

## PALILA

## *Loxoides bailleui*

**native resident, endemic, endangered**

monotypic

The Palila is currently endemic to *Hawai'i I* in the *Southeastern Hawaiian Islands* (Banko et al. 2002, 2009; Pratt 2005); subfossil evidence indicates its former presence on O'ahu (Olson and James 1982b) and Kaua'i (Burney et al. 2001), as well as a larger-billed congener ("Pila's Palila") found sympatrically with Palila on Kaua'i (James and Olson 2006). The Palila is closely related to *Telespiza* and resembles (but is not that closely related to) the 'O'u *Psittorostris* (Sclater 1879; Amadon 1950; Olson and James 1982b; James and Olson 1991, 2006; James 2004); it has often been merged with these genera ([Synonymies](#)). The Palila was first collected by T. Baillieu, the French Consul in Honolulu in 1869-1878, while staying at the Pu'u Lehua Ranch above Captain Cook in 1876 (Banko 1986, Wilson and Evans 1899). Baillieu sent his specimens to the Paris Museum, where Oustalet (1877) described the new genus and species, misspelling the name of the collector in the process.

The Palila formerly occurred commonly on the nw. slopes of Hualalai S to the w. slopes of Mauna Loa (above Honaunau) and around Mauna Kea, at 1,500-3,000 m elevation (Henshaw 1902a; Bryan 1903b; Perkins 1903; Munro 1944; Richards and Baldwin 1953; van Riper et al. 1978; Banko 1986; Banko et al. 2002, 2009; Banko and Farmer 2014). It was last observed on Mauna Loa by Palmer in 1891 (Rothschild 1900), last collected on Hualalai by Perkins in 1896 (Banko 1986), and last seen along the n. slopes of Mauna Kea near Pu'u Mali above Pa'auilo in 1968 (*E* 28:98-99). The range on Mauna Kea continued to contract, such that by the mid 2000s it was virtually limited to a 30 square km area at 2,000-3,000 m elevation (highest densities at 2,100-2,300 m) on the sw. slope of Mauna Kea, within the Pu'u La'au GMA and between here and Pu'u Kau (van Riper 1980; Scott et al. 1984, 1986; Banko et al. 2002, 2009; Pratt 2005). Their distribution within this range fluctuates according to the phenology of the mamane tree (*Sophora chysophylla*), the seeds of which are a primary food resource (Scott et al. 1984, 1986; Banko et al. 2002, 2009; Hess et al. 2014). Based apparently on mamane phenology, Palilias are found more prevalently at higher elevations in winter than in summer (Berger 1972, 1981; van Riper et al. 1978; van Riper 1980; Hess et al. 2001), although Fancy et al. (1993) also found that banded birds did not disperse widely. A report of one in Hawaii Volcanoes NP in 1958 (*E* 19:2) is unsubstantiated.

The Palila was designated as Federally Endangered in 1967 (USFWS 1986, 2006). Population estimates show wide interannual variation; estimates based on careful surveys included 1,600 individuals in 1975 (van Riper et al. 1978), 2-6,000 individuals in 1981-1984 (Scott et al. 1984), and 2-5,000 in the late 1990s and early 2000s (Banko et al. 1998, 2002; Jacobi et al. 1998; Gray et al. 1999; Johnson et al. 2006, USFWS 2006), but a steady decline between 2004 and 2008 (Leonard et al. 2008, USGS 2008, Gorresen et al. 2009, Pratt et al. 2009, VanderWerf 2013a). Although populations seemed to maintain stability (despite fluctuating) through 2014-2016, when between 1,116 and 2,070 individuals were estimated, a decline of 58% during 1998-2016 was also calculated based on extensive survey data (Camp et al. 2014b, 2016). During 2010-2016 small numbers (up to 12 per day) were being observed incidentally in core areas, primarily within Pu'u La'au GMA.

Control of feral ungulates in mamane forests has been critical to the survival of this endangered species (Warner 1960; Berger 1981; Scott and Kepler 1985; USFWS 1986, 2006; Pratt et al. 1997a; Gray et al. 1999; Banko et al. 2002, 2009; Hess and Banko 2011; Banko and Farmer 2014; BLI 2016), but failure to remove all ungulates at various times during the 1970s-2000s has been detrimental (Banko et al. 2009). In the 1990-2000s, in response to proposals to realign Saddle Road through Palila habitat, a propagation program was initiated, and individuals were released or trans-located to the n. and e. slope on Mauna Kea (Pu'u Mali and Kipuka 'Alala, respectively) in attempts to re-establish populations in formerly inhabited areas (Fancy et al. 1997, Pratt et al. 1997a, Banko et al. 2002, USGS 2008, Leberman and Kuehler 2009, Banko et al. 2009; *HFW* 8[2]:1-3, *HE* 9[5]:4-5). Initial results of translocation to Pu'u Mali were encouraging, including local breeding and commuting of birds between here and the primary population (USFWS 2006, USGS 2008, Banko et al. 2009), but by 2014 the translocated population had extinguished, perhaps the result of severe drought (Banko and Farmer 2014). Palila were also documented in a third restoration area, Ka' ohe, just down-slope of core population centers, in 2015-2016 (Camp et al. 2016).

#### [Acronyms and Abbreviations](#)

#### [Literature cited](#)

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