

## SHORT-EARED OWL

*Asio flammeus*

Other: *Pueo*, Hawaiian Owl

*A.f. flammeus* (vagrant)  
*A.f. sandwichensis* (resident)

### **native resident, endemic subspecies; non-breeding visitor, vagrant**

The Short-eared Owl breeds across Eurasia and N America, in S America, and on many islands around the world, including Pohnpei, the Galapagos Is, and the Hawaiian Islands (Dement'ev and Gladkov 1951b, Cramp and Simmons 1985, Holt and Leasure 1993, AOU 1998, Spennemann 2004). North-temperate populations are migratory, and the species has a proclivity toward wandering far to sea during migration (e.g., Henshaw 1901c, Bryan 1903a, Amerson and Shelton 1976). Migrants have also been recorded at Wake Atoll, Kosrae, and the Marshall Is (Kelso 1938, Johnson & Kienholz 1975, Jones 1995, Rauzon et al. 2008). On Johnston Atoll, 10+ records from 1965-2003 (e.g., Amerson and Shelton 1976; *E* 28:48-49) were followed by up to 10 present during the early 2010s, with nesting confirmed there in at least 2012 (BPBM 185941-185943, 186128; [HRBP](#) 6715); the subspecies (see below) of nesting birds here has yet to be determined (see below). Klavitter (2009) summarizes the natural history of Short-eared Owls in the Hawaiian Islands.

The resident Hawaiian population of Short-eared Owl has been considered an endemic subspecies, *A.f. sandwichensis*, first named by Bloxam (1827a) as "*Strix sandvicensis*" following his observations during the 1825 voyage of the *Blonde* (Olson 1996a). Dole (1869, 1879), Sclater (1871), and others promoted a bit of confusion by referring it to two genera and species, *Strix delicatula* (an old name for *Tyto* owls of Southeastern Asia) and *Brachyotus galapagoensis* (along with *Otus bracyotus*, old names for Short-eared Owl) and it was given various other specific and subspecific names by early naturalists ([Synonymies](#)). The resident subspecies has been reported to be weakly differentiated (smaller in size and averaging darker and richer plumage) from the nominate subspecies of the Holarctic (Rothschild 1900, Bryan 1901a, Amadon 1950, Fleischer and McIntosh 2001), and synonymization has been recommended (e.g., Cassin 1858, Stejneger 1887, Perkins 1903, Olson 1996a, Zeigler 2002); however, recent analysis of specimens indicates sufficient differentiation for subspecific status (P. Pyle, unpublished ms.). Olson and James (1982b) found few subfossil bones and suggested that the Short-eared Owl colonized the Hawaiian Islands only after Polynesians had introduced rats during the first millennium, although early reports of mobbing by honeycreepers (e.g., Perkins 1895) and observed predation of Hawaiian forest birds (Snetsinger et al. 1994, VanGelder and Smith 2001, Mounce 2008, Klavitter 2009), suggests that the owls may also regularly take forest birds. Their diet now consists primarily of introduced rodents (Tomich 1971a, Klavitter 2009). A long-legged owl found commonly in fossil and subfossil deposits of Kaua'i, O'ahu, and Moloka'i (*Grallistrix*), which may have become extinct after Polynesian settlement, was better adapted for preying on birds (Olson and James 1982b, 1991; Burney et al. 2001; Ziegler 2002, Hearty et al. 2005).

Short-eared Owls were reported as conspicuous and diurnal or crepuscular by nearly all of the early explorers and naturalists visiting the *Southeastern Hawaiian*

