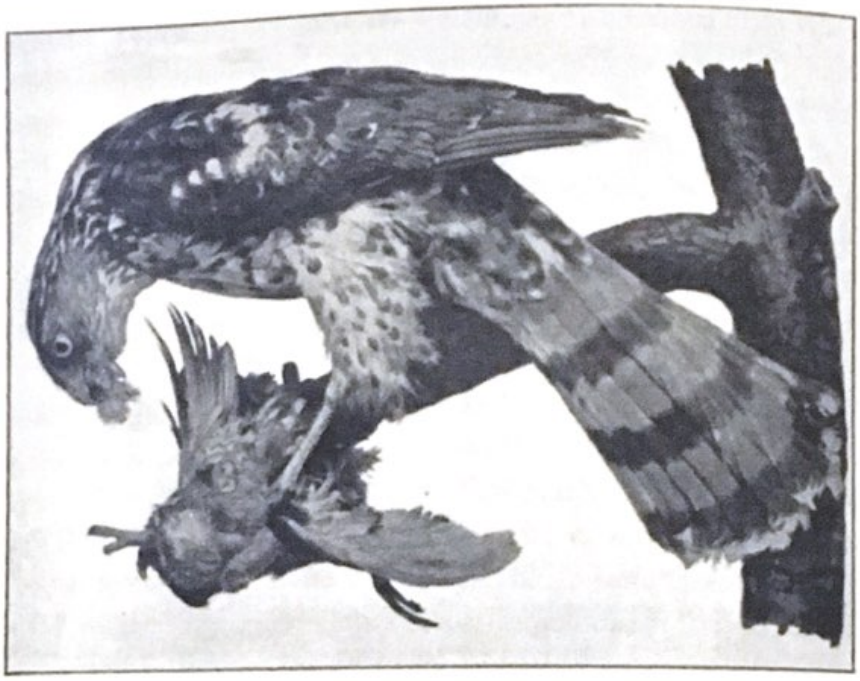

The Hawk Owl—Crow Pest Must Go!

The New Jersey Fish and Game Commission is befriending farmers and poultry raisers as well as sportsmen in starting out to eradicate the ravaging pestilence of vermin.

The only good hawk, owl, crow, roving house cat, weasel, fox, bobcat wolf or snake is a dead one. Let's up and at 'em and make them all good.

The last passenger pigeon on earth died September, 1914, six years before the passage of the New Jersey law against killing passenger pigeons. Post mortem activities became undertakers, not the friends of useful wild life.

There were no horses in America when this continent was discovered—only fossil remains. There will soon be nothing left of our song birds, game birds and game animals but fossil remains if FOSSILS remain in successful control of vermin.

If you want to be shown how to lend a hand—"do your bit"—in this holy was to rescue God's innocent and useful wild creatures from the ravages of viper trash and the ignorant preachments of those who raise neither pigs nor potatoes, chickens nor children, and to make New Jersey a happier hunting ground than Indian ever dreamed of, ask

REV. NOEL J. ALLEN,
Lecturer and Vermin Control Expert
New Jersey Fish and Game Commission
State House, Trenton, N. J.

THE HAWK-OWL-CROW-CAT PEST MUST GO

FIGURE 46. Antiraptor propaganda, 1933. Issued by the New Jersey Game Commission, this advertising was part of a campaign to "eradicate the ravaging pestilence of vermin," including hawks, owls, crows, and cats. From *Bulletin of the Hawk and Owl Society* 3 (1933): 7.

and avian predators, sponsored predator hunting contests, and established game propagation farms on which predators were systematically removed through trapping, hunting, and poisoning. Shooting hawks and owls during migration, when their populations tended to concentrate along seasonal flyways, also became an increasingly popular pastime in rural areas. The rationale behind these actions is revealed by the anonymous author of a 1936 pamphlet issued by the More Game Birds in American Foundation, a national organization of sport hunters that had been founded six years previously with the goal of increasing the supply of game birds through systematic propagation. While birds of prey had once played an important role in maintaining the balance of nature, that balance had been upset when human hunters arrived on the scene. Now the only effective way to restore game populations, the pamphlet argued, was to remove the population pressure that natural predators represented: "The old saying, 'Let the gamekeeper take care of vermin and the game will take care of itself,' does not tell the whole story, but it contains a great deal of truth."[14]

Raptors even failed to find safe haven in bird sanctuaries. In the late nineteenth and early twentieth centuries, hundreds of local Audubon Societies and bird clubs sprang up across North America.[15] In an effort to promote birdwatching, cultivate sympathy for conservation, and provide habitat for increasingly beleaguered birds, these organizations frequently established protected areas where hunting was prohibited. Yet, birds of prey often found themselves barred from their gates. For example, the reformed hunter, popular lecturer, and self-styled naturalist Jack Miner established a particularly famous bird sanctuary on the outskirts of his brick-and-drain-tile factory in Kingsville, Ontario. By the mid-1920s, when North American duck and geese populations already showed signs of serious decline, Miner's sanctuary attracted throngs of migratory waterfowl and an equal number of amazed human visitors. Though he had relinquished a youthful interest in hunting and professed to an abiding friendship with wildlife, Miner routinely referred to predators, particularly avian predators, as "cannibals": "With natural menaces—vermin like crows, hawks, and rattlesnakes—I've no patience."[16]

The National Association of Audubon Societies' failure to more vigorously defend hawks and owls also disturbed bird-of-prey advocates. They hoped the oldest, largest, and best-financed bird protection organization in North America would take a leadership role in a broad campaign to rehabilitate the reputation of predatory birds. Instead, bird-of-prey defenders became increasingly frustrated with the leadership of T. Gilbert Pearson, who had headed the organization since 1910. They criticized Pearson as timid in his general approach to wildlife conservation, far too cozy with sportsmen, excessively stingy with Audubon funds,

and largely indifferent to the increasingly desperate plight of birds of prey. Their fears intensified in late 1924 when Pearson vigorously defended his philosophy of "conservative conservation" in an address at the National Association's annual meeting. There he attacked "extremists" whose legislative proposals reflected a limited knowledge of wildlife, including those who called for new restrictions on hunting or even its elimination. He also reaffirmed his support for sportsmen, whom he called the "largest effective force for the preservation of game in this country." [17] A year later, when Pearson refused to condemn a hawk destruction campaign organized by the American Game Protective Association, raptor enthusiasts felt they could remain silent no more.

SAVE THESE BIRDS!

