

## BRISTLE-THIGHED CURLEW

*Numenius tahitiensis*

Hawaiian: Kioea

monotypic

### **non-breeding visitor, regular winterer**

The Bristle-thighed Curlew is a local breeder in w. Alaska near the mouth of the Yukon River and on the Seward Peninsula, where the current world population probably does not exceed 10,000 individuals (AOU 1998, Marks et al. 2002). Unique among migratory birds, their winter range is confined to islands throughout the c. Pacific Basin, primarily from the Hawaiian to the Tuamotu and Cook Is, less commonly S to the Kermadec Is and W to Wake Atoll and w. Micronesia (Higgins and Davies 1996, Wiles et al. 2004, Rauzon et al. 2008); vagrants have been recorded E to California (CBRC 2007). Most adults wintering to the S likely bypass the Hawaiian Is, flying directly from winter to breeding locations and vice versa (Marks and Redmond 1994a), although apparent transient flocks have been recorded during inclement weather. See Wilson and Evans (1899) for details on prior nomenclatural confusion surrounding this species and genus in the Pacific, in part because naturalists could not believe that it migrated from Alaska to Hawaii and Tahiti. Its Hawaiian name, *Kioea*, refers to its long legs (see also [Kioea](#) account) or, possibly, to its call note. The fossil record indicates its presence in the Hawaiian Islands for at least 200,000 yrs (James 1987). Subfossil records of bones also suggest a precipitous population decline following the arrival of the Polynesians during the first millennium (Olson and James 1982b). Bristle-thighed Curlews often lose the capacity to fly during molt in Hawaii (Marks et al. 1990, Marks 1993), making them susceptible to humans and invasive mammalian predators. This likely explains why this species is now found much more abundantly in the uninhabited Northwestern Hawaiian Islands than in the Southeastern Islands.

Curlews were first distinguished in post-contact Hawaii by Ellis (1782) and de Freycinet (1819). Subsequent early accounts indicate that wintering Bristle-thighed Curlews were only slightly more common in the Southeastern Islands during the 1800s than they are today (Dole 1879; Stejneger 1887, 1888; Wilson and Evans 1899; Rothschild 1900, Henshaw 1902a). This is despite their being a popular game bird around the turn of the 20th century (Perkins 1903; *E* 4:39, 10:20-21; Munro 1944, Schwartz and Schwartz 1949), up to 15 being taken in a day on O'ahu (*PoP* 14[7]:17). Only on Moloka'i, where "large flocks" formerly wintered in upland areas (Perkins 1903), have numbers apparently dropped substantially.

Although primarily a winter visitor, Bristle-thighed Curlews do not return to Alaskan breeding grounds until their third or fourth summer (Marks and Redmond 1996); thus a proportion of the population remains for the summer at favored wintering areas. Rumors that these birds nested on Laysan and in upland areas among the Southeastern Hawaiian Islands (Rothschild 1900, Henshaw 1902a, Munro 1944) persisted, even after the Alaskan breeding grounds were finally discovered in 1949 (*E* 10:20-21, Fisher 1951). Adults arrive in the Hawaiian Islands in two pulses during the fall, 18-24 Jul and 16-23 Aug (probably representing failed and successful breeders, respectively), whereas first-

year birds arrive in mid-Aug to early Sep (Marks and Redmond 1994a). Over 90% of adult individuals departing the Hawaiian Is to the N do so during 1-9 May.

