

Bigfoot Swims in the Garden of Eden

*Hellbenders and Identity
Formation in American History*

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Abstract: This essay examines the ways hellbenders, a species of aquatic salamander native to North America, has appeared in the archival of American history. It analyses the historical accounts American men during the late-eighteenth, nineteenth, and twentieth centuries about their interactions with hellbenders as they worked to define themselves as a distinct portion of a species possessing the ability to scientifically understand and tame the wilderness to their own advantage. It argues that unlike wolves, pigs, or cows, that have been historically domesticated because of their physical characteristics and bioadaptive behaviours, hellbenders' unique physical characteristics, elusive behaviours, and geographic isolation have made them a particularly resonant signifier of that which was wild or primitive. Encounters with an otherworldly, archaic species of salamander served a cultural function akin to Wildman legends or stories of Bigfoot encounters by giving men access to an imagined landscape in which they could reconceptualize their relationship to nature and society during periods of rapid change.

Keywords: *masculinity; hellbenders; salamanders; conservation; natural history; fantasy echo; environmental history*

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The glacial recession that characterized the late Pleistocene epoch vastly reshaped the earth’s surface and produced levels of biodiversity many scholars have compared to the biblical Garden of Eden.¹ As flora and fauna adapted to a new set of ecological circumstances, an abundance of species emerged and spread throughout the new landscapes that emerged across the Northern Hemisphere.² Species like *Cryptobranchus alleganiensis*—or hellbenders, as the large, aquatic salamanders later became popularly known—evolved, and as they started to thrive, they spread throughout the new riparian regions that emerged throughout the Appalachian Mountains.³ Simultaneously, *Homo sapiens* started migrating across the Bering Strait to take advantage of the new ecological opportunities that continued to emerge throughout North America.⁴

Biologists have shown that over the course of next ten thousand years, hellbenders spent their time making nests under river rocks left behind by receding Pleistocene glaciers. There, they would curl up, or bend, as their name suggests, and lay perfectly camouflaged in their algae-covered, rocky environment. They lay waiting inconspicuously, almost lazily, for another aquatic life form to swim by, such as a crawfish or minnow, before sucking the unsuspecting food source into unhinged jaws.⁵ Occasionally, hellbenders would unbend themselves from their favourite resting place to swim about in the rapids using their tail like a rudder. The swift-moving water would flow over their lasagna-like, capillary filled flaps, filling their bodies with oxygen. Outside of mating season, this was the hellbender’s daily routine.⁶

1 On historical perceptions of the “abundance” of the North American “wilderness”, see Worster, *Shrinking the Earth*.

2 On the Pleistocene as a benchmark for ecological restoration and conservation, see Donlan et al. “Pleistocene Rewilding”.

3 See Bredehoeft, “Pleistocene Hellbender”; Burgmeier et. al, “Spatial Ecology”; and Pugh et al., “Eastern Hellbenders”.

4 See Hoffeecker, *Modern Humans*, 305; and Ray, *Great Ice Age*.

5 David Herasimtschuk (conservation photographer), interview with author, 6 March 2020; Lori Williams (wildlife diversity biologist, North Carolina Wildlife Resources Commission), interview with author, 18 February 2020.

6 Johnson and Briggler, *The Hellbender*; Humphries and Pauley, “Life History”.

During mating season, hellbender males protected the spaces they dug out for females to lay eggs by fighting other males. Once the eggs were laid, the hellbender male would fertilize them and spend four to six weeks guarding the entrance to the rock covered nest until the larvae hatched. The hatchling larvae that survived the threat of being eaten by predators such as trout and other hellbenders spent two years growing limbs and shedding their gills. Between the ages of five and eight, they started searching for potential mates by sending out pheromones to communicate with others their intention to breed. Hellbenders that reached adulthood spent twelve to fifteen years, sometimes even thirty, hunting, reproducing, and fighting off predators and other hellbenders from their territory by secreting irritants from their pores.⁷

It remains unclear when exactly hellbenders first encountered the species biologists now consider to be one of the biggest threats to their territory and their biggest predator: humans. The specific ways human-hellbender relations changed over time also largely remains a mystery.⁸ Though they have often noted the historic importance of nonhuman entities like bison in shaping the “opportunities for certain kinds of subsistence” and “strategic endeavors” for Indigenous Americans, historians have yet to explore the potential ways these encounters might have changed both species over time, or the role these encounters might have played in shaping thousands of years of human history in North America.⁹

Convincing arguments made by numerous recent animal historians and animal studies scholars force historians to wrestle with the role of nonhuman species in shaping human history.¹⁰ As such work

7 Harding, *Amphibians and Reptiles*; Petranka, *Salamanders*.

8 On hellbenders’ physiological changes over time, see Unger, et. al., “Population Genetics”. Since the 1970s, biologists have noted a decrease in population as a result of stream pollution and siltation: see Keitzer, et. al., “Stream Characteristics”; Nickerson et. al., “Habitat Differences”; and Quinn et. al., “Multiscale Factors”.

9 Morrissey, *People of the Ecotone*, 18–22.

10 For a survey of recent works, see Nance and Marks, *Bellwether Histories*. For more on the approaches to animal histories that have informed this essay see Benson, “Historiography”; Cowie, “Exhibiting Animals”; Despret, “Secret Agents”; Fudge, *Perceiving Animals*; Nance, *The Historical Animal*; and Walker “Animals and the Intimacy of History”.

shows, nonhuman animals have often played a significant role in shaping the way humans construct their identity and understand their relationship to the environment.¹¹ According to Nicole Seymour, nonhuman animals have historically played a valuable role in the narratives humans mobilize as part of their political strategies.¹² And as Hannah Boast argues, studying these narratives proves to be “instructive for interrupting the past, present and future” of political anxieties, “their routes into the mainstream”, and reminds modern environmentalists to “exercise care in the stories we tell about pollution.”¹³ Despite these recent developments in the historical study of human and nonhuman animal relations, many questions linger regarding the range of roles species like the hellbender—a species that historian Drew Swanson calls “all-but-hidden”—have played in human history.¹⁴

Animal historians have frequently noted the difficulties of locating nonhuman animal subjects in the archival record.¹⁵ Locating hellbenders presents its own set of challenges: like their living counterparts who are rarely encountered by humans because of evolutionary adaptations like their camouflaging physical attributes and elusive bioadaptive behaviours, archival hellbenders prove scarce. Rarely mentioned in the bulk of available source materials, when hellbenders do appear, they do so in a remarkably consistent way. In the scattered and fragmented documents left behind by white American men who were in some way entangled in a British colonial system of knowledge production, hellbenders are almost universally mentioned because of their inherently exotic or loathsome qualities. The picture of the historic hellbender that emerges from this archival record bares a closer resemblance to a mythic beast, or cryptid, like Bigfoot than it does to

11 For examples of these works, see: Boisseron, *Afro-Dog*; Emel, “Are You Man Enough”; Nance, *Rodeo*; Spencer, “The Buffalo”; and Rosenberg, “Race Suicide” and “No Scrubs”.