The ornithologist Waldron DeWitt Miller played a leading role in the campaign to gain a more sympathetic hearing for birds of prey. Keenly interested in birds and wildflowers since childhood, in 1903, the twenty-four-year-old insurance agent found employment as an assistant in the bird department at the American Museum of Natural History in New York.[18] His new job provided him with access to a world-class bird collection, an extensive ornithological library, and colleagues who guided him through the intricacies of avian taxonomy. With long hours at the museum and regular forays into the countryside surrounding his home, he eventually established a reputation as one of America's premier ornithologists. Unlike most of his colleagues at the time, however, he never showed much interest in specimen collecting. His generally sympathetic attitude toward birds also found early expression in the New Jersey Audubon Society, an organization for which he served as an incorporator and vice president from the time of its creation in 1897 until his death in 1929.

Miller held a particular passion for birds of prey, and as early as 1914, he began systematically collecting data on their diets. Over the next decade, these studies confirmed what he had long suspected: hawks and owls were unjustly persecuted, declining in number, and clearly in need of greater protection. A fellow curator in the bird department and close personal friend later described Miller's attitude toward birds of prey in these words: "It seems true wisdom to preserve even apparently injurious species from wanton destruction. What moral right has man to decree the extermination of any bird which at worst merely reduces the number of some of its fellows? As biologists can we believe that the earth and all its inhabitants exist solely for the benefit of man?" [19]

Miller found numerous kindred spirits who supported his agenda. One of the most important of these was a maverick coworker, Willard G. Van Name, an as-

FIGURE 47. Waldron D. Miller in the field, 1928. A renowned ornithologist and curator at the American Museum of Natural History, Miller was also a strong advocate for birds of prey. The blistering pamphlets he coauthored helped raise consciousness about the plight of raptors and provoke reform of the National Association of Audubon Societies. From *Waldron De Witt Miller: In Memoriam* (1929): 7. Courtesy of the Department of Ornithology, American Museum of Natural History.

sociate curator in the invertebrate department at the American Museum who was seven years his senior.[20] With his pessimistic attitude toward human nature and a propensity for pointed critique, Van Name had already established a reputation for being a "quixotic, truculent curiosity" within conservation circles. He shared Miller's interest in birdwatching, his love of wild creatures, his impatience with existing conservation organizations, and his zeal for reform. The two undoubtedly served as the moving force behind the 1920 petition calling on the AOU to condemn the Alaskan eagle bounty. Both were also active in the Linnaean Society of New York, a regional bird study society that had been established in the late 1870s. There they found a largely sympathetic membership of serious amateur ornithologists and birdwatchers who experienced great aesthetic and emotional pleasure in viewing birds of all kinds, including birds of prey. Throughout the 1920s and 1930s, the organization remained a hotbed of agitation on behalf of predatory birds.[21]

Miller not only helped mobilize the Linnaean Society but also pushed other bird organizations, like the Delaware Valley Ornithological Club (DVOC), into action on the issue of predatory birds. In late 1925 and early 1926, both groups passed resolutions urging the National Association of Audubon Societies to devote more money and effort to the cause of bird-of-prey protection. The exact

wording of the resolutions varied, but the message proved virtually identical. Although hawk populations were plummeting in the eastern United States, their persecution seemed to be increasing. These disturbing developments had occurred even though A. K. Fisher had long ago demonstrated that most hawks were either neutral or beneficial to agricultural interests. Both organizations asserted that "nature lovers" had as much right to view birds of prey for the aesthetic pleasure it provided them as sport hunters had to kill these species in a misguided effort to protect game. The Linnaean Society resolution argued that the "interests of game conservation do not require the extermination of such raptorial birds as prey upon it." Echoing this sentiment, the DVOC resolution urged Pearson to take "immediate action" to prevent or discourage the antipredator campaigns by "so-called sportsmen."[22]

Miller also orchestrated a letter-writing campaign to accompany the resolutions. At his prodding or on their own initiative, dozens of bird enthusiasts urged Pearson to give the protection of birds of prey a higher priority within his organization. For example, in a letter dated February 21, 1926, and apparently written at Miller's urging, the ornithologist Aretas A. Saunders commended Pearson for the success that the National Association had enjoyed with its campaigns to protect gulls, terns, egrets, and other birds that once had been "threatened with extinction." Now, however, it was time to turn attention to another class of endangered birds. Saunders's letter reveals how the specter of extinction increasingly haunted naturalists and nature lovers alike during this period: "The extinction of any native species, even a harmful one, is in my opinion a crime. While the economic argument might be necessary for some minds, I do not think bird-lovers need to hesitate to try to protect any and every species of native bird, just because it is a living creature with as much right to its place in the world as man. The hawk kills because he must do so or starve. Man kills cruelly and wantonly, or to gratify his greed, or to have stuffed trophy as a token of his skill and needless cruelty. So here is hoping the National Association will not sit idly by and allow selfish greed or ignorant prejudice destroy to the verge of extinction some of our largest and most magnificent birds."[23]

The onslaught caught Pearson off guard. Initially, he suspected that Van Name was behind the avalanche of letters flowing into his office, many of which he found "insulting and abusive." He also clearly resented the implication that his organization had abandoned its duty to come to the aid of birds of prey. In his replies, Pearson strongly defended his leadership on the issue, pointing out that he had not only written numerous editorials but also delivered many addresses on the subject of predatory birds, that the first Audubon educational leaflets covered these species, and that the organization had recently begun systematically

gathering data on their current status. He also reminded his correspondents that the National Association of Audubon Societies (and its less-formal predecessor, the National Committee of the Audubon Societies) had been responsible for securing passage of a uniform bird protection law in forty states. While the model form of that law made it a crime to harm most nongame species, Pearson argued that "in many states we found it absolutely impossible to pass a law protecting song and insectivorous birds unless the hawk clause was amended to include all hawks in the non-protected list." He felt he could only push so hard on the issue of protecting birds of prey without appearing a "crank" and potentially undermining the organization's effectiveness on other issues.[24]

Underwhelmed by Pearson's response, Miller began laying plans for a circular on hawk protection designed to keep pressure on the Audubon president. He worked closely with Henry Carey, a Philadelphia lawyer, naturalist, and author of the Delaware Valley Ornithological Club's resolution on predatory birds, to write the text, gather illustrations, develop a mailing list, recruit cosigners, and raise the necessary funds.[25] By the time of the publication of *Save These Birds!* in April 1926, Miller and Carey had persuaded several prominent naturalists, artists, and nature writers—including Thorton Burgess, Louis Agassiz Fuertes, Ernest Thompson Seton, Gerald Thayer, and several DVOC officers—to formally endorse it.

