

NUKUPU'U

Hemignathus lucidus

Other: 'Akiapola'au

H.l. hanapepe (Kaua'i)

H.l. lucidus (O'ahu)

native resident, endemic, endangered, presumed extinct

H.l. affinis (Maui)

The Nukupu'u likely joined many other native Drepanines in going extinct around the turn of the 20th century. At least 79 specimens were collected on Kaua'i, O'ahu, and Maui (Banko 1979), the last two of which were secured by Munro near Makaweli, Kaua'i, on 6 May 1899. Many sightings were recorded from Kaua'i and Maui during 1960-1997, but careful analysis indicates that all are unsubstantiated (Pratt and Pyle 2000). Confusion with the similar 'amakihis, which can sometimes have abnormal bills, seems to be the primary source of misidentifications (Pratt and Pyle 2000; also, *cf.* Olson and James 1994b regarding the interpretations of Cassin). Although proclaimed "extinct" by the USFWS in 1966 (Banko 1968), the Nukupu'u was subsequently listed as endangered by the USFWS in 1967 and by the State of Hawaii in 1982, and it continues to be so listed (USFWS 1983c, 1984d, 2006).

The Nukupu'u was named by M.H.K. Lichtenstein (1839) based on specimens collected on O'ahu by Depe. During the same year Lafresnaye (1839) named it "*Heterorhynchus olivaceus*" based on specimens also collected on O'ahu, during the voyage of the *Venus* or *Sulphur*. See Olson and James (1995) for an entertaining analysis of naming priorities and dates (see also [Synonymies](#)). Most taxonomists consider the Nukupu'u to consist of one species and three subspecies (Olson and James 1995; [Synonymies](#)); however, it is possible that they may be considered three species in the future (Pratt and Pratt 2001, Pratt et al. 2001, Pratt 2005). Subfossil evidence indicates that Nukupu'us were present on all three of the islands with historical records and probably on Moloka'i, whereas a similar but larger species occurred on Hawai'i I (James and Olson 2003; see below).

On *Kaua'i*, Wilson (1889b) collected five Nukupu'us near the Kaholuamanu House (Evenhuis 2007:225) at about 1100 m elevation in Waimea Canyon, and applied the name *H. hanapepe*. At the same time Stejneger (1889), based on earlier specimens collected by the Knudsens, was struggling with whether or not the Nukupu'u and [Greater 'Akialoa](#) were different species or different sexes of the same species, and missed his chance to name the Nukupu'u.. Wilson (1890a) and the other early collectors (Wilson and Evans 1899; Rothschild 1900; Perkins 1903, in Evenhuis 2007:286; Munro 1944; see Banko 1984c) considered the species rare to uncommon and primarily restricted to higher elevations in the west-central portion of the island, but occasionally as low as 600 m elevation (Perkins 1903, *in* Evenhuis 2007:346). Bryan and Seale (1901), Munro (1944), and others (e.g., *E* 27:45, 47) failed to locate Nukupu'u despite extensive searches. Beginning with a "fleeting glimpse" of two birds on 16 Aug 1960 (Richardson and Bowles 1964), there have been at least 26 sight records of Nukupu'u in the upland forests of Kaua'i through Jan 1996 (e.g., *E* 22:3, 26:29, 29:20, 37:107; Conant et al. 1998), although Sincock et al. (USFWS 1983c) did not record any confirmed observations in over 500 days of extensive fieldwork in 1968-1975. We follow Pratt and Pyle (2000) in considering these unsubstantiated, and we presume it is extinct. Based on Poisson analyses of persistence probabilities using confirmed and unconfirmed records, Elphick et al. (2009) estimated that the Nukupu'u went extinct on Kaua'i in 1901, with an upper limit of 1906.

Nukupu'us were originally described based on a specimen secured in Nu'uuanu Valley, *O'ahu*, in 1837 by Deppe (Wilson and Evans 1899, Rothschild 1900). Although reported to be numerous by Deppe, it is possible he was observing [Hawai'i 'Amakihi](#) (see above). At least nine specimens were secured by Townsend and Deppe during that year (now found in seven collections; Banko 1984c), and at least two others were collected during the voyage of the *Venus* or *Sulphur* in 1838, and during the U.S. Exploring Expedition in 1840-1841 (see below). Collectors at the turn of the century (including Wilson 1890a, Rothschild 1900, Bryan 1901a, Perkins 1913) considered the species already extinct on O'ahu; Perkins looked for it extensively at the obsessed urging of Newton (*in* Evenhuis 2007). According to local inhabitants, it may have existed in the lower forests through 1860 (Perkins 1903). A second-hand report from 1939 (*E* 23:56) is doubtlessly incorrect.

On *Maui*, Finsch (1880) indicated that "*Hemignathus obscurus*", perhaps indicating Nukupu'u and distinct from [Hawai'i 'Amakihi](#), was the most abundant species on the island in July 1879, but other early naturalists indicated that it was the least common of Maui's native birds during the 1890s (e.g., Perkins *in* Evenhuis 2007:202-208). The first 13 specimens from Maui were collected by Palmer at about 1500 m elevation above Olinda in Aug 1892 (Banko 1984c); Rothschild (1893g) named it *H. affinis* based on this series. An additional 20 specimens were secured by Perkins in 1894 and 1896 (Banko 1979, 1984c). Palmer collected them as high as 2150 m elevation (Rothschild 1900) and Perkins (1903) considered it to be fairly common (up to 12 observed in a day) between 1200 and 1500 m. Both collectors regarded the species' range to be rather restricted, to a small area on the nw. slope of Mt. Haleakala. Henshaw (1902a) may have been the last ornithologist to observe the Nukupu'u in the field, noting that they were generally confined to upper-elevation forests during a visit to Maui in Jun 1901. Munro (*in* Gregory 1929) and Richards and Baldwin (1953) failed to find Nukupu'us despite careful searches. Pratt and Pyle (2000) note an additional 27 sight records between 1967 and 1996 (e.g., Banko 1968, Conant and Stemmermann 1980, Scott et al. 1986, Reynolds and Snetsinger 2001; *E* 37:107, 41:59, 41:77, 44:6, 50:68; *HFW* 9[3]:3) which they consider unsubstantiated.

There are no substantiated records of Nukupu'u for the island of Hawai'i, although a much larger congener is known from the fossil record (James and Olson 1991, 2003; Olson and James 1994b; Burney et al. 2001; Pratt et al. 2001). A specimen collected during the U.S. Exploring Expedition in 1840-1841, along with Peale's (1848) account of "*Hemignathus lucidus*" on Hawai'i, caused Olson and James (1994b) to speculate on the species' historical presence there, but the specimen turned out to be of the O'ahu subspecies (R. Fleischer *in* Pratt et al.2001, James and Olson 2003). van Riper (1982a, 1982b) noted a bird he thought to be a Nukupu'u in the Kohala Mts 29 Jun 1971 (originally considered an [Akiapola'au](#); *E* 34:1), but as with other 20th-century sightings (T.K Pratt and Pyle 2000), we consider this record unsubstantiated.

[Acronyms and Abbreviations](#)

[Literature cited](#)

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