12 Seymour, *Bad Environmentalism*.

13 Boast, “Gay Frog”.

14 Swanson, “Mountain Meeting Ground”, 242.

15 Animal historians frequently note the difficulties of grappling with problems like these in their sources. For an excellent description of the ways in which historians have approached these problems, see: Nance, *Entertaining Elephants*, 277–288; Zulueta, “Nonhuman Animal Testimonies”; and Tortorici, *Sins Against Nature*.

a swimming, breathing salamander.¹⁶ Over a period spanning more than two centuries, American men, have most often described these encounters in terms of disgust and superstition.

Despite encountering hellbenders in vastly different historical contexts, white settler men prove to be consistent in their focus on hellbenders' "negative aesthetic charisma". In the eighteenth, nineteenth, and twentieth centuries, the Anglo-American men who encountered hellbenders during scientific voyages of discovery and/or masculinity-reaffirming adventures, and who recorded such encounters in a way that has survived archivally, often reported that hellbenders' appearance and behaviours triggered "strong feelings of disgust and even panic among those humans they encountered."¹⁷ Across multiple generations, there is a continuity in the way American men emphasized hellbenders' physical features in wild or exotic terms and recorded their observations about its seemingly devilish or mischievous behaviour. In her analysis of feminist identity construction, historian Joan Wallach Scott has identified historical continuities like these as a "designation of a set of psychic operations by which certain categories of identity are made."¹⁸ Constitutive of these patterns are what Scott terms "fantasy scenarios" in "which the real relations of identity between past and present are discovered and/or forged."¹⁹ In particular historical moments, fantasy scenarios have enabled political movements to establish commonality amongst individuals based on unconscious associations, to solidify identity, and build "constituencies across the boundaries of difference."²⁰ Over time, these fantasies recur as "fantasy echoes": familiar fantasies that are adjusted and adapted to "elide historical differences", "create apparent continuities", and "condense the process of identification" in response to the specific circumstances of the moment.²¹

16 On the cultural history of cryptids, see: Buhs, "Tracking Bigfoot"; Degh, *Legend and Belief*; Loxton and Prothero, *Abominable Science!*; Milligan, "Truth"; Morris, "Imagining Bigfoot"; and Wallace, *Klamath Knot*.

17 Lorimer, "Nonhuman charisma", 919–920.

18 Scott, *Fantasy of Feminist History*, 66–67.

19 Scott, 50–51.

20 Scott, 60–61; 66.

21 Scott, 65–66.

This essay uses Scott’s fantasy echo framework to analyse the continuities of archival encounters with hellbenders across three distinct periods of the history of the United States. Scott’s framework is mobilized throughout because of its ability to destabilize the apparent continuities of the archival record and to help scholars understand why American men wrote and circulated specific narratives about hellbenders that emphasized their “feral charisma” in a seemingly universal way under vastly different sets of historical circumstances.²² Untangling the reasons why the men who recorded hellbender encounters constructed fantasy scenarios from these experiences provides evidence that shows how unseen animals, like hellbenders, who have limited interactions with human populations because of their distinctive physical features and elusive behaviours, have shaped the ways successive generations of American men have understood themselves and their relationship to nature.

During periods throughout the history of the United States when their patriarchal power has been challenged, American men crafted specific narratives about hellbenders—hellbender fantasies—that enabled them to articulate masculine identities that have been foundational to the political coalitions they have historically built. At times, they crafted hellbender fantasies to specifically define themselves as scientists or “civilized” modern men in sharp contrast to the nation’s wild “primitive” landscapes and the species that inhabited it. At other times, they used hellbender fantasy scenarios to articulate a distinct nationalist mode of masculinity, which, as the case studies presented in this essay show, helped them consolidate their power, justify their authority over the North American landscape, and legitimize their claims to land ownership as well as their attempts to manage populations in North America through eradication or conservation.

Tracing how these hellbender fantasies echo over time reveals the roots of these narratives in Indigenous epistemologies and illustrates

22 Scholars have often relied heavily on theoretical constructs of relational frameworks in their studies of the environment and human/nonhuman animal relations in isolated historical moments. This fails to fully grapple with the archival continuities and changes in human–nonhuman animal relations and identity formation over time, see: Hatley, “Blood Intimacies”; Rose, “Flying Fox”; van Dooren, “Vultures”; and Morgensen, “Theorising Gender”.

how white Anglo-American settler men in the eighteenth century started to exploit Indigenous encounters with hellbenders and Indigenous communities' knowledge about the species to craft their hellbender fantasies. Working to define themselves as American citizens who could govern a modern nation after the American Revolution, American men again echoed both Indigenous narratives of hellbender encounters as well as colonial observers' hellbender fantasies in the descriptions they produced about hellbenders as they worked to classify and name this "peculiar" species as a particularly American animal.

As I argue in later portions of the essay, white American men in the nineteenth century again echoed these hellbender fantasies as they laid claim to a particular scientific knowledge of the North American landscape and the populations that inhabited it. In doing so, they contributed to the historical development of what historian Claudio Saunt argues was a system of state-administered Indigenous "expulsion" and "eradication" that emerged in the 1830s and subsequently became a model for colonial empires around the world.²³ Echoes of colonial hellbender encounters continued to help certain American men affirm and stabilize their identities during periods like the Gilded Age and Cold War when racialized, class-based urban conflicts forced many Americans to re-evaluate their identity as American citizens and their relationship to the environment.

As the rather miscellaneous series of anecdotes about human–hellbender interactions that appear in the archival record of American history suggests, hellbenders, who can breathe underwater and emit a milky-slime as a defence against predators through their skin, have historically been a more powerful signifier of non-humanness than mammals like wolves, pigs, or cows who have been historically domesticated because of their physical characteristics and bioadaptive behaviours, which make them readily anthropomorphizable within the contexts of human cultural systems.²⁴ Hellbender encoun-

23 Saunt, *Unworthy Republic*, xiv–xv; 26.

24 See Churlew, "Love and Death"; Haraway, *Trouble*; and Lorimer, *Wildlife*. For specific species examples mentioned in the text see: Essig, *Lesser Beasts*; Mizelle, *Pig*; Haraway, *Companion Species*; Anderson, *Creatures of Empire*; Allen, *Otter*; and Colby, *Orca*.

ters, even if just in imagined liminal spaces, helped a particular set of American men to define “wilderness” and understand their relation to it.²⁵ Encounters with an otherworldly, archaic species of salamander served a cultural function akin to Wildman legends or stories of Bigfoot encounters by giving them access to an imagined landscape in which they could reconceptualize their relationship to nature and society during periods of rapid change.

These fantasies helped the American men who wrote about hellbenders—many of whom have influenced how other Americans understood the environment through their work as imperial agents, natural historians, writers, politicians, and conservationists—affirm their masculinity and legitimize their position atop a social hierarchy they naturalized via comparisons to othered species like the hellbender. Through their accounts of their interactions with hellbenders, these men worked to define themselves as a distinct portion of a species possessing the ability to scientifically understand and tame the wilderness to their own advantage. The unique physical characteristics, elusive behaviours, and geographic isolation of hellbenders made them a particular resonant signifier of that which was wild or primitive.

Embryonic Encounters

Hellbender encounters begin to appear in the archival record during the 1760s. In many early hellbender descriptions, colonial men echoed Indigenous stories of hellbender encounters to name the species. Likewise, these men recounted Indigenous encounters with hellbenders to describe the species’ behaviour and help newspaper, pamphlet, and travelogue readers in England imagine one of the many natural wonders of the North American wilderness.

