

TABLE C.—REQUIRED SEPARATION IN KILOMETERS (MILES) OF BASE STATION FROM PUBLIC COAST STATIONS—Continued

HAAT	Base Station Characteristics					
	Meters (feet)	ERP (watts)				
		400	300	200	100	50
30 (100)	154 (96)	151 (94)	145 (90)	137 (85)	130 (81)	
61 (200)	166 (103)	167 (104)	161 (100)	153 (95)	145 (90)	
122 (400)	187 (116)	177 (110)	183 (114)	169 (105)	159 (99)	

(v) In the event of interference, the Commission may require, without a hearing, licensees of base stations authorized under this section that are located within 241 kilometers (150 miles) of a co-channel public coast, I/ LT, or grandfathered public safety station licensed prior to July 6, 1998, or an international border, to reduce power, decrease antenna height, and/or install directional antennas. Mobile stations must be operated only within radio range of their associated base station.

(vi) Applicants seeking to be licensed for stations exceeding the power/ antenna height limits of the table in paragraph (iv) of this section must request a waiver of that paragraph and must submit with their application an interference analysis, based upon an appropriate, generally-accepted terrain-based propagation model, that shows that co-channel protected entities, described in paragraph (iii) of this section, would receive the same or greater interference protection than the relevant criteria outlined in paragraph (iii) of this section.

4. Section 90.179 is amended by revising paragraph (a) to read as follows:

§ 90.179 Shared use of radio stations.

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(a) Persons may share a radio station only on frequencies for which they would be eligible for a separate authorization. Licensees under Subpart R may share the use of their systems with any entity that would be eligible for licensing under § 90.523 and Federal government entities.

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5. A new section 90.553 is added to read as follows:

§ 90.553 GNSS protection.

In order to provide adequate protection to receivers of the Global Navigation Satellite System (GNSS) which will utilize the Radionavigation-Satellite Service (space-to-Earth) band, mobile units must meet a minimum second harmonic suppression standard in the frequency range of 1559–1605 MHz of 90 dB down from the maximum

effective radiated power of the carrier and handhelds and portable units must meet a minimum second harmonic suppression standard in the frequency range of 1559–1605 MHz of 80 dB down from the maximum effective radiated power of the carrier. This standard applies only to equipment operating in the frequency range of 779.5–802.5 MHz.

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DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 17

RIN 1018–AE91

Endangered and Threatened Wildlife and Plants; Proposed Rule To List the Short-Tailed Albatross as Endangered in the United States

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Proposed rule.

SUMMARY: Under the authority of the Endangered Species Act (Act) of 1973, as amended, the U.S. Fish and Wildlife Service (Service) proposes to extend endangered status for the short-tailed albatross (*Phoebastria albatrus*) to include the species' range within the United States. As a result of an administrative error in the original listing, the short-tailed albatross is currently listed as endangered throughout its range except in the U.S. Short-tailed albatrosses range throughout the North Pacific Ocean and north into the Bering Sea during the non-breeding season, and breeding colonies were historically present on islands in Taiwan. Originally numbering in the millions, the worldwide population of breeding age birds is currently approximately 500 individuals and the worldwide total population is less than 1000 individuals. There are no breeding populations of short-tailed albatrosses

in the U.S., but several individuals have been regularly observed during the breeding season on Midway Atoll in the Northwestern Hawaiian Islands. Current threats to the species include destruction of habitat by volcanic eruption or mud or land slides caused by monsoon rains, and demographic or genetic vulnerability due to low population size and limited breeding distribution. Longline fisheries, plastics ingestion, contaminants, and airplane strikes may also be factors affecting the species' conservation. This proposal, if made final, would implement the Federal protection and recovery provisions provided by the Act for individuals when they occur in the U.S.

DATES: Comments from all interested parties must be received by March 2, 1999. Public hearing requests must be received by December 17, 1998.

ADDRESSES: Comments and materials concerning this proposal should be sent to the Field Supervisor, Anchorage Field Office, U.S. Fish and Wildlife Service, 605 West 4th Avenue, Room G–62, Anchorage, AK 99501 (telephone 907/271–2787). Comments and materials received will be available for public inspection, by appointment, during normal business hours at the above address.

FOR FURTHER INFORMATION CONTACT: Greg Balogh, Endangered Species Biologist (telephone 907/271–2778).

SUPPLEMENTARY INFORMATION:

Background

Taxonomy

George Steller made the first record of the short-tailed albatross in the 1740s. The type specimen for the species was collected offshore of Kamchatka, Russia, and was described in 1769 by P.S. Pallas in *Spicilegia Zoologica* (AOU 1983). In the order of tube-nosed marine birds, Procellariiformes, the short-tailed albatross is classified within the family Diomedidae. Until recently, it had been assigned to the genus *Diomedea*. Following the results of genetic studies by Nunn et al. (1996), the family Diomedidae was arranged in four

genera. The genus *Phoebastria*, North Pacific albatrosses, now includes the short-tailed albatross, the Laysan albatross (*P. immutabilis*), the black-footed albatross (*P. nigripes*), and the waved albatross (*P. irrorata*) (AOU 1997).

Description

The short-tailed albatross is a large pelagic bird with long narrow wings adapted for soaring just above the water surface. The bill is disproportionately large compared to other northern hemisphere albatrosses and is pink and hooked with a bluish tip, has external tubular nostrils, and a thin but conspicuous black line extending around the base. Adult short-tailed albatrosses are the only North Pacific albatross with an entirely white back. The white head develops a yellow-gold crown and nape over several years. Fledged juveniles are dark brown-black, but soon obtain pale bills and legs that distinguish them from black-footed and Laysan albatrosses (Tuck 1978, Roberson 1980).

Historical Distribution

The short-tailed albatross once ranged throughout most of the North Pacific Ocean and Bering Sea, with known nesting colonies on the following islands: Torishima in the Seven Islands of Izu Group in Japan; Mukojima, Nishinoshima, Yomeshima, and Kitanoshima in the Bonin Islands of Japan; Kita-daitojima, Minami-daitojima, and Okino-daitojima of the Daito group of Japan; Senkaku Retto of southern Ryukyu Islands of Japan, including Minami-kojima, Kobisho and Uotsurijima; Iwo Jima in the western Volcanic Islands (Kazan-Retto) of Japan; Agincourt Island, Taiwan; and Pescadore Islands, of Taiwan, including Byosho Island (Hasegawa 1979, King 1981). Other undocumented nesting colonies may have existed. For example, recent observations together with records from the 1930s, suggest that short-tailed albatross may have once nested on Midway Atoll, USA. No confirmed historical breeding accounts are available for this area, however.

