FIGURE 24. Martha, the last known passenger pigeon, 1912. Photograph by Enno Meyer. At one point in the late nineteenth century, the Cincinnati Zoo boasted as many as twenty passenger pigeons in its collections, some of which successfully reproduced. But the birds gradually died out, and after 1910, only a single example of this once prodigious species survived. From R. W. Shufeldt, "Published Figures and Plates of the Extinct Passenger Pigeon," *Scientific Monthly* 12, no. 5 (May 1921): 466.

Zoo, one of oldest continuously operating zoological parks in the United States.[58] Sometime around the time of its opening in 1875, the institution acquired several of the birds, although the exact numbers, dates, and sources are hopelessly confused in the meager, conflicting records that survive. We do know that the zoo enjoyed modest success in raising the birds, and that by 1881, it boasted twenty passenger pigeons on its grounds.[59] By 1907, however, the institution's flock had been reduced to three birds, two older males, and a single female, that had come from Whitman. One of these males died in 1909, leaving an elderly pair of passenger pigeons that zoo officials dubbed Martha and George Washington, after the nation's original First Couple.[60] When George died a year later, Martha was now utterly alone, the last passenger pigeon known to be living anywhere in the world. There in an eighteen-by-twenty-foot aviary with a sign revealing the species' precarious status, she lived out her final days under growing public scrutiny. As Christopher Cokinos has argued, it was the first time that a creature facing extinction became a celebrity, albeit a minor one.[61]

Sometime on the afternoon of September 1, 1914, Martha drew her final breath. Shortly after discovering her lifeless body, officials placed her in a large block of ice to stave off decomposition and shipped her by rail to the Smithsonian Institution. Three days later, the frozen bird arrived in Washington, D.C.,

FIGURE 25. John James Audubon portrait of Carolina parakeets, 1827–38. The boisterously polychromatic Carolina parakeet once ranged throughout Southeast and Midwest wetlands before falling victim to overhunting, habitat destruction, and the introduction of exotic species. Although parrots generally breed well in captivity, no sustained effort to capture and raise this particular species took place before it fell victim to extinction. From John James Audubon, *Birds of America* (1827–38). Courtesy of the Darlington Memorial Library, University of Pittsburgh.

where it was skinned, dissected, photographed, and preserved for posterity. The flamboyant ornithologist and anatomist R. W. Shufeldt, who was granted the honor of performing the autopsy on Martha, predicted grimly that it would not be the last time he would be called upon to undertake such a disquieting task: "In due course, the day will come when practically all the world's avifauna will have become utterly extinct. Such a fate is coming to pass now, with far greater rapidity than most people realize."[62] After a taxidermist mounted Martha's body in a lifelike pose, Smithsonian officials placed her on display in the U.S. National Museum as a warning to the many visitors who flocked to the institution: even a once profusely abundant bird like the passenger pigeon could fall victim to the juggernaut of modern civilization.

Four years later, the last known captive Carolina parakeet died at the Cincinnati Zoo. Known to scientists as *Cornuropsis carolinensis*, the species was a vivacious, stunningly beautiful bird with a bright green body and a head marked with brilliant yellow, orange, and red hues.[63] The Carolina parakeet once ranged widely across the southeastern and midwestern United States, where it thrived

in wetland habitat, especially mature sycamores and cypress trees growing on riverbanks and in swamps. During the nineteenth century, extensive logging and the conversion of swamps into rice plantations played havoc with the home of the parakeet; the species also suffered persecution at the hands of farmers who blamed voracious flocks for destroying their valuable crops. The spread of the European honeybee may have further hastened the parakeet's decline by taking over the hollow trees the species preferred for nesting. By the end of the century, the brightly colored bird was also in demand for the pet bird trade, as decorations for hats, and as specimens for collectors. Avian diseases carried by domestic chickens and other animals may have also played a role in bringing down the species.

As early as 1831, Audubon noted that the Carolina parakeet "was rapidly diminishing in number."[64] Forty years later, in a report on an expedition he had recently made to Florida, J. A. Allen warned that the species was facing multiple threats: capture for the pet trade, wanton destruction by so-called sportsmen, and persecution from farmers who feared the bird would consume valuable crops. Already lost across much of its historic range, its ultimate fate seemed clear: "extermination."[65] By the end of the century, the parakeet's range had been reduced to the remote wetland regions of Florida and portions of South Carolina, leading the Smithsonian ornithologist Charles Bendire to echo Allen's grim prediction in 1895: "Civilization does not agree with these birds, and . . . nothing else than complete annihilation can be looked for. Like the Bison and the Passenger Pigeon, their days are numbered."[66] Yet, as had been the case for the passenger pigeon, naturalists gathered little data about the life history and behavior of the species before it was forced into oblivion. At the turn of the century, natural history remained focused on collection and classification, and as a result, ornithologists who encountered the bird in the field generally seemed more interested in possessing its skin and eggs than in trying to study its behavior and biology. The more than eight hundred Carolina parakeet skins, skeletons, and eggs that gather dust in museum collections around the world today offer powerful testimony about the orientation of avian science at the time. While specimens are relatively abundant, we know precious little about how the bird survived in the wild.[67]

As it turns out, the Carolina parakeet might have been successfully bred if only a little more thought, care, and energy had gone into the process. While conducting years of painstaking historical research on the species, the biologist Daniel McKinley uncovered more than a dozen accounts of aviculturalists and zookeepers who boasted having the bird in their collections at some point from the mid-nineteenth to the early twentieth centuries, and several of them success-

fully reared young birds.[68] Among the most famous (and to the modern reader, troubling) examples were the birds that the Smithsonian ornithologist Robert Ridgway kept at his home in the Brookland neighborhood of Washington, D.C. There is no question that Ridgway was aware of the precarious status of the species when he collected approximately two dozen skins in southern Florida during the winter of 1896. When three of the birds he and his party shot received only mild wounds, from which they eventually recovered, Ridgway brought them home.[69] A male and female from this group even produced at least one brood of four eggs that hatched and grew to maturity. But then, one by one, Ridgway's parakeets perished. The female of the original pair died in 1902, after having laid many, mostly infertile eggs; the male died in 1903. One of their offspring, which Ridgway gave to the naturalist and Smithsonian colleague Paul Bartsch, apparently lived until 1914.[70]