One of the earliest examples of how Indigenous Americans helped English colonizers understand their interactions with hellbenders comes from famed natural historian John Bartram. While working as a specimen collector for early botanist Peter Collison in the 1760s,

25 On “wilderness” and the ways Americans have defined it in the past, see Cronon, “The Trouble with Wilderness”, 7–28; and Smalley, *Wild by Nature*.

Bartram recorded in his journal a description of what the Indigenous peoples in the Alleghany Mountains, near Fort Pitt, called a “small kind of ‘Alligator’.”²⁶

A British soldier named Jonathan Carver recorded a similar encounter in the diary he kept of his travels between 1766 and 1769 while stationed in the Ohio region during the Seven Years’ War. Carver recounted in his memoir that members of the Winnebago nation told him about the population of alligators they had eradicated from one of the Northern Branches of the Illinois River. Later naturalists would argue that Indigenous descriptions of the “alligators” Carver wrote of indicate that this was in fact a population of hellbenders.

By recording these descriptions of the species in the published account of his expedition, Carver played a key role in the British imperial process of mapping and commodifying the North American landscape in the mid-eighteenth century as a colonial specimen collector. Carver crafted his own hellbender fantasy to define a navigable landmark English settlers could use to locate North America’s natural resources. He echoed his unnamed Winnebago guides and their narratives about hellbender encounters to identify the location of the river that served as a navigable channel to Winnebago Lake. Carver reported that by following the path of the river where Winnebago communities told him they had once worked to exterminate a peculiar aquatic species, he found land that was “very fertile, abounding with grapes, plums, and other fruits, which grow spontaneously” as well as Winnebago farms, game lands, and trading posts.²⁷ Though he downplayed the role of Winnebago peoples through “omission and anonymization,”²⁸ Carver relied heavily on Indigenous manual and intellectual labour to craft his hellbender fantasy. Echoing Indigenous hellbender encounters, he emphasized his own labour in the production of natural history as a resident colonial collector whose observations assisted metropolitan scientists in the “philosophical development of ideas about geographical

26 As reported by Barton, *A Memoir*, 21.

27 Carver, *Travels Through the Interior*, 37.

28 Kuster, “Global Commodity Chains”.

distribution” and facilitated the production and exchange of natural history specimens as commodities on the global imperial market.²⁹

As European colonists increasingly commodified the North American landscape during the late eighteenth century, they continued to encounter this “alligator”.³⁰ Traveling through frontier regions of the Blue Ridge Mountains along the French Broad River in North Carolina, Virginia, and the Allegheny Mountains, French explorers André Michaux and his son François encountered hellbenders on several occasions.³¹ André caught a “mountain alligator” while fishing on the North Toe River in North Carolina in the 1770s.³² His description of this “mountain alligator” became popular in the scientific communities of early nineteenth-century Paris where it was later classified as the “La Salamandre des Monts Allégnis” or *Salamandra alleganiensis*.³³ François would again encounter the mountain alligator on his travels through the Holston Valley region of North Carolina and Virginia in 1802 where he observed enslaved African American men referring to this species of two-foot-long salamander as the “hellbender”.³⁴

Throughout the eighteenth century, colonial naturalists continued to echo Indigenous knowledge as they produced scientific descriptions of North American flora and fauna that provided European colonizers with the “practical means to dominate their physical surroundings” and gave them “an ideological framework within which to comprehend the experience of doing so.”³⁵ According to Susan Scott Parrish, colonial naturalists played a key role in the production of natural historical knowledge that allowed the British Empire to expand. Colonial naturalists delivered descriptions and specimens to the metropole which fuelled English curiosity about America as an Edenic land of wild wonders. As tensions heightened between

29 On colonial collectors see Kuster, “Global Commodity Chains”.

30 On colonial competition between these groups, see Roberts, *Colonial Ecology*, 69–72.

31 Inscoe, “Michaux, André”.

32 Thwaites, *Travels West*, 289; cf. *André Michaux in North America*, 496n99.

33 Daudin, *Histoire naturelle*, 8:231–32.

34 Barton, *A Memoir*, 5; Thwaites, *Travels West*, 289.

35 Zeller, *Inventing Canada*, 6.

England and its colonies in the decades prior to the American Revolution, colonial naturalists started working to define a specific American scientific epistemology, and along with it, a particular identity as American observers of the natural world. During the mid-eighteenth century, they started to argue that their “unadorned” descriptions of the American environment, and their encounters with its species provided a unique kind of knowledge: a taxonomy that privileged scientific accuracy in contrast to the inventive and romanticized science produced by European cities such as London and Paris. Colonial naturalists’ role in the production of empirical knowledge gave them access to transatlantic instructional connections in ways that gave them the ability to assert their authority and challenge British imperial power.³⁶

Bartram’s, Carver’s, and Michaux’s hellbender encounters shaped the way some American natural historians, like Benjamin Smith Barton, sought to define themselves specifically as American after the United States formally severed ties to England after the American Revolution. During the early nineteenth century, politicians like Thomas Jefferson worked with natural historians like Barton to account for and scientifically describe the unique aspects of the American wilderness as part of the larger project of forging a uniquely American identity. Barton, along with other American naturalists during this period, started rejecting European conventions for scientific naming and categorization, which used French or purely Latin phrases. Instead, American naturalists started using a mix of Native American and Latin words to denote a new species.³⁷

For Barton, who had first described the species as *Salamandra horrida* in 1808 when trying to identify a separate species of salamander, echoed colonial hellbender encounters to define himself, in scientific terms of the Enlightenment, as an American who possessed a particular scientific authority because of his careful observations of this particular species found throughout the burgeoning

36 Parrish, *American Curiosity*, 21–22.

37 On the importance on naming conventions for defining national identity and American science epistemologically, see Parrish, *American Curiosity*, 134–35 and Robichaud, *Animal City*, 204.

nation.³⁸ In 1812, Barton wrote a small volume describing hellbenders. Having never encountered them himself, he drew almost exclusively on the accounts of colonial naturalists' encounters with hellbenders to name and describe a uniquely American animal.³⁹

The majority of Barton's hellbender pamphlet is spent analysing these earlier descriptions to define the species in particularly American terms. While carefully describing the species' physical attributes and behaviour, he devotes substantially more attention to dissecting the variety of names used historically for the aquatic salamander to identify a particularly American scientific name for it.⁴⁰ After rejecting names, like *Salamandra alleganiensis*, given to the species by European observers, he also rejects the name the aquatic salamander had been given by enslaved African men. Barton reports that "By the negroes in the western parts of Virginia, [. . .] the reptile is often called Hell-Bender, by reason of its slow twisted motions, when moving in the waters, which the slaves compare to the tortuous pangs of the damned in hell."⁴¹

In the same way that Carver submerged Indigenous labour in his hellbender fantasy, Barton submerged African American manual and intellectual labour by echoing enslaved Black men's descriptions of hellbenders and their encounters with the species. Finding it "beneath the dignity of natural history to notice" the "vulgar names" used by people of African descent who were themselves commodified and forced by slave-owners' violent coercive tactics to produce staple crops, he instead defined the species as the "Tweeg", which he described as the Algonquian word used by the Delaware to describe the salamander.⁴² By choosing an Indigenous word for the species, Barton took part in a tradition historian Phillip Deloria calls "playing Indian".⁴³ According to Deloria, adopting elements of

38 Barton, *Some Account*, 6.

39 Barton, *A Memoir*, 5.

40 Barton, *A Memoir*, 21–25.

41 Barton, *A Memoir*, 6. For more on enslaved African American encounters with animals during the Antebellum period, see Silkenat, *Scars on the Land*, 32–55.