Early naturalists, such as Turner and Chamisso, believed that short-tailed albatrosses bred in the Aleutian Islands because high numbers of birds were seen nearshore during the summer and fall months (Yesner 1976). Alaska Aleut lore referred to local breeding birds and explorer O. Von Kotzebue reported that Natives harvested short-tailed albatross eggs. However, while adult bones were found in Aleut middens, fledgling remains were not recorded in over 400 samples (Yesner 1976). Yesner (1976)

believed that short-tailed albatrosses did not breed in the Aleutians but were harvested offshore during the summer, non-breeding season. Given the midwinter constraints on breeding at high latitudes and the known southerly location of winter breeding, it is highly unlikely that these birds ever bred in Alaska (Sherburne 1993).

Additional historical information on the species' range away from known breeding areas is scant. Evidence from archeological studies in middens suggests that hunters in kayaks had access to an abundant nearshore supply of short-tailed albatrosses from California north to St. Lawrence Island as early as 4000 years ago (Howard and Dodson 1933, Yesner and Aigner 1976, Murie 1959). In the 1880s and 1890s, short-tailed albatross abundance and distribution during the non-breeding season was generalized by statements such as "more or less numerous" in the vicinity of the Aleutian Islands (Yesner 1976). They were reported as highly abundant around Cape Newenham, in western Alaska, and Ventaiminov regarded them as abundant near the Pribilof Islands (DeGange 1981). In 1904, they were considered "tolerably common on both coasts of Vancouver Island, but more abundant on the west coast" (Kermode in Campbell et al., 1990).

Historical Population Status

At the beginning of the 20th century, the species declined in population numbers to near extinction, primarily as a result of hunting at the breeding colonies in Japan. Albatross were killed for their feathers and various other body parts. The feather down was used for quilts and pillows, and wing and tail feathers were used for writing quills; their bodies were processed into fertilizer and rendered into fat, and their eggs were collected for food (Austin 1949). Hattori (in Austin 1949) commented that short-tailed albatrosses were "...killed by striking them on the head with a club, and it is not difficult for a man to kill between 100 and 200 birds daily." He also noted that the birds were, "very rich in fat, each bird yielding over a pint."

Pre-exploitation worldwide population estimates of short-tailed albatrosses are not known; the total number of birds harvested may provide the best estimate, since the harvest drove the species nearly to extinction. Between approximately 1885 and 1903, an estimated 5 million short-tailed albatrosses were harvested from the breeding colony on Torishima (Yamashina in Austin 1949), and harvest continued until the early 1930s,

except for a few years following the 1903 volcanic eruption. One of the residents on the island (a schoolteacher) reported 3,000 albatrosses killed in December 1932 and January 1933. Yamashina (in Austin) stated that "This last great slaughter was undoubtedly perpetrated by the inhabitants in anticipation of the island's soon becoming a bird sanctuary." By 1949, there were no short-tailed albatrosses breeding at any of the historically known breeding sites, including Torishima, and the species was thought to be extinct (Austin 1949).

The species persisted, however, and in 1950, the chief of the weather station at Torishima, Mr. M. Yamamoto, reported nesting of the short-tailed albatross (Tickell 1973, 1975). By 1954 there were 25 birds and at least 6 pairs (Ono 1955). These were presumably juvenile birds that had been wandering the North Pacific during the final several years of slaughter. Since then, as a result of habitat management projects, stringent protection, and the absence of any significant volcanic eruption events, the population has gradually increased. The average growth of the Torishima, Tsubamesaki colony, between 1950 and 1977 was 2.5 adults per year; between 1978 and 1991 the average population increase was 11 adults per year. An average annual population growth as high as 6 percent per year (Hasegawa 1982, Cochrane and Starfield in prep.) has resulted in a continuing increase in the breeding population to an estimated 388 breeding birds on Torishima in 1998 (H. Hasegawa, Toho University, Chiba, Japan pers. comm.). Torishima is under Japanese government ownership and management and is managed for the conservation of wildlife. There is no evidence that the breeding population on Torishima is nest site limited at this point; therefore, ongoing management efforts focus on maintaining high rates of breeding success.

Two primary activities have been undertaken to enhance breeding success on Torishima. First, erosion control efforts at the Tsubamesaki colony have improved nesting success. Second, an attempt to establish a second breeding colony on Torishima involved an experimental program for luring breeding birds to the opposite side of the island from the Tsubamesaki colony. Preliminary results of the experiment are promising; the first chick was produced in 1997. The expectation is that absent a volcanic eruption or some other catastrophic event, the population on Torishima will continue to grow, but that it will be many years before the breeding sites are limited (Hasegawa 1997).

In 1971, 12 adult short-tailed albatrosses were discovered on Minami-kojima in the Senkaku Islands, one of the former breeding colony sites (Hasegawa 1984). Aerial surveys in 1979 and 1980 resulted in observations of between 16 and 35 adults. In April 1988, the first confirmed chicks on Minami-kojima were observed, and in March 1991, 10 chicks were observed. In 1991, the estimate for the population on Minami-kojima was 75 birds and 15 breeding pairs (Hasegawa 1991). There is no information available on historical numbers at this breeding site.

Short-tailed albatrosses have been observed on Midway Atoll since the early 1930s (Berger 1972, Hadden 1941, Fisher in Tickell 1973, Robbins in Hasegawa and DeGange 1982). There is one unconfirmed report of a short-tailed albatross breeding on Midway Atoll in the 1960s (H. Hasegawa pers. comm., in a letter from Dr. Harvey Fischer), but no subsequent reports of successful breeding exist. In the years following the reported observation, tens of thousands of albatrosses were exterminated from Midway Atoll to construct an aircraft runway, and to provide safe conditions for aircraft landings and departures. It is possible that short-tailed albatrosses nesting on the island were killed during this process (E. Flint, U.S. Fish and Wildlife Service, Honolulu pers. comm.). Since the mid 1970s, short-tailed albatrosses have been observed during the breeding season on Midway Atoll. In March 1994, a courtship dance was observed between two short-tailed albatrosses (Richardson 1994), and at least one has occupied a nest site and laid an egg which did not hatch (K. Niethammer, U.S. Fish and Wildlife Service, Midway Atoll pers. comm.). Midway Atoll is currently managed by the U.S. Government as a National Wildlife Refuge.