Mailed to some two thousand individuals and organizations, Miller's circular began by pointing out that early writers had once considered birds of prey to be the most majestic and beautiful of avian species, universal symbols of "power and might." Lately, however, these "splendid birds" had fallen on hard times as sportsmen and farmers had begun portraying them as "vermin," fit only for extermination. Miller decried campaigns aimed at reducing the populations of birds of prey, presented scientific evidence for the benefit of hawks and owls (drawn largely from A. K. Fisher's earlier study), and called on readers to raise the issue with local bird protection organizations and the National Association of Audubon Societies: "Is it not high time that the nature-lovers of this country asserted their right to a share in its wildlife? Are we not justified in demanding our rights, and those of our successors, to the enjoyment of these marvelous creatures?"[26]

Save These Birds! prompted an increase in the volume of mail urging Pearson to devote more attention to birds of prey and resulted in a new round of pro-bird-of-prey resolutions from the Nuttall Ornithological Club and the American Ornithologists' Union. Much to Pearson's consternation, several of those who wrote him mistakenly thought that his organization had issued the circular. He assured one such correspondent that nothing could be further from the truth; rather, it was the product of "a little group of people who have apparently

been displaying as much zeal in their efforts to discredit this Association and the writer, as they have to protect Hawks."[27]

Whatever his attitude toward those behind the circular, Pearson felt pressure to respond publicly. He did so during an address delivered at the 1926 meeting of the National Association. There he once again defended his record as president, claiming that he had always stood for "a policy of sane and conservative conservation" while endeavoring to steer clear of "false sentimentalism." Following a request from the Audubon board of directors, Pearson announced that he had called on Alaskan officials to repeal the eagle bounty law "until such time as a careful investigation of its food habits can be made."[28]

The Audubon board also persuaded Pearson to venture to Alaska so he could gain firsthand information about the impact of the eagle bounty. Following a brief visit in the summer of 1927, he reversed his earlier position calling for its repeal. Pearson now argued that bald eagles remained more abundant in Alaska than statesiders could possibly imagine and that at times they did prey on healthy fish and game. Moreover, while the payment of more than forty thousand bounties may have reduced the eagle population in the more accessible coastal regions of Alaska, the species certainly did not face "any immediate danger of extermination" within the territory as a whole. Rather than a fight to repeal the eagle bounty, Pearson argued for a broad educational campaign in Alaska to cultivate sympathy for all forms of bird life.[29]

A CRISIS IN CONSERVATION

Clearly frustrated by Pearson's backsliding on the Alaskan eagle bounty, Miller, Van Name, and Davis Quinn felt obligated to respond. In June 1929, they issued a scathing sixteen-page pamphlet entitled *A Crisis in Conservation: Serious Danger of Extinction of Many North American Birds.* Without referring to the National Association of Audubon Societies by name, the three naturalists minced no words as they charged the nation's largest and most widely recognized wildlife conservation organization with "neglect, indifference, and incompetence." Although this well-financed institution had helped secure protection for most "song and insectivorous" birds, it was now sitting by idly while dozens of North American birds—including the bald eagle—were rushing headlong toward extinction. Among numerous other charges, Miller, Van Name, and Quinn castigated Audubon leaders for being slow to publicize the Alaska bounty. They also took them to task for issuing "anti-eagle propaganda" that gave the impression that the species was "pretty destructive of game and fish" while failing to mention its threatened status.[30]

A Crisis in Conservation set into motion a series of events that rocked the National Association of Audubon Societies to its core. One recipient of the harsh indictment was Rosalie Edge, whose copy arrived while she was vacationing in Paris. A well-heeled New Yorker and former women's suffrage activist with "sharp, restless blue eyes," Edge had recently met Van Name while on one of her regular birding jaunts in Central Park. As an ardent birdwatcher, an active participant in the Linnaean Society, and an Audubon Society life member, she was greatly disturbed by what she read. Later, Edge recalled how strongly the pamphlet impressed upon her "the tragedy of those beautiful birds, disappearing through the neglect and indifference of those who had at their disposal wealth beyond avarice with which those creatures might be saved." After returning to New York, she attended the 1929 annual Audubon Society meeting to demand a response.[31]

Unsatisfied with the reply she received, Edge met with Van Name, who had been barred from issuing further publications without prior approval from museum authorities (several of whom served on the Audubon board of directors). In part as a way to circumvent this ban, the two launched the Emergency Conservation Committee, a radical organization that remained a gadfly in wildlife conservation circles for the next three decades. Davis Quinn, a young bird-of-prey enthusiast of no particular renown, and Irving Brant, a midwestern journalist who had earlier charged that gun companies had gained control of the Audubon association, also agreed to serve as officers in the new organization. Undoubtedly, Miller would have also become involved if he had not been killed in a tragic accident—a bus struck his motorcycle while he was birding in the New Jersey countryside—shortly following the publication of *A Crisis in Conservation*.[32]

Although the Emergency Conservation Committee is probably best remembered today for the reforms it provoked within the National Association of Audubon Societies—including the forced resignation of Pearson in 1934—from the beginning the organization proved firmly committed to securing greater protection for predatory birds. A series of provocative pamphlets castigating the National Association of Audubon Societies, the Bureau of the Biological Survey (condemned in one ECC publication as the "Bureau of Destruction and Extermination"), and other American conservation institutions soon became the hallmark of the new organization.[33] The first three ECC pamphlets all treated birds of prey. After a reprint of *A Crisis in Conservation*, two publications with an equally strident tone quickly followed. *Framing the Birds of Prey*, written by Davis Quinn, decried the "fanatical and economically harmful campaign of extermination being waged against the hawks and owls." According to Quinn, ammunition manufacturers hoping to bolster sales and sportsmen attempting

to stave off a reduction in bag limits or a shortening of open seasons fostered the increasingly common perception that birds of prey were simply "vermin." If something were not done quickly to save these "beautiful" birds, they would soon be "creatures of the past."[34] *The Bald Eagle: Danger of Its Extinction by the Alaskan Bounty* lambasted the Bureau of the Biological Survey for failing to exercise its authority to overturn the eagle bounty in Alaska territory and the National Association for neglecting to "carry on any earnest or persevering work to save the Bald Eagle."[35]