42 Barton, *A Memoir*, 6–7.

43 Deloria, *Playing Indian*, 182–86.

Indigenous culture, like Algonquian or Mohawk words, was a persistent tradition in American culture during “paradigmatic moments” in history, like the period following the American Revolution. The use of Indigenous words like “Tweeg” allowed white American men like Barton to perform American “Indianness” which provided them with “a powerful foundation for subsequent pursuits of national identity.”⁴⁴

By defining the particularities of encounters with species unique to the American environment like the hellbender, naturalists like Barton in part attempted to help other nations and other Americans make sense of what it meant to be American. Barton attempted to demonstrate the superior ability of American men to describe American animals using a particularly American scientific method in his hellbender pamphlet in the same way natural historians during the colonial period used their role in the production of scientific knowledge to gain access to and assert authority in the British imperial system. Echoing Indigenous hellbender encounters enabled Barton to lay claim to a particular knowledge of American species. Like colonial naturalists before him, Barton worked to define Americans in relation to the environment they inhabited and the variety of species they encountered. In demonstrating his ability to describe curious American critters and determine specifically American names for the nation’s species, he defined Americans as having a specific scientific authority that helped them tame the nation’s wilderness, transform it using principles of the Enlightenment, and govern populations scientifically.

Hatchlings Emerge

In the second half of the nineteenth century, social reformers echoed early American naturalists as they wrote about hellbender interactions and hellbender habitats in new ways to legitimize their attempts to manage human and nonhuman populations in North America. In the wake of the Civil War, many Americans worked to redefine themselves within a divided nation and forge an identity

44 It is worth noting that this effort to perform indigeneity is not unique to American history but common to settler cultures. See Deloria, *Playing Indian*, 7.

as free labourers in a burgeoning industrial economy. Across the nation, African Americans, women, and immigrants all vied for the right to participate in the American political process, and in doing so, attempted to define themselves as American citizens.⁴⁵ At the same time, the vast expansion of the nation's industrial economy radically changed Americans' relationship with animals and the environment as urban populations grew.⁴⁶ Increasingly removed from rural or "wild" spaces, class conscious social reformers, like George Grinnell and Henry Bergh, located the root of the era's social tensions in Americans' changing proximity to livestock and wildlife.

As women, immigrants, and other marginalized groups continued to demand their rights as citizens and workers in a rapidly changing urban landscape, many American men turned to the wilderness to affirm their patriarchal identities.⁴⁷ To reconceptualize their identity and relationship to the environment in an increasingly industrialized and urban world, Progressive Era social reforming men articulated their identities and worked to affirm their masculinity, amidst the era's social and ecological tensions, through their interactions with animals like hellbenders in numerous ways.⁴⁸

Many elite social reformers, like George Grinnell, argued that American men needed wilderness and encounters with wild animals to define themselves and affirm their masculinity. This idea inspired Americans to establish numerous clubs and organizations devoted to protecting American animals and wild spaces throughout the late nineteenth century. Some clubs were also devoted to giving Americans new ways to encounter and consume them too, as a growing class of consumers demanded material objects through which they could display the wealth they had amassed in an industrial economy.

45 On Americans working to define themselves and redefine citizenship after the American Civil War, see: Richardson, *West from Appomattox*, 4–7; Steven Hahn, *A Nation*; and Edwards, *Gendered Strife*.

46 On changes between Americans and the environment after the American Civil War, see Cronon, *Nature's Metropolis*; Mauldin, *Unredeemed Land*; Robichaud, *Animal City*, 7; Anderson, *Capitalist Pigs*; and Rome, "Nature Wars".

47 Montgomery, *The Fall*.

48 For more on the various ways Americans articulated and affirmed their masculinity during the Progressive Era, see: Bederman, *Manliness and Civilization*.

Social clubs like the Ichthyophagous—or fish-eating—Club or, were perfectly suited to this task, allowing elite urbanites to encounter wild species and helping them to define their class status by participating in the consumption of exotic aquatic animals.

Founded in the 1880s by several prominent New York society men who were heavily entrenched in the growing marine fishing industry, members of The Ichthyophagous Club gathered annually for lavish dinner parties to feast on “many kinds of fish [...] rarely eaten” because of their “unknown” excellence.⁴⁹ The club’s membership included the editor of the *New York Times*, Robert Barnwell Roosevelt, uncle and mentor to future president Theodore Roosevelt, and another one of Teddy Roosevelt’s close friends, George Bird Grinnell, who founded the Audubon Society and owned the periodical *Forest and Stream*.⁵⁰ As Grinnell announced on the pages of his newspaper, the club’s founding principle was to test “the edible qualities or possibilities of uncanny water creatures not commonly reckoned as food but looked upon with disgust and loathing.”⁵¹ On 27 May 1881, club members gathered to dine on the “deviled” hellbender.⁵²

For a brief period, the club seemed to have successfully convinced Americans that the hellbender counted amongst the country’s many delicious exotic delicacies. Grinnell reported on the pages of *Forest and Stream* the next month that the hellbender “was most excellent, its only fault being the small pieces consequent upon a limited supply.”⁵³ According to one period cookbook that featured hellbender as an ingredient amongst its recipes, the club was partially successful in convincing some members of elite society during the decade that hellbenders were a delicacy ranking with the “best

49 Humes, Michele Humes, “The Way We Ate: The Ichthyophagous Club”, *The New York Times*, 6 January 2010.

50 Murphy, “AFS Roots”, 90–100; Taliaferro, *Grinnell*; Adler, “Dining”.

51 “When the Ichthyophagous Dines.” *Forest and Stream*, 17 March 1906, 426. <https://www.biodiversitylibrary.org/page/60909914>

52 Adler, “Dining with the Ichthyophagous Club”; cf. “The Ichthyophagous Club”, *New York Times*, 27 May 1881, 5. <https://www.nytimes.com/1881/05/27/archives/the-ichthyophagous-club.html>.

53 Grinnell, “Hellbender’s Appeal”.

salmon” despite its mud-coloured flabby skin.⁵⁴ Even *The American Angler* noted in 1886 that the hellbender “can be ‘fed up’ so that it will become a palatable makeshift.”⁵⁵

Redefining hellbenders as a delicacy for Americans served a dual purpose for Ichthyophagous Club members like Grinnell. It gave some opportunistic club members new ways to commercialize America’s natural resources and meet the demands of a growing class of urban consumers. At the same time, it gave men like Grinnell a new way of addressing the nation’s social tensions and affirming their masculinity through encounters with rare, exotic species.

