

CANDIDATE ASSESSMENT AND LISTING PRIORITY ASSIGNMENT FORM

SCIENTIFIC NAME: Oceanodroma castro

COMMON NAME: Band-rumped (Harcourt's) storm-petrel

LEAD REGION: 1

INFORMATION CURRENT AS OF: 01/30/2003

STATUS/ACTION (Check all that apply):

New candidate

Continuing candidate

Non-petitioned

Petitioned - Date petition received: 05/08/1989

90-day positive - FR date: 09/21/1989

12-month warranted but precluded - FR date: \_\_\_\_\_

Is the petition requesting a reclassification of a listed species? \_\_\_\_\_

Listing priority change

Former LP: \_\_\_\_\_

New LP: \_\_\_\_\_

Latest Date species became a Candidate: 06/13/2002

Candidate removal: Former LP: \_\_\_\_\_ (Check only one reason)

A - Taxon more abundant or widespread than previously believed or not subject to a degree of threats sufficient to warrant issuance of a proposed listing or continuance of candidate status.

F - Range is no longer a U.S. territory.

I - Insufficient information on biological vulnerability and threats to support listing.

M - Taxon mistakenly included in past notice of review.

N - Taxon may not meet the Act's definition of "species."

X - Taxon believed to be extinct.

ANIMAL/PLANT GROUP AND FAMILY: Birds, family Hydrobatidae

HISTORICAL STATES/TERRITORIES/COUNTRIES OF OCCURRENCE: Hawaii: islands of Maui, Molokai, Oahu, Hawaii, and Kauai.

CURRENT STATES/ COUNTIES/TERRITORIES/COUNTRIES OF OCCURRENCE: Hawaii: islands of Maui, Hawaii, and Kauai.

LEAD REGION CONTACT (Name, phone number): Scott McCarthy (503) 231-6241

LEAD FIELD OFFICE CONTACT (Office, name, phone number): Pacific Islands Fish and Wildlife Office, Ecological Services, Marilet A. Zablan, 808-541-3441

## BIOLOGICAL INFORMATION:

### Species Description

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The band-rumped storm-petrel (*Oceanodroma castro*) is a small seabird about 20 centimeters (cm) (8 inches (in)) long. It is an overall blackish-brown bird with a white rump. Sexes are alike in size and appearance. The species is long-lived (15-20 years) and probably does not breed until its third year (Ainley 1984 in Harrison et al. 1990). There is little or no seasonal variation in plumage. Field identification can be difficult because several other species of storm-petrels are similar in size, color, and shape; however, vocalizations at breeding colonies are distinctive and can be used to identify the species (Allan 1962).

During the day, adults spend their time on the ocean foraging. Nests are placed in crevices, holes, and protected ledges along cliff faces, where a single egg is laid (Allan 1962; Harris 1969). Adults visit the nest site after dark, where they can be detected by their distinctive calls. In Hawaii, the nesting season occurs during the summer months, with adults establishing nesting territories in April or May. The incubation period averages 42 days (Harris 1969) and the young reach fledging stage in 64 to 70 days (Allan 1962; Harris 1969). Food is taken from the ocean surface and consists mostly of small fish, squid, crustaceans, oily scraps of marine animal carcasses, and garbage remnants (King 1967; Harris 1969).

### Taxonomy

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Band-rumped storm-petrel specimens were collected by naturalists visiting Hawaii during the 1800s, but were not recognized as *Oceanodroma castro* until the 1900s (Henshaw 1902). Prior to 1900, the Hawaiian bird had been described as an “unnamed petrel” in the genus *Thalassidroma* (Dole 1869, 1879), as *Cymochorea cryptoleucura* (Ridgeway 1882), and as *O. cryptoleucura* (Stejneger 1888). After Henshaw’s 1902 publication, the bird was commonly known as *O. castro cryptoleucura*, the Hawaiian storm-petrel (Harrison et al. 1990). Other common names for this species are the Harcourt’s or Madeiran storm-petrel. The native Hawaiian names for the bird include *oee*, *lupe`akeke*, and `ak` `ak` (Harrison et al. 1990).

