'APAPANE

Other: Akakani; Laysan Honeycreeper

H.s. sanguineai (Southeastern Islands) H.s. fraithii (Laysan)

native resident, endemic (Laysan subspecies extirpated)

The 'Apapane has long been considered the most abundant of the Hawaiian Honeycreepers, and it remains so today (Fancy and Ralph 1997, Pratt 2005). The nominate subspecies is found on all six forested islands, being the only native landbird species residing regularly on Lana'i at the end of the 2000s. It is a nectar feeder, specializing on the blooms of the 'ohia lehua (*Metrosideros polymorpha*), the dominant plant of upper-elevation forests. It is also one of four species (along with 'O'u, '<u>T'iwi</u>, and '<u>Akohekohe</u>) that undergo seasonal migrations and may frequently commute between islands, during storms or otherwise (Munro 1944, Baldwin 1953; but see Berger 1972, 1981), and therefore shows little to no geographic variation among the Southeastern Hawaiian Islands (Stejneger 1887a [but *cf.* 1900], Wilson 1890a, Amadon 1950).

The Laysan subspecies of 'Apapane, now extirpated, was the only nectar-feeding Drepanine in the Northwestern Hawaiian Islands. It was first noted by C. Isenbeck (in von Kittlitz 1834) on 3 Apr 1828, who recorded both a "red bird" and a hummingbird ("Colibri"), perhaps referring to 'Apapane in both instances, due in part to its nectarfeeding habits. Palmer and Munro collected a series in June 1891 and Rothschild (1892a, 1900) named it in honor of George D. Freeth, armchair naturalist, superintendent of the guano company, and self-appointed "Governor of Laysan" at the time (Ely and Clapp 1973). Rothschild (1892a) originally mis-spelled the name as "fraithii" and later used four different spellings ("fraithii", "fraithi", "freethi", and "freethii") during the course of writing his monograph in 1893-1900 (Rothschild 1900) and all four of these names have since been used (Synonymies). See Pyle (unpublished ms2) for the use of "fraithii". Early ornithologists considered the Laysan population as a full species; Amadon (1950) and subsequent authors relegated it to a subspecies of 'Apapane; and more-recent osteological evidence again suggests that full species status may be warranted (Olson and James 1982b, James and Olson 1991, Olson and Ziegler 1995, Pratt and Pratt 2001, Pratt 2005; see Synonymies).

'Apapanes were apparently considered uncommon on Laysan by Insenbeck in 1828, and Palmer (in Rothschild 1900) claimed it was the rarest of the landbirds there, although he observed "a fair number". Palmer and subsequent collectors (including Shauninsland *in* Rothschild 1900:305, Fisher 1903a, Dill and Bryan 1912, and Bailey 1956) secured at least 105 specimens between 1892 and 1913 (see Ely and Clapp 1973, Banko 1979 for details). Dill and Bryan (1912) estimated a population size of 300 birds in 1911, and W.F. Coultas (*in* Ely and Clapp 1973) estimated 1000 individuals in 1915. The well-documented decimation of Laysan's vegetation by European Hares in 1903-1923 (Ely and Clapp 1973; see Laysan Rail) resulted in the extirpation of the 'Apapane on Laysan. The last three individuals apparently perished along with other taxa in a "three-day gale" on 18-20 Apr 1923 "that enveloped everything in a cloud of swirling sand" (Wetmore *in* Olson 1996b; see also Rauzon 2001).

In the *Southeastern Hawaiian Islands*, the 'Apapane was first collected near Kealakekua Bay during Cook's third voyage (Medway 1981) and named by Latham

(1781-1785), Gmelin (1789), and Cabanis (1850) as the "Crimson Creeper", *Himatione sanguinea* (see Synonymies). The genus name was based on the use of 'Apapane feathers in Hawaiian war capes (himations) and "*sanguinea*" referred to the blood-colored plumage aspect of adults. Cook (*in* Cook and King 1784:227) had earlier observed one at Waimea, Kaua'i, in Jan 1778, describing it as different from <u>Tiwis</u> and the "size of a canary bird, of a deep crimson colour" (see also Beaglehole 1967:630). Bloxam (1827a) named the 'Apapane "*Nectarina byronensis*" honoring Commander Byron of the *Blonde*, unaware of the previous name (see Olson 1996a), whereas "*Himatione*" was also adopted for several species of Drepanines for a time (<u>Synonymies</u>). Earlier taxonomists (e.g., Gray 1859, Sclater 1871; cf. Wilson and Evans 1899) thought that <u>'amakihis</u> might be female 'Apapanes but this was cleared up by Dole (1879) and Finsch (1880).