The furor over *A Crisis in Conservation* also provoked Pearson into action. At the time of its publication in June 1929, he was still basking in the glory of one of his greatest conservation victories: the passage of the Norbeck-Andresen Migratory Bird Conservation Bill. By the end of the 1920s, the "duck crisis" was deepening as North American waterfowl populations continued to plummet due to drought, habitat destruction, and overhunting. Although he had repeatedly defended sportsmen and refused to sanction further restrictions on their activities, now Pearson had reluctantly concluded that a reduction in waterfowl bag limits was necessary. With backing from a newly created National Committee on Wild-Life Legislation, which he chaired, Pearson also threw his support behind a federal refuge bill for migratory birds that Senator Peter Norbeck of South Dakota had introduced into Congress in 1928. Using NAAS staff and working closely with several other prominent conservation organizations, Pearson coordinated a massive publicity campaign to garner support for the bill, which made it through Congress and was signed into law early in 1929. Previous federal refuge bills had been roundly criticized for allowing hunting in the very areas supposedly being created to restore waterfowl populations; the Norbeck-Andresen Act, however, authorized the expenditure of up to $8 million in federal funds to purchase "inviolate sanctuaries" for waterfowl along migratory flyways. John Burnham, the president of the American Game Protective Association, congratulated Pearson on the victory, exclaiming "you deserve all the glory that is coming to you."[36]

Coming on the heels of the Norbeck-Andresen Act, Pearson felt blindsided by the turmoil that *A Crisis in Conservation* ignited. Fearful of eroding support within the National Association of Audubon Societies in the wake of the controversy, he began devoting more attention to birds of prey. In a carefully worded address delivered to the American Game Conference late in 1929, Pearson defended the right of gamekeepers and farmers to protect themselves from avian predators. But he also argued that they had an obligation to consider the views of those who opposed the wholesale killing of "useful hawks," birds that rendered valuable services as "destroyers of rats, mice, and various insects." "For the sake of these great, handsome birds themselves, and in the spirit of fair-play," Pearson

concluded, game officials should discourage bounties on birds of prey and help his organization educate the public on how to identify those species protected by law.[37] Pearson's address was hardly the ringing endorsement of hawks and owls that his critics had been urging him to make, but it sent a signal that Audubon planned to give greater attention to the issue.

A further encouraging sign came three weeks later, when Pearson authored a Bald Eagle Protection Act and convinced Senator Norbeck and Rep. August P. Andresen of Minnesota to introduce it in Congress. At the time, only five states specifically mentioned the bald eagle in their bird protection laws, while thirty-nine states protected it by inference, three states included the species on their unprotected list, and one state (Wyoming) had no laws covering nongame birds. Even in those states where the bald eagle received explicit or implicit protection by law, prosecutions for killing them proved extremely rare. And Alaska continued to pay bounties on "this magnificent emblem of our country," which, according to an editorial Pearson published in *Bird-Lore*, "was becoming a very rare species over large areas of its range." Although Norbeck initially rejected Pearson's request that Alaska be specifically included in the bill, Pearson stood firm on the issue, and the territory appeared in the draft presented to Congress.[38]

As he had done for the Norbeck-Andresen Act a year earlier, Pearson unleashed an impressive publicity drive to drum up support for his eagle bill. He and his staff dispatched editorials to newspapers across the country stressing the importance of the legislation; they sought backing from hundreds of major conservation organizations, bird clubs, sportsmen's groups, and even the Benevolent Order of Eagles; and they urged countless American bird lovers to write their congressional representatives urging its passage. By January 1930, Pearson reported that the campaign was "keeping his office-force after hours and working at top-speed," although privately he admitted that the bill had little chance to gain passage.[39]

Later that month, in hearings before the House Committee on Agriculture and Forestry, Pearson joined Theodore S. Palmer, an ornithologist, longtime Biological Survey staff member, and first Audubon vice president, to testify on behalf of the bill. During nearly two hours before the committee, Pearson reviewed the status of the bald eagle, which he claimed was "nearly bordering on extinction in many places," while Palmer argued that the eagle bill would "encourage patriotism" and provided historical background on how the species had become the "national bird." In response to questioning, both naturalists denied that the bald eagle was a migratory species, a point with which their critics took exception. Although only one individual, the delegate to Congress from Alaska Territory, offered opposition to the bill and more than a hundred supporters sent

letters strongly urging its passage, the House Committee on Agriculture reported unfavorably on the measure. Committee members claimed that because the bald eagle was not considered a migratory bird, the act would unconstitutionally interfere with the right of states to regulate wildlife within their borders. They also argued that the Depression was an inauspicious time to enact legislation protecting such a clearly "destructive bird." Norbeck had better luck in the Senate, where he steered Pearson's bill through with only a relatively minor amendment authorizing the destruction of any bald eagle "found in the act of killing domestic fowl, wild or tame lambs or fawns or foxes on fox-farms." The measure died, however, when it failed to gain passage in the House of Representatives.[40]

REHABILITATING RAPTORS

Disappointed but undaunted, in January 1932 a small, enthusiastic group of predatory bird supporters (most of whom were also Linnaean Society members) decided to found the Hawk and Owl Society. The primary force behind the new organization was its secretary, Warren F. Eaton, a thirty-two-year-old, Harvard-educated textile and dry goods wholesaler, dedicated birdwatcher, and president of the Linnaean Society of New York. An energetic, dapper young man with a wiry physique, Eaton "gloried in birds of prey, his adoration amounting almost to an obsession." The purpose of the Hawk and Owl Society was to foster "greater popular appreciation of the aesthetic, scientific, and economic value of hawks and owls"; to combat the steady stream of anti-bird-of-prey propaganda; and to work for the passage and enforcement of protective laws for avian predators. The group also came out in firm opposition to the ethos of eradication that seemed to inform many predator-control campaigns, arguing that "No species should be exterminated or extirpated from *any* part of its habitat."[41] Within a few months of its founding, Eaton had received expressions of support from more than twenty bird clubs, state and local Audubon Societies, and scientific organizations sympathetic to its goals. Not surprisingly, the Delaware Valley Ornithological Club, the Linnaean Society of New York, the Nuttall Ornithological Club, and the bird protection committee of the AOU were among those offering resolutions welcoming the new organization.