By this point, even Hornaday had given up on the species. As early as 1902, he had received repeated offers from a Florida collector who had previously sold live birds to the New York Zoological Society. He refused to consider purchasing the Carolina parakeet because "the species is so nearly exterminated" and, in his view, there was no hope that it could be induced to breed in captivity. "I think it would not be right to encourage the capture of any of the few living specimens that now remain," Hornaday continued.[71] Nine years later, the society did accept the donation of two superannuated birds from the Cincinnati Zoo (which at the time had a flock numbering eight live Carolina parakeets), but both were dead by the spring of 1913.[72]

By 1916, only two of the birds were known to remain in captivity—a male and female, dubbed Incas and Lady Jane, both of which resided at the Cincinnati Zoo. Lady Jane died in 1917, and Incas in 1918.[73] Their passing received less notice than Martha's had only a few years earlier in part because apparently reliable sightings of the Carolina parakeet in Florida and South Carolina continued well into the 1920s and 1930s.[74] These reports offered a faint ray of hope that the species might still be rescued from the brink of extinction. In 1926, for example, the Chicago ophthalmologist and ornithologist Casey A. Wood offered an account of the work of the British aviculturalist Lord Tavistock, who had been advocating a systematic scheme of captive breeding of rare parakeets facing extinction using a system of large portable cages and a rigorous disinfection regime to minimize the chance of disease in his flocks. The hope was, in Wood's words, "to do for these vanishing species what has already been accomplished for the North American Bison." "Is not the Carolina parakeet a fit subject for such treatment," he asked, "if, perchance, a solitary breeding pair still survives the crass stupidity of our bird murderers?"[75] As it turns out, none of the surviving

birds were captured, and by the late 1930s, the number of reports of the species in the wild greatly diminished.[76] No one knows exactly when and where the last Carolina parakeet perished, but given how conspicuous and mobile the species was, it is extremely unlikely that it continues to persist.

No one stepped forward to create a national organization, like the American Bison Society, to rally to the defense of the endangered passenger pigeon or the Carolina parakeet. While the Audubon movement provided regular updates on the status of both species, they were only two of the dozens of birds that movement sought to save. The declining status of passenger pigeon and the Carolina parakeet received wide publicity by the end of the nineteenth and the beginning of the twentieth centuries, but the two species failed to capture the imagination like the bison, which was not only one of the largest mammals in the United States but also viewed as central to America's identity as a nation. This was the charismatic creature that had once blackened the Great Plains during its seasonal migration, sustaining the lives of native peoples and greatly aiding the western migration of Euroamericans. The bison's continuing place in the nation's history and imagination would be commemorated in countless paintings, museum exhibits, coins, currency, and stamps.[77] The well-organized campaign to rescue this once conspicuous species came just as prominent Americans were beginning to worry about the future of a nation that seemed to be veering from its traditional values and ways of life. Industrialization and urbanization increasingly isolated Americans from regular contact with natural world, contact that was thought to be beneficial to body, mind, and spirit. Saving the bison represented a symbolic step in reaffirming a past way of life that seemed to be slipping away.

In addition to nationalism and nostalgia, biology may have also played a role in success of the campaign to save the bison. Like many ungulate species, the bison proved relatively easy to breed in captivity. Numerous ranchers had established successful, self-sustaining bison herds prior to the establishment of the American Bison Society, and indeed, these were the creatures that became the nucleus of the group that was acquired by the New York Zoological Society and eventually shipped back west to stock newly created bison preserves. While there were scattered successes with raising passenger pigeons and Carolina parakeets in captivity, their needs proved more difficult for their human captors to fulfill.

HORNADAY'S DIATRIBE

On the eve of the demise of the passenger pigeon and the Carolina parakeet and nearly a quarter century after he first sounded the alarm about the bison, Hornaday issued a lengthy diatribe about the extermination and preservation of

America's native birds and mammals. With its shrill tone, *Our Vanishing Wildlife* (1913) was vintage Hornaday, clearly designed to motivate its readers to action.[78] The four-hundred-page book was dedicated to William Dutcher, its foreword came from Henry Fairfield Osborn, and the preface offered lavish thanks to Madison Grant. The book's basic message was straightforward: a once profusely abundant population of North American wildlife was now lying in ruins. The great auk, Labrador duck, Pallas's cormorant, passenger pigeon, Eskimo curlew, Carolina parakeet, and five species of macaw and parakeet "had been totally exterminated in our own times."[79] Twenty-three additional North American birds were "threatened with early extinction."[80] Among the list of "Extinct and Nearly Extinct Species of Mammals" were several North American species and subspecies—the Arizona elk, the West Indian seal, the California elephant seal, and the California grizzly bear—along with several African, European, and Australian mammals. And at least two additional game mammals, the pronghorn antelope and the bighorn sheep, were clearly on their way out. Given this deplorable record of destruction, Hornaday argued, Americans needed to acknowledge that "the wild things of this earth are *not* ours to do with as we please. They have been given to us *in trust*, and we must account for them to the generations which will come after us and audit our accounts."[81]

Who or what was to blame for all this carnage? Hornaday presented a lengthy list of groups he considered responsible for the increasingly desperate plight of American wildlife. While praising "gentlemen sportsmen" as the "bone and sinew of wild life preservation," he strongly criticized all hunters who sought declining native species, especially when "extinction is impending."[82] He also had little patience for so-called pot hunters, who pursued game to put meat on the table when other food supplies were almost always available. All forms of commercial hunting, whether for meat or feathers, he condemned out of hand. As J. A. Allen had done twenty-five years earlier, Hornaday singled out two groups he considered especially destructive to wildlife. In terms that reflected the xenophobic circles with which he associated, Hornaday strongly denounced the slaughter of song birds by "Italians and other aliens from southern Europe," whom he referred to in biblical terms as a "pestilence that walketh at noonday."[83] Using equally sharp language, he castigated southern blacks for killing prodigious numbers of song birds, woodpeckers, and doves for food.[84] While Hornaday acknowledged the role that domestic cats, telegraph and telephone wires, predators, and diseases played in the decline of some forms of North American wildlife, he remained curiously silent on the issue of habitat destruction.

