



## Nu ʻupia Ponds Scavenger Hunt

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Native or introduced?



### Hawaiian Duck (Koloa) = N

Unbeknown to most, Hawaii's native duck, the Koloa Maoli, has been a part of the ecosystem of the Hawaiian Islands for tens of thousands of years. It is unique to these remote islands - found nowhere else on Earth. Like many native species it is threatened with extinction from the combined forces of habitat loss, introduced predators, historic overhunting, etc., but is unusual in that it faces an additional threat - that of hybridization (or cross-breeding). Hybridization occurs when two distinct species interbreed and produce fertile offspring. In the case of the Koloa, this has occurred with the domestic mallard, many of which have been released by people into the wild and become feral. Domestic mallards are notoriously effective breeders, and can hybridize readily with even distantly related species of duck. This added pressure is threatening the very existence of the Koloa, and has the potential to add one more Hawaiian bird to the already too long list of extinctions.

<https://dlnr.hawaii.gov/wildlife/koloa/>



### Red Mangrove = I

In the U.S., red mangroves are native to Florida, Puerto Rico, and the Virgin Islands, but they are also present as an exotic species in Hawaii. Mangroves exclude native terrestrial coastal vegetation and makes shorelines or stream banks inaccessible because of their vast network of branches and prop roots. They destroy nesting habitats for all four endemic shorebirds, such as the ae' o (Hawaiian stilt) and 'alae 'ula (Hawaiian moorhen) and excludes them from their natural habitat.

<https://dlnr.hawaii.gov/hisc/info/species/>



### Hawaiian Stilt (Āe'ō) = N

The ae'ō or Hawaiian stilt is a slender, graceful waterbird (Family: Recurvirostridae) that is considered distinct from the North American subspecies, *H. m. mexicanus*. Adult males and females are mostly black above and white below with a long, thin black bill and long, delicate pink legs. Foraging habitat consists of ephemeral fresh, brackish, or salt water habitats. Water depth and vegetation density are important determinants of the suitability of foraging habitat.

<https://dlnr.hawaii.gov/wildlife/files/2013/09/Fact-Sheet-hawaiian-stilt.pdf>



### Black Crowned Night Heron = N

The 'auku'u or black-crowned night heron (Family: Ardeidae) is a stocky cosmopolitan species that breeds on every continent except for Australia and Antarctica. Four subspecies are recognized and *N. n. hoactli* occurs in Hawai'i, as well as across North America and most of South America. Adult males and females have a black crown and upper back, with a white throat, cheeks, and a narrow band above the bill that extends over the eyes, gray wings, and whitish underparts; males are larger than females. Juveniles are overall brown with light spots. The species' stout bill is black; legs and feet are yellow, and the eyes are red. 'Auku'u (black-crowned night heron) are gregarious and unlike continental birds, those in Hawai'i are diurnal. The species uses a variety of shallow wetlands for foraging and employs various techniques to capture a diversity of prey including insects, fish,

frogs, mice, and the young of other native waterbirds. <https://dlnr.hawaii.gov/wildlife/files/2013/09/Fact-Sheet-Black-crowned-night-heron.pdf>



### **Kiawe – I**

Long-thorn kiawe is native to South America, Central America and the Caribbean and was first noted in Hawai'i in 1978. The introduction history is unknown but it was possibly introduced for agriculture or accidentally. The long-thorn kiawe thorns are able to pierce entirely through rubber slippers, boots, and car/truck tires. These thorns also have poison-tipped ends that can cause bruises and swelling. The long-thorn kiawe grows in dense thickets that crowd out native coastal plants. It is capable of rendering large areas impassible, preventing beach access. <https://dlnr.hawaii.gov/hisc/info/invasive-species-profiles/long-thorn-kiawe/>



### **Pacific Golden Plover = N**

The Kōlea or Pacific golden-plover is a moderately small yellow and-buff mottled shorebird (Family: Charadriidae) which winters in the Main Hawaiian Islands (MHI) and breeds in Siberia and westernmost Alaska. Most adults arrive in Hawai'i in August, while juveniles arrive in October; spring departures begin in late April. Kōlea feed primarily on terrestrial insects such as cockroaches, moths, caterpillars, and earwigs, all of which they locate by sight. During the breeding season, they are also known to eat berries, leaves, and seeds. Kōlea show high site fidelity to wintering grounds and will chase intruders from their territories while foraging. Hawai'i is thought to support a large proportion of the world's wintering Kōlea population.

