided through the local system of caves (possibly the Falemauga Caves)

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[588] Wilkes, 95.
[589] Peale, in Poesch, 156.
[590] Peale, in Poesch, 159.
[591] On the concept of *fanua*, see Sa'iliemanu Lilomaiava-Doktor, "Oral Traditions, Cultural Significance of Storytelling, and Samoan Understandings of Place or Fanua," *Native American and Indigenous Studies* 7, No. 1 (Spring 2020): 121–51.
[592] Peale, in Poesch, 163.
[593] Peale, in Poesch, 163.

by man Peale called "Chief Lelomiana."[594] Lilomaiava is a chiefly title and not an individual's name, but this man's involvement in the search for Moso's cave implied the story came through elite diplomatic channels like *talanoa*. Knowing that Peale's goal in Samoa was to locate bird and mammal species, the residents of Upolu probably shared this piece of intelligence with Cunningham as part of a diplomatic exchange.

Wilkes similarly described hearing other examples of *fanua*—places with ecological and historical meaning. According to Wilkes, two members of the Scientific Corps, "Messrs. Dana and Couthouy visited a lake called Lauto [Lanoto'o]." [595] Wilkes elaborated that Lake Lanoto'o:

> is regarded with superstitious dread by the natives, who believe it to be the abode of the spirits […] These were supposed to inhabit the waters of the lake, in the shape of eels, as thick as a cocoa-but tree, and two fathoms long. The attempt of our gentlemen to explore it was looked up as such as profanation that their native guides left them, and regarded them as persons doomed to accident if not destruction. The eels were represented as so savage and fierce that they would bite a person's leg off. No eels, however, nor any other fish, were seen in the lake.[596]

The story of giant, man-eating eels, as examples of *fanua,* would have fallen within normal topics for *talanoa*. Wilkes also described meeting a chief name "Toa" on Tutuila, who welcomed his party and then:

> became quite communicative, and as he showed me about his village, he told me, through the interpreter, that before the missionaries came, the chiefs all had their "aitu" or spirits, which they worshipped […] His [Toa] aitu were fresh-water eels, which he constantly fed in the brook near the village.[597]

By entertaining Wilkes, a dignitary, and then telling him about his *aitu* (lesser god or spirit), Toa was engaging in a modified version of *talanoa*, even if Wilkes did not explicitly classify it as such.

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[594] Peale, in Poesch, 163.
[595] Wilkes, vol. 2, 95–6.
[596] Wilkes, 95–6.
[597] Wilkes, vol. 2, 77.

Samoan *talanoa* advanced the U.S. Ex Ex's scientific goals in the Pacific. The expeditions' members were welcomed, provisioned, guided, and—most importantly—given information about the local environment. The reception the U.S. Ex Ex received was, however, part of a much longer history of Pasifika cosmopolitanism that converged with recent political events in Samoa to produce an ideal site for American scientific research. None of this was the doing of Wilkes and his crew but was entirely directed by their Samoan hosts. Descriptions of Moso's cave and the eels of Lake Lanoto'o—likely passed during Samoan *talanoa*—ignited further research by the Scientifics, who investigated each site for unusual animal species. Although the Scientifics in both cases did not find what they had hoped to, Samoan ideas and practices were still productive for American naturalists.

The tempting Edens of the South Pacific

Both Lake Lanoto'o's eels and Moso's cave were objects of scientific interest for the U.S. Ex Ex by Samoan design. *Fa'a-Samoa* (Samoan culture and ways of knowing) nurtured and shaped the environment of the Samoan islands through concepts like *sā* (sacred or forbidden) and through entities like *aitu*, material manifestations of the divine like the eels described by Toa. As a land management principal, *sā* dictated that different ecological spaces should be left untouched to preserve a spiritual and ecological balance. Similarly, plant and animal species identified as *Aitu* were classified as *sā* and as a result were protected and cultivated by individual Samoans. These Samoan land management practices and ethics intellectually guided the attention of Peale and the other Scientifics in addition to the material assistance that Polynesian diplomacy provided the U.S. Ex Ex. It was these man-modified features and not the supposedly natural riches of the Pacific that made Samoa a productive place for American naturalists to think.

The concept of *sā*—the Samoan equivalent of the Polynesian idea of *tapu* (*taboo*), something that possessed both spiritual potency as well as interdiction—connected to larger a Samoan ethic that shaped the Samoan landscape the U.S. Ex Ex explored.[598] *Sā* included chiefly prohibitions on fishing certain species, growing certain crops and cultivating certain spaces, all of which historically prevented soil exhaustion, deforestation and habitat exhaustion in Samoa.[599] Members of the U.S. Ex Ex were at least partially aware of Samoan land management practices. Pickering wrote of "artificial 'clearings" and patterns of growth that indicated to him agricultural land rotation practices.[600] Wilkes described how Pickering "engaged natives to accompany him into the interior, and to visit the Mu or burnt district."[601] Pickering additionally noted the cultural dimensions of these practices. During one excursion, Pickering stated that it was necessary to get the permission of "sort of 'the Lord of the Forest'" before entering protected spaces allowed to grow "wild" with yams.[602] The practice Pickering described was most likely form of *sā* where "chiefly prerogative on the harvesting of productive crops" prevented overuse.[603]

Members of the Scientific Corps, including Pickering and Peale, noted what they saw as the sublime nature of the Pacific Islands, and it was the American perception of natural wealth and majesty in the South Pacific that drove scientific and colonial interest there.[604] For European

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[598] Samoan historian Sa'iliemanu Lilomaiava-Doktor argues that the terms "land tenure" and "land" imperfectly graft on to Samoan ideas of place and fa'a-Samoa (Samoan ways of knowing). I use "land ethic" here as a rough but flawed equivalent for this complex religious and social perspective on the environment. See Lilomaiava-Doktor, 121–3.
[599] See Olson, 19–20.
[600] Pickering, 139; see Pickering, 129.
[601] Wilkes, vol. 2, 110.
[602] Pickering, 129.
[603] For a more detailed discussion of *tapu, see Olson, 20*.
[604] David Igler writes about the associations of the Pacific with the sublime in his essay on J.D. Dana (the expeditions geologist) in "On Coral Reefs, Volcanoes, Gods, and Patriotic Geology: Or, James Dwight Dana Assembles the Pacific Basin," although he extends this experience of the sublime to Pickering as well as other Euro-American experiences of the Pacific. See Igler, "On Coral Reefs, Volcanoes, Gods, and Patriotic Geology: Or, James Dwight Dana Assembles the Pacific Basin," *Pacific Historical Review* 79, No. 1 (February 2010): 23–49.

and later American explorers, the islands of the Pacific were depicted as "mountain summits clothed in forests," an idyllic combination that complemented dominant American descriptions of the natural sublime.[605] Members of the U.S. Ex Ex described the Pacific as "enchanted" and "luxuriant."[606] U.S. Ex Ex Midshipman Joshua Reynolds wrote of "the tempting Edens of the South Pacific," calling Tahiti "a lovely place of such delicious beauty" and lamenting "I could not help thinking of a life in this Eden" upon leaving the Samoan island of Tutuila.[607] American perceptions of Samoa as sublime (based in large part on Samoan land management practices) led them to treat Samoa as an ideal sight for scientific research.

By trying to fit the Samoan landscape into a preconceived definition of the sublime, American naturalists inadvertently made the identification of novel plant and animal species easier, as any organism that strayed from their idealized image became scientifically interesting. For example, one Peale's most significant scientific findings while with the U.S. Ex Ex was the naming of a new species of fruit bat, *Pteropus samoenesis* (the Samoan Flying-Fox). Peale noted at the beginning of his first journal entry on Samoa that "I found several interesting birds and the Colored Vampire (Pteropus ruficollis [*Pteropus samoenesis*]). Contrary to my expectations they [Samoan Flying-Foxes] were abroad flying in daylight, and one that I wounded uttered loud scream when captured."[608] The surprising presence of these large, diurnal bats disrupted Peale's understanding of Samoa-as-sublime and drove his inquiry into this animal's form and distribution. According to Peale, "the only mammalia [sic] indigenous to the group [the Navigator Islands] are rats & flying foxes (Pteropus ruficollis), the latter are very abundant and

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[605] Olson, 10.
[606] Dana, in Igler, 31; Pickering, 122.
[607] William Reynolds, *The Private Journal of William Reynolds: United States Exploring Expedition, 1838-1842* (New York: Penguin, 2004), 85, 93, 119.
[608] Peale, in Poesch, 161.

destructive [of] all kinds of fruit, never allowing any to ripen on the trees."[609] Although Peale would see more Pteropus in Fiji—"I shot a fine specimen of Pteropus ("Flying fox")—and Singapore—"amongst [a banyan tree's] numerous roots I found a new species of 'Vampyre' bat Pteropus"—it was never with the same frequency that he saw in Samoa.[610] The alterity of flying foxes—with wingspans over two and a half feet, daytime flight, loud screeches, and malodorous nests—ultimately proved productive for Peale to think with, who correctly surmised that "each group of islands [had] its peculiar species" of bat.[611] Although Samoans would not have seen these bats as out of place, Peale saw Samoan flying foxes in sharp contrast to their cultivated habitat.

