

ANIMALS AND THE INTIMACY OF HISTORY

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The tasteful austerity of Kenton Joel Carnegie's online memorial belied the edgy complexities of his bloody death. The memorial contained traces of Carnegie's twenty-two-year life: it provided links to Kenton's artwork, several family pictures, a discussion board, and a donation site at the University of Waterloo, where he was a third-year geological engineering student. Donations served the newly established Kenton Carnegie Memorial Fund. Judging from the written content of the online memorial, Carnegie was a person of "profound integrity" who possessed "an incredible understanding of the land." But the online memorial is silent on one matter: the cause of Carnegie's death. All the memorial divulges is that he died "Suddenly on Tuesday November 8, 2005 as a result of a tragic incident in Points North, Saskatchewan."¹ News reports proved more forthcoming with the grisly details: four wolves had killed and eaten him on a trail near a uranium mine in Saskatchewan.

Wolf conservation circles labeled the incident the "first documented case of healthy wolves killing a human in North America." Needless to say, the key word in this poorly documented assertion is "documented," because it is hard to imagine that, given wolves' opportunistic natures, unreported killings have not taken place. Barry Lopez, in *Of Wolves and Men*, wrote that both wolves and humans are social hunters, often seeking the same prey in the same general locations. In such an environment, he concluded,

confrontations were probably inevitable.² If published accounts of Carnegie's death are reliable, however, speculation regarding ancient hominid-lupine interaction is unnecessary. After a brief chase, Carnegie appears to have been dragged down and eaten near the shores of Wollaston Lake.

Given that Carnegie was a geological engineering student, it is not surprising that he was in the Points North Landing area. The *Duluth News Tribune* reported that the "former wilderness area is a hotbed for uranium mining, as well as gold and diamond exploration." Carnegie was engaged in aerial surveys for an Ottawa company, Sander Geophysics Ltd. The high numbers of miners, engineers, and support workers in the area meant that some wolves, such as the four under investigation, had seized the opportunity and started loitering around mining camps and eating garbage and food scraps. They had become habituated to people – living at the uranium camp/wilderness edge with the miners – intimately familiar with the miners' life rhythms. Two wolves had been in the area for weeks, including just prior to the incident. More disturbing were indications that Carnegie and others had been "interacting with the wolves at close range, possibly feeding the animals." Indeed, two days before his death, Carnegie, after showing photographs of wolves at a cafeteria, was warned against taking such photographs by trucker Bill Topping, who hauled supplies in the region. He relayed the story of a dog that had been "shredded" by wolves in the Paull River Wilderness Camp, south of Points North Landing. There, a wolf killed and ate a bulky Airedale terrier in camp. Topping cautioned Carnegie and another geology student that "Wolves are the smartest creatures in the bush."³ When Carnegie failed to return from a walk in the late afternoon of November 8, searchers discovered his body and chased off the four nearby wolves.⁴

Andrew McKean, of *Field & Stream*, recreated the moment for his rifle-toting readers: “The footprints indicated that four wolves had shadowed Carnegie, who stopped, turned around and then tried to elude the animals breaking into a terrified sprint for safety. The tracks suggest that the man was knocked to the ground at least twice but struggled to his feet before he was taken down a final time.”

Topping, the trucker who had earlier warned Carnegie, remembered that the site of Carnegie’s body “wasn’t pretty.” He recalled, “It was just as though those wolves had taken down a moose or a caribou.” In *Field & Stream*, however, McKean had a different interpretation and, by separating humans from other animals, forcefully reined in his readers from the dangerous philosophical abyss. He barked: “Only it wasn’t an animal. The wolves’ victim was a human...”⁵ On November 10, Saskatchewan conservation officers shot two of the suspect wolves at the dump. When necropsies were performed at the Prairie Diagnostic Services laboratories, at the University of Saskatchewan, veterinarians discovered “hair and flesh in the large intestines that resembled human remains.”⁶ Paul Paquet, an ecologist from the University of Calgary, concluded his investigation in this manner: “I suspect that ultimately we will find that these are garbage-habituated wolves that are either being inadvertently fed or intentionally fed in the area... That is the common thread to most wolf attacks that I’ve investigated.”⁷ Tim Trottier, a wildlife biologist for Saskatchewan Environment and Resource Management, explained that “These wolves lived in a very unnatural state, so it’s not that surprising that they might behave unnaturally.”⁸ Intimacy with humans is always unnatural; always supremely dangerous.

Carnegie's kill site is not "pretty" (to borrow trucker Topping's gritty truck-stop vernacular) for environmental historians, either. It evokes the many tricky theoretical issues that historians face when writing about nonhuman animals. Carnegie's mangled body outraged McKean, the *Field & Stream* journalist, precisely because the young man was "human," not an "animal" such as a moose or caribou. His anxieties exposed the carefully policed divide, between a hominid species, one that has long fancied itself as outside nature, and other Earthly organisms.⁹ Trottier, the Saskatchewan environmental official, likened the garbage dump to an "unnatural state" and wolves that killed people as behaving "unnaturally." When humans manipulate and defile the sublime Cathedral of wilderness – mining for uranium, laying oil pipes, and logging forests – that pristine place falls from its natural grace, and so do, we must surmise, the other souls that live there.¹⁰ In the case of wolves, they become, in the words of McKean, "junkyard dogs," living on the edge between civilization and wilderness. Real wolves do not kill and eat people, but junkyard dogs certainly do.

Carnegie's kill site was bloodied not only by the young man's torn body, but by the cruel reminder it provided: humans are indeed animals, sometimes even a meaty prey species, and that, as such, they are not outside nature or, ultimately, different than other animals. Just as Carnegie did, they can have violently intimate relationships with other creatures. Being eaten by another animal is to become energy for that animal. It is to be forcefully pulled back into the metabolism of the natural realm; ripped from the safe confines of cultural dominion. Whether one fixates on advanced technologies or the lofty notes of classical music or the intricate chaos of Vincent van Gogh's paintings, the debate

regarding whether humans are outside nature or separate from animals abruptly ends with stomach enzymes from a wolf dissolving the flesh of a young mining engineer.

