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United States Wildlife Conservation Law and the Hawaiian *Nene*

Daryl Masao Arakaki

- I. Introduction
- II. Historical Background
- III. Federal Law-The Endangered Species Act of 1973
- IV. Hawai'i State Level Law
- V. Court Decisions of Interest
- VI. Current Conservation Efforts and Future Challenges
- VII. Conclusion

I. Introduction

Whenever I have an opportunity to travel to the Hawai'ian island of Kaua'i, I am always emotionally moved by the pristine natural beauty that still exists there. Unlike the island of O'ahu which is overcrowded with

high-rise buildings, highways, and large shopping centers, the green and lush Kaua'i still lives up to its nickname : "The Garden Island". I especially enjoy hiking in the Koke'e area, a mountainous region in the northwestern part of Kaua'i. Walking among the dense *ohi'a lehua* trees, one can hear the melodious cries of many native Hawai'ian songbirds such as the '*Apa'ane*, the '*Amakihi*, and the '*Elepaio*. If one is especially lucky, one can sometimes catch a glimpse of the very rare Hawai'ian Hawk, the *Pueo*.

But for me, the highlight of each trip to Kaua'i is to have a chance to meet the *Nene*, also known as the Hawai'ian Goose. As a young boy in elementary school, I learned about how the *Nene* was hunted to the brink of extinction and saved only through the intervention of concerted breeding and conservation programs. Living on the urbanized island of O'ahu, I had no opportunity to see a live *Nene*, and I developed a strong yearning to meet the plump, friendly looking bird in the wild. Even at the time I was a university student, I had yet to see a live *Nene*, and I remember feeling quite envious when I saw photographs of *Nene* which another student had taken on the island of Maui. It wasn't until I reached my 30's that I finally fulfilled my childhood desire to see my first *Nene*. Since then, I have photographed the magnificent birds whenever I had the chance.

One of my most memorable recollections of *Nene* occurred early one morning on a hiking trip to Koke'e. As the morning sun rose from the east, I heard the baritone honking of a flock of *Nene* gliding in from the west. The flock circled our position once, and then elegantly floated down

to land in the open area where we had parked our car. After having a number of similar close encounters with *Nene*, I developed a greater appreciation for the public and private efforts taken to prevent their extinction, and for the various federal and state level laws that continue to protect them. In this article, I will attempt to 1) discuss the historical background of the *Nene's* plight, 2) provide a very basic overview of the current United States federal level law ; the Endangered Species Act of 1973, 3) briefly outline law at the Hawai'i state level which protect the *Nene*, and 4) discuss ongoing conservation efforts and challenges in Hawai'i.



Photograph taken August 14, 2004, near Kalalau Lookout, Kaua'i, Hawai'i.

II. Historical Background

The Hawai'ian island archipelago is one of the most isolated places on planet Earth. It is located almost at the center of the Pacific Ocean, about 6,100 kilometers from Japan and about 3,900 kilometers from the west coast of North America.¹⁾ As a result of this isolation, Hawai'i became the home of many animal and plant species found nowhere else in the world. One of those species is the *Nene* or Hawaiian Goose (scientific name : *Branta sandvicensis*). It is believed that the *Nene* is most closely related to the Canada Goose (*Branta Canadensis*). Since the Canada geese spend their winters along the west coast of the continental United States and return to Alaska and arctic Canada in the spring, it is thought that a small number of these geeses' ancestors may have become disoriented during migration and ended up in Hawai'i.²⁾ The *Nene* is the official bird of the state of Hawai'i,³⁾ and is probably the best known and most popular of the surviving native Hawai'ian birds. It is also a species formally recognized by the United States government as a species that is in danger of extinction.

Conservationists call Hawai'i the "endangered species capital" of the United States.⁴⁾ As of February 2005, 327 of the 1,264 species of plants

1) Sonia P. Juvik and James O. Juvik, *Atlas of Hawai'i, Third Edition*, University of Hawai'i Press (1998) at xiii (Introduction).

2) Thomas W. Quinn, Gerald F. Shields, and Allan C. Wilson, *Affinities of the Hawaiian Goose Based on Two Types of Mitochondrial DNA Data*, AUK, Vol. 108 (July 1991) at 585.

3) Hawaii Revised Statutes, Section 5-17 (1988).

and animals designated by the federal government as “threatened” or “endangered” were species native to Hawai‘i.⁵⁾ According to Professor Sheila Conant, at the time humans first arrived in Hawai‘i, there were more than 140 species of native birds, many of which were found nowhere else in the world. Since the arrival of humans, more than half of the bird species have gone extinct, and of the 66 native bird species and subspecies remaining, 30 were considered endangered. As of 1995, 12 of these surviving species were on the brink of extinction, and 6 may already be extinct.⁶⁾

Archaeologists believe that the first human inhabitants of the Hawai‘ian islands arrived from the Marquesas sometime between 200 B. C. and A. D. 700, and that a later wave of settlers arrived from Tahiti between A. D. 900 and 1300.⁷⁾ These early Hawai‘ian settlers burned and cleared lowland areas for crop cultivation, effectively reducing the native bird habitats. As the number of human inhabitants of the archipelago increased, it caused additional stress upon the native bird populations. It is thought that the Hawai‘ian settlers were responsible for the extinction of at least 35 species of birds.⁸⁾ By the time westerners started to arrive in the islands at the end of the 18th century, the population of *kanaka maoli*, or

4) Elizabeth Royte, *On the Brink : Hawaii's Vanishing Species*, NATIONAL GEOGRAPHIC, Vol. 188, No. 3 (Sept. 1995) at 14.

5) Threatened and Endangered Species System (TESS) report generated on February 11, 2005. http://ecos.fws.gov/tess_public/TESSUsmap?status=listed.

6) Sheila Conant, *Atlas of Hawai‘i, Third Edition*, University of Hawai‘i Press (1998) at 130.

7) Eleanor C. Nordyke, *The Peopling of Hawai‘i, Second Edition*, University of Hawaii Press (1989) at 10.

native people, had grown to the size of somewhere between 250,000 to 1,000,000 people.⁹⁾

There is no good estimate of how many *Nene* existed before the Hawaiians arrived, but in the latter part of the 18th century, it is estimated that there were about 25,000 of the birds still living in the Hawaiian chain.¹⁰⁾ This number, however, is at best a very rough estimate.¹¹⁾ History generally recognizes Captain James Cook and his crew members aboard HMS *Resolution* and HMS *Discovery* as the first westerners to visit Hawai'i when they landed in Waimea on the island of Kaua'i in January 1778.¹²⁾ Although there is fossil evidence that *Nene* once inhabited the lowlands of Kaua'i¹³⁾, there were none remaining at the time of Cook's first visit. Presumably, they had been all killed by the native Hawai'ian people living on the island.¹⁴⁾

8) Elizabeth Royte, *On the Brink: Hawaii's Vanishing Species*, NATIONAL GEOGRAPHIC, Vol. 188, No. 3 (Sept. 1995) at 26. Also, Nancy J. Morris, *Can Hawaii's Endangered Birds Survive?*, MALAMALAMA, Vol. 14, No. 2 (Spring 1990) at 4.

9) Glen Grant and Bennett Hymer, *Hawai'i Looking Back : An Illustrated History of the Islands*, Mutual Publishing (2000) at 9.

10) David H. Woodside, *Reprieve for the Nene, Hawaii state bird restored to former habitat*, DEFENDERS, vol. 50, No. 6 (December 1975) at 480.

11) In his article, *The Hawaiian Goose, Its Distribution and Reduction in Numbers*, Paul H. Baldwin wrote : "Not having a numerical estimate of the original *Nene* population, for convenience we shall make our own. Twenty-five thousand may be a reasonable approximation: certainly the number was well up in the thousands." THE CONDOR, vol. 47 (Jan. 1945) at 33.

12) Eleanor C. Nordyke, *The Peopling of Hawai'i, Second Edition*, University of Hawaii Press (1989) at 16.