When Peale noted the abundance of the Samoan flying fox in his scientific report, he was responding to Samoan land management practices. While it is unclear if Samoan flying foxes took the form of *aitu*, they did have sacred and mythological associations within Samoan cosmology as *pe'a* (bats).[612] More importantly, Samoans adhered to seasonal cycles of planting, fishing, and gathering that favored profusion of species like the Samoan flying fox.[613] *Alaga'upu* (proverbs) instructed Samoan peasants how and when to harvest certain resources and used ecological sentinels like the Samoan flying fox to mark seasonal change. One such *alaga'upu* specified that "A momona le vao ua tapisa le gataifale/When the forest is abundant, the coastline is noisy," which spoke "to the congruence between the maturation of fruiting trees and the

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[609] Peale, in Poesch, 164.
[610] Peale, in Poesch, 174, 203.
[611] Titian Ramsay Peale, *Mammalia and Ornithology: v. [8] of United States Exploring Expedition during the years 1838, 1839, 1840, 1841, 1842 under the command of Charles Wilkes, U.S.N.* (C. Sherman: Philadelphia, 1848), 5.
[612] The United States National Park Service includes a note on *pe'a* on their site on the National Park of American Samoa, continuing the American scientific legacy of using flying foxes as a metonym for the Samoan landscape. See "What is a Fruit Bat?" National Park Service, accessed 10 June, 2016, https://www.nps.gov/npsa/learn/education/classrooms/fruit-bats-are-our-friends.htm.
[613] On seasonal cycles, see D'Arcy, 36.

maturation of marine resources" by reminding peasants both resources were ready to harvest at the same time.[614] Another *alaga'upu* notes that:

> An abundance of fruit berries and nuts invites pe'a/fruit bats, manutagi/fruit doves, and lupe/pigeons to feed on them. The convergence of birds and mammals in the trees generates a melodic, playful, and sometimes mournful sound. When this phenomenon coincides with the full moon, it is time to hunt these animals.[615]

This *alaga'upu* adds important context to Peale's claims that flying foxes were both "destructive of all kinds of fruit, never allowing any to ripen on the trees" and seen "abundantly" throughout the islands of Samoa as "one of the characteristics in the wild and varied scenery."[616] The lack of ripe fruit was likely the result of the season and not, as Peale argued the bats' behavior, while the prolific numbers of bats were also not a coincidence but part of a socially regulated hunting and harvesting cycle. Peale, like many of his naturalist colleagues, viewed the Pacific Islands as idyllic natural laboratories. Like an actual laboratory, however, the conditions in Samoa were controlled through human intervention, bringing certain elements into sharp focus and obscuring others.

Additionally, individual Samoans cultivated and protected many different plant and animal species associated with their personal *aitu*—eels, trees, fish, bats—and as a result, the relative abundance or scarcity of those animal species was the result of human intervention.[617] In Wilkes' published narrative, he described how Toa domesticated the eels in a particular brook, explaining that "there were many [eels] in it [the brook] formerly, and quite tame; but since he had embraced Christianity, they had all been caught and destroyed."[618] As *aitu*, Tao's eels were

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[614] Lilomaiava-Doktor, 135.
[615] Lilomaiava-Doktor, 135.
[616] Peale, 5.
[617] See Olson, 18–20
[618] Wilkes, vol. 2, 77.

previously *sā*—a sacred incarnation of the divine that was "untouchable in a harmful way" and subject to "powerful conservation" on Tao's part—the feeding and protection he provided those specific eels prior to his conversion.[619] Although Tao's eels were destroyed shortly before Wilkes arrived in Samoa, their prior cultivation revealed how Samoans modified the distribution of plant and animal species within the natural environment.

Peale similarly used the story of the swallows in Moso's cave to inspire his field research. Peale, "directed by Capt Wilkes," assembled a party "consisting of Mr. Rich [U.S. Ex Ex botanist], Dr. Fox [U.S. Ex Ex medical doctor], Mr. Blunt [Midshipman Simon Blunt] & myself with [William] Crowley as interpreter, Sutter, and three natives" to investigate the story of the mysterious cave.[620] Once there, Peale quickly determined that despite their "bat-like voice[s]," the swallows were nothing more than "the common species of the island."[621] Although Peale dismissed the story of Moso's cave as local superstition, the residents of Upolu were in fact guiding Peale to a rich spiritual and environmental space. Moso was a Samoan *aitu* was strongly associated with the village of Falealupo on the western edge of the island of Savai'i—a village that also served as a spiritual center for Samoans due to its association with Pulotu (the underworld).[622] Peale's interpreter, "the missionary Mr. Bachman," mistakenly took him to a cave found on western edge of Upolu—not Savai'i— but that cave still likely held spiritual meaning to Bachman's Samoan parishioners as a western-most point on the island.[623] *Aitu* and

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[619] Olson, 19.
[620] Peale, in Poesch, 163.
[621] Peale, in Poesch, 163.
[622] See Caroline Sinavaiana-Gabbard, "Sina and Nafanua: Mother Goddess Enacting Primordial Spirituality in Samoa," in *Whispers and Vanities: Samoan Indigenous Knowledge and Religion*, ed. Tamasailau M. Suaalii-Sauni (Wellington: Huia Publishers, 2014), 444–64; Moso was probably another name for Saveasi'uleo, who lived in an underwater cave.
[623] Peale as quoted in Poesch, 163. In Samoan cosmology, life originated in the west and thus westernmost points guided mortals to liminal spaces between the mortal world and the realms of the divine. See D'Arcy, 118–9.

the spirits of the deceased, who often took the form of woodpigeons, owls, and *ve'a* (banded rails), purportedly congregated at the liminal space near Pulotu, meaning that Peale's informants were likely taking him to a cave that they believed was overrun with otherworldly birds. Any birds that lived in these caves were moreover protected by their association with spirits. Like Tao's eels, the avian *aitu* of Moso's cave were there by design and not by chance.

On the whole, the U.S. Ex Ex's month spent in Samoa was a huge success for the expedition, and Wilkes wrote that the squadron's "work was all expeditiously and well done."[624] In addition to accurately surveying and mapping the island group, in Samoa "full experiments were made in magnetism and extensive collections obtained in natural history, botany, &c, the islands being traversed by parties in several directions for this purpose."[625] In summarizing the squadron's accomplishments, however, Wilkes conspicuously omitted the enormous assistance provided by Samoans, the very people who made the U.S. Ex Ex's time in Samoa so scientifically full and expeditious. Pasifika cosmopolitanism ensured the American explorers would be well-received while practices like *talanoa* provided the naturalists with needed intelligence about the local flora and fauna. *Fa'a-Samoa* moreover resulted in a carefully cultivated and managed natural environment that made extensive natural historical collecting possible. Cosmopolitanism, *talanoa*, and *Fa'a-Samoa*, however, were all tools used by Samoan chiefs to build alliances and shore up their own authority. Peale and the other Scientifics owed an intellectual and material debt to their Pasifika hosts—but in the nineteen volumes published upon the U.S. Ex Ex's return, the contributions of Pacific Islanders were downplayed, caricatured, or

[624] Wilkes, vol. 2, 114.
[625] Wilkes, 114.

wholly erased, reflecting the larger goals of the expedition as well as mid-nineteenth century scientific racism.

Narrating the U.S. Ex Ex

Although the U.S. had not yet colonized Samoa at the time of the U.S. Ex Ex, Peale and the other Scientifics operated under the directive of what was effectively a colonizing mission.[626] American businessmen and politicians in the early nineteenth century wanted to expand into the Pacific and the U.S. Ex Ex promised to make this expansion happen. The U.S. Ex Ex was created to produce detailed hydrographic and geographic charts for use by American commercial and naval vessels as well as to establish diplomatic relationships at various ports of call for these same vessels and conduct scientific surveys of natural resources. As a result of these goals, the scientific findings produced by the U.S. Ex Ex were filtered through a prevailing American fascination with the Pacific during the Early Republic. The scientific journals and reports created by the U.S. Ex Ex moreover justified the expedition's colonizing mission by exaggerating the racial difference of Pasifika peoples and depicting them as in need of guidance and tutelage—a portrayal that mimicked the prevailing way in which the U.S. described Indigenous North Americans. Peale's process of effacing Indigenous labor and testimony from his published report, *United States Exploring Expedition Volume VIII: Mammalia and Ornithology* (1848), conformed to a larger American vision of race science that not only undergirded policies such as Indian Removal on the continent but that also informed a colonizing view of the Pacific that supported and funded the U.S. Ex Ex.

[626] In 1899, the U.S. and Germany partitioned Samoa into two major halves, with the U.S. officially annexing the islands known today as American Samoa between 1900 and 1904 although Americans interfered in Samoan affairs throughout the nineteenth century. After 1904, American Samoa effectively became an U.S. naval outpost with large military installments. On the partitioning of Samoa see Thomas, 281–2.

Despite the remoteness and relatively small size of the Pacific Islands, Oceania loomed large in antebellum American imagination. Ideologically, Americans viewed the Pacific as an idyllic, passive space where outsiders could project their desires and prove their identities.[627] Nineteenth-century Americans projected a "stepping-stones narrative" on the Pacific Islands, which positioned the Pacific as a strategic step to the real goal—Asia—that distinguished it from European ideas about the Pacific.[628] American ideas about the Pacific thus developed alongside the "economic nationalism" of the early nineteenth century.[629] Both American science and interest in the Pacific grew following the War of 1812 when the new American nation considered its place in global politics.[630] The South Pacific was already frequented by American whaling and commercial ships, meaning that producing better maps, establishing favorable relationships with local leaders, and identifying any natural resources was of the utmost importance to many Americans.[631] As early as 1812, Boston Newspapers reported that sandalwood procured in Fiji could be sold at a ten-fold profit, while "Birlip"—a boy from Fiji—was exhibited at a Baltimore museum in 1836.[632] A genre of newspaper stories called "the news from the Feegee" emerged and lobbied "to establish a military presence to protect commerce in Oceania".[633] Initial support

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[627] Lyons argues that American intervention in the Pacific generated an ideological construct he names Pacificism, which built on European discourses about the Pacific. Like Orientalism (which inspired Lyons), Pacificism is a discursive representation of Oceania that structures art, literature, science, and foreign policy surrounding the Pacific and constructs Oceania as a place to prove American identity. American Pacificism literally pacified Oceania, turning it into an idyllic site for tourism and transforming it into a passive space for the projection of American desire. See Lyons.
[628] Lyons, 39.
[629] Lyons, 18.
[630] Rosemarie Zagarri develops the argument that War of 1812 constituted a "global turn" in United States history; see Zagarri, "The Significance of the 'Global Turn' for the Early American Republic: Globalization in the Age of Nation-Building," *Journal of the Early Republic* 31, no. 1 (2011): 1–37. Stanton, an expert on the U.S. Ex Ex, similarly argues the events following the War of 1812 contributed directly to the Expedition's conception; see Stanton, 1–7.
[631] See Stanton, 41–6.
[632] Stanton, 50–1.
[633] Stanton, 51.

for the U.S. Ex Ex grew from this vocalized desire to protect American commercial interests as well as to develop knowledge about what resources might exist in the Pacific Islands.