Although the Hawaiian population was previously recognized as a distinct subspecies, taxonomists today generally combine the various Pacific populations into a single taxon. Austin (1952) studied the taxonomy of the band-rumped storm-petrel and concluded that, although the various populations exhibited minor size differences, these differences were not significant and the populations were best considered as belonging to a single subspecies. After examining a series of specimens, Harris (1969) likewise concluded that, although the species showed considerable variation among populations, the differences were not significant. The American Ornithologists’ Union (AOU) currently regards the species as monotypic with no recognized subspecies (Burt Monroe, Jr., AOU, in litt., 1989).

The band-rumped storm-petrel demonstrates high fidelity to nest chambers, suggesting genetic isolation of colonies (Allan 1962; Harris 1969). The actual degree of genetic isolation of the Hawaiian population is not known, and it is not likely that any genetic studies will be completed soon. A limited amount of dispersal, restricted mostly to pre-breeding young, may occur. Harris (1969) states that populations are “probably distinct with little mixing. The Japanese population is over 6,400 kilometers (km) (4,000 miles (mi)) west of Hawaii, and the Galapagos

population is a similar distance to the east. Investigations into the genetic relationships of the Hawaiian dark-rumped petrel (*Pterodroma phaeopygia sandwichensis*), a related species with disjunct breeding populations in the Galapagos and Hawaii, has shown no genetic interchange between the two locations (Browne et al. 1997). Browne et al. (1997) concluded that if one of the Pacific populations is lost, natural recolonization following from the other population is unlikely.

### Distinct Vertebrate Population Segment

The definition of “species” in section 3(15) of the Act includes any distinct population segment (s) of any species of vertebrate fish or wildlife that interbreed when mature. For a population to be listed under the Act as a distinct vertebrate population segment, three elements are considered--1) the discreteness of the population segment in relation to the remainder of the species to which it belongs, 2) the significance of the population segment to the species to which it belongs, and 3) the populations segment’s conservation status in relation to the Act’s standards for listing as endangered or threatened (61 FR 4722).

The available information indicates that distinct populations of band-rumped storm petrels are definable and that the distinct population segment of band-rumped storm-petrel in the Hawaiian Islands is discrete in relation to the remainder of the species as a whole. The population segment is distinct based on geographic and distributional isolation from other band-rumped storm-petrel populations in Japan, the Galapagos Islands, and the Atlantic Ocean. A population also can be considered “discrete” if it is delimited by international boundaries across which exist differences in management control of the species. The Hawaiian Islands population of the band-rumped storm petrel is the only population within U.S. borders or under U.S. jurisdiction.

A population segment is considered “significant” if its loss would constitute a significant gap in the range of the taxon. As discussed above, the Hawaiian Islands population constitutes the Central Pacific distribution of band-rumped storm petrels between the Galapagos and Japan populations. The loss of this population would cause a significant gap in the distribution of the band-rumped storm petrel in the Pacific, and could result in the complete isolation of the Galapagos and Japan populations without even occasional genetic exchanges. Based on the discreteness and significance of the Hawaiian Islands population, the Service considers it to be a distinct vertebrate population segment which warrants review for listing under the Endangered Species Act.

### Habitat

In Hawaii, there are a number of visual records in coastal waters around Kauai, including reports of regular concentrations of storm-petrels at various distances offshore from possible nesting colonies (Harrison et al. 1990; Tom Telfer, State of Hawaii, pers. comm., 1997). These “rafts,” which number from a few birds to perhaps a hundred, may be birds awaiting nightfall before coming ashore to the breeding colonies. Concentrations of birds found near the equator, almost due south of the Hawaiian Islands and in the Marshall islands (Spear et al. 1994), may be part of the Hawaiian population. Assignment of these central Pacific birds to an exact breeding location is speculative, but since studies at both the Galapagos and Japan colonies indicate that the band-rumped storm-petrel stays relatively close to its breeding areas, the Hawaiian population is the most likely source of these birds.