Observations of individuals have also been made during the breeding season on Laysan Island, Green Island at Kure Atoll, and French Frigate Shoals, but there is no indication that these occurrences represent established breeding populations (Sekora 1977, Fefer 1989).

The dramatic decline during the turn of the century and recent increases in numbers of short-tailed albatrosses were reflected in observations from the non-breeding season. Between the 1950s and 1970, there were few records of the species away from the breeding grounds according to the AOU Handbook of North American Birds (Vol. 1, 1962) and the Red Data Book (Vol.2, Aves, International Union for the Conservation of Nature, Morges,

Switzerland, 1966) (Tramontano 1970). There were 12 reported marine sightings in the 1970s and 55 sightings in the 1980s; over 250 sightings have been reported in the 1990s to date (Sanger 1972, Hasegawa and DeGange 1982, USFWS unpublished database). This observed increase in opportunistic sightings should be interpreted cautiously, however, because of the potential temporal, spatial, and numerical biases introduced by opportunistic shipboard observations. Observation effort, total number of vessels present, and location of vessels may have affected the number of observations independent of an increase in total numbers of birds present. Moreover, it is likely the reporting rate of observations has increased with implementation of outreach efforts by Federal agencies and fishing interest groups in the last few years.

At-sea sightings since the 1940s indicate that the short-tailed albatross, while very few in number today, is distributed widely throughout its historical foraging range of the temperate and subarctic North Pacific Ocean (Sanger 1972; USFWS unpublished data), and is found close to the U.S. coast. From December through April, distribution is concentrated near the breeding colonies in the Izu and Bonin Islands (McDermond and Morgan 1993), although foraging trips may extend hundreds of miles or more from the colony sites, if short-tailed albatross behavior is similar to black-footed and Laysan albatrosses. Recent satellite tracking of black-footed and Laysan albatrosses revealed that individuals of those species travel hundreds of miles from the breeding colonies during the breeding season (David Anderson, Wake Forest University, pers. comm.).

In summer (i.e., non-breeding season), individuals appear to disperse widely throughout the historical range of the temperate and subarctic North Pacific Ocean (Sanger 1972), with observations concentrated in the northern Gulf of Alaska, Aleutian Islands, and Bering Sea (McDermond and Morgan 1993, Sherburne 1993, USFWS unpublished data). Individuals have been recorded along the west coast of North America as far south as the Baja Peninsula, Mexico (Palmer 1962).

Current Population

A worldwide population total may be coarsely estimated by combining information from a variety of sources. Estimates of total numbers of breeding age adults and immature birds are obtained using a variety of different data and methods. The total estimates are rounded to the nearest hundred birds,

reflecting the lack of precision in some of the data.

Breeding age population estimates come primarily from egg counts and breeding bird observations. There were 388 breeding adults present on Torishima in 1998, assuming 2 adults are present for each of the 194 eggs counted. The most recent population count on Minami-kojima revealed 30 breeding adults present in 1991. A conservative estimate for observed breeding birds is therefore 400. It has been noted that an average of approximately 25 percent of breeding adults may not return to breed each year, and this rate may vary between years as much as an additional 25 percent (Cochrane and Starfield in prep.). It is reasonable, therefore, to estimate that approximately 100 additional breeding age birds may not be observed on the breeding grounds. The total estimate of breeding age birds is therefore 500.

Estimates of immature birds are more difficult to calculate because these individuals are rarely seen between fledging and breeding at approximately 6 years of age. Two different methods were used to estimate the number of immature birds in the population: (1) using observational data of chicks fledged, and (2) using modeling information. Both methods yielded similar results. H. Hasegawa (pers. comm.) reports that 509 chicks were fledged from the Tsubamesaki colony on Torishima between 1992 and 1997. The only information on number of chicks from Minami-kojima is that 10 chicks were counted by H. Hasegawa (pers. comm.) in 1991. Over the past 6 years, therefore, assuming a stable population, an estimated minimum of 60 chicks may have fledged from Minami-kojima. Based on an average juvenile survival rate of 96 percent (H. Hasegawa pers. comm., Cochrane and Starfield in prep.), this technique yields an estimate of approximately 500 immature individuals in the population. Alternatively, modeling information indicates that immature birds comprise approximately 47 percent of the total population. Breeding age birds are estimated at 500; therefore, using this method immature birds also number approximately 500.

The total population of short-tailed albatross is likely to number somewhere around 1,000 birds. No numerical estimates of uncertainty are available for this estimate.

Demographic Information

Short-tailed albatrosses are long-lived and slow to mature; the average age at first breeding is 6 years old (H.

Hasegawa pers. comm.). As many as 25 percent of breeding age adults may not return to the colony in a given year (H. Hasegawa pers. comm.; Cochran and Starfield in prep.) Females lay a single egg each year, which is not replaced if destroyed (Austin 1949). Adult and juvenile survival rates are high (96 percent), and an average of 0.24 chicks per adult bird on the colony survives to six months of age (Cochran and Starfield in prep.), but these rates can be severely reduced in years when catastrophic volcanic or weather events occur during the breeding season.

Breeding Biology

At Torishima, birds arrive at the breeding colony in October and begin nest building. Egg-laying begins in late October and continues through late November. The female lays a single egg, incubation involves both parents and lasts for 64–65 days, eggs hatch in late December and January, and by late May or early June, the chicks are almost full grown and the adults begin abandoning their nests (H. Hasegawa pers. comm.; Hasegawa and DeGange 1982). The chicks fledge soon after the adults leave the colony, and by mid-July, the colony is totally deserted (Austin 1949). Non-breeders and failed breeders disperse from the breeding colony in late winter through spring (Hasegawa and DeGange 1982). There is no detailed information on phenology (breeding activities) on Minami-kojima, but it is likely to be similar to that on Torishima.

Short-tailed albatrosses are monogamous and highly philopatric to nesting areas, returning to the same breeding site year after year. Chicks hatched at Torishima return there to breed. However, young birds may occasionally disperse from their natal colonies to breed, as evidenced by the appearance of adult birds on Midway Atoll that were banded as chicks on Torishima (H. Hasegawa pers. comm., Richardson 1994).