In the second half of his book, Hornaday chronicled efforts to rescue American wildlife from the brink of extinction. Here he praised the work of the federal

government, which had established American bison in four national ranges, created fifty-eight bird refuges and five game preserves, protected the northern fur seal, and taken steps to conserve wildlife in Alaska. At the same time, game commissions and Audubon Societies had been responsible for the passage of much sound legislation on the state level. Beyond this, a series of New York–based national organizations—like the New York Zoological Society, the Boone and Crockett Club, the National Association of Audubon Societies, the Camp-Fire Club of America, the American Game Protective and Propagation Association, and the Wild Life Protective Association—had all done commendable work. But these organizations needed additional funding to continue their campaigns, while other cities needed to establish similar institutions to take up some of the conservation burden.

Hornaday offered several additional recommendations and warnings to his readers, including a lengthy list of new wildlife laws needed in each state as well as a call for new federal legislation protecting migratory birds and outlawing the sale of game. Beyond better laws, he strongly urged parents, educators, and zoologists to teach young children about the value of wildlife and its conservation.[85] Although America was now living through "*the middle of the period of Extermination*," he remained convinced that most vanishing species, both game and nongame, could be saved, but only if they received "absolute protection from harassment and slaughter." "Recovery" would be "impossible," however, once a population had reached a critically low level where "the survivors" were "too few to cope with circumstances." The heath hen, passenger pigeon, whooping crane, sage grouse, trumpeter swan, wild turkey, upland plover, and perhaps even the antelope had already reached the point where they "will never come back to us, and nothing that we can do ever will bring them back."[86]

As he had done in a controversial article published fifteen years earlier, Hornaday railed against professional naturalists. As a group, he argued, naturalists tended to be apathetic about the plight of wildlife, "so intent upon the academic study of our continental fauna that they seem not to have cared a continental about the destruction of that fauna."[87] True, a handful of scientists at the Biological Survey, U.S. Forest Service, American Museum of Natural History, New York Zoological Society, Museum of Comparative Zoology, University of California, and a few other institutions had been active in wildlife conservation circles. Now it was time for scientists elsewhere to shoulder their fair share of the burden. In addition to offering a list of museums and scientific societies that he thought owed "service to wild life," Hornaday called for leading American universities—like Columbia, Cornell, Yale, and the University of Chicago—to hire at least one naturalist who would devote themselves entirely to the cause of

wildlife conservation. "We don't want to hear about the 'behavior' of *protozoans*," he argued, "while our best song birds are being exterminated by negroes and poor whites."[88]

While many of the claims in *Our Vanishing Wildlife* were prone to exaggeration, there was also at least a kernel of truth in much of what Hornaday wrote. His indictment of scientists for their failure to engage with the issue of wildlife extinction offers an illuminating case in point. As the previous two chapters have tried to show, naturalists played a critical role in the turn-of-the-century wildlife conservation movement. The firsthand knowledge of vanishing fauna they gained while pursuing their scientific studies, along with the aesthetic and emotional attachment they developed with those species, pushed them to take active steps to stop the slaughter. Without the authoritative knowledge and leadership naturalists provided, the turn-of-the-century wildlife conservation movement would have soon faltered. Yet, for well into the twentieth century, the total number of naturalists who became active in conservation circles remained a small fraction of the biological community as a whole. Most naturalists seemed relatively indifferent to the plight of endangered species and more interested in safeguarding their prerogative to collect rare species than in rescuing them.

Those naturalists who did actively participate in the movement did not necessarily share Hornaday's strict protectionist views. For example, Joseph Grinnell, who established a leading program to study western fauna at Berkeley—a program that Hornaday had singled out for praise—also openly worried about the impact that restrictive wildlife laws were having on the practice of natural history. In 1915, only two years after the publication of *Our Vanishing Wildlife*, he issued an editorial in *Science* with the provocative title of "Conserve the Collector."[89] There he lamented the considerable decrease in the number of specimen collectors over the previous decade. An increased reliance on field identification, rather than the more traditional practice of securing specimens in hand, resulted in less precise and accurate data, thereby threatening "ornithology as a science." Moreover, as they forsook collecting, budding naturalists no longer gained the critical knowledge obtained from the pursuit and preparation of specimens in the field. Bird protection laws should include reasonable provisions for scientific collecting, Grinnell urged. While officials charged with enforcing those laws might rightly deny permits to collect "rare or disappearing species like the ivory-billed woodpecker or the Carolina parakeet," they should also more freely issue permits to collect other species.

Even when they did act on behalf of endangered species, there were clear limitations on what naturalists were willing to do or say. They devoted much more attention to mammals and birds facing extinction, especially game species,

than to reptiles, amphibians, or insects. The focus of their concern tended to be larger, charismatic species that were not only easier to study but also attracted a larger number of interested researchers. They also tended to be economically important species. While naturalists were quick to point the finger of blame on the commercial exploitation of species, they refused to seriously question the larger political and economic system that promoted continued habitat destruction. American naturalists also tended to center their conservation gaze almost entirely on North American species. The nationalism that had informed American science since the early days of the republic still remained a potent force at the beginning of the twentieth century. Hornaday's *Our Vanishing Wildlife*, which included brief discussions of the lost and vanishing species on other continents, proved an exception to this otherwise general rule. Not until after World War I, with the United States' growing involvement with foreign affairs more generally, did a handful of American conservationists begin showing a more sustained interest in the plight of wild animals from other lands.

CHAPTER FIVE

GOING GLOBAL

THE AMERICAN COMMITTEE AND THE FIRST INVENTORY OF EXTINCTION

Friends of wild life must act quickly, if we modern men are not to find ourselves masters of a world shorn of much of its beauty at the very stage when, through the development of machinery, we are obtaining increasing leisure to cultivate an interest in the things of the spirit.

HENRY CAREY, 1926

Unless vigorous steps are taken in the next few years, we fear that the rapid development and opening up of the great continent [of Africa] will result in the permanent loss of some of the most interesting productions of nature to be found anywhere in the world.

JOHN C. PHILLIPS, 1935

COOLIDGE'S AFRICAN ADVENTURE

As he approached graduation at Harvard, Harold Jefferson Coolidge, Jr., experienced a burning desire to make a name for himself. His first opportunity came when he signed on as an assistant zoologist for the Harvard African Expedition of 1926 and 1927. One objective of this yearlong medical and biological survey of Liberia and the Belgian Congo was to secure a specimen of the mountain gorilla, a rare primate that had first been described twenty-five years previously.