For Grinnell, encountering and conquering “uncanny water creatures not commonly reckoned as food but looked upon with disgust and loathing” affirmed “civilized” American men’s identity in the same way big game hunting did.⁵⁶ Encountering savage or loathsome creatures in the wilderness provided a profound method for elite American men to confront wilderness and reconceptualize American manhood.⁵⁷ Throughout the late nineteenth century, Grinnell worked to protect white American men’s access to the “wilderness” and ability to encounter wildlife. In 1887, he founded the Boone and Crockett Club with Theodore Roosevelt to promote the conservation of wildlife and wildlife habitats so men could continue to hunt and fish. In the decades that followed, the club’s founders built a political constituency around their conservation ethic, which called for the expulsion and eradication of Indigenous peoples like the Blackfeet nation from their land as a means of creating and managing a system of national parks that ensured white Americans’ access to supposedly primitive spaces.⁵⁸

Like many other social reformers, Grinnell believed that the only way to resolve the racialized, class-based urban conflicts threatening the

54 Whitehead, *Steward’s Handbook*.

55 “The Flavor of Carp”, *The American Angler*, 30 October 1886, 284.

56 “When the Ichthyophagous Dines”, 426.

57 On hunting and fishing’s role in defining certain American identities, see: Haraway, “Teddy Bear Patriarchy” and Hahn, “Hunting, Fishing, and Foraging”.

58 Spence, “Crown of the Continent”.

stability of the nation and its growing industrial economy was to return to its Garden of Eden: the wilderness. For conservation-minded reformers like the Grinnell and Roosevelt, hunting instilled qualities such as “energy, resolution, manliness, self-reliance, and capacity for hardy self-help”, which were critical for the American nation to “do its life-work well”.⁵⁹ As they explained in Boone and Crockett Club publications, the individualistic act of tracking and killing animals was a way to encounter nature and revive the qualities which they believed had enabled their colonial ancestors to build American civilization and that contemporary urban men failed to display because they no longer regularly encountered nature and wild things. Much like the act of killing wild and exotic animals and stuffing them to display as natural history specimens, men like Grinnell framed experiences like eating “grotesque” animals such as the hellbender as acts that could “induce” the “highest forms” of “healthy manhood” in white men, which was required in a democracy to keep the wheels of society moving.⁶⁰ By conserving men’s ability to encounter wild things and conquer them, conservation-minded reformers sought to preserve natural resources for “the achievement of manhood”.⁶¹

Other members of New York’s elite, such as Henry Bergh, founder of the American Society for the Prevention of Cruelty to Animals (ASPCA), were not so convinced that the practice of killing animals was the “prophylaxis” for the “specific historical malaise” of the Gilded Age’s urban crisis.⁶² Bergh was, in fact, convinced that killing animals for sport was just the thing that was ruining American civilization.⁶³ Killing animals for leisure or pleasure was an “immoral”, unchristian, even “unmanly” act that caused deviant brutish behaviour to permeate throughout society.⁶⁴ After founding the ASPCA in 1866, Bergh became a vigilante, gaining legal authority through New York’s

59 Roosevelt and Grinnell, *American Big-Game Hunting*, 14–15. On US National Parks and conservation movement see: Hays, *Conservation*; Miller, *Modern Environmentalism*; and Tyrrell, “America’s National Parks”.

60 Haraway, “Teddy Bear Patriarchy”, 38–39.

61 See Haraway, “Teddy Bear Patriarchy”, 57; and Robichaud, *Animal City*, 285.

62 On the ASPCA, see: Robichaud, *Animal City*, 225; and Haraway, “Teddy Bear Patriarchy”, 38.

63 Henry Bergh, “Pigeon Shooting”, *New York Times*, 31 Dec. 1871, <https://nyti.ms/3UCIGs1>.

64 Gilfoyle, “The Moral Origins”, 638; Bergh, “Pigeon Shooting”.

anti-cruelty laws, who worked to define and enforce what he believed to be civilized American behaviour, articulated through a language of Christian morality.⁶⁵ In his quest to end the uncivilized treatment of animals, Bergh took aim at the pigeon shooting competitions held by elite New Yorkers to hone and display their marksmanship.⁶⁶ In June 1881, just weeks after the Ichthyophagous Club dined on hellbender, Bergh published an illustrated circular which called for the end of pigeon shooting and worked to define a different relationship to wildlife for American men.

Grinnell quickly published a scathingly sarcastic response to Bergh's circular later that month in *Forest and Stream*. Denouncing Bergh's "ultra-humanitarian plea" as "weak", Grinnell argued that Bergh had not gone "far enough". Mocking his belief in the cruelty of pigeon shooting, he asked why Bergh "put in a plea for the pigeon and remain[ed] silent upon the late unholy holocaust of hellbenders by the greedy Ichthyophagi?"⁶⁷ To convince readers of the illogical nature of Bergh's claims about pigeon shooting, Grinnell constructed his own hellbender fantasy. Substituting hellbenders for pigeons, and the Ichthyophygiasts for shooters, he rewrote Bergh's pigeon plea as "The Little Hellbender's Appeal" to imagine how a hellbender, "suddenly endowed with speech", might defend itself by appealing to the conscience of those who killed and consumed its species.

Speaking to a member of the club who had consumed it, Grinnell's imagined little hellbender first explained how it had "betrayed into captivity while seeking to provide nourishment" for its family of hellbenders, "now dead of starvation." It then asked the ichthyophage what he would gain "by [the] crunching of my delicate limbs and ruptured arteries that a senseless turnip would not afford you?" By unnecessarily killing and consuming "this little body, so cunningly and so mysteriously contrived by the Creator", the little hellbender suggested to the ichthyophage that he had both offended God and insulted the "cultivated spirit of your generation by a deed your own conscience, on

65 Gilfoyle, "The Moral Origins", 639.

66 John F. Kullberg, "Father of Clay Pigeon", *New York Times*, 5 Feb. 1990, <https://nyti.ms/3w5q7ih>.

67 Grinnell, "Hellbender's Appeal."

reflection, will characterize, but which I refrain from doing.”⁶⁸

Encountering the little hellbender as a member of the Ichthyophygous Club himself, Grinnell found its claims ridiculous. He suggested that Bergh might have an easier time achieving his “hoped-for effect upon the cruel ichthyophagus” if he worked to intervene on behalf of pigeons and other nonhuman animals by convincing the city’s district attorney that the club’s annual dinners were “in direct violation of the gambling laws, or divorce laws for that matter.”

Like Bergh’s encounter with the pigeon, Grinnell’s hellbender encounter and the fantasy he constructed around it worked to affirm and define his own masculine identity. Echoing colonial naturalists, who used encounters with hellbenders to assert their authority as scientific Americans, Grinnell used his interactions with hellbenders as a way to affirm his authority as a “civilized” American man in relation to “weak” men like Bergh, who seemed incapable of encountering wild spaces and loathsome animals in the same way.

In the first decades of the twentieth century, hellbender encounters would continue to play a role in a larger debate about the relationship between American men and animals that drove the creation of modern American environmental conservation. During the early 1900s, conservationists like Horace Kephart echoed Grinnell’s hellbender fantasy and crafted fantasies of their own as they continued to search for ways to affirm their identity as civilized American men through their encounters with wilderness and the species found in it.

