

## BLACK-NECKED STILT

## *Himantopus mexicanus*

Other: Hawaiian Stilt, *Ae'o*, *Kukuluae'o*

*H.m. knudseni*

### **native resident, endemic subspecies, endangered**

The "Hawaiian Stilt" is considered an endemic subspecies of the Black-necked Stilt of N and S America (AOU 1998, Robinson et al. 1999), to which it is very similar genetically (Fleisher and McIntosh 2001). The Hawaiian subspecies was formally named *knudseni* by Stejneger (1887a) in honor of Valdemar Knudsen who, along with his son Augustus F. Knudsen, was an early collector of birds on Kaua'i, including the type specimen of Hawaiian Stilt. It had previously been noticed in the islands by Dole (1879, as "*H. candidus*", the "Stilt Plover", and old name for certain Black-winged Stilts, all now combined into *H. himantopus*), Finsch (1880), and others (see [Synonymies](#)). It was considered a separate species until Bryan and Greenway (1944) lumped it with Black-necked Stilt, which they and others felt (and still feel) should be lumped with *H. himantopus* (see [Synonymies](#)). "Pied" Hawaiian Stilts are occasionally encountered (e.g., [HRBP](#) 5020-5021), some of which resemble [Black-winged Stilts](#), and perhaps indicating how closely related all stilts are worldwide. Banko (1979) summarizes 55 specimens of Hawaiian Stilt known in collections at the time and Banko (1988) gives a history of records and detailed review of population surveys and status from 1856 to 1981.

Hawaiian Stilts were considered "common in swamps and ponds all over" the *Southeastern Hawaiian Islands* by Dole (1879) and this status generally applied through the 2000s. Records exist for elevations of up to 600 m on Lana'i and 700 m on Hawai'i I, near Pu'u Wa'a Wa'a Ranch, where breeding has been suspected. Some inter-island movement has been documented, especially between Kaua'i and Ni'ihau (*E* 1[2]:3, 39:63; Shallenberger 1977a; Berger 1981; Engilis and Pratt 1993; Reed and Oring 1993, Reed *et al.* 1998), and as far as the Northwestern Hawaiian Islands (see below). The species requires specific water depths to forage and breed, necessitating seasonal movements as dictated by water-level conditions (Allen and Lum 1972, *E* 36:29-31, Reed *et al.* 1998). Prior to 1950 population sizes appeared to be reduced, probably due to hunting (Henshaw 1902a, Bryan 1937b, Munro 1944; *E* 5:16-17) but since hunting stilts was prohibited in the 1940s (cf. *E* 2:8) they have shown statewide increases through the 2000s (HAS 1959-2005). Protection of this Federally Endangered Species and active management by the USFWS (Schwartz and Schwartz 1949, 1951b; Berger 1973; USFWS 1978, 2005a; Engilis and Pratt 1993; Reed and Oring 1993; Drigot 2001) has resulted in increased population estimates, especially at Kealia NWR, Maui (see below). Time-series analyses by Reed *et al.* (2007) indicated that populations increased between 1957 and 2004, with the primary increasing trend beginning in 1975, shortly after it was afforded Endangered-Species status (USFWS 2005a). [DOFAW Waterbird Surveys](#) also show a steady statewide increase, from counts of 700-1300 individuals in the 1980s, to 1100-1550 in the 1990s, to 1200-2200 in the 2000s, but with a one-year dip to ~1000 individuals in both winter and summer counts of 2002. Perkins (1903) mentions that populations were occasionally reduced due to outbreaks of tapeworms.

Populations on each Southeastern Island fluctuate widely, according to precise water levels, and long-term trends on each island have varied accordingly (e.g., *AB*

33:317, Banko 1988, Reed and Oring 1993; [Christmas Bird Count](#) data). *Ni'ihau* and *Kaua'i* appear to support a single mobile population that shows fluctuating breeding and wintering ranges dependent on water conditions. Most breeding is suspected of occurring on Ni'ihau, except for years of drought (e.g., 1976-1978) when summer counts were much higher on Kaua'i (Banko 1988). It is possible that the size of this population declined slightly during the 20th century. Bryan and Seale (1901) noted "hundreds" of breeding individuals at one pond near Waimea, Kaua'i, and 600-800 were reported breeding on Ni'ihau in 1964 (*E* 24:43). More recent high counts have included 326-376 on Kaua'i during the summers of 1976-1978 and, as observed during [DOFAW Waterbird Surveys](#), 550 island-wide on Kaua'i in Jan 1993, 360 on Ni'ihau 17 Apr 1972 (*E* 33:48) and 203 there 14 Jan 1981 (Banko 1988). During the 2000s the population for these two islands was estimated at 125-350 birds (USFWS 2005a), and populations appear to be increasing, at least in nw. Kaua'i ([Graph](#)).

