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*Back Story: Migration, Assimilation and Invasion  
in the Nineteenth Century [book chapter]*

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## Chapter 2

# Back Story: Migration, Assimilation, and Invasion in the Nineteenth Century<sup>1</sup>

Harriet Ritvo

People were on the move in the nineteenth century. Millions of men and women took part in the massive transfers of human population that occurred during that period, spurred by war, famine, persecution, the search for a better life, or (most rarely) the spirit of adventure. The largest of these transfers—although by no means the only one—was from the so-called Old World to the so-called New. This is a story that has often been told, although its conclusion has been subject to repeated revision. That is to say, the consequences of these past population movements continue to unfold throughout the world, even as new movements are superimposed on them. Of course, people are not unique in their mobility, as they are not unique in most of their attributes. Other animals share our basic desires with regard to prosperity and survival, and when they move independently they are therefore likely to have similar motives. But, like people, they don't always move independently. And, as in the human case, when the migrations of animals are controlled by others, their journeys also reveal a great deal about those who are pulling the strings. A couple of animal stories can

serve as examples. They both concern creatures transported far from their native habitats by the Anglophone expansions of the nineteenth century. The motives for their original introductions a century and a half ago were rather different, as have been their subsequent fates, but they were introduced to the same widely separated shores under circumstances that resembled each other in suggestive ways.

One story concerns the English or house sparrow (*Passer domesticus*), which was apparently first introduced into the United States by a nostalgic Englishman named Nicolas Pike in 1850, and subsequently reintroduced in various locations in eastern North America. In Darwinian terms, this was the beginning of a great success story. So conspicuously did the English sparrow flourish that in 1889, the Division of Economic Ornithology and Mammalogy (part of the U. S. Department of Agriculture--an ancestor of the current Fish and Wildlife Service) devoted its first monograph to it. (Moulton et al., 2010, Barrow, 1889) By 1928, a Department of Agriculture survey of introduced birds made the same point by opposite means, explaining the brevity of its entry on the species on the grounds that it "receives such frequent comment that it requires no more than passing notice here" (Phillips, 1928: 49). It remains one of the commonest birds in North America, although its populations have recently suffered precipitous declines elsewhere in the world.

The sparrow's adaptation to North America may have been a triumph from the passerine point of view, but hominids soon came to a different conclusion. Although the first introduction was at mid-century, the most celebrated one occurred a decade and a half later. The *New York Times* chronicled the evolving opinions inspired by the new immigrants. In November 1868, it celebrated the “wonderfully rapid increase in the number of sparrows which were imported from England a year or so ago”; they had done “noble work” by eating the inchworms that infested the city's parks, described by the *Times* as “the intolerable plague or numberless myriads of that most disgusting shiver-producing, cold-chills-down-your-back-generating, filthy and noisome of all crawling things.” The reporter praised the kindness of children who fed the sparrows and that of adults who subscribed to a fund that provided birdhouses for “young married couples”; he promised that, if they continued to thrive and devour, English sparrows would be claimed as “thoroughly naturalized citizens.” (No author, 1868: 8)

Two years later, sympathy was still strong, at least in some quarters. For example, the author of an anonymous letter to the editor of the *Times* criticized his fellow citizens in general, and Henry Bergh, the founder of the American Society for the Prevention of Cruelty to Animals, in particular, for failing to provide thirsty sparrows with water. Bergh took the allegation seriously enough to compose an immediate reply, pointing out that despite his “profound interest...in all that relates to the sufferings of the brute creation—great and small,” neither he nor his society had authority to erect fountains in public parks (No author, 1870a:

2, Bergh, 1870: 3). But the tide was already turning. Only a few months later the *Times* published an article entitled, “Our Sparrows. What They Were Engaged To Do and How They Have Performed Their Work. How They Increase and Multiply—Do They Starve Our Native Song-Birds, and Must We Convert Them Into Pot-Pies?” (No author, 1870b: 6).