### Historical Range/Distribution

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The band-rumped storm-petrel was probably common on all of the main Hawaiian Islands when aboriginal Polynesians arrived about 1,500 years ago (Berger 1972; Harrison et al. 1990; Pyle 1984). As evidenced by abundant storm-petrel bones found in middens on the island of Hawaii (Harrison et al. 1990), and in excavation sites on Oahu and Molokai (Olson and James 1982), band-rumped storm-petrels once were numerous enough to be used as a source of food and possibly feathers (Harrison et al. 1990). Given the current lack of breeding colonies in Hawaii compared to pre-historic population levels, the band-rumped storm-petrel probably was significantly reduced in numbers upon the settlement of aboriginal Polynesians in the Hawaiian Islands. This likely was the beginning of a decline in the band-rumped storm-petrel population that has continued to the low numbers found today in the Hawaiian Islands.

### Current Range/Distribution

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The band-rumped storm-petrel is a widespread species found in the subtropics of the Pacific and Atlantic Oceans (Harris 1969). Breeding populations in the Atlantic are restricted to the eastern portions of the ocean, primarily in the Azores island group off north-western Africa (Cramp and Simmons 1977). Wintering populations may occur as far west as the mid-Atlantic, with small numbers regularly reaching the coasts of North and South America (Cramp and Simmons 1977). The Atlantic breeding and wintering populations are not within the borders of the United States (U.S.) or under U.S. jurisdiction. In the Pacific, there are three widely separated breeding populations--one in Japan, one in Hawaii, and one in the Galapagos (Richardson 1957; Harris 1969).

The Japanese population, which breeds on islets off the east coast of Japan, appears to range mostly east and south of Japan (Harrison 1983), within about 1,400 km (860 mi) of the breeding colonies. The lack of birds to the west of Hawaii was confirmed by Pyle and Engbring (1985) by an absence of records from western Micronesia, suggesting that these waters are seldom used by band-rumped storm-petrels. The scarcity of information in this part of the Pacific could reflect a lack of or limited amount of field work, or could indicate a distributional gap between the Japanese and Hawaiian populations.

Both the Atlantic and Pacific Oceans band-rumped storm-petrels are most commonly found in close proximity to breeding islands (King 1967). The three populations in the Pacific are separated by major distances across the ocean where birds are not continuously found. Pitman (1986) found virtually no records of birds from the Galapagos outside the immediate area of the Galapagos Islands. This indicates an at-sea distribution of birds in the central Pacific that is disjunct from the other Pacific nesting colonies to the east and west. Extensive at-sea surveys of the Pacific near Hawaii have revealed a broad gap in distribution of the band-rumped storm-petrel to the east and west of Hawaii (Pitman 1986; Spear et al. 1994).

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### Population Estimates/Status

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Populations in Japan and the Galapagos are comparatively large and number in the thousands (Coulter 1984; Hasegawa 1984), while the Hawaiian birds represent a small, remnant population of possibly only a few hundred pairs (Harrison et al. 1984; Harrison et al. 1990). The Hawaiian

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population of the band-rumped storm-petrel is the only population within U.S. borders or under U.S. jurisdiction.

Evidence of extant nesting populations of band-rumped storm-petrels in the Hawaiian Islands is based on detection of adult birds during breeding season surveys and by retrieval of fledglings in the fall. Band-rumped storm-petrels, as with other storm-petrels, make very distinctive calls throughout the breeding season as they approach their nesting colonies. These calls can be detected during nocturnal surveys and used to locate and identify nesting colonies. Fledglings have been retrieved on the islands of Hawaii and Kauai, and provide additional evidence of nesting colonies within the Hawaiian archipelago (Harrison et al. 1990). On Hawaii, band-rumped storm-petrels most likely nest in barren lava fields above 2,130 meters (m) (7,000 feet (ft)) elevation, on Kauai they most likely nest on cliff ledges or burrows (Service, unpubl. data 1992). Some nests are believed to occur at elevations of 3,050 m (10,000 ft) or more (Service, unpubl. data 1992). Land ownership of these sites include Haleakala and Hawaii Volcanoes National Parks on the islands of Maui and Hawaii, respectively, State, and private land.