13) Ellen E. Paxinos, Helen F. James, Storrs L. Olson, Jonathan D. Ballou, Jennifer A. Leonard, Robert Fleischer, *Prehistoric Decline of Genetic Diversity in the Nene*, SCIENCE, Vol. 296, No.7 (June 2002) at 1827.

14) Jim Denny, *The Birds of Kaua'i*, University of Hawai'i Press (1999) at 41.

By 1891, the *Nene* were found only on the island of Hawai'i.¹⁵ One theory is that the *Nene* were able to survive on this island because they lived in the saddle between the two mountains Mauna Loa and Mauna Kea. Because the area was considered to be off-limits to the early Hawai'ians, the *Nene* were thus able to avoid human contact and human consumption.¹⁶

By the early 1900's, scientists realized that overhunting and predation by rats and mongooses had decimated the population of *Nene*.¹⁷ The rats are believed to be accidental arrivals that came as stowaways on Polynesian canoes in the early migrations or on European ships that arrived from Southeast Asia between 1870 and 1880. The mongooses were intentionally imported in 1883 by sugar cane growers who wanted to control the rat population.¹⁸ Unfortunately, while the mongooses hunted during the day, the rats were largely active at night. Unable to find any rats during the day, the mongooses turned to *Nene* to satisfy their appetites. In a 1982 report, mongoose predation of eggs and incubating females was cited as the most important factor responsible for clutch failure of *Nene* at the Hawai'i Volcanoes National Park and the Haleakala National Park.¹⁹

15) George C. Munro, *Birds of Hawaii*, Charles E. Tuttle Co., Inc. (1960) at 41.

16) H. Douglas Pratt, *Hawai'i's Beautiful Birds*, Mutual Publishing (1996) at 36.

17) Elizabeth Royte, *On the Brink: Hawaii's Vanishing Species*, NATIONAL GEOGRAPHIC, Vol. 188, No. 3 (Sept. 1995) at 37.

18) Carla H. Kishinami, *Hawai'i's Invasive Species*, section on *Mammals*, Mutual Publishing (2001) at 18.

19) Paul C. Banko, *Productivity of Wild and Captive Nene Populations*, PROCEEDINGS OF THE FOURTH CONFERENCE IN NATURAL SCIENCES, HAWAII VOLCANOES NATIONAL PARK (1982) at 16.

Another factor that seems to have contributed to the demise of the *Nene* is that they exhibited little fear of humans. This trait is partly attributed to the fact that, before the arrival of humans, the *Nene* had no terrestrial predators.²⁰⁾ Naturalists that accompanied Captain James Cook on his historic visit to Hawai'i in 1778 noted that the bird was quite tame, and English ornithologist Scott Wilson noted in the late 1880's that native Hawai'ians kept the *Nene* as a pet.²¹⁾ Other literature notes that in 1789, John Meares, Captain of the *Iphigenia*, and in 1792, Edward Bell, clerk of the *Chatham* recorded purchases of domestic geese (presumably *Nene*) from the native Hawaiians.²²⁾ George C. Munro's observations from 1891 similarly indicated that the *Nene* goslings he encountered seemed "quite unafraid of human beings".²³⁾

The *Nene* was also a visible and important part of native Hawai'ian culture. References to *Nene* are made in at least two Hawai'ian proverbs collected by Hawai'ian language expert Mary Kawena Pukui.²⁴⁾

20) H. Douglas Pratt, *Hawai'i's Beautiful Birds*, Mutual Publishing (1996) at 36.

21) Scott Wilson and Sheila Buff, *Frohawk's Birds of Hawaii*, The Wellfleet Press (1989) at 20.

22) Paul H. Baldwin, *The Hawaiian Goose, Its Distribution and Reduction in Numbers*, THE CONDOR, vol. 47 (Jan. 1945) at 27.

23) George C. Munro, *Birds of Hawaii*, Charles E. Tuttle Co., Inc. (1960) at 42.

24) The two proverbs collected by Pukui offer interesting insight into traditional Hawai'ian culture. The first reads as : *He hoa manu nene, he ho'i no a pauma'ele i ka hale*, which Pukui translated into "A goose mate returns to pollute the house", Said to a mate whose relative disgraces the family by committing fornication or adultery with another member. The second reads as : "*Unele! Unele!*" *wahi a ka nene*, which Pukui translated into "*Honk! Honk!*" says the goose, A play on nele (a lack, poverty), this saying implies a going without, a lack of success, chagrin, and so forth. Mary Kawena Pukui, *Olelo No'eau : Hawaiian Proverbs & Poetical Sayings*, Bishop Museum Press (1983) at 67, 314.

Although *Nene* had been successfully bred in captivity since 1834 and distributed to zoos and other private collections throughout Europe, *Nene* in Europe became rare by 1900 and the last specimen disappeared during the German invasion of France in 1940.²⁵⁾ Government breeding efforts in Hawaii were started in 1927, but disbanded in 1935. The Territory of Hawai'i Board of Agriculture and Forestry began a new captive propagation project in 1949 at Pohakuloa on the island of Hawai'i²⁶⁾ and a second effort was started by conservationists in Slimbridge, England in 1950.²⁷⁾ Clearly, they were fighting the clock. By 1951, only 33 wild *Nene* remained, about half of which were in captivity.²⁸⁾ Gradually, the numbers of *Nene* raised in captivity were increased, and beginning in 1960, *Nene* were released on the islands of Hawai'i and Maui. In 1982, a flock of 12 *Nene* established themselves on the island of Kaua'i, and from 1991, captive raised *Nene* were also released on that island.²⁹⁾

For the *Nene*, Kaua'i has proven to be an excellent place for reintroduction because there are no mongooses on the island. On the island, *Nene* can be seen visiting scrubland, grassland, sparsely vegetated slopes, open lowland country, and even golf courses.³⁰⁾ Most probably due to the

25) Paul C. Banko, *Nene Reintroduction Program and Research in Hawaiian National Parks*, PROCEEDINGS OF THE SECOND CONFERENCE IN NATURAL SCIENCES, HAWAII VOLCANOES NATIONAL PARK (1978) at 6.

26) *ibid*, at 7.

27) Elizabeth H. Rave, *Genetic Analysis of Wild Populations of Hawaiian Geese Using DNA Fingerprinting*, THE CONDOR, vol. 97 (1995) at 82.

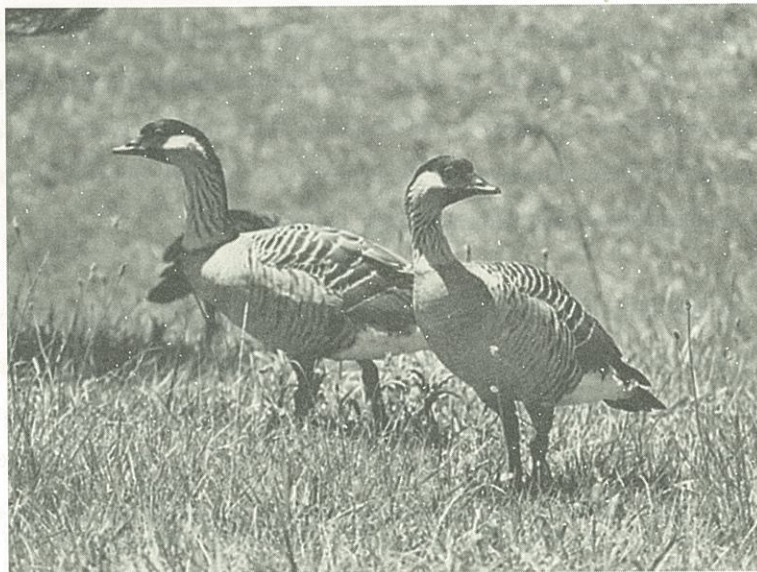
28) David H. Woodside, *Reprieve for the Nene, Hawaii state bird restored to former habitat*, DEFENDERS, vol. 50, No.6 (December 1975) at 480.

29) Elizabeth H. Rave, *Genetic Analysis of Wild Populations of Hawaiian Geese Using DNA Fingerprinting*, THE CONDOR, vol. 97 (1995) at 83.