While the English sparrow was making itself at home in New York and adjoining territories, another creature was having a very different immigrant experience far to the southwest. In the early 1850s, after the American annexation of what became Texas, California, Arizona, and New Mexico, the U. S. Army found that patrolling the vast empty territory along the Mexican frontier was a daunting task, especially in the overwhelming absence of roads. The horses and mules that normally hauled soldiers and their gear did not function efficiently in this harsh new environment. Of course, although the challenges of the desert environment were new to the U.S. Army, they were not absolutely new. The soldiers and merchants of North Africa and the Middle East had solved a similar problem centuries earlier, and some open-minded Americans were aware of this. (See Bulliet, 1990)<sup>2</sup> Several officials serving in the dry trackless regions therefore persuaded Jefferson Davis, then the U.S. Secretary of War, that what the army needed was camels, and in 1855 Congress appropriated \$30,000 to test the idea (Marsh, 1856: 210).

[Insert figure 2.1 here]

Figure 2.1 Camel

Source: S. G. Goodrich, *Illustrated History of the Animal Kingdom, being a Systematic and Popular Description of the Habits, Structure and Classification of Animals from the Highest to the Lowest Forms, with their relations to Agriculture, Commerce, Manufactures, and the Arts* (New York: Derby and Jackson, 1861) p. 576. Copy in possession of the author.

Acquiring camels was more expensive than acquiring sparrows, partly because they are much larger and partly because such transactions required intermediate negotiations with people, including camel owners, foreign government, customs officials. And the animals themselves demanded significantly more attention, which Americans familiar only with such northern ungulates as horses and cattle were ill equipped to provide. In consequence a Syrian handler named Hadji Ali (soon anglicized to “Hi Jolly”) was hired to accompany the first shipment of camels; he outlasted his charges and was ultimately buried in Quartzsite Arizona, where his tomb, which also commemorates the original Camel Corps, now constitutes the town’s primary tourist attraction.<sup>3</sup> A total of seventy-five camels survived their ocean voyages and their subsequent treks to army posts throughout the southwest. The officers who used them on missions were, on the whole, favorably impressed, while the muleteers who took care of them tended to hold them in more measured esteem.

But these discordant evaluations did not explain the ultimate failure of the experiment. With the outbreak of the Civil War, responsibility for the camels, whose numbers had grown somewhat through natural increase, passed to the

Confederacy. Even their early advocate Jefferson Davis had other priorities at that point. Some of the camels were sold to circuses, menageries, and zoos; others were simply allowed to wander away into the wild dry lands. They were sighted (and chased and hunted) with decreasing frequency during the postwar decades (Perrine, 1925). In 1901 a journalist who considered the whole episode to be “one of the comedies that may once in a while be found in even the dullest and most ponderous volumes of public records from the Government Printing Office” reported that “now and then a passenger on the Southern Pacific Railroad...has had a sight of some gaunt, bony and decrepit old camel...grown white with age, [and] become as wild and intractable as any mustang” (Griswold, 1901: 218-9).

Of course the details of the assimilation or attempted assimilation—how many individuals were involved, whether they were wild or domesticated, where they went and where they came from, whether the enterprise succeeded or failed—made a great difference to the imported creatures as well as to the importers. Such attempts, often termed “acclimatization,” became relatively frequent during the nineteenth century, although the simple desire to acclimatize was the reverse of novel. Whether so labeled or not, acclimatization has been a frequent corollary of domestication, as useful plants and animals have followed human routes of trade and migration; it thus dates from the earliest development of agriculture, 10,000 years and more ago. Indeed much of the history of the world,

at least from the perspective of environmental history, can be understood in terms of the dispersal and acclimatization of livestock and crops.

Historically and prehistorically, people have taken animals and plants along with them in order to re-establish their pastoral or agricultural way of life in a new setting. Thus the bones of domesticated animals (and the seeds and other remains of domesticated plants) can help archaeologists trace, for example, the spread of Neolithic agriculture from the various centers where it originated. (The agricultural complex that was ultimately transferred throughout the temperate world by European colonizers in the post-Columbian period, based on cattle, sheep, and goats, along with wheat, barley, peas, and lentils, was derived ultimately from the ancient farmers of the eastern Mediterranean.) Even the remains of less apparently useful (or at any rate, less edible) domesticated animals can signal human migration patterns. For example, the prevalence of orange cats in parts of northwestern Europe indicates long ago Viking settlement and the relative frequency (greater than further south and decreasing toward the Pacific) of robust polydactyl cats (a mutation that apparently arose in colonial Boston) along the northern range of American states indicates the westward movement of New Englanders (Todd, 1977: 100-7).

