

Brian Seasholes

*The Endangered Species Act at 40: Species Profiles*

# ALEUTIAN CANADA GOOSE



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# **ALEUTIAN CANADA GOOSE**

***(BRANTA CANADENSIS LEUCOPAREIA)***

## **Range**

**Historic:** Nesting range (much of Alaska’s Aleutian Islands, islands of Russia’s Far East and northern Japan); Wintering Range (the coastal and inland wetland regions of Washington, Oregon, and California).

**When listed:** Nesting range (Buldir Island in the Aleutians); Wintering Range (California and perhaps Oregon)

**When downlisted in 1990:** Nesting range (Buldir, Agattu, Niski-Alaid, Little Kiska, Amukta, Chagulak, and Kiliktagik Islands in the Aleutians); Wintering Range (California, and a small portion of Oregon)

**When delisted in 2001:** Nesting range (Buldir, Agattu, Niski-Alaid, Rat Islands, Chagulak, Kiliktagik, Anowik in the Aleutians, and Ekarma Island in Russia); Wintering Range (California, a small portion of Oregon, and northern Japan)

**Listed status:** Endangered [35 FR 16047-16048] 10/13/70, and carried over to the ESA in 1973.

**Current status:** Recovered [66 FR 15643-15656] 3/20/01.

**Status change prior to delisting:** Threatened [55 FR 51106-51112] 12/12/90.

## **Official reasons for listing:**

1. Predation by introduced arctic foxes to nesting grounds in Aleutian Islands
2. Declines during migration and on wintering grounds in OR and northern CA due to hunting and habitat loss from agriculture and general development.

**Recovery criteria:** There are a number of criteria that have changed over the years, as the recovery went through three versions.<sup>1</sup>

## **Population:**

**Historic**—Unknown, although their breeding range stretched from near Kodiak Island in the east to the Kuril Islands of Japan in the west

**When listed**—Approximately 200-300 individuals

**When downlisted to threatened in 1990**—6,200 individuals

**When delisted in 2001**—37,107 individuals.

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<sup>1</sup> A. **1979 Recovery Plan**—Delisting and downlisting criteria: 1) Maintain population at 1977 level, 1,160 individuals, or greater; 2) Reestablish self-sustaining populations of at least 50 breeding pairs on each of on three former breeding areas from which foxes have been eradicated (U.S. Fish and Wildlife Service 1979o, pp.4-6).  
B. **1982 Recovery Plan**—Delisting and downlisting criteria: 1) Maintain population of at least 1,200 individuals; 2) Reestablish self-sustaining populations of at least 50 breeding pairs on each of three former breeding areas from which foxes have been eradicated. (U.S. Fish and Wildlife Service 1982a, p.6)  
C. **1991 Recovery Plan**—Delisting criteria: 1) At least 7,500 individuals and a positive population trend; 2) Reestablish self-sustaining populations of at least 50 breeding pairs on each of three former breeding areas from which foxes have been eradicated (western Aleutians other than Buldir Island, central Aleutians, and the Semidi Islands) for three or more consecutive years (U.S. Fish and Wildlife Service 1991a, p.22).

## **CLAIMS THAT THE ALEUTIAN CANADA GOOSE IS AN ESA SUCCESS STORY**

- 1) “Thanks in large part to Endangered Species Act protection, Aleutian Canada goose populations have skyrocketed.”—FWS<sup>2</sup>
- 2) “Today the Aleutian Canada goose is being delisted, a rare success story, but one that shows that partnerships can work”—Gail Norton, then Interior Secretary<sup>3</sup>
- 3) “Humans nearly drove the Aleutian Canada goose to extinction, and humans, through the Endangered Species Act, saved this magnificent bird. The proposal to delist the goose represents a great victory and demonstrates yet again that through conservation and recovery efforts, we can bring threatened and endangered species back to healthy levels.”—Bruce Babbitt, then Interior Secretary, on the proposed delisting of the goose<sup>4</sup>
- 4) The Aleutian Canada goose is one of a number of species that “has been saved from near extinction by the Endangered Species Act.”—American Rivers, Center for Biological Diversity, Defenders of Wildlife, Earthjustice, Endangered Species Coalition, Forest Guardians, Natural Resources Defense Council, National Wildlife Federation, and U.S. PIRG<sup>5</sup>
- 5) “The full recovery of the Aleutian Canada Goose is a model of management and a testament to the effectiveness of the Endangered Species Act.”—National Audubon Society<sup>6</sup>
- 6) “We’ve got a group of species that would almost certainly be extinct by now if it weren’t for the protection of the Endangered Species Act...And all of them show increasing populations, they’re on the rebound. In fact, we have a total of about forty-four members of the class of ’67 that are now either recovered, well on the road to recovery or at stable populations because of the Endangered Species Act”—David Wilcove, then with Environmental Defense Fund, currently Princeton University, talking about members of the first cohort of species, listed in 1967 under the ESA’s predecessor, the Endangered Species Preservation Act of 1966, and then carried over to the ESA of

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<sup>2</sup> Hoffman 1999b.

<sup>3</sup> Lazaroff 2001.

<sup>4</sup> U.S. Fish and Wildlife Service 1999f.

<sup>5</sup> American Rivers et al., 2003d.

<sup>6</sup> National Audubon Society ND, *Endangered Species Act Success Stories*.

1973, one of which is the Aleutian Canada goose.<sup>7</sup>

7) There are a number of other such claims of success.<sup>8</sup>

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<sup>7</sup> National Public Radio 1993.

<sup>8</sup> “ESA Success Story” (FWS) “Reclassified to threatened - A major effort was undertaken to protect wintering flocks from hunting and to preserve roosting and feeding habitat in Oregon and California. The...population increased from fewer than 800 birds in 1975 to approximately 7,500 today. Consequently, the bird was downlisted from endangered to threatened in 1990.” (U.S. Fish and Wildlife Service 1995a, p.3); “‘Downlisted’ from Endangered to Threatened due to successful recovery efforts”—(Wilcove et al., 1993, p.5); “The law [ESA] has been responsible for bringing the...Aleutian Canada goose back from the brink of extinction.”- George Frampton, then Assistant Secretary of Interior for Fish and Wildlife and Parks (Frampton 1995.); “The list of species making a strong comeback due to protection of the Endangered Species Act is impressive...Other species increasing in number or seeing threats to their survival reduced include the...Aleutian Canada goose.”—Defenders of Wildlife (Defenders of Wildlife 1992, p.7.)

# CONSERVATION OF THE ALEUTIAN

## CANADA GOOSE

Even though the Aleutian Canada goose is one of the few delisted species to have benefited substantially from the Endangered Species Act, almost all the ESA-related conservation measures that helped the goose could have been accomplished under laws other than the Act. Furthermore, state and especially private conservation efforts were critically important to the goose. In addition, ESA proponents' most valued conservation tool under the Act—land use control through the ESA's "harm" by habitat modification rule—had little if anything to do with the goose's rebound.

The Aleutian Canada goose is one of the smallest subspecies of Canada goose, weighing between four and six pounds, which makes it slightly larger than a mallard duck. The goose, as with many subspecies and races of Canada geese, had its taxonomy redefined in 2004. The American Ornithologists' Union, the scientific body that decides issues about bird taxonomy, renamed the Aleutian Canada goose (*Branta Canadensis leucopareia*) as the Aleutian cackling goose (*Branta hutchinsii leucopareia*). Therefore in 2004 the goose became a subspecies of the cackling goose. What are now called cackling geese include subspecies of what had been thought of as the "small" Canada geese because of their diminutive body size. Canada geese, on the other hand, are composed of those subspecies that tend to be larger than cackling geese.<sup>9</sup>

Despite that this occurred in 2004, the term Aleutian Canada goose will be used in this profile because for the duration of the subspecies' tenure under the ESA it was known as the Aleutian Canada goose. Furthermore, even though events occurring after the taxonomic change will be discussed in this profile, for the sake of clarity the name Aleutian Canada goose or Aleutian goose will be used.

The story of the conservation of the Aleutian Canada goose is broadly similar that of the black-footed ferret, a member of the weasel family native to the Great Plains. Both were feared extinct, but fortunately both were rediscovered, which galvanized conservation efforts for them.

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<sup>9</sup> Banks et al., 2003.

From 1938-1962 the goose was feared extinct, as it was not seen during this time period on its breeding grounds in the Aleutian Islands. The primary cause of the goose's decline was the arctic fox, and to a lesser extent the red fox, which Russian and American fur traders introduced to the Aleutians Islands in the hope that commercially viable populations would become established. While the foxes did form self-sustaining populations, they unfortunately had a devastating impact on native birds, which, because the Aleutians have no trees, are forced to nest on the ground, in rock crevices and cliffs. Geese were easy pickings for foxes, especially when they were rendered flightless during their summer molt.

But in 1962 something remarkable and wonderful happened. The manager of the National Wildlife Refuge that encompassed most of the Aleutians found a remnant population of Aleutian Canada goose on Buldir Island in the western part of the archipelago. Fur traders never introduced foxes to Buldir because the island's rocky coast and rough surf were so formidable. In 1963 the FWS estimated the population on Buldir contained 200-300 individuals. Over the subsequent decades, the goose staged a remarkable comeback almost exclusively from this small nucleus of birds.

The Aleutian Canada goose has a special status under the ESA because it is a member of the cohort of seventy-eight species initially listed in 1967 under the Act's first predecessor, the Endangered Species Preservation Act of 1966. When Congress passed the ESA, the FWS carried over most of these seventy-eight species to the Act.

The story of the Aleutian Canada goose's rebound is one of the more complex of the delisted species and involves fourteen topics; hunting restrictions, fox eradication, nesting habitat, wintering habitat, politics of winter habitat conservation, land use controls, translocations, natural population expansion, bald eagle predation, data error, making recovery goals more difficult, misrepresenting the goose's conservation, belated delisting, and the politics of delisting.

## **HUNTING RESTRICTIONS**

The paramount cause of the Aleutian Canada goose's resurgence was hunting restrictions for Canada geese in Alaska, Washington, Oregon and California. The reason for this is much the same as the reason why the DDT ban was the paramount reason for the resurgence of the bald

eagle, two sub-species of peregrine falcon, and two sub-species of brown pelican. As with the DDT ban, hunting restrictions for the Aleutian Canada goose were first implemented when the goose's population was at or near its nadir. Once hunting restrictions allowed the population to increase and get some "breathing room," then other conservation efforts could be effective. But, as with the DDT ban, if no hunting restrictions has been implemented, it is very likely the goose's population would have remained very small and perhaps declined to the point of extinction. The FWS initially recognized the paramount importance of hunting restrictions, but when delisting occurred in 2001 the agency minimized the importance of hunting restrictions in an effort to give the ESA undue credit.

According to the FWS, the most significant boost to the Aleutian Canada goose from the time of its listing under the ESA until downlisting, from endangered to the less-imperiled status of threatened, in 1990 was hunting closures. This was the most critical time of the goose's tenure under the ESA because small populations, whether they are geese or other species of wildlife, are much more vulnerable to chance events, such as disease and severe weather, than large populations of wildlife. Following hunting restrictions, as the Aleutian goose population gradually increased, it became more secure. "Of the many strategies implemented in an effort to restore Aleutian Canada Geese to a non-endangered status (Byrd and Springer 1976, Springer *et al.* 1978, U.S. Fish and Wildlife Service 1982), the most successful to date has been hunting closures imposed on the wintering grounds in California and Oregon," stated Edgar Bailey and John Trapp, two FWS biologists who worked on goose conservation. "As a result of these closures the population has increased more than fourfold, from about 790 birds in 1975 to 3,500 birds in 1982."<sup>10</sup> Another FWS biologist concurred. "Foremost among the many factors responsible for the [goose's] positive population trend is complete protection from hunting in the migration and wintering grounds," said the FWS's Michael Amaral in 1985.<sup>11</sup> The FWS reiterated this point when it downlisted the goose in 1990. "While fox control efforts in Alaska made former breeding habitat once again suitable for nesting geese, hunting closures on key

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<sup>10</sup> Bailey and Trapp 1984.

<sup>11</sup> Amaral 1985.

wintering areas in California and Oregon are primarily responsible for Aleutian Canada goose increases, from 790 birds in 1975 to about 6,000 in fall 1989.<sup>12</sup>

The FWS put the first hunting closures into effect in 1973, and the closures encompassed all of the Aleutian Islands, which included the goose's known nesting grounds.<sup>13</sup> In 1975, the FWS shifted its attention to the goose's wintering grounds in California when the agency closed extensive portions of California to all Canada goose hunting: the three most northern coastal counties, Del Norte, Humboldt and Mendocino; a region around Colusa, north of Sacramento; and a region along the San Joaquin River Valley south of Modesto.<sup>14</sup> The reason the FWS closed all Canada goose hunting is that it can be difficult for hunters to distinguish different types of Canada geese when they are flying. In 1975, due to the hunting closures, the goose's population was about 1,000 and apparently increasing but still vulnerable if it were to be struck by a chance event like disease.

Also in 1975 the FWS gave itself the authority to close without prior notification regions of the country to bird hunting in order to conserve endangered species. This new authority was primarily intended for the whooping crane, which migrates from the Gulf Coast of Texas, across the Great Plains to the Northwest Territory of Canada. Aleutian Canada goose conservation was a secondary consideration.<sup>15</sup> In 1982 the FWS closed portions of Cook, Curry and Tillamook counties in Oregon to all Canada goose hunting, which was done in part to benefit was in part for the benefit of the Semidi Islands population of Aleutian geese (i.e., the small remnant of 100 or so birds on Kiliktagik Island discovered in 1979).<sup>16</sup>

As the Aleutian Canada goose population increased, the FWS targeted hunting closures specifically for it. In 1984 the FWS closed the entire Pacific Flyway, meaning Alaska, Washington, Oregon and California, to hunting of the Aleutian Canada goose and the cackling Canada goose, another subspecies that can easily be mistaken for the Aleutian because they are very similar in size and appearance. The FWS lifted the cackling goose closure in 1994, but the

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<sup>12</sup> U.S. Fish and Wildlife Service 1990d, p.51506.