Initially conceived of in the late 1820s, the U.S. Ex Ex possessed a tripartite mission: to create detailed hydrographic and geographic charts for use by American commercial and naval vessels, to establish diplomatic relationships at various ports of call for these same vessels, and to conduct scientific surveys of the plants, animals, and peoples encountered. Although the Expedition's geographic purview expanded during the 1830s, it was American interests in whaling, sandalwood, seals, and fishing in the Pacific that sustained interested in the Expedition through multiple presidencies.[634] While in the field, Wilkes was explicitly tasked with establishing trading relationships with Islanders in order to foster American economic expansion.[635] The perceived problem posed by the indigenous people of Oceania was their resistance to capitalist exchange, so Wilkes was also directed to preach the importance of property rights and ideally to colonize the Pacific through the peaceful introduction of Euro-American commodities.[636] Wilkes in many ways failed in this task, massacring a Fiji village and opening hostilities in Samoa, but the U.S. Ex Ex was still guided by this capitalist diplomacy.[637]

Emulating other government-funded expeditions, Wilkes arranged for a congressional appropriation to produce a series of reports "in a form similar to the 'Voyage of the Astrolabe,' published by the government of France" with individual volumes divided roughly by subject.[638] The nineteen published volumes produced by the U.S. Ex Ex following their return invoked the literary conventions of existing writing about the Pacific, describing the purported "treachery" of

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[634] See Stanton, 17, 29.
[635] See Thomas, 114.
[636] Lyons, 51; See Lyons, 48–53.
[637] On Wilkes's failures, see Stanton, 288.
[638] Wilkes, in Poesch, 97.

Islanders, celebrating the natural abundance of sandalwood and other commodities, and relaying lurid accounts of Indigenous cannibalism.[639] The published accounts and exhibitions produced by the U.S. Ex Ex inflamed existing American popular interest in the Pacific and inspired new works, including Herman Melville's 1846 novel *Typee: A Peep at Polynesian Life*, which drew directly on Commander Charles Wilkes' *Narrative of the United States Exploring Expedition*.[640] As government publications authored by respected scientists, the reports confirmed sensational accounts produced by sailors and foreigners, in effect 'proving' extant existing American ideas about the Pacific.

Despite Peale's later criticisms about the increasingly dry, technical style of natural history, he, Pickering, and the other Scientifics all managed to lace their ostensibly formal naturalists' reports with colorful, ideologically laden descriptions of Samoa. In his ostensible disinterested descriptions of Samoan wildlife, Peale reiterated three American stereotypes about the Pacific that had more to do with America's imperial ambitions than reality: that the Pacific was Edenic in nature; that Pasifika peoples were supposedly indolent, and that Oceanic peoples were more receptive to trade and alliance due to the simultaneous abundance and scarcity of key resources. These ideological constructions justified American intervention in the Pacific as these beliefs framed the region as rich, underdeveloped, and in need of external support and guidance.[641] Even if Peale did not possess a vested financial or political interest in the Pacific, his understanding of the distribution of animal species in Oceania was informed by the U.S.'s colonial vision for the Pacific.

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[639] See Lyons, 24–47.
[640] See Lyons, 75–6.
[641] On perceived indolence of Pacific Islanders as well as the perceived scarcity of resources like iron or livestock, see for example Nicholas Thomas, *Entangled Objects: Exchange, Material Culture, and Colonialism in the Pacific* (Cambridge: Harvard University Press, 1991) and Lyons.

Peale tellingly opened *United States Exploring Expedition Volume VIII: Mammalia and Ornithology* with a description of the Samoan flying fox, a species Peale named for its ubiquity within the Samoan landscape. Peale elaborated that the "spectral appearance" of *Pteropus* (fruit bats or flying foxes) "is one of the characteristics in the wild and varied scenery [of Fiji and Samoa]" adding that "[*Pteropus*] will always be remembered by persons who have visited the interesting regions inhabited by these animals."[642] Unlike his sparse journals, *Mammalia and Ornithology* added evocative details like the fact that *Pteropus*' "strong odour [sic] taints the atmosphere of the otherwise fragrant forests," and are "most active at twilight."[643] Peale's description of *Didunculus strigirostris* (the tooth-billed pigeon he complained to Audubon about) similarly invoked American fantasies surrounding Samoa. According to Peale, the "bird formerly abounded at the Island of Upolu […] [inhabiting] the tree, called owa by the natives […] a remarkable feature in the Samoan scenery" with "broad and ample branches spreading like umbrellas."[644] Peale added that the "natives of the Samoan Islands, who spend much of their time indolently, are fond of pets, which are mostly Pigeons or Doves, their islands not affording suitable quadrupeds."[645] In these and other descriptions, Peale embedded American ideological constructs of the Pacific into his official naturalists' reports. The dearth and wealth of certain species, the alleged domestication of different animals, and the lushness of the Samoan landscape all dominated Peale's descriptions of the natural history of Samoa and directly reinforced the U.S.'s colonial vision for the Pacific.

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[642] *Pteropus* is a genus of so-called megabats. They are some of the largest bats recorded and are commonly referred to as "flying foxes" or fruit bats; Peale, 5.
[643] Peale, 5.
[644] Peale, 211
[645] Peale, 211.

While Peale's published report emphasized both his perception of the Samoan landscape as sublime and the paradoxical abundance and inadequacy of the Pacific, the formal journals he kept during his tenure as a U.S. Ex Ex naturalist were peppered with descriptions and queries about the race of Pasifika peoples. Even though Peale's primary "pursuits were ornithological," his journals carefully catalogued the phenotypical features of the Pacific Islanders he met, focusing on their height, skin color, and hair texture.[646] For example, Peale noted that the residents of the Tuamotu Islands were "of a dark colour with a Malay cast of countenance [...] Their hair was bushy."[647] Peale also compared Pacific Islanders to other races, claiming some Islanders had a "Moorish look" or that others "were well formed, of a dark brown colour, redder than Negroes, but blacker than N. Am^{n} Indians, hair black and curly looking at a little distance like wool."[648] According to Peale, the Samoans were "a fine, athletic race but not so mild in appearance or disposition as the Tahitians."[649] Peale's descriptions revealed that he brought his pre-existing assumptions that Pasifika people were of a dramatically different race to the Pacific and used them to make sense of what he experienced. Additionally, Peale's need to compare the people he met to African Americans, Indigenous North Americans, and other Islanders established early on that white Americans wanted to fit Pasifika peoples into existing racial hierarchies that cemented their supposed immutable inferiority. Doing so allowed Americans to claim racial superiority over Pacific Islanders, intellectually justifying colonization.

Although describing the physical characteristics of Indigenous peoples had been a common feature of natural history for centuries, Peale and the other members of the U.S. Ex Ex

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[646] Peale, in Poesch 156
[647] Peale, in Poesch 150
[648] Peale, in Poesch 152.
[649] Peale, in Poesch 161.

brough new rigidity to their descriptions. For example, when Mark Catesby described the general physical appearance of "the *Indians* of *Carolina* and *Florida*," he included idiosyncratic traits such as "their fingers [are] long and slender" and "they never pare their Nails."[650] Catesby additionally implied many of these physical traits were the products of culture. According to Catesby, "the Colour of their [Indigenous Carolinians'] Skin is tawny, yet would not be so dark did they not daub themselves over with Bears Oyl."[651] Although Catesby believed "No People have stronger Eyes or see Better" that Native Americans, he similarly added that "in their Houses they live in perpetual Smoke," implying their visual acuity may have been a learned trait.[652] In Catesby's writing, there was not a set of fixed traits that measured racial difference nor were racialized traits permanent. In contrast, Peale focused very narrowly on describing the height, skin color, hair texture and color, "ornaments" (like tattoos), dress, and the tools or weapons of each of the populations he encountered.[653] Moreover, Peale rarely provided explanations for these physical traits, like grooming practices or the impact of the local environment, indicating that Peale assumed certain characteristics like height and hair texture were standard attributes that could be used to universally measure human difference. Peale and the other Scientifics crafted formulaic descriptions of Pasifika peoples that inscribed racial difference rather than simply noting physical differences existed.

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[650] Mark Catesby, *The natural history of Carolina, Florida and the Bahama Islands : containing the figures of birds, beasts, fishes, serpents, insects, and plants : particularly, the forest-trees, shrubs, and other plants, not hitherto described, or very incorrectly figured by authors : together with their descriptions in English and French : to which, are added observations on the air, soil, and waters : with remarks upon agriculture, grain, pulse, roots, &c. : to the whole, is prefixed a new and correct map of the countries treated of*, 2 vols. (London, 1731–1743 [1729–1747]), *I*, "Account," viii.
[651] Catesby, *I,* "Account," viii.
[652] Catesby, viii.
[653] See for example Peale, in Poesch, 150, 152.