Breeding Habitat

Available evidence from historical accounts, and from current breeding sites, indicates that short-tailed albatross nesting occurs on flat or sloped sites, with sparse or full vegetation, on isolated windswept offshore islands, with restricted human access (Aronoff 1960, Sherburne 1993, DeGange 1981). Current nesting habitat on Torishima is steep sites on soils containing loose volcanic ash; the island is dominated by a grass, *Miscanthus sinensis* var. *condensatus*, but a composite, *Chrysanthemum pacificum*, and a nettle, *Boehmeria biloba*, are also present (Hasegawa 1977). The grass is

likely to stabilize the soil, provide protection from weather, and minimize mutual interference between nesting pairs while allowing for safe, open take-offs and landings (Hasegawa 1978). The nest is a grass or moss-lined concave scoop about 0.75 meters (m) (2 feet (ft.)) in diameter (Tickell 1975).

Marine Habitat

The common synonym of "coastal albatross" reflects the short-tailed albatross's predilection for nearshore waters. The Service's short-tailed albatross at-sea sightings database contains many observations of short-tailed albatrosses within 6 miles of shore, and several observations of birds within 3 miles of shore (Julie Michaelson, Alaska Natural Heritage Program, Anchorage, pers. comm.). Their presence may coincide with areas of high biological productivity, such as along the west coast of North America, the Bering Sea, and offshore from the Aleutians (Hasegawa and DeGange 1982).

The North Pacific marine environment of the short-tailed albatross is characterized by coastal regions of upwelling and high productivity and expansive, deep water beyond the continental shelf. The region has a clockwise, oceanic current flow with counter clockwise currents in the Gulf of Alaska and the Bering Sea (Sherburne 1993).

Diet

The diet of short tailed albatrosses includes squid, fish, flying fish eggs, shrimp and other crustaceans (Hattori in Austin 1949, H. Hasegawa pers. comm.). There is currently no information on variation of diet by season, habitat, or environmental condition.

Legal Status

The short-tailed albatross is listed as endangered on the State of Alaska's list of endangered species (State of Alaska, Alaska Statutes, Article 4. Sec. 16.20.19). This classification was supported by a letter to Commissioner Noerenberg from J.C. Bartonek (1972, in litt.) in which he recommended endangered status because the short-tailed albatross occurs or "was likely" to occur in State waters within the 3-mile limit of State jurisdiction (Sherburne 1993). The short-tailed albatross does not appear on the State list of Hawaii's list of threatened and endangered species.

The Japanese government designated the short-tailed albatross as a protected species in 1958, as a Special National Monument in 1962 (Hasegawa and DeGange 1982), and as a Special Bird for

Protection in 1972 (King 1981). Torishima was declared a National Monument in 1965 (King 1981). These designations have resulted in tight restrictions on human activities and disturbance on Torishima (H. Hasegawa pers. comm.). In 1992, the species was classified as "endangered" under the newly implemented "Species Preservation Act" in Japan which makes federal funds available for conservation programs and requires that a 10-year plan be in place which sets forth conservation goals for the species. The current Japanese "Short-tailed Albatross Conservation and Management Master Plan" outlines general goals for continuing management and monitoring of the species, and future conservation needs (Environment Agency 1996). The principal management practices used on Torishima are legal protection, habitat enhancement, and population monitoring. Since 1976, Dr. Hiroshi Hasegawa has systematically monitored the breeding success and population numbers of short-tailed albatrosses breeding on Torishima.

Previous Federal Action

Currently, the short-tailed albatross is listed as endangered under the Act, throughout its range, except in the U.S. (50 CFR 17.11), and is a Candidate species in the U.S. (September 19, 1997, Candidate Notice of Review, 62 FR 49398). The species was originally listed as endangered in accordance with the Endangered Species Conservation Act of 1969 (ESCA). Pursuant to the ESCA, two separate lists of endangered wildlife were maintained, one for foreign species and one for species native to the United States. The short-tailed albatross appeared only on the List of Endangered Foreign Wildlife (35 FR 8495; June 2, 1970). When the Act became effective on December 28, 1973, it superseded the ESCA. The native and foreign lists were combined to create one list of endangered and threatened species (39 FR 1171; January 4, 1974). When the lists were combined, prior notice of the action was not given to the governors of the affected States (Alaska, California, Hawaii, Oregon and Washington), as required by the Act because available data were interpreted as not supporting resident status for the short-tailed albatross. Thus native individuals of this species were never formally proposed for listing pursuant to the criteria and procedures of the Act.

On July 25, 1979, the Service published a notice (44 FR 43705) stating that, through an oversight in the listing of the short-tailed albatross and six other endangered species, individuals occurring in the United States were not

protected by the Act. The notice stated that it was always the intent of the Service that all populations and individuals of the seven species should be listed as endangered wherever they occurred. Therefore, the notice stated that the Service intended to take action to propose endangered status for individuals occurring in the U.S.

On July 25, 1980, the Service published a proposed rule (45 FR 49844; July 25, 1980), to list, in the United States, the short-tailed albatross and four of the other species referred to above. Since no final action was taken on the July 25, 1980 proposal, the Service is issuing this updated proposal. In 1996, the Service designated the species as a Candidate for listing in the U.S. (U.S. Fish and Wildlife Service in litt.).

Summary of Factors Affecting the Species

Section 4 of the Act and regulations (50 CFR part 424) promulgated to implement the listing provisions of the Act set forth the procedures for adding species to the Federal lists. A species may be determined to be an endangered or threatened species due to one or more of the five factors described in section 4(a)(1). These factors and their application to the short-tailed albatross are as follows:

A. The present or threatened destruction, modification, or curtailment of its habitat or range. Short-tailed albatrosses face a significant threat to the primary breeding colony on Torishima due to the potential of habitat destruction from volcanic eruptions on the island. The threat is not predictable in time or in magnitude. Eruptions could be catastrophic or minor, and could occur at any time of year. A catastrophic eruption during the breeding season could result in chick or adult mortalities as well as destruction of nesting habitat. Significant loss of currently occupied breeding habitat or breeding adults at Torishima would delay the recovery of the species or jeopardize its continued existence.