[https://dlnr.hawaii.gov/wildlife/files/2013/09/Fact-Sheet-Pacific\\_Golden\\_Plover.pdf](https://dlnr.hawaii.gov/wildlife/files/2013/09/Fact-Sheet-Pacific_Golden_Plover.pdf)



### **Indian Mongoose = I**

The mongooses found in Hawai'i are native to India and were originally introduced to Hawai'i Island in 1883 by the sugar industry to control rats in sugarcane fields on Maui, Moloka'i and O'ahu. The introduction of mongoose to Hawaii with the intent to control rats was misguided, because while rodents make up a large portion of the mongooses' diet, their substantial negative impact on other desirable birds, insects, and animals outweighs their minor impact on rat. Mongoose are now widespread on all of the main Hawaiian islands except for Lana'i and Kaua'i, where there are no known populations. Mongooses can live in both wet and dry conditions including gardens, grasslands, and forests. <https://dlnr.hawaii.gov/hisc/info/invasive-species-profiles/mongoose/>



### **Koa Haole = I**

*Leucaena leucocephala* is native to tropical America where it grows in dry forests. In Hawaii the plant is known as koa haole and is a great example of an alien pest species in Hawaii. The name likely came from its resemblance to the other native tree in the bean family, koa, and haole, alluding to its introduction by foreigners. <https://wildlifeofhawaii.com/flowers/1266/leucaena-leucocephala-white-leadtree/>



### **Green Turtle = N**

The green turtle is one of the largest hard-shelled sea turtles. They are unique among sea turtles in that they are herbivores, eating mostly seagrasses and algae. This diet is what gives their cartilage and fat a greenish color (not their shells), which is where their name comes from. Green turtles live all over the world, nest in over 80 countries, and live in the coastal areas of more than 140 countries. Today, all green turtle populations are listed as either endangered or threatened under the Endangered Species Act. The primary threats facing green turtles are bycatch in commercial and recreational fishing gear, direct killing of turtles

and harvest of eggs, vessel strikes, loss and alteration of nesting habitat, degradation and loss of foraging habitat, and entanglement in or ingestion of marine debris. <https://www.fisheries.noaa.gov/species/green-turtle>



### **Milo – N or I**

Though it is known that milo was brought to Hawaii by early Polynesian settlers, it is also possible that it was already growing in the islands. Therefore, it could be considered native or introduced, since there is no conclusive evidence to support either. Milo trees grow throughout the Pacific islands and are prolific seed producers. Dry milo seeds can float on salt water for a month or more and still be viable. It is quite possible that seeds made their way here by floating on the ocean before the settlers arrived. <https://www.westhawaii.com/2015/08/02/features/milo-the-ideal-tree-for-lower-elevation-landscapes/>



### **Silver Buttonwood – I**

Highly invasive ornamental shrub/tree. <https://plants.usda.gov/core/profile?symbol=COER2>



### **Cat – I**

Cats have established populations on all eight of the main Hawaiian Islands and contribute to widespread ecological disruptions that threaten native Hawaiian wildlife. Cats are one of the most devastating predators of Hawai'i's unique wildlife. In addition to direct predation, cats also spread a potentially lethal parasite (*Toxoplasma gondii*) that contaminates terrestrial, freshwater, and marine environments and has been shown to negatively impact birds and mammals – including humans. <https://dlnr.hawaii.gov/hisc/info/invasive-species-profiles/feral-cats/>

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