30) Hawaii Audubon Society, *Hawaii's Birds*, Hawaii Audubon Society (1997) at 49.

absence of mongooses, Kaua'i remains the place where you can find more native forest birds in one place than anywhere else in Hawai'i.³¹⁾

As of 2004, there were approximately 350 wild *Nene* on the island of Hawai'i, 250 on Maui, and 620 on Kaua'i. There were also 11 captive-bred *Nene* released on the island of Molokai in December 2001, and another 13 released on Moloka'i in 2002 as part of efforts to reestablish the bird on that island.³²⁾ Despite half a century of reintroduction efforts, the popula-



Photograph taken on August 14, 2004, near Kalalau Lookout.

31) H. Douglas Pratt, *Enjoying Birds and Other Wildlife in Hawai'i*, Mutual Publishing (2002) at 174.

32) U. S. Environmental Protection Agency document: *Draft Recovery Plan for the Nene or Hawaiian Goose (Branta sandvicensis)*, Federal Register: September 24, 2004 (vol. 69, No. 185) accessed at <http://www.epa.gov/fedrgstr/EPA-SPECIES/2004/September/Day-24/e21172.htm> (last visited on Feb. 2, 2005)

tion of *Nene* still has not recovered sufficiently to be considered self-sustaining.³³⁾

III. Federal Law-The Endangered Species Act of 1973

The Endangered Species Act of 1973³⁴⁾ was preceded by the Endangered Species Preservation Act of 1966³⁵⁾ and the Endangered Species Conservation Act of 1969³⁶⁾. The 1966 Act and the 1969 Act were described as the first comprehensive United States efforts to prevent extinction of the world's imperiled animal species.³⁷⁾ Unfortunately, both the 1966 Act and the 1969 Act were insufficient and lacking.

The Endangered Species Preservation Act of 1966 only provided that native species of fish and wildlife (no plants) could be listed as endangered, and it provided limited means to protect the animals that were placed on the list.³⁸⁾ The Act gave the Secretary of the Interior the ability

33) Audubon Society Watchlist, accessed at <http://audubon2.org/webapp/watchlist/viewSpecies.jsp?id=100> (last visited on Feb. 2, 2005).

34) Act Dec. 28, 1973, P. L. 93-205, 87 Stat. 884. The Act appears as 16 USCS Section 1531 et seq.

35) Pub.L. No. 89-669, 80 Stat. 926 (codified at 16 U. S. C. Section 668aa-668cc) (repealed by Pub.L. No. 93-205, Section 14, 87 Stat. 884, 903 (1973)).

36) Pub. L. No. 91-135, 83 Stat. 275 (codified at 16 U. S. C. Section 668cc-1 to 668cc-66) (repealed by Pub.L. No. 93-205, Section 14, 87 Stat. 884, 903 (1973)).

37) David A. Paulson, *No Endangered Species Left Behind: Correcting The Inequity In Critical Habitat Designation for Pre-1978-Amendment Listed Species*, 25 Hawaii L. Rev. 525 (2003) at 529.

38) U. S. Fish & Wildlife Service, *The Endangered Species Act of 1973, History and Evolution of the Endangered Species Act of 1973, including its Relationship to CITES*. at <http://www.fws.gov/endangered/esasum.html>. (Web page last visited on Nov. 1, 2005)

to acquire land to establish wildlife refuges³⁹⁾, but it provided only a limited amount of funds. According to Section 2(c), funds made available through the Land and Water Conservation Act of 1965 (78 Stat. 897) could be used to acquire land for refuges, but the amount appropriated per year was not to exceed \$5,000,000. Also, the amount used to acquire refuge lands was not to exceed \$750,000 for any one area.⁴⁰⁾ In terms of enforcing a protection of the endangered animals, the 1966 Act did include penalties for the taking or possessing of endangered species, but the penalty for violation of the Act was a rather light \$500 fine or a prison term of 6 months, or both.⁴¹⁾ As will be later discussed, the penalties under the later 1973 Act became much more severe. The 1966 Act was approved on October 15, 1966, and the Hawaiian *Nene* was listed as an endangered species on March 11, 1967.⁴²⁾

The Endangered Species Conservation Act of 1969 was passed to provide additional protection to species that were in danger of “worldwide extinction”.⁴³⁾ The purposes of the 1969 Act were to “prevent the importation of endangered species and wildlife into the United States”, and to “prevent the interstate shipment of reptiles, amphibians, and other wildlife taken contrary to State law.”⁴⁴⁾ People who violated the law would

39) Section 2 of P. L. 89-669, 80 Stat. 926.

40) Section 2(c) of P.L. 89-669, 80 Stat. 926.

41) Sections 4(c) and 4(e) of P. L. 89-669, 80 Stat. 926.

42) 32 Federal Register 4001 (1967).

43) U. S. Fish & Wildlife Service, *The Endangered Species Act of 1973, History and Evolution of the Endangered Species Act of 1973, including its Relationship to CITES*. at <http://www.fws.gov/endangered/esasum.html>. (Web page last visited on Nov. 1, 2005)

44) P. L. 91-135, 83 Stat. 275

be subject to a civil penalty of \$5000 for each violation⁴⁵⁾, and people who “willfully” violated the law could be subject to criminal fines of up to \$10,000, or imprisonment of up to 1 year, or both.⁴⁶⁾ Section 5 of this Act called upon the Secretary of State to encourage other countries to provide protection to fish and wildlife species and subspecies (again no plants) that were endangered with “worldwide extinction”.⁴⁷⁾ This law was approved on December 5, 1969.⁴⁸⁾

During the 1960's, the United States was not the only country interested in the conservation of Wild Fauna and Flora. The World Conservation Union (IUCN) began efforts that culminated in the drafting of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES).⁴⁹⁾ The text of the Convention was agreed upon at a meeting of representatives from 80 countries in Washington, D. C., United States of America, on March 3, 1973.⁵⁰⁾ CITES places strict restrictions on the international commercial import and export of plant and animal species that are believed to be actually or potentially harmed by trade.⁵¹⁾ In 2005, there are now 169 countries that have joined the Convention and have agreed to be legally bound by its terms.⁵²⁾ The *Nene*

45) Section 4 (a) (1) of P.L. 91-135, 83 Stat. 275.

46) Section 4 (b) of P. L. 91-135, 83 Stat. 275.

47) Section 5 of PL 91-135, 83 Stat. 278.

48) P. L. 91-137, 83 Stat. 275 at 283.

49) See web-site for Convention on International Trade in Endangered Species of Wild Fauna and Flora : <http://www.cites.org/index.html> (last visited on November 2, 2005.)

50) This treaty is often referred to in Japan as the “Washington Joyaku” 「ワシントン条約」, see web-site for Japan Ministry of Foreign Affairs : <http://www.mofa.go.jp/mofaj/gaiko/kankyo/jyoyaku/wasntn.html> (last visited on November 1, 2005).

is listed in Appendix I of CITES, meaning that it is recognized as a species threatened with extinction. Commercial international trade of Appendix I species is generally prohibited except for certain circumstances such as scientific research.⁵³⁾

In the same year that CITES was agreed upon, growing concern in the United States for disappearing high-profile species like the bald eagle led to the passing of the Endangered Species Act on December 28, 1973.⁵⁴⁾ While the Endangered Species Act of 1973 was obviously not exclusively created to address the specific situation of the *Nene*, it is currently the most important United States federal level law which provides protection to the *Nene*. In the first part of the Act, Section 1531 (a), there is a list of noteworthy findings that were made by Congress in the passing of the law. Those findings state that:

- 1) various species of fish, wildlife, and plants in the United States have been rendered extinct as a consequence of economic growth and development untempered by adequate concern and conservation ;

51) U. S. Fish & Wildlife Service, *The Endangered Species Act of 1973, History and Evolution of the Endangered Species Act of 1973, including its Relationship to CITES*. at <http://www.fws.gov/endangered/esasum.html>. (Web page last visited on Nov. 1, 2005)

52) See web-site for Convention on International Trade in Endangered Species of Wild Fauna and Flora : <http://www.cites.org/index.html> (last visited on November 2, 2005.)

