Other: Spotted Munia (<1983), Ricebird, Scaly-breasted Munia, Spice Finch, Chinese Sparrow, 'Ai-lakai

L.p. topela

naturalized (non-native) resident, long established

Nutmeg Mannikins are commonly referred to as "ricebirds" as they inhabit rice fields among other grassy and open habitats from India and Nepal E to the Philippine Is and Indonesia (Ali and Ripley 1999, AOU 1998). They have been introduced to many locations around Australasia and islands of the Indian and Atlantic oceans, as well as Yap and the *Southeastern Hawaiian Islands* in the Pacific (Long 1981, Lever 1987, Pratt et al. 1987, AOU 1998, Higgins et al. 2006). They have also been released on Palau and Tahiti but populations failed to become established.

Nutmeg Mannikins were first brought to Honolulu by W. Hillebrand in Jun or Jul 1866 (not 1865 as often published), with other avian species, after a trip to China, Calcutta, and Java (Meier 2005; see Common Myna for details). Little is known about its spread through the remainder of the Southeastern Islands but observations of flocks at sea (e.g., 16 photographed 10-20 km off Kona 3 May 2008; HRBP 5450-5451) suggest that they likely dispersed between islands on their own, as has African Silverbill. In any event, by 1900 they had been recorded on at least Kaua'i, O'ahu, Moloka'i, Maui, and Hawai'i I (Henshaw 1900b, 1902a; Rothschild 1900; Bryan and Seale 1901; McGregor 1902, Bryan 1908), and they were subsequently found on all eight islands including Ni'ihau (Fisher 1951) and Lehua Islet (VanderWerf et al. 2007), Lana'i by the 1910-1920s when considered common (Hirai 1978b, Munro 2007; E 27:28), and Kaho'olawe during the 1980-2000s (Conant et al. 1983a, Gon et al. 1992, Morin et al. 1998). In Aug 1875 one was collected in Hilo by a local hunter who had never seen one before (Sclater 1878), but by 1900 they were found in "great numbers" on the windward side of Hawai'i I (Henshaw 1900b). Other evidence of continued expansion during the early 1900s is that of Bryan (1905b), who noted them to be much less common in the Waianae Range in 1901 as they were in the valleys behind Honolulu, although this may have been related to habitat preferences or grass seeding phenology at the time, rather than populationexpansion dynamics. Observational data through the 20th century indicates highly fluctuating populations likely related to such food-related factors (Berger 1972, 1981), and recent data from Christmas Bird Counts indicates declining populations through the 1970-2000s on Kaua'i and O'ahu around Kapa'a (Graph), Waipi'o (Graph), and Honolulu (Graph), perhaps related to competition with increasing populations of more-recently arrived Estrilids on these islands (cf. Moulton et al. 1990). No trend was evident based on Volcano Christmas Count data, in an area of Hawai'i I where other Estrilid finches did not expand during the 1970-2000s.

Nutmeg Mannikins are found most commonly in lowland fields, open woodlands, and parks, but have been recorded up to 2500 m elevation on Mauna Kea (Berger 1981, Scott et al. 1986), and are occasionally found in openings to native forest (Richardson and Bowles 1964, Shallenberger and Vaughn 1978, Scott et al. 1986, Conant et al. 1998). They can roost in immense flocks in cane fields (*E* 18:43). They were considered a scourge in the 1800s when rice was more commonly cultivated in Hawaii (Henshaw

1902a; W. Bryan 1915; Caum 1933; E. Bryan 1937a, 1940; Berger 1981), especially on Kaua'i (Denny 1999), and "the wholsale trapping and slaughter of tens of thousands" there in 1934 apparently resulted in at least some limited success (Bryan 1937b). The species was looked upon more favorably later in the 1900s after rice production had diminished (Munro 1944, Fisher 1948c); however, over 10,000 were again eradicated from fields around the Lihu'e Airport by U.S. Department of Agriculture officials in Jan-May 1992, for fear that they would interfere with aircraft operations. Nutmeg Mannikins breed year-round in Hawaii (Berger 1981).

Up to 12 subspecies of Nutmeg Mannikin have been recognized (Clements 2007). Although early writers (e.g., Henshaw 1902a, Caum 1933, Bryan 1958) assumed that they were brought from the Malaysian Peninsula, McGregor (1902) applied the Indonesian subspecies *L.p. nisoria* to it (perhaps thinking Hillebrand had picked it up in Java, his last port of call), and Ali and Ripley (1999) attribute Kaua'i birds to *subundulata* of n. India. However, specimen examination (PP, USNM) shows that the subspecies in Hawaii is *topela* of s. China, n. Thailand, Hainan, and Taiwan. It would appear, then, that Hillebrand picked up the Nutmeg Mannikins in Hong Kong, his first port of call during his 1865-1866 trip to Asia (Meier 2005).

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/