*Islands*, including offshore islets (e.g., King 1779, Ellis 1782, Cook and King 1784, Bloxam 1827b, Nuttall 1840, Peale 1848, Dole 1879, Finsch 1880, Sclater 1881, Shauinsland 1906). Native Hawaiians considered the owl as sacred, and would not hunt them; however, early Caucasian settlers did kill them, resulting in depleted populations by the end of the 1800s (Perkins 1895). Seale (1900) noted them commonly in Kalihi Valley and elsewhere around what is now Honolulu, in open grassy and marshy areas that are now fully developed and support no owls (a total of 21 have been recorded on the Honolulu [Christmas Bird Count](#) in 71 years from 1944-2014, only 4 after 1974). Population sizes have continued to decrease substantially on all islands since these early assessments (*cf.* Henshaw 1902a, Perkins 1903, Scott et al. 1986, Klavitter 2009), but especially on *O'ahu*, where they are considered endangered by the state of Hawaii. In the 2000s-mid 2010s they appeared to have stabilized at low densities on all eight Southeastern Islands, including *Ni'ihau* (e.g., Fisher 1951), *Moloka'i* (e.g., Pekelo 1964; *E* 33:99, 57:77), *Lana'i* (e.g., *E* 18:13, 37:11; Hirai 1978), and *Kaho'olawe* (e.g., Conant 1983, Morin et al. 1998). They show episodic peaks (e.g., *E* 21:75) and "die-offs" (Aye et al. 1995, Klavitter 2009; *E* 47:94; *HFW* 6[4]:3, 9[1]:1-3) due to trauma and various ailments and possible epidemics, possibly correlated with periods of food-stress, perhaps following cycles of abundance in rodent populations (see also [Barn Owl](#)). Conspicuous die-offs have occurred in 1987-1989 (*Kaua'i*), 1988 (*Hawai'i*), 1991-1992 (*Maui*), and 2007 (Moloka'i), among other smaller or less-documented events. At least 24 were turned into the [SOS](#) program on Kaua'i during 2010-2016 ([SOS data](#)). Short-eared Owls are observed most commonly over pastures (up to 2800 m elevation) and around coastal wetlands but are also observed foraging over native forests. Banko (1979) summarized specimens known at that time.

Short-eared Owls have also regularly occurred from the *Northwestern Hawaiian Islands*, many of which have been collected and confirmed by size as *A.f. flammeus* of the Holarctic (P. Pyle unpublished ms). Observations of individuals during consecutive winters (e.g. 1962-1969 at Kure, 1983-1986 at French Frigate, and 2010-2016 on Midway) suggest that some may undergo successful annual migrations between the continents and Hawaiian winter grounds. Assuming this, a [minimum](#) of 64 individuals have been recorded, on *Kure* (9, 1962-2015; e.g., Robbins 1966, Clapp and Woodward 1968, Woodward 1972; BPBM 178816, 185998; USNM 494362; [HRBP](#) 0123, 6719-6720); *Midway* (33, 1907-2005; e.g., Bailey 1951, 1956 includes photo; Fisher 1960, 1965; Hofslund 1972; *E* 18:4, 20:56; BPBM 178521 and 178902; [HRBP](#) 6717-6718, 6721-6722); *Laysan* (12, 1986-2005; e.g., BPBM 178571, 178614, 178648-50, 184142, 184447); and *French Frigate* (10, 1967-2010; e.g., *E* 31:98, Amerson 1971; BPBM 184139; [HRBP](#) 0432-0433). Short-eared Owls can prey on breeding seabirds in these islands; e.g., numerous noddies and up to 70 [Tristram's Storm-Petrels](#) predated by two owls on Kure during the winter of 2013-2014. Most records are from Nov-early May, although Bailey (1951) mentioned records for Jun 1949 on Midway and, at French Frigate, one observed 24 Jun 1997 and found dead the following day (BPBM 184139) and another observed 14 Jun-16 Jul 2010 (Howard et al. 2013; [HRBP](#) 6716) were both small and dark, with the specimen (and probably the photographed bird as well) representing the Hawaiian subspecies, *sandwichensis* (P. Pyle unpublished ms.). The high counts for Short-eared Owls in the Northwestern Islands were of up to 6 each on Midway and Laysan during the winter of 1991-1992 and 6 on Midway during each of the three

winters of 2011-2012. The occurrence pattern to the Northwestern Island suggests that the Holarctic subspecies may also reach the Southeastern Islands as well, but there are no confirmed records of this subspecies there.

#### [Acronyms and Abbreviations](#)

#### [Literature cited](#)

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