53) The CITES Appendices : www.cites.org/eng/app/index.shtml (last visited on November 2, 2005.)

54) Act Dec. 28, 1973, P.L. 93-205, 87 Stat. 884. The Act appears as 16 USC Section 1531 et seq.

- 2) other species of fish, wildlife, and plants have been so depleted in numbers that they are in danger of or threatened with extinction;
- 3) these species of fish, wildlife, and plants are of esthetic, ecological, historical, recreational, and scientific value to the Nation and its people;
- 4) the United States has pledged itself as a sovereign state in the international community to conserve to the extent practicable the various species of fish or wildlife and plants facing extinction, pursuant to --
 - (A) migratory bird treaties with Canada and Mexico ;
 - (B) the Migratory and Endangered Bird Treaty with Japan ;
 - (C) the Convention on Nature Protection and Wildlife Preservation in the Western Hemisphere;
 - (D) the International Convention for the Northwest Atlantic Fisheries;
 - (E) the International Convention for the High Seas Fisheries of the North Pacific Ocean;
 - (F) the Convention on International Trade in Endangered Species of Wild Fauna and Flora ; and
 - (G) other international agreements ; and
- 5) encouraging the States and other interested parties, through Federal financial assistance and a system of incentives, to develop and maintain conservation programs which meet national and international standards is a key to meeting the Nation's international commitments and to better safeguarding, for the benefit of all citizens, the Nation's heritage in fish, wildlife, and plants.⁵⁵⁾

The stated purposes of the Act, defined in Section 1531 (b), were : “to provide a means whereby the ecosystems upon which endangered species and threatened species depend may be conserved, to provide a program for the conservation of such endangered species and threatened species, and to take such steps as may be appropriate” to achieve the purposes of the various international treaties and conventions pertaining to conservation.⁵⁶⁾ In Section 1531 (c), the Act further states that it is the policy of Congress that “all Federal departments and agencies shall seek to conserve endangered species and threatened species”, and that “Federal agencies shall cooperate with State and local agencies to resolve water resource issues in concert with conservation of endangered species”.⁵⁷⁾

Some of the more notable highlights of the Endangered Species Act of 1973 are as follows:

Section 1533 requires the Secretary⁵⁸⁾ to determine whether any species is an endangered species or a threatened species because of any of the following factors : (A) the present or threatened destruction, modification, or curtailment of a species’ habitat or range, (B) overutilization of a

55) 16 USCS Section 1531 (a) (2005)

56) 16 USCS Section 1531 (b) (2005)

57) 16 USCS Section 1531 (c) (2005)

58) In this section, “Secretary” means the Secretary of the Interior or the Secretary of Commerce, as program responsibilities are vested pursuant to the provisions of Reorganization Plan 4 of 1970[5 USCS Section 903 note]; except that with respect to the enforcement of the provisions of this Act and the Convention on International Trade in Endangered Species of Wild Fauna and Flora, signed on March 3, 1973, which pertain to the importation or exportation of terrestrial plants, the term also means the Secretary of Agriculture. 16 USCS Section 1532 (15) (2005).

species for commercial, recreational, scientific, or educational purposes, (C) disease or predation, (D) the inadequacy of existing regulatory mechanisms, or (E) other natural or manmade factors affecting the species' continued existence.⁵⁹⁾ (The term "endangered species" means any species which is in danger of extinction throughout all or a significant portion of its range other than a species of the Class Insecta determined by the Secretary to constitute a pest whose protection under the provisions of this Act would present an overwhelming and overriding risk to man.⁶⁰⁾ The term "threatened species" means any species which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.⁶¹⁾

Section 1533 (b) specifies that the government will determine whether a species is an endangered species or a threatened species on the basis of the best scientific and commercial data available after conducting a review of the status of the species and after taking into account efforts being made to protect the species.⁶²⁾

Section 1533 (c) requires that the government create a list of endangered species and a list of threatened species, and to conduct a review every 5 years to determine whether a listed species should be removed from the list, be changed in status from an endangered species to a threatened species, or be changed from a threatened species to an endan-

59) 16 USCS Section 1533 (2005)

60) 16 USCS Section 1532 (6) (2005)

61) 16 USCS Section 1532 (20) (2005)

62) 16 USCS Section 1533 (b) (2005)

gered species.⁶³⁾

Section 1533 (f) requires that federal agencies develop and implement recovery plans for the conservation and survival of listed endangered species and threatened species.⁶⁴⁾

Section 1534 authorizes the federal government to acquire lands, waters, or interest therein, by purchase, donation, or otherwise, in order to implement and carry out programs to conserve fish, wildlife, and plants which are listed as endangered species or threatened species.⁶⁵⁾

Section 1536 (a) requires each federal agency to insure that any actions authorized, funded, or carried out by the agency is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of a species' "critical habitat".⁶⁶⁾ ("Critical habitat" means 1) the specific areas within the geographical area occupied by the species on which are found the physical and biological features that are essential to the conservation of the species and which may require special management considerations or protection, and 2) specific areas outside the geographical area occupied by the species if the government determines that the areas are essential for the conservation of the species.⁶⁷⁾

63) 16 USCS Section 1533 (c) (2005)

64) 16 USCS Section 1533 (f) (2005)

65) 16 USCS Section 1534 (2005)

66) 16 USCS Section 1536 (a) (2) (2005)

Under Section 1536 (c), if a federal agency plans an activity or construction project, it must request the preparation of a biological assessment to determine whether any species which is listed or proposed to be listed (as an endangered species or a threatened species) may be present in the area of the planned activity or construction.⁶⁸⁾

Section 1538 (a) prohibits people (except when they have lawful authorization) from 1) importing or exporting any endangered fish or wildlife species, 2) “taking” any such species within the United States or its territorial seas, 3) “taking” any such species upon the high seas, 4) possessing, selling, delivering, carrying, transporting, or shipping any such species taken within the United States, its territorial seas or the high seas, 5) delivering, receiving, carrying, transporting, or shipping any such species in the course of a commercial activity, and 6) selling or offering to sell any such species.⁶⁹⁾ (The term “take” means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.⁷⁰⁾)

Section 1538 (a) also prohibits people (except when they have lawful authorization) from 1) importing or exporting any endangered plant species, 2) removing and reducing to possession any such plant species from federal lands, maliciously damaging or destroying any such species on federal lands; removing, cutting, digging up, damaging, or destroying

67) 16 USCS Section 1532 (5) (A) (2005)

68) 16 USCS Section 1536 (c) (2005)

69) 16 USCS Section 1538 (a) (1) (2005)

70) 16 USCS Section 1532 (19) (2005)

any such species on any other lands in knowing violation of State law or regulations, 3) delivering, receiving, carrying, transporting, or shipping any such species in the course of a commercial activity, or 4) selling or offering to sell any such species.⁷¹⁾

Section 1540 provides for stiff civil penalties (including fines of up to \$25,000 per violation) and criminal penalties (including fines of up to



Photograph taken on August 14, 2004, near Kalalau Lookout. An identification band is clearly visible on the left leg.

71) 16 USCS Section 1538 (a) (2) (2005)

\$50,000 and imprisonment of up to 1 year) for persons who violate the Act.⁷²⁾

Section 1540 (g) allows for citizen-filed lawsuits : 1) to enjoin the activities of any person (including the government) who is allegedly in violation of the Act, 2) to compel the government to apply the provisions of the Act, and 3) against the government when the government has failed to perform its duties under the Act.⁷³⁾

IV. Hawai'i State Level Law

In the United States, much more than in Japan, the individual state governments exercise the power to create laws separate from those issued by the federal (central) government.⁷⁴⁾ Because of this, there are both federal level laws and state level laws regarding the conservation of endangered species. At the Hawai'i state level, the statute that provides protection for the *Nene* is Chapter 195D : Conservation of Aquatic Life, Wildlife, and Land Plants.⁷⁵⁾ Chapter 195D was enacted in 1975 as the Hawai'i State version of the Endangered Species Act. The Chapter begins with a "Findings and declaration of necessity" section that reflects a fair amount of enlightened environmental awareness. The section reads as follows :

72) 16 USCS Section 1540 (a) and (b) (2005)

73) 16 USCS Section 1540 (g) (2005)

74) The states' power to do this is guaranteed by the 10th Amendment to the Constitution which reads: "The powers not delegated to the United States by the Constitution, nor prohibited by it to the States, are reserved to the States respectively, or to the people."