Torishima is an active volcano approximately 394 m (1,300 ft) high and 2.6 kilometers (km) (1.6 miles) wide (H. Hasegawa pers. comm.) located at 30.48° N and 140.32° E (Simkin and Siebert 1994). The earliest record of a volcanic eruption at Torishima is a report of a submarine eruption in 1871 (Simkin and Siebert 1994), but there is no information on the magnitude or effects of this eruption. Since the first recorded human occupation on the island in 1887, there have been four formally recorded eruption events: (1) On August

7, 1902, an explosive eruption in the central and flank vents which resulted in lava flow, and a submarine eruption, and caused 125 human mortalities; (2) On August 17, 1939, an explosive eruption in the central vent which resulted in lava flow, and caused two human mortalities; (3) On November 13, 1965, a submarine eruption and; (4) On October 2, 1975, a submarine eruption 9 km (5.4 mi) south of Torishima (Simkin and Siebert 1994). There is also reference in the literature to an additional eruption in 1940 which resulted in lava flow that filled the island's only anchorage (Austin 1949).

Austin (1949) visited the waters around Torishima in 1949 and made the following observations "The only part of Torishima not affected by the recent volcanic activity is the steep northwest slopes where the low buildings occupied by the weather station staff are huddled. Elsewhere, except on the forbidding vertical cliffs, the entire surface of the island is now covered with stark, lifeless, black-gray lava. Where the flow thins out on the northwest slopes, a few dead, white sticks are mute remnants of the brush growth that formerly covered the island. Also on these slopes some sparse grassy vegetation is visible, but there is no sign of those thick reeds, or "makusa" which formerly sheltered the albatross colonies. The main crater is still smoking and fumes issue from cracks and fissures all over the summit of the island."

In 1965, meteorological staff stationed on the island were evacuated on an emergency basis due to a high level of seismic activity; although no eruption followed, the island has since been considered too dangerous for permanent human occupation (Tickell 1973). In late 1997, Hiroshi Hasegawa observed more steam from the volcano crater, a more pronounced bulge in the center of the crater, and more sulphur crusts around the crater than were previously present (R. Steiner, Alaska Sea Grant Program, pers. comm.).

The eruptions in 1902 and 1939 destroyed much of the original breeding colony sites. The remaining site used by albatrosses is on a sparsely vegetated steep slope of loose volcanic soil. The monsoon rains that occur on the island result in frequent mud slides and erosion of these soils, which can result in habitat loss and chick mortality. A typhoon in 1995 occurred just before the breeding season and destroyed most of the vegetation at the Tsubamezaki colony. Without the protection provided by vegetation, eggs and chicks are at greater risk of mortality from monsoon rains, sand storms and wind (H.

Hasegawa pers. comm.). Breeding success at Tsubamezaki is lower in years when there are significant typhoons resulting in mud slides (H. Hasegawa pers. comm.).

In 1981, a project was supported by the Environment Agency of Japan and the Tokyo Metropolitan Government to improve nesting habitat by transplanting grass and stabilizing the loose volcanic soils (Hasegawa 1991). Breeding success at the Tsubamezaki colony has increased following habitat enhancement (H. Hasegawa pers. comm.). Current population enhancement efforts in Japan are concentrated on attracting breeding birds to an alternate, well vegetated colony site on Torishima which is less likely to be impacted by lava flow, mud slides, or erosion than the Tsubamezaki colony site (H. Hasegawa pers. comm.). Japan's "Short-tailed Albatross Conservation and Management Master Plan" (Environment Agency 1996) sets forth a long-term goal of examining the possibility of establishing additional breeding grounds away from Torishima once there are at least 1,000 birds on Torishima. Until other safe breeding sites are established, however, short-tailed albatross survival will continue to be at risk due to the possibility of significant habitat loss and mortality from unpredictable natural catastrophic volcanic eruptions and land or mud slides caused by monsoon rains.

B. Over utilization for commercial, recreational, scientific, or educational purposes. As previously mentioned, direct harvest of short-tailed albatrosses caused a catastrophic decline in population numbers (refer to Background); but today direct harvest of short-tailed albatrosses is considered rare. H. Hasegawa (pers. comm.) reports that some local Japanese fishermen in Izu and Ryukyu Islands hunt seabirds and may take some short-tailed albatrosses, but the likelihood that short-tailed albatrosses are taken, or the level of such take is not known. There is no other known direct take of short-tailed albatrosses for commercial, recreational, scientific or educational purposes.

C. Disease or predation. There are no known diseases affecting short-tailed albatrosses on Torishima or Minami-kojima today. However, the world population is vulnerable to the effects of disease because of the small population size and extremely limited number of breeding sites. H. Hasegawa (pers. comm.) reports that he has observed a wing-disabled bird every few years on Torishima, but the cause of the disability is not known. An avian pox has been observed in chicks of albatross

species on Midway Island, but it is unknown whether this pox infects short-tailed albatrosses or if it may have an effect on survivorship of any albatross species (T. Work, D.V.M., USGS, Hawaii).

Several parasites were documented historically on short-tailed albatrosses on Torishima: a blood-sucking tick that attacks its host's feet, a feather louse, and a carnivorous beetle (Austin 1949). However, current evidence suggests that there are no parasites affecting short-tailed albatrosses on Torishima, and there is no evidence that parasites caused mortality or had population level impacts in the past (H. Hasegawa pers. comm.).

Sharks may take fledgling short-tailed albatrosses as they desert the colony and take to the surrounding waters (Harrison 1979). Shark predation is well documented among other albatross species, but has not been documented for the short-tailed albatross. The crow, *Corvus* sp., is the only historically known avian predator of chicks on Torishima. Hattori (in Austin 1949) reported that one-third of the chicks on Torishima were killed by crows, but crows are not present on the island today (H. Hasegawa pers. comm.). Black or ship rats were introduced to Torishima at some point during human occupation; their effect on short-tailed albatrosses is unknown. Cats were also present, most likely introduced during the feather hunting period. They have caused damage to other seabirds on the island (Ono 1955), but there is no evidence to indicate an adverse effect to short-tailed albatrosses. Cats were present on Torishima in 1973 (Tickell 1975), but Hasegawa (1982) did not find any evidence of cats on the island.