Under Eaton's leadership, the Hawk and Owl Society quickly became an important clearinghouse for the latest information on birds of prey and their protection. Through a voluminous correspondence, the publication of a modest irregularly issued bulletin, the wide distribution of article reprints on predatory birds, and the creation of local committees, the new organization not only linked

together hawk and owl supporters throughout the nation but also promulgated authoritative information on their status. In addition, Eaton and other members of the Hawk and Owl Society regularly delivered pro-bird-of-prey speeches, pushed game authorities to enforce existing laws, lobbied for additional protective legislation, and used various other means to "exert influence in favor of raptors."[42]

Beyond engaging in successful legislative campaigns in several states, the Hawk and Owl Society also played a role in the creation of Hawk Mountain Sanctuary, the world's first refuge for birds of prey. After World War I, slaughtering hawks during their fall migration became an increasingly popular pastime in rural communities along Blue Mountain (also known as Kittatinny Ridge), a corduroy ridge that begins in southeastern New York and runs to southern Pennsylvania. The killing proved particularly intense along the rock outcrops above Drehersville, Pennsylvania, where at the height of the migration season, as many as four hundred shooters vied to bag the thousands of raptors that soared passed each day. So many hawks were killed and left to rot where they fell that "a bad odor hung over the place" during the fall migration season.[43]

After reading about the annual massacre in an ornithological journal, Henry H. Collins, Jr., and Richard H. Pough—both avid Philadelphia birdwatchers, Delaware Valley Ornithological Club affiliates, and members of the Hawk and Owl Society—visited the area during the fall migration of 1932. Disgusted by what they saw, the two published graphic accounts of the grisly ritual in the *Hawk and Owl Society Bulletin* and *Bird-Lore*.[44] In October 1933, Pough presented an illustrated lecture on the subject to a joint meeting of the Hawk and Owl Society, the Linnaean Society of New York, and the National Association of Audubon Societies. He had spoken with realtors, he announced, and the entire mountain could be purchased for a reasonable price. Following Pough's presentation, the meeting broke into enthusiastic applause when Pearson announced that Audubon would buy the mountain and stop the slaughter.[45] By June 1934, when it looked like Pearson was not going to follow through on his promise, Rosalie Edge secured a lease on the property, some 1,398 acres, with an option to buy it for $3,500. Though her preemptive action ruffled some feathers within the Hawk and Owl Society and Audubon, Edge managed to obtain financial support from both organizations to help enforce a ban on shooting within the borders of the newly established Hawk Mountain Sanctuary.

Although he failed to purchase Hawk Mountain, Pearson did devote increasing attention to bird-of-prey protection in the early years of the Great Depression.

FIGURE 48. (*above*) Rows of raptors killed at Hawk Mountain, 1931. Photograph by Richard Pough. During the early 1930s, slaughtering migrating hawks remained a popular pastime along parts of the Blue Mountains, which stretch from southeastern New York to Pennsylvania. This photograph represents the kill at a single stand near Drehersville, Pennsylvania. Courtesy of Hawk Mountain Sanctuary.

FIGURE 49. (*left*) Rosalie Edge with hawk. A birdwatcher and cofounder of the Emergency Conservation Committee, Edge served as an important gadfly in wildlife conservation circles during the 1930s and 1940s. She also secured the purchase of Hawk Mountain Sanctuary. Courtesy of Hawk Mountain Sanctuary.

For example, in 1932, he lodged a protest with Montana state game officials after they announced a "Common Enemy Contest" that targeted hawks and owls. In response to anti-eagle stories that began circulating in newspapers across the nation, he widely distributed a press release defending the species. While admitting that bald eagles regularly feasted on carrion and occasionally robbed fish from ospreys, Pearson argued that those biological realities should not detract from the grandeur of America's national emblem, this "symbol of valor and of power."[46] *Bird-Lore* also began to include regular reports of various state campaigns to extend legal protection to birds of prey and to repeal bounty laws targeting them. The title and portions of the text of Pearson's 1933 address to the International Association of Game, Fish and Conservation Commissioners—"Evils That Lurk in the Bounty System"—sounded more like an Emergency Conservation Committee pamphlet than the bland statements he had typically issued in the past. There he decried the results of state and private bounty campaigns and pointed out that twenty-six states protected "useful Hawks" by law, while sixteen failed to protect them. According to Pearson, bounty programs invariably led to the needless destruction of hawks because these species were notoriously difficult to identify correctly.[47]

NAAS involvement with hawk and owl protection became even more pronounced early in 1933, when John H. Baker gained election as chairman of the Audubon board of directors. A strong-willed Harvard graduate, successful Wall Street investment banker, and ardent birdwatcher since childhood, Baker came to the attention of the Audubon board while serving as president of the Linnaean Society of New York. They recruited him in the hope of bringing an end to the controversy that continued to plague the organization under Pearson's reign. The ongoing conflict not only threatened Audubon's authority, but also caused a precipitous decline in membership, which fell from 8,400 in 1929 to 3,400 by 1933. Baker wasted no time recruiting allies to oust the increasingly ineffective Pearson, who was finally forced to tender his resignation in October 1934. Baker then assumed the position of executive director of Audubon, with responsibility for the day-to-day administration of the organization.[48]

Signs of change abounded within the association. For example, in 1934, the Audubon board adopted a strongly worded resolution lifted almost verbatim from the Hawk and Owl Society mission statement. The organization put itself on record as opposing the extermination of any species, advocating protection for all "beneficial" hawks as well as any that were "rare," and condemning all bounty laws and anti-hawk campaigns. The only exception in the board's generally pro-predatory bird resolution was in the case of individual birds caught in the act of damaging property. Audubon also committed itself to "create greater

popular appreciation of the aesthetic, scientific, and economic value of Hawks and Owls," "to combat the constant propaganda which encourages their destruction," and "to work for the enactment of laws for their protection."[49]

The resolution marked the beginning of an active "Hawk and Owl Preservation Campaign" at Audubon. Baker invited Eaton to join the Audubon staff, a move that, in effect, merged the Hawk and Owl Society into the larger and more established bird conservation organization. In addition, the National Association published a lavishly illustrated book, *The Hawks of North America* (1935), a project that had begun under Pearson's administration. An anonymous donor subsidized publication of the volume with the agreement that any profits from its sales would be used to help fund Audubon's bird-of-prey campaign. The organization also issued a large color poster urging the young men in Civilian Conservation Corps camps not to engage in the "promiscuous killing of eagles, hawks, and owls." By the end of 1935, Baker claimed that Audubon had distributed more than eighty thousand pieces of printed material relating to hawks and owls.[50]

