

BAND-RUMPED STORM-PETREL

Oceanodroma castro

Other: Hawaiian Storm-Petrel, Harcourt Storm-Petrel,
Madeiran Storm-Petrel, 'Ake'ake, 'o'e'o'e,

monotypic

breeding visitor, indigenous, endangered (State)

The Band-rumped Storm-Petrel breeds in localized populations and disperses widely throughout the world's tropical and subtropical oceans (Harrison 1983, AOU 1998). In the Pacific, breeding has been documented at the Galapagos and Hawaiian Is, in Japan, and possibly on Cocos I off Costa Rica (Spear and Ainley 2007). Small and little-known breeding colonies currently exist in the *Southeastern Hawaiian Islands* (summarized in Banko *et al.* 1991, *E* 50:47-51, Wood *et al.* 2002, USFWS 2005). Bones of Band-rumped Storm-Petrels have been found commonly in Polynesian midden sites of most or all of the Southeastern Hawaiian Islands (Olson and James 1982b, Harrison *et al.* 1990) indicating greater abundance as a breeding species before the introduction of rats and other mammalian predators (Slotterback 2002, Wood *et al.* 2002). Calling birds are heard in May-Jul and grounded fledglings are found in Aug-Nov (Rana Productions 2004; [HRBP](#) 1133-1134), suggesting that breeding occurs during the spring and summer (although both winter and breeding seasons, perhaps consisting of separate populations, have been documented elsewhere). Based on suspected small colony sizes and threats from introduced mammalian predators, the Band-rumped Storm-Petrel was listed as a candidate endangered species at the Federal level in 2008, and it is listed as a state endangered species by the State of Hawaii (USFWS 2005).

Dole (1869, 1879) makes reference to "an unnamed species [of storm-petrel, *Thallasidroma*] from the Hawaiian Islands in the Smithsonian collection", which could have referred to Band-rumped Storm-Petrel, although no specimens from this era exist at USNM. Perhaps Dole was referring to specimens apparently collected in 1864-1865 by W.T. Brigham (MCZ 10894-95), probably on Moloka'i (Olson 1992). Later in the 1800s Valdemar Knudson and/or his son collected two fledgling Band-rumped Storm-Petrels near Waimea, Kaua'i. The specimens were sent to USNM (41949-50) where they were eventually identified (Ridgway 1882, Stejneger 1887, Henshaw 1902a) as "*O. c. cryptoleucura*", an endemic Hawaiian subspecies of Band-rumped Storm-Petrel, but all described subspecies were later synonymized by Austin (1952) and Harris (1969). Other birds were collected on Kaua'i in the 1890s (BPBM 6155, 156975; USNM 61260-61, 115461-62) and live birds were reported from suitable nesting habitats on mountainous cliff faces (Bryan and Seale 1901). Specimens were also reportedly collected on Ni'ihau around this time (Wilson and Evans 1899) but the whereabouts of these are unknown.

Throughout the 20th century a few more specimens were collected (Crossin 1974; USNM 496572) and birds observed (Munro 1944, Richardson and Bowles 1964, Gould 1983) on or near *Kaua'i* and *Ni'ihau*, including, more recently, at least 30 grounded fledglings found 4 Oct –18 Nov, in 1978-2008 on Kaua'i or on cruise ships off Kaua'i (*E* 41:72; Harrison *et al.* 1990, Rana Productions 2004, Holmes and Joyce 2009b; BPBM 177906; [HRBP](#) 5879-5880), although at least one of these that was photographed ([HRBP](#) 0032-0037) turned out to be a [Leach Storm-Petrel](#). During recent extensive surveys, Wood *et al.* (2002; see also USFWS 2005, Holmes and Joyce 2009b) identified several

potential nesting locations and found one nest site in Waimea Canyon, along the Napali Coast, in the Awa'awapuhi region of Kokee SP. Suspected nesting areas are in small crevices on steep rugged cliffs or talus slopes where nests are extremely difficult to locate. Breeding population size for Kaua'i is thus very difficult to determine but has been estimated at 171-221 pairs ([Table](#); Wood et al. 2002). Rafts of perhaps up to 100 birds (if not [Leach Storm-Petrels](#)) have been observed offshore Kaua'i (see below), suggesting that the breeding population may be larger than this or increasing. They also appear to breed in small numbers on Lehua Islet off Ni'ihau (Wood et al. 2002, USFWS 2005, VanderWerf et al. 2007), where a skeleton was recovered and up to six birds have been observed at dusk (on 1 Jun 2003; USFWS 2005), but confirmation of this is needed, and an explosion of the rat population there following failed eradication attempts in 2008 may prevent further breeding, at least for some time.

