

were of two at Kealia Pond, M., throughout June to July 7, then one thereafter (JeO).

One Rufous-necked Stint was studied well at Kealia Pond, M., July 31 (†JeO), and another was found Aug. 1 at Aimakapa Pond, H. (JOB). One was seen at Aimakapa again Aug. 8 (DPr), and two were found there Aug. 9 (probably) & 10 (†JOB). Rufous-neckeds are rare stragglers to Hawai'i, but are recorded more often than any of the other palearctic stints. A **South Polar Skua** was reported Aug. 1, 19 mi off Kewalo Basin, O., with many shearwaters and other seabirds (DPr), and another (possibly two) was confidently identified from Kaena Pt., O., Aug. 13 (DPa). A probable S. Polar Skua was reported off Keahole Pt., H., July 25 (JOB). This species is a very rare straggler to Hawaiian waters, and these sightings this summer may have been related to the remnant El Niño conditions. Three Franklin Gulls in breeding plumage at Kealia Pond, M., May 9 all remained until June 18. Two were still there June 20 & 28 (JeO), very late dates. Two others were at Poughala Marsh, O., June 5 & 8, and one was seen there again June 10 (DS).

BULBULS TO GRACKLES

A group of 42 Red-vented Bulbuls at Kaena Pt. Natural Area Reserve, O., June 1 was the largest number yet seen at this far n.w. corner of the island, farthest point from where this species first got started on O'ahu several decades ago. A flock of 20 was seen there July 8 (PD). Counts in mountain forests included 17 Red-vented on Aiea Trail June 7 and 40 on Wa'ahila Ridge Trail June 20 (PD). Six Red-whiskered Bulbuls were also on Aiea

Trail June 7, and 15 on Wa'ahila Ridge Trail June 20, along with 35 other unidentified bulbuls of one or both these species (PD).

One or two (O'ahu) 'Elepaio were reported on 5 trails this summer (LT, PD, JOBa), an encouraging trend for this race, which has become very, very scarce on O'ahu. Two of the sightings were reported as immature birds. Observations of Red-billed Leiothrix (another species that crashed on O'ahu and is coming back) were reported in June and early July on Aiea Ridge Trail (PD, JOBa), and six were seen on Wa'ahila Ridge Trail June 20 (PD). On Maui, for comparison, about 70 were counted above 4000-foot elevation along the road to Polipoli Springs State Recreation Area July 11 (JeO). The ♀ Great-tailed Grackle at Waipi'o Pen., O., first reported there a dozen years ago, was seen there again July 20 (PD).

HAWAIIAN HONEYCREEPERS TO ESTRILDIDS

In the Puu La'au region on the w. slope of Mauna Kea, H. Palila (*Endangered*) suffered their worst breeding season in 5 years. Only one active nest was found by U.S. Fish & Wildlife researchers from April through July, a period when 50–80 nests could be expected at this study site. The low number of nesting attempts may be explained by the very small crop of mamane seeds coupled with the severe drought from winter through early summer, brought on by the El Niño event (TP). On the e. side of Mauna Kea at Hakalau N.W.R., nesting of Hawai'i Creeper and (Hawai'i) 'Akepa (both *Endangered*) also fared poorly. Fledgling production was down

only a bit, but many apparently failed to survive after fledging (JL). During a 10-day survey in the Hanawi area on Haleakala Mt., M., at the end of July, Maui Parrotbills (*Endangered*) were seen or heard daily, including one juvenile seen with its parents. Two Maui Creeper nests with nestlings were observed, and 'Akohekohe (*Endangered*) were "common," but none of the super-rare Po'ouli (*critically Endangered*) were found (JL).

In early August several Red-cheeked Cordon-bleus were found at their regular spot below Pu'uanahulu, H., and several Black-rumped Waxbills were seen on the nearby Pu'uanahulu hillside (DP). These are the only localities in the state where these 2 species may still be found. On O'ahu July 8, a flock of eight Red Avadavats in the grass along the road to Kaena Pt. and a flock of 20 Common Waxbills at the Point (PD) provided interesting locality records at the far n.w. corner of the island. Java Sparrows are just beginning to colonize Maui, mostly in the Kihei area; but 10–15 were found across the isthmus at Maui Community College in Kahului July 27 & 29 (JeO).

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CHANGING SEASONS *contd. from page 1111*

Gulls and Elegant Terns showed very early dispersal from the breeding grounds, pushed very far north (and inland in the case of Brown Pelicans) and were present in record or near-record numbers. In California, an amazing 3000 Elegant Terns were in Humboldt Bay in late July, 30,000 Black-vented Shearwaters were recorded off Newport Beach in July, and four Craver's Murrelets recorded off Monterey in June beat the previous early northern California date by approximately 6 weeks.

Many of these birds may have dispersed northward early, and in record numbers, due to decreased food availability as a result of El Niño. In fact, birds such as Black-vented Shearwaters that breed off western Mexico and disperse north in variable numbers after breeding may not have bred at all this year, as evidenced by the large numbers that occurred north of the breeding grounds very early in the season. The total lack of juvenile Yellow-footed Gulls at the Salton Sea suggested nesting failure in the Gulf of California. North of Mexico, many species such as cormorants, Western Gulls and alcids failed to reproduce this year, and species like Cassin's Auklets suffered increased mortality of adults.

The effects of El Niño may not be confined to seabirds. In 1984, Schreiber and Schreiber suggested that ENSO conditions "may extend to non-marine species far from the Pacific" (*Science* Vol. 225:713-716). George Hall and his coauthors have found that data on Neotropical migrants show a correlation between ENSO events and low numbers of breeding birds in the east, and suggest that these events result in lower populations of Neotropical migrants (see Hall et al., 1988, Effects of El Niño-Southern Oscillation (ENSO) on terrestrial birds, in *Acta XIX Congressus Internationalis Ornithologici*, Vol II pp. 1747-1759). However, a great deal more research would be required to actually determine relationships between ENSO and landbirds. Some support for this concept comes from the Hawaiian Islands, where poor nesting success for some Hawaiian honeycreepers this year was probably related to the dry winter and spring associated with El Niño. The endangered Palila experienced the worst breeding season in years.

Food for Thought

The relatively profound influences of climatic perturbations on bird populations are interesting in their own right. However, the

magnitude of influence that a single year's abnormal climatic events can have on avian populations may be an indication of potential long-term catastrophic events that could accompany global warming. We don't know the ramifications of global warming for avian populations, but it certainly bears thinking about, and watching.

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