During the 1890s, Kephart — one the founders of the American National Parks and conservation movement — became disenchanted with his experience of urban life while serving as the director of the Saint Louis Mercantile Library. For several years, camping trips offered him a respite, but in early 1904 he suffered a nervous breakdown as a result of his urban anxieties.⁶⁹ Later that summer he travelled to the Great Smoky Mountains of North Carolina on a journey to find himself

68 Grinnell, “Hellbender’s Appeal”.

69 On the modern wilderness movement in the early twentieth century, see Sutter, *Driven Wild*. On Kephart biographically, see: Ellison and McCue, *Back of Beyond*.

again. In his books *Camping and Woodcraft* and *Our Southern Highlanders*, Kephart explained how he had been able to reconceptualize his identity through his confrontations with the Appalachian wilderness. Hellbender encounters played a role in Kephart's quest to revitalize his sense of self and helped him explain to an urban audience how they too could be saved by returning to America's Eden.

After encountering them on his trip, Kephart crafted his own hellbender fantasies to signify what he defined as uncivilized or primitive. While this reference is brief, he directly references hellbenders when discussing Chinese immigrants, whom he believed embodied urban life. According to Kephart, Chinese immigrants and hellbenders were alike in that they were able to make a home anywhere, "whether immersed in air, water, or mud."⁷⁰ He classified the Chinese American population and hellbenders as "exotic [...] peculiar creatures who were shaped by their uncivilized environments."⁷¹

Kephart also characterized white Appalachian families who lived alongside the hellbender-inhabited rivers he visited in the Blue Ridge Mountains as creatures of their environments. However, he extended a differently racialized description to his white Appalachian subjects. Unlike negative characterization of Chinese immigrants, Kephart valorized their supposed primitive nature. The mountaineers he encountered there lived by what he identified as a traditional set of colonial values that had been preserved because the Appalachians had been "ghettoed in the midst of a civilization that is as aloof from them as if it existed on another planet."⁷² Later explaining that he had chosen the mountains of North Carolina for his mission to live the "self-dependent life of the wilderness nomad" because he was unable to find a guide to the region in any of his library research, Kephart believed the Appalachian Mountains to be a primitive, wild space that remained untouched by industrial modernity.⁷³

70 Kephart, *Camping and Woodcraft*, 18.

71 Kephart, *Our Southern Highlanders*, 356.

72 Kephart, *Our Southern Highlanders*, 18.

73 Kephart, *Our Southern Highlanders*, 14–15.

Kephart's hellbender fantasies, fuelled in part by his racial and class-based characterizations about Chinese immigrants and mountaineers, helped him imagine the Appalachians as the primitive wilderness he so fervently desired to find. For years after travelling to Western North Carolina, Kephart worked to protect of this region of Appalachia in large part because he envisioned it as a Garden of Eden that allowed him to affirm his sense of self and reconnect with his white colonial heritage.

Kephart echoed Grinnell, whose own work continued the project of colonial naturalists. Grinnell — who had actively worked to “civilize” Blackfeet people after he “discovered” the area that became Glacier National Park — in the way he defined the spaces he wished to protect and the reasons for preserving them. Like Grinnell, Kephart understood that the presence of populations perceived to be uncivilized was critical for categorizing a place as part of his imagined American wilderness. Hellbender encounters helped early American conservationists imagine certain spaces as wilderness and define the people that inhabited the regions they deemed wild as uncivilized and primitive. For Kephart, hellbender fantasies helped define the area that became the Great Smoky Mountain National Park as a wild space in need of protection and careful management. Comparing the behaviour of the communities that lived in these wild spaces to that of hellbenders, men like Grinnell and Kephart justified social reform programs and land seizures that were necessary to create national parks in this region.⁷⁴

Throughout the first decade of the twentieth century, hellbender encounters continued to help scientifically-minded American men identify primitive or wild things. In the 1900s, James Mooney ventured into the mountains of North Carolina as an agent of the United States Bureau of American Ethnology to “trace the development of human thought under varying conditions of race and environment.”⁷⁵ Guided by the work of contemporary scientists and

74 On other Progressive-Era environment management programs in the South, see Giesen, *Boll Weevil Blues* and Strom, *Making Catfish*.

75 Mooney, *Myths of the Cherokee*, 12.

anthropologists, Mooney worked to compare the cultural development of the Eastern Band of the Cherokee Nation to that of the Western Band by collecting myths.

During this period, many influential American men, including Theodore Roosevelt, believed that the primitive lifestyles of America's Indigenous peoples were dying as a result of the settling of the West. In the period of Progressive politics, scholars like Frederick Jackson Turner solidified the idea that the American character was defined by the clash of European cultures with Indigenous cultures on the frontier of the American wilderness. For a nation that had defined its character through confrontations with Indigenous peoples in the wilderness, the disappearance of primitive American peoples threatened the national character and its mythic origins. Collecting the culture and myths of Indigenous peoples offered a unique way to maintain a connection to the American Garden of Eden for ethnologists like Mooney. One of the myths Mooney collected involved the hellbender.⁷⁶

According to Cherokee tradition, if a man eats a hellbender and then goes directly into a field, the crop planted there will be ruined. Mooney found this myth to be “unexplainable” which led him to conclude that “primitive man is essentially the same in every part of the world.”⁷⁷ Mooney's conclusion helped to bolster Lewis Henry Morgan's theory of social evolution which posited that human advancement came in evolutionary stages—savagery, barbarism, and civilization.⁷⁸ It confirmed for federal bureaucrats of the era that the Cherokee, like other Indigenous American peoples, were less civilized, or savage, and therefore in need of management.

Studies like Mooney's *Myth of the Cherokee* were critical in crafting the social management programs of the progressive era that relied on “expert knowledge” in its policy making. These social management programs were guided by the same Progressive Era belief in

76 On the role of animal myths in work of ethnographers defining Native American cultures during this period see Spencer, “The Buffalo.”

77 Mooney, *Myths of the Cherokee*, 307.

78 Morgan, *Ancient Society*; Woodbury et. al., “American Ethnology”.

a universal social good that inspired the creation of the National Parks. In order to maintain that good, the lives of citizens and the land had to be managed for the long-term benefit of the whole population. Expert ethnological records like Mooney's provided something that these men would understand as empirically based evidence of the Cherokee and other Native American's savagery on Morgan's advancement scale and helped them to manage Indigenous peoples.⁷⁹

As they appear on the pages of *Myths of the Cherokee*, hellbender fantasies helped justify Progressives' belief in a universal social good. Hellbender fantasies again served to categorize certain populations of America as uncivilized and in need of careful management. The echoes of Cherokee encounters with hellbenders recorded by Mooney allowed him to preserve and reconnect with America's mythic frontier origins. Echoing the hellbender encounters of both contemporary men like Grinnell and Kephart as well as colonial naturalists, Mooney's hellbender fantasies helped him legitimize his authority as a civilized American man with a specific claim to scientific expertise during a period of rapid social change.

Shedding the Gills

In the second half of the twentieth century, human–hellbender interactions also shaped how certain American men made sense of themselves and dramatic ecological changes as the United States asserted its technological and scientific power during the Cold War. The growth of the US consumer economy, the expansion of New Deal programs, industrial food production, and fears of nuclear annihilation all worked to intensify the anxieties many American men harboured about the loss of wilderness and environmental degradation.⁸⁰ Echoing the hellbender fantasies of previous generations, certain American men crafted narratives about their interactions

79 On the use of ethnography for crafting federal Native American management programs, see Elliot, "Ethnography" and Purdy, *After Nature*, 38.