Accompanied by fifteen Batwa pygmies and outfitted in stereotypical safari dress, Coolidge pursued the prized gorilla in the region surrounding Katana, in eastern Congo, where he had heard recent rumors of sightings. In a popular ac-

count of the adventure, Coolidge projected himself as an intrepid white hunter forced to surmount innumerable obstacles in the field: difficult terrain, high altitude, drenching rains, dense vegetation, a "large and utterly useless army" of native helpers, and a secretive, cunning, and potentially dangerous prey.[1] Two months of slogging up and down the area's steep slopes had resulted in only two fleeting encounters with his intended target, but no specimen, not even so much as a clear shot.

One day before he was scheduled to begin the journey to rejoin his American colleagues, the discovery of fresh gorilla tracks renewed Coolidge's hope for success. Soon he spotted several young gorillas frolicking high in the trees on the next slope. Coolidge and his men headed down the intervening ravine as quietly as they could, only to be greeted by a "fierce chest-drumming noise . . . undoubtedly a signal of danger from the male leader of the troop." For the next thirty minutes, both sides maintained a "most oppressive" silence that remained unbroken until one of his men issued a half-smothered cough.[2] Following a new round of chest drumming, the alarmed gorillas retreated, with Coolidge and his entourage in keen pursuit. Approaching the bottom of the ravine, Coolidge was startled by the sudden rush of a fleeing creature that seemed massive, about his height and nearly three times his weight. He quickly fired in the direction of the dark moving mass, which scampered across a stream and escaped into the bush.

A puddle of blood revealed that Coolidge's bullet had found its mark, but most of his men proved "too cold" and "too frightened" to continue the pursuit. Only the pygmy chief persevered in tracking the wounded animal through the dense jungle. When the two heard a "low, ominous growl" emitted from a thicket they were about to enter, the final native tracker also fled, while Coolidge braced himself for a possible charge from the creature, now only fifteen feet away, before firing again. Coolidge's second bullet also reached its target, but once again the beast managed to escape. Now alone in the jungle, Coolidge resumed searching until spotting the wounded gorilla leaning against a tree just twelve feet down the slope in front of him. After losing his footing in the mud, he began sliding down toward the fearsome beast. Coolidge fired once more, this time from a sitting position, fatally striking the gorilla in the heart.

Coolidge was delighted with the specimen, which he boasted was "far finer" than he had ever dreamed. His father paid to have the large male gorilla mounted for the Museum of Contemporary Zoology (MCZ), where it remains on exhibit to this day. While Coolidge expressed no concern about the precarious status of the vanishing mountain gorilla in his account of the adventure, he did reveal more than a little sympathy for his target, which he described in vividly anthropomorphic terms: "I had to take off my hat to this old king who handled

FIGURE 26. Harold J. Coolidge with gorilla specimen collected in Congo, 1927. Soon after his return to the United States, Coolidge became a founder of the American Committee for International Wild Life Protection. Two decades later he would also play a central role in creating the Survival Service Commission of the International Union for the Conservation of Nature. Courtesy of Miles Coolidge.

his troops so well, covered the rear of his retreat, and handled his medicine like a man. . . . That night in some unknown valley of a remote Congo mountain probably the gorillas held a meeting to mourn the loss of their great sovereign and elect his successor."[3]

The product of a prominent New England family, Coolidge had entered Harvard in 1923 with the hope of becoming a diplomat.[4] Gradually, however, he gravitated toward natural history, and in the summer following his sophomore year, he and Charles Day ventured to Alaska to collect brown bear specimens for the U.S. Bureau of the Biological Survey. The next fall he discovered the MCZ's famous "eateria," where museum staff and visitors regularly gathered to socialize and consume exotic game. Following his return from Africa, Coolidge graduated with a bachelor's of science degree and spent the next year studying zoology at Corpus Christi College, Cambridge. At the suggestion of the Yale primatologist Robert Yerkes, he decided to specialize in the great apes. Although he never earned a Ph.D., which had already become a standard entry requirement for an academic career in science, in 1928 Coolidge became an assistant mammalogist at the MCZ, a position he was to occupy for the next two decades. There he com-

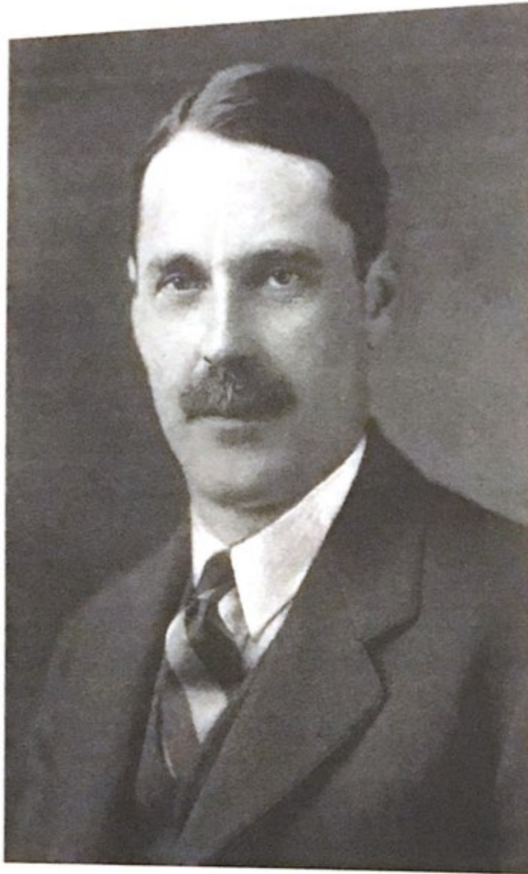

FIGURE 27. John C. Phillips, 1928. Trained as a scientist and physician, Phillips only briefly practiced medicine before devoting himself to conservation, natural history, and sport hunting. As founders and early leaders of the American Committee, he and Harold J. Coolidge set the organization's agenda. Courtesy of the Archives of the Ernst Mayr Library of the Museum of Comparative Zoology, Harvard University.

pleted a major taxonomic revision of the genus *Gorilla*, discovered the pygmy chimpanzee, led a major expedition to Asia, and began regularly coteaching a course called "The Evolution of Animal Sociology."