There were also subtle changes in the way Audubon pitched bird-of-prey protection to the public. Baker and many of his younger staff felt it was important to place wildlife conservation on more secure scientific foundations. In addition to funding long-term research on the status of several endangered species—including the bald eagle, California condor, and ivory-billed woodpecker—Audubon officials began resorting to ecological arguments in their literature intended for public consumption. For the first time, Audubon publications routinely cited the work of a new generation of ecologists, wildlife biologists, and game managers who had taken up the systematic study of predators and their roles in biological communities. For example, in a 1935 article for *Bird-Lore*, Eaton summarized the research of Paul L. Errington, an associate of Aldo Leopold who had just completed a five-year study of the bob-white quail. Errington's research demonstrated that predators and game birds had "existed together for centuries before the balance of nature was disturbed by man." Now, however, the most important factor in the survival of game species was the degree to which humans had modified their environment. Adequate food supplies and suitable cover proved much more important than natural predation in determining the number of quail that survived in a given year.[51]

The same article quoted extensively from Leopold, who was laying down the foundations of modern wildlife management through the introduction of ecological concepts and research methods. Leopold had recently warned that hawks and owls were becoming "almost as scarce as ducks": "Apparently we are about to repeat what has already happened in England, exterminate our breeding raptors in the alleged interest of game." While predator-control efforts had made

serious inroads into bird of prey populations, "research has piled more and more evidence that such control is usually futile." There were no easy answers to this problem. Legal protection of harmless raptor species would fail without public support and adequate enforcement. The only solution was the "slow and painful process of teaching sportsmen and farmers the *ecology of predation*." [52] This new, more ecological approach to conservation did not immediately supplant earlier arguments based on aesthetic and utilitarian grounds. But it would become increasingly important in the post–World War II era, as ideas from academic ecology began to diffuse into the wider culture.

While sympathetic to Leopold's call for more education about the role of predators in biological communities, Audubon officials also continued to value protective legislation. In 1935, when Rep. Jennings Randolph of West Virginia introduced a new eagle protection bill into the U.S. House of Representatives, Audubon once again unleashed its publicity machine to promote the measure. The Emergency Conservation Committee also lobbied aggressively for the legislation, issuing a second edition of their earlier eagle pamphlet under the title *Save the Bald Eagle: Shall We Allow Our National Emblem to Become Extinct?* Randolph's bill, apparently introduced without Audubon input, sought to "preserve from extinction the American eagle, emblem of the sovereignty of the United States of America" using the enforcement provisions of the Migratory Bird Treaty Act. As had been the case with a similar bill introduced five years previously, Senator Norbeck successfully shepherded companion legislation through the Senate, but the House refused to pass the measure. Clearly, there was much more educational work to be done.[53]

A LIMITED VICTORY

Audubon resolve on the issue of birds of prey was put to a test a year later (1936), when Eaton died suddenly from complications following surgery for appendicitis. He had been an indefatigable champion for birds of prey, first as "the works" behind the Hawk and Owl Society and later as head of the Hawk and Owl Division at Audubon, and there were fears that the organization would no longer prioritize raptors without his leadership. Those concerns quickly diminished, however, when Baker hired the Philadelphia engineer and businessman Richard H. Pough—one of the primary instigators behind the creation of Hawk Mountain Sanctuary—to replace Eaton. Like most of those involved in the ongoing campaign to rehabilitate the image of avian predators, the thirty-two-year-old Pough had discovered the joys of birdwatching as a youngster; over the years, his determined pursuit of the activity had led him to join numerous bird clubs and to

visit forty-five of the forty-eight states. After joining Audubon, he continued the aggressive education campaign that Eaton had begun. In addition to regular reports on the status of birds of prey in *Bird-Lore*, Pough widely distributed a new poster that included views of how hawks appeared from the air on one side and graphic representations of the their diets on the other.[54]

The growth of falconry—the practice of taming wild birds of prey to use for hunting—also promoted greater public appreciation of these species.[55] American interest in reviving this ancient sport—which had long been popular among the British upper classes—began in the 1920s, when the Cornell bird artist and ornithologist Louis Agassiz Fuertes published an article on the subject in *National Geographic* magazine.[56] By 1941, more than one hundred devotees joined together to form the Falconer's Association of North America, which soon began publishing its own short-lived periodical, the *American Falconer*. Hundreds of additional falconers joined local organizations devoted to the sport or pursued it on their own. Like birdwatching, falconry had a strongly aesthetic dimension; one prominent enthusiast called it a "glorified form of bird worship." Supporters of the activity also claimed that the "overwhelming majority" of its practitioners were ardent conservationists who were "keenly interested in the future of hawks and falcons."[57] However, critics of the practice—like Rosalie Edge of the Emergency Conservation Committee—condemned most falconers as both cruel and a "new and very serious factor in the progressing extermination of our birds of prey." Whatever their direct impact on raptor populations, falconers published widely circulated accounts of their sport, accounts that invariably highlighted the grandeur and majesty of the species they trained. Even Edge recognized the "good a few falconers have accomplished in introducing their birds to prejudiced people who have never perhaps seen a hawk."[58]

The most renowned American falconers from this period were John J. and Frank C. Craighead, twins from Washington, D.C. In 1930, at the age fourteen, the Craighead brothers stumbled onto an old copy of *National Geographic* containing Fuertes's article on falconry and then witnessed a trained hawk in person. Captivated by what they had read and seen, the two began searching for suitable young birds to begin working with themselves. Soon they had secured four nestling Cooper's hawks from high in a pin oak tree along the Potomac River. They kept two of the birds for themselves, gave a pair to their buddies, and spent the next several months learning to care for and train their young charges. This initial experiment in falconry proved such a success that within a few years the Craighead brothers began traveling widely to capture, photograph, and film a remarkable variety of birds of prey. They published enthusiastic reports of their adventures in a series of popular articles that they expanded into a book, *Hawks*

FIGURE 50. Frank (*far left*) and John (*far right*) Craighead and friends with trained hawks, ca. 1937. Beginning in the 1920s, the age-old practice of falconry experienced a modest revival in the United States, thereby helping to cultivate a broader sympathy for raptors. The twin brothers Frank and John Craighead were well-known falconers who went on to distinguished careers in wildlife biology. Courtesy of the Craighead Collection.

in the Hand (1939), before heading off to graduate school in wildlife biology at the University of Michigan. Their publications invariably presented hawks and owls in extremely sympathetic terms. Rather than the nameless destructive "vermin" so often vilified by hunters, farmers, and ranchers, the Craigheads stressed the charm and distinct personality of their birds. "Hawks," they were fond of saying, "vary individually as much as people."[59]