Alfred Crosby has christened the process by which this assemblage of domesticated animals and plants (along with the weeds, pests, and diseases that inevitably accompanied them) achieved their current global range “ecological



imperialism,” replacing or subsuming his earlier coinage “the Columbian exchange.” (See Crosby, 1986, 1972) These labels are somewhat inconsistent in their political implications, but they both have validity. Especially with regard to plants, the Americas have transformed the rest of the world at least as much as they have been transformed by it: corn (maize) and potatoes are now everywhere. But of course American imperialism, when it emerged, did not result from this multidirectional dissemination of indigenous vegetables. Instead it was a consequence of the final westward transfer of the combination of domesticated plants and animals initially developed in ancient southwest Asia, and gradually adapted to the colder wetter climates of northern Europe and eastern North America.

The instigators of the wave of acclimatization attempts that crested in the late nineteenth century often claimed that their motives were similarly utilitarian. But as is often the case, their actions told a somewhat different story. The American experiences of the English sparrow and the camel suggest the much smaller scale of such transfers, although the relatively few imported sparrows ultimately populated an entire continent through their own vigorous efforts. In addition, most nineteenth-century introductions resulted from the vision or desire of a few individuals, not an entire community or society; they involved the introduction of more or less exotic animals to that community, rather than the transportation by human migrants of familiar animals along with tools and household goods in order to reestablish their economic routine. Self-conscious efforts at

acclimatization also embodied assumptions and aspirations that were much more grandiose and self-confident: the notion that nature was vulnerable to human control and the desire to exercise that control by improving extant biota. In many ways acclimatization efforts seemed more like a continuation of a rather different activity, which also had ancient roots, although not quite as ancient: the keeping of exotic animals in game parks and private menageries (for the rich), and in public menageries and sideshows (for the poor). This practice similarly both reflected the wealth of human proprietors, and implicitly suggested a still greater source of power, the ability to categorize and re-categorize, since caged or confined creatures—even large dangerous ones like tigers or elephants or rhinoceroses—inevitably undermine the distinction between the domesticated and the wild.

The scale of these nineteenth-century enterprises was often paradoxical: they simultaneously displayed both hubristic grandeur in their aspirations and narrow focus and limited impact in their realizations. For example, the thirteenth Earl of Derby, whose estate at Knowsley, near Liverpool, housed the largest private collection of exotic wild animals in Britain, was one of the founders of the Zoological Society of London and served as its President from 1831 until he died in 1851. He bankrolled collecting expeditions to the remote corners of the world, and there were frequent exchanges of animals between his Knowsley menagerie and the Zoo at Regent's Park, as well as other public collections (Fisher and Jackson, 2002: 44-51). These exchanges were by no means unequal; indeed the

Earl's personal zoo was decidedly superior. At his death it covered more than 100 acres and included 318 species of birds (1272 individuals) and 94 species of mammals (345 individuals) (Fisher, 2002: 85-86). Among its denizens were bison, kangaroos, zebras, lemurs, numbats, and llamas, as well as many species of deer, antelope, and sheep. In addition to providing his animals with food, lodging, and expert veterinary attention (sometimes from the most distinguished human specialists), Derby had them immortalized by celebrated artists (including Edward Lear) when they were alive, and by expert taxidermists afterwards. But he made no plans for his menagerie, or even for any of the breeding groups it contained, to survive him. His heir, already an important politician and soon to be prime minister, had no interest in the animals and sold them at auction as soon as possible.

Late in the century, the eleventh Duke of Bedford, also a long-serving President of the Zoological Society of London (1899-1936), established a menagerie at Woburn Abbey, his Bedfordshire estate. By this time, the rationale for accumulating such a vast private collection of living animals had evolved. The Woburn park contained only ungulates (and a few other grazers, like kangaroos and wallabies): its residents included various deer, goats, cattle, gazelles, antelope, tapirs, giraffes, sheep, zebras, llamas, and asses. A summary census printed in 1905 made it clear that, unlike his distinguished predecessor, the Duke collected with a view to acclimatization. "Only those animals believed to be hardy" were selected for trial, and animals that were not "good specimens," either

because of their savage dispositions or because their constitutions were not well adapted to the environment of an English park, did not survive long (No author, 1905).