75) Hawaii Revised Statutes, Section 195D-1, et al. (2005)

Since the discovery and settlement of the Hawaiian islands by humans, many species of aquatic life, wildlife, and land plants that occurred naturally only in Hawaii have become extinct and many are threatened with extinction, primarily because of increased human use of the land and disturbance to native ecosystems.

All indigenous species of aquatic life, wildlife, and land plants are integral parts of Hawaii's native ecosystems and comprise the living heritage of Hawaii, for they represent a natural resource of scientific, cultural, educational, environmental, and economic value to future generations of Hawaii's people.

To insure the continued perpetuation of indigenous aquatic life, wildlife, and land plants, and their habitats for human enjoyment, for scientific purposes, and as members of ecosystems, it is necessary that the State take positive actions to enhance their prospects for survival.⁷⁶⁾

Under Chapter 195D, an "endangered species" is defined as "any species whose continued existence as a viable component of Hawaii's indigenous fauna or flora is determined to be in jeopardy and has been so designated pursuant to (this Chapter)".⁷⁷⁾ An "indigenous species" means any aquatic life, wildlife, or land plant species growing or living naturally in Hawaii without having been brought to Hawaii by humans.⁷⁸⁾

76) Hawaii Revised Statutes, Section 195D-1 (2005).

Chapter 195D makes direct reference to the federal Endangered Species Act of 1973 and states that any species that has been determined to be an endangered species pursuant to the federal act will be considered an endangered species for the purposes of Chapter 195D.⁷⁹⁾ But, going beyond just duplicating the lists made by the Federal government, Chapter 195D empowers the Hawaii State Department of Land and Natural Resources to list additional species that have not yet been included on the federal list.⁸⁰⁾ Like in the federal act, determinations of whether a species is endangered are to be made based on the basis of scientific and commercial data.⁸¹⁾ Also similar to the federal act, Chapter 195D prohibits : 1) the export of any threatened or endangered species, 2) the “taking” of any threatened or endangered species, and 3) the possession, processing, selling, offering for sale, delivering, carrying, transporting, or shipping of any threatened or endangered species.⁸²⁾

Chapter 195D also includes penalties to enforce its provisions. Violations of Chapter 195D are deemed to be misdemeanor crimes under Hawai'i law. A first offense is punishable by a fine of not less than \$250 or by imprisonment of not more than one year, or both.⁸³⁾ Second or subsequent offenses which occur within 5 years of a previous conviction are subject to a fine of not less than \$500 or by imprisonment of not more

77) Hawaii Revised Statutes, Section 195D-2 (2005).

78) Hawaii Revised Statutes, Section 195D-2 (2005).

79) Hawaii Revised Statutes, Section 195D-4 (a) (2005).

80) Hawaii Revised Statutes, Section 195D-4 (b) (2005).

81) Hawaii Revised Statutes, Section 195D-4 (c) (2005).

82) Hawaii Revised Statutes, Section 195D-4 (e) (2005).

83) Hawaii Revised Statutes, Section 195D-9 (a) (2005).

than one year, or both. On top of these penalties, an even heavier fine of \$5000 for each specimen of a threatened species and \$10,000 for each specimen of an endangered species may be levied if the convicted person intentionally, knowingly, or recklessly killed the specimen, or intentionally, knowingly, or recklessly removed the specimen from its original growing location.⁸⁴⁾

In addition to the criminal fines mentioned above, Chapter 195D also allows the State to impose civil administrative fines to recover administrative fees and costs, and to pay for the cost to correct the damage resulting from any violation of Chapter 195D. These administrative fines are also severe. A first violation fine may be up to \$2,500. A second violation within 5 years of the first violation may result in a fine of up to \$5,000. A third violation within 5 years of the last violation may result in a fine of up to \$10,000.⁸⁵⁾ In addition, an administrative fine of up to \$5,000 may be levied for each specimen of wildlife or plant taken, killed, injured, or damaged.⁸⁶⁾ Most importantly, a criminal action taken against a person who violates Chapter 195D will not preclude a second separate civil lawsuit to recover administrative fines and costs, and vice versa.⁸⁷⁾ Another interesting addition is the payment of informer's fees to people who provide information leading to the arrest and conviction of someone who violates Chapter 195D. In the case of a conviction, the informer may be paid one-half of the fine imposed and collected.⁸⁸⁾ Of course, an informer's fee is not paid if

84) Hawaii Revised Statutes, Section 195D-9 (b) (2005).

85) Hawaii Revised Statutes, Section 195D-9 (d) (2005).

86) Hawaii Revised Statutes, Section 195D-9 (e) (2005).

87) Hawaii Revised Statutes, Section 195D-9 (f) (2005).

the informant is a regular salaried sheriff, deputy sheriff, police officer, warden or constable, or officer or agent of the Department of Land and Natural Resources.

Like the federal act, Chapter 195D allows for citizen lawsuits. Any person, acting as a private attorney general, may commence a lawsuit : 1) against any state or county agency that is allegedly in violation of the terms of, or that has failed to fulfill the obligations imposed under, any habitat conservation plan or species' safe harbor agreement⁸⁹⁾, and 2) against the Department of Land and Natural Resources or the Board of Land and Natural Resources if there is an alleged failure to perform any act or duty under a habitat conservation plan or species' safe harbor agreement and accompanying license issued for private lands.⁹⁰⁾

A second Hawai'i statute that arguably provides protection for the *Nene* is Chapter 183D : Wildlife.⁹¹⁾ Chapter 183D mainly concerns hunting rules, but its provisions leave enough room for it to be interpreted as applicable to the *Nene*. In Chapter 183D, "wild birds" are defined to be

88) Hawaii Revised Statutes, Section 183D-11 (2005).

89) Habitat conservation plans are planning processes used by the Department of Land and Natural Resources and landowners to protect, maintain, restore, or enhance identified ecosystems, natural communities, or habitat types upon which endangered, threatened, proposed or candidate species depend upon. Hawaii Revised Statutes, Section 195D-21 (2005). Safe harbor agreements are agreements in which landowners voluntarily agree to create, restore, or improve habitats or to maintain currently unused habitats that threatened or endangered species can be reasonably expected to use. Hawaii Revised Statutes, Section 195D-22 (2005).

90) Hawaii Revised Statutes, Section 195D-32 (2005).

91) Hawaii Revised Statutes, Section 183D, et al. (2005).

“birds, other than game birds, living in a wild and undomesticated state, and the young and the eggs of those birds”.⁹²⁾ Since “game birds” are narrowly defined by Chapter 183D to be “birds designated by law or by rule for hunting”⁹³⁾, all other birds living in the wild (and by extension, all threatened and endangered birds), qualify to be “wild birds” for the purposes of this statute.