David Quammen, in *Monster of God*, has written that, “For as long as *Homo sapiens* has been sapient – for much longer if you count the evolutionary wisdom stored in our genes – alpha predators have kept us acutely aware of our membership within the natural world. They’ve done it by reminding us that to them we’re just another flavor of meat.”¹¹ This chapter investigates how some environmental historians and other scholars have navigated the complex terrain of writing about nonhuman animals, including animals that kill and eat people. Over the past decade, writing on nonhuman animals has developed into a sizable literature and, regrettably, only a slice of that literature can be covered in the pages ahead. Therefore, this chapter focuses on two broad themes, which, for our purposes, serve as subchapters and represent some of the major areas of concentration in this subfield: “The Intimacy of Violence” and “The Intimacy of Transcendence.” But the thread that holds this chapter together, with all its disparate references to important books and articles, is our shared intimacy with animals. They permeate our history and we theirs: tug at the threads and our stories, woven as they are into the same tightly knit tapestry, will not disentwine.

THE INTIMACY OF VIOLENCE

Just like Carnegie, Val Plumwood was in the wrong place at the wrong time. In Kakadu National Park in Australia, the water lilies float wistfully on thick, slow-moving water; but the fiberglass canoe that Plumwood paddled through these lazy wetlands, meander as they do through countless shallow channels with steep, muddy banks, seems in retrospect like a flimsy craft, given that, after decades of protection, the park belonged

to hundreds of crocodiles. Plumwood had come to Kakadu because she desired to view ancient Aboriginal rock art, and she ventured deep into crocodile country, despite cold temperatures, driving rain, and a stern warning from a park ranger. Finally, she arrived at the croc-infested main channel; but she grew nervous and decided to paddle back to the boat launch. It was then that a crocodile pursued her. She tried to paddle the canoe to avoid the half-submerged creature, but it effortlessly adjusted its course to intercept her. “For the first time,” she recalled, “it came to me fully that I was prey.”¹² She was no longer the sole agent in this pending violent encounter in her personal history.

She sprung from the craft and grabbed a low-hanging tree limb, but the crocodile launched from the water with a tremendous splash and grabbed her between the legs and pulled her into the water. Immediately, Plumwood found herself in the crocodile’s “death roll,” whirling violently in the frothing, bloody water. It was drowning her. Then, suddenly, the crocodile released her and, with what traces of power she could muster, she once more tried to climb the tree’s draping limb. But just as before, the crocodile launched from the muddy depths of the channel and grabbed her by the thigh, dragging her into the water and then releasing her. Finally, she was able to scale the muddy bank of the channel by using her thumbs as dull, fleshy pitons, hoisting herself out of the water. She tried to make it back to the boat launch, but she lost blood and buckled under the excruciating pain and exhaustion. “I struggled on,” she remembered, “through driving rain, shouting for mercy from the sky, apologizing to the angry crocodile, calling out my repentance to this place for the fault of my intrusion.”¹³ Ultimately, Plumwood was rescued from her harrowing experience. Later, she philosophized about the entire event. She pondered what she called the “hyperseparated” boundaries between the “sacred-

human” and “profane-natural,” boundaries that dissolve before one’s eyes when being ripped in the horrifically powerful jaws a crocodile. Death at the jaws of one of these giant lizards “multiplies these forbidden boundary breakdowns, combining decomposition of the victim’s body with the overturning of the victory over nature and materiality that Christian death represents.” She continued: “Crocodile predation on humans threatens the dualistic vision of human mastery of the planet in which we are predators but can never ourselves be prey. We may daily consume other animals in their billions, but we ourselves cannot be food for worms and certainly not meat for crocodiles.” Indeed, the crocodile’s “death roll” proved the inadequacies of culturally driven explanations for our encounters with other animals on Earth: “We live by illusion if we believe we can shape our lives, or those of the other beings with whom we share the ecosystem, in the terms of the ethical and cultural sphere alone.”¹⁴ Humans inhabit a vast living biosphere, teeming with creatures driven by biological needs and hungers, making us far from the sole agents of Earth’s destinies.

Just as Carnegie’s death did, Plumwood’s “death roll” with a crocodile served as a bloody reminder that, despite our clever manipulations of some animals into industrialized “biotechnologies” or our useful domestication of others for our companionship or calorie stocks, animals possess real agency in our world, directly shaping our histories. Really, they are not our technologies, though the case for viewing them in this manner, as collections such as *Industrializing Organisms* proposes, has proved compelling.¹⁵ *Industrializing organisms* serves as another example of our shared intimacy with animals, however: industrial culture has re-crafted the bodies of animals, through what Edmund Russell has called “historical evolution,” to serve our modern

needs.¹⁶ But every time the brainy hominid manipulates nature – birthing a “hemophiliac beagle,” a large-breasted “chicken of tomorrow,” or the “worker” hogs of industrial pharmaceutical settings – somewhere, hidden in some muddy channel on Earth, another animal is stealthily adjusting its course, always half submerged from our horizon of vision, glassy eyes probing, preparing a toothy interception.¹⁷

One compelling example of this toothy interception is contagious diseases. In his classic *Plagues and Peoples*, William McNeill aptly characterized disease transfer as a kind of predation on humans by microparasites, microscopic meat-eaters that stalk the human herd. McNeill writes that “one can properly think of most human lives as caught in a precarious equilibrium between the microparasitism of disease organisms and the macroparasitism of large-bodied predators...” Simply, certain diseases are actually animals that exist at a microscopic horizon, or “tiny organisms – viruses, bacteria, or multi-celled creatures as the case may be – that find a source of food in human tissue suitable for sustaining their own vital processes.” It is a matter of scale: they are not all that different than wolves, crocodiles, and lions, just much smaller. Moreover, most killer pathogens, from smallpox to influenza, are the product of the domestication of livestock and, hence, transference between species. This is the price humanity has paid for the domestication and, later, industrialization of organisms. The price for humanity’s intimacy with livestock is the micro-predation of the human herd. McNeill explains that twenty-six known diseases transferred from poultry to humans, thirty-two from rats, thirty-five from horses, forty-two from pigs, forty-six from sheep and goats, fifty from cattle, and sixty-five from dogs. Obviously, he writes, the “sharing of infection increases with the degree of intimacy that prevails between man and beast.”¹⁸ Man’s best friend,

the dog, has bestowed on the human species more infectious microparasites than any other domesticated creature. Like Plumwood's crocodile, this is nature adjusting course and intercepting. But, in the case of dogs, it was probably a price worth paying for both species.