The majority of the wintering population (estimated 800 birds; Marks et al. 2002) occurs in the *Northwestern Hawaiian Islands*, in particular: **Laysan** (300-450 individuals; but apparently much fewer during the 2000-mid 2010s based on [Christmas Bird Counts](#) of < 100 and a high count of only 31 during winter 2011-2012; Rutt in press); **Lisianski** (300-400); and **Midway** (ca. 100; [HRBP](#) 0128; see below), with lesser numbers at the other groups (Marks and Redmond 1994b, Rauzon 2001). Estimates of 1,000 birds on Laysan in 1915-1918 (*cf.* Ely and Clapp 1973) were undoubtedly too high (Marks et al. 2002). High counts for the other groups, recorded during the POBSP (see [Seabird Page](#) for citations), include **Kure** (21+ in Dec 2013 and increasing there; see also [HRBP](#) 0602); **Pearl and Hermes** (30 in Aug-Sep 1966-1967; see also [HRBP](#) 0603); **French Frigate** (20 on 29 Apr 1988; see also [HRBP](#) 0601-0603, 0697, 0701, 706-0707); **Necker** (1 in Sep 1964-1966); and **Nihoa** (5 in Mar-Sep 1969-1972; see also Conant 1983b). Overwintering birds are found in small numbers (1-4 birds) at most groups but range up to 10 on Midway (mid May-early Jul 1993) and 50 (Brock 1951b) to 100 (28 Jun 1989) on Laysan. Two birds banded during the POBSP in 1967 were present on Laysan in 1989-1991, the oldest at least 23 yr 10 mo of age, perhaps a longevity record among shorebirds (Marks 1992).

Good estimates for group-wide wintering populations can be made by counting roosting birds in late Apr and early May, when birds flock up in preparation for departure to breeding grounds. On Midway, counts during most springs during 1995-2006 indicated that adult birds depart the atoll simultaneously between 2 and 8 May, often during the first clear night after a cloudy period. Careful counts (excluding transients forced down by storms) had risen to a peak of 108 in 1998 (13 Apr) but dropped to 45 in 1999 (30 Apr). This large drop (-58%) in the estimated wintering population likely resulted from the loss of birds during a large storm in the N Pacific in early May 1998, which also caused many birds to get as far off course as Washington, Oregon, and California (Mlodinow et al. 1999, CBRC 2007). The vulnerability of simultaneous migration, resulting in the occasional loss of a significant proportion of the population during storms, may be partially offset by the fact that younger birds remain on the winter grounds for their first two or more summers, providing a safety valve for such events. The winter population on Midway appeared to be recovering slowly during the 2000s-mid 2010s.

In the *Southeastern Hawaiian Islands*, small numbers of Bristle-thighed Curlews have been noted during fall migration and winter on all islands except Kaho'olawe. Recent island high counts have included 17 (with reports by residents of 40-50) on **Ni'ihau** (1939; *E* 10:20, attributed to the lack of hunting there); 5 on **Kaua'i** (30 Sep 1996 and 2 Oct 1997, Hanapepe Airstrip; see also [HRBP](#) 1059-1060); 68 on **O'ahu** (3 Nov 2011, Ki'i Unit of JCNWR; see below and also [HRBP](#) 0188, 5708, 5729); 21 on **Moloka'i** (Koheo Wetlands, 4 Oct 2011); 3 on **Maui** (Ma'alea, 4 Sep 1973); 1 on **Lana'i** (5 occasions; e.g., Hirai 1978b, Munro 2007; *E* 39:17, 39:63); and 20-30 on **Hawai'i** (6 Oct 1965, South Point; *E* 45:74). Many of these high counts seemed to involve fall transients, perhaps including first-fall birds that had not settled yet for the winter. At Ki'i, management of the refuge for curlews (*E* 39:17) and protection has resulted in a gradual

increase in the wintering population, from 0-1 birds in the early 1970s to 10-20 in the early 2000s to 20-40 in the late 2000s and 40-60 in the early-to-mid 2010s. Increases in the oversummering populations here (e.g., 1-8 birds during the 2000-mid 2010s) indicate that young birds are recruiting into the wintering population, which thus should continue to increase. On Moloka'i a wintering flock favoring Koheo Wetlands near Kaunakakai slowly increased from 7-10 birds during the early 2000s to 8-14 birds during the early-to-mid 2010s, with 3-4 regularly over-summering (Dibben-Young 2015); it was made the official bird of Kaunakakai in 2011 (E 71:49-52). Smaller wintering and over-summering populations have recently been noted at Hanapepe and Kauaiele Wetlands, Kaua'i, and at South Point and Kona Village, Hawai'i. An interesting record is of 1-2 curlews heard flying over Hakalau NWR, Hawai'i I 14 Aug 1990, 1900 m above sea level.

### [Acronyms and Abbreviations](#)

### [Literature cited](#)

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