Beyond describing Samoan's as racially other, Peale also emphasized how Samoans purportedly benefitted from or wanted foreign assistance. In nearby Tuamotu, Peale claimed Islanders were "a thievish set" and he underscored their clumsy and ineffective attempts at trade "frequently crying out 'tapa' holding up some wove cloth, but always taking care to retain it."[654] In contrast, Peale described Samoans as well-versed trading partners—possibly too experienced for Peale, who complained that the residents of Upolu "have learned to extort by every means in their power" and yet he "could not induce any Natives to trade their shells or curiosities with us, it being the Missionary sabbath."[655] Peale implicitly credited the Samoan's amenableness to British missionaries, who had converted "a considerable portion" of the estimated 20,000 Samoans to Christianity.[656] Peale additionally admired the fact that "About 6000 [Samoan] children attend the schools."[657] These and other crewmembers' descriptions emphasized Samoa as a place that had speciously benefitted from foreign intervention, positioning Samoa as an ideal candidate for American colonization.[658] The language used by Peale, Wilkes, and other members of the U.S. Ex Ex to portray Samoans mirrored the language that American advocates of "moral and intellectual "improvement" programs applied in Indigenous North Americans.[659]

Although Peale was in no way on the scientific vanguard, his natural historical methods and his collaboration with Indigenous Samoans complemented his larger mission as a member of the U.S. Ex Ex: science in service American imperial expansion. In his published writing on

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[654] Peale, in Poesch, 152.
[655] Peale, in Poesch, 161.
[656] Peale, in Poesch, 161.
[657] Peale, in Poesch, 161.
[658] For example, Wilkes repeatedly underscored the neatness, regularity, and domesticity of Samoa in his published narrative.
[659] On "improvement" or "civilization" programs, see Sean P. Harvey, "'Must Not Their Languages Be Savage and Barbarous Like Them?' Philology, Indian Removal, and Race Science," *Journal of the Early Republic* 30, No. 4 (Winter 2010): 505–32.

Samoan birds and mammals, Peale still managed to underscore the richness of the Samoan landscape and the scarcity of key resources, conveniently effacing Samoan labor and land management. Peale's journals additionally provided his preliminary impressions of Samoa—impressions that deliberately supported what American *wanted* to believe about Indigenous Samoans: that Samoans were racially inferior but would benefit from American guidance and interventions. Peale's calculated omissions and inclusions in his published writing were all consistent with American imperial visions for the Pacific. In his published writing on Samoa's mammals and birds, Peale did not cite Samoan testimony or expertise. By omitting this source of Indigenous information, Peale bolstered the distinctly colonial argument that Samoans needed American assistance.

"WHAT WAS A SCIENTIFIC CORPS SENT FOR?"[660]

Peale's exclusion of Samoan testimony from *United States Exploring Expedition Volume VIII: Mammalia and Ornithology* (1848) not only molded his writing to American colonial views of the Pacific—it also aligned his research with prevailing scientific practices. Unfortunately for Peale, this particular methodological change was not enough to redeem *Mammalia and Ornithology* in the eyes of its critics. After only one hundred copies of Peale's text were printed in 1848, Wilkes ordered printing to cease and assigned another naturalist, rising American ornithologist John Cassin, to "complete" Peale's volume despite the fact that Cassin did not accompany the expedition.[661] Other members of the Scientific Corps were, however, more successful than Peale—James Dwight Dana (a geologist), Horatio Hale (a philologist), and Charles Pickering (a medical doctor and expert on race) all received professional acclaim for the

[660] Peale, in Poesch, 154. Peale petulantly scrawled this phrase in his official journal to protest Wilkes's instructions that the Scientifics not be permitted to disembark on certain islands.
[661] See Poesch, 100-1.

research they published. Unlike Peale, who lacked a formal education or specialized skills, Hale and Pickering exemplified the new professional naturalist. Hale and Pickering additionally published works that embodied the new American approach to the science of race in the mid-nineteenth century by supposedly explaining and proving immutable racial differences existed while Peale's writing simply acknowledged racial differences existed.

Both the marginalization of old-fashioned naturalists like Peale and the delegitimization Indigenous testimony were responses to the professionalization and compartmentalization of natural history in the mid-nineteenth century. Ethnology and philology, which purported to study Indigenous peoples, gained authority thanks to patronage from the U.S. government and suppressed external commentary on Indigenous expertise. The rise of ethnology and philology also supported U.S. Indian Removal policy, a devastating political project that simultaneously stemmed the flow of Indigenous testimony to American naturalists. Indian Removal in the first half of the nineteenth century geographically isolated Indigenous peoples, particularly those living in the Eastern Woodlands, and destroyed the kinds of multi-ethnic social formations that facilitated information sharing.[662] During Removal, Indigenous peoples still controlled the flow of information but without either the social structures and spaces that facilitated information exchange or the political incentive to act as informants, Indigenous testimony grew rarer within continentally-focused American natural history.

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[662] Chapter 3 of this dissertation discusses the practice of destroying multi-ethnic settlements in more detail. The policy of Indian Removal was of course not applied uniformly and impacted different regions at different times. For example, Dakota and Anishinaabeg peoples west of the Mississippi River preserved their political dominance and autonomy well into the nineteenth century. Settler naturalists in the eastern U.S., however, frequently used their limited experiences to make sweeping generalizations about all Native Americans and moreover wanted to claim success for Indian Removal. On nineteenth-century Dakota and Anishinaabeg politics, see Michael Witgen, *An Infinity of Nations: How the Native New World Shaped Early North Americ*a (Philadelphia: University of Pennsylvania Press, 2013).

Wilkes' decision to replace Peale as the author of *Mammalia and Ornithology* was based both on interpersonal conflicts between Peale and almost every member of the Scientific Corps as well as on serious doubts concerning Peale's scientific abilities. Throughout his career, Peale published very few scientific journal articles—an increasingly important professional metric. Additionally, Peale's ability as a taxonomist, facility with Latin, and familiarity with comparative anatomy were all fairly limited.[663] All of these shortcomings were noted by Cassin in his revised 1858 version of *Mammalogy and Ornithology* (now designated Volume XIIIb). Cassin cited both Peale and Pickering as his sources of contextual information and interlaced quotes from Peale's *Mammalia and Ornithology*, Peale's journal, and Pickering's journal with Cassin's own anatomical observations of the specimens obtained by Peale. Cassin's original writing was peppered with criticisms of Peale, although Cassin tellingly thanked Pickering (another, more established member of the Scientific Corps) in his acknowledgements.[664] Peale's *Mammalia and Ornithology*, like his journals, reflected his informal, apprentice-based scientific training: both were relatively sparse and did not present the exhaustive tables and extensive citations coming into vogue for nineteenth century scientific writing. Cassin's volume, by comparison, provided more precise formatting and citations. Cassin listed the class, order, family, and genus as well as their citations before naming the species of each animal. Notably, neither author used Samoan testimony or expertise to support their observations and claims.

The methodological differences between Peale, Cassin, and the other Scientifics were the result of the gradual professionalization of American natural history—a process that happened

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[663] See Poesch, 98.

[664] Cassin wrote: "I am indebted to the kindness of Charles Pickering, M.D.," but did not thank Peale, only stating "from the notes and observations of Mr. Titian R. Peale, another of the naturalists of the Expedition, much has also been derived," in a particularly pointed use of the passive voice; John Cassin, *Mammalogy and ornithology* (Philadelphia: J.B. Lippincott, 1858), V, VI.

"at varying rates across different specialties" but that was an "unmistakable" trend by the mid-nineteenth century.[665] The professionalization of American natural history was a complex "professional-amateur-public system," or spectrum of reforms that initially lacked cohesive criteria but which still managed to excluded some practitioners by classifying them as amateurs.[666] In the 1840s, paid positions for naturalists were still fairly uncommon but American natural history increasingly respected specialized knowledge and skills (fluency in Latin, familiarity with anatomical terms, etc.) as the hallmarks of a good naturalist. Even in the mid-nineteenth century university-educated, paid specialists assumed a hierarchal relationship with supposed amateurs, mimicking the dynamic between British and American naturalists decades earlier.[667] Peale worked during a transitional period for natural history when there were not firm standards for who was and was not a naturalist but Peale's illiteracy in cutting edge terminology (as well as his numerous interpersonal conflicts) placed him firmly outside of those changes.

Professionalization also facilitated the partitioning of natural history into expert scientific disciplines. With new training and educational opportunities centered on specialized skills, nineteenth century ornithologists, ethnologists, geologists, and others could employ a more detailed and granular approach to the natural world instead of the more wholistic but less focused purview of classical natural history.[668] The organization of the U.S. Ex Ex's Scientific Corps, which employed seven naturalists with different collecting subjects, indicated that already in the

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[665] Mark Barrow provides an excellent and concise overview of the contentious topic of scientific professionalization. See Mark Barrow, *A Passion for Birds: American Ornithology After Audubon* (Princeton: Princeton University Press, 2000), 4-6.
[666] Barrow, 5; Older models of professionalization identified characteristics like full-time occupation, formal educational requirements, and formal licensing or certification procedures as necessary features of professionalization but several generations of historians of science have dismissed these rigid criteria as both ahistorical and overly rigid. See Barrow, 4–5.
[667] On the late professionalization, see Barrow 5–6.
[668] See Andrew Lewis, *A Democracy of Facts: Natural History in the Early Republic* (Philadelphia: University of Pennsylvania Press, 2011), 154-6.

