

# Hawaiian Duck

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**COMMON NAME:** Hawaiian Duck

**HAWAIIAN NAME:** *Koloa*

**SCIENTIFIC NAME:** *Anas wyvilliana*

**LEGAL STATUS:** MBTA protected.

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**APPEARANCE:** Hawaiian ducks, or koloa, are a small dabbling duck. Both sexes resemble a dark female mallard, mottled brown with blue wing bars bordered on both sides by white. Males have darker head and neck feathers, an olive-colored bill, bright orange feet and legs, and are 19 to 20 inches long. Females have a more orange or gray colored bill with a dark mark on the upper ridge, feet and legs that are dull orange, and are 16 to 17 inches long. Data indicate that there has been extensive hybridization between koloa and feral mallards on O'ahu. There is often difficulty distinguishing genetically pure koloa (*Anas wyvilliana*) from true mallards (*Anas platyrhynchos*) and koloa-mallard hybrids, although mallards and hybrids tend to be larger. For management purposes the three species often must be grouped together as koloa/ hybrid/ mallard.

**NATIVE RANGE:** Endemic. Previously koloa inhabited all of the MHI except Lāna'i and Kaho'olawe. They are now restricted to wild populations on Kaua'i and Ni'ihau and small reestablished populations on O'ahu, Hawai'i, and Maui.

**HABITAT:** Koloa occupy coastal wetlands, freshwater pools, bogs, streams, and marshy areas. They prefer shallow water with nearby dense cover and safe roosting sites (islands). They have adapted to urbanized environments by foraging in lawns and open grassed areas across the base.

**DIET:** Koloa feed on grass seeds and other vegetation, crustaceans, insects, nematodes, and algae.

**REPRODUCTION:** Information on the nesting biology of koloa is sparse. Nesting occurs year-round with the majority of activity occurring between January and May. Koloa build their nests on the ground near water. They generally lay eight to ten eggs that incubate for less than one month.

**ECOLOGICAL THREATS:** The main threat to koloas is hybridization with introduced mallards. Other threats include habitat loss; altered hydrology (modifications to wetland habitats); alien plant encroachment; avian botulism; and introduced mammalian predators. Duckling predators include mongooses, cats, dogs, black-crowned night herons, and common mynas.

**USFWS CONSERVATION STRATEGIES:** Although there is not currently an active captive breeding program, koloa bred in captivity have previously been used for reintroductions. Captive breeding programs or future translocation of birds are still considered valid and valuable methods of increasing the population on certain islands. The importation of mallards is restricted by the state and efforts to eliminate koloa/mallard hybrids primarily occurring on Kaua'i. Efforts to protect and restore wetlands and control predators benefit this species.



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**MCBH CONSERVATION MEASURES:** It is assumed that the Hawaiian duck population on MCBH are all hybrids and are not protected under ESA, but are protected under MBTA. Hawaiian ducks and/or hybrids have been recorded at MCBH Kaneohe Bay, MCTAB, and Pearl City Annex. Regularly conducted surveys for waterbirds indicate that the number of Hawaiian duck/hybrid/mallards at MCBH has increased notably since 2002. Prior to 2002, surveys typically detected less than 20 ducks per visit. Between 2012 and 2021 the average number present at MCBH has been 80 Hawaiian duck hybrids recorded during regular counts in each year. The following conservation measures benefit the Hawaiian duck:

- **Habitat protection and enhancement.** Although maintaining healthy non-invasive vegetation is important, ducks on MCBH have adapted well to an urbanized environment. They are regularly found foraging in the open grassy areas around base and at the Water Reclamation Facility. The number of Hawaiian ducks documented at the Klipper Golf Course ponds has decreased principally due to the golf course grounds maintenance crew removing all the trees on the perimeter of the ponds, especially Koloa pond that provided protection and shade to the ducks. Ducks in the Percolation Ditch wetland has slightly increased.
- **Limiting disturbance.** Hawaiian ducks appear unfazed by human activity, including normal light and noise pollution associated with the base, and it does not appear to affect their breeding success. Established best management practices (BMPs) and conservation measures are employed when a project may disturb or otherwise modify a koloa's behavior.
- **Predator control.** Koloa benefit from the on-going trapping of cats, mongoose, and rats within the WMA and wetlands.
- **Wildlife friendly lighting.** All exterior lights for new construction, replacement of existing fixtures, and renovations shall meet or exceed light requirements developed in consultation with U.S. Fish and Wildlife Service (USFWS) and National Oceanic and Atmospheric Administration (NOAA), which incorporate International Dark-Sky Association (IDA) standards and research focused on identifying wildlife-friendly lighting. Natural Resources staff work with base planners to incorporate wildlife-friendly lighting standards into all projects, which will address seabird fallout concerns. Appendix E defines the requirements for wildlife-friendly lighting.
- **Monitoring for diseases.** Due to periodic occurrences of outbreaks of avian botulism in the Water Reclamation Facility, koloa at MCBH Kaneohe Bay are monitored during summer months for symptoms of avian botulism in an effort to detect the disease in the earliest stages allowing for treatment of sick ducks and potentially limiting the spread of disease and the number of associated deaths. All ducks showing signs of botulism are immediately removed from the population and taken to the local veterinarian clinic and given an anti-toxin. If caught early enough, ducks have recovered.
- **Biological monitoring.** Contracted biological monitoring is now being regularly incorporated into all projects whose action areas include MCBH wetlands. The Biological Monitor Roles, Methods, and Survey Standards are presented in Appendix D.
- **Education and outreach.** Development and distribution of informational material, including videos, fact sheets, and briefings for military personnel and civilians on base, including new arrivals, and outreach with volunteers.

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## REFERENCES

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Second Revision. U.S. Fish and Wildlife Service, Portland, Oregon. 155 pp.

**For more information:** MCBH Integrated Natural Resources Management Plan. 2022. Sections 6 and 7.1.

**PHOTOS** Hawaiian Duck. USFWS, Pacific Islands Fish and Wildlife Office.