Chapter 183D includes a blanket protection for wild birds. Under the statute, “no person shall intentionally, knowingly, or recklessly take, catch, injure, kill, or destroy, or attempt to take, catch, injure, kill, or destroy, any wild bird, or to keep or have possession of any wild bird, dead or alive, or to damage or destroy a nest of any wild bird”⁹⁴⁾ unless they acquire a permit from the Department of Land and Natural Resources. Such permits may be issued for scientific and educational purposes, for distributing wild birds to different places in the State, for protection or medical treatment of the birds, in cases where the birds are agricultural or aquaculture pests, or if the birds constitute a health hazard to humans.⁹⁵⁾

Since there is no statutory language excluding “endangered” and “threatened” bird species from the definition of a “wild bird”, the *Nene* is theoretically subject to protection under both Chapter 195D and 183D. Furthermore, Chapter 195D, Section 28 specifically states that “(t) he

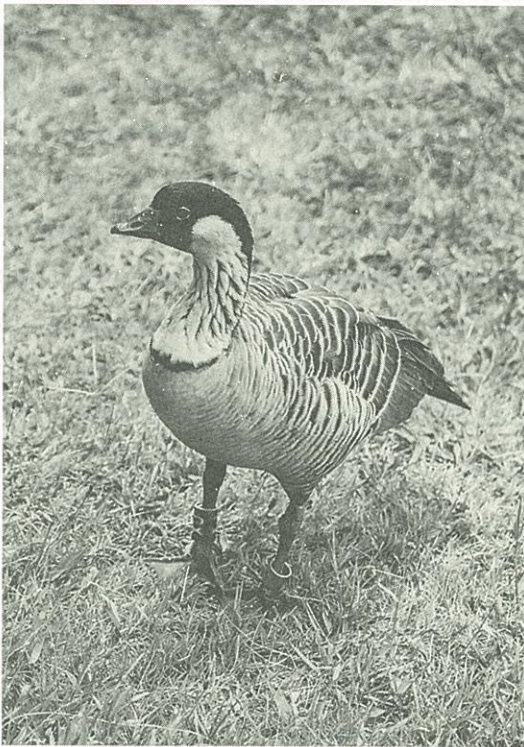
92) Hawaii Revised Statutes, Section 183D-1 (2005).

93) Hawaii Revised Statutes, Section 183D-1 (2005).

94) Hawaii Revised Statutes, Section 183D-62 (2005).

95) Hawaii Revised Statutes, Section 183D-61 (2005).

rights and remedies in this chapter shall be cumulative and in addition to any and all rights and remedies that may exist under applicable state and federal laws.”⁹⁶⁾ This appears to indicate that a prosecution under Chapter 183D would not preclude a prosecution under Chapter 195D. But for practical purposes, since Chapter 195D is sufficiently available to prosecute persons who harm the *Nene*, and because monetary penalties under Chapter 195D can be so much more severe than under Chapter 183D⁹⁷⁾,



Photograph taken on August 13, 2004 at Kilauea Point National Wildlife Refuge, Kaua'i, Hawai'i. Identification banding is clearly visible on both legs.

96) Hawaii Revised Statutes 195D-28 (2005).

the application of Chapter 183D to *Nene* is probably a moot question.

V. Court Decisions of Interest

There appear to be no reported court decisions directly involving the *Nene*. There are, however, three federal cases from the Hawai'i District involving the federal Endangered Species Act that are worth examining. The first case is *Palila v. Hawaii Department of Land & Natural Resources*, a dispute that involved three separate waves of litigation and spanned over 20 years. In the *Palila* case, the court was required to weigh the conservation interests of an endangered bird species versus the sport interests of big game hunters. The *Palila* (*Psittirostra bailleui*) is a small finch-billed member of the Hawaiian Honeycreeper family. It is approximately 6-inches long, found only in Hawai'i, and the known range of the *Palila* is limited to the remaining *mamane* (*Sophora chrysophylla*) and *naio* (*Myoporum sandwicense*) forests on the slopes of Mauna Kea on the Island of Hawai'i.⁹⁸ The *Palila* was designated as an endangered species at the same time as the *Nene* in 1967.⁹⁹

At the time of the first wave of decisions, often referred to as *Palila I*¹⁰⁰,

97) Criminal fines and prison terms under Chapter 183D may be comparable to criminal fines and prison terms under Chapter 195D, but there is a great difference in the possible per specimen fines. Under Hawaii Revised Statutes 183D-5, the fine assessed for each bird specimen taken is \$100. Under Hawaii Revised Statutes 195D-9, the fine assessed is \$5000 for each specimen of a threatened species and \$10,000 for each specimen of an endangered species.

98) *Palila v. Hawaii Dep't of Land & Natural Resources*, 471 F. Supp. 985 (1979) at 988.

99) 32 Federal Register 4001 (1967)

the State of Hawai'i's Department of Land and Natural Resources (Hawai'i DLNR) maintained a population of feral sheep and goats on the island of Hawai'i for sport-hunting purposes. The plaintiffs in the suit alleged that the feral sheep and goats ate and destroyed the *mamane* and *naio*, thus destroying the remaining critical habitat of the *Palila*. The court in *Palila I* ruled that the Hawai'i DLNR's maintenance of the feral sheep and goat population amounted to a "significant environmental modification or degradation" which actually caused injury to the *Palila*, and that injury amounted to a "harm" which could be construed to be a "taking" as defined under Section 1538 (a) (1) (B) of the Endangered Species Act.¹⁰¹⁾

The second wave of decisions in the *Palila* litigation, often referred to as *Palila II*¹⁰²⁾, involved essentially the same identical issues as in *Palila I* except that the damage to the bird's critical habit was being caused this time by mouflon sheep rather than feral sheep and goats.¹⁰³⁾ In its opinion

100) The District court decision is reported at *Palila v. Hawaii Dep't of Land & Natural Resources*, 471 F. Supp. 985 (1979); the 9th Circuit Court of Appeals decision is reported at *Palila v. Hawaii Dep't of Land & Natural Resources*, 639 F2d 495 (1981).

101) 471 F.Supp. 985 (1979) at 995.

102) The District court decision is reported at *Palila v. Hawaii Dep't of Land & Natural Resources*, 631 F. Supp. 787 (1985), *Palila v. Hawaii Dep't of Land & Natural Resources*, 649 F. Supp. 1070 (1986); the 9th Circuit Court of Appeals decision is reported at *Palila v. Hawaii Dep't of Land & Natural Resources* 852 F. 2d 1106 (1988).

103) At the time of *Palila I*, a scientific study regarding the Mouflon sheep had not yet been completed, and so the plaintiffs specifically excluded the Mouflon sheep from their prayers for relief in the *Palila I* action. Now that the study on Mouflon sheep had been completed, the plaintiffs refiled the second action aimed specifically at the Mouflon.

for *Palila II*, the court repeated much of its reasoning from *Palila I* and expanded its explanation of the key issues, adding that “(i) n passing the Endangered Species Act, it is ‘beyond doubt that that Congress intended endangered species to be afforded the highest of priorities.’”¹⁰⁴ The court found that the Hawai’i DNLR’s program of maintaining mouflon sheep, just like the maintaining of feral sheep and goats, resulted in a “taking” of the endangered *Palila* :

In conclusion, I find that the mouflon sheep are harming the *Palila* within the definition of 50 C. F. R. (Sec.) 17. 3. The mouflon are having a significant negative impact on the mamane forest, on which the *Palila* is wholly dependent for breeding, feeding, and sheltering. This significant habitat degradation is *actually presently injuring* the *Palila* by decreasing food and nesting sites, so that the *Palila* population is suppressed to its current critically endangered levels. If the mouflon continue eating the mamane, the forest will not regenerate and the *Palila* population will not recover to a point where it can be removed from the Endangered Species List. Thus, the presence of mouflon sheep on Mauna Kea threatens the continued existence and the recovery of the *Palila* species. If the *Palila* is to have any hope of survival, the mouflon must be removed to give the mamane forest a chance to recover and expand.¹⁰⁵ (*notes omitted*).

104) 649 F. Supp 1070 (1986) at 1076, citing *Tennessee Valley Authority v. Hill*, 437 U. S. 153, 175, 57 L. Ed. 2d 117, 98 S. Ct. 2279 (1978).

105) 649 F. Supp. 1070 (1986) at 1080.

The *Palila* litigation was resurrected again 11 years later when the Hawai'i DLNR and a group of sport hunters (who had intervened in the earlier actions) asked the court to rescind or amend its orders from *Palila I* and *Palila II* that required the State to eradicate all mouflon sheep and feral sheep from the area designated as the *Palila's* critical habitat. In this third round of litigation,¹⁰⁶⁾ the hunters argued that the sheep eradication efforts had been too successful, and that sport hunters could no longer find any sheep even in the parts of the Mauna Kea Game Management Area that did not overlap with the areas designated as the *Palila's* critical habitat.¹⁰⁷⁾ They further argued that the *mamane* trees had recovered enough that it could survive and co-exist with a small, managed population of sheep.