80 For historical analysis of American anxieties regarding environmental degradation in the twentieth century, see: Buhs, *Fire Ant Wars*; Ferguson, *This Is Our Land*; Harvey, *A Symbol of Wilderness*; Maher, *Nature's New Deal*; and Sellers, *Crabgrass Crucible*.

with hellbenders as they simultaneously sought to of reconceptualize the nation's relationship to the environment and protect it.

In the late 1960s, at the same time that scientific and technological advancement was escalating ideological Cold War battles and racial tensions were boiling over at home, Americans were becoming increasingly concerned over the harm they were causing the environment and the damage they were causing other species.⁸¹ Encounters with hellbenders helped some Americans define themselves in relation to their environment and species. Starting to realize the full scale of the nation's impact on the environment, conservationists responded to echoes of hellbender fantasy in new ways. As biologists noticed significant declines in species like hellbenders during the 1970s, they started working to better define the species as a means of measuring the degradation of America's wilderness and health of the nation's streams. Their work defining hellbenders informed how they defined themselves as conservationists moving forward.

Echoes of colonial hellbenders continued to resonate for some of the American men who started encountering hellbenders in new ways in the early 1970s. Tucked between stories about foraging for food in the wild and encounters with Appalachian folk traditions, *National Geographic* published an article in its July 1972 edition titled "The Shadowy World of Salamanders". The cover photo featured an extraterrestrial looking, translucent aquatic salamander standing on a rocky grey surface, set against a pitch-black backdrop. The article told the story of a hellbender hunt.

Before going into the "prehistoric swamp" late one night, the author Paul Zahl put on high-waisted rubber boots, grabbed a flashlight, bucket, and net, and stepped into the unknown world of the river. Twenty minutes later, his fellow hunters had captured a dozen hellbenders. Zahl mentions the animal's "cold beady eyes" and describes the hellbender as a hybrid between "a fish, a lizard, and some weird crawler" or something from "a horror movie."⁸² Zahl

81 See Carson, *Silent Spring*; Drake, *Loving Nature*; and Lear, *Rachael Carson*.

82 Zahl, "The Shadowy World".

describes hellbenders as an evolutionary remnant that illustrate how animals evolved from water to land. He also takes pains to describe salamander's strange ability to breathe underwater, making this a focal point of his discussion.

Just a few of years after Americans, aided by new technologies, had explored new frontiers in outer space, Zahl's hellbender fantasy helped him define his species on an evolutionary scale and redefine American wilderness. Echoing colonial American naturalists, Zahl affirmed a particular definition of the terrestrial American wilderness by carefully observing and describing its curious particular species during the Space Age.

Reflecting on his hellbender encounter, Zahl wrote that being "reacquainted with these wonderful, beautiful animals [...] I had caught some glimpses of the untold millions of salamanders living [...] across this land." He echoed colonial naturalists in a specific way while describing the salamander biologist who led his hellbender hunt. Like the frontier explorers who had first worked to describe the species empirically, Zahl described the scientist departing for the hunt draped in "gear, bags, jars, camping equipment, maps, and other paraphernalia of his calling." Zahl's hellbender encounter enabled him to acquaint himself with the abundance of curious encounters that could take place terrestrially in America's wild spaces while simultaneously giving others a path to finding it.⁸³

Responding to the intensifying social anxieties of Space Age environmental degradation, Zahl wrote about his encounter with hellbenders in the same way other American men wrote about Bigfoot fantasies to make sense of their changing relationship to the planet. Echoes seem to particularly resonate between Zahl's reflection on his hellbender encounter and the Bigfoot fantasy David Rains Wallace's crafted a few years later in *The Klamath Knot*. While trying to make sense of a curious figure he imagined seeing along a hike and define himself in relation it, Wallace keenly observed that encounters with Bigfoot remind us that "we don't live in a world

83 Zahl, "The Shadowy World".

that's completely nailed down."⁸⁴ For both Zahl and Rains, experiences with mysterious, rarely encountered animals, both real and imagined, allowed Americans to enter a liminal space in which they could confront and reconnect with the wilderness that had given birth to particular American identity and individualism from a safe, yet accessible distance. During the 1970s and 1980s, hellbenders, like Bigfoot, became an "invigorating emblem of the wild", an object through which humans were able to redefine their relationship with what was perceived to be lost as they became increasingly aware of anthropogenic environmental degradation.⁸⁵

In the 1970s, biologists started noticing a significant decline in the populations of salamanders and other animals like hellbenders. Hellbender encounters helped biologists, who were becoming increasingly concerned about the scale of the nation's impact on the environment, define both environmental degradation and themselves as conservationists in the second half of the twentieth century. Working to understand populations of animals like the hellbender better, conservationists like John Groves responded to the echoes of past hellbender encounters and crafted hellbender fantasies of their own.

Long before he became a leading figure in the hellbender conservation movement, interactions with reptilian and amphibious species played a large role in Groves's life. Growing up in the 1950s, he often took reptile hunting trips with his father, Frank, a long-time reptile curator at the Baltimore Zoo.⁸⁶ As a child, he learned how to handle snakes and other reptiles safely in the time he spent with his father. Occasionally, John convinced his father to let him skip school and go on reptile hunting in distant states often to places like Florida—with ecologies radically different than those he encountered in Maryland. In John's memory, it was on one of those awe-inspiring trips,

84 Wallace, *The Klamath Knot*, 111.

85 Like hellbender encounters, echoes of Bigfoot encounters are particularly loud during periods of radical social change, such as the late nineteenth century when Americans dealt with industrialization, the post-World War II period, or the 1970s and early 1980s, see: Morris, "Imagining Bigfoot", 289. Also see, Buhs, "Tracking Bigfoot".

86 "Frank Groves, 84, reptile curator for zoo", *Baltimore Sun*, 7 April 2004. <https://www.baltimoresun.com/2004/04/07/frank-groves-84-reptile-curator-for-zoo/>

while slipping over rocks with his father, that he first encountered North America's largest salamander, *Cryptobranchus alleganiensis*, a.k.a. the hellbender.⁸⁷ Over the next fifty years, John continued to encounter hellbenders as he built a career in herpetology for himself. Though he followed in his father's footsteps and devoted most of his primary research to snakes, he occasionally helped young scientists organize hellbender surveys as curator of reptiles at the Philadelphia Zoo. Then in the early 2000s, John found himself in a new position as reptile curator at the North Carolina Zoological Park and in need of a new project. As he surveyed the reptiles and amphibians being studied in the state, it occurred to him that no one had seriously studied hellbender populations in North Carolina.⁸⁸

Groves knew from his work with other herpetologists that the once common but always elusive hellbender populations of Appalachia had been steadily declining throughout the region since the 1970s. Around the time John Groves moved to North Carolina, a concerted conservation effort was starting to coalesce as Appalachian herpetologists worked to figure out why hellbenders were disappearing. In 2004, Ron Goellner, at the Saint Louis Zoo, founded the Center for Hellbender Conservation in Missouri to promote research, bring awareness to the strange critters' plight, and educate the public about this often-misunderstood creature. As he planned a study of North Carolina hellbenders, Groves drew extensively on Goellner's work and the conservation model he had developed in St. Louis. In 2007, Groves partnered with the North Carolina Wildlife Resources Commission and wildlife diversity biologist Lori Williams to launch a broad initiative to study of the state's hellbender populations and educate the public about them. In doing so, Groves and Williams became North Carolina's premier "hellbender hunters."⁸⁹

87 Groves, interview with author; Groves and Williams, "In Search of the Hellbender in North Carolina".

88 Groves, interview with author. A bibliography of Groves's published herpetology research readily available online through multiple sources.