D. The inadequacy of existing regulatory mechanisms. The purpose of this proposed rulemaking is to extend the protective status afforded by the Act to the short-tailed albatross throughout its range. The short-tailed albatross is currently listed under the Act as endangered outside of the U.S., or outside of the 200-mile limit from shore. The Service and the National Marine Fisheries Service have consulted under section 7 for federally managed "high seas" fisheries off of Alaska (i.e., between 3 and 200 miles from shore), but other protective mechanisms of the Act, such as prohibitions from direct taking, do not extend to albatrosses that occur within 200 miles from shore. Listing the species within the U.S. would provide more comprehensive and extensive protection for the species through sections 7, 9, and 10 of the Act, and through recovery planning.

Short-tailed albatrosses are currently protected from taking under the Migratory Bird Treaty Act of 1918, as amended (MBTA: 16 U.S.C. 703 *et seq.*), but MBTA jurisdiction extends only to 3 miles from shore.

Torishima and Minami-kojima are the only two confirmed breeding sites for short-tailed albatrosses, and both are under Japanese ownership and management. Of concern is that Minami-kojima has also been claimed by the Nationalist Republic of China and the People's Republic of China. The situation may present logistical and diplomatic problems in attempts to implement protection for the colony on the island (Tickell 1975).

On July 1, 1975, the short-tailed albatross was included in Appendix I of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). CITES is a treaty established to prevent international trade that may be detrimental to the survival of plants and animals. Generally, both import and export permits are required from the importing and exporting countries before an Appendix I species may be shipped, and Appendix I species may not be imported for primarily commercial purposes. CITES export permits may not be issued if the export will be detrimental to the survival of the species or if the specimens were not legally acquired. However, CITES does not itself regulate take or domestic trade.

E. Other natural or manmade factors affecting its continued existence. Other factors potentially represent threats to the species; however, no information is available to assess the probability of any one factor occurring in a way that will threaten the species with extinction. Nor is it possible to assess the potential extent or magnitude of the threat posed, because these will likely vary depending on the occurrence of any one threat in combination with other perturbations.

One of these factors is small population size. The worldwide breeding-age population of short-tailed albatrosses numbers approximately 500 individuals. A significant proportion of these individuals nest in the Tsubamezaki colony on Torishima. The remaining small number of breeding birds nest on Minami-kojima. Because the population size is small, and breeding is limited to two islands, a catastrophic volcanic or weather event on Torishima has the potential not only to significantly reduce the numbers of birds in the world, it also could reduce the worldwide breeding population to a level where the risk of extinction is high. Genetic diversity of the worldwide

population may also be cause for concern since the species experienced a severe bottleneck during the middle of this century.

The risk of extinction caused by a catastrophic event at the breeding colony is buffered by adult and immature non-breeding birds. An average of 25 percent of breeding age adults do not return to breed each year (H. Hasegawa pers. comm.), and immature birds do not return to the colony to breed until at least 6 years after fledging (H. Hasegawa pers. comm.). As much as 50 percent of the current total worldwide population may be immature birds. If suitable habitat were still available on Torishima, these birds could recolonize in years following a catastrophic event.

Another potential threat is damage or injury related to oil contamination, which could cause physiological problems from petroleum toxicity and by interfering with the bird's ability to thermoregulate. Oil spills can occur in many parts of the short-tailed albatrosses' marine range. Oil development has been considered in the past in the vicinity of the Senkaku Islands (Hasegawa 1981, in litt.). Future industrial development would introduce the risk of local marine contamination, or pollution due to blow-outs, spills, and leaks related to oil extraction, transfer and transportation. Historically short-tailed albatrosses rafted together in the waters around Torishima (Austin 1949) and small groups of individuals have occasionally been observed at sea (USFWS unpublished data). An oil spill in an area where individuals were rafting could affect the population significantly. The species' habit of feeding at the surface of the sea makes them vulnerable to oil contamination. Dr. Hiroshi Hasegawa (pers. comm.) has observed some birds on Torishima with oil spots on their plumage.

Consumption of plastics may also be a factor affecting the species' survival. Albatrosses often consume plastics at sea, presumably mistaking the plastics for food items, or consuming marine life such as flying fish eggs that are attached to floating objects. Dr. Hiroshi Hasegawa (pers. comm.) reports that short-tailed albatrosses on Torishima commonly regurgitate large amounts of plastics debris. Plastics ingestion can result in injury or mortality to albatrosses if sharp plastic pieces cause internal injuries, or through reduction in ingested food volumes and dehydration (Sievert and Sileo in McDermond and Morgan 1993). Young birds may be particularly vulnerable to potential effects of plastic ingestion prior to

developing the ability to regurgitate (Fefer 1989, in litt.). Auman (1994) found that Laysan albatross chicks found dead in the colony had significantly greater plastics loads than chicks injured by vehicles, a sampling method presumably unrelated to plastics ingestion, and therefore representative of the population. Dr. Hiroshi Hasegawa has observed a large increase in the occurrence of plastics in birds on Torishima over the last 10 years (R. Steiner pers. comm.), but the effect on survival and population growth is not known.

Another potential threat is short-tailed albatross mortality that is incidental to longline fishing in the North Pacific and Bering Sea. Short-tailed albatross mortalities occur in longline fisheries as a result of baited longline hooks that are accessible to foraging albatrosses during line setting and hauling. Five short-tailed albatrosses are known to have been taken by longline fisheries in Alaska from 1983–1996. The Service, in consultation with the National Marine Fisheries Service, determined that the Alaskan groundfish and halibut fisheries are likely to adversely affect short-tailed albatrosses, but are not likely to result in an appreciable reduction in the likelihood of survival and recovery of the species (USFWS 1989 and amendments, USFWS 1998). Consultation under section 7 of the Act has not been conducted for the Hawaiian longline fishery; the amount and likelihood of take in this fishery is difficult to determine because of the low rate of observer coverage (5 percent of fishing time is observed). There have been no reported takes of short-tailed albatrosses. Black-footed albatrosses and Laysan albatrosses are taken in this fishery (E. Flint pers. comm.). The magnitude of impacts caused by international longline fisheries is unknown.

Hasegawa (pers. comm.) reports that 3–4 birds per year on Torishima come ashore entangled in fishing gear, some of which die as a result. He also stated that some take by Japanese handliners may occur near the nesting colonies, although no such take has been reported. There is no additional information on the potential effects of fisheries near Torishima on the species.