An Animal in the Bedroom

Dogs have deftly adjusted their evolutionary course throughout human history, serving as humanity's most intimate partners. When the first dogs departed the wolf tribe, they hitched their evolutionary wagon to the brainy hominid, which cleverly assured their survival; but they surrendered themselves to a species that has inscribed its cultural and political desires, sometimes quite cruelly, on their bodies and behaviors. Archaeological sites reveal humans buried along side wolves and dogs. Sites such as the Zhoukoudian in North China (300,000 BP), Lazeret in South of France (150,000 BP), and Boxgrove near Kent, England (400,000 BP) all yielded wolf bones in close association with hominid bones. As mentioned earlier, these early sites of intimate association should not surprise us. As Juliet Clutton-Brock wrote, "the sites of occupation and hunting activities of humans and wolves must often have overlapped..." Archaeologists unearthed a dog mandible from a late Paleolithic gravesite at Oberkassel in Germany (14,000 BP). It is likely that dogs emerged as humanity's subsistence partner, as hunting techniques shifted from direct impact with stones and axes to arrows tipped with microliths in the Epipaleolithic or Natufian age. Dogs could help track down and dispatched wounded

game.¹⁹ In these hunting fields, our intimate relationship with dogs began. The wolf tribe, by contrast, has struggled on its own.

Splitting with wolves and joining humans was evolutionarily wise for dogs: many dogs share beds with people in opulent homes; wolves are chased down with snow machines or shot from low-flying aircraft. Humans have re-crafted the bodies of dogs to advertise class difference and display other social signals, sculpting them through selective breeding to play into human social needs as they shift over historical time. In *The Beast in the Boudoir*, Kathleen Kete observed, “When bourgeois people spoke of their pets, as they loquaciously did, they pointedly spoke also of their times, and above all else of themselves.” The “bourgeois dog” was the carefully sculpted product of a Parisian fantasy, while “working-class” dogs and “Oriental” dogs “led unstructured, more natural, less cultured lives.” Class anxieties paralleled the pet-keeping fantasy; consistent with the theme of intimacy in this chapter, the “bourgeois dog” was protected and invited into the bedroom, the “working-class” and “Oriental” dog ostracized, chased down, and killed, because it was closer to wolves.²⁰

This was certainly true in Victorian England. In *The Animal Estate*, Harriet Ritvo wrote that similar to the “bourgeois dog” of Paris “good animals” never challenged human superiority. She continued, “The best animals were those that displayed the qualities of an industrious, docile, and willing human servant; the worst not only declined to serve, but dared to challenge human supremacy.” In this hierarchy, one challenged in this chapter by wolves, crocodiles, and microparasites, “Eating human flesh symbolized the ultimate rebellion, the radical reversal of roles between master and servant.” While dog fanciers systematized pedigrees, participated in dog shows, and fussed over portraits

with their prized pets, the unlicensed mongrels of the working class in London were hunted down and clubbed to death because of anxieties over rabies. But the real anxieties were over the working class. Power over nature (and people) was at the heart of Victorian England's "cult of the pet." As Ritvo explained, the goal of pet fanciers "was to celebrate their desire and ability to manipulate, rather than to produce animals that could be measured by such extrinsic standards as utility, beauty, or vigor."²¹ Careful manipulation safely transforms animals from the "profane-natural" to the "sacred-human."

These attitudes were quickly projected into Victorian England's imperial designs as well. In Japan, for example, though not formally part of the empire, indigenous breeds were labeled "pariah dogs" or "kaffir," because of their unstructured, wolfish behavior, while English dogs became symbols of "civilization." Immediately after the Meiji Restoration of 1868, indigenous breeds, because of rabies and their threat to livestock, were rounded up and shot; foreign breeds were often protected as emblems of Japan's desired Western-style modernity. Starting in 1877, on the northern island of Hokkaido, in such cities as Sapporo, Hakodate, and Nemuro, policed tracked and clubbed to death all unlicensed dogs, because they reportedly harassed livestock and allegedly carried disease. Police dispatched hundreds of what were labeled "wild dogs," "bad dogs," and "mad dogs" in this brutal manner.²² Only with the rise of Japanese ethnic-nationalism in the early twentieth century were indigenous Japanese breeds rescued from the brink of extinction. Within the context of Japanese ethnic-nationalism and other distinctly Japanese things, the "Japanese dog" was born and celebrated, re-sculpted to fit the fascist political climate of its day.²³

Holding Humanity Down

In all these histories, the human need to conquer nature through subduing and re-sculpting animals glares out like translucent crocodile eyes in a dark Australian wetland. In *Eyelids of Morning*, Alistair Graham wrote of his and Peter Beard's crocodile research on Lake Rudolf in Kenya in the mid-1960s. Graham, too, fixated on the theme of human dominance over this particularly toothy nature. He wrote, "In the face of man's inexorable expansion, Lake Rudolf will one day fall and its dragons be subdued, for civilized man will not tolerate wild beasts that eat his children, his cattle, or even the fish he deems to be his. That would be regression into barbarism." Being eaten by a crocodile, or even wolves for that matter (as Carnegie's tragedy instructs), is to confront our shared animal nature with other organisms, to surrender being human, a crafter of culture and artifice, and to regress into animal "barbarism." This is the "hyperseparation" that Plumwood identified in the aftermath of her encounter with a crocodile's "death roll." Graham told many grisly stories of crocodile attacks, but the most gripping was the death of William Olsen, a Peace Corp volunteer in Ethiopia in 1966. He, too, was in the wrong place at the wrong time and a crocodile killed and ate him for it. Later, the reptile was shot by police and a field necropsy produced Olsen's torn body. Karl Luthy, a safari-outfitted big-game hunter, witnessed the slicing open of the croc's belly. "We found his legs," Luthy recalled, "intact from the knees down, still joined together at the pelvis. We found his head, crushed into small chunks, a barely recognizable mass of hair and flesh; and we found other chunks of unidentifiable tissue." Graham wrote, "So long as one is constantly threatened by savage brutes one is to some extent bound in barbarism; they

hold you down. For this reason there is in man a cultural instinct to separate himself from and destroy wild beasts such as crocodiles.” The hallmark of the human relationship with other animals is our need to separate ourselves from them, lest they “hold us down.” Wild, toothy animals deny us our right to heavenly immortality by holding us down; they deny us our divine origin myths by holding us down. Crocs and other predators force us to confront our shared fleshy nature with other organisms on Earth, which flies in the face of our deepest cultural myths of monotheistic transcendence and sacred difference.²⁴

Look around carefully; look at your fingernails, hair, and incisors: we were not built in the likeness of gods, but in the likeness of the other organisms with whom we share Earth.