That is to say, he collected with a view to the future, hoping that his park would serve as a waystation for species that might find new homes in Britain, whether in stockyards or on public or private display. In several cases, Woburn Abbey in fact provided a refuge--or even the last refuge--for remnant populations. Before the Boxer Rebellion, the Duke secured a small herd of Père David's deer, a species otherwise exclusively maintained in the imperial parks of China (and so already extinct in the wild). An original herd of 18 had grown to 67 by 1913 (Chalmers Mitchell, 1913: 79). Since their Chinese relatives fell victim to political turmoil, all the current members of the species descend from the Woburn herd. He also nurtured the Przewalski's horse—a rare wild relative of domesticated horses and ponies, discovered (at least by European science) only in the late nineteenth century, when it was on the verge of extinction (R L, 1901: 103).

The Duke's emphasis on preservation also echoed a shift that was to become increasingly evident in the rhetoric of zoological gardens in the course of the twentieth century. As zoogoers will have noticed, preservation, both of individual animals and of threatened species, has loomed increasingly large in their publicity, although, of course, intention is often one thing, and results are another. Less predictive of the evolution of zoo policies was the Duke's

emphasis on acclimatization. His menageries contained mostly ungulates because those are the animals that people like to eat. Although there have been occasional deviations, such as the scandal that engulfed the Atlanta Zoo in 1984, when it emerged that “a city worker was making rabbit stew and other dishes out of the surplus small animals he had bought from the zoo's children's exhibit,”<sup>4</sup> on the whole modern zoos have taken care not to suggest that their charges, or the offspring of their charges, will end their days on someone's plate.

But this distinction—between natural history and agriculture, to put it one way—seemed less important in the early days of public zoos. Indeed, it hardly existed. On the contrary, the first goal mentioned in the “Prospectus” of the Zoological Society of London was to introduce new varieties of animals for “domestication or for stocking our farm-yards, woods, pleasure grounds and wastes” (Bastin, 1970: 385). To this end, along with the menagerie at Regent's Park, the young society established a breeding farm at Kingston Hill, not far to the west of London. It lasted only a few years, as the market for the stud services of zebus and zebras turned out to be small. But the notion that the zoo could supplement or enhance the British diet persisted, at least in some particularly active imaginations. Frank Buckland, an eccentric and omnivorous naturalist, successfully requested permission to cook and eat the remains of the zoo's deceased residents. Among the species he (and his unfortunate dinner guests) sampled were elephant, giraffe, and panther (that is, leopard) (Ritvo, 1987: 237-241).

Naturalists like Buckland, along with wealthy owners of private menageries, founded the Society for the Acclimatisation of Animals, Birds, Fishes, Insects and Vegetables within the United Kingdom in 1860. They were following in the footsteps of French colleagues, who had founded the Société Zoologique d'Acclimatation in 1854. But their proximate inspiration was zoological dinner held at a London tavern in 1859, at which the gathered naturalists and menagerists enjoyed the haunch of an eland descended from the Earl of Derby's herd at Knowsley Park. The declared objects of the society were grandiose and diffuse: to introduce, acclimatize, and domesticate "all innocuous animals, birds, fishes, insects, and vegetables, whether useful or ornamental"; to perfect, propagate and hybridize these introductions; to spread "indigenous animals, &c" within the United Kingdom; to procure "animals &c., from British Colonies and foreign countries"; and to transmit "animals, &c. from England to her colonies and foreign parts." If all these objects had been achieved the result would have been a completely homogenized globe, at least with respect to the flora and the fauna. In fact, of course, none of them came close to realization. Despite Buckland's ambitious wish list, which included beavers and kangaroos, along with the more predictable bovids and cervids, most society members confined their attention to a scattering of birds and sheep, none of which made much impact on the resident plants and animals, whether wild or domesticated. The Society itself survived only through 1866, when it enrolled only 270 members, of which 90 were life members who had therefore lost the power of expressing disaffection; it

was then absorbed by the Ornithological Society of London. (Lever, 1977: 29-35, Ritvo, 1987: 239, see also Lever, 1992)

