

BULWER PETREL

Bulweria bulwerii

Other: 'Ou

monotypic

breeding visitor, indigenous

This small petrel breeds in the Northwest Hawaiian Islands from Pearl & Hermes east to Nihoa and Kaula Rock, and on small coastal islets around the Southeastern Hawaiian Islands (Megyesi and O'Daniel 1997). Rat predation long ago eliminated breeding populations from the Southeastern Islands themselves, Kure, and more recently from Midway Atoll in the 1940s (*E* 5:48-51, 6:11-14). Bulwer Petrels also breed on Johnston Atoll (Amerson and Shelton 1976) and other islands in the Pacific from the China coast to the Galapagos, and in the Atlantic and NW Indian Oceans (AOU 1998). In Hawaii they arrive at the breeding islands generally in Apr-May, and the last fledglings leave in Oct-Nov. They are virtually absent from Hawaiian waters in Nov-Mar, possibly dispersing southeastward into the tropical Pacific (Pitman 1986). Stejneger (1889) first describes the occurrence of this species in the Pacific based on specimens collected by the Knudsens on Kaua'i; Munro (*E* 2:1-3) describes their early history and breeding in Hawaii; and Megyesi and O'Daniel (1997) provide a recent thorough discussion of the distribution and biology of the species.

In the *Northwestern Hawaiian Islands* about 95% of the estimated 92,000 pairs of breeding Bulwer Petrels are located on *Nihoa*, with much smaller colonies present on *Laysan*, *Necker*, *French Frigate*, *Lisianski*, *Pearl and Hermes*, and *Gardner Pinnacles* ([Table](#)). On *Midway*, breeding Bulwer Petrels remained common on Eastern Island (and rarely on Sand Island) through Jul 1941 (Blackman 1944; *E* 14:46, 58). The first post-war census in May 1945 found 600 still present on Eastern Island and none on Sand Island (Fisher and Baldwin 1946, *E* 6:12). Rats were introduced to Midway around 1943 and within a few years had exterminated the small ground-nesting petrels from the atoll. Not long after rats were removed from Midway in 1997, a Bulwer Petrel was found calling in a burrow on Sand I. in May 1999, after a half-century absence, and reports increased here and at *Kure* (where rats were removed in 1994) during the 2000s (VanderWerf and David 2000; Vanderlip 2005-2007); perhaps about 10 pair were known to be breeding on each atoll during the late 2000s. Information on the history of the species and data on breeding phenology for each Northwestern Island, compiled as part of the POBSP, can be found in the Atoll Research Bulletins for each breeding locality (see [Seabird Page](#)).

In the *Southeastern Hawaiian Islands*, remains of Bulwer Petrels have been found in middens and fossil deposits on Kaua'i, O'ahu, and Moloka'i (Olson and James 1982b). The species has not inhabited the Southeastern Islands in recent times but they do nest on small offshore islets where they are relatively free from human disturbance (but see Northwood 1940b) and introduced predators; a very rough estimate of 1100 pairs bred in the Southeast Islands during the 1980-2000s ([Table](#)). They have been recorded nesting on Kaula Rock and on Lehua islet off *Ni'ihau*, where they are predated by Barn Owls and/or rats (Richardson 1963, VanderWerf et al. 2007); an estimated 50 pairs may breed on each islet. Remains of 14 birds found on Mokuaeae Islet off Kilauea NWR, *Kaua'i* (Byrd and Zeillemaker 1981), and 24-25 birds were found in each of 2006 and 2007 (carcasses predated by [Barn Owls](#)) suggesting a colony on this islet, but confirmation of breeding

has not been made and population size is unknown. Offshore of *O'ahu* they nest on several islets along the NE coast ([Table](#); cf. Richardson and Fisher 1950), with a rough total estimate of 425 pairs. They also nest or likely nest on islets off *Moloka'i* (Moku Ho'oniki off the E end; *E* 50:77); *Lana'i* (islets along S shore); *Kaho'olawe* (Pu'u Koa'e; Environmental Study Impact Corp 1979, Gon et al. 1992); *Maui* (Moke'ehia and Hulu off the NW coast and Molokini); and *Hawai'i* (Ke'a'oi off Halape on the Ka'u coast; Baldwin 1946). Estimated populations are 50-150 breeding pairs on Moke'ehia, Molokini, and Ke'a'oi, and <25 breeding pairs on other islets (Harrison 1990). The species may breed on other coastal islets not yet surveyed.

Numbers are found each year stranded on beaches and elsewhere, primarily in fall just after young fledged (see Wedge-tailed Shearwater). Occasional birds are turned in during the Save-Our-Shearwaters program on Kaua'i, and approximately 178 birds were turned in to the SLP rehabilitation facility, O'ahu, between 1991 and 2003, including high counts of 19 in 1990 and 1998.

At sea, Bulwer Petrels are seen regularly in small numbers around breeding colonies and off all islands in Apr- Oct (e.g., [HRBP](#) 0780, 5618). During a survey of all Hawaiian waters in Aug-Nov 2002 Bulwer Petrels were found at sea on 37 of 46 observing days in Aug-Sep, but on only on 2 of 25 observing days during Oct and none of 23 days in Nov. Birds were recorded from W of Kure to E of Hawai'i. Highest daily counts were near the breeding islands during Aug 23-28, including 225 Bulwer Petrels seen N of Nihoa on 25 Aug 2002 (Rowlett 2002). Surveys S and E of O'ahu and Hawai'i I. found good numbers of Bulwer Petrels during Apr-Sep, the majority within 140 km of the islands (King 1970, Spear *et al.* 1999), and more recent high counts occur during this period; e.g., 75 off Maui 5 Aug 2003 and 100 off O'ahu 26 Jun 2004. By contrast, King (1970) recorded only one Bulwer's Petrel in Hawaiian waters between 4 Oct 1964 and 11 Apr 1965, just N of Molokai 24 Jan 1965, the only winter record for the Hawaiian Islands.

[Acronyms and Abbreviations](#)

[Literature cited](#)

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