The court denied the request to rescind or amend its previous orders and stated that "(t)he interests of hunters were considered sufficiently important in the 1970's to give them standing to intervene. However, preservation of the *Palila* had priority over shooting sheep. *TVA v. Hill*, 437 U. S. 153, 98 S. Ct. 2279, 57 L. Ed. 2d 117 (1978), teaches us that Congress intended by the Endangered Species Act of 1973 to halt and reverse the trend towards species extinction - - whatever the cost."¹⁰⁸⁾

106) Reported at *Palila v. Hawaii Dep't of Land & Natural Resources* 73 F. Supp.2d 1181 (1999).

107) In the court's opinion, it is interesting to note the political involvement of U. S. Representative Patsy Mink and then Governor of Hawai'i Benjamin Cayetano on the side of the hunters. Considering the fact that among all the 50 states, Hawai'i's politics are usually considered to be on the pro-environment side, the appearance of two well respected politicians advocating against the interests of the endangered *Palila* seems to be somewhat of an anomaly.

108) 73 F. Supp.2d 1181 (1999) at 1185.

Later in the decision, the court expressed a very concise (and common sense) reason for upholding the sheep eradication orders : “...mouflon sheep can always be reintroduced on Mauna Kea. Palila once extinct are gone forever.”¹⁰⁹⁾

The second and third cases involved arguments that, in certain circumstances, the Endangered Species Act should not apply to native Hawaiians. In *United States of America v. Daryl Nuesca*, the defendant was convicted of a misdemeanor for taking two endangered green sea turtles in violation of Section 1538 (a) (1) (g) and 1540 (b) of the Endangered Species Act.¹¹⁰⁾ In appealing the conviction, Nuesca first argued that the Endangered Species Act did not prohibit the possession of a green sea turtle by a native Hawai'ian. He contended that native Hawai'ians traditionally hunted green sea turtles for subsistence purposes and therefore native Hawai'ians have an “aboriginal right” to continue the practice.¹¹¹⁾ In support of this argument, he cited the case of *United States v. Dion*, 476 U. S. 734, 106 S. Ct. 2216, 90 L.Ed. 2d 767 (1985), in which the court recognized the right of the Yankton Sioux Tribe to hunt endangered bald eagles. Because the native Hawai'ians, like the American Indian Tribes, was a group that saw its government collapse and its lands taken away by the United States government, Nuesca argued that a native Hawai'ian should be accorded similar “aboriginal rights”. With respect to this first argument, the court said that the Yankton Sioux Tribe in the *Dion* case

109) 73 F. Supp.2d 1181 (1999) at 1187.

110) *United States of America v. Daryl Nuesca*, 773 F. Supp. 1388 (1990).

111) 773 F.Supp. 1388 (1990) at 1390.

had a right by treaty to take the bald eagles. Since there was no treaty between the United States and the native Hawaiians regarding green sea turtles, nor was there any statute granting such a right to take green sea turtles, the court's granting of such a right would amount to a violation of the separation of powers doctrine.¹¹²⁾

Nuesca's second argument was based on Section 1539 (e) (1) of the Endangered Species Act. Section 1539 (e) (1) allowed any Indian, Aleut, or Eskimo who is an Alaskan native who resides in Alaska (or any non-native permanent resident of an Alaskan native village) to take an endangered animal, provided that the taking was for the purposes of subsistence. Nuesca argued that the circumstances of native Alaskans and native Hawaiians were similar, and that the Act's failure to recognize in native Hawaiians a right to take green sea turtles for subsistence purposes amounted to a violation of equal protection. With respect to this second argument, the court ruled that there was a "rational basis" to justify treating the native Alaskans differently under the Endangered Species Act because Alaskans lived in remote areas where access to conventional food supplies was virtually nonexistent.¹¹³⁾ By contrast, modern native Hawaiians did not live in such remote circumstances.

In the third case, *United States of America v. Daniel Peter Kaneholani*,¹¹⁴⁾ the defendant was convicted for taking an endangered

112) 773 F. Supp. 1388 (1990) at 1390.

113) 773 F. Supp. 1388 (1990) at 1392.

114) 773 F. Supp. 1393 (1990).

Hawaiian Monk Seal. In his defense, Kaneholani made the same “aboriginal rights” argument that Nuesca made in reference to green sea turtles.¹¹⁵⁾ Like in the *Nuesca* case, the court rejected the “aboriginal rights” and “subsistence” arguments.¹¹⁶⁾ Because the two cases involved the same legal arguments, the United States Court of Appeals for the Ninth Circuit heard the appeals together and affirmed both convictions in the same decision.¹¹⁷⁾ One of the points made by the court was that neither defendant could point to a treaty which gave native Hawaiians the right to hunt green sea turtles or Hawaiian monk seals, nor could they cite evidence that hunting turtles or seals was a traditional aspect of native Hawai‘ian life.¹¹⁸⁾

While these three cases do not involve *Nene*, they provide us with some interesting points of comparison. In the *Palila* case, the court’s decision was unpopular among big-game hunters because it effectively set aside large tracts of what would be good sheep and goat hunting areas for the conservation of an endangered species of bird that was (at the time) not very widely known by the public. This resulted in a two-decade effort by the hunters to rally political support against the *Palila*. In the case of the *Nene*, there are no such politicized groups exerting pressure to reduce

115) The published decisions indicate that Daryl Nuesca and Daniel Peter Kaneholani were represented by the same Federal Public Defender. Furthermore, both cases were decided by the same United States District Judge, and the *Kaneholani* decision was filed less than two months after the *Nuesca* decision.

116) In fact, some portions of the *Kaneholani* decision are virtually identical to portions of the *Nuesca* decision.

117) 945 F. 2d 254 (1991).

118) 945 F. 2d 254 (1991) at 257.

Nene habitat. This is probably because the *Nene* appears to be able, at least to some extent, to share its environs with human beings. Whereas the *Palila* had a dependence on two specific plants (the *mamane* and *naio*) which required the preservation of exclusive areas of land, the *Nene* thrive in open grasslands and appear to be less finicky about where those grasslands are located (apparently golf courses are sometimes okay).

Another big difference may be the “cute” factor. The *Palila* is a small, elusive, 6-inch bird found only on the slopes of Mauna Kea. As a result, few people in modern Hawai’ian society have ever had the opportunity to observe it up close in the wild, and few people hold any emotional ties to the species. In contrast, the *Nene* is a large-sized Goose that is reminiscent of the *Mother Goose* all children learn about through nursery rhymes. Also, since there is a history of the *Nene* being domesticated as a food source and as a pet, it is a much more familiar animal to the general public. That, and the fact that it is the Hawai’i State Bird, provides a stronger base of public sentiment to protect the *Nene*. Even if there ever were a conflict regarding using state land for recreational uses such as hunting sheep or protecting the *Nene*, the safe money would bet on the *Nene*.

The *Nuesca* and *Kaneholani* cases also provide material to ponder upon. If the court in those cases had accepted the defendants’ arguments that native Hawai’ians had some kind of “aboriginal right” to take an endangered species for “subsistence” purposes, it possibly could have resulted in an open season on *Nene*. As stated earlier in this article, there

is documentary evidence that consumption by early Hawai'ian settlers was a significant factor in the decrease of the *Nene* population. There are also recorded accounts that, when Europeans arrived in Hawai'i in the late 18th century, *Nene* were kept by the native Hawai'ians for food purposes. If the court had recognized an "aboriginal right" of native Hawai'ians to take an endangered species, it would have had ample basis to also recognize that a native Hawai'ian living off the land in a remote area had a right to eat *Nene* for subsistence. Since the *Nene* is just about a perfect fit for the American-sized oven, it is not hard to imagine that some people would try to exercise that right.



Photograph taken August, 1996 at Kalalau Lookout. The birds, hoping that the backpack contained some type of food, showed absolutely no fear of the photographer.