The French society was larger (2600 members in 1860, including a scattering of foreign dignitaries), longer lasting, and more firmly grounded, both in Paris where it controlled its own Jardin d'Acclimatation and within a network of colonial societies (Osborne, 2000: 143-5, Anderson, 1992: 143-4). It kept elaborate records, which could be consulted by any landowner wishing to diversify his livestock. But, like those in Britain, French acclimatization efforts never had a significant local economic effect, nor did they transform the landscape. Instead they made life a little more curious and entertaining. By the end of the century, the generalization that “animal acclimatisation in Europe is now mainly sentimental or is carried out in the interests of sport or the picturesque” applied in France as well as Britain, where, according to a commentator in the *Quarterly Review*, aficionados of the exotic could savor “the pleasure of watching [the] unfamiliar forms [of Japanese apes and American prairie dogs, as well as gazelles and zebras] amid the familiar scenery.” (No author, 1900: 199-201)

The main economic impact of French acclimatization efforts was in such warmer colonial locations as Algeria. And although the British society lacked official or quasi-official support (at least with regard to animals—Kew Gardens was at the center of a network concerned with the empire-wide distribution of plants that might produce economic benefits), the Anglophone acclimatization movement

also had great (although not necessarily similar) impact outside the home islands. Acclimatization societies quickly sprang up throughout Australia and New Zealand, where members embraced a weightier mission than the one undertaken by Frank Buckland or the Duke of Bedford. They felt that new kinds of animals were not needed merely for aesthetic or culinary diversification; they were needed to repair the defects of the indigenous faunas, which lacked the “serviceable animals” found so abundantly in England, including, among others, the deer, the partridge, the rook, the hare, and the sparrow. The heavy medals struck in 1868 by the Acclimatization Society of Victoria give a sense of the seriousness with which they approached this endeavor. One side featured a wreath of imported plants, surrounding the society's name, the other a group portrait of a hare, a swan, a goat, and an alpaca, among other desirable exotic animals.<sup>5</sup>

Their passion was rooted in a perception of dearth. Acclimatizers complained that while nature had provided other temperate lands with “a great profusion...of ruminants good for food, not one single creature of the kind inhabits Australia!” They were not discouraged when immigrant rabbits and sparrows began to despoil gardens and fields, merely suggesting the hair of the dog as remedy: it might be advisable to “introduce the mongoose to war against the rabbits.” They continued to urge “the acclimatization of every good thing the world contains” until “the country teemed with animals introduced from other countries.”<sup>6</sup>



As was often the case, ordinary domesticated animals were not of primary concern to the most enthusiastic and visionary acclimatizers, although in many places cattle and sheep were more influential than rabbits or rats or sparrows in converting alien landscapes into homelike ones. But, in Australia as in Texas and Arizona, extraordinary domesticated animals could fall into another category. Similar problems—vast trackless deserts that nevertheless required to be traversed by people and their equipment—suggested similar solutions. A few immigrant camels arrived in Australia in 1840, but the ship of the desert was not integrated into the economic life of the colony (or colonies) for several decades. (See Rangan and Kull, 2009) In the 1860s, just as the Civil War deflected official interest from the American camels, their Australian conspecifics were beginning to flourish, their manifest utility outweighing the perception of some who used them, that they could be spiteful, sulky, and insubordinate (Winnecke, 1884: 1-5). They even received appreciative notice in the imperial metropolis: by 1878 *Nature* reported approvingly that they worked well when yoked in pairs like oxen, and that they remained very useful in exploring expeditions, although most labored in the service of ordinary commercial purposes (No author, 1878: 337). They also carried materials for major infrastructure projects that brought piped water and the telegraph to the dry interior. A camel breeding stud was established in 1866; overall, in addition to homegrown animals, approximately ten to twelve thousand camels were imported for draft and for riding during the subsequent half century.<sup>7</sup> Their

importance continued until the 1920s, when they were supplanted by cars and trucks—the same fate that had already befallen horses in Europe and elsewhere.