1830s the American scientific community valued concentrated expertise. Defined scientific fields, however, also led to considerable squabbling as members fought to "maintain status, privilege, and monopolistic domination in their field by establishing and policing institutionally sanctioned boundaries between experts and their potential rivals."[669] In some cases, rivals could take the form of other naturalists—ornithologists, for example, commenting on Indigenous beliefs concerning birds might draw conclusions better made by ethnologists. Under this disaggregated logic, Indigenous testimony had no place in fields that were not tailored to the study of Indigenous peoples.

In the mid-nineteenth century, perhaps no American scientific field was subject to more policing and professionalization than the scientific study of Indigenous peoples. By the 1820s, the U.S.'s contradictory approaches to Indian policy produced a cacophony of opinions concerning Native Americans—could Native Americans be "civilized," what was the best tool for assimilation, was removal justified—that American politicians desperately wanted to consolidate into a single informed approach.[670] Ethnology and the related field of philology promised to provide the insight and clarity needed by government officials because naturalists in these fields argued that cultural practices as well as language and linguistic abilities served as metonyms for mental ability. An entire population's mental and racial superiority or inferiority could thus supposedly be measured by the language they spoke, by their marriage customs, or by any other arbitrary marker.[671] As a result, the federal government assumed the role of "a solicitor, arbiter, and creator of ethnological, particularly philological knowledge" early in the nineteenth century, turning ethnology and philology into vocational fields as early as the

[669] Lewis, 154.
[670] See Harvey, 523–6.
[671] See Harvey, 530.

1820s.[672] This ethnological and philological knowledge *of* Indigenous people framed Indigenous people as passive objects that could be observed and scrutinized and frequently rejected Indigenous expertise on North American flora and fauna. Government funding for and legitimation of ethnology and philology fostered both early professionalization and monopolistic claims to expertise on all things Indigenous. Wholistic naturalists like Peale, without special training or qualifications in ethnology and philology, knew better than to comment on Indigenous expertise or use Indigenous testimony, which was increasingly categorized as quaint and intellectually backwards.

In the continental U.S., philology took center stage in public debates surrounding Indian removal. Prominent American philologists during the 1820s claimed that Indigenous languages were the largest obstacle to assimilating Native Americans and thus mandatory English-language instruction could solve the supposed problem caused by Indigenous nations without the use of violence or wars of extermination.[673] English-only education additionally supported the claim that Native Americans were vanishing or disappearing, adding new urgency the racialized study of Indigenous peoples under the guise of salvage ethnography.[674] In the Pacific, ethnology and philology similarly promised to facilitate the U.S.'s imperial goals. The organizers of the U.S. Ex Ex insisted that a philologist be included in the Scientific Corps and Hale and Pickering's writing about Pacific Islanders provided guidance to potential colonizers.[675] Hale, writing after famed French Explorer Jules Dumont d'Urville, added authority to the claim that all Pasifika peoples fell into one of three groups: Melanesian, Micronesian, and Polynesian.[676] This tripartite

[672] Harvey, 507.
[673] See Harvey, 513–4.
[674] Harvey, 513–4.
[675] See Thomas, 143–8.
[676] See Thomas, 152.

classification, however, was based on arbitrary divisions that were heavily informed by the racial prejudices of European and American explorers.

Hale, for example, was emphatic that Fijians "differ from the Polynesian as the wolf from the dog," unambiguously classifying Fiji as part of Melanesia despite Fiji's proximity to and cultural ties with places like Tahiti and Samoa, both categorized as parts of Polynesia.[677] In the nineteenth century, the term Melanesian (meaning Black islander) carried negative associations and implied the people of Fiji were more violent and less civilized than those of Samoa.[678] Hale, Pickering, and Peale's physical descriptions of Fijians reinforced the idea that Fijians were racially distinct from Polynesian and explained away the Fijians attempts to violently repel the U.S. Ex Ex as racially motivated instead of a legitimate response to the American squadron's own attacks on Fiji. By making these claims about Melanesians, Hale and the other Scientifics directed American imperial attention towards Polynesians and away from Melanesians. In places like Samoa and Hawaii, being labeled as Polynesian projected a false image of passivity and openness despite the complex social and military structures in those places.[679] Like in the continental U.S., philology and ethnography promised to make the Indigenous peoples of the Pacific more manageable for American officials. Information that contradicted this vision—like the idea that Indigenous people possessed expertise—had no place in the new American science of race.

Peale's struggles to gain professional recognition as a naturalist were indicative of larger changes taking place within American natural history. Peale was a decidedly old-fashioned field

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[677] Hale, in Thomas, 153.
[678] On the negative origins of the word Melanesian, see James Belich, "Race," in *Pacific Histories: Ocean, Land, People,* ed. David Armitage and Alison Bashford (New York: Palgrave MacMillan, 2014), 270.
[679] Belich calls this construct the "White Savage" see Belich, 270.

naturalist and when he travelled to Samoa, he relied on Indigenous expertise like his intellectual predecessors did. Peale's research benefitted enormously from features of Polynesian cultures and Samoan politics that reflected Samoan control over the flow of information. But Peale's later decision to efface Samoan testimony from his already shaky writing demonstrated that even out-of-date Peale knew Indigenous testimony was no longer a credible form of scientific evidence in the 1840s. This delegitimization of Indigenous testimony deliberately coincided with U.S. Indian Removal, a political policy that generally made Indigenous testimony harder for naturalists like Peale to come by isolating Indigenous peoples and destroying social spaces where information exchange was common. Samoa, however, was both geographically distant from and not yet settled by the U.S., meaning that by the late 1830s Samoan people still had something to gain by sharing information and forming alliances with American explorers. Peale, faced with places and peoples virtually unknown to Americans, reverted to older methods of field research, and fortuitously for Peale, Samoan politics complemented those methods even as Peale removed Samoan expertise from his published writing. By erasing his Samoan informants' complex environmental knowledge and cosmopolitanism, Peale ultimately reinforced a fictious imperial vision of Polynesian people both racially inferior and easily colonized.

Conclusion

On March 10, 1797, a letter from Moravian missionary John Heckewelder to Benjamin Smith Barton was read before the American Philosophical Society (APS). The letter described a creature known to the "Mohican Indians" as "Ahamagachktiat" and as "Amangachktiat" to "the Delawares [Lenape]," which Heckewleder translated as "the Big Naked Bear."[680] Heckewelder, paraphrasing his Indigenous sources, claimed that:

> among all animals that had been formerly in this country, this was the most ferocious […] it attacked and devoured man and beast […] [and] with its teeth it could crack the strongest bones. […] it could not see very well, but in discovering its prey by scent, it exceeded all other animals. […] it pursued its prey with unremitting ravenousness, and that there was no other way of escaping, but taking to a river […] [as] it could seldom be killed.[681]

After relaying an account of a time when an Indigenous hunting party successfully killed a big naked bear, Heckewelder added that "the history of this animal used to be a subject of conversation among the Indians, especially when in the woods a hunting."[682] More recently, however, Heckewelder heard the creature described by Indigenous parents who would "say to their children when crying: 'Hush! The naked bear will hear you, be upon you, and devour you.'"[683] Despite the big naked bear's association with cautionary tales told to cajole children, Heckewelder believed "the story had foundation" in material reality and possibly described a then-extinct predator.[684] By reading Heckewelder's letter before the APS, Barton validated Heckewelder's argument that the big naked bear merited additional investigation by American naturalists.

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[680] John Heckewelder, "A Letter from Mr. John Heckewelder to Benjamin Smith Barton, M. D. Containing an Account of an Animal Called the Big Naked Bear," *Transactions of the American Philosophical Society* 4 (1799): 260.
[681] Heckewelder, 260.
[682] Heckewelder, 261.
[683] Heckewelder, 261.
[684] Heckewelder, 261.

Instead of using the big naked bear as evidence concerning Indigenous beliefs or credulity, both Heckewelder and Barton treated Mohican and Lenape speakers as authorities on American nature. Over one hundred years later, American anthropologists concluded that the big naked bear described by Heckewelder was not a physical animal but a variation or "proto-concept" of the "Eastern Algonkian myth" of "the Windigo or fabulous cannibal giant concept."[685] In drawing this conclusion, early twentieth century ethnologists dismissed Heckewelder and Barton's belief that eighteenth century Mohican and Lenape people knew something about North American nature that they did not.[686] To these professional anthropologists, the big naked bear provided evidence of Indigenous beliefs and culture and not reliable information about the natural world. And by the beginning of the twentieth century, American anthropologists had successfully the claimed intellectual authority to speak conclusively on topics pertaining to Indigenous peoples.

American anthropologists in the late nineteenth and early twentieth centuries drew much of their scholarly clout from Smithsonian Intuition. The creation of the Smithsonian Institution in the mid-nineteenth century, moreover, dramatically altered all of American natural history by quite literally acting as an avenue for institutionalization and professionalization. Founded in 1846 for "the increase and diffusion of knowledge," the Smithsonian represented the first organized and sustained effort by the U.S. government to supposed American natural history.[687] Joseph Henry, the first Secretary of the Smithsonian

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[685] F.T. Siebert, "Mammoth or "Stiff-Legged Bear," *American Anthropologist*, New Series 39, No. 4, Part 1 (Oct. - Dec. 1937): 725. Siebert's observations were also based on anthropological studies of Native American bear folklore created at the turn of the century.

[686] As Siebert's title hinted, some American ethnographers entertained the possibility the big naked bear was another name for a mammoth but quickly dismissed this hypothesis due to the supernatural abilities attributed to the create. See Siebert.

