BISHOP 'O'O Moho bishopi

Other: Moloka'i 'O'o (<1983) monotypic

native resident, endemic, presumed extinct

Bishop 'O'o has been confirmed only from Moloka'i, where at least 31 specimens were collected (Banko 1979, 1981a; Sykes et al. 2000). The type specimen (AMNH 693923) was secured by Palmer above Kalua'aha 16 Dec 1892 and named by Rothschild (1893d, 1900) in honor of Charles R. Bishop, who founded the Bernice Puaohi Bishop Museum in the 1890s. It has occasionally been considered a subspecies of the Hawai'i 'O'o, M. nobilis bishopi (e.g., Bryan and Greenway 1944, who considered all 'o'os subspecies of a single species; see Synonymies), but specimen evidence confirms that Bishop 'O'o is distinct. In 2008 the 'o'os were moved from the Australasian family Melaphigidae to their own family, Mohoidae, of North American origin (Fleischer et al. 2008; see Kaua'i 'O'o).

Although reported to be common and widespread by native Hawaiians, naturalists visiting *Moloka'i* in the 1890s found them generally uncommon, declining, and restricted to thick forests at higher elevations (Perkins 1895, 1903; Rothschild 1900; Munro 1944; Banko 1981a; *E* 57:77). Perkins (1903) noted that the impacts of cattle throughout the 1800s caused both this and the Hawai'i 'O'o to soon abandon degraded forests, and he noted that they were quite migratory, transiting the mountains from east to west (*in* Evenhuis 2007:132, 322). The last substantiated report was of about six individuals observed by Munro (1944; *E* 7:62) in upper Waikolu Valley sometime during 1902-1904. One of these was collected (BPBM 6081); the amount of wear on the specimen, which consists of just scapulars and one wing (PP examination), suggests that it was taken in winter, perhaps most likely that of 1903-1904. Bryan (1908) was unable to find any 'o'os during extensive searches of all former haunts of the species during 15 Apr-15 Jun 1907. Subsequent second-hand reports and speculation on their continued existence on Moloka'i (e.g., *E* 14:76, 23:64, 27:90-91, 28:89; Munro 1944) are without substance.

The possible occurrence of Bishop 'O'o or a similar congener on Maui has generated much discussion and interest (Banko 1981a, Sykes 2000) but no substantiated records. There is subfossil evidence for a Moho on Maui (James and Olson 1991) and Bishop 'O'o certainly could have inhabited Maui Nui when Moloka'i and Maui were connected (Wilson and Evans 1899, Sabo 1982). Judd (1880) accompanied bird-catchers to the W Maui Mts on 4 Jul 1828 in search of "the little black bird called the oo, each producing a few yellow feathers under the wings". Sight and aural observations of black birds have been reported from the Waikamoi and Hanawi watersheds on the e. slopes of Haleakala, in June 1901 (Henshaw 1902a); Nov 1950, 1955, Sep 1973, and May 1974 (Banko 1981a, E 21:26); May 1980 (Sabo 1982); and several times in 1981-1986 (Scott et al. 1986, Sykes et al. 2000). Extensive ornithological surveys in these areas from 1986-2005 (see Po'ouli) has failed to turn up any further evidence of this conspicuous genus. Given the population trajectories of 'o'os on other islands we presume that the Bishop 'O'o is extinct (Reynolds and Snetsinger 2001) and has been since early in the 20th century. Based on Poisson analyses of persistence probabilities using all records, Elphick et al. (2009) estimated that the Bishop 'O'o went extinct on Moloka'i in 1906, with an upper

limit of 1917. Due to its unknown recent status the Bishop's 'O'o is not listed by the USFWS or State of Hawaii but provisions are in place should it be rediscovered (USFWS 2006).

Acronyms and Abbreviations

Literature cited

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