VI. Current Conservation Efforts and Future Challenges

At the present time, the main efforts to conserve the *Nene* are coordinated by the Hawaiian Endangered Bird Conservation Program. The program is a unique partnership composed of the United States Fish and Wildlife Service, the State of Hawai'i Division of Forestry and Wildlife (DOFAW), and the Zoological Society of San Diego, and in collaboration with organizations such as the U. S. Geological Survey, Biological Resources Division, the University of Hawaii, and the 'Alala, Maui and Kaula Partnerships.¹¹⁹⁾ The U. S. Fish and Wildlife Service also manages National Wildlife Refuges which provide habitat to the *Nene* ; including the Kilauea Point National Wildlife Refuge Complex on Kaula¹²⁰⁾ and the Hakalau Forest National Wildlife Refuge Complex on Hawai'i.¹²¹⁾ The State of Hawai'i Division of Forestry and Wildlife regulates activities in the state's forest reserves,¹²²⁾ including with respect to those wildlife species designated as "endangered" or "threatened".¹²³⁾ Captive breeding facilities on Hawai'i and Maui are operated by the Zoological Society of San Diego.

119) <http://www.hawaii.gov/dlnr/dofaw/captiveprop/consprog.htm>, (last visited on November 3, 2005.)

120) <http://www.fws.gov/pacificislands/wnwr/kkilaueanwr.html>, (last visited on November 3, 2005.)

121) <http://www.fws.gov/pacificislands/wnwr/bhakalaunwr.html>, (last visited on November 3, 2005.)

122) Hawai'i Administrative Rules, Section 13-104-1, et al. (2002).

123) The lists of "endangered" and "threatened" wildlife species are recorded as exhibits to Hawai'i Administrative Rules, Section 13-124 (2002).

Private efforts to conserve the *Nene* have also recently increased due to the 1995 creation of "Safe Harbor Agreements" under which private landowners voluntarily agree to engage in activities beneficial to endangered species.¹²⁴⁾ Some of the activities that landowners have agreed to conduct include maintaining certain trees that endangered species depend on, restoring prairie land, and even reintroducing endangered species into areas where they no longer exist. In exchange for doing these things, the government promises not to impose further land use restrictions on the subject property, even if the number of endangered species on the property increases.¹²⁵⁾ While Safe Harbor Agreements are not codified under federal law, they are considered permitted under Section 1539 (a) (1) (A) of the Endangered Species Act which permits normally prohibited activities if the activity enhances the propagation or survival of the affected species.¹²⁶⁾ Under Hawai'i state law, Safe Harbor Agreements are specifically permitted pursuant to Hawai'i Revised Statutes, Section 195D-22 which was enacted in 1997.

As of October 2005, four Safe Harbor Agreements for the benefit of *Nene* have been created in Hawai'i.¹²⁷⁾ In September 2001, the Puu O Hoku Ranch, a lodge and cattle ranching enterprise on the island of Moloka'i, agreed to maintain or improve *Nene* habitat for 7 years by continuing cattle ranching operations to maintain open short grass habitat

124) Darcy Kishida, *Safe Harbor Agreements Under the Endangered Species Act : Are They Right For Hawai'i?*, 23 Hawaii Law Review 507 (2001).

125) 23 Hawaii Law Review at 508.

126) 23 Hawaii Law Review at 508, note 15.

127) <http://www.state.hi.us/dlnr/dofaw/safeharbors/>, (last visited on November 3, 2005).

that the *Nene* prefer, to assist the state in establishing and maintaining *Nene* release sites, and to assist in controlling mammalian predators around the *Nene* breeding and release sites.¹²⁸⁾ In December 2001, the Umikoa Ranch, a Koa lumber enterprise on the island of Hawai'i, agreed to create and fence 152 acres of new wetland and upland and control mammalian predators for the benefit of the *Nene* and the *Koloa* duck.¹²⁹⁾ In April 2003, a programmatic agreement was created to encourage other properties on Moloka'i outside of the Puu O Hoku Ranch to also provide habitat for the *Nene*. And, in August 2004, Piiholo Ranch on the island of Maui agreed to maintain 600 acres of *Nene* habitat for a period of ten years.¹³⁰⁾

At the same time that additional cooperation by private landowners has been improving the odds of *Nene* survival on Hawai'i, Maui, and Moloka'i, it is important to remember that the survival of *Nene* on Kaua'i is not guaranteed. *Nene* have thrived on Kaua'i mainly due to the lack of mongooses and other land predators on the island. A recent newspaper article that reported the alleged citing of a mongoose on the island is a reminder that the daily transport of a multitude of modern goods and materials (whether by air or sea) into Kaua'i could always provide the opportunity for mongooses to establish themselves on the island.¹³¹⁾ A second con-

128) See *Safe Harbor Agreement for Nene Introduction to Puu O Hoku Ranch, Molokai*, available at <http://www.state.hi.us/dlnr/dofaw/safeharbors>.

129) See *Safe Harbor Agreement and Habitat Management Plan for Koloa (Hawaiian Duck) and Nene (Hawaiian Goose) on Umikoa Ranch, Island of Hawaii*, available at <http://www.state.hi.us/dlnr/dofaw/safeharbors>.

130) See *Safe Harbor Agreement for the Reintroduction of the Nene to Piiholo Ranch, Maui*, available at <http://www.state.hi.us/dlnr/dofaw/safeharbors>.

stant threat is the brown tree snake (*Boiga irregularis*), a native of the south eastern Pacific area from eastern Indonesia to the Solomon Islands and northern Australia.¹³²⁾ After World War II, and before 1952, the brown tree snake was accidentally introduced to Guam, probably as a stowaway in a military transport.¹³³⁾ Since there was an abundance of prey sources, and no natural predators, the brown tree snake thrived. It is now estimated that there are up to 13,000 brown tree snakes per mile in Guam,¹³⁴⁾ and their spread has resulted in the extermination of 9 of the island's 12 forest birds, half its lizards, and perhaps some of its bats. Between 1981 and 1994, seven brown tree snakes have been captured in Hawai'i, mostly near airport runways. Clearly, if the brown tree snake were to establish itself on Kaua'i, the effect on the *Nene* population would be catastrophic.

VII. Conclusion

History indicates that, from the time the first human settlers arrived in the Hawai'ian archipelago from Polynesia, the *Nene* were hunted by man, mongoose, and rats. And with the 18th century arrival of Europeans and their subsequent settlement in the islands, the hunting of *Nene* increased and continued until they stood on the very brink of extinction with only 33

131) *Traps set to catch mongoose on Kauai*, HONOLULU STAR BULLETIN, February 25, 2004. <http://starbulletin.com/2004/02/25/news/story7.html> (last visited on November 9, 2005).

132) <http://www.hawaii.gov/dlnr/Snake.html> (last visited on November 3, 2005).

133) http://www.fort.usgs.gov/resources/education/bts/bts_home.asp (last visited on November 3, 2005).

134) <http://www.invasivespeciesinfo.gov/profiles/bts.shtml> (last visited on November 3, 2005).

wild birds remaining. Conservation and propagation efforts were started in 1949, and in 1967, the *Nene* was recognized as an endangered species and placed under the protection of federal law which became even stricter with the passage of the Endangered Species Act of 1973. In 1975, the State of Hawai'i passed its own version of an Endangered Species Act which added another layer of legal protection for the *Nene*, and the net effect of conservation and protection efforts was that bird numbers have successfully increased to about 1,300 or 1,400 individuals. In the courts, decisions interpreting the federal Endangered Species Act with respect to another bird, the *Palila*, have directed that the State of Hawai'i must give the conservation of an endangered species the highest of priorities, and other ESA cases involving green sea turtles and Hawaiian monk seals suggest that not even native Hawai'ians would be allowed to hunt *Nene*, not even for subsistence purposes.

But despite the strong legal protections and the best efforts of public and private conservation groups, the long-term survival of the *Nene* is still an uncertain issue. Predation in the wild by mongooses, rats, feral dogs and feral cats provide an ever-present threat to the docile *Nene*. Furthermore, the possible entrance of brown tree snakes from Guam is another cause for continual vigilance. In all probability, the battle to protect the *Nene* and the other native Hawai'ian bird species will prove to be a never-ending one. But each time I meet a plump, friendly looking *Nene* up close in the wild, I am once again convinced that their survival is well worth the effort.