

MILLERBIRD

Acrocephalus familiaris

native resident, endemic, endangered
Laysan subspecies extinct

A.f. familiaris (Laysan)
A.f. kingi (Nihoa)

The Millerbird is an endemic resident in the *Northwestern Hawaiian Islands* (AOU 1998), having likely colonized the archipelago from Asia or other Pacific Island groups (Bryan 1940; Berger 1972, 1981; *E* 31:47). *Acrocephalus* warblers have widely colonized the Pacific Basin (Pratt et al. 1987, Wiles 2005, Cibois et al. 2011), and Millerbird has been found to be genetically distant from other Pacific congeners (AOU 1983, Fleischer et al. 2007), being the first to diverge from other taxa within a Polynesian clade (Cibois et al. 2011). Cassin (1858) followed by Dole (1869, 1879) reported an *Acrocephalus* warbler (as "*Tatare otaiensis*") in the marshes of Kaua'i and Hawai'i, which caused Rothschild (1900) and Bryan (1901a) to consider it a possibility on these islands, but Cassin was apparently referring to *Acrocephalus caffer* which is not found in Hawaii (see [Tahiti Reed Warbler](#)). No subfossil evidence exists for the occurrence of *Acrocephalus* in the Southeastern Hawaiian Islands (Olson and Ziegler 1995), which is curious given the genus' widespread distribution within the Pacific Basin (Bryan 1940).

Two subspecies of Millerbird have been found, on Laysan and Nihoa, which are distinct and could be treated as different species (Wetmore 1924, Munro 1944, Olson and Ziegler 1995, Olson 1996b, Fleischer et al. 2007) but most regard them as subspecies (see [Synonymies](#)). See Banko (1979) for locations of 104 specimens of Millerbird, and Morin et al. (1997) for a summary of the natural history and biology of the species. In 1967 the Millerbird was listed as a Federally Endangered species due to restricted range size, population fluctuations, and the potential for inbreeding (USFWS 1984c).

The population of Millerbird on *Laysan* was first reported by H.C. Palmer and G.C. Munro on 16 Jun 1891, forming the basis for Rothschild's (1892a) description of the species, which has since been considered the nominate subspecies (*A. f. familiaris*) by most taxonomists (see [Synonymies](#)). It was reported as common prior to the introduction of rabbits in 1903 (Rothschild 1900; Fisher 1903a, 1903b; Dill and Bryan 1912; Bryan 1915; *E* 3:2-3, 6:66-67), with viable populations remaining until at least 1915 (Dill and Bryan 1912, Munter 1915, Bailey 1956, Ely and Clapp 1973), but the subspecies had become extinct by May 1923 or shortly thereafter due to severe reduction of vegetation by rabbits (Wetmore in Olson 1996b; see [Laysan Rail](#)), "gone with the moths on which it fed" (Munro 1927), until reintroduction of Millerbirds to Laysan occurred in 2011-2012 (see below)

Shortly after confirming the demise of the Laysan population, Wetmore (1924) discovered the *Nihoa* population (*cf.* [HRBP](#) 5915-5918) on 11 June 1923 and named it as a new genus and species, "*Conopderas kingi*" ([Synonymies](#)), after the Lieutenant Commander of the *Tanager*, Samuel Wilder King. It had been missed by earlier naturalists due to Nihoa's difficult landing conditions and by parties that overlooked this secretive species while collecting [Nihoa Finches](#) (*cf.* Bryan 1916, 1917). Since discovery, the estimated population size of Millerbirds on Nihoa has varied substantially (*E* 37:106, Richardson 1954b, Clapp et al. 1977, Conant et al. 1981, USFWS 1984c, Wetmore in Olson 1996b, Conant and Morin 2001, Evenhuis and Eldredge 2001, Rauzon 2001, VanderWerf 2013a), with estimates as low as 31 to as high as 731 individuals during 1967-1996, using fixed-transect surveying methodology (Morin et al. 1997, Conant and Morin 2001) and a high estimate of 894 individuals in Sep 2014 (Gorreson et al. 2016) (MacDonald 2008, Kohley et al. 2010); however, estimates are difficult to obtain and may

not be accurate or reflect the viable breeding population (Addison and Diamond 2011; Gorreson et al. 2012, 2016). Population size appears to be regulated primarily by weather (especially drought, which results in population declines) and its effects on insect availability and nest site availability (Conant 1983c, USFWS 1984c, BLI 2016).

During the late 1990-2000s, translocations of Millerbirds to Laysan from Nihoa were considered and planned (Morin et al. 1997, Conant and Morin 2001, Fleischer et al. 2007, MacDonald 2008, Lieberman and Kuehler 2009, Kohley et al. 2010), and in Sep 2011 and Aug 2012, 21 and 29 Millerbirds, respectively, were safely translocated (Rutt and Kohley 2012, VanderWerf 2013a, BLI 2016, Friefield et al. 2016, Rutt in press; [HRBP](#) 6763). The birds began to nest soon after release (Rutt and Kohley 2012, Rutt in press), and by Sep 2014 the population was estimated at 164 individuals (Dalton et al. 2014, Friefield et al. 2016).

[Acronyms and Abbreviations](#)

[Literature cited](#)

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