### Kauai

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Despite the suggestion that the island of Kauai has the largest population in the islands (Harrison et al. 1990), breeding bird surveys on Kauai in 1992 by the Service (Service, unpubl. data 1992) detected only a few band-rumped storm-petrels, and only along the north shore in Nualolo Valley. Harrison et al. (1990), however, reports many band-rumped storm-petrels over the last 12 years on the south and southwest side of Kauai at the mouths of Waimea Canyon and Hanapepe Valley. Harrison et al. (1990) concluded that band-rumped storm-petrels probably nested along the cliffs of these two valleys and elsewhere on the island. A search of Hanapepe Valley in 1980 by J. Sincock revealed what appeared to be burrows, feathers, and feces on the cliff face 50-70 m (165-230 ft) from the top of the cliff (Harrison et al. 1990). In 1992, almost the same location was occupied by common mynas (*Acridotheres tristis*), and band-rumped storm-petrels were not heard during nocturnal surveys (Service, unpubl. data 1992). Crossin (1974) found band-rumped storm-petrels off the southern coast of Kauai but speculated that the population on the island "cannot be large."

### Hawaii

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Band-rumped storm-petrels nest on the upper western slopes (1,830-3,050 m (6,000-10,000 ft)) of Mauna Loa on the island of Hawaii (Banko et al. 1991; Service, unpubl. data 1992), but only in small numbers. The northern and southern portions of Mauna Loa were examined during surveys over multiple nights in 1992, but these efforts failed to locate any colonies. Surveys of other portions of Hawaii failed to discover any birds, even with the use of marine radar and night-vision optics (Cooper et al. 1996; Reynolds et al. 1997).

### Kahoolawe

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Olson (1992) reported the historical presence of band-rumped storm-petrels on Kahoolawe Island and speculated that the species may still exist there; however, rat populations on this island likely would limit any successful breeding.

### Maui

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On Maui, band-rumped storm-petrels were detected during breeding season surveys at Haleakala Crater in 1992 (Service, unpubl. data 1992). This survey confirmed past records of a small number of storm-petrels vocalizing during the breeding season at this location (Pyle 1984; Warren B. King, pers. comm. in Harrison et al. 1990). Despite extensive work in the dark-rumped petrel colonies within Haleakala National Park, no band-rumped storm-petrel nest sites have ever been located (C. Natividad-Hodges, Haleakala National Park, pers. comm., 1997).

Recent breeding season surveys on Hawaii, Maui, and Kauai, as well as reports of fledglings picked up on Hawaii and Kauai, confirm that remnant populations still exist on these Hawaiian islands. Harrison et al. (1990) states that estimates of the total State-wide population could exceed 100 pairs if viable breeding populations exist on Maui and Hawaii. Although remnant populations do occur on Maui and Hawaii, it is not possible to determine if they are viable; certainly they are not large and they represent a fraction of pre-historic distribution. Spear et al. (1994) estimated that perhaps as many as 5,500 birds occur in the eastern and central tropical Pacific. Given the limited range of most storm-petrels from their breeding colonies (Pitman 1986), it is likely that these birds are from Hawaii.

