# **GREATER 'AKIALOA**

# Akialoa ellisiana

Other: 'Akialoa (<1983), Hawaiian Akialoa (1983-1997), Iwi (juvenile, Kaua'i), Kipi (O'ahu) A.e. stejnegeri (Kaua'i) A.e. ellisiana (O'ahu) A.e. lanaiensis (Lana'i)

### native resident, endemic, extinct

The Greater 'Akialoa is regarded as polytypic (AOU 1997, 1998), having subspecies on Kaua'i, O'ahu, and Lana'i, but these may be split into two or three separate species in the future (see <a href="Lesser 'Akialoa">Lesser 'Akialoa</a> and <a href="Synonymies">Synonymies</a>). Dole (1869, 1879) indicated that 'akialoas were present on Maui but it appears that he was likely referring to Nukupu'u.

The Greater 'Akialoa is best known from *Kaua'i*, where it was the most distinctive of the subspecies and where it persisted through the 1960s. See Olson and James (1988, 1995) for the naming of this subspecies *stejnegeri* as opposed to "*procerus*" recorded in most previous and some current literature (Synonymies). After being collected by the Knudsens sometime before 1888 (Stejneger 1887a, 1889) and named by Wilson (1890a), the distribution of the Kaua'i 'Akialoa was well-documented by naturalists in the late 19<sup>th</sup> century (Wilson and Evans 1899, Rothschild 1900, Perkins 1903, Munro 1944; reviewed by Banko 1984c), who collected some 115-120 specimens (Banko 1979, Lepson and Johnston 2000). They regarded 'akialoas as being fairly commonly distributed throughout the forests, from sea level to 900 m and above. However, they also noted many individuals with swollen feet, tapeworms, and other maladies suggesting a widespread epizootic and, by Apr-May 1900, Bryan and Seale (1901) recorded none below 1050 m elevation.

As with so many other Hawaiian landbirds there are few subsequent records for the first half of the 20<sup>th</sup> century, when ornithological exploration was on hiatus. Munro (1944) failed to find it during visits to unspecified localities on Kaua'i after 1920 but individuals were observed at an unknown locality in 1936 (E 5:32) and in Wai'alae Valley E of Waimea Canyon on 6 Oct 1941 (E 2:52 5:32). A small flock of 'akialoas was reported by Valdemar L. Knudsen (grandson of the collector) at an unknown locality in 1957, and two were observed (one collected) near the upper end of the Koai'e Stream in the Alakai Swamp 19-20 July 1960 (Richardson and Bowles 1964). The last substantiated observations were made in this same area in Mar 1965 (E 26:71) and along the Pihei Trail near the north edge of Alaka'i Swamp 12 Apr 1969 (cf. Conant et al. 1998, Reynolds and Snetsinger 2001). Sincock et al. (USFWS 1983c) failed to find 'akialoa during over 500 days of extensive fieldwork over all of Kaua'i in 1968-1975 (E 37:107) and subsequent targeted searches through 2005, including the HFBS, were also unsuccessful (Scott et al. 1986, Conant et al. 1998, Reynolds and Snetsinger 2001, USFWS 2006); a reported observation from 1973 (HAS 1978-1986) appears to be an error. A few sight records in the 1970-1990s are unsubstantiated (likely of other species), and we presume the Kaua'i 'Akialoa is extinct. Based on Poisson analyses of persistence probabilities using confirmed and unconfirmed records, Elphick et al. (2009) estimated that the Greater 'Akialoa went extinct on Kaua'i in 1967-1973, with upper limits of 1984-1985.

It was listed as endangered by the USFWS in 1967 and by the State of Hawaii in 1982, and continues to be listed in the extremely remote chance that individuals are rediscovered (USFWS 2006).

The O'ahu 'Akialoa was probably never common, having been missed by Bloxam (1827a, 1827b), Wilson (1890a), and several other collectors on *O'ahu* during the 1800s (Olson and James 1994a; *E* 6:33). Deppe and Townsend (see Townsend 1839) found the bird in Nu'uanu Valley in 1837, collecting several specimens of which three are still known, the type and two recently found that were mislabeled as other 'akialoas (Olson and James 1995, Lepson and Johnston 2000). Perkins (1903, 1913, *in* Evenhuis 2007:103-104; see also Banko 1984c) observed two 'akialoas along a ridge above Nu'uanu in Oct 1892. He shot one but it fell over a steep edge and the specimen could not be located. We consider subsequent observations, including one on Mt Ka'ala in 1935 (*E* 23:55), singles on the Kipapa Trail about 4 km above Mililani in 1936 and 1937 (Munro 1944, *E* 23:55), and one e. of Mt. Palehua above Makakilo 19 Feb 1939 (Northwood 1940a; description on file BPBM) to be insufficient to extend the known existence of the O'ahu 'Akialoa beyond 1892, but given the survival of the Kaua'i 'Akialoa into the 1960s it is possible that one or more of these sightings are valid. It or congeners have been identified in fossil and subfossil deposits of O'ahu (Olson and James 1982b, James 1987).

On *Lana'i*, three specimens of 'akialoas were collected, apparently by E.B. Wolstenholme (not Palmer as often supposed), all in "either one day or in one bush, I forget which" (Perkins 1903 and in Evenhuis 2007:132), above Ko'ele 15-22 Nov 1892 and named H. lanaiensis by Rothschild (1893f). Palmer did observe additional individuals in this area and near Mt. Lana'ihale 15-26 Nov 1892 (Rothschild 1900, Hartert 1919, Banko 1984c). Perkins (1903, in Evenhuis 2007:191) was probably the last to see the Lana'i 'Akialoa, a single male along a ridge near the type location above Ko'ele 9 Jan 1894. He had a chance to collect it but, perhaps remembering his O'ahu experience a year earlier, remarked that "it would necessarily have fallen in the brush far below, or have lodged in the shrubbery on the side of the cliff, being without dog I forbore to shoot, and when after some minutes it flew off, it was seen no more". Munro (1927, 1944, 2007) subsequently searched for the Lana'i 'Akialoa for 20 years and may have seen Perkins' male but was not certain. He believed that the clearing of a Euphorbia forest (E. lorifolia) for pineapple fields may have caused the demise of this species and the Lana'i Hookbill. Subfossil records, probably of this taxon, exist for Moloka'i and Lana'i (Olson and James 1995), suggesting that they formerly were found throughout Maui Nui.

# **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) <a href="http://hbs.bishopmuseum.org/birds/rlp-monograph/">http://hbs.bishopmuseum.org/birds/rlp-monograph/</a>