

LAYSAN DUCK

Anas laysanensis

Other: Laysan Teal

monotypic

native resident, endemic, endangered

The Laysan Duck ([HRBP](#) 0759-0761, 0819, 0822, 0921) has the most restricted range and (often) population of any of the world's waterfowl species. It is endemic to *Laysan* in the *Northwestern Hawaiian Islands*, although it occurred throughout the Southeastern Hawaiian Islands prior to Polynesian contact (James 1987, Cooper *et al.* 1996, Burney *et al.* 2001, Ziegler 2002), and a small population of ducks found on *Lisianski* in 1828-1859 was confirmed to be of this species (Isenbeck *in* Kittlitz 1834, Rothschild 1900, Clapp and Wirtz 1975, Olson and Ziegler 1995); reduction of habitat by introduced rodents and perhaps over-harvest by shipwrecked mariners are mentioned as causes of extirpation on Lisianski (*HE* 18[3]:1-3). Although sometimes considered a subspecies of the [Hawaiian Duck](#) or [Mallard](#) (see [Synonymies](#)), recent genetic evidence suggests it is not closely related to Mallard (Browne *et al.* 1993, Cooper *et al.* 1996, Rhymer 2001) and may be closer to the Pacific Black Duck (*A. superciliosa*) of s. Polynesia (Fleisher and McIntosh 2001). Oberholser (1917) felt that it "certainly did not belong in [*Anas*]" and placed it in the monotypic genus *Horizonetta*. See Fisher (1903a, 1903b), Warner (1963), Greenway (1967), Ely and Clapp (1973), Moulton and Weller (1984) and Moulton and Marshall (1996) for summaries of the natural history and conservation of Laysan Duck, and Reynolds (2004), USFWS (2004b), Reynolds and Work (2005), Reynolds *et al.* (2006, 2007a), and Seavy *et al.* (2009) for updated information. Banko (1979) summarizes 66 known specimens, including the type series collected by Palmer in Jun 1891 (Rothschild 1892b).

No historic population estimates of Laysan Ducks were obtained before the late 1800s, when Laysan began to be altered to the detriment of endemic avifauna but it was likely close to the carrying capacity, which appears to be 500-700 individuals according to several population estimates of this magnitude between 1963 and the 2000s (Warner 1963, Moulton and Weller 1984, HAS 1984-1996, Scott and Kepler 1985, Marshall 1992, Reynolds and Citta 2007, BLI 2009, Seavy *et al.* 2009; *E* 25:90). Between 1891 and 1910 populations declined due to disturbance from a mining operation, hunting for food and plumes, and denuding of habitat by the introduction of European Hares (see Ely and Clapp 1973 and [Laysan Rail](#)). Subsequently, populations dropped, possibly to as low as 7-20 individuals, between 1911 and 1936 (Dill and Bryan 1912, Wetmore 1925, Munro 1944, Bailey 1956, Ely and Clapp 1973), and there is one report that it had perhaps dwindled to just one gravid female in 1930 (Zimmerman 1974). Populations slowly recovered after rabbits were removed in 1923 (Brock 1951a, 1951b; Warner 1963; Ely and Clapp 1973; *E* 12:17-18, 22:22-23, 33:9, 48:15-16), reaching a peak of 688-746 in 1961 (Warner 1963), and despite occasional die-offs or reproductive failures (Morin 1992, Moulton and Marshall 1996, Reynolds *et al.* 2007) reaching near carrying capacity of 400-600 individuals through most of the 2000s (Reynolds and Citta 2007). In Aug-Dec 1993, Laysan Ducks suffered a die-off related to drought and a nematode infestation, reducing numbers by 75% in 1993-1994 (Work *et al.* 2004) but numbers had rebounded by 2004.

Because of the vulnerability of the Laysan Duck population, captive populations have been maintained for propagation purposes since 1957 (Ripley 1960; Berger 1972, 1981; USFWS 1982, Cooper et al. 1996, Reynolds and Kozar 2000; *E* 19:22). Wildfowl centers, zoos, and private individuals currently hold over 200 individuals for propagation should it become necessary, although there are drawbacks to relying on captive birds for propagation (USFWS 2004b). Introduction of 14 birds to Pearl and Hermes in 1967 resulted in one nesting attempt, but all birds had disappeared by 1969 (Amerson *et al.* 1974).

In Oct 2004 and Oct 2005, USFWS transported 42 wild Laysan Ducks from Laysan to Midway, where rats had been removed and wetlands had been created or enhanced specifically for establishment of an introduced "insurance" population (USGS 2005; Reynolds et. al 2007, 2008). The ducks bred during ensuing breeding seasons (e.g., [HRBP](#) 5246) and by 2008 had established a population of > 200 adults. An outbreak of botulism during the summer of 2008, when 181 carcasses were recovered including many young of the year, set back in population growth, but recovery was well underway in 2009. The population size on Midway is expected to exceed the population size on Laysan Island within 10 years of the translocation, if there are no other catastrophes, and the botulism outbreaks can be managed (Reynolds et. al 2008, Seavy et.al 2009). Laysan ducks fly between Eastern and Sand islands of Midway Atoll, where as flights over the ocean are uncommon on Laysan. During the late 2000s translocation to other predator-free Northwestern Islands was being considered to further reduce extinction risk.

A report of a Laysan Duck among other exotic wildfowl at Waimea Falls Park, O'ahu, 6 Sep 1987, if valid, was surely based on an imported bird.

[Acronyms and Abbreviations](#)

[Literature cited](#)

Citation: Pyle, R.L., and P. Pyle. 2009. The Birds of the Hawaiian Islands: Occurrence, History, Distribution, and Status. B.P. Bishop Museum, Honolulu, HI, U.S.A. Version 1 (31 December 2009) <http://hbs.bishopmuseum.org/birds/rfp-monograph/>