<sup>13</sup> U.S. Fish and Wildlife Service 2001i, p.15644.

<sup>14</sup> U.S. Fish and Wildlife Service 1975f; U.S. Fish and Wildlife Service 2001i, p.15644.

<sup>15</sup> U.S. Fish and Wildlife Service 1975h

<sup>16</sup> U.S. Fish and Wildlife Service 1990d, p.51109.



closure for the Aleutian goose remained in effect because the goose was still listed under the ESA.<sup>17</sup> While it might appear the hunting closures were a major hardship for hunters, this was not the case at least in California. As of the late 1990s, hunting closures had relatively little impact on California hunters because they take primarily “white” geese (snow and Ross’) and ducks, not Canada geese.<sup>18</sup>

### **FWS BACKTRACKING**

Even though the FWS acknowledges the paramount importance of hunting closures in the earlier years of the Aleutian Canada goose tenure under the ESA, when the agency delisted the goose in 2001 it downplayed the significance of hunting restrictions in an attempt to give the Act undeserved credit. “The birds began to increase after recovery actions were put into place, particularly re-establishing geese populations on islands where they formerly nested,” stated the FWS. “By the winter of 1989-90, the birds reached a peak winter count of 6,300 individuals, and the U.S. Fish and Wildlife Service reclassified the goose as threatened.”<sup>19</sup> This is simply not true, as reestablishing geese on islands other than Buldir was of less importance than hunting closures. The agency also stated:

“Initial population increases of Aleutian Canada geese were likely in response to hunting closures in California and Oregon to protect the geese during migration and during winter. However, a substantial increase in numbers was dependent on reestablishing geese on former nesting islands...As new breeding colonies became established in the Aleutian Islands, the number of Aleutian Canada geese increased rapidly. Annual rates of increase between 1975 and 1989 ranged from 6 to 35 percent, and by winter 1989-1990, the peak winter count reached 6,300 geese. We reclassified the Aleutian Canada goose from endangered to threatened in 1990.”<sup>20</sup>

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<sup>17</sup> Pacific Flyway Council 1999.

<sup>18</sup> Yparraguire 1998.

<sup>19</sup> U.S. Fish and Wildlife Service 2001c.

<sup>20</sup> U.S. Fish and Wildlife Service 2001i, p.15644.

While the first sentence of this statement is accurate, the subsequent ones are not, especially the implication that reintroduction of geese to islands from which foxes were eradicated accounted for much of the 800% population increase (from 790 birds in 1975 to 6,300 in 1989).

### **NESTING DATA**

The validity of the FWS's statement above about significance reestablishing breeding colonies can be assessed by looking at population data for Aleutian Canada geese on their nesting grounds in the Alaska, especially the percentages of geese on the various islands. A few caveats, however, are important to keep in mind about the goose's population numbers, especially because the FWS's above statement is confusing because it mixes data on breeding and wintering populations. In 1989, as in any other year for that matter, the total number of individual breeding geese (2,818) was substantially lower than the number of wintering geese (6,300) for several reasons, one of which is that the number of breeding geese only takes into account adult breeding pairs, while the number of wintering geese consists of breeding pairs in addition to non-breeding juveniles. Given optimal conditions, geese can be prolific breeders, and the Aleutian goose is no exception. So the seemingly disproportionate number of geese arriving on the wintering grounds was partially the result of the breeding pairs successfully raising large families. The FWS appointed recovery team estimated that 40% of the population in the Aleutians consisted of breeding pairs. This would mean that in 1989 there were 7,045 total geese on the breeding grounds in Alaska. Not all of these geese made it to the wintering grounds in California and Oregon due to mortality on the breeding grounds and during migration.

The data in Table 1 belie the FWS's implication that at the time of downlisting in 1990 geese reintroduced to "new breeding colonies" (i.e., islands other than the three islands on which they existed prior to reintroductions—Buldir, Chagulak and Kiliktagik) constituted a significant portion of the population. In 1990, the population of geese on these three islands constituted 95.4% of the Aleutian Canada goose's population (data from 1989 is used because it is the only island-by-island data contained in the FWS's final downlisting rule).

**TABLE 1**

| <b>Island</b> | <b>Number of Breeding Pairs in 1989</b> | <b>% of Total Population</b> |
|---------------|---|------------------------------|
| Buldir        | 1,300                                   | 92.3%                        |
| Agattu        | 55                                      | 3.9%                         |
| Niski-Alaid   | 7                                       | 0.55%                        |
| Little Kiska  | 2                                       | 0.10%                        |
| Amukta        | 1                                       | 0.05%                        |
| Chagulak      | 23                                      | 1.6%                         |
| Kiliktagik    | 21                                      | 1.5%                         |
| <b>TOTAL</b>  | <b>1,409</b>                            | <b>100.00%</b>               |

Table derived from data in; U.S. Fish and Wildlife Service 1990d, p.51107.

Furthermore, as Table 2 illustrates, at the time of delisting in 2001 (nesting data from 1995 was the last year prior to delisting for which data were available) the vast majority of the population, 87%, continued to nest on Buldir. The percentage of the population on islands to which the FWS reintroduced them continued to be relatively insignificant (12.0%).

**TABLE 2**

| <b>Island or Island group</b> | <b>Number of Breeding Pairs in 1995</b> | <b>% of Total Population</b> |
|-------------------------------|---|------------------------------|
| Buldir                        | 3,500                                   | 87.2%                        |
| Agattu                        | 350                                     | 8.7%                         |
| Nizki-Alaid                   | 124                                     | 3.1%                         |
| Rat Islands                   | 5                                       | 0.10%                        |
| Chagulak                      | 20                                      | 0.50%                        |
| Kiliktagik                    | 14                                      | 0.35%                        |
| Anowik                        | 3                                       | 0.05%                        |
| <b>TOTAL</b>                  | <b>4,016</b>                            | <b>100.00%</b>               |

Table derived from data in: U.S. Fish and Wildlife Service 2001i, pp.15645-15646.

These data make clear that hunting restrictions were the most significant conservation measure because of the marked increase in the Buldir population after hunting closures went into effect. Another way to grasp the importance of hunting closures is that if closures were not such a significant factor, then the Buldir population should not have increased much more than the estimated 200-300 geese when it was rediscovered in 1963. Clearly, this is not the case, and this was apparent even in the mid-1970s. The first time an accurate count of the goose's population

occurred was in 1975 when the FWS counted 790 geese in Crescent City, California in the spring as they prepared to depart for their nesting grounds on Buldir Island.<sup>21</sup> 1975 was also right around when hunting closures went into effect.

By comparing the population growth rates before hunting closures (1963-1975) and after closures (1976-2000), it should be possible to get a rough sense of the effect of hunting closures. In order for the 1963 population of 250 geese to grow to 750 by 1975, the population would have had to grow at 10.0% annually. This growth rate, however, is very likely inaccurate because the FWS conducted the 1963 count at the nesting grounds on Buldir Island while the agency took the 1975 count at the wintering grounds where the population would have been at its peak because it consisted of adults as well as juveniles. As for the post-hunting closures population, between 1976 and 2000, the population grew at an average rate of 17.0%. The difference between the two time periods, pre and post-hunting closures, is a striking; a 70% higher population growth rate after closures took effect. While there are no doubt many variables that influenced the population growth rates, the most significant one had to have been hunting closures because other conservation measures either were not significant enough during these two time periods (fox eradication and reintroduction of geese to fox free islands), or had not changed markedly during the goose's tenure under the ESA (winter habitat conservation).

In addition, if fox eradication on other Aleutian Islands was so important, then when delisting occurred in 2001 Buldir Island would not have continued to contain such an overwhelming percentage of the goose's entire population. Given that no fox eradication occurred on Buldir, because fur traders never introduced foxes to the island, the marked increase of the goose population on Buldir must have been due to one or both of the two other factors responsible for the goose's increase; hunting restrictions and habitat conservation. The most probable reason is hunting restrictions because, as will be discussed below in the section titled "Wintering Habitat," during the goose's tenure under the ESA the amount and quality of wintering habitat likely did not increase sufficiently to give the population such a remarkable boost.

The question then turns to why the FWS exaggerated the significance of reestablishing geese on islands other than Buldir while at the same time downplaying the importance of hunting restrictions. There are several likely reasons. First, the FWS spent enormous amounts of time

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<sup>21</sup> U.S. Fish and Wildlife Service 2001i, p.15643.

and money removing foxes from a number of islands, and the agency seems to have wanted to highlight this. Second, hunting closures could have been accomplished without the ESA through the federal Migratory Bird Treaty Act, which diminishes the importance of the Act to the goose's conservation. This fact has not gone unnoticed by ESA proponents. The goose "is now being protected by hunting restrictions under the U.S. Migratory Bird Treaty Act (1918)," observed Holly Doremus, law professor at the University of California-Davis, and Joel Pagel, Ph.D. candidate in ecology at U.C.-Davis and U.S. Forest Service employee.<sup>22</sup>

Third, when the FWS delisted the goose in 2001 Gail Norton was Interior Secretary, and a major focus of her tenure was the promotion of "partnerships" as a solution to conservation problems. Norton wanted to cast the goose's delisting as the result of such a partnership. "Norton has made what she calls the Four C's the cornerstone of her tenure: Communication, Consultation, and Cooperation, all in the service of Conservation," according to the Interior Department.<sup>23</sup> In 2001 Norton held a press conference at which she cast the goose's resurgence as a victory for cooperative conservation. "The recovery of the Aleutian Canada goose sets an example for the future of endangered species recovery," she stated. "By working with private landowners, acquiring land and implementing conservation actions, the Service has enabled the protection of thousands of acres of habitat crucial to the recovery of the Aleutian Canada goose, while maintaining the flexibility landowners need to manage their property."<sup>24</sup> Yet hunting closures are not, by their very nature, partnerships; they are government edicts. Even though federal edicts did not fit well into Norton's partnerships paradigm, she overlooked this and labeled them as such.

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<sup>22</sup> Doremus and Pagel 2001, p.1265.

<sup>23</sup> U.S. Department of the Interior ND, *Gail A. Norton*.

<sup>24</sup> U.S. Fish and Wildlife Service 2001f.

## **FOX ERADICATION**

Eradication of foxes from various Aleutian Islands from which fur traders did not introduce them was, following hunting closures, the next most significant conservation effort for the Aleutian Canada goose. Fox eradication could have been accomplished much more quickly and cost effectively had it not been for opposition from environmental pressure groups, most notably Defenders of Wildlife, to the use of predacides (i.e., chemicals toxic to predators) to eradicate foxes. Instead, the FWS had to use much more costly and labor intensive methods, such as trapping, to eradicate foxes, and this slowed eradication efforts considerably. In addition, a significant amount of fox eradication occurred prior to the ESA's passage.

Fur traders introduced foxes to most of the Aleutian Islands starting in the mid-1700s, but primarily from 1915 to 1936, in hopes of establishing commercially viable populations. Traders introduced mostly Arctic foxes, because they had a valuable pelt, but also some red foxes. Once introduced, the foxes flourished because they had a rich source of food; birds. Almost all birds on the Aleutian Islands do not nest in trees because almost all of the islands are devoid of trees. As a result, these ground and cliff nesting birds made easy pickings for the foxes. Species like the goose, which are known as surface nesters because they nest on the ground, were especially hard hit, as opposed to rock and crevice nesters like auklets, a small species of seabird, or burrow nesters like puffins.

The effect of foxes was not, however, limited to birds but impacted the entire ecosystems on islands to which they were introduced. Staff at the National Wildlife Refuge that encompasses the goose's nesting grounds noticed a marked difference between islands with and without foxes. Islands without foxes had dramatically more lush vegetation, primarily grasses and other grass-like plants, than islands with foxes. The reason for this was that without many birds, islands with foxes no longer were fertilized by bird guano, or droppings. Research on the relationship between foxes, birds and vegetation has become one of the classic examples of how a non-native predator can fundamentally alter an ecosystem.<sup>25</sup>

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<sup>25</sup> Croll et al., 2005; Maron et al., 2006.

As for the goose, “[t]he principal cause of the decline of the Aleutian Canada goose was predation by Arctic fox,” according to the FWS.<sup>26</sup> Foxes had such a devastating impact that the goose was not seen from 1938-1962 and feared extinct. Fortunately, in 1962 the manager of the National Wildlife Refuge found a remnant population of some 200-300 geese on Buldir, a small isolated island in the western-most portion of the Aleutians. Fur traders never introduced foxes to the 5,000-acre island because its rocky coastline made landing boats extremely difficult and hazardous.

With the discovery of the remnant population on Buldir, the FWS was elated but also fearful because the concentration of almost all the birds on one island left them vulnerable to a catastrophic event such as disease or bad weather on their nesting grounds, during migration and on their wintering grounds. “The concern is that we’ve got all our eggs in one basket, if you’ll pardon the expression,” said Denis Money, then the FWS endangered species coordinator for Alaska.<sup>27</sup>

Due to this, conservation efforts for the Aleutian Canada goose quickly turned to fox eradication so goose populations could be established on other islands. The goose’s imperiled status was, “the primary objective for eliminating foxes in the Aleutians,” according to Edgar Bailey, longtime FWS employee at the Alaska Maritime National Wildlife Refuge, and one of the people involved with fox eradication efforts.<sup>28</sup> In addition, fox eradication was the major focus of conservation efforts on the Aleutians Islands because of the devastating impact foxes had on the islands flora and fauna. Fox eradication efforts started prior to the ESA’s passage and continued afterwards. Eradication that occurred prior to the ESA’s passage is for the most part not mentioned by those claiming the goose as an ESA success story because, obviously, the Act cannot take credit for what occurred prior to its passage.