On *O'ahu* ([HRBP](#) 5313), there are only scattered historical references and specimens collected during the 1800s (Banko 1988), and Perkins (1903) indicated that they were only rarely seen in the wetlands around Honolulu. Subsequently, the population appears to have increased, with island-wide [DOFAW Waterbird Surveys](#) from 1956-1981 averaging 300 in Jan and 511 in Jul-Aug (Banko 1998) and showing an increasing trend during 1968-1989 (Reed and Oring 1993). Development of wetlands (e.g., *E* 23:3-4) and changes around Honolulu beginning in the 1940s ([Graph](#)) and on Waipi'o Peninsula beginning in the late 1980s have resulted in the drying up of settling basins which formerly provided excellent habitat for Black-necked Stilts (cf. Engilis and Naughton 2004). High counts by observers at Waipi'o dropped from 500 in Aug 1950 (*E* 11:24) and 599 in Aug 1976, to 2-300 in the 1980s, 1-200 in the 1990s, and <100 in the 2000s. High counts at other favored habitat areas on O'ahu (Ki'i Unit of JCNWR and Mokapu Pond, KMCB) also showed gradual declines during this period. But more recent DOFAW surveys (1980-2007) indicate little change from former numbers, with island-wide low points of ~250 in 1988-1989 and ~220 in 1998 and peaks of 550 in Jan 1996 and 520 in Aug 2004. Drops in populations at historically favored locations appear to have been compensated by the formation of a new colony during the 1990s at an electrical facility near Ewa Beach (*AB* 48:344) and perhaps increases in smaller breeding colonies in parks and fish ponds throughout the island, resulting from a seemingly higher tolerance of stilts for humans and *vice versa*.

After being noted intermittently between the 1800s and 1940s (e.g., Finsch 1880, Rotschild 1900, Henshaw 1902a, Perkins 1903, Banko 1988), perhaps as migrants from O'ahu (*E* 9:36, 46), populations of Hawaiian Stilts on the other Southeastern Islands increased dramatically between the 1950s and the 2000s (Banko 1988, Reed and Oring 1993). On *Moloka'i*, high counts by observers went from 5-13 in the 1960s (*E* 24:47, 30:65) to around 30 in the 1970s (e.g., *E* 38:6), to 50-60 in the 1980s, to >200 in the 1990-2000s, with a peak of 251 at Kaunakakai during the fall of 1995. Island-wide [DOFAW](#) counts on Moloka'i during the 2000's were on the order of 35-70 individuals, with peaks of 130-140 in the winters of 2003 and 2006. On *Mau'i* ([HRBP](#) 5213, 5253), high counts went from 100-300 in the early 1960s (*E* 34:24-25), to 200-600 in the 1970-1980s (e.g., *E* 28:5, 31:65-66, 33:48, 34:24-25), and 800-1,000 in the 2000s, with a peak single-location count of 900+ at Kealia NWR in early Jul 2003. Island-wide [DOFAW](#) counts in 1980-2007 reflect this increase, with peaks 710 in Jan 2000 and 860 in Jan

2006. On *Lana'i*, Munro (2007) failed to see a stilt in 18 years (1911-1929), and the first report was of two birds landing on an airport runway during a rainstorm on 1 Jun 1980. Since this numbers have increased dramatically to a peak of 135 individuals on a [DOFAW](#) survey in Jan 2003, aided by the opening of a sewage treatment plant providing favorable breeding habitat in Lana'i City in 1989 (Engilis and Pratt 1993, USFWS 2005a). The only record for *Kaho'olawe* was of two birds observed after heavy rains in Jan 2005. On *Hawai'i*, counts went from none between 1900 and 1960, to 20-30 in the 1970-1980s (Paton et al. 1985, Paton and Scott 1985) to 120-200 in the 1990-2000s (Engilis and Naughton 2004), with high counts of 225 on 16 Dec 2000 (*E* 61:77) and 275 on an island-wide [DOFAW](#) survey in Jan 2001. These birds move between several wetland areas in the vicinity of Kona; specific records for the Hilo area are sparse (1 in Feb-Apr 1981, 5 on 15 Jan 1987, and 3-4 on 6 Apr 1991). A primary breeding site during the late 1990s, on private property near Kona (Cyanotech Ponds), was altered in 2001 to the detriment of stilts (USFWS 2005a); much of the breeding population here shifted to Kona STP at this time. Island-wide [DOFAW](#) surveys in 1986-2007 reflect these dynamics, with consistent counts of 10-40 birds in 1986-1997, followed by a large jump to 150-275 birds in 1998-2007, except for 2002-2003, when counts were reduced to <10 individuals due to lack of survey effort.

There is a single record for Hawaiian Stilt for the Northwestern Hawaiian Islands, of one found freshly killed on *Nihoa* on 15 May 1987 (BPBM 175823). Given this populations proclivity to wander between Southeastern Islands, we presume that this individual arrived on its own and was not transported by a raptor such as a [Peregrine Falcon](#), none of which were seen on Nihoa at the time (or have yet been recorded there, although surely they are regular in small numbers).

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

#### [Literature cited](#)

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