Predators such as wolves and crocodiles do not eat people in chance encounters, either. Being prey, or participating in the crunchiest of animal intimacies, is motivated by biological necessity, but often made possible by humanity’s social drivers. David Quammen labeled the social and cultural forces that render people prey as “the muskrat conundrum.” His principal example is the Maldharis people of India, whose livestock and selves often serve as meat for the Asiatic lion of the Gir Wildlife Sanctuary and National Park. For nearly a century and a half, the Maldharis (a composite of several older pastoral communities) were nomadic, traveling the Kathiawar with their cattle, peddling access to pasturelands for the manure that their cattle would inevitably deposit there. As the Kathiawar landscape became more restricted with private ownership, they established makeshift camps in the forests around Gir. In 1972, however, all Maldharis families living within the Gir forests – some 845 of them – were to be forcibly resettled to make way for what the Gujarat government called the Gir Lion Sanctuary Project, a project undertaken at the behest of such international conservation groups as World

Wildlife Fund. The Maldharis were slated to become farmers. Nonetheless, by the 1980s, only about 600 families had left the Gir for surrounding farmlands, while some 300 Maldharis families remained, scattered throughout the Gir forests in makeshift camps. These Maldharis and their livestock now share the edges of the Gir with lions and leopards. Living outside mainstream Indian society (a phenomena shaped by India's rigid caste system), the Maldharis and their livestock fend for themselves against lions and leopards. They live in close proximity to large predators, and their poverty and pastoral lifestyle renders them vulnerable.

Quammen likened this situation to the "muskrat conundrum" because forcing the Maldharis to the edges of Indian society, where lions and leopards lurk in dark forested places, is similar to how muskrats treat their furry outcasts. Muskrat populations are notoriously density dependent, and only a certain number of individuals can find safe, suitable den sites and adequate food within a given territory. The elderly, outcast, or those weakened from disease are forced from the safe den sites and become what scientists call the "wasted parts" of the population. Predators such as minks lurk on the edges, preying on muskrat "wasted parts," or those forced to the dangerous edges of muskrat territories. Quammen likened the Maldharis to the "wasted parts" of Indian society, bound to the edges of the Gir forest by pastoral tradition, botched government relocation programs, poverty, and the desire for charismatic lions and leopards by the wealthy in industrialized nations. So that "haves" in the safe center can enjoy the spiritual and aesthetic pleasure of the Gir Sanctuary's majestic lions, "have-nots" such as the Maldharis wander with their cattle through lion and leopard-infested forests, losing livestock and members of their community in the process. Those closest to the Gir lions,

the Maldharis, understandably resent the large cats. Quammen wrote, “No one wants to be among the ‘wasted parts’ of a population.” He asked, “Is it inevitable that the costs exacted by alpha predators be borne disproportionately by poor people... while the spiritual and aesthetic benefits of those magnificent beasts are enjoyed from afar? He concluded that “it’s a matter that we cozier muskrats need to address.”²⁵

However, “cozier muskrats” in the U.S., as portrayed by Mike Davis in *Ecology of Fear*, have their own edgy, predator-infested problems to deal with. If Indian society has pushed pastoral peoples such as the Maldharis to the edges of the Gir, where lions and leopards wait for them and their livestock, violent and impoverished inner-cities in the U.S. have pushed the “haves” to the suburbs. In California and across the U.S., as suburban neighborhoods encroach on once wilder lands, cross-over ecologies have emerged, places where wildlife, such as the four wolves that killed and ate Carnegie, becomes more habituated to people. That is, whether in India or California, nonhuman animals, such as Asiatic lions or mountain lions, rarely if ever hunt people in the heart of major cities or metropolitan areas; this is where the “have-nots” hunt members of their own species. Mostly, these animals hunt people on the edges, where the green Kentucky bluegrass yields to arid sage lands. Predation occurs at these edges, just as it does along the Gir forest’s edges. Only, it is not herdsmen who suffer, but rather the mobile, well-healed of American society, folks who yearn to retrieve a small, carefully manicured piece of subdued nature. But here again, animals just beyond our horizon, just like Plumwood’s overly curious croc, have adjusted their course. In an edge ecosystem, Davis recounts how a mountain biker was torn from his bike in the San Gabriel Mountains, and a coyote ripping the head from a young girl in a Glendale, California, suburb. Most

predators kill people along the edges of suburban areas, mines, wildlife sanctuaries and logging camps.²⁶ These suburbanites live in a new kind of intimacy with wildlife, creatures that have come to appreciate the amenities of living near more vulnerable people.

Intimate Affinities

However, sharing cultural and biological affinities and intimacies with the brainy hominid can be risky business. For these creatures, humans reserve a level of violence they normally reserve for members of their own species. The more similar to the human species other animals are – whether socially, physiologically, or behaviorally – the more menacingly they challenge the human/animal distinction humans so carefully police. It is hard to separate (let alone “hyperseparate”), when everywhere similarities, not differences, abound between humanity and other animals. Chickens, for example, are not like people: they lay eggs, cluck, have feathers, roost, and scratch and forage for grasshoppers and grains. But monkeys are quite like us, so much so that Japanese hunters, when asked by angry persimmon fruit growers to cull them, refuse to do so. Japanese hunters recount how if you point a rifle at them, they gesture and beg for their lives; if you do shoot them, they grab their wound in pain, something like the ending of a shootout scene from a Spaghetti Western.²⁷

Some primates are so closely related to us that they serve as a kind of “natural other” to humans: the study of certain species, such as chimpanzees, can be cast in a manner that underscores and legitimizes patriarchy and capitalism in certain societies. In