While studying in England, Coolidge attempted to contact the American conservationist T. Gilbert Pearson, who had ventured abroad to preside over the first general meeting of the International Committee for Bird Protection. The two failed to meet up, but Coolidge sent Pearson a letter in which he revealed an ambitious idea. There ought to be, he wrote, "an International Committee for the Protection of the Flora and Fauna of the World and for the Advancement of Science. This committee to be made up of leading Scientists (such as directors of large museums) and prominent men interested in Preservation (by Preservation I mean also Protection)."[5] The organization could act as an information clearinghouse on international wildlife conservation issues, fund fieldwork for naturalists studying endangered species, lobby for the creation of national parks around the world, and compile a blacklist of wildlife poachers. Pearson's response to Coolidge's idea has not survived, but soon after beginning work at the MCZ, he found a sympathetic ear in the person of the physician, sportsman, and naturalist, John C. Phillips.

Nearly three decades older than Coolidge, Phillips was also from a family with deep New England roots, but one whose financial prospects seemed a good deal more solid.[6] A modest, self-effacing man with a well-developed sense of humor, he became keenly interested in outdoor pursuits, especially hunting and fishing, at a young age. Phillips earned a bachelor's degree in science from Harvard's Lawrence Scientific School in 1899 and an M.D. from Harvard Medical School in 1904. But save for a couple of years at Boston City Hospital immediately following graduation and a brief stint in a military field hospital during World War I, Phillips never practiced medicine. Instead he traveled widely—to Greenland, Mexico, the Middle East, the Far East, and Africa—to hunt and study wildlife, especially game birds and mammals. In addition to amassing trophies for his home, he donated numerous specimens to the MCZ, where he served as a research curator of birds. Between 1922 and 1926, he published his magnum opus, a copiously illustrated, four-volume *Natural History of Ducks*. Phillips was also active in numerous state and national conservation organizations and a vice president of the Boone and Crockett Club.

Early in 1930, Coolidge and Phillips successfully launched an organization that bore a remarkable resemblance to the one Coolidge had outlined in his 1928 letter to Pearson: the American Committee for International Wild Life Protection.[7] This was a small, informal group whose membership was limited to representatives from a handful of zoological societies, museums, and conservation organizations, most of whom served as official advisors. Much of the work of the American Committee was transacted through a small executive committee, which met once or twice a year, with Phillips serving at its first president and Coolidge as its secretary. Although the group was a spin-off from the Boone and Crockett Club, its leaders were quick to point out that they were not primarily an organization of sportsmen. Rather, they hoped to use the authority of science to further their main objective: "to promote the preservation of rare species in all parts of the world."[8]

In actual practice, the American Committee proved more regionally focused than this ambitious mission statement suggests. For its first several years, the organization devoted most attention to African wildlife conservation. Every member of its first executive committee had spent time in Africa hunting game or collecting specimens—a distinction that was not always easy to make in actual practice—and five of the organization's first seven publications dealt with that continent. Toward the end of the 1930s, however, for reasons outlined in the next chapter, the American Committee increasingly set its sights on Latin America.

The specter of extinction clearly haunted members of the American Committee. Yet, when it came to threatened species, they found themselves in a quan-

dary. On the one hand, like many other naturalists from this period, they sought to "preserve" rare animals as specimens to be amassed in museums for exhibition and scientific study. On the other hand, they also sought to "preserve" living examples of those species, ideally in their native habitats. These differing notions of preservation came into increasing conflict as vanishing wildlife populations moved closer and closer to oblivion. In the mid-1930s, the American Committee confronted this basic tension by passing a controversial resolution calling for scientific institutions—primarily natural history museums and zoological parks—to refrain from collecting rare species. They also began an ambitious project to create an authoritative inventory of the world's vanishing species—first of mammals and then of birds. Given the limited state of knowledge about threatened species at the time, the task turned out to be much more difficult than originally anticipated, and over the next two decades, the effort to complete this catalog consumed much of the committee's time and energy. Nonetheless, the resulting publications—which finally began appearing in 1943—not only rank as one of the American Committee's most enduring legacies but also became an important model for later official lists of endangered species.

CROSSING BOUNDARIES

Efforts to protect migratory species provided the first inkling of a more international conservation consciousness in the United States. Many forms of wildlife refuse to stay put, regularly crossing national boundaries during their seasonal movements. Beginning in the early twentieth century, the process of trying to resolve competing ownership claims involving migratory species and to regulate their taking as their numbers crashed led the U.S. government to enter into several international treaty negotiations.

The first (and least successful) of those treaties involved fishing rights in the waters between the United States and Canada, a subject that had long provoked tension between the two nations.[9] By the end of the nineteenth century, increasingly efficient harvest methods and continued resistance to any form of regulation brought the disagreement to a head. As early as the 1890s, the U.S. secretary of state initiated talks about how to address the problem of diminishing fish stocks, talks that led to the appointment of a special commission of scientists (one American and one Canadian) to gather relevant data and formulate recommendations. Four years in the making, that initial report nonetheless failed to break diplomatic deadlock on the issue. In 1908, officials succeeded in negotiating a treaty that called for another scientific commission to draw up regulations designed to make the boundary water fisheries more sustainable. In

the end, however, the regulations floundered in Congress. Though clearly in their long-term interest, fishermen strongly opposed the regulations, while the fish themselves lacked the charisma needed to elicit sympathy from the public or even most prominent conservationists.