#### THREATS:

##### A. The present or threatened destruction, modification, or curtailment of its habitat or range.

The significant impact to the band-rumped storm-petrel results from the effects of artificial lights on fledgling young and, to a lesser degree, adults. Artificial lighting of roadways, resorts, ballparks, residences, and other development in lower elevation areas both attracts and confuses night-flying, storm-petrel fledglings, resulting in “fall-out” (Harrison et al. 1990) and collisions with buildings and other objects (Banko et al. 1991). Artificial lights modify the night sky through which the fledgling birds must navigate after leaving the nest to reach the open sea. Over a 12-year period, from 1978 to 1990, Harrison et al. (1990) reports that 15 band-rumped storm-petrels, 13 of which were young, were recovered on Kauai as a result of fall-out. The actual extent of such loss and its overall impact on the population is not known because the majority of “fall-outs” are not detected (“fall-outs” are likely scavenged and consumed by predators such as feral cats; see discussion under Factor C below for more information on predators), but any loss in such a small population is significant. The impact from artificial lighting is expected to increase as human population grows and development continues on Kauai and other Hawaiian Islands. The human population on Kauai increased by 24 percent between 1970 and 1980 (Department of Geography, University of Hawaii 1983). The County of Kauai has recognized the potential threat caused by artificial lighting and is using shields on street lights in the vicinity of some presumed storm-petrel nesting areas (Reed et al. 1985; T. Telfer, pers. comm., 1997).

The rocky cliffs where band-rumped storm-petrels are thought to nest are too steep for development, and there is no development in the higher elevation lava fields on Mauna Loa, Hawaii, where storm-petrel colonies are believed to occur. Feral goats may occasionally forage along cliffs, but such grazing would not be expected to significantly affect the quality of nesting habitat.

##### B. Overutilization for commercial, recreational, scientific, or educational purposes.

Overutilization is not a threat to the band-rumped storm-petrel. Currently, the species is not known to be taken or used for commercial, recreational, scientific, or educational purposes.

### C. Disease or predation.

There have been no studies conducted on the impact of disease in band-rumped storm-petrels; therefore, the significance of such threats as a factor limiting the population is presently unknown. However, avian diseases have had a devastating effect on many endemic Hawaiian forest birds, many of which have little resistance to introduced diseases. Avian pox (Poxvirus avium) causes lesions on the feet, legs, and bills, and is transmitted by physical contact or through vectors such as mosquitoes. Avian malaria (Plasmodium relictum capistranoae) is vectored by the southern house mosquito (Culex quinquefasciatus), and clearly limits the distribution of many Hawaiian birds (Service 1984; Atkinson et al. 1993).

Introduced predators are one of the most serious threats facing the band-rumped storm-petrel. The Polynesian rat (Rattus exulans) was introduced to the Hawaiian Islands by Polynesians prior to the arrival of Europeans, and the rat probably was one of the first serious predators introduced to these islands. Since the arrival of Europeans, a number of additional predators have been introduced, including the feral or domestic cat (Felis catus), mongoose (Herpestes auropunctatus), common barn owl (Tyto alba), and two additional species of rats, the black rat (R. rattus) and Norway rat (R. norvegicus). These predators are generally found throughout the main Hawaiian Islands, with the exception of the mongoose, which has not spread to Kauai.

Predation by introduced species has played a significant role in reducing storm-petrel numbers and in exterminating colonies in the Pacific and other locations worldwide (Flint 1999; Moors and Atkinson 1984). There is ample evidence documenting the devastating affect of introduced predators on seabirds (Flint 1999; Moors and Atkinson 1984). In New Zealand, petrel species are common on islands free of Polynesian rats, but are rare or absent on neighboring islands inhabited by this predator (Robertson and Bell 1984). Olson (1992) reported the historical presence of the band-rumped storm-petrel on Kahoolawe Island and speculated that it may still exist there; however, rat populations on Kahoolawe would limit any successful breeding. Small ground/burrow nesting seabirds such as storm-petrels, as well as their eggs and young in such nests, are highly susceptible to predation by rats and other mammalian predators larger than mice (Flint 1999). The band-rumped storm-petrel, like many seabirds, is relatively small in size, lacks effective anti-predator behavior, and has a lengthy incubation and fledgling period, making the species highly vulnerable to predation by introduced mammals.