[687] Wealthy British naturalists James Smithson willed his estate to "the United States to found in the City of Washington, under the name of the Smithsonian Institution, an establishment for the increase and diffusions of

Institution, immediately "established of "Programme of Organization"" in 1847 that divided the topics studied at the hybrid research library and museum into sections or departments.[688] Notably, Henry formed a "Moral and Political Class" that included ethnology and philology.[689] By partitioning the Smithsonian into classes, Henry placed the organization on the cutting edge of natural history, which was only just beginning to dissolve into discrete disciplines during the 1840s.

As a scholarly organization created by the U.S. government in the mid-nineteenth century, much of the work supported by Smithsonian addressed topics of deep political importance. High on this list of topics was U.S. Indian policy, a political project that American ethnologists and philologists had been collaborating with the U.S. War Department on since the 1820s.[690] It is thus unsurprising that the first publication the Smithsonian Institution produced in 1848 was an anthropological study.[691] During the 1850s and 1860s, anthropology not only became a centerpiece of the Smithsonian's research, the Smithsonian also began producing guidelines for ethnological and philological research.[692] In 1879, John Wesley Powell founded the Bureau of American Ethnology, a research unit within the Smithsonian that systemized and codified how Americans understood Indigenous peoples.

My dissertation ends at the moment when this history began: in 1848 when Peale published his scientific report for United States Exploring Expedition. The scientific

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knowledge among men"; Pamela Henson, "Nineteenth Century Smithsonian Anthropologists: Creating A Discipline And A Profession," *AnthroNotes* 29, No. 1 (Spring 2008): 12. Using this bequest as a source of funding, the Smithsonian's Board Regents – acting at the behest of the U.S. government—became a major patron of American natural history in the mid-nineteenth century.

[688] Henson, 13.

[689] Henson, 13.

[690] See Sean P. Harvey, "'Must Not Their Languages Be Savage and Barbarous Like Them?' Philology, Indian Removal, and Race Science," *Journal of the Early Republic* 30, No. 4 (Winter 2010): 505–32.

[691] See Henson, 13.

[692] See Henson, 13.

specimens gathered by Titian Ramsay Peale and other members of United States Ex Ex eventually became the Smithsonian's first museological collection after a winding and convoluted journey.[693] Of the forty tons of objects brought back by the squadron, 2500 were classified as either ethnographic or archeological specimens, meaning the U.S. Ex Ex also contributed to the Smithsonian's anthropological turn.[694] The organization of the Scientific Corps, with its delegated areas of expertise, hinted at what American natural history would become in a post-Smithsonian world: professional, specialized, and technical. For the most part Peale and the other Scientifics continued to study the natural world after 1846 but I stop here in part because this new way of doing natural history was fundamentally different from the old. Although there were certainly some continuities, comparing the methods of someone like Mark Catesby to Horatio Hale is like comparing apples to oranges; Catesby strove to provide an eclectic and wholistic portrait of North America while Hale analyzed the minute grammatical differences of Indigenous languages.

I also stop in 1848 because the value and use of Indigenous testimony within American natural also radically changed in this historical moment. While the delegitimization of Indigenous testimony was connected to the professionalization of natural history, I have argued in this dissertation that those intellectual changes were secondary to the eventual erasure of Indigenous expertise. Instead, the credibility and reliability of Indigenous testimony corresponded to the political relationships between Anglophone naturalists and Indigenous peoples. Indigenous people like Fani' Minko', William Henry Killbuck, Louis Lorimier, and Malietoa Vai'inupo all had political motivations for sharing

[693] See Anthony Adler, "From Pacific to the Patent Office: The US Exploring Expedition and the origins of America's first national museum," *Journal of the History of Collections* 23, No. 1 (2011): 49–74.
[694] See Henson, 12.

information, including natural historical knowledge, with Anglophone explorers, missionaries, and naturalists. Anglophone naturalists relied on these individuals' expertise just as they often relied on Indigenous alliances for material and political support. When Americans stopped regarding Indigenous peoples as their political equals, American naturalists could no longer rationalize their reliance on Indigenous expertise.

Bibliography

Primary Sources

Archival Collections

BV Miller papers, New York Historical Society, New York, NY.

Communications to the Historical and Literary Committee of the American Philosophical Society, 1816-1821 (Mss.970.1.H35c), American Philosophical Society Library.

Geography and Map Division, Library of Congress, Washington, D.C.

Jay I. Kislak Collection, Rare Book and Special Collections Division, Library of Congress

Journals of the Lewis and Clark Expedition, University of Nebraska Press, online

Microfilm reproduction from the Massachusetts Historical Society

Morris Tyler family collection of John James Audubon, Beinecke Rare Book and Manuscript Library, Yale University, New Haven, CT.

Books, Articles, Reports, and Pamphlets

Adair, James. *The history of the American Indians; particularly those nations adjoining to the Missisippi East and West Florida, Georgia, South and North Carolina, and Virginia: containing an account of their origin, language, manners, religious and civil customs, laws, form of government, punishments, conduct in war and domestic life, their habits, diet, agriculture, manufactures, diseases and method of cure... With observations on former historians, the conduct of our colony governors, superintendents, missionaries, & c. Also an appendix, containing a description of the Floridas, and the Missisippi lands, with their productions--the benefits of colonizing Georgiana, and civilizing the Indians--and the way to make all the colonies more valuable to the mother country*. London: E. and C. Dilly, 1775.

Alford, Thomas Wildcat. *Civilization and the Story of the Absentee Shawne*e. Norman: University of Oklahoma Press, 1979.

Audubon, John James. "Journey Up the Mississippi," *The Winter's Wreath for MDCCCXXIX* (London and Liverpool, 1829): 104–127.

Audubon, John James. "'Notes on the Bird of Washington (Fálco Washingtoniàna), or Great American Sea Eagle' (fig. 53.)," *The Magazine of Naturel History and Journal of Zoology, Botany, Mineralogy, Geology, and Meteorology* 1 (1829): 115–120.

Audubon, John James. *Ornithological Biography, or An Account of the Habits of the Birds of the United States of America; Accompanied by Descriptions of the Objects Represented in the Work Entitles The Birds of America Interspersed with Delineations of America Scenery and Manners*. Philadelphia: E.L. Carey and A. Hart, 1832.

Audubon, John James. *The Life of John James Audubon, the naturalists, edited by His Widow with an introduction by Jas. Grant Wilson*. New York: G.P. Putnam's Sons, 1901.

Barton, Benjamin Smith. “A memoir concerning the fascinating faculty which has been ascribed to the rattle-snake, and other American serpents.” *Transactions of the American Philosophical Society* 4 (1799): 74–113.

Barton, Benjamin Smith. *A Discourse on Some of the Principal Desiderata in Natural History and on the Best Means of Promoting Science in the United States*. Philadelphia: Denham & Town, 1807.

Cassin, John. *Mammalogy and ornithology.* Philadelphia: J.B. Lippincott, 1858.

Catesby, Mark. *The natural history of Carolina, Florida and the Bahama Islands : containing the figures of birds, beasts, fishes, serpents, insects, and plants : particularly, the forest-trees, shrubs, and other plants, not hitherto described, or very incorrectly figured by authors : together with their descriptions in English and French : to which, are added observations on the air, soil, and waters : with remarks upon agriculture, grain, pulse, roots, &c. : to the whole, is prefixed a new and correct map of the countries treated of,* 2 vols. London, 1731–1743 [1729–1747].

Dudley, Paul. “An account of the rattlesnake.” *Philosophical Transactions* Vol. 32, Issue 376 (31 December 1723): 292–295.

Edgar, Lady Matilda Ridout (ed). *Ten Years of Upper Canada in Peace and War*. New York: Garland Publishers, 1977.

Hall, Captain and Sir Hans Sloane. “An Account of Some Experiments on the Effects of the Poison of the Rattle-Snake. By Captain Hall. Communicated by Sir Hans Sloane, Bar. Med Reg &c.,” *Philosophical Transactions* Vol. 35, (01 January 1728): 309–315.

Heckewelder, John. *History, Manners, and Customs of The Indian Nations Who Once Inhabited Pennsylvania and the Neighboring States*. Philadelphia: The Historical Society of Pennsylvania, 1888.

Heckewelder, John. “A Letter from Mr. John Heckewelder to Benjamin Smith Barton, M. D. Containing an Account of an Animal Called the Big Naked Bear,” *Transactions of the American Philosophical Society* 4 (1799): 260–262.

Jones, David. *Journal of Two Visits Made to the Nations of Indians on the West Side of the River Ohio, in the Years 1772 to 1773*. Burlington: Isaac Collins, 1774.

Larsen, Esther Louise. “Pehr Kalm's Account of the North American Rattlesnake and the Medicines Used in the Treatment of its Sting,” *The American Midland Naturalist*. Vol. 57, No. 2 (Apr. 1957): 502-511.

Lawson, John. *A New Voyage to Carolina: Containing the Exact Description and Natural History of That Country: Together with the Present State Thereof. And a Journal of a*

Thousand Miles, Travel'd Thro' Several Nations of Indians. Giving a Particular Accounts of Their customs, Manners, &c. London: 1709, electronic edition.

Mather, Cotton. "An extract of several letters from Cotton Mather, D. D. to John Woodward, M. D. and Richard Waller, Esq; S. R. Secr." *Philosophical Transactions*. Vol. 29, No. 339 (01 January 1714): 62–71.

Nairne, Thomas and Alexander Moore (ed). *Nairne's Muskhogean Journals*. Jackson: University Press of Mississippi, 1988.

Nash, Linda Clark (ed.). *The Journals of Pierre-Louis de Lorimier, 1777–1795.* Quebec: Baraka Books, 2012.