Efforts to reach an agreement to save the North Pacific fur seal proved more successful.[10] This aesthetically appealing and economically valuable mammal was born on American islands in the Bering Sea but spent most of its life in international waters. In the 1880s, Canadians began pursuing fur seals on the high seas, an act that was within their legal rights but which also led to appalling waste (as many as 80 percent of the seals shot were never recovered) and a cruel death by starvation for young seals whose mothers were killed. Scientists tended to blame pelagic hunting for the precipitous turn-of-the-century decline of the North Pacific fur seal. If something were not done soon, they warned, the species might soon go the way of the passenger pigeon. Alarmed at this prospect, conservation-minded naturalists—like David Starr Jordan, William T. Hornaday, and Henry W. Elliot—rallied behind the cause of seal protection and gained widespread public sympathy for the appealing but increasingly beleaguered species. By 1911, Canadian and U.S. officials reached an agreement with their counterparts in Japan and Russia to ban the pursuit of fur seals on the high seas and to divide the profits from the more sustainable practice of harvesting on land. In the words of environmental historian Kurkpatrick Dorsey, that landmark treaty "snatched the northern fur seal from the jaws of extinction," and the herd quickly rebounded.[11]

The Migratory Bird Treaty sought to protect another form of wildlife that regularly crossed international borders.[12] As we saw in chapter 3, by the end of the nineteenth century, Americans had grown increasingly concerned about the decline of wild birds, many of which seemed to be teetering on the brink of extinction. The Audubon movement succeeded in gaining limited protection for some vanishing species, particularly nongame birds, through a series of state laws, while sport hunters secured passage of state laws regulating the taking of game birds. The problem was these laws lacked uniformity from one state to the next, and they were not always adequately enforced. Federal legislation seemed a logical solution, but long-standing tradition and a recent Supreme Court decision (*Geer v. Connecticut*, 1896) held that wild game was the property of the state. The Lacey Act, passed in 1900, represented the federal government's tentative entry into the arena of wildlife regulation, but it merely outlawed the interstate shipment of wildlife taken in violation of any state law, without challenging the idea of state ownership.

Beginning in 1904, supporters of federal protection of wild birds introduced

the first in a long series of bills that were initially aimed at safeguarding migratory waterfowl and wading birds. In 1912, T. Gilbert Pearson, the acting head of the National Association of Audubon Societies, urged Congress to offer federal protection for *all* migratory birds. The next year, Congress responded with the Migratory Bird Act, though opponents of the legislation continued to argue that it represented a blatant violation of states' rights. To make sure the new law survived constitutional muster, supporters moved to have its major provisions introduced into a treaty with Great Britain (on behalf of Canada) and then, in 1918, successfully shepherded the enabling legislation through the House and the Senate. The treaty, which declared a permanent closed season on most nongame migratory birds and authorized the federal government to set seasons on game species, survived judicial review within two years after its passage.

Beyond treaties, the next stage in the development of a more international conservation consciousness was the creation of institutions devoted to the issue. In 1922, T. Gilbert Pearson set out for Europe to learn more about avian conservation initiatives on the other side of the Atlantic and to explore the possibility of international cooperation.[13] He met with the wealthy aviculturalist and ornithologist Jean Delacour, the president of the French League for the Protection of Birds whose elegant five-hundred-acre estate was stocked with hundreds of birds from around the world, and with the Dutch naturalist and conservationist Peter G. Van Tienhoven, who would later establish the International Office for the Protection of Nature.[14] After preliminary discussion with these and other individuals, he invited Delacour, Van Tienhoven, and eight other colleagues to London to discuss the idea of forming an international society devoted to bird preservation. The group enthusiastically supported the idea and voted to found the International Committee for Bird Protection (ICBP), with Pearson as its chairman. Membership was to be composed of individuals nominated to represent various societies with an interest in bird protection. The members from a given country were organized into national sections, with a chair serving as a node of communication between the section and Pearson.

The stated goal of the ICBP was "co-ordinating and encouraging the preservation of birds."[15] That was to be accomplished through a variety of means. First, through correspondence, informal meetings (held in 1923 and 1925), a series of more formal congresses (the first of which was held in 1928), the publication of an irregular bulletin (first issued in 1927), and the exchange of other publications, the society served as an information clearinghouse on the status of bird protection within its member countries. In addition, Pearson used the ICBP as a vehicle to promote the cause of bird protection in nations where it seemed lacking. For example, prior to his second trip to Europe in 1923, Pearson wrote Percy

Lowe, an ornithologist at the British Museum of Natural History and head of the ICBP's British section, to ask if he knew of any "worthwhile man or men in Italy whom we might approach with the possible hope of getting a bird organization started there." Pearson hoped that promoting conservation sentiment in Italy would not only benefit the birds of that particularly nation, but would also serve as a positive influence for the "tens of thousands of Italian workers" who immigrated to America each year. According to Pearson, "Every blooming one of them gets hold of a gun and they today as a class constitute the most tremendous human force of destruction operating against our songbirds."[16] During his trip, Pearson found four Italian organizations willing to nominate members to the ICBP.

Although a loose-knit organization, the ICBP remained active on several fronts. The organization's Declaration of Principles, passed in 1923, emphasized that wild birds were critical to maintaining the balance of nature, that they were important as objects of scientific study, that they exerted a "great aesthetic influence on all right-minded people," and that they served utilitarian functions as sources of food, destroyers of unwanted rodents and injurious insects, and as objects of pursuit in field sports. Despite these many benefits to the environment and humanity, in many countries bird populations were diminishing "at an alarming rate," and many "interesting and valuable species" had already been "exterminated from the earth."[17] Consistent with these general principles, the ICBP urged the passage of legislation protecting insect-eating birds, called for elimination of the feather trade, promoted the creation of bird sanctuaries, and called for the end of hunting during breeding season and while birds were raising their young. The organization also promoted international treaties to protect migratory birds and minimize oil pollution of navigable waters.[18]

During its first few decades, the ICBP faced numerous challenges that greatly limited its effectiveness as an agent for international avian conservation. One major problem was the geographical, cultural, and linguistic diversity of its membership. By 1935, the organization boasted 203 members representing 130 societies and 26 countries.[19] While it was true that the diverse membership of the ICBP agreed on the need for greater protection of birds and the most active members tended to be in Europe, members often differed on the specifics about how to achieve that goal. The problem of diversity within the organization was exacerbated by Pearson, who could communicate only in English, a severe disadvantage in such a polyglot organization. To make matters worse, Pearson arranged for publication of the first ICBP Bulletin only in English. The result was that, until the Second World War, the organization remained more important as an information clearinghouse than as a force for significant change.

COLLECTING AND PROTECTING AFRICAN BIG GAME

A growing interest in African big game provided a second context for a modest upsurge in concern about international wildlife in the United States. Since the colonial period, Americans had enjoyed viewing exotic African creatures in circuses, menageries, and traveling shows. The first lion, for example, was displayed in North America as early as 1716; the first elephant in 1796.[20] Although difficult to obtain, African species also proved popular in the American zoos that began opening their gates in the second half of the nineteenth century, while stuffed examples of these creatures figured prominently in public natural history museums. The first inklings of anxiety about the plight of African wildlife, however, did not emerge until the early twentieth century.