Banko (1979, 1987d) summarizes early observations and localities for 593 specimens of 'Apapane that he located in collections at the time. Accounts by early naturalists (King 1779, Cook and King 1784, Wilson 1890a, Seale 1900, Perkins 1903) and subfossil deposits (Olson and James 1982b, James 1987, James and Olson 1991) indicate that they were common down to low elevations prior to the 1900s, even feeding in beachside coconut palms (King 1779, C. Clerke *in* Beaglehole 1967), although it is unclear whether or not sightings at sea-level during the 1880-1890s were associated only with inclement weather at higher elevations (see below). They have since become restricted primarily to elevations above 600-1000 m, with seasonal movements, particularly in winter, resulting in occasional observations as low as 200-400 m elevation.

Under <u>Tiwi</u>, Wilson and Evans (1899) mention a report of numbers of "these birds" on *Ni'ihau* after storms, almost certainly referring to both <u>Tiwis</u> and 'Apapanes, as indicated by Newton (*in* Evenhuis 2007:65). 'Apapanes remained common on *Kaua'i*, *Maui*, and *Hawai'i* through the 2000s, but had become less common on *O'ahu* and *Moloka'i*, and have been reduced to very small numbers on *Lana'i*, since considered common there in 1913 (Munro 2007). Scott et al. (1986) estimated populations g the <u>HFBS</u> in 1978-1981 of 30,000 on Kaua'i, 39,000 on Moloka'i, 110,000 on Maui (including 16,000 in the W Maui Mts), and over 1,000,000 on Hawai'i I. Subsequent trends on these islands have been difficult to determine due to variable distributions in response to flowering 'ohia (MacMillan and Carpenter 1980, Ralph and Fancy 1995, Hess et al. 2001, Simon et al. 2002, Gorresen et al. 2009). Significant declines have been recorded on the Volcano <u>Christmas Bird Count</u> in 1972-2007 (<u>Graph</u>), and slight declines have also been noted on Kaua'i (Foster et al. 2004).

On O'ahu, 'Apapanes were noted to be scarcer than on other islands as early as the turn of the 20^{th} century (Seale 1900, Bryan and Seale 1901, Perkins 1903), and observers through the early part of the century noted declines (*E* 9:66, 27:96). They have subsequently been found in moderate numbers at higher elevations in the Wai'anae Range and in upper valleys of the Ko'olau range (Banko 1987d, Shallenberger 1977b, Shallenberger & Vaughn 1978; *E* 37:43), occurring at lower elevations and in exotic flowering trees during winter months (Shallenberger and Vaughn 1978, *E* 17:56). In 1991 a population of about 25,000 was estimated on O'ahu (Camp et al. *in* Gorresen et al. 2009). Subsequent observations and <u>Christmas Count</u> data around both Waipi'o (<u>Graph</u>) and Honolulu (<u>Graph</u>) indicate a continued slow decline, except for a spike in abundance noted on the Honolulu count in 1955-1958 (<u>Graph</u>), when flocks were visiting a large flowering Eucalyptus grove above Manoa Valley (*E* 17:56); occasional counts of 100+

have been reported during the 1990s and early 2000s. On Moloka'i 'Apapanes were considered abundant during the late 1800s and early 1900s (Perkins 1903, W.A. Bryan 1908) and continued so at higher elevations through the 1970s (Richardson 1949, Scott et al. 1977; *E* 24:46), but have shown apparent declines in numbers into the 1990s (Pratt 2002a), although other evidence along with lower-elevation (< 250 m) sightings during the 2000s may indicate a stable or increasing population there (Gorresen et al. 2009). Walther (2006) summarizes the status of 'Apapane on Lana'i, documenting a steady decline in numbers noted by Munro between 1923 and 1937 (*in* Gregory 1924-1936 and Buck 1937-1938; see also Munro 1944). A population in the low hundreds in the 1970-1980s (Hirai 1978b, Scott et al. 1986) has apparently declined further, although small numbers (< 10) noted through at least Apr 2006 indicate a persistent population (Walther 2006), perhaps augmented from time to time by transients from neighboring islands.

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/