KAUA'I 'O'O Moho braccatus

Other: 'O'o'a'a (1992) monotypic

native resident, endemic, endangered, presumed extinct

The Kaua'i O'o is endemic to the island of *Kaua'i* (AOU 1998, Sykes et al. 2000, USFWS 2006). Formerly considered one of five species of honeyeaters (Meliphagidae) that colonized Samoa, Micronesia, and the Hawaiian Islands from the Australo-Papuan region of southwestern Pacific (Perkins 1903, Mayr 1943, Amadon 1950), it has now been shown to be a unique family of N American origin (Mohoidae) and most closely related to waxwings and silky-flycatchers, Bombycillidae and Ptilogonathidae (Fleischer et al. 2008). This family colonized Hawaii 14-17 million years ago, well before the Drepanidae, providing pollination for lobeliad plants that have existed in Hawaii since this period (Fleisher and McIntosh 2001, Fleischer et al. 2008, Banko and Banko 2009). The Hawaiian name, 'O'o'a'a, implies small flower-piercer, perhaps because it was the smallest (shortest tailed) member of the genus in Hawaii and indicating that native Hawaiians had compared it to congeners from other islands (Wilson and Evans 1899). The few yellow feathers found on the 'o'os and Hawaii Mamo were greatly valued by Hawaiians for feather works such as cloaks and helmets (Malo 1838, Emerson 1895, Conant 2005, Amante-Helwig and Conant 2009).

Although specimens of Kaua'i 'O'o apparently were studied by Latham (1790, 1793), possibly collected during the Portlock-Dixon voyage (Dixon 1789) in 1786-1787 (Rothschild 1900, Medway 1981), Latham may also have been referring to O'ahu and/or Hawai'i o'os (see Synonymies), and the species was not described until Cassin (1855) named it based on a specimen collected by Townsend (1839), probably near Koloa, in Feb-Mar 1835 (Sykes et al. 2000). Peale (1848) had earlier made reference to the species by the name of *Certhia pacifica*, confusing it with Hawaii Mamo (Synonymies). Banko (1981a) recounts early reports and specimens of Kaua'i O'o, Banko (1979) and Sykes et al. (2000) list up to 111 specimens known from museum collections, and Berger (1972, 1981) and Sykes et al. (2000) summarize the distribution and natural history of the species.

Early naturalists visiting Kaua'i (Peale 1848, Wilson and Evans 1899, Rothschild 1900, Perkins 1903, Munro 1944) noted the Kaua'i 'O'o to be common and widespread at all elevations, although Perkins (*in* Banko 1981a) began to notice their withdrawal to higher elevations during the 1890s. Observations during 1940-1975 (e.g., Richardson and Bowles 1964; Berger 1972, 1981; Conant et al. 1998; *E* 2:52, 5:31, 7:40, 8:6-7, 22:51, 23:1-3; 24:23, 24:48-49, 26:29-31, 27:44, 29:26) indicate that the Kaua'i 'O'o had become very uncommon and were confined to higher elevations (1100-1300 m) around the Alakai Swamp, where a small population persisted (*cf.* HRBP 1468). Based on this information the Kaua'i 'O'o was listed as a Federally Endangered Species by the USFWS in 1967 and by the State of Hawaii in 1982 (USFWS 2006). Sincock et al. (USFWS 1983c) estimated the total population at 36 birds in 1973 and "no more than a dozen" in 1978 (Berger 1981). By 1980 and during the HFBS in 1981 only a single pair could be found attending a nest cavity along Halepa'akai Stream at about 1300 m elevation (Hart 1978; Scott and Kepler 1985; Scott et al. 1985, 1986; Sykes et al. 2000). The female was last reported in

May 1981 and the male continued to be observed "going through nest-building ritual in spring, and calling over and over for a mate that may never come" (*AB* 37:916) until last heard on 29 Apr 1987 (*E* 47:94, *AB* 41:492). There have subsequently been no substantiated observations, despite numerous searches (e.g., Reynolds and Snetsinger 2001, Foster et al. 2004, USFWS 2006; *E* 53:49), and we presume the the Kaua'i 'O'o is now extinct. Based on Poisson analyses of persistence probabilities using confirmed and unconfirmed records, Elphick et al. (2009) estimated that the Kaua'i 'O'o went extinct in 1985-1991, with upper limits of 2000-2007.

Acronyms and Abbreviations

Literature cited

Citation: Pyle, R.L., and P. Pyle. 2009. The Birds of the Hawaiian Islands: Occurrence, History, Distribution, and Status. B.P. Bishop Museum, Honolulu, HI, U.S.A. Version 1 (31 December 2009) http://hbs.bishopmuseum.org/birds/rlp-monograph/