In 1949, the FWS began fox eradication efforts when the agency tried to eradicate foxes from Amchitka, the 73,024-acre island in the western Aleutians on which the U.S. conducted three underground nuclear tests between 1965 and 1971. From the mid-1950s to 1960 the FWS distributed across the island tens of thousands of strychnine pellets placed within seal blubber as

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<sup>26</sup> U.S. Fish and Wildlife Service 1999o.

<sup>27</sup> Foster 1985a.

<sup>28</sup> Bailey 1993, p.41.

well as 130 fish, seal and bird carcasses laced with compound 1080. Both these chemicals, but especially 1080, are highly toxic to canids, or the dog family, which includes foxes. By 1960 Amchitka was finally free of foxes.

Eradication efforts continued in 1964, when the FWS spread 50,000 baits (i.e., balls of tallow laced with 1080) by aircraft over Kiska, an 80,062-acre island in the western Aleutians. Unfortunately, the FWS did not spread baits a second time, and as a result the fox population was not totally destroyed 1986 when the agency spread by aircraft and by hand 49,000 baits laced with 1080. After the FWS trapped one fox in 1988, no foxes have been seen since.<sup>29</sup> However, when delisting occurred in 2001, the FWS had not conclusively verified Kiska as fox free.<sup>30</sup>

In 1964 the FWS initiated fox eradication efforts on 55,535-acre Agattu Island, the next-to-last of the western-most islands in the archipelago, when it distributed by aircraft 50,000 baits laced with 1080. Additional poisoning with 1080 and strychnine in 1967 and 1968 appeared to have rendered the island fox free, but subsequent surveys found a few remnant foxes. Unfortunately, by the time the surveys detected the foxes, the federal Environmental Protection Agency had banned the use of 1080 and strychnine as predacides. So the FWS was forced to use much more expensive and labor intensive methods, such as trapping and shooting. The FWS did not eradicate foxes on Agattu until 1979 through the use of hunting with dogs, leg hold traps and M-44 ejectors, devices that spray a lethal dose of sodium cyanine into the mouth of a canid when it tries to bite the bait attached to the injector.<sup>31</sup> The FWS petitioned the Environmental Protection Agency for approval of M-44s on Agattu, and the EPA gave permission for use in 1977 and 1978.<sup>32</sup> The use of M-44s was the key to eliminating the last few foxes on Agattu that were too wary to be killed by hunting or traps.

Poisons were also the key to eradicating foxes from other islands. In 1963, the FWS used 1080 on Kasatochi Island, which, at 717-acres, was relatively small. Eradication was not fully achieved until follow-up shooting and trapping occurred in 1984 and 1985. In 1969, the agency

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<sup>29</sup> Bailey 1993, p.41.

<sup>30</sup> U.S. Fish and Wildlife Service 2001i.

<sup>31</sup> Bailey 1993, p.41.

<sup>32</sup> U.S. Fish and Wildlife Service 1979o, p.5.



used 1080 and strychnine on Nizki Island (approx. 1,500-acres) in the western Aleutians. The effort was successful until 1970 when a sand spit formed that connected Nizki to Alaid, an adjacent island. The newly-formed sand spit permitted foxes from Alaid to invade previously fox-free Nizki. In 1976, the FWS used a combination of M-44s and traps to eradicate foxes from both these islands. In 1983 the FWS eliminated foxes on Amukta, a 12,355 island in the central part of the Aleutians, through the use of M-44s and leg hold traps. By 1989 the agency declared the island fox free. In 1984 FWS eradication efforts to be successful on 6,870-acre Rat Island, which is roughly midway between Amchitka and Kiska in the western Aleutians, through the use of traps, M-44s, snares. Surveys in 1985 and 1989 did not find any foxes.<sup>33</sup>

### **PRESSURE GROUPS GET PREDACIDES BANNED**

The salient point about strychnine, M-44 sodium cyanide ejectors and especially compound 1080 is that they are extremely effective predacides, both in terms of their potency and cost effectiveness. This is particularly true for 1080, which is particularly toxic to canids, including arctic and red foxes. However, due to lobbying from environmental pressure groups, Defenders of Wildlife in particular, President Nixon issued Executive Order 11643 in 1972 which banned the use of predacides, including 1080, strychnine and sodium cyanide, on federal lands or by federal agencies.<sup>34</sup> The day after the Executive Order, the EPA cancelled of all permitted uses of these predacides on federal lands or their use by federal agencies.<sup>35</sup>

Many environmental pressure groups strongly opposed the use of predacides, especially 1080, because of the widespread application of these chemicals in the western U.S. as a means of killing livestock predators, especially coyotes. Not only did the coyotes suffer, but a wide range of “non-target” species, such as eagles, including endangered bald eagles, crows, and badgers, were also killed as a result of ingesting baits laced with predacides or carcasses of animals killed by predacides. Opposition to predacides stemmed from a combination of concerns about animal

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<sup>33</sup> Bailey 1993, p.41.

<sup>34</sup> Executive Order 11643, 1972.

<sup>35</sup> Executive Order 11643, 1972.

rights (the suffering of the individual animals that died) and wildlife conservation (threats posed to wildlife populations).

No organization better embodied these two concerns than Defenders of Wildlife. In the early 1970s Defenders still had strong ties to its animal rights and animals welfare roots from the days of its founding in 1947 as an organization dedicated to opposing the use of leghold traps and other poisons to kill coyotes and other predators. By the early 1970s, Defenders was also an advocate for wildlife conservation, but it was not until the late 1980s and early 1990s that Defenders shed its animal rights and animal welfare past to pursue a path more dedicated to wildlife conservation. Opposition to 1080 also had a geographical dimension. Groups opposed to 1080, and their financial supporters, were almost exclusively in the urbanized areas of the lower 48 states. The beneficial use of 1080 and M-44s on remote Aleutian Islands was of little concern, or likely even ignored, because opponents to these chemicals branded them as an unalloyed evil. Bans are not achieved with subtlety and ambiguity, even if an entire ecosystem, such as the Aleutian Islands, would suffer.

With the banning of strychnine and especially 1080, and the restriction on the use of M-44 sodium cyanide ejectors, FWS efforts to eradicate foxes on the Aleutian Islands were severely hobbled. “The best means of eliminating foxes from islands [is] Compound 1080 laced bait,” stated the FWS’s Edgar Bailey.<sup>36</sup> After the restriction on the use of predacides, the FWS had to resort to leg-hold traps and shooting foxes, methods that cost much more than predacides. “[T]rapping is very time consuming, labor intensive, and unsuitable for very large islands,” according to Bailey. “Also, without M-44s or some other backup, eliminating the last few trap-shy foxes is exceedingly difficult, if not impossible.”<sup>37</sup> From 1995-1999 the FWS was able to use M-44s on the Aleutian Islands under an apparent exception to the ban.<sup>38</sup>

Despite the clear-cut advantages of using predacides, especially 1080, to conserve the Aleutian Canada goose and restore the Aleutian Islands’ ecosystems, pressure groups, led by Defenders of Wildlife, refused to budge from their opposition to the use of 1080 for goose conservation in the Aleutian Islands. However, in April 1983, due to a petition by the FWS, the

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<sup>36</sup> Bailey 1993, p.41.

<sup>37</sup> Bailey 1993, p.42.

<sup>38</sup> Rozell 2005.

Environmental Protection Agency granted the FWS an “emergency exemption” to use a maximum of 50,000 baits laced with 1080 on Amukta and Kiska Islands between May 1983 and April 1984.<sup>39</sup> Apparently, the FWS did not carry out the experimental use of 1080 by April 1984 deadline. In April 1985 the FWS applied to the ESA for a two-year Emergency Use Permit to use 1080 baits on Kiska, which the EPA granted in November. The FWS was keen to eliminate the approximately 700 foxes from the 70,400-acre Kiska because its close proximity to Buldir (about 75 miles to the southeast) made it the logical choice if geese—beside the small remnant populations on Chagulak in the central Aleutians and Kiliktagik south of the Alaska Peninsula—were to expand their range naturally.<sup>40</sup> The mid-1980s also seemed a good time to the FWS to think about range expansion because even though the goose’s population had increased substantially, almost the entire population of 4,000 birds nested on Buldir.

The FWS was eager to use 1080 on Kiska because the predacide had proved so effective on other islands. “Generally speaking, compound 1080 has been used to protect introduced animals, namely livestock, from native predators,” observed the FWS’s Dennis Money. “Our goal here is to protect native birds from introduced predators. We’re trying to preserve natural ecosystems rather than maintain an artificial one.”<sup>41</sup> As with other Aleutian Islands, there was little threat of 1080 poisoning non-target species on Kiska because there were simply so few non-target species. Some feared that bald eagles or ravens would feed on fox carcasses and ingest lethal doses of 1080. But, according to Dennis Money, this was not of significant concern in the case of Kiska. None of the meat eating bird species that could be poisoned were imperiled or uncommon in the Aleutians, and even in the event that bald eagles or ravens were poisoned, they would readily repopulate Kiska from adjacent islands that had large and healthy populations of these birds.<sup>42</sup>

The potential use of 1080 in 1985 on Kiska exposed some interesting fissures between environmental pressure groups. Not surprisingly, Defenders of Wildlife was adamantly opposed. Due to the goose’s population increase on Buldir, the establishment of a small population of 50

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<sup>39</sup> Wade 1986.

<sup>40</sup> Foster 1985a.

<sup>41</sup> Foster 1985a.

<sup>42</sup> Foster 1985a.

geese on Agattu, and the discovery of the remnant population on Kiliktagik Island, “it would seem that any radical program is unnecessary at this time,” according to Susan Hagood of Defenders. “If the geese were teetering on the brink of extinction, it might be another matter.”<sup>43</sup> It is ironic that this was Defenders’ standard for the use of 1080 because if the goose were teetering on the brink of extinction then it might well be too late for 1080 to do any good. To rally support against 1080 on Kiska, Defenders sent out a fundraising letter stating 1080 was “too toxic for its use ever to be justified.”<sup>44</sup>

Instead of using 1080, Defenders suggested that native Aleut trappers be brought in to kill the foxes. But trying to get trappers on the island with the incentive of free pelts “is not economically feasible,” according to FWS spokesman, George Sura. “That is like going after free cattle.”<sup>45</sup> Sura’s comment was in reference to FWS efforts to offer free cattle to anyone who would remove them from some of the Aleutian Islands because the introduced cattle were destroying native vegetation. Aleuts took some of the cattle, but the FWS had to shoot most of the cattle because capturing them on remote islands was uneconomical. Manual labor to eradicate foxes was similarly problematic. “An island as big as Kiska would take ten years using guns and snares” to eliminate foxes, according to Fred Zeillemaker, then manager of the Aleutian Islands unit of the Alaska Maritime National Wildlife Refuge.<sup>46</sup> On an island the size of Kiska, use of guns and snares would likely have cost well in excess of \$1,000,000 while 1080 would have cost \$100,000 to \$250,000.<sup>47</sup> Defenders of Wildlife’s stance against the use of 1080 on the Aleutian Islands is ironic given that the group is one of the ESA’s staunchest supporters and has used the goose as a means to promote the Act. Defenders’ stance was doubly ironic because the group, like many pressure groups, tried to claim the conservation of ecosystems under the ESA was a goal on par with, or perhaps even superseding, species conservation. While this view is fundamentally incorrect, as pointed out in the first section of this book, it is ironic that Defenders

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<sup>43</sup> Foster 1985a.

<sup>44</sup> Foster 1985a.

<sup>45</sup> Berliner 1986.

<sup>46</sup> Associated Press 1986.

<sup>47</sup> Foster 1985a.

would not enthusiastically endorse the use of 1080 to restore the goose and the Aleutian Islands' ecosystems.

The National Audubon Society took a different view on the use of 1080 than Defenders of Wildlife. Unlike Defenders, Audubon was primarily dedicated to wildlife conservation, and so was much less encumbered by animal rights considerations than Defenders. When the FWS announced its plan to use 1080 Audubon was skeptical but gave guarded support. "Only as a last resort," should 1080 be used, warned Dave Cline of Audubon's Alaska office.<sup>48</sup>

With EPA approval in hand in November 1985, the FWS started planning to spread 1080 laced baits on Kiska in the spring of 1986.<sup>49</sup> Just prior to when the FWS spread the 1080 laced baits in late March 1986, Audubon was more enthusiastic about the experiment. "I'm now convinced that the agency is doing everything it can to use the poison judiciously, based on the best available scientific knowledge," said Cline.<sup>50</sup> "We do support the project and the main reason is because the Aleutian Canada goose is an endangered species...and the introduced species is affecting it," said Bard Johnson of Audubon's Alaska chapter.<sup>51</sup> After the application of 50,000 pellets laced with 1080, the FWS began to survey Kiska in order to gather the fox carcasses, to try to detect if any foxes were still alive, and to search for any poisoned non-target species.<sup>52</sup> Initially, three gulls were the only non-target species poisoned. "[T]here gulls are essentially inconsequential in terms of the gull populations on the island," stated Dave Cline of Audubon.<sup>53</sup> In addition, one raven was killed, but no dead bald eagles were found. The experiment was a resounding success. By 1987, the FWS tentatively declared Kiska fox free.<sup>54</sup>

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<sup>48</sup> Foster 1985a.

<sup>49</sup> Foster 1985b.

<sup>50</sup> Foster 1986a.

<sup>51</sup> Berliner 1986.

<sup>52</sup> The FWS spread approximately 50,000 pellets of beef tallow and wax mixed with 1080. The foxes readily took the pellets and were almost totally destroyed (Associated Press 1986).

<sup>53</sup> Foster 1986b.

<sup>54</sup> New York Times 1987.