While there continued to be setbacks, Audubon's ongoing educational campaign, the continued growth of interest in birdwatching, and the modest expansion of falconry eventually produced legislative results. By 1939, for example, thirty-eight states had enacted laws protecting the bald eagle, and Audubon officials were actively lobbying for similar protection in eight of the remaining states.[60] One year later, responding to mounting public pressure and the upsurge of patriotism on the eve of America's involvement in World War II, Congress finally passed the Bald Eagle Protection Act. This particular version had been introduced at the urging of Maud G. Phillips, the founder of the Blue Cross Society, a regional humanitarian organization based out of Springfield, Massachusetts. In 1939, she convinced two of her congressional representatives, Senator David Walsh and Rep. Charles R. Clason, to sponsor her bill and then testified on its behalf. Phillips's legislation declared that the bald eagle, the "symbol of American ideals of freedom," was clearly "threatened with extinction" and

therefore in dire need of federal protection.[61] When the National Association of Audubon Societies urged its members to write their representatives in Congress in support of the bill, American birdwatchers responded with a flood of letters and telegrams. The plea from Carl T. Keller of Boston proved typical: "As a lover of the woods, the birds and the beasts, I am much in favor of S1494 to protect the bald eagle."[62] With war looming on the horizon, the appeal to protect America's national symbol could no longer be ignored. But in a move that dismayed eagle supporters, Congress exempted Alaska—the one region of the country where eagles remained most abundant—from the new law. Thus, the Bald Eagle Protection Act represented only a partial victory.

REGARDING RAPTORS

The ongoing Audubon campaign provided only one of several factors that led to heightened protection for the eagle and other American birds of prey. Perhaps more critical was the expanding interest in these species that accompanied the growth of birdwatching as a mass leisure activity. Here was a crucial difference between the campaigns to gain sympathy for mammalian and avian predators. A strong devotion to birdwatching proved the common denominator that linked virtually every early bird-of-prey advocate in the 1920s and 1930s. In the process of regularly viewing raptors in the wild, these individuals developed a strong emotional and aesthetic bond with predatory birds, a bond that led them to speak out on their behalf. As birdwatching took hold, increasing numbers of other Americans sought to view birds of prey in their native environments. By the early 1940s, for example, thousands of birdwatchers annually flocked to the Hawk Mountain Sanctuary in the hope of catching a glimpse of the successive waves of raptors that migrated through each spring and fall; so many bird enthusiasts tried to reach the area at the peak of migration season that railroad officials had to schedule special excursion trains to handle the demand.[63] There was no analogous rush to view coyotes and wolves during this period, nor could there be, since they are secretive creatures that are extremely difficult to find in the wild.[64]

In the long run, the cultural baggage associated with birds of prey also tended to work in their favor. As Barry Lopez, Thomas Dunlap, Jon Coleman, and other scholars have shown, mammalian predators had long been feared and loathed with an intensity disproportionate with the actual threat they posed to humans or the damage they inflicted on livestock and game. Much of this reaction was informed by the deeply held cultural beliefs associated with these creatures. Wolves, for example, have often featured prominently in folk traditions and fairy tales as emblems of evil, cruelty, and rapaciousness. Hawks and eagles,

on the other hand, have tended to be associated with power, nobility, majesty, and freedom. In addition to the United States, numerous other nations through the ages have adopted the eagle as their symbol. The ancient, highly ritualized practice of falconry provided another source of positive associations for birds of prey. The advent of anti-bird-of-prey propaganda in the nineteenth and early twentieth centuries only partially eclipsed this earlier, more deeply rooted tradition of viewing birds of prey favorably, while the rise of birdwatching helped to reinvigorate it.[65]

In the decades after World War II, several demographic trends led to greater public appreciation for birds of prey. The percentage of Americans who engaged in sport hunting saw an upsurge in the immediate postwar years before experiencing a gradual decline that has continued to this day.[66] Related to this trend, a long-term shift in population from rural to urban and suburban areas continued, while agricultural production became concentrated in fewer and fewer hands. At the same time, interest in birdwatching showed a marked increase. As a result of these changes, in the second half of the twentieth century Americans proved less and less likely to experience predatory birds as potential destroyers of game or livestock. If they thought about birds of prey at all, they were much more likely to do so in the context of the pleasant memories they had experienced while viewing those species in the wild.[67]

The postwar growth of birdwatching not only produced a large, increasingly vocal constituency for the preservation of raptors but also promoted greater legal protection for these species. In 1959, for example, Congress finally granted protection to Alaska's bald eagle population; three years later, an amendment to the Bald Eagle Protection Act also extended federal protection to the golden eagle, a species that is difficult to distinguish from the immature bald eagle. By 1966, twenty-one states protected all hawks and owls by law, while twenty-six additional states protected at least some of these species. That same year, Congress passed the first Endangered Species Preservation Act, which was intended to identify, publicize, and ultimately rescue native vertebrates that were teetering on the brink of extinction. Several birds of prey—including the Southern bald eagle, the Florida snail kite, and the Hawaiian hawk—were among the first seventy-eight organisms listed under this landmark federal legislation, which provided a foundation for subsequent Endangered Species Acts in 1969 and (most importantly) 1973. In extending federal protection to the nation's threatened symbol, the Bald Eagle Protection Act of 1940 served as an important model for the increasingly comprehensive and stringent federal endangered species legislation enacted three decades later, at the height of the modern environmental movement.[68]

CHAPTER NINE

SALVATION THROUGH SCIENCE?

THE FIRST LIFE-HISTORY STUDIES OF ENDANGERED SPECIES

I realize that there are some who feel that when a species becomes rare as is the Ivory-bill that it is useless to try to preserve it, and they quote the history of the Heath Hen as an example. I feel, however, that had we known as much about Grouse in general twenty years ago as we do today, the Heath Hen might have been saved, and the same holds true for the Ivory-billed Woodpecker. Unless we know more than at present there is no hope of saving it.