89 See Mark Wanner, "Hunting Hellbenders", *Greensboro News & Record*, 29 August 2009. https://greensboro.com/news/columnists/hunting-hellbenders/article_d06d794d-9a40-5923-9209-59fbc70ae601.html.

Over the next seven years, Groves and Williams collaborated with a growing number of zoologists and ecologists to locate and observe the state's "Bigfoot"-esque hellbender populations. In many ways, the work of conducting these surveys resembled the labour of resident specimen collectors during the colonial period. Like the biologists that appeared in Zahl's narrative of his hellbender encounter, Groves, Williams, and their assistants donned wet suits and snorkels and spent countless hours crawling along stream bottoms in search of the "elusive" hellbender, hoping they found a hellbender instead of creek mud. When they were lucky enough to grab a hellbender, they pulled it from its rocky hiding place and placed it on a dissected piece of PVC pipe to observe it, by measuring the specimen they collected, describing its physical characteristics, observing its behaviours, and recording the location of its habitat. They often interviewed local working-class residents and anglers who they encountered during survey trips to locate other specimens and better understand the hellbender populations through the accounts of people who reported encountering the aquatic salamanders in their daily lives.

Conservationists often report that the mountain residents they encountered while conducting their surveys hoped that their goal was not to save hellbenders but rid the rivers of them.⁹⁰ Because of stories told by Appalachian anglers about encounters with hellbenders echoing for successive generations, many mountain residents described hellbenders as a loathsome, vicious pest that exude a poisonous slime that can infect waterways and kill prized fish populations.⁹¹ Other Appalachians define hellbenders as an omen of bad luck, asserting that if a hellbender bites a fishing rod, it will never catch another fish.⁹²

Many of the misconceptions Appalachian residents held about hellbenders could be attributed to their own encounters with the species and echoes of past encounters. Reports abound of hellbenders

90 This is something that every conservationist interviewed by the author highlighted about their educational programming.

91 Alissa Widman Neese, "Zoos, other officials work to keep hellbender salamander happy and healthy in Ohio", *Canton Repository*, 16 August 2016; Snyder, "New Streams of Religion", 911.

92 Williams, interview with author.

eating the fish anglers have caught and left hanging on stringers in the river or causing rashes and skin irritations when handled. Over time, as anglers spun tales from their encounters with hellbenders to share their knowledge of the river with other fishermen and new generations — they constructed hellbender fantasies which solidified the salamander’s regional reputation as a fish-killing monster.⁹³

Responding to the echoes of Appalachians’ past hellbender encounters themselves, Groves and Williams submerged working-class Appalachian knowledge about the species as they publicly emphasized their own modern scientific descriptions of the species as a way of challenging cultural myths about the species and providing Americans with a new way of conceptualizing their relationship to the environment through encounters with animals like the hellbender.⁹⁴ After years of conducting these surveys, Groves and Williams launched a population management plan in 2010 that was aimed at protecting hellbenders by increasing public awareness about the species. In doing so, they crafted their own hellbender fantasies from their encounters with the species by designing a campaign to make the salamanders more palatable and publicly accessible by rebranding the seemingly menacing hellbender as the “snot otter”, a core figure of their conservation efforts.⁹⁵ At schools, fairs, and outdoor educational events, Groves, Williams, or some lucky assistant, transformed into “Snotty the Snot Otter”.⁹⁶ They donned a brown cloth suit that featured a wavy flowing cape-like back, a long tail, shoes, and gloves with orb tips on its fingers and toes, and a large foam mascot head with beady, yellowish eyes and a short open snout. Dressed as Snotty, conservationists educated the

93 Williams mentioned in her interview that this frequently happened with anglers she talked to in the communities she visited during hellbender surveys. Likewise, online fishing forums frequently recount stories of interacting with hellbenders while fishing. See, for example: Ryan Griswell, “Toccoa River Hellbender”, *Freshwater Fishing*, GON Forum, 13 July 2012, <https://forum.gon.com/threads/toccoa-river-hellbender.699016/>; hoch999, “waterdogs/hellbenders in the yough river?” *FishUSA Forums*, 14 February 2009, <https://forums.fishusa.com/Message/165633-waterdogshellbenders-in-the-yough-river/>.

94 Krometis, et. al, “Water Scavenging”.

95 Groves and Williams, “In Search of the Hellbender”.

96 Leslie Eaton, “Green Movement’s New Mascot: the Slimy Snot Otter”, *Wall Street Journal*, 5 March 2011.

public as part of their attempt to demystify hellbenders and make the species a tangible way for North Carolinians to connect with nature. Appearing as Snotty, they hoped that by rebranding hellbenders as snot otters they could challenge the cultural misconceptions held by Appalachians about the species and manage the way human populations responded to future hellbender encounters.⁹⁷

As American anxieties about climate change intensified throughout the twenty-first century, Snotty the Snot-otter — as a particular hellbender fantasy — helped Americans redefine their relationship to the species and the American wilderness. During the 2010s, hellbender fantasies like Snotty provided the foundations for numerous political coalitions that formed around conservation issues like clean water. As they worked to address the misconceptions and echoes of Appalachians' hellbender encounters, Groves and Williams used Snotty to define hellbenders as a “bioindicator” which can help scientists measure levels of environmental degradation. Encountering hellbenders, whether as Snotty or as a bioindicator, helped conservationists determine the health of the North American wilderness and spot “degrading environmental conditions when conditions first start changing.”⁹⁸ In the decade after Snotty's introduction, numerous conservationists and politicians started touting *Cryptobranchus alleganiensis* as a mascot for the environmental conservation movement in North Carolina and other states throughout Appalachian Mountain range — like Pennsylvania — where the species makes its home.⁹⁹

As many wrestle with questions regarding their role in the twenty-first century's climate crisis, hellbenders continue to shape the ways some American men understand themselves and their relationship to the environment through their specific ecological role and the particular adaptive behaviours the species has developed

97 See Burgmeier et. al., *How Our Zoos*.

98 Jodie Owen, “See a Hellbender? The Wildlife Commission Wants to Know”, North Carolina Wildlife Resources Commission, 27 March 2018. <https://www.ncwildlife.org/Blog/see-a-hellbender-the-wildlife-commission-wants-to-know>.

99 In 2019 Pennsylvania legislators passed a law making the hellbender its official state amphibian, see: Lauren Hard and Jennifer Harlan. “Pennsylvania Honors the Snot Otter. It's Not Even the Strangest State Animal”, *New York Times*, 23 April 2019.

which has enabled them to thrive in North America for millennia. Even as conservationists have worked to redefine the ferally charismatic species as a cuddly bioindicator, the echoes of prior interactions with elusive or “all-but-seen” species like hellbenders continue also give shape to the way some Americans make sense of rapidly changing social and environmental circumstances.

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