“We are cautiously declaring Kiska fox free, we think we got them all,” said the FWS’s Michael Amaral.<sup>55</sup> Since then, Kiska appears to have stayed fox free.

### **FWS RETICENCE**

Unfortunately, after the success on Kiska the EPA never permitted further use of 1080 for fox eradication so the highly successful use of the predicide on many of the Aleutian Islands, including Kiska, could not be replicated. Consequently, the FWS was forced to undertake highly labor intensive and expensive fox eradication efforts by trapping and shooting only on the relatively small Aleutian islands because fox eradication on larger islands would be exceedingly difficult, if not essentially impossible.<sup>56</sup> Ironically, after the eradication effort on Kiska, the FWS learned that the island was not good habitat for the Aleutian Canada goose because in the years following eradication the agency found only two goose nests.<sup>57</sup> Thanks in large part to the intransigence of groups like Defenders of Wildlife, by the early 1990s, less than 15% of the goose’s historic breeding habitat was free of foxes.<sup>58</sup>

According to recovery team leader, Vernon Byrd, a biologist with the FWS’s Alaska Maritime National Wildlife Refuge, 1080 is clearly the best fox eradication tool available. But getting it re-labeled (i.e., re-permitted) by the EPA would cost a minimum of \$700,000-\$800,000. This was money he simply did not have in his budget. Even if money were spent on re-labeling, there is no assurance that the EPA would approve the use of 1080. These reasons essentially precluded the recovery team from using 1080.<sup>59</sup>

It is interesting that the FWS did not spend the necessary funds, and likely fight the EPA, so that 1080 could be put to use—albeit carefully and under strict controls—to eradicate foxes from Aleutian Islands. With their considerable resources and influence, the FWS and Interior Department might well have been able to secure use of 1080. Had this occurred, it would have

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<sup>55</sup> New York Times 1987.

<sup>56</sup> Johnson 1995.

<sup>57</sup> Johnson 1995.

<sup>58</sup> Ehrlich et al., 1992, p.37.

<sup>59</sup> Byrd 1996.

benefitted not only the Aleutian Canada goose but a number of other bird species as well as the entire Aleutian Islands ecosystem. The FWS's unwillingness to try secure the use of 1080 is all the more curious given that the estimated cost of re-labeling 1080 is relatively small compared to the millions of dollars spent by the agency on other conservation measures for the goose, primarily translocating geese in the Aleutian Islands and purchasing land used for migration and wintering. The FWS's apparent refusal to fight for the use of 1080 was likely due to the agency's concern about political opposition from environmental pressure groups such as Defenders of Wildlife. This apparent unwillingness is an example of how politics can trump sound wildlife conservation, even for endangered species like the Aleutian Canada goose and beleaguered ecosystems like the Aleutian Islands.

### **FURTHER ERADICATION EFFORTS**

From the mid-1980s until 1999, when the FWS proposed to delist the goose, fox eradication continued. In the 1999 delisting proposal the FWS primarily mentioned eradication efforts on islands around Chagulak in the eastern Aleutians but also a few islands in the vicinity of Buldir in the west. The following is a list of the islands near Chagulak followed by the year the FWS initiated fox eradication and then that island's acreage: Amukta (1983), 12,425 ac.; Uliaga (1984), 2,321 ac.; Carlisle (1990), 10,718 ac.; Herbert (1993), 13,790 ac.; Yunaska (1993), 43,520 ac.; Kagamil (1994), 10,342 ac.; and Seguam (1996), 52,293 ac. During this time period the FWS did not undertake much fox eradication in the western Aleutians, in large part because so much eradication occurred prior to and soon after the ESA's passage. In 1999, the FWS eradicated foxes from Attu, the western-most Aleutian island, which, at 223,812-acres, has substantial amounts of potential goose nesting habitat. In addition, foxes appear to have died out naturally on Skagul, which is some 75 miles east of Amchitka, and is approximately 1,000-acres in size, as well as Little Kiska, a 1,920-acre island adjacent to the larger island of Kiska and which is some 90 miles southeast of Buldir.

When the FWS delisted the Aleutian Canada goose in 2001, the goose was known to breed on ten islands; Buldir, Agattu, Alaid and Nizki, Rat, Chagulak, Kiliktagik, Amchitka, Amukta, and Little Kiska. At the time of delisting, Amchitka, Amukta, and Little Kiska were known only to have breeding geese present, but the number of geese was unknown because

surveys had not been conducted. Hence, the geese breeding on these islands were not counted towards the total number of breeding pairs (see Table 2).

### **UNDUE CREDIT**

When delisting occurred, the FWS gave fox eradication primacy over hunting restrictions, but there are several factors that call the validity of this into question beside the fact that it was simply not true.

First, a good deal of fox eradication took place prior to the ESA's passage. The FWS eradicated foxes from Amchitka prior to the ESA's passage. Fox eradication efforts on Kiska, Kasatochi, and Nizki before the Act's passage substantially reduced fox populations on these islands. Also, foxes were either never introduced to, or died out on, Buldir, Little Kiska, Chagulak, Kiliktagik, and Skagul.

Second, at the time of delisting, the overwhelming percentage of the goose's population, 87.2%, lived on Buldir, on which, of course, fox eradication never occurred because fur traders never introduced foxes. At the time of delisting in 2001, the other islands on which fox eradication occurred and on which geese nested successfully harbored approximately 12% of the population.

Third, is the opinion of Edgar Bailey, the FWS biologist who spent several decades involved in fox eradication efforts. "Unequivocally, the removal of introduced foxes from islands is the most beneficial activity that the U.S. Fish and Wildlife Service can undertake for the restoration of island ecosystems in Alaska," stated Bailey. "However, inability to use toxicants and practically nonexistent funding for continued eradication of foxes seriously hamper efforts to restore biodiversity and former numbers of birds on additional islands."<sup>60</sup> And this inability was due in large part to pressure groups, especially Defenders of Wildlife.

It seems the FWS gave unwarranted emphasis to fox eradication over hunting restrictions in an effort to give the ESA credit. Fox eradication was a dramatic conservation effort that involved significant expenditures of funds and human effort. By contrast, hunting restrictions do not make as good a public relations vehicle; they are relatively easy to implement and lack the

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<sup>60</sup> Bailey 1993, p.42.



dramatic impact of fox eradication. So the FWS chose fox eradication as the better means to sell the goose as an ESA success story, even if doing so was misleading and inaccurate.

## **NESTING HABITAT**

Fox eradication efforts could have been undertaken without the ESA. This is because almost all the goose's nesting habitat has been protected since 1913 in what was the Aleutian Islands National Wildlife Refuge but after the FWS renamed it in 1980 is Alaska Maritime National Wildlife Refuge.<sup>61</sup> The primary purpose of all National Wildlife Refuges, including Alaska Maritime, is the conservation of indigenous flora and fauna. Therefore, given how destructive foxes were, and continue to be, to the indigenous plants and animals of the Aleutian Islands, it is very likely the FWS would have carried out fox eradication efforts independent of the goose's listing under the ESA. However, the goose's status under the ESA seems to have helped increase the rapidity of fox eradication. In this sense, the goose's status under the ESA is similar to the American peregrine falcon's because, while the ESA helped focus funding and speed-up conservation efforts, the Act was not necessary for conservation of these species to occur—in the case of the goose this applied primarily to nesting habitat while for the peregrine it applied more generally to all aspects of the sub-species' conservation.

## **WINTERING HABITAT**

Conservation of winter habitat in California, Oregon and Washington was the third most important conservation effort, after hunting restrictions and fox eradication, for the Aleutian Canada goose. What follows is a discussion of the composition and relative significance of the key parcels of wintering habitat for the goose.

The main point about wintering habitat is that when delisting occurred in 2001, private lands comprised the largest and most significant portion of the habitat. The primary wintering habitat was, and still is, in California, with important stop-over and staging sites in Oregon. “[M]ost of the habitat used by the geese on the migration and wintering areas has been

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<sup>61</sup> U.S. Fish and Wildlife Service. ND. Alaska Maritime National Wildlife Refuge.

maintained by private landowners who have tolerated and even actively promoted goose use of their lands,” according to the FWS.<sup>62</sup>

In California the geese primarily use private lands for roosting and feeding. Wetlands are used for roosting, and only 5% of the state’s historical wetland remains. Of this, 66% are privately owned and managed for waterfowl hunting.<sup>63</sup> “We owe a great deal to them [private hunting clubs] in terms of habitat preservation, and that’s something that most people don’t realize,” said Glenn Olson, regional vice president of Audubon. “The easy way to preserve wildlife is to preserve the habitat, and that is what hunters have done. Most clubs maintain wildlife habitats the year round, but their hunting season is only about 70 days, with short hours, and that adds to maybe 20 or 30 days out of 365 days each year, which means you have a wildlife sanctuary for 330 days of the year.”<sup>64</sup>

As for feeding habitat, the geese feed primarily on private agricultural fields, where they consume grass, waste grain, corn and emerging winter wheat.<sup>65</sup> Most of these agricultural fields exist because low-lying areas, much of which would be considered wetlands today, were cleared, diked and drained by early settlers.<sup>66</sup>

Despite that private landowners provided the bulk of the wintering habitat, and will continue to do so for the foreseeable future, the FWS almost invariably considers habitat as secure only if it is in public ownership or if it consists of private land under conservation easement with the FWS. As a result, when delisting occurred, the FWS considered only 7,488 acres of wintering habitat secure; 2,000 acres owned by local government, 2,505 by the FWS, 1,963 by the Gallo family of the wine fortune, 700 by the state of California, 300 by Curry County, Oregon, and 6 by Native Americans.<sup>67</sup> Yet these approximately 7,500 acres are only a small fraction of the habitat used by the geese. As the FWS acknowledged, the agency did not take into account 67,000 acres of private lands under federal conservation easements or 33,108

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<sup>62</sup> Byrd 1995.

<sup>63</sup> Heitmeyer, et al., 1989.

<sup>64</sup> DeWolfe 1997.

<sup>65</sup> U.S. Fish and Wildlife Service 2001i, p.15644.

<sup>66</sup> Springer and Lowe 1998, pp.430-431.

<sup>67</sup> U.S. Fish and Wildlife Service 2001i, p.15648.

acres in National Wildlife Refuges to the south of the primary wintering area that were increasingly being used by the geese. Additionally, there were tens of thousands of acres of private lands in Oregon and California that geese heavily utilized. Also, much of the remaining wetlands in California's Central Valley, the epicenter of the goose's wintering habitat, are likely to remain wetlands because the duck hunting clubs that own much of the wetlands will want to retain them as such. Also, federal and state environmental laws will make developing these wetlands exceedingly difficult.

The following discussion of wintering habitat is organized geographically and follows the routes the geese take—after their 2,000 mile non-stop journey from their nesting habitat in the Aleutian Islands—when they arrive in the lower 48 states in the fall, flying south, and then leave in the spring, flying north.

### **WASHINGTON and OREGON**

Habitat in Washington and Oregon for geese arriving in the fall from the Aleutian Islands is relatively less important than the fall and winter habitat in California. Approximately 150 or so geese from the Semidi Islands winter near Pacific City along Oregon's northern coast. The geese roost at night at Haystack Rock, which is part of the Oregon Islands National Wildlife Refuge.<sup>68</sup> In addition, the FWS acquired 457 acres, which became part of Nestucca Bay National Wildlife Refuge, a unit of the Oregon Islands Refuge, specifically for the Aleutian Canada goose.<sup>69</sup> As with almost all wintering habitat, the geese forage almost exclusively on private agricultural lands, in this case grass pastures at two dairies, and cause significant damage and loss of forage for which the private landowners are not compensated by the federal government.<sup>70</sup> Unfortunately, this situation is typical of how the FWS has conserved not only the Aleutian Canada goose but other species like the gray wolf in the Upper Midwest and Rocky Mountain regions.

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<sup>68</sup> U.S. Fish and Wildlife Service 2001i, p.15644.

<sup>69</sup> U.S. Fish and Wildlife Service. ND. National Wildlife Refuges Established for Endangered Species.

<sup>70</sup> U.S. Fish and Wildlife Service 2001i, p.15644.

**CRESCENT CITY, CALIFORNIA**

While a few geese stop in Washington and Oregon in the fall, more stop near Crescent City on California's northern coast near the border with Oregon. The geese feed primarily at private dairy farms where they find the grass pastures to their liking, and they roost primarily on Castle Rock National Wildlife Refuge, a 14 acre island off the coast. Castle Rock is one of three National Wildlife Refuges acquired in part, or in whole, for the Aleutian Canada goose.<sup>71</sup>

**COLUSA, CALIFORNIA**

Most geese do not stop at Crescent City but make first landfall around Colusa, California, which is some fifty miles north of Sacramento. The geese primarily feed on harvested fields of corn, beans, rice, as well as winter wheat on private farms and roost on local government land.<sup>72</sup> When the FWS delisted the goose, the agency claimed these geese utilized the 733 acre Butte Sink National Wildlife Refuge near Colusa.<sup>73</sup> Yet a search of Butte Sink refuge website found no mention of the Aleutian Canada goose, either as one of the endangered species that can be found on the refuge<sup>74</sup> or as one of the birds on the refuge checklist published in 1994.<sup>75</sup>

**MODESTO, CALIFORNIA**

After leaving Colusa, almost all the geese reach their final destination in the vicinity of Modesto, which is located in the California's Central Valley approximately 100 miles east of San Francisco. The two private landowners that own the majority of the roosting habitat, as well as some of the feeding habitat, manage their two properties for the geese in conjunction with cost sharing arrangements with the FWS.<sup>76</sup>

One of the properties, known as the Faith Ranch, is owned by Robert Gallo of the Gallo wine fortune. Beginning in 1992, the FWS paid him to plant approximately 40 acres in corn at

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<sup>71</sup> U.S. Fish and Wildlife Service. ND. National Wildlife Refuges Established for Endangered Species.