Simians, Cyborgs, and Women, Donna Haraway argued that natural knowledge regarding animals has often been used to buttress social domination over women and reinforce forms of political-economic control. “Women know very well that knowledge from the natural sciences has been used in the interest of our domination and not our liberation,” wrote Haraway. She continued that “natural knowledge is reincorporated covertly into techniques of social control instead of being transformed into sciences of liberation.” Indeed, the study of animal groups, observed Haraway, has proved “unusually important in the construction of oppressive theories of the body political.”²⁸ Monkeys, too, “hold us down,” only in this case intentionally, because it serves the purposes of the architects of our patriarchal, capitalistic scientific realities. Clearly, primatology and other animal sciences depart from environmental history into the realm of the history of science, but it is through the lens of such “natural knowledge” that environmental historians often see the animals they write about, so studies of the social and cultural construction of science are critical to the environmental historian’s toolkit. Cultural studies demonstrate that animals can signify many different political, social, and cultural forces in human societies around the globe.²⁹ In pre-revolutionary France, cats signified bourgeois luxury, witchery, and vaginas. In Japan’s folk beliefs, raccoon-dogs signified neglected debts and large testes; while deer signified gratitude, the continuum of life, and the transmigration of the soul in Buddhist theologies.³⁰

Wolves do not exactly look like us, but they live in complex societies, nurture and educate their young for years, communicate through complex vocalizations and body languages, grieve and sacrifice, violently defend their territories, eat meat, cooperate, and live within elaborate social hierarchies, which they occasionally challenge. They really

do compete with humans on an ecological and economic level. The livestock that humans defend for their livelihood, wolves view as part of their livelihood, too.³¹

The manner in which nature's economic competition between wolves and humans spirals out into the cultural realm of myth-making and ritualized violence is the theme that Jon Coleman explored in *Vicious*. Principally, Coleman sought to explain the violence inflicted on wolves by humans, violence that travels beyond simple competition for calories. Even if the two species did compete over territory, livestock, and other sources of meat, that competition still fails to explain the meticulous cruelty that humans have unleashed on the wolf tribe. In the 1660s, for example, along the Maine coast, John Josselyn and hunting partners twice captured live wolves and tortured them for sheer enjoyment. Once, Josselyn's Mastiff pinned a wolf by its throat in a low tide, so that the hunters could bind the wolf and carry it back home, "like a Calf upon a staff between two men." Later that night, they let the wolf loose in the living room. "The beast sank to the floor," narrated Coleman. "No biting, no snarling, he just slouched there, staring at the door." Even the Mastiffs proved disinterested in riling up the wolf. Coleman explained, "Their evening's entertainment ruined, the hunters took the wolf outside and crushed his skull with a log."³² As Coleman documented, the violence inflicted on wolves by Americans was ghoulish. The title *Vicious*, it turns out, refers to the hominid species, not the lupine one. Coleman's prose on this topic is as eloquent as his examples are grisly:

Euro-Americans fractured wolf skulls and shot-gunned wolf puppies. They set the animals on fire and dragged them to pieces behind horses. They destroyed wolves for a host of pragmatic reasons: to safeguard livestock, to knit local ecosystems into global capitalist markets, to collect state-sponsored bounties, and to rid the world of beasts they considered evil, wild, corrupt, and duplicitous. Their motives appear as blunt as a gunshot to the head, but wolves' deaths were neither that quick nor that straightforward. They died with fractured spines and severed hamstrings,

gifts from a predator dissatisfied with mere annihilation. The brutality of wolf killing transformed bloody-but-understandable acts of agricultural pacification into deeds as inexplicable as they were horrendous.³³

Coleman argued that wolves and humans fought for one common goal: “transcendence.” He wrote, “Both struggled to pass down genetic, cultural, and material legacies to their offspring, and this conquest of time, played out over history, culture, and biology, explained the longevity and intensity of the species’ conflict.” Coleman observed that all creatures seek transcendence at some level, but humans also seek to pass along their “possessions and ideas.” He continued, “Humanity’s quest to reproduce ideas and possessions clashed with wolves’ mission to survive as a species through sexual reproduction. Wolves were formidable biological competitors.” Coleman integrated biological analysis into his portrait of the viciousness between wolves and humans, but he carefully made one distinction between humans and other nature. “Humans set conditions on life while biology sets none,” he explained.

Perhaps the most persuasive example of humans setting “conditions on life” through biological and cultural transcendence was colonialism and empire. Coleman observed, “One of the ways Europeans coped with their reproductive bonanza was to pack up their progeny and leave. Population fueled European colonization, and colonization rearranged biological communities throughout the world.”³⁴ Importantly, if colonialism delivered biological and cultural transcendence for some members of humanity and their allied organisms, it set the stage for mayhem and genocide for others. Though some humans vigorously competed with wolves for transcendence, they enlisted allies from throughout the natural world to assist with ensuring the survival of their offspring, possessions, and ideas. Humanity needed imperial partners to craft empire,

and they received substantial help from nonhuman animals. This is the intimacy of transcendence.

THE INTIMACY OF TRANSCENDENCE

Human expansion created opportunities for transcendence. Really, many animals, even the smallest creatures with whom we share Earth, have nurtured biological advantage through allying themselves with the brainy hominid. In *The Fire Ant Wars*, for example, Joshua Blu Buhs argued that fire ants exploited what historians call the “bulldozer revolution” in the American South, following humans as they disturbed the landscape. The ant, because it evolved in the floodplains of South America, thrived in areas of upheaval. Blu Buhs submitted that fire ants “exploited this revolution to spread across the region. Thus it was a combination of the ant’s natural history and human action that caused the insect’s irruption.” Blu Buhs carefully pointed out that the “ant is nature independent of humans.”³⁵ That is, they think and act outside the realm of our minds. But, like most nonhuman animals explored in this chapter, they established an ecological intimacy with humans, particularly the human penchant to expand and disrupt distant landscapes. Most invasive insect species hitched their evolutionary wagons to humans: the Japanese beetle, for example, stowed itself away in the root-bundles of a batch of azaleas shipped to Riverton, New Jersey in 1916. It proved an advantageous decision for the hungry chafers, as they manage to escape several species of predatory flies and wasps, not to mention several deadly diseases, which kept their numbers down in Japan.³⁶ Similarly, in the mid-nineteenth-century, Etienne Leopold Trouvelot imported European gypsy moths to the Boston area and, after they mysteriously escaped, became an agricultural scourge and led to the “gypsy moth wars.”³⁷ In every pesky instance, though,

whether fire ants, Japanese beetles, or gypsy moths, it was the intimate ecological partnerships with humanity that ensured these insects' survival and their expansion to new corners of the globe. Indeed, humanity is a good partner when it comes to expanding your species.