Peale, Titian Ramsay. *Mammalia and Ornithology: v. [8] of United States Exploring Expedition during the years 1838, 1839, 1840, 1841, 1842 under the command of Charles Wilkes, U.S.N.* C. Sherman: Philadelphia, 1848.

Poesch, Jessie. *Titian Ramsay Peale and His Journals of the Wilkes Expedition*. Philadelphia: American Philosophical Society, 1961.

Ranby, John. "The anatomy of the poisonous apparatus of a rattle-snake, made by the direction of Sir Hans Sloane, Bart. Præs. Soc. Reg. & Coll. Med. Together with an account of the quick effects of its poison; by John Ranby, Esq; Surgeon to his Majesty's Houshold, and F. R. S.," *Philosophical Transactions*. Vol. 35, No. 401 (01 January 1728): 377–382.

Reynolds, William. *The Private Journal of William Reynolds: United States Exploring Expedition, 1838-1842*. New York: Penguin, 2004.

Siebert, F.T. "Mammoth or "Stiff-Legged Bear," *American Anthropologist*, New Series 39, No. 4, Part 1 (Oct. - Dec. 1937): 721-725.

Sloane, Sir Hans. "Conjectures on the charming or fascinating power attributed to the Rattle-Snake: grounded on credible accounts, experiments and observations," *Philosophical Transactions*. Vol. 38, No. 433 (31 December 1733): 321–331.

Smith, John. *The generall historie of Virginia, New England & the Summer Isles : together with The true travels, adventures and observations, and A sea grammar*. engr. John Barra (1624).

Spencer, Joab. "Shawnee Folk-Lore," *The Journal of American Folklore* 22, No. 85 (Jul-Sept. 1909): 319–326.

Spencer, Joab."The Shawnee Indians: Their Customs, Traditions, and Folk-Lore," *Collections of the Kansas State Historical Society* 10 (1908): 382–401.

Spencer, O.M. *The Indian Captivity of O.M. Spencer*. Chicago: The Lakeside Press, 1917.

Trowbridge, C.C., Vernon Kinietz (ed), and Erminie W. Voegelin (ed). *Shawnese Traditions*. Ann Arbor: Univeristy of Michigan Press, 1939.

Tyson, Edward. "Vipera caudi-sona Americana, or the anatomy of a rattle-snake, dissected at the repository of the Royal Society in January 1682," *Philosophical Transactions*. Vol. 13, No. 144. (31 December 1683): 25–60.

Wilkes, Charles. *Narrative of the United States Exploring Expedition, During the Years 1838, 1839, 1940, 1841, 1842*, Vol. 2. Philadelphia: Lea and Blanchard, 1845.

Wood, William. *New-England's Prospect.* London: Thomas Coates, 1634.

Zeisberger, David. *History of the Northern American Indians*. Columbus: Ohio State Archaeological and Historical Society, 1910.

Secondary Sources

Adler, Anthony. "From Pacific to the Patent Office: The US Exploring Expedition and the origins of America's first national museum," *Journal of the History of Collections* 23, No. 1 (2011): 49–74.

Anderson, Gary Clayton. *Ethnic Cleansing and the Indian: The Crime That Should Haunt America*. Norman: University of Oklahoma Press, 2014.

Armitage, David (ed.) and Alison Bashford (ed.) P*acific Histories: Ocean, Land, People*. New York: Palgrave MacMillan, 2014.

Barat, John. "Smithsonian Scientist Discovers Two New Bat Species Hiding In Museum Collections For More Than 150 Years." *Smithsonian Insider* (29 July, 2009), accessed online. https://insider.si.edu/2009/07/smithsonian-scientist-discovers-two-new-bat-species-hiding-in-museum-collections-for-more-than-150-years/

Barrow, Mark. *A Passion for Birds: American Ornithology After Audubon.* Princeton: Princeton University Press, 2000.

Blee, Lisa and Jean M. O'Brien. *Monumental Mobility: The Memory Work of Massasoit*. Chapel Hill: University of North Carolina Press, 2019.

Brooks, Lisa. *Our Beloved Kin: A New History of King Philip's War.* New Haven: Yale University Press, 2018.

Browne, Janet. *The Secular Ark: Studies in the History of Biogeography*. New Haven: Yale University Press, 1983.

Calcaterra, Angela. *Literary Indians: Aesthetics and Encounter in American Literature to 1920.* Chapel Hill: University of North Carolina Press, 2018.

Chambers, Ian. "A Cherokee Origin for the 'Catawba' Deerskin Map (c.1721)," *Imago Mundi: The International Journal for the History of Cartography* 65, No. 2 (1 June 2013): 207–216.

Daston, Lorraine. "Baconian facts, academic civility, and the prehistory of objectivity," *Annals of Scholarship* 8 (1991): 337–363.

De Lucia, Christin. "A Bible with Whales and an Indigenous Sawmill: Entangled Lives, Material, and Memories from the Native and Colonial Northeast." Vast Early American Lecture, Omohundro Institute, William and Mary College, Williamsburg, VA, 29 September 2020 (online).

Delbourgo, James, Kapil Raj, Lissa Roberts, and Simon Schaffer (eds.). *The Brokered World: Go-Betweens and Global Intelligence, 1770–1820*. Sagamore Beach: Uppsala Studies History of Science, 2009.

Drayton, Richard. *Nature's Government: Science, Imperial Britain, and the 'Improvement' of the World*. New Haven: Yale University Press, 2000.

D'Arcy, Paul. *The People of the Sea: Environment, Identity, and History in Oceania*. Honolulu: University of Hawai'i Press, 2006.

Dowd, Gregory Evans. *A Spirited Resistance: The North American Indian Struggle for Unity, 1745–1815.* Baltimore: Johns Hopkins University Press, 1992.

Ethridge, Robbie and Thomas J. Pluckhahn (eds.). *Light on the Path: The Anthropology and History of the Southeastern Indians*. Tuscaloosa: The University of Alabama Press, 2006.

Ewan, Joseph and Nesta Ewan. *Benjamin Smith Barton: Naturalist and Physician in Jeffersonian America*. Missouri: Missouri Botanical Garden Press, 2007.

Flexner, James Thomas. *Mohawk Baronet: A Biography of Sir William Johnson*. Syracuse: Syracuse University Press, 1989.

Fur, Gunlöng. *A Nation of Women: Gender and Colonial Encounters Among the Delaware Indians*. Philadelphia: University of Pennsylvania Press, 2012.

Furstenberg, Francois. "The Significance of the Trans-Appalachian Frontier in Atlantic History" *The American Historical Review* 113, No. 3 (June 2008): 647–677.

Gerard, William R. "Virginia's Indian Contributions to English," *American Anthropologist* 9, No. 1 (Jan.–Mar. 1907): 87-112.

Gunn, Robert Lawrence. *Ethnology and Empire: Languages, Literature, and the Making of the North American Borderlands*. New York: New York University Press, 2015.

Halley, Matthew. "Audubon's Bird of Washington: unravelling the fraud that launched The birds of America," *Bulletin of the British Ornithologists' Club* 140, Issue 2 (2020): 110–141.

Hardwick, Kevin. "Narratives of Villainy and Virtue: Governor Francis Nicholson and the Character of the Good Ruler in Early Virginia," *The Journal of Southern History* 72, No. 1 (Feb. 2006): 39–74.

Harkness, Deborah. *The Jewel House: Elizabethan London and the Scientific Revolution*. New Have: Yale University Press, 2008.

Harley, Thomas, Gregory Waselkov, and Peter Wood (eds.). *Powhatan's Mantle: Indians in The Colonial Southeast*. Lincoln: University of Nebraska Press, 2006.

Harvey, Sean P. *Native Tongues: Colonialism and Race from Encounter to the Reservation*. Cambridge: Harvard University Press, 2015.

Harvey, Sean P. "Native Views of Native Languages: Communication and Kinship in Eastern North America, ca. 1800-1830," *William and Mary Quarterly* 75, Issue 4 (October 2018): 651–684.

Harvey, Sean P. "'Must Not Their Languages Be Savage and Barbarous Like Them?' Philology, Indian Removal, and Race Science," *Journal of the Early Republic* 30, No. 4 (Winter 2010): 505–532.

Henson, Pamela. "Nineteenth Century Smithsonian Anthropologists: Creating A Discipline And A Profession," *AnthroNotes* 29, No. 1 (Spring 2008): 12–18.

Horsman, Reginald. "American Indian Policy in the Old Northwest, 1783-1812." *The William and Mary Quarterly* vol. 18, No. 1 (Jan., 1961): 35-53

Howard, James H. *Shawnee! The Ceremonialism of a Native American Tribe and its Cultural Background*. Athens: Ohio Univeristy Press 1981.

Hutchins, Zachary Mcleod. "Rattlesnake in the Garden: The Fascinating Serpents of the Early, Edenic Republic," *Early American Studies* 9, No. 3 (Fall 2011): 677–715.

Igler, David. "On Coral Reefs, Volcanoes, Gods, and Patriotic Geology: Or, James Dwight Dana Assembles the Pacific Basin." *Pacific Historical Review* 79, No. 1 (February 2010): 23–49.

Jorge Cañizares-Esguerra, Jorge. *How to Write the History of the New World: Histories, Epistemologies, and Identities in the Eighteenth-Century Atlantic World*. Stanford: Stanford University Press, 2001.

Klauber, Laurence Monroe. *Rattlesnakes: Their Habits, Life Histories, and Influence on Mankind*. Berkeley: University of California Press: 1956.

Konkle, Maureen. *Writing Indian Nations: Native Intellectuals and the Politics of Historiography, 1827-1863*. Chapel Hill: University of North Carolina Press, 2004.