<sup>72</sup> U.S. Fish and Wildlife Service 2001i, p.15648; Springer and Lowe 1998, pp.427, 430-431

<sup>73</sup> U.S. Fish and Wildlife Service 2001i, p.15644.

<sup>74</sup> U.S. Fish and Wildlife Service. ND. Sacramento National Wildlife.

<sup>75</sup> U.S. Fish and Wildlife Service 1994i.

<sup>76</sup> Wallington 1998.

the cost of around \$15,000-\$20,000 annually. Mr. Gallo then matched the FWS's contribution and planted additional corn. The other property is owned by the Lyons family, a wealthy and politically powerful family, who have been selling much of it off, bit-by-bit, to FWS since 1986. As of 1995, FWS had bought approximately 2,300 acres from the Lyons family. Some of the land purchased by the FWS has had to be grazed in order to maintain the short grass favored by the geese. As part of the purchase agreement with the FWS, the Lyons family had right of first refusal for grazing, which they exercised. In some years, the FWS accepted in-kind services from the Lyons family, such as growing grain or providing water, in lieu of collecting grazing fees. At the time of delisting, approximately 90% of the entire Aleutian Canada goose population utilized these two properties for roosting habitat.

According to the FWS, 1,638 acres of the San Joaquin River National Wildlife Refuge, located some ten miles west of Modesto, is one of three National Wildlife Refuges—or in the case of San Joaquin, a portion of a refuge—acquired specifically for the geese.<sup>77</sup> The FWS acquired most of the acreage suitable for the geese in the San Joaquin River refuge from private landowners, primarily the Lyons family. Had it not been for the family's careful stewardship, the land may not have been suitable for the geese. The Lyons and Gallo properties played an absolutely crucial role in the goose's conservation. Prior to the goose's population explosion in the 1990s, these two ranches hosted 98% of the Aleutian Canada goose population. The ranch owners, "graciously allowed researchers access to their ranches for annual population monitoring, and closed their properties to hunting of small Canada geese," according to the FWS.<sup>78</sup>

In the years preceding delisting, as the population of the Aleutian goose exploded, geese periodically moved to the Grasslands Ecological Area, a 179,000-acre region some fifty miles south of the primary wintering habitat in Modesto. The region is primarily private land (approximately 70%), roughly one half of which is under conservation easements with the FWS.<sup>79</sup> Much of the private land in the Ecological Area is owned by private duck hunting

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<sup>77</sup> U.S. Fish and Wildlife Service. ND. National Wildlife Refuges Established for Endangered Species.

<sup>78</sup> U.S. Fish and Wildlife Service 2001g.

<sup>79</sup> U.S. Fish and Wildlife Service. ND. San Luis National Wildlife Refuge.

clubs.<sup>80</sup> Approximately 18% of the Grasslands Ecological Area is comprised of three National Wildlife Refuges,<sup>81</sup> and 12% is owned the state of California.

After spending several months in the Central Valley of California, the geese begin to migrate north in the later winter and early spring to their nesting grounds on the Aleutian Islands. Prior to making the 2,000 mile non-stop flight to the islands, the geese must feed voraciously to fatten up so they will have enough energy for the journey. They stop in two primary staging areas, Crescent City, California and Langlois, Oregon.

### **CRESCENT CITY, CALIFORNIA**

The primary staging area used by the geese prior to departing for the Aleutian Islands is Crescent City, California, which is located just south of the Oregon border. Most geese forage on grass at private dairy farms. At the time of delisting in 2001, the state of California had recently been managing 750 acres for the geese by fertilizing and grazing it to so as to promote the growth of the tender grasses the geese prefer. Even so, the overwhelming majority of geese foraged on grass and sprouting grain on private dairy farms.<sup>82</sup> The geese roost each night on Castle Rock, which is, as noted above, one of the three National Wildlife Refuges acquired for them.

### **LANGLOIS, OREGON**

As with wintering habitat in the Central Valley, the geese expanded the habitat used as they stage for the trip to the Aleutian Islands. One site saw increasing use and is around the town of Langlois, along the southern coast of Oregon. This is where 10,000-20,000 geese would gather about a week after leaving the Crescent City region. As in Crescent City, the geese found pastures on private farms an excellent source of food. Almost all the 2,200 acres of available foraging habitat was privately owned. The geese also used around 150 acres in the New River

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<sup>80</sup> U.S. Fish and Wildlife Service 2001i, p.15644.

<sup>81</sup> U.S. Fish and Wildlife Service 2001i, p.15647.

<sup>82</sup> U.S. Fish and Wildlife Service 2001i, p.15647.

Area of Critical Environmental Concern, which is managed by the Bureau of Land Management.<sup>83</sup>

### **FWS LAND ACQUISITION**

In response to the growing goose population, and the attendant problem of geese eating increasing quantities of farmers' crops and grass, the FWS opted for more acquisition of private land. In one sense this should not have been surprising. After all, the FWS behaved like any rational bureaucracy; it wanted to increase in size and one way of doing so was to acquire more land that will, in turn, require more personnel to manage it. But in another sense it was curious, given that arrangements short of acquisition—which would basically consist of paying farmers to raise forage for geese, much like what the agency had been doing in California—is both cheaper and had already proved successful with thousands of acres in California. If the FWS's goal was to conserve as much goose habitat as possible, then the most cost effective route to take would have been to enter into crop growing contracts with dairy farmers.

### **POLITICS OF WINTER HABITAT CONSERVATION**

The conservation of the goose on private lands provides an example of how politics influences endangered species conservation. The two aforementioned landowners in California are wealthy and politically well-connected. The Lyons family that owns the Mapes Ranch on which most of the geese roost, is a prominent California family. The owner of the ranch is Bill Lyons and one of his sons, Bill Lyons Jr., was California's Secretary of Food and Agriculture from 1999-November 2003. And the wealthy Gallo family, among the largest wine producers in the world, owns the Faith Ranch where geese feed on grain grown for them under contracts paid for by the FWS.

By contrast was the situation along the northern coast of California. As the goose population grew, it relied increasingly on pastures at private dairy and beef farms for food. The high protein vegetation, such as clover, cultivated at these farms was very attractive to the geese. The initial epicenter of goose depredation problems was the region around Crescent City,

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<sup>83</sup> U.S. Fish and Wildlife Service 2001i, p.15647.

California where more than 75% of the geese “stage,” or congregate, in the spring prior to flying northwest to their nesting grounds on the Aleutian Islands in Alaska.

The state of California exacerbated the problem of goose depredation. In 1979, the state acquired 10,000 acres near Crescent City that became the Lake Earl Wildlife Management Area and the Tolowa Dunes State Park. Upon purchase, the state no longer allowed local farmers to graze their cattle around the lake, and as a result the grass quality declined so that it was no longer palatable to the geese. The vegetation changed from protein rich and palatable to geese, to protein poor, unpalatable coarse grasses. Due to this, the rapidly growing population of Aleutian geese began looking elsewhere for the types of vegetation they required, and the best source were private farms along the Smith River north of Crescent City.<sup>84</sup>

In 1999, the Pacific Flyway Council, an interagency federal and state entity that manages migratory game birds, such as geese and ducks and that is overseen by the FWS, published its management plan for the Aleutian goose. The plan recommended the goose’s population be maintained at 40,000.<sup>85</sup> In 2005, the Council upped this to 60,000, but the exploding goose population soon rendered this obsolete.

When the FWS delisted the goose in 2001, the agency claimed it was actively involved in solving the goose depredation problem. “But because the burden upon these landowners is rapidly increasing due to the rapid growth of the Aleutian Canada goose population, it is incumbent upon us to continue efforts to secure additional public lands in this area,” stated the FWS. “Such efforts are under way.” The agency added:

“The Service in the Modesto area and the State of California in northwestern California are more actively managing their lands to attract geese away from private parcels. We, along with the State of California, also provide technical assistance to willing landowners to help them manage their lands for geese. Given the success of efforts by us, the State of California, and some private landowners to address crop depredation, and the size and growth rate of the Aleutian Canada goose population, we do not believe that the current

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<sup>84</sup> Mini and LeValley 2006.

<sup>85</sup> Pacific Flyway Council. 1999.



shortage of publicly held spring migration habitat in this area places this subspecies in danger of extinction now or in the foreseeable future.”<sup>86</sup>

These claims by the FWS, however, are highly inaccurate because it was the state of California that bore the burden of working with farmers along the state’s northern coast. Due to the growing problem of goose depredation, in 1997 the FWS estimated 400 acres needed to be managed to lure geese away from the dairy farms.<sup>87</sup> In response, the California Department of Fish and Game supplied 100 acres adjacent to Lake Earl and 300 more acres at another location in Del Norte County, which is the county in which Crescent City is located. The California Department of Parks and Recreation also gave Blake Alexandre, a local dairy farmer, a two year grazing lease on 230 acres near the Smith River. Local farmers partnered with the Department of Parks and Recreation to improve these lands and produce grass palatable to Aleutian geese through fertilization, seeding and livestock grazing.<sup>88</sup> In 1997, under an agreement with the state of California, Blake Alexandre also began managing 500 acres in the Lake Earl Wildlife Area for Aleutian geese by cultivating the types of grass the geese prefer. “But now it’s not enough land,” Blake said in 2000, the same year the president of the Del Norte County Farm Bureau estimated the geese were costing farmers \$225,000-\$250,000 a year in lost forage and the labor necessary to haze the geese off their fields. The dimensions of this problem was considerable, as each day thirty-five geese consume the rough equivalent of one cow, and when delisting occurred the population of geese was over 37,107, or the equivalent of 1,060 cows.<sup>89</sup>

Blake Alexandre’s concerns were well founded because the goose’s population growth rate of 17% meant that during and after the delisting process, the population began to become enormous. The population grew from 55,000 in 2002, to nearly 70,000 by 2004, and over 100,000 by 2007. The costs imposed on farmers by the exploding goose population were considerable. By 2004, it was estimated that geese in Del Norte County cost farmers \$250,000-

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<sup>86</sup> U.S. Fish and Wildlife Service 2001i, p.15647.

<sup>87</sup> Mini and LeValley 2006, p. I-2.

<sup>88</sup> Mini and LeValley 2006, p. I-3.

<sup>89</sup> Brazil 2000.

\$300,000 annually in lost forage and costs associated with hazing.<sup>90</sup> On a typical farm hazing costs \$15,000 per month; \$10,000 per to hire two to three people and pay for equipment, and \$5,000 for non-lethal “cracker” shotgun shells.<sup>91</sup>

The farmer that felt the brunt of goose depredation is Blake Alexandre. From 1997-2004 geese cost him an average of \$40,000 annually in lost grass and costs associated with hazing geese. Surprisingly, Blake had a compassionate view of the situation. “It is part of my responsibility as a large landowner to take care of our wildlife, so we are doing our share,” he said. “There were a lot of years where we did a lot more than our share and that was frustrating, but I understand that the government is not that darn responsible so we the people have to step up and do it.”<sup>92</sup> Due to the increasing problem of goose depredation, and the unwillingness of the FWS and other public agencies to step up to the plate to do something about the problem, much less provide compensation, in 2000 farmers in Del Norte County took it upon themselves to begin the process of forming a Resource Conservation District, a state program to encourage best farming practices. The farmers also partnered with the California Coastal Conservancy to formulate a plan for compensating the farmers for grass lost to geese.<sup>93</sup>

Another part of Alexandre’s efforts in response to the growing goose depredation problem was to engage his fellow farmers in increasingly concerted hazing efforts. In the mid-to-late 1990s, as hazing around Crescent City intensified, small numbers of geese began to be seen some 65 miles to the south in the vicinity of Humboldt Bay, a trickle that would grow to a torrent.<sup>94</sup> By 2007, as the goose population topped 100,000, a dramatic shift had occurred, as some 80% of the population was using the Humboldt Bay area as their staging area before departing for the Aleutian Islands nesting grounds.<sup>95</sup>

As in the Crescent City area, geese around Humboldt use primarily private farms and pastures to feed because these areas have the protein rich vegetation they favor. The problem of

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<sup>90</sup> Souza 2004.

<sup>91</sup> Mini and Levalley 2006, p.VI-39.

<sup>92</sup> Souza 2004.

<sup>93</sup> Brazil 2000.

<sup>94</sup> Mini and Black 2009.

<sup>95</sup> Walters 2007.

goose depredation on private pastures is compounded not only by the massive and rapidly growing goose population but also because throughout the 2000s the geese began arriving earlier (late January) and staying later (mid-April) than they normally had been. As occurred around Crescent City, the growing number of geese imposed increasing costs on area farmers. By 2007, the geese ate an estimated \$240,000-\$400,000 of grass annually. Cattle ranchers Sandy and Fred Hanks lost about \$14,000 in forage to the geese in 2006. The geese, “like pastures that already have been grazed because the new shoots that come up in early spring are sweet and have the highest protein content,” noted Sandy. “So they key in on private pastures, not the ungrazed public lands.”<sup>96</sup>

In response to the growing problem of Aleutian geese eating grass on private pastures, two studies were undertaken in Del Norte and Humboldt Counties. The California Coastal Conservancy, a state agency, funded the study in Del Norte County. The study estimated that the 987 acres of existing state land could only support 8,040 geese, but 2,100-2,500 acres were needed to support a population of 20,000-25,000 geese.<sup>97</sup> In the region around Humboldt Bay, people started to look into how to lure geese away from private farms. One such example was a graduate student in biology at Humboldt State University who did his Master’s research on possible management techniques at Humboldt Bay National Wildlife Refuge that would enhance the quality of forage by fertilizing certain areas and seeding them with clover, a favorite goose food. Fertilized areas had 42% more goose grazing activity than unfertilized areas. The cost per hectare (or roughly 2.5 acres) was; \$89.24 for fertilizer, and \$38.44 for seeding with clover.<sup>98</sup>

As the Aleutian goose population grew, and in response to hazing from farmers around Crescent City, geese began to search for forage not only further south around Humboldt Bay but also further north in Oregon, especially private farms and ranches along the New River near the town of Langlois along the state’s southern coast. By 2005, tens-of-thousands of geese began using pastures around Langlois. Rick McKenzie, a rancher, estimates that between 1995 and 2005, lost forage and hazing efforts cost him \$200,000.<sup>99</sup> On Oregon’s northern coast where the

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<sup>96</sup> Martin 2007.