At the current population level and growth rate, the level of mortality resulting from longline fisheries is not thought to represent a threat to the species' continued survival. However, in the event of a major population decline as a result of a natural environmental catastrophe or an oil spill, the effects of longline fisheries on

short-tailed albatrosses could be significant.

Another potential source of mortality is collision with aircraft on Midway Atoll. The current short-tailed albatross nest on Midway Atoll is located next to an active airplane runway. Black-footed and Laysan albatross mortalities occur periodically as a result of airplane strikes. It is possible, therefore, that short-tailed albatrosses could also be killed as a result of air traffic (Kevin Foster, U.S. Fish and Wildlife Service, Honolulu pers. comm.).

Summary

The worldwide population of short-tailed albatrosses continues to be in danger of extinction throughout its range due to natural environmental threats, small population size and the small number of breeding colonies. Longline fishing, plastics pollution, oil contamination, or airplane strikes are not likely to represent significant threats today, but any of these factors in combination with a catastrophic event on Torishima, could threaten future survival and recovery of the species. Most of the world's breeding population nests on Torishima in the Tsubamezaki colony. These individuals and the breeding habitat are at risk of measurable or significant population level impacts from a volcanic eruption on the island. The habitat at Tsubamezaki is further threatened by continued erosion and mud slides from monsoon rains despite the reduction of risk through habitat management. The only other known breeding location is on Minami-kojima, which is threatened by political unrest and internationally disputed ownership. Establishment of additional breeding colonies may be problematic. First, enough birds must be available to disperse to other sites. Second, colonization of Midway Island, the only recognized potential breeding site in the United States, may be compromised by take in longline fisheries and airplane strikes.

The Service has carefully assessed the best scientific and commercial information available regarding the past, present, and future threats faced by this species in determining to propose this rule. Based on this evaluation, the preferred action is to extend the listing of the short-tailed albatross as endangered to its U.S. range. The Service is also correcting the information in the Historic Range column of the short-tailed albatross entry in the list of endangered and threatened species (50 CFR 17.11(h)). The information in this column currently indicates the species' historic range includes the North Pacific Ocean

and Bering Sea, and lands and waters of Japan, China, Russia, and the United States. The Service will correct this to include Taiwan and Canada. This column is nonregulatory in nature and is provided for the information of the reader.

Critical habitat is not being proposed at this time for the short-tailed albatross for reasons discussed in the "Critical Habitat" section of this proposal.

Critical Habitat

Critical habitat is defined in section 3 of the Act as: (i) the specific areas within the geographical area occupied by a species, at the time it is listed in accordance with the Act, on which are found those physical or biological features (I) essential to the conservation of the species and (II) that may require special management considerations or protection; and (ii) specific areas outside the geographical area occupied by a species at the time it is listed, upon a determination that such areas are essential for the conservation of the species. "Conservation" means the use of all methods and procedures needed to bring the species to the point at which listing under the Act is no longer necessary.

Section 4(a)(3) of the Act, as amended, and implementing regulations (50 CFR 424.12) require that, to the maximum extent prudent and determinable, the Secretary designate critical habitat at the time the species is determined to be endangered or threatened. The Service finds that designation of critical habitat is not prudent for the short-tailed albatross at this time. Service regulations (50 CFR 424.12(a)(1)) state that designation of critical habitat is not prudent when one or both of the following situations exist: (i) The species is threatened by taking or other human activity, and identification of critical habitat can be expected to increase the degree of threat to the species, or (ii) such designation of critical habitat would not be beneficial to the species.

Critical habitat is not being proposed for the short-tailed albatross based on the Service's analysis and determination that such designation would not be beneficial to the species. Habitats outside of the U.S. are not eligible for critical habitat designation. Habitat within the U.S. used by short-tailed albatrosses include coastal waters of Alaska and Hawaii, and potential nesting habitat on Midway Atoll in the Hawaiian Islands.

Short-tailed albatrosses occur and forage throughout the coastal regions of the North Pacific Ocean and Bering Sea during the non-breeding season, and

throughout the Northwestern Hawaiian Islands during the breeding season. Although foraging areas are essential to the conservation of short-tailed albatrosses, there is currently no information to support a conclusion that any specific areas within U.S. jurisdiction are uniquely important. More importantly, adverse effects on the species occurring in the marine environment are a result of activities that threaten individual albatrosses rather than albatross habitat. These include incidental mortality in longline fisheries, and mortality or injury associated with plastics pollution and oil spills. These effects can be adequately addressed through the jeopardy standard of section 7 of the Act and through the section 9 prohibitions of the Act. With regard to foraging areas in U.S. waters, there would be no additional benefit or protection conferred through the destruction or adverse modification standard for critical habitat under section 7 of the Act.

The future potential for the Midway Atoll National Wildlife Refuge to serve as a geographically distinct breeding colony to recover the species is best realized through implementation of refuge system management planning. A management goal for Midway Atoll Refuge is to manage for the conservation and recovery of threatened and endangered species. Future project proposals which might adversely affect short-tailed albatrosses will be adequately addressed through the jeopardy standard of section 7 consultation and section 9 prohibitions of the Act. With regard to breeding areas and potential breeding areas within the U.S., there would be no additional benefit or protection conferred through the designation of critical habitat on the Midway Atoll Refuge over that conferred through the jeopardy standard of section 7 of the Act. Therefore, the Service finds that designation of critical habitat for the short-tailed albatross is not prudent.

Available Conservation Measures

Conservation measures provided to species listed as endangered or threatened under the Act include recognition, recovery actions, requirements for Federal protection, and prohibitions against certain activities. Recognition through listing encourages and results in conservation actions by Federal, State and local agencies, private organizations and individuals. The protection required of Federal agencies and the prohibitions against taking and harm are discussed, in part, below.

Section 7(a) of the Act, as amended, requires Federal agencies to evaluate their actions with respect to any species that is proposed or listed as endangered or threatened and with respect to its critical habitat, if any is being designated. Regulations implementing this interagency cooperation provision of the Act are codified at 50 CFR part 402. Section 7(a)(4) requires Federal agencies to confer informally with the Service on any action that is likely to jeopardize the continued existence of a proposed species or result in destruction or adverse modification of proposed critical habitat. If a species is listed subsequently, section 7(a)(2) requires Federal agencies to ensure that activities they authorize, fund, or carry out are not likely to jeopardize the continued existence of the species or destroy or adversely modify its critical habitat. If a Federal action may affect a listed species or its critical habitat, the responsible Federal agency must enter into formal consultation with the Service.