The specific episode that first raised American consciousness about the fate of African big game was an expedition that Theodore Roosevelt mounted immediately after leaving the White House in March 1909.[21] Determined both to make a scientific contribution and to fend off potential criticism of his African big game hunting, Roosevelt negotiated with Smithsonian officials to sponsor the expedition. Private donations (largely from Andrew Carnegie) financed most of the trip, while the ex-president covered the rest using a hefty advance he negotiated for published accounts of the adventure. With his eighteen-year-old-son Kermit in tow, Roosevelt arrived in Mombassa, Kenya, in April 1909. Also accompanying him were three Smithsonian-recommended field naturalists, two white guides, and more than 260 African grooms, gun bearers, tent men, askari, and porters.[22] It was reputed to be the largest hunting party ever to set out in Kenya.[23] By the time the expedition ended, the two Roosevelts had bagged no less than 17 lions, 11 elephants, 14 rhinos, 8 buffaloes, and numerous other species, more than 512 mammals in all.[24]

When the *New York Times* expressed concern about a report that Roosevelt shot eighteen antelope and gazelles along with two wildebeests in a single day, the ex-president felt compelled to respond. All the African animals he killed, save for a handful needed for food, were being preserved for the Smithsonian Institution and thus represented an important contribution to science.[25] The outpouring of publicity surrounding the expedition not only brought attention to the plight of African wildlife but also spawned a host of imitators who regularly sought museum sponsorship for African safaris.[26]

One hunter who had advised Roosevelt in planning his trip—the taxidermist, naturalist, sculptor, conservationist, and inventor Carl Akeley—also met up with him briefly in Africa. Through his publications, movies, and especially his magnificent museum dioramas, Akeley played a key role in bringing representations

FIGURE 28. Kermit and Teddy Roosevelt with African hunting trophy, 1909. Roosevelt's safari garnered specimens for the Smithsonian Institution, publicity for the plight of African wildlife, and criticism of what some considered to be overzealous hunting. Courtesy of the Smithsonian Institution Archives, Record Unit 7179, image no. SIA2008-2356.

of the "dark continent" to America's shores for decades after his death in 1926.[27] He first gained notoriety in 1886, when as an employee of Ward's Natural Science Establishment, he helped mount P. T. Barnum's famed elephant, Jumbo, after a locomotive accidentally struck and killed the beast. After leaving Ward's, Akeley found employment as a taxidermist at the Milwaukee Museum, the Field Museum of Chicago, and beginning in 1909, the American Museum of Natural History in New York. While on his third collecting trip to Africa in 1910, a charging elephant nearly killed him. During the lengthy period of recovery that followed, he developed a dream that would soon become an obsession: the great African Hall at the American Museum of Natural History. Anxious to capture a sense of the sublime grandeur of the African continent before the march of civilization destroyed it, Akeley envisioned a massive exhibition that would serve as an enduring monument to the continent's "fast vanishing wildlife." "Two hundred years from now," he predicted grimly, "naturalists and scientists will find in such museum exhibits as African Hall the only existent records of some of the animals which today we are able to photograph and study in their forest environment."[28] The hall would consist of a large open space surrounded by forty meticulously appointed dioramas featuring a variety of scenes of "primeval

Africa."[29] The centerpiece of the exhibit was to be "Akeley's taxidermic tour de force," a raised platform featuring an elephant group that included a cow collected by Roosevelt and a calf collected by his son.[30] Henry Fairfield Osborn, the president of the American Museum, loved Akeley's idea and sold it to the museum's board of directors. Until his death in 1926, Akeley struggled to secure the specimens and funds needed to transform his ambitious dream into a reality. Though he managed to place several wildlife groupings on exhibit, not until ten years after his death did a scaled-down version of the African Hall (with twenty-eight rather than forty dioramas) finally open to the public.

During his fourth expedition to Africa in 1921–22, Akeley traveled to the Kivu region of the Belgian Congo to collect mountain gorilla specimens for one of his habitat groups.[31] He succeeded in obtaining two large males, two females, a youngster, and the first motion pictures ever made of the species using a camera of his own invention. In the process of observing the species in the wild, however, he not only developed an increasing sense of kinship with the gorilla but also fear about its future. After returning to New York, Akeley wrote several articles emphasizing the sorry plight of the creature and went on a lecture tour featuring movies from his expedition. He also drew up plans for a wildlife sanctuary in the area where he had hunted and presented them to John C. Merriam, the paleontologist and conservation-minded head of the Carnegie Institution of Washington, who in turn passed them on to the Belgian ambassador to the United States.[32] Following prodding from Akeley, in 1925, King Albert I created the eponymous Parc National Albert. The decree setting aside the area, the first modern national park on the African continent, declared that it was time to "take steps to preserve the remaining gorillas from extermination."[33]

To drum up funding for the African Hall while cultivating public support for conservation on the continent, Akeley convinced the pioneering wildlife filmmaking duo of Martin and Osa Johnson to become formally affiliated with the American Museum of Natural History.[34] In 1923, Osborn and Akeley also persuaded museum officials both to sponsor the Johnsons' extended trip to Africa and to invest in a series of three films about the continent. The hope was that the profits from these motion pictures would provide a cash infusion for the African Hall fund. At the time, public museums generally avoided money-making ventures of this sort, and for a variety of reasons, the Johnsons managed to finish only one commercially viable film during their five-year stint with the museum. Nonetheless, *Simba, King of the Beasts: Saga of the African Veldt*, released in 1928, was a financial (if not a critical) success, providing compelling visual scenes of Africa to complement the increasing number of written accounts of the continent.