When Iberians set out for the New World in 1492 – seeking, to evoke Coleman's words, biological and cultural transcendence – they brought their ships, navigational sciences, military hardware, and lots of critters. Wooden ships rocked and jolted in stormy seas; they creaked and groaned while their cargo holds echoed with the agonizing bellows of livestock. But livestock had to come: these allied organisms proved instrumental in the conquest of the Native American civilizations. Allied organisms such as pigs, sheep, cows, dogs, and other creatures devoured native agriculture, transformed landscapes, introduced noxious weeds, out-competed indigenous fauna, and provided other imperial services critical in the European conquest of the New World. While pigs rummaged through native gardens, posing the threat of starvation, two-hundred pound English Mastiffs chased Indians from newly established plantations. When Captain Martin Pring landed at Provincetown Harbor near Cape Cod in 1603, he was accompanied by Fool and Gallant, two large Mastiffs. When Pring wanted to be rid of local Nauset traders, “wee would let loose the Mastives, and suddenly with out-cryes they would flee away.”³⁸ Fool and Gallant, and a host of other creatures, were allies in the European colonial project.

The Intimacies of Empire

Though snarling Mastiffs can prove helpful, Alfred Crosby argued that the real key to European success in the New World was their ability to “Europeanize” it, a process that was underway by 1500 and, in Crosby’s estimation, irreversible by 1550. Within decades of 1492, disease ravaged the Antillean peoples of Caribbean and had made headway on the American mainland. “As the number of humans plummeted,” wrote Crosby, “the population of imported domesticated animals shot upwards.” The land was emptied of Indians, and they were replaced by European livestock. The first wave of allied organisms arrived in 1493, and populations of these horses, sheep, dogs, pigs, cattle, chickens, and goats exploded with few natural predators, diseases, and plenty of grasses, roots, wild fruits, and carefully tended Indian gardens. Crosby explained: “Their numbers burgeoned so rapidly, in fact, that doubtlessly they had much to do with the extinction of certain plants, animals, and even the Indians themselves, whose gardens they encroached upon.” Virtually everywhere Iberian conquerors went, they deposited pigs and cattle from their ships, and their numbers multiplied and displaced or destroyed local fauna and human populations.³⁹

As pigs busily displaced peoples, Europeans saddled and rode horses, herding cattle whose meat could be consumed to provide colonial calories. In the New World, the Iberian rancher became iconic: Spaniards, astride their equine allies, drove their herds onto the plains, the llanos, and the pampas. Crosby estimated that by the seventeenth-century there were more cattle in the New World than any other type of “vertebrate immigrant.”⁴⁰ Sheep, too, accompanied Iberian conquerors, though they acclimated more

slowly to the New World. Sheep not only brought wool to the New World, but microparasites, which, once transmitted to llama and alpaca populations, swiftly devastated them. Elinor Melville, in *A Plague of Sheep*, likened the increase in sheep populations in the New World to “virgin soil” irruptions of diseases such as smallpox. She called the increase in sheep populations an “ungulate irruption,” whereby sheep contributed to the creation of a “conquest landscape” in Mexico. Sheep did not simply replace men,” wrote Melville. Rather, “they displaced them – ate them, as the saying goes.” She succinctly defined the conquest landscape as “The process by which sheep grazing displaced agriculture, and sheep displaced humans, resulted in the formation of a new and far less hospitable landscape within which the indigenous populations were marginalized and alienated, their traditional resources degraded or lost, and their access to the means of production restricted.”⁴¹

The conquest landscape was not unique to the Iberian experience in the New World, as animals often competed with humans for calories in certain disrupted environments. In northeastern Japan, for example, similar environmental processes occurred: after the brutal unification wars in the sixteenth century that terminated centuries of civil war (a period known as the Era of the Warring States), a domestic conquest landscape emerged when that region was shoehorned into the new political order emerging in such metropolitan areas as Kyoto and, later, Edo (present-day Tokyo). When the warlords militarily subdued essentially autonomous northeastern domains, the region was, over the centuries, transformed from a landscape characterized by horse pastures, ones that supplied some of Japan’s most famous samurai mounts, to ones dominated by soybean monoculture. In the eighteenth century, with Neo-Boreal (Little

Ice Age) events and increased demand for soybeans in Edo, colder and windier weather ruined crops, forcing farmers into the mountains to search for yams, arrow root, and other wild vegetables. However, the slash-and-burn agricultural techniques that had made large-scale soybean cultivation possible in the mountains also created large swaths of habitat for wild boars, whose populations irrupted. When farmers felled forests to make soybean fields, they inadvertently created ideal habitat for calorie competitors. With the threat of famine in 1749, farmers retreated to the mountains to harvest naturally occurring vegetables, but they found none; meanwhile, what little remained of their harvests marauding boars devoured. Thus, Japan's sixteenth-century unifications wars, conflicts that paved the way for the establishment of the modern state, colonized once-autonomous domains, restructured biological communities, changed landscapes, and sparked an "ungulate irruption" that contributed to the death of thousands in 1749 in such areas as Hachinohe. Several brutal famines struck eighteenth-century Japan, but chroniclers called this one the "wild boar famine" of 1749, because of the competition between hominids and ungulates.⁴²

A Stockyard on the Hill

Europeans' allied organisms crafted the conquest landscape in the Americas. In the Caribbean and Mexico, there were few predators and plenty of food, and livestock marauded through Indian gardens or turned feral and competed with indigenous fauna. Ultimately, these allied animals proved intimate partners in the conquest of South America. They partnered with hominids in the "Europeanization" of the New World, but

they also had their own agendas to attend to, such as reproducing, eating, bedding down, rummaging, marauding, and otherwise imprinting their rather large hoof-prints on the savage history of the conquest of the New World. As Virginia DeJohn Anderson argued in *Creatures of Empire*, European livestock, once in seventeenth-century New England, shouldered much of the burden of creating and expanding the English colonies. These creatures not only grazed the grasslands of the conquest landscape, but harassed, challenged and, ultimately, brutally displaced Indians from their homes as part of the slow, bloody march of white settlers across the North American continent. These beasts of colonial burden served at the vanguard.