Suddenly, what had seemed an unusually successful adventure in acclimatization took on a different cast. As in the American southwest, once the camels lost their utility, they became completely superfluous. A camel-sized pet is an expensive luxury, and there was no significant circus or zoo market for animals that had long ceased to be exotic. So some were shot and others were set free to roam by kinder hearted owners. At this point the Australian story diverged from the American one once again. Camels had lived in Australia for at least as long as many of its human inhabitants (that is, the ones with European roots) in terms of years, and in terms of generations, they had lived there longer. They were well adapted to the harsh terrain, where they foraged and reproduced, rather than dwindling and dying. As of 2009, according to the Australian Government, their feral descendants numbered close to one million—by far the largest herd of free-living camels in the world; a year later the *Meat Trade News Daily* estimated the camel population at 1.2 million.<sup>8</sup> They competed for resources with other animals, wild and domesticated, and it was feared that they were disrupting fragile desert ecosystems. Like some of the elephant populations of south and southeast Asia, they were occasionally reported to terrorize small towns. After helping to build the nation, they had, it was asserted, “outstayed their welcome.”<sup>9</sup> At least until recently, culling did not keep up with new births; and the market for camel meat that had arisen in the 1980s made

even less of a dent. Unsurprisingly, in a pattern that had also emerged with regard to feral horses, burros, and pigs in North America, as officials contemplated more drastic methods that would quickly reduce the population by two-thirds, human resistance also emerged, whether based on regard for the welfare of individual camels, the hope the camels could be converted dead or alive into a profit center (meat or tourism), or the fear that large scale eradication would require the violation of property rights.<sup>10</sup>

The acclimatization agenda in New Zealand was somewhat different with regard to its objects, but at least equally enthusiastic and even more persistent. Since the topography and climate of New Zealand differ greatly from those of Australia, and so camels were never at the top of the list of targets for introduction. But acclimatizers in both places shared the desire to convert their new homelands into the most plausible simulacra of their old ones as possible. In the initial burst of enthusiasm, as elsewhere, animal introductions were scattershot—anything that appealed to individual acclimatizers. But soon the focus shifted to the recreation half a world away of the staples of British outdoor sport: deer, game birds like pheasants and grouse, and game fish like trout and salmon. Some of these thrived, with a transformative effect on the local fauna, and others languished. The ubiquitous local societies attempted to protect them by eliminating indigenous predators. In 1906, for example, the Wellington Acclimatization Society was taking measures to combat “the shag menace to trout.”<sup>11</sup> In the course of the twentieth century new perspectives on this practice

emerged and enthusiasm for acclimatization diminished--although not everywhere. The plaque on an imposing monument to trout acclimatization reads "This centennial plaque was presented to the Auckland Acclimatisation Society to convey the gratitude of past, present, and future generations of trout anglers in New Zealand for the society's successful importation of Californian rainbow trout ova in 1883. Its hatching of the eggs in the the Auckland Domain Pond and its subsequent distribution of the fish and their progeny to many New Zealand waters."<sup>12</sup> In 1990 the local societies were abolished; that is to say, they were converted into fish and game councils.<sup>13</sup>

These examples demonstrate that utility, like many other things, is a matter of perspective. Because frivolous (or worse) as they may seem from a contemporary vantage point, the instigators of all these acclimatization attempts understood themselves to be acting in the public interest, and not just for their own idiosyncratic satisfaction. Perhaps the most poignant demonstration of this is another well-known American saga, that of the introduction of the starling. The starting point was also New York City, the scene of the excessively successful sparrow release. In 1871 the American Acclimatization Society was founded to provide a formal institutional base for such attempts. It is widely reported, although occasionally doubted, that is moving spirit, a prosperous pharmacist named Eugene Schieffelin wished to introduce to the United States all the birds named in Shakespeare. One reason for doubt is simply quantitative—according to a little book called *The Birds of Shakespeare*, which was published in 1916,

that tally would include well over fifty species, not all of them native to Britain (Geikie, 1916). But nevertheless this notion is persistent--thus a recent article on this topic in *Scientific American* was headlined “Shakespeare to Blame for Introduction of European Starlings to U.S.”(Mirsky, 2008) Less controversially this attempt—which also turned out to be excessively successful—was part of what the Department of Agriculture retrospectively characterized as “the many attempts to add to our bird fauna the attractive and familiar [and “useful”] song birds of Europe” (Phillips, 1928: 48-49). The report of the 1877 annual meeting of the American Acclimatization Society, at which the starling release was triumphantly announced, also approvingly noted more or less successful releases of English skylarks, pheasants, chaffinches, and blackbirds, and looked forward to the introduction of English titmice and robins, as well as additional chaffinches, blackbirds, and skylarks—all characterized as “birds which were useful to the farmer and contributed to the beauty of the groves and fields” (No author, 1877: 2).

