

## LAYSAN FINCH

## *Telespiza cantans*

Other: Laysan Canary, Hawaiian Finch

monotypic

**native resident, endemic, endangered**

The Laysan Finch is endemic to Laysan in the *Northwestern Hawaiian Islands* (Morin and Conant 2002, Pratt 2005); introductions to other islands have met with various levels of success, including establishment of a viable population on Pearl and Hermes in the late 1960s though the mid-2010s. The first mention of Laysan Finch was by Isenbeck aboard the *Moller* (*in von Kittlitz* 1834), who noted it to be fairly common on Laysan in 1828. However, it was not known to science until Wilson (1890b) described it based on a live bird brought back to England "with considerable trouble and good luck" which he purchased from the crew of a "hapless schooner", *Mary Böhm*, that had stopped at a Northwestern Island for food and brought back 50 Laysan Finches to Honolulu. Wilson mistakenly understood that the birds were captured on Midway (*cf.* Munro 1944, Ely and Clapp 1973, Banks and Laybourne 1977, Olson and James 1986). Rothschild (1892a) described a new species from Laysan, "*Telespyza flavissima*", based on an adult male of *cantans* (compared to a first-year male that he thought was from Midway) but corrected his error (Rothschild 1899, 1900) after examining a large series secured from Laysan by Schauinsland (1899).

The congeneric Laysan and [Nihoa](#) finches were lumped into one species (e.g., Amadon 1950, Peterson 1961, Pyle 1977), called "Hawaiian Finch", and further lumped generically with other Drepanine genera, especially *Psittirostra* and *Loxoides* (see [Synonymies](#)), but we follow Banks and Laybourne (1977) and subsequent taxonomists in splitting the two species and retaining *Telespiza* (which means "far-away finch"). A printer's error in the original description led many authors to spell the genus as "*Telespyza*" (see [Synonymies](#)) but this was corrected by Olson and James (1986). The subfossil record indicates that Laysan Finch and other congeners were formerly found on several Southeastern Hawaiian Islands including Moloka'i, where taxa resembling both extant species of *Telespiza* may have co-existed (Olson and James 1982b, James and Olson 1991, Burney et al. 2001, James 2004). Due to restricted range and small population size, the Laysan Finch was listed as a Federally Endangered Species in 1967 (USFWS 1984c).

Most early visitors to *Laysan* considered the Laysan Finch to be abundant, with estimates in the 1,000s, apparently at or close to carrying capacity (e.g., Schauinsland 1899; Fisher 1903a, 1903b, Munter 1915; reviewed by Ely and Clapp 1973). Populations on Laysan were reduced to 2-3 dozen individuals during destruction of vegetation by rabbits in 1916-1923 (Wetmore 1925, *in* Olson 1996b; *E* 6:68) but survived (feeding on dead seabirds, and possibly aided by re-introductions from a population on Midway at the time), and had recovered to over 1,000 birds by 1938 (Munro 1944, Fisher and Baldwin 1946, Brock 1951a, Bailey 1956, Scott and Kepler 1985; *E* 6:12, 18:17, 31:54), after rabbits had been removed in 1923 and vegetation began recovering. Estimates from 1967 to 1998 indicated a population fluctuating between 7,000 and 20,000 individuals, averaging about 10,000 (USFWS 1984c, Scott and Kepler 1985, Morin and Conant 2002;

Gorresen et al. 2009, VanderWerf 2013a); viability models suggest a low intrinsic risk of extinction except in the event of sea level rise (A. McClung *in* USFWS 2007a, BLI 2016). Laysan Finches are also susceptible to predation from [Peregrine Falcons](#) (Reynolds et al. 2015b, Rutt *in press*) but probably not to a great enough degree to affect population size of this fast-breeding species.

However, Laysan Finch could also be extremely susceptible to avian malaria (van Riper et al. 1982, USFWS 1984c, BLI 2016) and introductions to other islands have thus been attempted in order to establish a safety population should that of Laysan extinguish. Two Laysan Finches were released by the son of the captain of the *Kaalokai* at Eastern I, **Midway** 13 Jul 1891 (*E* 3:22-23, 6:3; Munro 1944, 1947) but this introduction apparently did not result in a breeding population. At the request of the superintendent of the Cable station on Midway, an unknown number of Laysan Finches were brought to Sand I Midway in May 1905 and these died out, apparently eaten by cats there (Bryan 1912). Another shipment brought in Sep 1905 was released on cat-free Eastern I, and they had successfully colonized that island by 1913 (Bartsch 1922, Bailey 1956; *E* 3:22-23), when more finches were released (Bailey 1951). Meanwhile, cats were removed from Sand I and reintroduction there in May 1910 led to an increasing population there as well (Bryan 1912). Populations were estimated as high as 5,000 birds in 1922-1941 (Hadden 1941, Fisher 1949; *E* 3:2, 14:10) and "millions" in 1940 (cf. Rauzon 2001:117) but they were gone by 1945 (*E* 6:12, Fisher and Baldwin 1946, Fisher 1949, Bailey 1951), presumably due to establishment of Norway Rats there in 1943, but possibly due to avian disease (*E* 5:49, 30:4-6), their populations having declined rapidly during the war (*E* 5:50).

An introduction of Laysan Finch to ***Pearl and Hermes*** was more ultimately successful: 110 birds (51 females and 59 males), captured on Laysan 18 Mar 1967 were released there three days later by USFWS personnel, and had doubled their numbers by spring 1969 (Amerson et al. 1974). By 1984 they numbered about 500 and had been observed on all four islets of the atoll (Scott and Kepler 1985), with islet populations showing variation in bill morphology from each other and from the Laysan population (Conant 1988), as well as genetic differences from the source population (Fleisher et al. 1991b, Tarr et al. 1998, Jarvi et al. 2009). Estimates from USFWS censuses on Pearl and Hermes between 1967 and 1998 (some incomplete) varied from 108 to 876 with a mean of 411 birds (Morin and Conant 2002), and 1,043 were counted there in 2007 (VanderWerf 2013a). However, population size appears to be linked to the invasive plant species *Verbasina*, which provides nesting habitat, and planned removal of *Verbasina* may have negative impacts of populations of Laysan Finches here.

Henshaw (1902a), Caum (1933), and Munro (1944, *E* 1[4]:1), among others, documented the transport of numbers of Laysan Finches to Ni'ihau and O'ahu by the *Mary Böhm* and other boats around the turn of the 20th century but, with the apparent exception of the bird that made its way to Wilson in London (see above), they reportedly survived for only a short time, perhaps harassed by [Common Mynas](#). Several of 217 specimens known in collections were bought or secured by early naturalists in Honolulu (Banko 1979). In 1940, Munro proposed releasing birds into Kapiolani Park, O'ahu, to help determine causes of declines in Drepanine populations throughout Hawaii, but his request for a permit to transport finches (along with [Laysan Rails](#)) was denied by HBAF (Rauzon 2001). Live birds were also transported to the Honolulu Zoo and University of

Michigan in 1966 (Berger 1972, 1981; *E* 27:7, 27:37, 28:18, 31:31-34, 31:54) and again in the late 1980s (*HWN* 4[2]:7, 5[1]:8), but these incipient propagation efforts were unsuccessful (Morin and Conant 2002).

### [Acronyms and Abbreviations](#)

### [Literature cited](#)

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