Lakomäki, Sami. *Gathering Together: The Shawnee People through Diaspora and Nationhood, 1600–1870*. New Haven: Yale University Press, 2014.

Landis, Charles I. "The Juliana Library Company in Lancaster," *The Pennsylvania Magazine of History and Biography* 43, No. 1 (1919): 24–52.

Large, Arlen J. "Captain Lewis and the Hopeful Cadet." *We Proceeded On: The Official Publication of the Lewis and Clark Trail Heritage Foundation* 15, No. 4 (November 1989): 4-7.

Lewis, Andrew. *A Democracy of Facts: Natural History in the Early Republic.* Philadelphia: University of Pennsylvania Press, 2011.

Lilomaiava-Doktor, Sa'iliemanu. "Oral Traditions, Cultural Significance of Storytelling, and Samoan Understandings of Place or Fanua." *Native American and Indigenous Studies* 7, No. 1 (Spring 2020): 121–51.

Lyons, Paul. *American Pacificism: Oceania in the U.S. Imagination*. New York: Routledge, 2005.

Maruna, Scott. "Substantiating Audubon's Washington Eagle," *The Ohio Cardinal* 29, Issue 3 (2006): 140–150.

McCully, Bruce. "Governor Francis Nicholson, Patron 'Par Excellence' of Religion and Learning in Colonial America," *The William and Mary Quarterly* 39, No. 2 (April 1982): 310–333.

Merrell, James. *The Indians' New World: Catawbas and Their Neighbors from European Contact through the Era of Removal*. Chapel Hill: University of North Carolina Press, 1989.

Meyers, Amy R.W. and Margaret Beck Pritchard (eds.). *Empire's Nature: Mark Catesby's New World Vision.* Chapel Hill: University of North Carolina Press, 1998.

Mt. Pleasant, Alyssa, Caroline Wigginton, and Kelly Wisecup. “Materials and Methods in Native American and Indigenous Studies: Completing the Turn” *The William and Mary Quarterly* 75, No. 2 (April 2018): 207–236.

Mussulman, Joseph. “Two Eagles.” *Discovering Lewis & Clark* (online, 2009), http://www.lewis-clark.org/article/3051.

National Park Service. “What is a Fruit Bat?” Accessed 10 June, 2016. https://www.nps.gov/npsa/learn/education/classrooms/fruit-bats-are-our-friends.htm.

Nobles, Gregory. *John James Audubon: The Nature of the American Woodsman*. Philadelphia: University of Pennsylvania Press, 2017.

Olson, M.D. “Re-Constructing Landscapes: The Social Forest, Nature And Spirit-World In Samoa.” *The Journal of the Polynesian Society* 106, No. 1 (March 1997): 7–32.

O’Brien, Jean. *Dispossession by Degrees: Indian Land and Identity in Natick, Massachusetts, 1650–1790*. Lincoln: University of Nebraska Press, 2003.

Park, Katherine. *Secrets of Women: Gender, Generation, and the Origins of Human Dissection*. Princeton: Princeton University Press, 2006.

Parrish, Susan Scott. *American Curiosity: Cultures of Natural History in the Colonial British Atlantic World*. Chapel Hill: University of North Carolina Press, 2006.

Pencak, William and Daniel Richter (eds*.). Friends and Enemies in Penn’s Woods: Indians, Colonists, and the Racial Construction of Pennsylvania*. University Park: Pennsylvania State University Press, 2004.

Piker, Joshua. *The Four Deaths of Acorn Whistler: Telling Stories in Colonial America*. Cambridge: Harvard University Press, 2013.

Porter, Theodore M. “How Science Became Technical.” *Isis* 100, No. 2 (June 2009): 292–309.

Pratt, Mary Louise. “Scratches on the Face of the Country; or What Mr. Barrow Saw in the Land of the Bushmen,” *Critical Inquiry* 12, 1 (Fall 1985): 119–143.

Prince, Sue Anne (ed.). *Stuffing Birds, Pressing Plants, Shaping Knowledge Natural History in North America, 1730–1860*. Philadelphia: American Philosophical Society, 2003.

Regis, Pamela. *Describing Early America: Bartram, Jefferson, Crevecouer and the Rhetoric of Natural History*. Philadelphia: University of Pennsylvania Press, 1999.

Reid, John P. *A Better Kind of Hatchet: Law, Trade, and Diplomacy in the Cherokee Nation during the Early Years of European Contact*. University Park: Pennsylvania State University Press, 1976.

Richter, Daniel. *Facing East From Indian Country: A Native History of Early America.* Cambridge: Harvard University Press, 2001.

Robles, Whitney Barlow. "The Rattlesnake and the Hibernaculum: Animals, Ignorance, and Extinctions in the Early American Underworld." *The William and Mary Quarterly* 28, No. 1 (January 2021): 3-44.

Roeber, A.G. (ed.). *Ethnographies and Exchanges: Native Americans, Moravians, and Catholics in Early North America*. University Park: Pennsylvania State University Press, 2010.

Russel, Marvin. "Thomas Barton and Pennsylvania's Colonial Frontier," *Pennsylvania History* 46, no. 4 (October 1979): 313–334.

Safier, Neil. "Global Knowledge on the Move: Itineraries, Amerindian Narratives, and Deep Histories of Science," *Isis* 101, No. 1 (March 2010): 133–145.

Sapp, Stephanie. "Fort Moore, Aiken County, SC (38AK4/5): Evidence of Creolization Along the South Carolina Frontier." Masters' thesis, University of South Carolina, 2009.

Schickore, Jutta. *About Method: Experimenters, Snake Venom, And The History Of Writing Scientifically*. Chicago: University of Chicago Press, 2017.

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

Shapin, Steven. *A Social History of Truth: Civility and Science in Seventeenth-Century England.* Chicago: University of Chicago Press, 1995.

Shapin, Steven and Simon Schaffer. *Leviathan and the Airpump: Hobbes, Boyle, and the Experimental Life.* Princeton: Princeton University Press, 2011.

Sheets-Pyenson, Susan. "War and Peace in Natural History Publishing: The Naturalist's Library, 1833–1843." *Isis* 72, No. 1 (Mar. 1981): 50–72.

Shoemaker, Nancy. "How Indians Got to Be Red," *The American Historical Review* 102, Issue 3 (June 1997): 625–644.

Smith, Pamela. *The Body of the Artisan: Art and Experience in the Scientific Revolution.* Chicago: University of Chicago Press, 2004.

Stanton, William. *The Great United States Exploring Expedition of 1838 – 1842.* Los Angeles: University of California Press, 1975.

Stearns, R.P. *Science in the British colonies of America*. Champaign; University of Illinois Press, 1970.

Suaalii-Sauni, Tamasailau M. (ed.). *Whispers and Vanities: Samoan Indigenous Knowledge and Religion*. Wellington: Huia Publishers, 2014.

Taylor, Alan. *American Colonies: The Settling of North America*, Vol. I. New York: Penguin, 2002.

Thomas, Nicholas. *Entangled Objects: Exchange, Material Culture, and Colonialism in the Pacific* (Cambridge: Harvard University Press, 1991).

Thomas, Nicholas. *Islanders: The Pacific in the Age of Empire*. New Haven: Yale University Press, 2012.

Vasar, Rena. "Some Short Remarkes on the Indian Trade in the Charikees and in Management thereof since the Year 1717," *Ethnohistory* 8, No. 4 (Autumn 1961): 401–423.

Warren, Stephen. *The Shawnees and Their Neighbors, 1795-1870*. Urbana: University of Illinois Press, 2009.

White, Richard. *The Middle Ground: Indians, Empires, and Republics in the Great Lakes Region, 1650–1815*. Cambridge: Cambridge University Press, 2011.

Wirth, Thomas. "'So Many Things for His Profit and for His Pleasure': British and Colonial Naturalists Respond to an Enlightenment Creed, 1727–1777," *The Pennsylvania Magazine of History and Biography CXXXI,* No.2 (April 2007): 136–7.

Wisecup, Kelly. *Medical Encounters: Knowledge and Identity in Early American Literatures*. Amherst: University of Massachusetts Press, 2013.

Witgen, Michael. *An Infinity of Nations: How the Native New World Shaped Early North America.* Philadelphia: University of Pennsylvania Press, 2013.

Wonham, Henry. "In the Name of Wonder: The Emergence of Tall Narrative in American Writing," *American Quarterly* 41, No. 2 (Jun. 1989): 284-307.

Wood, Peter. *Black Majority: Negroes in Colonial South Carolina From 1670 through the Stono Rebellion*. New York: Knopf, 1974.

Woodman, Neal. “Pranked by Audubon: Constantine S. Rafinesque’s description of John James Audubon’s imaginary Kentucky mammal.” *Archives of Natural History* 43, Issue 1 (2016): 95–108.

Yih, David. “Mark Catesby: Pioneering Naturalist, Artist, and Horticulturist,” *Arnoldia* 70, issue 3 (February 2013): 25–36.

Yokota, Kariann. *Unbecoming British: How Revolutionary America Became a Postcolonial Nation.* Oxford: Oxford University Press, 2011.

Yokota, Kariann. “‘To Pursue the Steam to its Fountain’: Race, Inequality, and the Post-Colonial Exchange of Knowledge Across the Atlantic,” *Explorations in Early American Culture: A Journal of MidAtlantic Studies,* Volume 5 (2001): 173–229.

Zagarri, Rosemarie. “The Significance of the ‘Global Turn’ for the Early American Republic: Globalization in the Age of Nation-Building,” *Journal of the Early Republic* 31, no. 1 (2011): 1–37.