<sup>97</sup> Mini and LeValley 2006, p.III-23.

<sup>98</sup> Bachman 2008.

<sup>99</sup> Barnard 2005.

small population of 140 Aleutian geese that nest in the Semidi Islands winters, goose depredation was also a problem, although much less severe than elsewhere.

There is a relatively simple solution to the problem of Aleutian geese eating vegetation from private pastures and it comes from Great Britain where farmers are compensated for forage lost to the imperiled barnacle and white-fronted geese, which spend the winter along coast of Scotland and northern England. On the island of Islay, off the coast of Scotland, the government started a compensation program in 1992 for farmers suffering from barnacle and white-fronted geese grazing their pastures.<sup>100</sup> Farmers are paid based on the estimated number of geese on their lands, with payments of about \$21 per goose, for a total of about \$522,000 in 1997 to almost \$940,000 in 2002.<sup>101</sup> By 2005, the cost of the program increased to about \$944,000, with the vast majority going towards direct compensation but small amounts of funding went towards hazing and administration.<sup>102</sup> The program has been successful at conserving the geese, which nest in Greenland, because the populations—40,000 barnacle geese (70% of the population) and 9,400 white-fronted geese (50% of the population)—would likely be smaller were it not for landowners and grazers willingly providing land and forage for the geese.<sup>103</sup>

The other major wintering area for barnacle geese is Solway Firth, an estuary on the border of the western coast of Scotland and England. These barnacle geese nest in Svalbard, the group of islands in the high Arctic Circle that belong to Norway. In 1949 these geese were, like the Aleutian goose, in dire straits, with a population of 300. By 2005 the population had increased to 25,000. When the population was small, wintering geese in Solway utilized public lands for grazing, but as the population grew increasing numbers of geese began using private pastures and this created conflict. In response, Scottish Natural Heritage, the Scottish arm of the British fish and wildlife agency, began in 1994 to incorporate two reserves belonging to private organizations, along with lands adjacent to the reserves, into a compensation scheme to provide grazing lands for the geese.<sup>104</sup> Since then the program has grown and its total costs are about

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<sup>100</sup> National Goose Management Review Group 2005.

<sup>101</sup> Macmillan and Leader-Williams 2008.

<sup>102</sup> National Goose Management Review Group 2005.

<sup>103</sup> National Goose Management Review Group 2005.

<sup>104</sup> Cope et al., 2005.

\$216,000 per year. The program was successful at increasing the goose population, and a major reason for this is the provision of land by local landowners.<sup>105</sup>

Even though the British solution to goose grazing points the way towards a less conflict ridden and ultimately more successful approach for Aleutian goose management, the FWS and state wildlife agencies have not done so. Instead, their focus has been to acquire land for the goose. This is puzzling because land acquisition is much more expensive than compensation, more time consuming, and potentially more subject to conflict because the lands acquired are usually privately owned.

The most troubling example of land acquisition for the Aleutian goose involves the FWS's purchase of 80 acres from The Nature Conservancy for inclusion in the Nestucca Bay National Wildlife Refuge. As with vast majority of land the Conservancy purchases, it is sold to public agencies, predominantly the federal government. In some cases, such as Nestucca Bay, the Nature Conservancy purchased the land with sole intent of selling it back to the FWS because the Conservancy, with its hundreds of millions of dollars of cash, can purchase land very quickly. By contrast, the FWS and federal and state agencies cannot do so because they must go through the time consuming and cumbersome appropriations process. So The Nature Conservancy and the federal government have formed a relationship whereby the Conservancy will purchase land with the prior assurance from the federal government that they will purchase the land from the Conservancy. This arrangement is troubling because it appears The Nature Conservancy is less a private non-profit organization that it is a quasi-public land acquisition arm of the federal government. The extent of this relationship is staggering.

As of 1999, The Nature Conservancy claimed it had protected 10.5 million acres, which gave the impression that this land was owned by the Conservancy because the organization claims to be a non-controversial outfit that steers wide of conflict and lobbying by protecting land the old fashioned way; purchasing it. However, in its glossy literature the Conservancy omits one crucial piece of information. The vast majority of land it has acquired has been sold to government, mostly the federal government. Of the 10.5 million acres "protected," the

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<sup>105</sup> National Goose Management Review Group 2005.

Conservancy owned only 1.177 million acres, while the rest, 9.323 million acres or 89%, was sold to various forms of government, most apparently to the federal government.<sup>106</sup>

This same situation occurred in Nestucca Bay. In 2009 the FWS announced that the Nestucca Bay National Wildlife Refuge, located along the northern Oregon coast, was going to receive \$800,000 to acquire 80 acres for the Semidi Island Aleutian geese population. The FWS was acquiring the land from The Nature Conservancy, which purchased it from a private landowner for the express purpose of selling it to the FWS. “This property was a top national priority for addition to the refuge because its habitats are so critical for fish and wildlife,” said Russell Hoeflich, head of The Nature Conservancy in Oregon. “We congratulate the Fish and Wildlife Service for this refuge expansion and thank them for doing an excellent job of protecting the incredible natural diversity of the Oregon coast for future generations.”<sup>107</sup> In 2008 the Conservancy in Oregon also received \$25,000 from the federal Land and Water Conservation Fund for land acquisition.<sup>108</sup> This, however, is only the tip of the proverbial iceberg. In 2009, U.S. Representative Kurt Schrader of Oregon submitted an Appropriations Request for \$2,050,000 for the purchase of two land parcels owned by The Nature Conservancy, totaling 158 acres, for addition to the Nestucca Bay National Wildlife Refuge.<sup>109</sup>

Other private land the FWS had its eye on was along the New River in Oregon where increasing numbers of Aleutian geese grazed on private pastures. In 2005, the FWS initiated the process of planning for a new National Wildlife Refuge to be established on the flood plain of the New River and at the point where the river enters the Pacific Ocean for the purpose of conserving a wide variety of species but especially the Aleutian goose. The study area for the refuge encompasses 5,900 acres, an indication of the size of the potential refuge.<sup>110</sup> In October 2006, the FWS announced that it was deferring its study of the potential new National Wildlife Refuge. Prior to deferring the study, the FWS held a public meeting in 2005 and one of the issues raised was Aleutian geese grazing on private pastures. The FWS responded that it planned

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<sup>106</sup> Arnold 1999.

<sup>107</sup> U.S. Fish and Wildlife Service 2009a

<sup>108</sup> Oregon House Delegation 2009.

<sup>109</sup> Oregon House Delegation 2009.

<sup>110</sup> U.S. Fish and Wildlife Service 2005a.

to manage portions of the potential refuge to make them attractive to geese by cultivating “high quality forage” and by purchasing conservation easements on private land surrounding the refuge as a means of providing more forage for the geese.<sup>111</sup> Given the FWS’s track record of doing very little, if anything, to alleviate goose depredation of private pastures elsewhere, most notably around Crescent City and Humboldt Bay, the FWS’s stated intention to do so in the case of the proposed New River National Wildlife Refuge is not very credible.

All of this actual and potential land acquisition is, in a certain sense, puzzling because, as mentioned, land for the Aleutian goose could be conserved much more cheaply if public agencies simply paid farmers and ranchers to raise grass for the geese. Two ideal candidates for landowners who would be interested in conserving the geese, in addition to efforts they have already undertaken, are Blake and Stephanie Alexandre, owners of an organic dairy farm along the Smith River north of Crescent City. The Alexandre’s are deeply committed to caring for their land in an ecologically sensitive way, and in addition to organic milk, they produce organic chicken eggs and grass-fed organic pork. Blake has played a lead role in formulating strategies for luring Aleutian geese off private pastures and on to public lands. Blake is also a founding board member of the Northcoast Regional Land Trust, an organization dedicated to land conservation, and since 2004 president of its board. The Alexandres are such good stewards of their land that they are one of twenty-two sites in Del Norte County included in the county’s portion of the Coastal Redwoods Birding Trail, which consists of outstanding bird watching spots along the northwest coast of California.

The Alexandres would make a perfect example for proponents of the ESA who have touted the Aleutian goose as an ESA success story—especially large groups with annual budgets of tens-of-millions of dollars such as Defenders of Wildlife, National Audubon Society, Environmental Defense Fund, and National Wildlife Federation. If these proponents were truly committed to conservation, instead of lobbying, they could easily partner with the Alexandres and provide funding for their conservation efforts, especially efforts to conserve the Aleutian goose by luring it away from private pastures. After all, these groups put a great deal of money towards public relations campaigns designed to build bridges between themselves and religious groups, as well as Republicans, because all often profess a desire to care for the Earth. The

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<sup>111</sup> U.S. Fish and Wildlife Service 2006g.

Alexandre family, which is quite religious, would make an ideal candidate. Furthermore, the costs associated are relatively small for these large, wealthy organizations. The fact that these environmental pressure groups have not provided funding to the Alexandres, or any of the other farmers suffering from Aleutian geese eating the forage in their pastures, is telling of lack of commitment, these groups, as well as the FWS, have to undertaking the difficult and time consuming task of working with landowners who are suffering as a result of the ESA.

As for the broader issue of why the FWS is bent on acquiring land instead of paying farmers to provide grass for Aleutian geese, including compensating farmers such as occurs in Scotland, there are several likely reasons. First, and most broadly, public land management agencies have an institutional bias towards land acquisition. They are more interested in land acquisition because it adds to their empires and is more tangible than payments to farmers. Public land managers are promoted on the basis of their accomplishments, and one of the most valued accomplishments is adding to the amount of land under public ownership.

Second, public agencies don't want to compensate some farmers for forage consumed by Aleutian geese because doing so would shine an unwanted light the issue, as well as the broader issue of damage caused, and property devalued, by wildlife, especially imperiled wildlife. Proponents of the ESA have long maintained that claims of ESA-caused property devaluation are exaggerated or non-existent. Clearly, the case of the Aleutian geese proves otherwise. More broadly, non-endangered wildlife also can cause considerable damage to private lands. The FWS and state agencies likely fear that were they to provide substantial compensation to farmers impacted by Aleutian geese, other landowners impacted by other wildlife would also demand compensation for damage to their property caused by wildlife. So the FWS and state wildlife agencies are very reluctant, if not opposed, to compensating landowners such as the farmers and ranchers who have lost millions of dollars of forage to Aleutian geese.

Third, is political power. Compared to the Gallo and Lyons families, the two families in California's Central Valley who the FWS paid to provide food for the Aleutian goose, the farmers and ranchers along California's northern coast and Oregon's coast have much less wealth and political power. As a result, these farmers and ranchers were unable to lobby the relevant state and federal authorities successfully to get the FWS and state authorities to pay them. Or the FWS knew the Gallo and Lyons families were so influential that the agency could not risk the political and public relations fallout of tangling with them and so preemptively



offered to pay them for harboring Aleutian geese. In the case of the Lyons family, both the FWS and the family had strong incentives to be on good terms; the family because it was making millions of dollars from land sales to the FWS, and the FWS because it was acquiring coveted land from the family. So the FWS was likely eager to pay the Lyons family a few tens or hundreds of thousands of dollars to conserve the Aleutian Canada goose and thereby remain in the family's good graces.

Fourth, is the issue of politics and the ESA. The ESA can impose enormous costs on private landowners who harbor species protected by the Act. If the FWS began compensating farmers and ranchers in California and Oregon for grass eaten by Aleutian Canada geese, this could raise unwanted demands from other landowners across the country for financial compensation due to lost property value as a result of species listed under the ESA. If this occurred, it could generate backlash against the Act, especially since the time period during which geese became an increasing problem for dairy farmers, the mid-to-late 1990s, was also when there were efforts in the U.S. Congress to amend the ESA that the FWS opposed.

Another factor that impeded efforts by farmers around Crescent City to gain sympathy, or even compensation, was the annual goose festival in Crescent City, founded in 2000, as a means to attract tourists. Rick Sermon, Superintendent of the local state park, noted the festival likely put "political pressure on farmers to not chase" the geese.<sup>112</sup>

In contrast to the approach taken by the FWS and state officials towards geese eating pasture grass, is that state officials in Minnesota, Wisconsin and Michigan provide financial compensation to landowners for livestock and dogs preyed on by wolves. Officials in these states do this because they must if wolf conservation is to be successful and not generate backlash. They also provide compensation because the FWS does not, despite that the wolves have been federally protected.

The apparent calculus of the FWS in the case of the Aleutian Canada goose is quite crass and telling of how the agency implements the ESA. Farmers and ranchers in Oregon and northern California are ignored because they are economically and politically weak, while the two wealthy and politically powerful landowners in the Central Valley are compensated for their losses and feted by the FWS for their efforts.

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<sup>112</sup> Boxall 2001.

## **LAND USE CONTROLS**

No evidence can be found that the FWS used the Endangered Species Act's punitive land use controls to conserve the Aleutian Canada goose. This bears noting because these controls are what make the Act such a cherished law by its proponents and are what proponents maintain are necessary for the law to function properly. In fact, the FWS willingly ignored these provisions in the case of the goose. Hazing by farmers around Crescent City, California prior to the goose's delisting were clearly in violation of the ESA because of the Act's prohibition on harassing listed species. The likely reason for the FWS's refusal to enforce the Act in this case is that popular sentiment was against the agency. In turn, this provides yet another example of the arbitrary way in which the FWS implements the ESA.