If Europeans' allied organisms intruded into the "virgin soil" of the Caribbean and Mexico, essentially as invasive species transported in ships by an invasive civilization, livestock in New England worked in a closer empire-building partnership with European settlers. Anderson argued that the English colonists' livestock not only reconfigured New World environments, but changed the "hearts and minds and behavior of the peoples who dealt with them" in a cultural clash that left New England-area Indians in tatters. Specifically, although Europeans categorized all nonhuman creatures as "beasts" or "animals," Indians viewed the natural world differently, ignoring such strict dichotomies. They neglected to police divisions between the "sacred-human" and "profane-natural." Famously, the Algonquian peoples believed that a spiritual power, known as *manitou*, manifested itself in human and nonhuman animals. This belief contrasted sharply with Christian conceptions of animals in the natural order of Creation. Anderson explained: "The assumption that animals could possess *manitou* literally empowered nonhuman creatures in a manner foreign to the colonists' Christian beliefs. Access to spiritual

protection gave animals a special status in native societies. Indians certainly recognized differences between people and animals, but could not regard animals as lesser beings, defined from the moment of Creation as invariably subordinate to humans.” Therefore, the importation of European livestock to the New World sparked cultural shifts, not simply ecological ones. The husbandry practices of English settlers challenged the natural order of Indians. Indians adorned themselves with animal motifs, dressed in animal skins, refrained from killing certain animals for deep cultural reasons, and “negotiated” with animals as they hunted and killed them. Anderson wrote that “Native peoples conceived of their connections with animals in terms of mutual support rather than human dominance and shaped their behavior accordingly. In this, as in so many other aspects of Indian culture, the principle of reciprocity structured both thought and conduct.”⁴³

Respect for animals and reciprocity toward their slaughter should not be interpreted as Indians being closer to animals, however. Indians might have respected them, but it was English colonists who actually lived with them: husbandry is an intimate relationship with organisms that would have proved unfamiliar to Native Americans. Domestication, observed Anderson, “is as much a relationship as a condition, signaled by the frequent association of people with certain animals.” She argued that the key to understanding the colonists’ relationship with their allied organisms is that they were “property” (or part of human material dominion or ownership). If Indians made little distinction between wild animals and domesticated ones, Europeans did, precisely because domesticated animals were the property of colonists. Foreshadowing the role that domesticated animals played in the history of Early America, Anderson submitted: “The Indians could not have known that a distinction that had little or no meaning in their

culture would loom so large in the colonists' minds." Much as they did in the conquest landscape in the Caribbean and Mexico, cattle became key players in the empire-building project in New England. Cattle as agents in the New World operated in an ecological, legal, and symbolic manner. Simply, cattle's symbolic association with civility and their material association with property made the "land as Christian as well as English." "As agents of empire," Anderson wrote, "livestock occupied land in advance of English settlers, forcing native peoples who stood in their way either to fend the animals off as best they could or else move on." Even though Indians eventually started to incorporate livestock into their culture, their lands became pastures for these hoofed agents of empire. "Indians found room in their world for livestock," Anderson concluded, "but the colonists and their descendants could find no room in theirs for Indians."⁴⁴

Neither could they find room for wild animals that threatened their livestock. Importantly, the relationship between English colonists and their livestock was a reciprocal one – a little like the reciprocity between Indians and their game, only more intimate. That is, livestock provided calories and served in the vanguard for white settlers' cruel march across the North American continent. In return, white settlers reciprocated by protecting them. Later, in the eighteenth and nineteenth centuries, this meant eliminating Indians who raided cattle, killing ungulates such as bison that competed for grass with them, and organizing pogroms against predators such as wolves that tracked, killed, and ate them. Cattle replaced bison on the American frontier and, as Richard White explains, "Americans came to think that they were living in the 'Golden Age of American Beef.'"⁴⁵ Some western cities were little but giant slaughterhouses. After 1860s, observes William Cronon, Chicago's south-side became famous for its

unified stockyards and slaughterhouses, where the meat-market was concentrated, railroads loaded and unloaded squealing animals, and gawking tourists waded through the thick, sticky, saccharine blood from stuck pigs and cows bleeding to death from hooks thrust through their bodies. In this brutal, mechanical, “death factory,” as Rudyard Kipling described it, livestock sacrificed themselves reciprocally to their hungry hominid overseers. It was in the Chicago stockyards, Upton Sinclair wrote, that one hears “the hog-squeal of the universe.”⁴⁶ That squeal, as recent environmental history has shown, echoes throughout human history as well.

Sharing the Kills of Another

Empire-builders around the globe left a wake of rotting bodies behind them, and animals were, once again, intimately involved. Violence was perpetrated to protect organisms such as livestock, but it was also perpetrated by certain animals as part of their reciprocity to hominid invaders. In India, Africa, and parts of Asia, where nineteenth and early twentieth-century El Niño droughts laid waste to entire communities and, as Mike Davis explained, provided a “green light for an imperialist landrush,” dogs, jackals, wolves and other animals hunted down weakened people. Animals shared the kills of another – in this case, the kills of Europeans – gorging themselves on the “wasted population” left as carrion on global killing fields of biological transcendence. In August 1877, for example, in India’s Nellore and other districts in the Madras Deccan, pariah dogs feasted on the famine dead. “I came upon two dogs worrying over the body of a girl about eight years old,” wrote one British official. “They had newly attacked it, and had

only torn one of the legs a little, but the corpse was so enormously bloated that it was only from the total length of the figure one could tell it was a child's." That same year, El Niño droughts ravaged parts of China's Qing dynasty. In Shaanxi, for example, the Qing allowed two representatives of the British Inland Mission to tour the Wei River Valley, where they discovered to their horror hundreds of thousands of dead bodies. Those lucky enough to survive were weakened by malnutrition and, according to reports, hunted down by wolves that prowled the outskirts of town, "gorged and stupid from the fullness of many ghastly meals."

In some regions of China, locust devoured what remained of crops, magpies and "pariah dogs" picked at bloated bodies, and people – the most un-animal of all the animals – reportedly sold and consumed their own children in acts of grave desperation, blurring the contrived line between human and nonhuman animals. Chinese officials reported in Shanxi that "children abandoned by their parents... were taken to secret locations, killed and consumed." One Welsh missionary described stories of "parents exchanging young children because they could not kill and eat their own."⁴⁷ The British Empire preyed on societies weakened from El Niño droughts, and different varieties of animals – from pariah dogs to wolves – preyed on the native bodies left in the wake of cruel British misrule.