ARTHUR ALLEN, 1936

BLIND OBSERVATIONS

On April 2, 1929, the ornithologist Alfred O. Gross entered a small observation blind in the heart of Martha's Vineyard.[1] Both the blind—a crudely built, four-by-six-by-six-foot wooden structure—and the surrounding landscape—the scrub-oak barrens characteristic of the island—seemed quite familiar to him from repeated visits over the previous six years. He had come to the site to study a bird that the public called the heath hen and scientists knew as *Tympanuchus cupido cupido*. One of three geographic races of the greater prairie chicken, the heath hen had once ranged across the northeastern part of the United States, as far south as Virginia, perhaps even South Carolina, and as far north as Maine. Now the beleaguered bird was making a desperate final stand on a single island off the coast of Massachusetts. A Harvard-trained biologist with a position at Bowdoin College, Gross had been commissioned to find out as much as he could

FIGURE 51. Alfred Gross holding a heath hen, 1923. The heath hen was the first endangered species to be subject to intense scientific study. By the time Gross began his research in 1923, however, the bird had already reached critically low numbers from which it would never recover. Courtesy of the George J. Mitchell Department of Special Collections and Archives, Bowdoin College Library, Brunswick, Maine.

about the bird's life and behavior. The hope was that the scientific knowledge he gained would help save the heath hen. Instead, its numbers, which had oscillated wildly during the previous several decades, now seemed to be dangerously declining. By 1929, the world's entire heath hen population had been reduced to a single male bird. Despite this devastating setback, Gross maintained his periodic vigil on the island until the bitter end.

Accompanying him that cool spring day on the eve of the Great Depression was his friend, the best-selling children's nature writer and radio broadcaster Thornton W. Burgess.[2] A year earlier, Burgess had collaborated with one of Gross's students to obtain motion pictures and still photographs to document the remaining heath hen population, which at that point still numbered three birds. Now Gross and Burgess stood witness to an unusual, sobering display. While the heath hen normally remained close to the ground, the lone remaining male flew to the top of a nearby tree, engaged in its characteristic courtship display, and uttered its eerie mating call.[3] It seemed as if the bird was signaling a refusal to accept its fate. As Burgess revealed several months later in a letter to the ornithologist Waldron DeWitt Miller, standing in the presence of the last heath hen moved him profoundly: "What extermination means was most vividly brought home to me last year when I visited Martha's Vineyard for the purpose of making motion pictures of the last Heath Hens. A year ago in March there were but three, all males. This last March there was but one. . . . Waiting in the blind for that lone bird to appear in the early morning, I felt the full force of the tragedy."[4]

While the heath hen was certainly not the first North American organism to fall victim to humans, its final days differed from other recently extinct species in

several key ways. The public learned little about where or how the final Labrador ducks, passenger pigeons, or Carolina parakeets passed their last years in the wild. Because of their seasonal movements and once extensive ranges, it proved difficult to state with any degree of certainty what the exact status of these species was at any given point in time. It was even difficult to say for certain when any of them had been pushed over the brink of oblivion, especially since there continued to be claimed sightings of these species long after they had undoubtedly been lost. For the last fifty years or so of its existence, however, the heath hen remained confined to a single, relatively small island, where it proved easier (albeit still challenging) to monitor. And monitored it was. Ornithologists, government officials, sportsmen, and birdwatchers flocked to the island to attend the slow, painful demise of the heath hen, which became a national media event, documented in newspapers, periodicals, government reports, lectures, photographs, motion pictures, and even a Radio Nature League program that Burgess broadcast weekly from WBZ in Boston. According to Christopher Cokinos, who has painstakingly researched the history of the subspecies, as the story of the last heath hen made its way across the country it "galvanized interest in conservation." "The renown of the last specimen has spread remorse," reported the *New York Tribune*, "and the resolve to rescue other vanishing species."[5]

The heath hen also became the first endangered species that trained, professional scientists studied extensively in the wild. Rare and apparently vanishing species had long enchanted naturalists, but until the early twentieth century, their interest remained quite narrow. Most of all they desired preserved specimens of these precious organisms before it was too late. Yet, in the rush to collect, preserve, and catalog the last examples of the great auk, passenger pigeon, and Carolina parakeet, naturalists failed to learn much about their life history, behavior, or ecology. By the time the heath hen was making its final stand on Martha's Vineyard, however, the scope of natural history had broadened considerably. Increasingly, naturalists sought to learn more not only about how organisms lived but also how they interacted with each other and their natural environment. The emergence of graduate training in biology at the end of the nineteenth century and in ecology in the 1920s and 1930s reinforced this trend.[6] Informed by the latest developments in wildlife research and the product of countless hours of careful, patient observation, Gross's 1928 monograph on the heath hen represented the first of its kind for any threatened species.

The loss of the final heath hen also occurred during a period of deep rancor within American wildlife circles as naturalists, sport hunters, government officials, nature lovers, and other interested parties argued about the proper scope and goals of conservation.[7] Nowhere were these divisions more pronounced than

at the National Association of Audubon Societies, which faced mounting turmoil during the early 1930s as an older generation of conservationists with strong ties to the sport hunting community and the Bureau of the Biological Survey gave way to a more independent generation of leaders and staff members, who tended to be younger and have at least some training in modern natural history. Under the leadership of Audubon president John Baker, who came to power in 1934 (just two years after the last sighting of the heath hen on Martha's Vineyard), the organization gave increasing emphasis to scientific research. Consistent with this aim (and at the urging of Aldo Leopold), Baker instituted a research fellowship program designed to gather more data about the status, habitat requirements, and future prospects of endangered species in North America. Although modest in scope, that program served the needs of university programs searching for ways to fund their graduate students during the height of the Depression while helping Audubon moor its wildlife conservation policy recommendations on more solid scientific foundations.

The Audubon fellowship program resulted in a pioneering series of widely distributed research reports on several charismatic birds—the ivory-billed woodpecker, California condor, roseate spoonbill, and others—studies that provided authoritative information about the life, ecology, and population status of these vanishing species. Each of them also offered a set of specific recommendations for how to preserve individual species and the critical habitat they needed to survive. In the end, though, each revealed the limitations of science in wildlife conservation. As Baker and his colleagues discovered, scientific knowledge might be necessary to rescue endangered species, but it was hardly sufficient. Science could not save those species in the absence of the political will needed to implement the recommendations made in those pioneering reports.

THE TRIALS AND TRIBULATIONS OF THE HEATH HEN

At first glance, the heath hen seems an unlikely poster child for endangered species. About the size of a small Cornish hen, it was a relatively drab bird—streaked with various shades of chestnut brown, gray, and black—whose coloration blended in perfectly with what seemed like a drab environment—the coastal plains and shrubby barrens of the northeastern United States. By some accounts, its meat tasted too gamy to be an especially desirable source of food. Nor did sport hunters find it a challenging target, since it massed in open fields and tended to fly with great labor and in straight lines when flushed.[8] It lacked the romantic associations with the frontier West that the bison enjoyed; it did not blacken the sky in awe-inspiring flocks like the passenger pigeon; and it failed to