Federal agency actions that may require conference and/or consultation as described in the preceding paragraph include National Marine Fisheries Service Fishery Management Plans, management practices at the Midway Atoll National Wildlife Refuge, permits or authorization for oil tankering within the range of short-tailed albatrosses, and oil spill contingency plans.

The Act and its implementing regulations found at 50 CFR 17.21 set forth a series of prohibitions and exceptions that apply to all endangered species of wildlife. All prohibitions of section 9(a)(1) of the Act, implemented by 50 CFR 17.21, apply. These prohibitions, in part, make it illegal for any person subject to the jurisdiction of the United States, to take (includes harass, harm, pursue, hunt, shoot, wound, kill, trap, or collect; or to attempt to engage in any of these), import or export, ship in interstate commerce in the course of a commercial activity, or sell or offer for sale in interstate or foreign commerce any listed species. It is also illegal to possess, sell, deliver, carry, transport, or ship any such wildlife that has been taken illegally. Certain exceptions apply to agents of the Service and State conservation agencies.

Permits may be issued to carry out otherwise prohibited activities involving endangered wildlife species under certain circumstances. Regulations governing permits for endangered wildlife are at 50 CFR 17.22 and 17.23. Such permits are available for scientific purposes, to enhance the propagation or survival of the species,

and/or for incidental take in connection with otherwise lawful activities. Information collections associated with these permits are approved under the Paperwork Reduction Act, 44 U.S.C. 3501 *et seq.*, and assigned Office of Management and Budget Clearance number 1018-0094.

It is the policy of the Service (59 FR 34272) to identify to the maximum extent practicable at the time a species is listed those activities that would or would not constitute a violation of section 9 of the Act. The intent of this policy is to increase public awareness of the effect of the listing on proposed and ongoing activities within a species' range. The only known non-federal activities which may result in incidental take of short-tailed albatrosses are State managed hook-and-line longline fisheries. Activities which are not expected to result in any take of short-tailed albatrosses include: (1) fishing activities in Alaska and Hawaii other than hook-and-line longline fishing; (2) lawfully conducted vessel operations such as transport, tankering and barging; and (3) harbor operations or improvements. Questions regarding whether other specific activities will constitute a violation of section 9 should be directed to the Field Supervisor of the Anchorage Field Office (See ADDRESSES section).

Public Comments Solicited

The Service requests comments on the proposed listing of the U.S. population of the short-tailed albatross on the List of Endangered and Threatened Wildlife and the clarity of this proposal, pursuant to Executive Order 12866, which requires agencies to write clear regulations.

Proposed Listing

The Service intends that any final action resulting from this proposal will be as accurate and as effective as possible. Therefore, comments or suggestions from the public, other concerned governmental agencies, the scientific community, industry, or any other interested party concerning this proposed rule are hereby solicited. Comments particularly are sought concerning:

(1) Biological, commercial trade, or other relevant data concerning any threat (or lack thereof) to this species;

(2) The location of any additional populations of this species and the reasons why any habitat should or should not be determined to be critical habitat as provided by section 4 of the Act;

Dated: September 15, 1998.

Jamie Rappaport Clark,

Director, Fish and Wildlife Service.

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DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

50 CFR Parts 222 and 227

[I.D. 101498D]

Listing Endangered and Threatened Species and Designating Critical Habitat: Petition To List the Swordfish as Endangered and Designate Critical Habitat Under the Endangered Species Act Throughout the North Atlantic Ocean

AGENCY: National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Commerce.

ACTION: Notification of finding.

SUMMARY: NMFS has received a petition to list the swordfish (*Xiphias gladius*) as endangered and to designate critical habitat in the North Atlantic Ocean under the Endangered Species Act (ESA). NMFS finds that the petition does not present substantial scientific information indicating that the petitioned action may be warranted.

DATES: This petition finding was made on October 27, 1998.

ADDRESSES: Copies of the petition may be obtained from the Endangered Species Division, Office of Protected Resources, NMFS, 1315 East West Highway, Silver Spring, MD 20910.

FOR FURTHER INFORMATION CONTACT: Terri Jordan or Marta Nammack, NMFS, Office of Protected Resources, (301) 713-1401.

SUPPLEMENTARY INFORMATION:

Background

Section 4(b)(3) of the ESA contains provisions concerning petitions from interested persons requesting the Secretary of Commerce (Secretary) to list species under the ESA. Section 4(b)(3)(A) requires that, to the maximum extent practicable, within 90 days after receiving such a petition, the Secretary make a finding whether the petition presents substantial scientific information indicating that the petitioned action may be warranted. Section 424.14(b)(1) of NMFS' ESA implementing regulations define "substantial information" as the amount of information that would lead a reasonable person to believe that the measure proposed in the petition may be warranted (See 50 CFR 424.14). Section 424.14(b)(2) of these regulations contains factors the Secretary considers in evaluating a petitioned action.

On July 14, 1998, the Secretary received a petition dated July 13, 1998,

from Messrs. Jonah Crawford and Max Strahan of Greenworld to list swordfish as endangered and to designate critical habitat in the North Atlantic Ocean. The petitioner cites commercial over-utilization of swordfish and the inadequacy of existing regulatory mechanisms as reasons for population decline. However, the petitioner does not present substantial information with regard to these claims.

NMFS has reviewed the petition and information available in NMFS files. Although fisheries data available to NMFS provide evidence of some decline, (the North Atlantic stock is at 58 percent of its maximum sustainable yield (MSY)) no substantial evidence to indicate that the species may be threatened or endangered exists. The stock is overfished, but this only means that the current biomass cannot produce MSY on a continuing basis. Fishing quotas have been reduced in order to allow the stock to rebuild. Therefore, NMFS finds that the petition does not present substantial information indicating that listing the North Atlantic swordfish may be warranted.

Authority: The authority for this action is the Endangered Species Act (16 U.S.C. 1531 *et seq.*).

Dated: October 27, 1998.

Andrew A. Rosenberg,

Deputy Assistant Administrator for Fisheries, National Marine Fisheries Service.

[FR Doc. 98-29278 Filed 10-28-98; 2:51 pm]

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