Dead animals often provide markers for the triumph of expanding civilizations. Throughout history, as Chinese dynasties and their allied organisms expanded across North and Southeast Asia, dead elephants littered the killing fields left in the wake of the march of Confucian civilization. Indeed, Mark Elvin, in *The Retreat of the Elephants*, began by explaining: "Four thousand years ago there were elephants in the area that was

later to become Beijing (in the Northeast), and in most of the rest of what was later to be China. Today, the only wild elephants in the People's Republic are those in a few protected enclaves in the Southwest, up against the border with Burma." Elvin's book is not about elephants, but the pachyderms provide a fascinating historical indicator for China's biological and cultural transcendence. Similar to Euro-American monotheistic beliefs, pacifying animals proved central to Confucian notions of civilization. Mencius, one of the great Confucian philosophers, boasted that the sage-ruler, the Duke of Zhou, rid the landscape of animals. "He drove the tigers, leopards, rhinoceroses, and elephants far away," wrote Mencius, "and the world was greatly delighted." Ridding the landscape of elephants was cruel business, however. In 1547, villagers from Hepu County, in the Southwest, killed a herd of marauding elephants that had trampled their gardens by surrounding them with barricades, trapping them, felling all the trees from within the barricades, and then roasting them to death in the scorching sunlight. A Ming-dynasty chronicler wrote: "People were also told to wait for a moment when they could cut down the trees that grew within the barricades, so the herd could be attacked by the heat of the midday sun. Elephants are afraid of heat; and in three or four days all of them were dead." As Chinese hunted elephants as pests, for their ivory tusks, and enlisted them as allied organisms in warfare, the creatures gradually disappeared. In time, the landscape was depopulated of elephants and repopulated by Chinese people: the destruction of elephant herds became an indicator of the advance of the human one.⁴⁸

The elephant's destruction by the Chinese reminds one of the ruthless annihilation of the bison in the U.S. If elephants were killed as agricultural pests, sources of ivory, and as evidence of Confucian pacification of the landscape, bison were principally killed for

hides that provided leather belts for industrial machinery. In *The Destruction of the Bison*, Andrew Isenberg traced the multi-causal nature of the bison's near extinction: the changing nature of the Great Plains ecosystem, eastern markets and consumer demands for hides, the emergence of equestrian nomadism among certain Native American societies, wasteful white hunting practices, and the spread of disease all conspired to destroy the bison. The nuances of this complex debate aside – that is, was it overzealous native hunting after the enlistment of horses as allied organisms or white hunters slaughtering for east-coast markets that ultimately decimated herds from an estimated 30 million to about 1,000? – in the wake of the European invasion of the New World, the bison's near extinction became a potent indicator of the biological mayhem that followed.⁴⁹

In the Pacific Northwest, salmon became a potent indicator of biological disruption on the Columbia River. Just as bison served as organisms that transferred the sun's energy from the grasses of the Great Plains to Native American and white settler bodies, salmon transported energy from the Pacific to the bodies of those humans and other organisms who relied on the Columbia. Richard White wrote about the role of salmon, before their virtual decimation, in bringing energy upstream. "During their time at sea Columbia salmon harvest the far greater solar energy available in the Pacific's food chain and, on their return, make part of that energy available in the river," observed White. "By intercepting the salmon and eating them, other species, including humans, in effect capture solar energy from the ocean. Salmon thus are a virtually free gift to the energy ledger of the Columbia."⁵⁰ Energy from organisms such as bison, salmon and, later, cattle fueled humanity's biological and cultural transcendence. To date,

environmental historians have focused mostly on the relationship between human transcendence and terrestrial animals, but compelling research by Arthur McEvoy, David Helvarg, and Mark Kurlansky is redirecting attention to the hidden environmental histories of the ocean and the myriad animals that live in its depths.⁵¹

CONCLUSION

When Plumwood paddled through those eerie channels of the Kakadu wetlands, she confronted a crocodile swimming just below the muddy water's surface. She changed course, trying to get around the animal; but, with a flip of its tail, it adjusted its course, too, successfully intercepting her. This is what animals represent to environmental historians: mobile, thinking, feeling – cleverly adjusting their courses and intercepting us – nature with a profoundly important form of agency many historians choose to ignore. We ignore them at our own peril, however, because of our shared intimacy. They permeate global histories, their crocodile eyes glaring back from within virtually every story we tell. They are not separate from humanity, but rather an intimate partner in our species' biological and historical transcendence. This is the principal lesson of writings on animals in environmental history.

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⁴ Darren Bernhardt, "Wolves Undergo Tests," Saskatchewan News Service; CanWest News Service (Wednesday, November 16, 2005).

⁵ Andrew McKean, "Manhunters: A killing in Canada puts an end to the myth that wolves won't harm humans," *Field & Stream* (April 2007), see <http://www.outdoorlife.com/outdoor/print/article/0,20068,1168298-2...> (viewed 5/15/2007 10:22am)

⁶ John Myers, "Death could be Rare Wolf Attack," *Duluth News Tribune* (21 December 2005).

⁷ "Wolves Killed in Wollaston Lake Area," Canadian Broadcasting Corporation CBC.CA News (16 November 2005 12:31PM CST).

⁸ McKean, "Manhunters: A killing in Canada puts an end to the myth that wolves won't harm humans," *Field & Stream* (April 2007).

⁹ For more on the history of the human-animal divide, see Richard W. Bulliet, *Hunters, Herders, and Hamburgers: The Past and Future of Human-Animal Relationships* (New York: Columbia University Press, 2005), 47-70.

¹⁰ William Cronon, "The Trouble with Wilderness; or, Getting Back to the Wrong Nature," in *Uncommon Ground: Rethinking the Human Place in Nature*, ed. William Cronon (New York: W.W. Norton, 1996), 69-90.

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¹² Val Plumwood, "Being Prey," *Terra Nova* 1, no. 3 (Summer 1996): 34.

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- ²¹ Harriet Ritvo, *The Animal Estate: The English and Other Creatures in the Victorian Age* (Cambridge: Harvard University Press, 1987), 17, 29, 115.
- ²² Brett L. Walker, *The Lost Wolves of Japan*, foreword William Cronon (Seattle and London: University of Washington Press, 2005), 118-19.
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