

LONGEVITY RECORD FOR THE BULWER'S PETREL

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Abstract.—A female Bulwer's Petrel (*Bulweria bulwerii*) nesting on Sand Island, Johnston Atoll, during the 1992 and 1993 breeding seasons was at the time last seen (July 1993) at least 24 yr 0 mo old, making it the oldest known Bulwer's Petrel in the world. This was the only band recovery during 1992 and 1993 from the 94 Bulwer's Petrels that were banded on Sand Island from 1964 through 1969 by the Pacific Ocean Biological Survey Program.

RECORD DE LONGEVIDAD PARA *BULWERIA BULWERII*

Síntesis.—Una hembra de *Bulweria bulwerii* que se encontró anidando durante el 1992 y 1993 en la Isla Sand, del Atolón de Johnston, tenía, cuando se observó por última vez (julio de 1993) al menos 24 años, pasando a ser el individuo de esta especie más viejo del mundo. Éste fue el único recobro de aves durante la temporada del 1992 y 1993 de los 94 individuos de la especie en discusión que fueron anidados desde 1964 a 1969.

Johnston Atoll is located near the center of the tropical North Pacific (16°45'N, 169°31'W) between the Hawaiian Islands and the Marshall Islands, and is one of the most isolated atolls in the world. It was declared a bird refuge in 1926 and has been a restricted military base since the mid-1930s. The U.S. Fish and Wildlife Service currently manages the atoll as a national wildlife refuge. There are four islands in the atoll, two original ones, Johnston and Sand islands, and two (North and East islands) created from lagoon dredgings.

Bulwer's Petrels (*Bulweria bulwerii*) were first recorded breeding on Johnston Island in 1923, when the Tanager Expedition visited the atoll as part of a scientific expedition in the Pacific Ocean (Amerson and Shelton 1976). The species was extirpated from Johnston Island in the 1930s when the U.S. military increased the size of the island and destroyed the petrel's original nesting habitat. Members of the Pacific Ocean Biological Survey Program (POBSP) discovered Bulwer's Petrels nesting in 1964 along the human-made causeway, which was constructed in the 1930s to connect the original Sand Island with its human-made western extension. This is currently the only known nesting area for this species on the atoll.

During 1992 and 1993 I studied the breeding biology of the Bulwer's Petrel. In 1992, birds were initially mist netted and later temporarily removed from the crevices of the causeway for banding and individual marking. A USFWS band was placed on each of 107 adult Bulwer's Petrels. Forty-six nests were discovered, but some were not visible and thus went undetected until the end of the breeding season when chicks appeared along the causeway. It was estimated that there were 60 active nests during 1992.

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On 26 May 1992, I removed a banded adult female (determined by cloacal examination) Bulwer's Petrel from her nest cavity along the causeway of Sand Island. The band did not appear excessively worn and the band number (USFWS aluminum band 642-03207) was easy to read. This proved to be the only known band recovery since 1969 of 94 Bulwer's Petrels banded on Sand Island by the POBSP from 1964 to 1969 (R. B. Clapp, pers. comm.).

The bird had been banded as a nestling on Sand Island on 29 Aug. 1969, making it at least 22 yr 9 mo old at the time of her discovery. This bird, along with her mate, successfully fledged a chick in 1992, and both returned to the same nest cavity in 1993. On 11 Apr. 1993, shortly before departing on the pre-laying exodus, she weighed 85 g (mean = 87 ± 5.7 g SD, $n = 15$). In 1993, she and her mate hatched a chick that disappeared after the first day of its life.

This previously banded adult female was last seen at her nest site in July 1993, making her at least 24 yr old. The oldest known individual of this species prior to this capture was a 22-yr-old bird captured on Laysan in the Northwestern Hawaiian Islands (Clapp et al. 1982).

The only other Bulwer's Petrels known to have been banded at Johnston Atoll prior to 1992 were four banded in 1987 and 12 banded in 1989. In 1992, one bird that was banded in 1987 and three birds that were banded in 1989 were recaptured. In 1993, three birds that were banded in 1989 and 13 birds that were banded in 1992 (out of 134 total) were recaptured.

Studies of survival in this species on Selvagem Grande in the North Atlantic suggested a mean longevity of adults of 18.3 years with a theoretical estimate inferred from survivorship in younger birds that approximately 1% of the population may reach ages as great as 50 yr (Mougin 1989). Recovery of the Johnston Atoll bird suggests that ages attained in Pacific populations may be similar to those in Atlantic populations.

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