Other: Red-eared Bulbul *P.j. emeria?* 

## naturalized (non-native) resident, recently established

Red-whiskered Bulbuls are native to s. China, with range extensions into India and se. Asia; they have been introduced to several places around the world including Florida, Singapore, Indonesia, the Mauritius and Nicobar Is, and Australia (Long 1981, Lever 1987, Ali and Ripley 1996a, AOU 1998). Escapes and breeding were also noted in s. California in the 1970s but an established population did not result. In Hawaii, Red-whiskered Bulbuls were introduced to O'ahu in the mid 1960s, probably via an illegal cage-bird trade (see <a href="Red-vented Bulbul">Red-vented Bulbul</a>), and a viable population became established and was slowly spreading in range through the mid-2010s.

On O'ahu, escaped Red-whiskered Bulbuls were first reported 9 Jul 1965, when a pair was noted in a yard in Makiki Heights above Honolulu (E 28:24). It is quite possible that parties responsible for the release of many finches on Diamond Head in the mid 1960s (see Non-established List) also released Red-whiskered Bulbuls, or perhaps both bulbul species escaped from the same aviary that was opened by a falling tree in Makiki Heights in the mid-1960s (see Red-vented Bulbuls). More were seen in this Makiki yard in 1966 and by the fall of 1967 as many as 24 were counted (E 29:35). By 1975 they had expanded through upper-elevation Honolulu, including the Manoa and Nu'uanu valleys (E 28:70, 29:16, 29:69, 30:66, 31:39, 31:78-79, 32:9, 35:80, 35:87; summarized by Berger 1972, 1975b, 1981; HRBP 0021) but thereafter range expansion occurred much more slowly than it did with Red-vented Bulbuls, introduced around the same time (HAS 1979-1993, van Riper et al. 1979, Williams 1983a, Williams and Giddings 1984). Within the Honolulu Christmas Bird Count circle, however, population densities did increase through the 1980s (Williams 1987; Graph), and this led Williams and Giddings (1984) to infer that differences in habitat and elevational preferences (generally above 150 m for Red-whiskered Bulbul), rather than reproductive rates, explained the different expansion rates of the two bulbul species.

Through the 1980s and 1990s populations of Red-whiskered Bulbuls slowly expanded, being noted above Aiea, in Aina Haina, and across the Ko'olau ridge to Kaneohe by 1985-1986 (e.g., *E* 47:42); to Hawaii Kai by 1986, upper Halawa Valley, and Pearl City by 199; Maunawili above Kailua by 1992; throughout Kaneohe by 1995, Kailua by 1997, t and Waimanalo by 1998; to Wahiawa by 1999, Laie by 2002, Waimea Falls by 2005; and to Haleiwa and Ka'ena Pt by 2010. They were considered fairly common throughout the foothills of the Waianae Range during the late 2000s-mid 2010s. The spread through NW O'ahu is reflected by an increase in numbers recorded on the Waipi'o Christmas Count during the early 1980s followed by a leveling off or slight decline through 2014 (Graph); abundance in Honolulu also had leveled off or became cyclic through the 1990s-2014 (Graph). Numbers of Red-whiskered Bulbuls are consistently lower than those of Red-vented Bulbul on O'ahu, reflecting generally lower abundance. In contrast to Red-vented Bulbul there are no reports of Red-whiskered Bulbul away from O'ahu.

Little has been proposed concerning the subspecies of Red-whiskered Bulbul introduced to Hawaii. Specimen examination (PP, USNM and BPBM) indicates that birds from O'ahu are very similar to those introduced to Florida, which have been identified as *P.j. emeria* of e. India, Myanmar, and sw. Thailand (Banks and Laybourne 1968; see Deignan 1948 and Ali and Ripley 1996a for diagnoses). Other Indian, Himalayan, and Chinese subspecies can be ruled out for the O'ahu birds; however, *hainanensis* of SE Asia and se. China (Clements et al. 2016) is very similar and could not be ruled out as a possibility.

## Acronyms and Abbreviations

## Literature cited

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