ZEBRA DOVE Geopelia striata

Other: Barred Dove (<1983), Peaceful Dove (see below) monotypic

naturalized (non-native) resident, long established

Geopelia doves have been successfully introduced to Indian Ocean islands, Indonesia, the Philippines, Tahiti and in the Hawaiian Islands (Long 1981, Lever 1987), where they have become one of the most abundant bird species (Pyle 1995). The Zebra Dove is native to the Malay Peninsula, the Philippine Is, and Indonesia, but species limits within the genus Geopelia doves in the Austalasian region remain unresolved (Schodde and Mason 1997). The Peaceful Dove (G. placida) of s. New Guinea and Australia and the Barred Dove (G. maugei) of the Lesser Sundas and Molucca Is are similar and have been treated as part of G. striata (e.g. Long 1981, Higgins and Davies 1996) but most authors (Harrison 1969; AOU 1983, 1998; Monroe and Sibley 1993; Schodde and Mason 1997; Clements et al. 2016; Gill and Donsker 2016) treat them as three separate species (see Non-established List). Three subspecific taxa, tranquilla and clelandi of Australia and papua of New Guinea, have been variously treated as belonging to Zebra Dove (e.g., Howard and Moore 1994) or Peaceful Dove (e.g., Schodde and Mason 1997, Clements 2007, Gill and Donsker 2016); we follow most recent treatments in considering Zebra Dove as monotypic.

A small group of Zebra Doves were reportedly brought to Kaua'i, O'ahu, Moloka'i, and Maui in 1922, possibly from a Singapore dealer (Bryan 1958). They were identified then as *G.s. striata* (Munro 1944, Swedberg 1967b, Walker 1967) but the shipment was also reported to have included some Barred and Peaceful doves (see above; Caum 1933, Bryan 1937, Munro 1944, Bryan 1958, Swedberg 1967b). Munro collected what he determined to be Peaceful Doves on Lana'i in the 1920s but it appears these were all Zebra Doves (see Non-established List). Munro also suggested that populations may have been genetically introgressed with Bar-shouldered Dove, also introduced to Hawaii in the 1920s (see Non-established List) but all specimens examined to date show no signs of introgression with this or other *Geopilia* doves (PP examination).

By the late 1930s Zebra Doves had reached and become common on all Southeastern Islands except Hawai'i I, where they soon spread and became established, initially in n. Kona and sparingly in N Kohala (Northwood 1940, Schwartz & Schwartz 1949). In 1946 Schwartz and Schwartz (1949) estimated a population of 237,000 individuals, on *Kaua'i* (ca. 52,000), *O'ahu* (ca. 70,000), *Molokai* (ca. 52,000), *Maui* (ca. 47,000), *Lana'i* (ca. 10,000), and *Hawai'i I* (ca. 7,800); highest densities (up to 800 per square mile) were found in dryer areas of O'ahu and Moloka'i. They have since spread throughout Hawai'i I and have much higher populations there (Lewin 1971; Berger 1972, 1981; Scott et al. 1986), and undoubtedly on the other islands as well. They originally colonized *Ni'ihau* via flights from Kaua'i (Schwartz and Schwartz 1951d) and by 1947 it was considered the most abundant species there (Fisher 1951). They have also been reported regularly in small numbers (up to 10 per day) on *Kaho'olawe* since 1983 (e.g., Conant 1983, Gon et al. 1992, Morin et al. 1998) and we assume breeding there. Abundance estimates on different Christmas Bird Counts have shown various population trends (Table): decreasing at Kapa'a (Graph), showing no trend at Lihue or Volcano

(<u>Table</u>), increasing at Waipi'o (<u>Graph</u>), and increasing during the 1960-1980s (Williams 1987), decreasing in the 1990-2000s, and increasing during the early 2010s on the Honolulu count (<u>Graph</u>). Single-location high counts reported on each island in 2010-2016 included 2553 carefully estimated at Smith's Tropical Paradise, Wailua, Kaua'i 6 Aug 2014; 1500 in fields near Waipahu, O'ahu 27 Aug 2011; 475 on the Kualapuu Christmas Count, Moloka'i 21 Dec 2011; 71 at Manele Bay, Lana'i 14 Jun 2010; 500 at Marriot Ocean Club golf course, Kaanapali, Maui 3 Oct 2013; and 630 at the Hamakua Macadamia Nut Orchards, Hawai'i I 14 Feb 2016.

Zebra Doves are found primarily in dry lowlands, agricultural fields, and suburban and urban areas, at elevations up to 1000 m and occasionally as high as 2300 m (Berger 1981, Scott et al. 1986). They can be quite tame, often foraging and courting around the feet of patrons in both outdoor and indoor eateries, most abundantly in Honolulu, where they have also been conditioned to arrive in large flocks at certain tourist or homeless-patron feeding stations (Williams and Fleischer 1989; *E* 48:61-64). Flocks of up to 1000 or more sometimes can be found (Schwartz and Schwartz 1950b; see above), particularly at water holes in dry areas (e.g., 2600 and 3100 observed by Fisher on Ni'ihau) and when fed in areas such as Waikiki and the Honolulu Zoo. Over 10,000 were shot around the Lihue Airport, Kaua'i, Jan-May 1992 as part as damage control. Although listed as a gamebird (Walker 1967) and actively taken through at least the 1970s (Berger 1981), little hunting of this species has since occurred in Hawaii.

Acronyms and Abbreviations

Literature cited

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