[Insert figure 2.2 here]

Figure 2.2 Starlings.

Source: Richard Lydekker, ed. *The Royal Natural History* (London: Frederick Warne, 1894–5) vol III, p. 345. Copy in possession of the author.

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The acclimatization project has often been interpreted as a somewhat naïve and crude expression of the motives that underlay nineteenth-century imperialism—intellectual and scientific, as well as political and military—more generally. This

understanding is compelling, but not necessarily comprehensive. There is, for one thing, a significant difference between the imposition of the European biota on the rest of the world, and the transfer of exotic animals and plants to the homeland (whether inherited or adopted). And for another, the enterprise of acclimatization is much more likely to demonstrate the limitations of human control of nature than the reverse—whether the targets of acclimatization shrivel and die, or whether they reproduce with unanticipated enthusiasm. Already in the nineteenth century, introduction of exotic plants and animals could be seen as a kind of Pandora’s box, at least when they were imported into Europe or heavily Europeanized colonies or excolonies. For example, to return to eastern North America, the Society for the Protection of Native Plants (now the New England Wild Flower Society) was founded in 1900, in order to “conserve and promote the region’s native plants.”<sup>14</sup> It was the first such organization in the United States, but in the intervening century societies with similar goals have been established across the continent. The commitment to preserve native flora and fauna from the encroachment of aliens marked a turn, conscious or otherwise, from offense to defense—perhaps in the American context, to be read in conjunction with the Chinese Exclusion Act of 1882 or the more comprehensive Immigration Act of 1924. And of course the American context was not the only relevant one, in the nineteenth century or later; elsewhere the defense of the native would become still more strenuous.

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<sup>1</sup> A shorter version of this chapter was originally published as "Going Forth and Multiplying: Animal Acclimatization and Invasion" in *Environmental History* 17 (2012), 404-14.

<sup>2</sup> Bulliet gives a definitive account of the integration of camel transport into the economies and societies of the Middle East and North Africa.

<sup>3</sup> Chuck Woodbury, "U.S. Camel Corps remembered in Quartzsite, Arizona," *Out West* (2003). <http://www.outwestnewspaper.com/camels.html> Accessed March 27, 2011.

<sup>4</sup> William E. Schmidt, "Civic Leaders Planning Reforms for Atlanta Zoo." *New York Times* (August 28, 1984). <http://www.nytimes.com/1984/08/28/us/civic-leaders-planning-reforms-for-atlanta-zoo.html?scp=1&sq=atlanta%20zoo%20%20rabbit%20sale&st=cse> Accessed March 29, 2011.

<sup>5</sup> For an image of the medal see: <http://museumvictoria.com.au/collections/items/76618/medal-acclimatization-society-of-victoria-bronze-australia-1868>

<sup>6</sup> Acclimatisation Society of Victoria, *First Annual Report* (1862), 8, 39 and *Sixth Annual Report* (1868), 29-30; South Australian Zoological and Acclimatization Society, *Seventh Annual Report* (1885), 7; Acclimatisation Society of Victoria, *Third Annual Report* (1864), 30 and *Fifth Annual Report* (1867), 25.



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<sup>7</sup> "Camels Australia Export." <http://www.camelsaust.com.au/history.htm>  
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<sup>8</sup> "Australia--The worlds largest camel population," Meat Trade News Daily 5 September 2010.  
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<sup>9</sup> "A Million Camels Plague Australia," National Geographic News (October 26, 2009).

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<sup>10</sup> "Feral Camels in Western Australia," Department of Environment and Conservation, Western Australia. <http://www.dec.wa.gov.au/content/view/3224/1968/>

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<sup>11</sup> "The Press" Christchurch for 23 February 1906. Reproduced in "Acclimatisation Societies in New Zealand."

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<sup>12</sup> <http://www.tongarirorivermotel.co.nz/trout-fishing/history-of-taupo-fishery/>

<sup>13</sup> Conservation Law Reform Act 1990 031 Legislation NZ.

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<sup>14</sup> New England Wild Flower Society website.

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