## non-breeding visitor, regular winterer

monotypic

The Pomarine Jaeger has a Holarctic breeding distribution and winters throughout the world's oceans from Florida and California S to S America, S Africa, Australia, and New Zealand (Dement'ev and Gladkov 1951c, Cramp and Simmons 1983, Higgins and Davies 1996, AOU 1998). Its occurrence pattern in Hawaiian Island waters was greatly affected by the Honolulu wastewater outflow, which deposited sewage into the ocean about 1 km off Sand Island, O'ahu, during the 1950s through the 1980s, as reflected by numbers recorded on the Honolulu Christmas Bird Count (Graph). Flocks of over 100 Pomarine Jaegers would congregate at the outflow during certain wind and tide conditions in winter, representing unusual if not unprecedented numbers for aggregations of this species. Other seabirds such as Brown Boobies and Great Frigatebirds were also attracted to the outflow during this period. The outflow was gradually reduced and eliminated during the 1980s (*E* 47:68), and numbers of Pomarine Jaegers noted off Sand Island gradually diminished through the mid-1990s (see below). Apart from these congregations, the Pomarine Jaeger is an uncommon migrant and winter visitor in Hawaiian waters.

Frohling (1952) recorded the first Pomarine Jaegers in Hawaiian waters when he observed 11 off Pearl Harbor, *O'ahu* 10 January 1952. It is probable that these birds were attracted to the wastewater outflow. Observer effort in waters near the outflow was minimal until the mid 1970s; however, observations of 30 or more (and up to 83) in this vicinity between 1955 and 1971 (e.g., *E* 16:49, 27:70-71, 28:66-67, 31:107) suggested that these winter congregations occurred annually during this period. Beginning in the fall of 1976, increased awareness of this unusual congregation prompted observers to perform regular counts from Sand Island (*E* 38:4). Depending on currents and winds, the aggregation could be absent (over 50% of the time) or would occur between 0.5 and 3 km from shore, making accurate identification and counts difficult.

The first fall arrivals in 1976 occurred 9 Oct, and totals frequently exceeded 50 individuals throughout the ensuing winter. A peak estimate of >400 birds 9 Jan 1977 included many birds that could not be confirmed to species due to the distance of observation (*E* 38:4). It is unknown whether or not the numbers observed during winter 1976-1977 were unusually high; however, continued observation of up to 39 Pomarine Jaegers during June and July 1977, most likely oversummering one-year-old birds, suggests that the summer of 1976 was productive and that first-winter birds perhaps augmented totals off O'ahu observed during the previous winter. These represent the only individuals noted during Jun-Jul in Hawaiian waters. During ensuing winters, seasonal high counts gradually dropped: 135 on 5 Mar 1978 (*E* 39:18), followed by 80 on 6 Jan 1979 (*E* 40:29), 75 on 24 Feb 1980, 40 on 21 Dec 1980 (*E* 41:110), and 25 on 20 Dec 1981 (*E* 42:99). Thereafter numbers observed from Sand Island did not exceed 15, with the last observation of multiple birds being of 4 observed 6 Jan 1997.

Elsewhere in Hawaiian waters, Pomarine Jaegers are regularly seen in small numbers *at-sea*, during one-day trips offshore, and from the shores of both the *Northwestern Hawaiian Islands* (*Midway*, *Laysan* and *French Frigate*) and the *Southeastern Hawaiian Islands* (*Kaua'i*, *Moloka'i*, *Lanai*, *Maui*, and *Hawai'i I*).

Excluding observations from the wastewater outflow area off O'ahu, there are specific records of approximately 151 birds observed during one-day offshore trips and from shore. Monthly totals for these records through 2009 are Aug (3), Sep (4), Oct (27), Nov (52), Dec (24), Jan (20), Feb (24), Mar (86), Apr (41), and May (3), suggesting transient periods peaking near the islands in Nov and Mar. Few Pomarine Jaegers have been observed on shore in the Hawaiian Islands; these include one found dead on Midway 31 Mar 2000, one feeding on a dead Bonin Petrel on the beach at Laysan 24 Dec 1994 and another found dead there 10 Nov 2000 (BPBM 184374), and one specimen collected at Kaunakaka'i, Moloka'i 11 Feb 1953 (USNM 448629). Another specimen from an unknown locality was received 12 Mar 1976 by BPBM (148220). Photographs have been taken off O'ahu (HRBP 5030, 5340-5342), Lana'i (HRBP 0125), and Hawai'i I (HRBP 5745, 5756, 5792-5793).

At sea, during monthly surveys S and E of the Southeastern Hawaiian Islands Mar 1964-Jun 1965, King (1970) recorded over 160 individuals, with increased numbers throughout the study area in Apr-May suggesting passage of northbound migrants through Hawaiian waters at this time. Individuals were more common within 80 km of the islands during the winter, and no confirmed individuals were observed in Jul-Oct. Spear et al. (1999) also recorded them more commonly in spring than in fall at sea SE and S of Hawai'i in 1984-1991, eight individuals being recorded in Apr-May and one being seen in Oct-Nov. Rowlett (2002) observed 17 individuals throughout Hawaiian waters 6 Aug-28 Nov 2002, with a high count of 3 on 18 Sep. At least 8 Pomarine Jaegers were collected at sea during the POBSP in 1964-1966 (USNM 493821, 493589-90, 496296-9; Utah Museum of Natural History 21969).

## Acronyms and Abbreviations

## Literature cited

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