By the mid-1920s, even periodicals aimed at scientifically oriented naturalists devoted increasing attention to the plight of African wildlife. In May 1926, for example, the *Journal of Mammalogy* included a stirring article entitled "Saving the Animal Life of Africa—a New Method and a Last Chance," authored by the Philadelphia lawyer, conservationist, and nature writer Henry Carey.[35] Once abundant species, like the white rhinoceros of South Africa, the blauwbok antelope, and the quagga, Carey lamented, were now gone forever. Others, like the okapi, the white-tailed gnu, and the white rhinos of the Upper Nile were poised "on the verge of the abyss." In support of his claim about the general decline of African wildlife, Carey quoted a pessimistic passage from Osborn, who had written, "We paleontologists alone realize that in Africa the remnants of all the royal families of the Age of Mammals are making their last stand, that their backs are up against the pitiless wall of what we call civilization. Human rights are triumphing over animals rights, and it would be hard to determine which rights are really superior or most worthy to survive."[36]

Ultimately, Carey seemed most concerned about the aesthetic, philosophical, and spiritual consequences of this mass extinction. The destruction of African wildlife was not only threatening many species, he argued, but also "shrinking our own intellectual and spiritual resources." American conservationists had long expressed cultural concerns about the loss of game species in the United States. Carey extended those concerns to Africa, while boldly declaring that continent's wildlife to belong to the entire world: "Man is stripping a vast playground of the beautiful creatures that gave it life. . . . We need a place in the world where we can recapture 'The lost arts of wildcraft' in such surroundings, because 'the self dependent life of the wilderness nomad brings bodily habits and mental processes back to normal, by exercise of muscles and lobes that otherwise might atrophy from want of use.'"[37] To achieve this end, Carey called for the creation of a permanent international game commission to be set up under the auspices of the League of Nations.

By the second half of the 1920s, then, a long series of lecturers, publications, films, and exhibits had begun exposing American audiences to the beauty, wonder, and vulnerability of African wildlife. New Yorkers were thus well primed when, in November 1929, C. W. Hobley, secretary of the Society for the Preservation of the Wild Fauna of the Empire (SPWFE), came to the United States to appeal for funds.[38] Established in 1903 and known by the sobriquet "the penitent butchers," the SPWFE was an organization of British sport hunters, naturalists, and governmental officials concerned about the desperate plight of wildlife in Britain's colonial possessions in Africa and Asia.[39] The society published a periodical, lobbied for the establishment and enforcement of protective legisla-

tion, sponsored scientific studies of endangered species, promoted a protective ethos among settlers, and pushed for the creation of secure wildlife refuges. Two months after Hobley's visit, New Yorkers also heard from the American sportsman, adventurer, and soldier of fortune Frederick R. Burnham, who reported a "shocking decrease" in game in areas of Africa he knew well from his days as a military scout.[40] Hobley's plea and Burnham's bleak report generated nearly $10,000 in pledges for the SPWFE. They also led Osborn to suggest the formation of "an American auxiliary" to the SPWFE that would "assist both in propaganda and in raising funds."[41]

LAUNCHING THE AMERICAN COMMITTEE

In the midst of this flurry of activity, Coolidge and Phillips seized the opportunity to establish the American Committee for International Wild Life Protection. After gaining support from Kermit Roosevelt, by then a prominent conservationist and a member of the Boone and Crockett Club's executive committee, and from Madison Grant, the organization's president, Coolidge introduced a motion that he and Phillips had authored at the club's business meeting early in 1930.[42] That motion highlighted the conservation work being done in Europe and proposed that the Boone and Crockett Club establish a committee of its own to deal with international wildlife affairs. Although initially created by and closely affiliated with the Boone and Crockett Club, from the beginning the new group was supposed to broadly represent "American sympathy and interest in international wild life protection."[43]

During the first executive committee meeting in May 1930, the committee voted to make its headquarters in Harvard's Museum of Comparative Zoology and established a small advisory committee, which initially consisted of nine individuals chosen to represent various museums and conservation organizations across the United States.[44] Included on the first advisory committee were many of America's best-known naturalists, conservationists, and sportsmen, including Thomas Barbour, director of the Museum of Comparative Zoology; Charles M. B. Cadwalader, director of Academy of Natural Sciences of Philadelphia; Joseph Grinnell, representing the American Society of Mammalogists; Alexander Wetmore, representing the Smithsonian Institution; and Stanley Field, director of the Field Museum.

At this initial meeting, the executive committee also hammered out the goals of the new organization, declaring that it intended (1) to promote the creation of national parks or reserves and new game laws; (2) to gather and disseminate "correct information on matters of international wildlife conservation"; and

(3) to promote sportsmanship among Americans hunting abroad while eliminating abuse of any special permits they may have been granted to collect protected animals.[45] The committee made it clear that it intended to complement and support rather than compete with the SPWFE and the International Office for the Protection of Nature in Brussels. Writing to Hobley at about the time of this first formal meeting, Coolidge stressed that the new American Committee hoped to work closely with its European counterparts, with whom they shared a deep sense of responsibility for the future of threatened flora and fauna: "I realize as you do that Anglo Saxon people will have to bear a large portion of the burden, financial and otherwise in this great conservation work."[46] The committee was also anxious to differentiate itself from the ICBP. While recruiting Wetmore to serve on the advisory committee of the American Committee, Phillips argued that "we will not conflict in any way with Pearson's work on bird protection in Europe, as we are more nearly concerned with extinction in the Colonial possessions of England, France, Belgium, etc."[47]

In its mission statement, the committee indicated it was "especially interested in preserving much depleted forms of wild life, particularly . . . the larger game mammals such as the Giant Sable in Angola, the White Rhinoceros, the Gorilla, etc."[48] The list of threatened species highlighted here is telling. During its first several years, the American Committee engaged with efforts to protect many vanishing forms of wildlife—ranging from the koala bear in Australia and the wisent of Europe to great whales that traversed international waters and the chinchilla in South America. But it primarily grappled with the threat facing African big game mammals. And while the committee focused on the conservation of game animals, it remained anxious to show that the dictates of sport hunting did not set its agenda. As Phillips argued in a letter to Hobley, "primarily we are not an organization of sportsman, not the least bit interested in the welfare of the sportsman, and almost all our Advisory Board consists of representatives of museums and zoological gardens. We are interested primarily in saving rare and vanishing species for future generations, not for recreation especially."[49]

One of the first issues the American Committee wrestled with was the destruction of African wildlife undertaken as part of tsetse fly control campaigns. The insect serves as carrier for a trypanosome that causes nagana in cattle and sleeping sickness in humans, both of which seemed to be on the rise following the imposition of European rule in Africa.[50] Although scientists at the time argued about what role, if any, game played in the apparent increase of these dreaded diseases, during the early twentieth century, officials in Central and South Africa began periodic wildlife culling programs aimed at stemming their spread. Responding to a plea from Hobley, in 1930 the newly created American Committee