Even the staunchest supporters of the ESA admit, albeit implicitly, that the Act's land-use control provisions had essentially nothing to do with the goose's resurgence. "The Aleutian Canada goose (*Branta Canadensis leucopareia*), for example, was listed as a result of the introduction of foxes (*Vulpes spp*) to its nesting grounds on several islands in the Aleutians; removal of the foxes from these islands eliminated the threat and allowed the species to recover," stated J Michael Scott, professor of biology at the University of Idaho with the U.S. Geological Survey, Dale D Goble, University of Idaho law professor, John A Wiens, the Nature Conservancy, David S Wilcove, professor at Princeton University's Woodrow Wilson School of Public Affairs, and Michael Bean and Timothy Male, both with Environmental Defense Fund. "Continuing conservation management for the goose relies on existing instruments such as the Migratory Bird Treaty Act, flyway councils, and state waterfowl regulations."<sup>113</sup> Notice how no mention was made of the ESA's land-use control provisions.

## **TRANSLOCATIONS**

Translocations of Aleutian geese to islands in their historic range played a relatively minor role in the sub-species' conservation. When delisting occurred in 2001, geese translocated

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<sup>113</sup> Scott et al., 2005, p.384.

to islands other than the three islands from which they existed at the time of the ESA's passage (Buldir, Chagulak and Kiliktagik) comprised 11.9% of the population. Yet the FWS overstated and made false claims about the importance of translocations in an effort to give the ESA underserved credit. "As new breeding colonies became established in the Aleutian Islands, the number of Aleutian Canada geese increased rapidly," claimed the FWS when it delisted the goose.<sup>114</sup> The rapid population increase was overwhelmingly due to the explosion of geese on Buldir where no translocations occurred.

Despite the FWS's misrepresentation of the significance of translocations, they still played an important role in the goose's conservation. Geese, including Aleutian Canada, are philopatric, meaning they have a very strong instinct to return to the area from which they were raised. Aleutian geese are very slow to expand into new habitat, especially when much of the habitat consists of islands separated by tens or hundreds of miles of ocean, such as in the Aleutians. Due to this, the FWS decided to try to speed-up the process by reintroducing Aleutian Canada geese to unoccupied islands.

Initially, most of the FWS's translocation program was oriented around raising geese in captivity and releasing juvenile birds. The FWS took this approach because the agency deemed the population on Buldir Island was too small to spare any birds for translocation elsewhere.

The initial efforts to raise geese and translocate them began prior to the ESA's passage. In 1963 the FWS captured 18 goslings on Buldir Island and put them at the Monte Vista National Wildlife Refuge in Colorado. In 1966 eight of these geese were moved to the FWS's Patuxent Wildlife Research Center, located outside Washington, D.C. and the FWS's premier research facility. "Pairs [of geese] have also been farmed out to carefully selected game breeders at various locations in the United States, Canada, and England to 'spread the risk,'" according to Vernon Byrd and Paul Springer of the FWS.<sup>115</sup> Apparently allowing private breeders to own an endangered species did not raise the ire of environmental pressure groups in this case, as it did with peregrine falcons.

Once the geese were at Patuxent, they formed the nucleus of a captive breeding effort that would produce hundreds of geese over the next fifteen years. In 1971, the FWS released 75

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<sup>114</sup> U.S. Fish and Wildlife Service 2001i, p.15644.

<sup>115</sup> Byrd and Springer 1976.

captive-reared birds on Amchitka Island, but the island's large bald eagle population was the probable cause of their demise. As a result, the FWS selected Agattu and Nizki for almost all releases because they were the only two islands that were both free of foxes and bald eagles. Between 1974 and 1982, the FWS translocated 888 captive-bred geese to Amchitka, Agattu, and Nizki, and released 20 birds on Buldir.<sup>116</sup>

It soon became apparent, however, that the captive-bred birds were not faring well. Only about 5% were ever sighted again on wintering grounds in Oregon and California. One of the likely reasons for this was that the captive-bred geese had not been taught the proper migration routes by older, experience geese. In perhaps the most vivid example of this, in 1979, two captive-bred geese released on Agattu Island were sighted 4,000 km. to the south on Kwajalein Island, the site from which the U.S. managed nuclear weapons tests on the neighboring atolls of Bikini and Enewetak in the 1940s and 50s.<sup>117</sup>

In an effort to improve survivorship of translocated geese, the FWS employed two tactics; translocating wild birds from Buldir, and creating "golden pairs," wild males from Buldir paired with captive-bred females and their resulting progeny. From 1980 through 1982, a total of 223 golden pairs were released, but after 1982 the effort was abandoned in favor of using the most successful method, translocating entire families of geese from Buldir. Translocations of wild birds from Buldir began in 1974, and from then through 1995 the FWS released a total of 1,717 geese.<sup>118</sup> Another persistent problem that became apparent during the translocations was predation by the large population of bald eagles on islands east of Buldir. As a result, reestablishing geese on two islands west of Buldir, Agattu, and Nizki-Alaid, was much more successful (see Table 2).<sup>119</sup> In 1994 and 1995 the FWS translocated 168 geese from Buldir to Yunaska, which is located in the central Aleutians near Chagulak, and 151 geese to Skagul, which is in the east near Amchitka.<sup>120</sup> At the time of delisting, the FWS had not done follow-up

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<sup>116</sup> Byrd 1998, pp.<sup>24-25</sup>.

<sup>117</sup> Byrd 1998.

<sup>118</sup> Pacific Flyway Council 1999, pp.24-25.

<sup>119</sup> Byrd 1998.

<sup>120</sup> Pacific Flyway Council 1999, pp.24-25.

surveys to determine whether these translocations were successful, but in California over the winter of 1997-1998 the FWS sighted thirteen geese from Skagul and fifteen geese from Yunaska, which suggests that breeding may have occurred.<sup>121</sup>

## **NATURAL POPULATION EXPANSION**

A very small number of geese expanded on their own to fox free islands. In 1989, the FWS found a pair of geese on Amukta after they had apparently pioneered from Chagulak, which is some ten miles to the east.<sup>122</sup> When delisting occurred, it was not known whether geese had actually nested on Amukta or whether they were merely visiting from Chagulak. At some point, geese on Kiliktagik, on the eastern edge of the range, started nesting on the adjacent island of Anowik. By 1995 there were three nesting pairs there.<sup>123</sup>

## **BALD EAGLE PREDATION**

The main reason the goose had very limited success getting established on fox free islands east of Buldir was predation by bald eagles. The eagle has a large and healthy population in the Aleutians, but its range does not extend as far west as Buldir, and the Near Islands to the west of Buldir (Attu, Agattu, Alaid-Nizki, and Shemya). “We believe reestablishment of breeding populations via translocations to Amchitka and Little Kiska Islands and natural recolonization of Amukta Island to have a low probability of success,” stated the FWS when delisting occurred. “We believe the presence of bald eagles (*Haliaeetus leucocephalus*), a major predator of geese, on islands east of Buldir Island to be a factor that has limited the success of translocations to Amchitka, Little Kiska, and Kiska Islands.”<sup>124</sup>

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<sup>121</sup> U.S. Fish and Wildlife Service 2001i, p.15646.

<sup>122</sup> U.S. Fish and Wildlife Service 1989b, p.40143.

<sup>123</sup> U.S. Fish and Wildlife Service 2001i, p.15646.

<sup>124</sup> U.S. Fish and Wildlife Service 2001i, p.15645.

The logical action to take would have been to kill much of the bald eagle population on Amchitka, Kiska, Little Kiska, Amukta and a couple of the other islands around Chagulak in the central Aleutians until reestablished goose populations were sufficiently large to withstand eagle predation. The eagle population on these islands would likely rebound naturally so there would be little lasting impact to the already healthy bald eagle population in the Aleutians from killing some of them. But the FWS did not take this course of action for a couple of reasons. First, environmental and animals rights pressure groups, portions of the general public, and public officials would likely oppose killing relatively common eagles even if doing so was for the greater good of reestablishing an endangered species. Second, the bald eagle is protected by a federal law that prohibits killing eagles so in order for eagle control to occur the Bald and Golden Eagle Act would have likely have to be amended by Congress. Given that the bald eagle is the U.S. national bird, and that few, if any, members of Congress would want to be seen condoning killing eagles, it was extremely unlikely the Eagle Act would have been amended in this way.

### **DATA ERROR**

When the FWS listed the Aleutian Canada goose was listed under the ESA, the subspecies was known only from Buldir Island in the western Aleutians. The discovery of two additional separate populations constituted an instance of data error because these populations existed prior to, during, and after listing. With the discovery of these two populations, one of the recovery plan's downlisting criteria was met.<sup>125</sup> One of the populations was discovered in 1979 on Kiliktagik Island and totaled approximately 132 birds (28 nests). The other population was discovered in 1982 on Chagulak Island and had 100-120 birds (18 nests). Kiliktagik is located south of the Alaska Peninsula, some 1,300 miles east of Buldir, and is not even part of the Aleutian Islands. The population was hundreds of miles east of what was thought to be the historic range of the goose when it was listed under the ESA.<sup>126</sup> Chagulak Island, on the other hand, was within the goose's historic range, but it was also very isolated. The island is some 700

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<sup>125</sup> U.S. Fish and Wildlife Service 1990d, p.51506.

<sup>126</sup> U.S. Fish and Wildlife Service 1990d, p.51506.

miles east of Buldir and located in the eastern part of the Aleutian Islands. As a result of the discovery of these two populations, a significant part of the reason why the FWS downlisted the goose in 1990 from endangered to the less imperiled status of threatened was data error.

## **MAKING RECOVERY GOALS MORE DIFFICULT**

After the discovery of these two isolated, disjunct populations, the recovery team revised the recovery criteria and made them more difficult to achieve. The first revision of the recovery plan, published in 1982, created a new recovery goal; reestablishing self-sustaining goose populations of at least 50 pairs of geese in each of three regions.<sup>127</sup> The 1991 second revision of the recovery plan specified that the three regions must be; the western Aleutians other than Buldir Island, the central Aleutians (i.e., Chagulak and surrounding islands), and the Semidi Islands (Kiliktagik and surrounding islands).<sup>128</sup> “Well we didn’t know about [the other populations]...when we first drafted the [recovery] plan in 1973. It would have changed the [recovery] criteria,” said recovery team leader Vernon Byrd about the two newly discovered populations on Chagulak and Kiliktagik.<sup>129</sup>

While Byrd’s statement has a great deal of merit from a biological standpoint, it does raise a persistent problem with the ESA, which is that when recovery plans are revised they almost invariably make recovery goals more difficult to attain. Furthermore, when data error occurs it tends to spur the recovery team to make the recovery criteria more difficult. But the practice of “moving the goalposts” (i.e., making recovery criteria more difficult) has, among other things, three effects. First, it tends to push the date back by which delisting, and hence the ESA’s ultimate purpose, can be attained. Second, by leaving a species listed longer under the ESA, there is more opportunity for the FWS and pressure groups to use the species as land use control tools. Third, the longer a species is listed, the more opportunity researchers—in the FWS, other federal agencies, academia, and elsewhere—have to garner federal research funding.

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<sup>127</sup> U.S. Fish and Wildlife Service 1982a.

<sup>128</sup> U.S. Fish and Wildlife Service 1991a.

<sup>129</sup> Schulte 1990.

This phenomenon can be seen most starkly in the cases of the American peregrine falcon and the Hawaiian hawk.

## **MISREPRESENTING THE GOOSE’S CONSERVATION**

Most of the ESA’s prominent supporters among environmental pressure groups have badly misrepresented the goose’s conservation, in part due to efforts to give the Act undeserved credit. Despite that experts from the FWS stated that hunting restrictions were the paramount cause of the goose’s resurgence, more recently most environmental pressure groups have omitted mention of hunting restrictions from their claims of ESA for the goose. To celebrate the ESA’s 30<sup>th</sup> anniversary, most of the Act’s major proponents—American Rivers, Center for Biological Diversity, Defenders of Wildlife, Earthjustice, Endangered Species Coalition, Guardians, Natural Resources Defense Council, National Wildlife Federation, and U.S. PIRG—released a report profiling a number of purported success stories, one of them the Aleutian Canada goose. Under the heading “Road to Recovery” these groups state:

“In 1973, the Aleutian Canada goose received protections under the newly passed Endangered Species Act. That year, the federal government banned all hunting of the species. Federal biologists removed foxes from the islands and reintroduced geese to fox-free islands. All of the nesting islands were protected in the Alaska Maritime National Wildlife Refuge.”<sup>130</sup>

The National Audubon Society has a similar take on the goose’s resurgence.

“In 1973, the federal government banned all hunting of the Aleutian Canada Goose and began trapping and removing the foxes from some islands. Geese were reintroduced to islands that were now clear of foxes. Strengthened conservation and management of wintering habitat have contributed to recovery as well. All the islands inhabited by Aleutian Canada geese are protected, and wintering habitat in California and Oregon also

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<sup>130</sup> American Rivers et al., 2003d.



has been protected. In 2001, due to the successful recovery, the FWS removed the goose from the threatened and endangered species list.”<sup>131</sup>

The Sierra Club’s version of the goose’s conservation is much the same:

“In 1973, the goose was listed as endangered under the Endangered Species Act. Listing under the Endangered Species Act promoted the eradication of the introduced foxes in historic goose habitat and encouraged the restoration of geese to that habitat once the foxes were removed. To further recovery efforts, the U.S. Fish and Wildlife Service and state wildlife agencies established cooperative relationships with landowners to conserve goose habitat on private property and to conduct research on the birds' conservation needs.