The effect of these predators, particularly the cat, on the band-rumped storm-petrel is likely devastating, given the evidence on the islands of Hawaii and Maui of predation on the Hawaiian dark-rumped petrel, a related seabird that suffers huge losses to introduced predators and nests in close proximity to the suspected location of band-rumped storm-petrel nests (Service, unpubl. data 1992; C. Natividad-Hodges 1994; D. Hu, unpubl. data 1997). During surveys on Mauna Loa, Hawaii in 1992, several caches of Hawaiian dark-rumped petrel carcasses associated with feral cat predation have been recorded in the same areas where band-rumped storm-petrel vocalizations were recorded (Service, unpubl. data 1992). Population modeling of the Hawaiian dark-rumped petrel indicates that predation levels as low as 10 percent in a single season would require a recovery period of at least seven years (Natividad-Hodges 1994). The Hawaiian dark-

rumped petrel study sites on Mauna Loa and Haleakala are in areas where band-rumped storm-petrels have been detected during night-time surveys. The effects of introduced predators on the breeding success of Hawaiian dark-rumped petrels are probably similar to the effects on band-rumped storm-petrel breeding success since these birds are equally vulnerable and nest in the same areas.

D. The inadequacy of existing regulatory mechanisms.

The band-rumped storm-petrel is currently protected under Federal law by the Migratory Bird Treaty Act (MBTA) (16 U.S.C. 703-712). The MBTA regulates most aspects of take, possession, transport, sale, purchase, barter, export, and import of migratory birds including the band-rumped storm-petrel. These regulations protect the species from killing, capturing, and collecting (without appropriate permits) individuals, eggs, and nests unless such action is authorized by permit. While the MBTA does prohibit actions that directly kill a covered species, unlike the Endangered Species Act, it does not prohibit habitat modification that indirectly kills or injures a covered species. Therefore, the MBTA affords no habitat protection when the birds are not present.

The Hawaiian population of the band-rumped storm-petrel is also listed by the State of Hawaii as an endangered species under Hawaii State Endangered Species Act (HSESA) (Hawaii Revised Statutes (HRS), Sect. 195D-4(a)). The HSESA prohibits take, possession, sale, transport, or export of adults, eggs, or young, except as authorized by law, license, or permit.

Although these regulations offer significant protection if storm-petrels were taken for commercial, recreational, or other reasons, they contribute minimally to the active management and recovery of a species. The chance of implementing conservation measures that would lead to recovery of the species would be improved if the band-rumped storm-petrel were federally listed as endangered. As a species covered under the Act, the band-rumped storm-petrel would benefit from an approved recovery plan that would guide recovery efforts, identify responsible agencies, and support agencies in obtaining funding for needed recovery actions. Further, the State may enter into agreements with Federal agencies to administer and manage any area required for the conservation, management, enhancement, or protection of endangered species (HRS, Sect. 195D-5(c)). Funds for these activities could be made available under section 6 of the Act (via State Cooperative Agreements). Listing of this animal species would therefore reinforce and supplement the protection available under State law. Since many of the band-rumped storm-petrels may nest on National Park Service lands, the provisions of section 7 of the Act would be applied to any actions authorized, funded, or conducted by the National Park Service that may affect the band-rumped storm-petrel.

E. Other natural or manmade factors affecting its continued existence.

Unstudied factors that could affect the continued existence of the band-rumped storm-petrel includes commercial fisheries interactions or alteration of the prey base upon which the storm-petrel depends. Commercial fisheries are known to adversely affect certain species of seabirds (Furness and Ainley 1984). Prey items taken by the storm-petrel are small, and there are no commercial fisheries that are known to compete directly for this resource. However, the effect of large drift nets, purse seines, long lines, and other fishing methods on the pelagic ecosystem is not clearly understood.

Pollution of the open oceans by plastics and other debris that can be mistaken as food by storm-petrels (Harrison et al. 1990), also may pose a threat to the population. Although a study by Spear et al. (1995) found no evidence of plastic ingestion by band-rumped storm-petrels, the sample size was inadequate and many closely related seabirds did suffer ill effects from plastic ingestion. The effects of plastic ingestion include physical damage to the digestive tract and the introduction of toxins. Some evidence also indicates that birds that are already in poor health may eat more plastic particles than healthy individuals.