Breeding colonies of Band-rumped Storm-Petrel are also suspected of occurring on *Maui* and *Hawai'i I* (Slotterback 2002, USFWS 2005). On Maui, storm-petrels have been heard within Haleakala Crater in late June 1970, 8 Aug 1983, and Aug 1992 (Harrison et al. 1990, Wood et al. 2002) and an adult was found dead in Kihei 29 Mar 2005 (BPBM 185001), but confirmed evidence for breeding is thus far lacking. On Hawai'i I (see Banko et al. 1991), downy chicks have been found near Volcano on 28 Oct 1949 (USNM 529770), near Kulani Correctional Facility on 20 Oct 1988 (BPBM 177920), and on the N to E slope of Mauna Loa 6 Apr 1994 (BPBM 183608), and an adult was found dead at the last location 3 Sep 2001 (BPBM 184416). An apparent inactive nest was found at 2600 m elevation on the se. slope of Mauna Loa (USFWS 2005). Adults have also been heard calling along the southwest rift of Mauna Loa in 1968, 1973, and 1992; the latter observation involved "several dozen birds assumed nesting in the area" along the Upper Mauna Loa strip road on the nights of 22 and 23 Jun (see also Wood et al. 2002). Calling birds were also reported over Captain Cook on 13 Jul 1990 and one was reportedly found dead in Hilo 28 Jul 1993. Radar surveys around the island, however, have failed to detect any birds (Reynolds et al. 1997a, USFWS 2005). The only other records of Band-rumped Storm-Petrels ashore have been from *O'ahu* (Honolulu Airport 18 Jul 1990) and *Kaho'olawe*, where bones have been discovered in archeological sites (Gon et al. 1992, Olson 1992a). There are as yet no confirmed records for Moloka'i, although it is possible that two specimens collected in 1864-65 came from this island (see above).

Offshore and at-sea reports of Band-rumped Storm-Petrels occur primarily in the vicinity of the suspected breeding colonies during Apr-Oct (King 1967, Crossin 1974, Pitman 1986, Spear and Ainley 2007). Most reports have occurred in the Kaula Kahi Channel off Kaua'i and off Kona, Hawai'i (*cf.* Harrison et al. 1990, Banko et al. 1991; [HRBP](#) 0766-0768, 0860-0862, 5229, 5361, 5771-5775), with high counts of 27 on 28 Jul 1993 and 18 (including 10 in one flock) 28 Jun 2005. Crossin (1974) recorded "a considerable number" on 25 June 1966. Rafts of a few birds up to 25 (17 Apr 2009) and perhaps up to 100 have also been reported (USFWS 2005), which might consist of adults awaiting nightfall to come ashore. They have been observed less frequently off Maui and O'ahu (7 birds in Apr-Jun, 1989-2001). The only winter report (3 birds off Kaua'i 3 Jan 1985) was not documented well enough to eliminate [Leach Storm-Petrels](#). Spear et al. (1999) recorded 2 in mid April SE of Hawai'i I during spring and fall surveys in 1984-1991 and King (1970) recorded none during his surveys but admitted that he may not

have adequately distinguished them from Leach Storm-Petrel. Spear and Ainley (2007) recorded 10 birds S of Hawaii during surveys in 1980-1995 and noted that fewer seemed to be present than during surveys in the 1960s (Crossin 1974). Rowlett (2002), during surveys throughout Hawaiian waters in Aug-Nov 2002, recorded 17 during 93 days at sea, with observations evenly distributed throughout the survey period, and most being in the vicinity of the Southeastern Islands in expected locales.

There are no records of Band-rumped Storm-Petrels ashore in the *Northwestern Hawaiian Islands* proper, but several have been reported at sea in nearby waters. Five were noted by Rowlett (see above) 90-370 km N of Nihoa and Necker in Aug-Sep 2002, and they were reported near French Frigate on 19 Mar 1976 and 15 Dec 1983, although the dates for these last two observations suggest that these were probably the similar [Leach Storm-Petrel](#). Crossin (1974) reports 10 or more observations in Northwestern waters by POSBP personnel, with a concentration of records around Laysan and one in the vicinity of Pearl and Hermes, the farthest NW report for the islands, but we consider these unsubstantiated. Three reported landing on a ship at Midway in Nov 1907 (Mearns 1909) were later confirmed as Leach Storm-Petrels (Bartsch 1922), and Rothschild's initial report (in 1893) of Band-rumped Storm-Petrels from French Frigate was based on confusion with [Tristram Storm-Petrel](#) (Rothschild 1900).

[Acronyms and Abbreviations](#)

[Literature cited](#)

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