By 1990, the number of geese had increased to an estimated 6,300, leading the U.S. Fish and Wildlife Service to reclassify the goose from endangered to threatened status. In 1991, the Nestucca Bay National Wildlife Refuge was established in Oregon, permanently conserving some of the wintering grounds essential to recovering the Aleutian Canada goose.”<sup>132</sup>

Note how all these groups inaccurately peg the goose’s conservation to passage of the ESA in 1973 and fail to mention any conservation efforts taken prior to the Act’s passage, most notably fox eradication. Except for Audubon, these groups also omit mention of hunting restrictions, and even though Audubon mentions this, the organization does not put hunting restrictions in context.

Some have tried to use the goose’s rebound to bolster the idea that species recovery takes a long time, and that those critical of the ESA for not recovering more species are taking an unrealistic and shortsighted view. “Take for example the Aleutian Canada goose, which was declared recovered and delisted in 2001,” stated Michael Bean of Environmental Defense Fund.

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<sup>131</sup> National Audubon Society. ND. *Endangered Species Act Success Stories*.

<sup>132</sup> Sierra Club. ND. Fish & Wildlife.

“The goose’s endangerment came from a single threat. Russian and American fur traders introduced Arctic foxes to uninhabited Aleutian islands”, and the result was that the goose’s population crashed.<sup>133</sup> Bean fails to mention that while introduced foxes were the most significant cause of decline, hunting and habitat loss on wintering grounds were also causes. Bean then goes on to explain how the goose rebounded:

“Fortunately, one nesting population survived on Buldir Island. These birds formed the basis of a captive rearing effort by the Fish and Wildlife Service. More than a decade earlier, in 1949, the Service had begun to eliminate foxes from the most important of the former breeding islands, making reintroduction of the birds possible. Some early reintroduction efforts failed, but eventually enough succeeded that the goose began to recover. It had finally completely recovered by 2001, some 52 years after conservation efforts began.”<sup>134</sup>

This picture is misleading and incomplete. First, Bean overemphasizes the importance of captive breeding and fails to mention that translocations of wild birds from Buldir, not captive-bred birds, proved to be the key to establishing populations on other islands. Second, Bean omits any mention of hunting restrictions or habitat conservation. It is ironic that Bean did not mention habitat conservation because he has long maintained that the ESA’s punitive habitat conservation provisions are one of the keys to the Act’s effective implementation. Conservation of the Aleutian Canada goose was far more complex than the simplistic and incomplete portrait painted by Bean.

In a similar vein, when the FWS delisted the goose in 2001, the agency published a timeline titled “Road to Recovery,” which omits any mention of a number of things: that fox eradication took place prior to the ESA’s passage; virtually all of the goose’s nesting habitat was federally protected since 1913; or private landowners were responsible for conserving much of the goose’s winter habitat.<sup>135</sup> When the FWS delisted the goose the agency tried to bolster its

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<sup>133</sup> Bean 2005, p.4.

<sup>134</sup> Bean 2005, p.5.

<sup>135</sup> U.S. Fish and Wildlife Service 2001h.

case for the goose as an ESA success story by naming other delisted species that owed their “recovery” to data error, factors unrelated to the ESA, or had been harmed by the Act. “As we have proved with species as diverse as the peregrine falcon, the American alligator and the Palau ground dove, the Endangered Species Act is an effective tool not only to bring species back from the brink of extinction but also to recover them to full health,” stated Anne Badgley, Director of the Service’s Pacific Region. “All Americans should be proud of what we have accomplished under this landmark law.”<sup>136</sup>

### **BELATED DELISTING**

By 1992, with a population of 7,800 individuals, the goose exceeded its population delisting goal of 7,500 by 300.<sup>137</sup> The population continued to increase in each subsequent year. In November 1995 the Recovery Team held a meeting to review the goose’s status and concluded the goose should be delisted:

“Following a review of the delisting criteria and information on the current status of the Aleutian goose populations, the team decided there is no longer a biological justification for listing the Aleutian Canada goose as a threatened species because the population level and increasing trend preclude a determination that the taxon is likely to become endangered in the foreseeable future. Not all of the criteria listed in the 1991 recovery plan have been met, but the following factors were considered overriding:

- 1) “The population is now approximately three times higher (~22,000) than the minimum suggested for delisting.
- 2) “The population is continuing to increase at a high rate.
- 3) There are now three self-sustaining breeding populations in the western Aleutians (Buldir, Agattu, Nizki-Alaid islands).”
- 4) The population on Chagulak in the central Aleutians is below the target of 50 pairs, but foxes

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<sup>136</sup> U.S. Fish and Wildlife Service 2001d.

<sup>137</sup> U.S. Fish and Wildlife Service. ND. *Return of the Aleutian Canada Goose*.

have been removed from adjacent islands and geese from Buldir have been translocated to islands in the central Aleutians.

- 5) The FWS has initiated an effort to reintroduce geese to their former range in Russia and Japan.
- 6) Much winter habitat has been protected and plans exist to protect more habitat.
- 7) “Plans are being developed to help alleviate goose depredations on private pasturelands in the Smith River bottoms near Crescent City, California, during spring and fall migration.”
- 8) Sound monitoring of winter populations is occurring, which will be able to detect any population decline.<sup>138</sup>

The recovery team’s 1995 delisting recommendation was not acted upon by the FWS for almost four years until the agency finally issued a proposal in 1999 to delist the goose.<sup>139</sup> By this time the goose population had swelled to 32,281.<sup>140</sup> The FWS did not get around to delisting the goose until more than a year-and-a-half later, in March 2001, despite the ESA’s mandate that proposed rules must be acted upon within one year.<sup>141</sup>

## **POLITICS OF DELISTING**

There are several possible explanations for why the FWS took over five years to act on the recovery team’s recommendation to delist the goose. One, the FWS was concerned the goose was not a good example of success so they were reluctant to delist it. Two, the agency was remarkably inefficient and slow-moving. Three, the FWS was more concerned with listing rather than delisting species. Four, the people inside and out of the FWS resisted delisting because once it occurred they would no longer be able to use the goose as a public relations vehicle for promoting the ESA or as money tree to shake for funding, especially because the

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<sup>138</sup> Byrd 1995.

<sup>139</sup> U.S. Fish and Wildlife Service 1999g.

<sup>140</sup> U.S. Fish and Wildlife Service. ND. *Return of the Aleutian Canada Goose*.

<sup>141</sup> U.S. Fish and Wildlife Service 2001i.

goose was one of the Act's poster species. The delayed delisting of the goose is similar to when the FWS took years more than necessary to delist the gray whale and the American peregrine falcon.

When the FWS belatedly delisted the goose in 2001, the issues of funding and public relations emerged, along with a new reason, partisan politics, as the leading reasons why the FWS, and especially its supporters in environmental pressure groups, did not push for delisting to occur. The most remarkable aspect of delisting is that when it happened, there was a stunning silence from the very pressure groups that for so long had promoted the goose as an ESA success story. There seem to be two possible reasons for this.

First, at the time of delisting, the pressure groups appeared more concerned with giving the cold shoulder to Gail Norton, the recently appointed Interior Secretary, than they were in heralding the "recovery" due to the ESA of only the thirteenth species. Norton was sworn-in about two months before the goose's delisting, and pressure groups were eager to fight her because she was appointed by a Republican President, George W. Bush. In the gladiatorial world inhabited by environmental pressure groups, Republicans are to be opposed at every turn, even if these groups agree with something Republicans are doing.

Norton announced the goose's delisting during her speech on March 19, 2001 before several hundred people at the 66<sup>th</sup> annual North American Wildlife and Natural Resource Conference, an event widely regarded as the premier wildlife conference in the U.S. In an effort to generate interest and hopefully media coverage of the announcement, the FWS set up and elaborate display of visual and written material on the goose's conservation for members of the media and conference attendees. That same day the FWS also issued a nationwide press release heralding the goose's delisting.

Despite the lengths to which the Interior Department went to publicize the goose's delisting, a search of pressure groups' websites (National Audubon Society, Center for Biological Diversity, Center for Marine Conservation, Defenders of Wildlife, Earthjustice, Environmental Defense Fund, National Wildlife Federation, Natural Resources Defense Council, Sierra Club, U.S. PIRG, and the Wilderness Society) turned up no acknowledgements, much less celebration, of the occasion of the goose's delisting. The only mention of the event from these groups that could be found was a small box of text with an accompanying drawing of the goose—all of which occupied approximately 1/3 of a page—of an eleven page issue of *ESA*

*Today*, the quarterly news magazine of the Endangered Species Coalition (the umbrella lobbying organization of most of the major members of environmental pressure groups, including Defenders of Wildlife, Earthjustice, National Audubon Society, National Parks and Conservation Association, National Wildlife Federation, Natural Resources Defense Council, U.S. PIRG, and the Wilderness Society).<sup>142</sup> Even though Brock Evans, coordinator of the Endangered Species Coalition, was reportedly pleased about the goose's delisting, he would rather that Secretary Norton had announced an end to the moratorium she had placed on listing any new species under the ESA.<sup>143</sup> This lack of response from the ESA's proponents is strange, especially because the goose was one of the Act's poster species and because these groups almost never missed a chance to praise the ESA even if such praise, as in the case of the goose, was largely undeserved.

The second reason pressure groups may have been nonplussed by the goose's delisting is that it meant the loss of a potentially valuable tool for land use control. Indeed, as Dave Cline, the National Audubon Society's vice president for the Alaska region, noted on the occasion of the goose's change in status from endangered to threatened in 1990, "the downlisting will make it extremely difficult to save the wetlands used by the birds. Money is easier to raise when an endangered [rather than threatened] species is involved."<sup>144</sup> The same rationale can be applied to the delisting of the goose. This is also similar to the reasoning used by opponents of delisting of the gray whale (Defenders of Wildlife, Earth Island Institute, and Greenpeace) and gray wolf in the northern Rocky Mountains (Center for Biological Diversity, Defenders of Wildlife, Earthjustice, Humane Society of the United State, Natural Resources Defense Council, Sierra Club, and a host of smaller groups). These groups have been more interested in using the whale and wolf as a means to influence land and resource use decisions, as well as using these species as fundraising and public relations tools, than they are claiming credit for the law they purport to cherish.

The unwillingness of pressure groups to celebrate the goose's delisting indicates that they are more concerned with political posturing than they are conserving species. The irony is that pressure groups could have used the goose's recovery as a genuine example in which the ESA benefited a delisted species, instead of falsely or misleadingly attributing the Act with the

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<sup>142</sup> Mason 2001.

<sup>143</sup> Epatko 2001.

<sup>144</sup> Schulte 1990.

rebound of a host of other species (e.g., the American alligator, the Atlantic brown pelican, the Arctic peregrine falcon, the American peregrine falcon, the three bird species from Palau, three kangaroo species, and the rydberg milk-vetch).

## CONCLUSIONS

As the foregoing analysis reveals, conservation of the Aleutian Canada goose is far more nuanced and far less of an ESA success story than portrayed by proponents of the Act. Furthermore, much, if not all, of the goose's recovery could have been accomplished without the ESA. The formal mechanism by which hunting restrictions, the most important factor in the goose's conservation, were essentially implemented was the Migratory Bird Treaty Act, not the ESA. As hunting closures demonstrated, if geese have sufficient habitat and they are not suffering much mortality from hunting, they are relatively easy to recover due to high population growth rates and that they are fairly tolerant of people, especially when on wintering grounds.

Fox eradication and other instances of nesting habitat conservation was well under way prior to the goose's listing under the ESA, and almost certainly would have continued had the goose not been listed. This is because the FWS would have wanted to restore the habitat due to the destruction caused by the foxes, and due to the agency's mandate to conserve wildlife on National Wildlife Refuges. Furthermore, private habitat conservation was the key to conservation of the goose's wintering grounds in Oregon and especially California. As with hunting closures, private habitat conservation was especially important when the goose population was lowest. While the amount of private habitat utilized, as a percentage of all habitat, has decreased due to public, primarily federal, acquisition of private lands, such public acquisitions would not have been possible if private landowners had not conserved the habitat in the first place. As for translocations, they, too, could have occurred independent of the ESA for the same reason fox eradication could have.

The main thing the ESA did for the geese was to provide funding, which sped-up recovery and provided money for surveys and studies of the goose. Yet the aspect that distinguishes the ESA is its "teeth," the law's punitive land and resource use control provisions that make it such a cherished law by its proponents. However, the ESA's "teeth" were essentially not a part of the goose's recovery.

Even though the story of the goose’s conservation is essentially one of hunting closures, nesting habitat conservation prior to the ESA’s passage, private winter habitat conservation, and lack of the ESA’s “teeth,” the federal government has tried to obscure this. The FWS has tried to attribute the goose’s conservation to “partnerships” involving many entities in much the same way the agency tried to obscure the conservation of the American peregrine falcon. “The recovery of the Aleutian Canada goose sets an example for the future of endangered species recovery,” said Interior Secretary Norton. “By working with private landowners, acquiring land and implementing conservation actions, the Service has enabled the protection of thousands of acres of habitat crucial to the recovery of the Aleutian Canada goose, while maintaining the flexibility landowners need to manage their property.”<sup>145</sup> And the FWS piled-on as well. “The recovery of the Aleutian Canada goose once again proves that successful conservation of wildlife is a partnership between the people and their government,” said Acting FWS Director Marshall Jones. “Using the flexibility provided under the Endangered Species Act, we forged partnerships with states and private organizations and found innovative ways to protect the bird’s habitat. All Americans should be proud of what we have accomplished together.”<sup>146</sup>

This “partnership” was possible for two main reasons. First, the FWS did not have to rely much, if at all, on the ESA’s punitive land-use provisions to get private landowners to conserve the goose. Second, the FWS chose to ignore the plight of those landowners who suffered taking of their property, such as pasture grass in Oregon. The rebound of the Aleutian Canada goose is cause for celebration, but the ESA’s role in this has been badly exaggerated in efforts to give the Act undeserved credit.

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<sup>145</sup> U.S. Fish and Wildlife Service 2001f.

<sup>146</sup> U.S. Fish and Wildlife Service 2001f.