

## LAYSAN RAIL

## *Zapornia palmeri*

native resident, endemic, extinct

monotypic

The Laysan Rail, now extinct, was endemic to Laysan, *Northwestern Hawaiian Islands*, although unconfirmed reports of "land rails" observed in 1828 on Lisianski (Rothschild 1900, Berger 1981; but see Clapp and Wirtz 1975) and possibly glimpsed in 1923 on Nihoa by Alexander Wetmore (*E* 2:43, Olson 1996b) could have been of this or of similar undescribed species; Vanderbuilt and de Schauensee (1941) deemed Wetmore's report mistaken. The Laysan Rail was historically placed in the genus *Porzanula*, then to *Porzana* in 1973 and *Zapornia* by the AOU (2016; see [Synonymies](#)). The original ancestor was close to Baillon's Crake (*Z. pusilla*) of the Palearctic, Australia, and New Zealand (Olson 1973a, 1973b, 1999a; Olson and James 1991; Taylor 1998) and it appears to be derived from a more recent colonization of Hawaii by *Zapornia* than that leading to the [Hawaiian Rail](#) (Fleisher and McIntosh 2001); while a separate colonization resulted in the now-extinct Wake Rail (*Gallirallus wakensis*; Olson and Rauzon 2011). Despite conservation efforts by ornithologists and others to introduce Laysan Rails on several Hawaiian Islands during the late 1800s and early 1900s, its populations eventually succumbed to neglect and various exploits of humans. At least 250 specimens currently exist in museums (Ely and Clapp 1973, Banko 1979, Manning 1982), at least two of which were collected on Midway (MVZ 118427-428; see below).

The sad history of the Laysan Rail has been recounted numerous times (Baldwin 1945b, 1947; Munro 1947; Bailey 1956; Greenway 1967; Berger 1972, 1981; Ely and Clapp 1973; Ripley 1977; Olson 1996b, 1999a; Taylor 1998; Fuller 2001; Rauzon 2001). The species was first observed on **Laysan** in 1828 by C. Isenbeck of the Russian ship *Moller* (Kittlitz 1834), but it was not described until 1892, when a live individual captured by and named after Palmer, made its way to London and died (Frohawk 1892, Hartert 1927). It existed abundantly during the late 1800s through 1915-1918 (Palmer in Rothschild 1900; Fisher 1903a, 1903b; *E* 3:2; Bailey 1956; Ely and Clapp 1973), with a population estimate of 2,000 individuals by Dill and Bryan (1912) and 5,000 by Munter (1915) probably being within reason (Baldwin 1947, Olson 1999a). The well-documented destruction of all vegetation by European Hares, introduced in 1903 and 1904 (Ely and Clapp 1973), resulted in the rail's extirpation there in or shortly after 1923, the year in which members of the Tanager Expedition observed only two birds during intensive searching (Wetmore 1925, Grant 1947, Olson 1996b, Rauzon 2001; see also Day 1989). Rather hopeless searches for rails on Laysan in 1936 (Bailey 1956), 1944 (Greenway 1967), and 1951 (Brock 1951b) were unsuccessful. By the mid-2010s habitat on Laysan has been restored to pre-contact levels, supporting a good case for the possible genetic re-creation ("de-extinction") of Laysan Rails in the future.

Confirmed introductions of Laysan Rails to other Northwestern Islands began with the release of two birds by the son of the captain of the sailing vessel *Kaalokai* at Eastern I, **Midway** 13 Jul 1891 (Palmer in Rothschild 1900, *E* 6:24, Munro 1947, Bailey 1956; Bryan 1912 mentions 1887 as a date of introduction but this may pertain to the 1891 release). These were last seen three days later. Additional introductions of Laysan Rail to Eastern I occurred in 1894, 1904-1905, and 1913, and they were transferred back to Sand I as well in 1906-1910 (Baldwin 1945b; Munro 1947; Bailey 1956; Berger 1981;

Long 1981; Wetmore in Olson 1996b; Olson 1999a; *E* 3:22-23), but probably did not survive there until cats were removed in May 1910 (Bryan 1912). By 1902 rails were established and flourishing on Eastern I and by 1911 they were thriving on Sand I (Bryan 1906, 1912; Bartsch 1922; Hadden 1941; Wetmore in Olson 1996b; *E* 3:22-23; *E* 14:10, 49, 58). Estimates of up to 5,000 birds in 1922, and "millions" in 1940 (Rauzon 2001:117) were possibly and undoubtedly exaggerated (Berger 1981), respectively, whereas that of 600-750 in 1923 (Baldwin 1947) may have been more realistic. However, rats that escaped from a Naval landing craft in 1943 (*E* 5:48-51) quickly lead to the Laysan Rails' demise, the last reports being from Sand I on 15 November 1943 and on Eastern I in Jul 1944 (*E* 6:11-14, Fisher and Baldwin 1946, Baldwin 1947, Bailey 1951), although there were subsequent unconfirmed sightings in Jun 1945 by Naval personnel (possibly of turnstones; *E* 6:13-15) and in 1947 (Bailey 1956).

Other unsuccessful introductions occurred on Lisianski where 45 birds released on 12 Mar 1913 were reported through Feb 1916, apparently unable to exist due to defoliation by hares there, and Pearl and Hermes, where 7 pairs released in 1929 were apparently wiped out by storms in 1930 (Galstoff 1933, Fisher and Baldwin 1946, *E* 6:13-15, Baldwin 1947, Bailey 1956, Amerson et al. 1974, Clapp and Wirtz 1975, Olson and Ziegler 1995). In the *Southeastern Hawaiian Islands*, Laysan Rails were also reportedly introduced to O'ahu in 1904 to help control insects in sugarcane fields but they were not seen subsequent to release, presumably having quickly succumbed to predation by rats and/or mongooses (Caum 1933, *E* 35:64). Palmer had also brought live rails to O'ahu in 1891 for transport back to London but when no boats were headed that way he made specimens of them (Bailey 1956). A plan proposed by Munro and T. M. Blackman to bring Laysan Rails from Midway to O'ahu for propagation in the 1930-1940s was unfortunately thwarted by HBAF politics and paperwork, along with concurrent transport of [Laysan Finches](#) (Rauzon 2001).

### [Acronyms and Abbreviations](#)

### [Literature cited](#)

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