The small size of the extant Hawaiian population of band-rumped storm-petrels, perhaps not more than a few hundred birds, could be a threat to this species. Small population are more susceptible to stochastic, genetic, environmental, and demographic events that can lead to extinction.

A single human-caused action such as the accidental introduction of mongoose to Kauai, or a natural environmental disturbance such as a hurricane during the breeding season, could destroy a significant percentage of the known extant individuals cause reproductive failure, and prevent recovery of the population.

Of particular concern is the threat of accidental introduction of the brown tree snake (*Boiga irregularis*) from Guam, Saipan or the Solomon Islands. The brown tree snake is an aggressive predator of birds that has caused a significant decline in avifauna on some Pacific Islands and has been detected on the island of Oahu.

The combined effects of these factors can degrade band-rumped storm-petrel habitat or result in increased competition or predation, leading to a gradual decline in population size and further increasing the effects that naturally occurring events have on the population.

**FOR RESUBMITTED PETITIONS:**

- a. Is listing still warranted? Y
- b. To date, has publication of a proposal to list been precluded by other higher priority listing actions? Y
- c. Is a proposal to list the species as threatened or endangered in preparation? N
- d. If the answer to c. above is no, provide an explanation of why the action is still precluded: Since publication of the 2002 CNOR, the publication of a proposed rule to list this species has been precluded by other higher priority listing actions, and based on work scheduled we expect that will remain the case for the remainder of Fiscal Year 2004. Almost the entire national listing budget has been consumed by work on various listing actions taken to comply with court orders and court-approved settlement agreements, emergency listing, and essential litigation-related, administrative, and program management functions. We will continue to monitor the status of the band-rumped storm-petrel as new information becomes available. This review will determine if a change in status is warranted, including the need to make prompt use of emergency listing procedures.

**LAND OWNERSHIP:** Federal, State of Hawaii, and private land.

PRELISTING: Surveys of possible nesting areas on Kauai were conducted in 2002 by Ken Wood of the National Tropical Botanical Garden, supported partially by the Pacific Islands Fish and Wildlife Office. The results of those surveys are not yet available, but they will help to increase our knowledge about the species distribution and identify sites where management actions could be conducted in the future.

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LISTING PRIORITY (\* after number)

THREAT
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Magnitude	Immediacy	Taxonomy	Priority
High	Imminent	Monotypic genus	1
		Species	2
		Subspecies/population	3 *
	Non-imminent	Monotypic genus	4
		Species	5
		Subspecies/population	6
Moderate to Low	Imminent	Monotypic genus	7
		Species	8
		Subspecies/population	9
	Non-imminent	Monotypic genus	10
		Species	11
		Subspecies/population	12

**Rationale for listing priority number:**

*Magnitude:* The magnitude of the threat is high due to the serious threat posed by introduced predators and the impacts of artificial lighting. Other seabird species have been seriously impacted by introduced predators such as rats and feral cats, and the impacts of alien predators on the band-rumped storm-petrel are likely to be more severe because of its small size.

*Imminence:* The imminence of the threat is immediate because the species already has been extirpated from some islands, its populations are thought to be very small on the islands where it still occurs, and predators and artificial lighting and communication towers are known to be impacting other seabird species in the same areas.

APPROVAL/CONCURRENCE: Lead Regions must obtain written concurrence from all other Regions within the range of the species before recommending changes to the candidate list, including listing priority changes; the Regional Director must approve all such recommendations. The Director must concur on all additions of species to the candidate list, removal of candidates, and listing priority changes.

Approve: Rowan Gould March 6, 2003  
Regional Director, Fish and Wildlife Service Date

Concur: Steve Williams April 5, 2004  
Director, Fish and Wildlife Service Date

Do not concur: \_\_\_\_\_  
Director, Fish and Wildlife Service Date

Director's Remarks: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Date of annual review: February 2003  
Conducted by: \_\_\_\_\_

Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_