## Hawaiian Goose Bounces Off Endangered List as Other Species Struggle

## December 18, 2019 MATTHEW RENDA

(CN) – When Captain James Cook alighted on the shores of the Hawaiian Islands in January 1778, the first European to set foot on the remote island chain, the population of the Hawaiian goose was estimated to be 25,000.

Nene at Kilauea Point, Kauai. (By <u>Jörg Hempel</u> – Own work, <u>CC BY-SA 3.0 de</u>, <u>Link</u>)

Known as the nene due to its soft call, the bird's population was ravaged by introductions of non-native predators like cats and mongoose by Europeans settlers. By 1952, as few as 300 birds remained.

The species was listed under the Endangered Species Act in 1967, but the actual recovery began much earlier when conservationist Peter Scott used a wildlife preserve in Gloucestershire, England, to breed the nene in captivity while avoiding the pitfalls of genetic bottlenecking – a highly probable development in a species with so few individuals left.

The goose was reintroduced into the wild in the ensuing decades, with a focus on expansive ranches on Maui. Scientists estimate there are 2,500 birds roaming the island chain at present.

This success story culminated with the U.S. Fish and Wildlife Service's decision to officially move the nene from the endangered list to threatened list.

Interior Secretary David Bernhardt announced the listing change this month, saying "the nene is out of intensive care and on a pathway to recovery."

While wildlife managers celebrated the nene's recovery, they have found enough concern about the populations of two insect species – Bethany Beach firefly and the Gulf Coast solitary bee – to warrant further review about whether a listing is necessary.

The firefly is the only endemic species in Delaware, where the crepuscular bug emerges during the summer months using the wetlands along the Atlantic coast as its habitat

The male firefly emits a distinctive double green flash to attract mates.

"The service finds the petition to list the Bethany Beach firefly presented substantial information on potential threats associated with light pollution, invasive species, pesticide use and the effects of climate change (sea level rise, increased incidence of severe storms, and increased temperature and phenology changes)," Fish and Wildlife said in a statement Wednesday.

The Gulf Coast solitary bee is a fuzzy bee with yellow and black stripes that proliferates in the sandy barrier islands and coastal dunes that fleck the coastline from eastern Mississippi to the panhandle of Florida.

The bee is threatened by the loss of a particular plant called the coastal plain honeycomb head, the only plant the bee frequents for nourishment.

"The service finds the petition to list the Gulf Coast solitary bee presented substantial information on potential threats associated with effects from climate change, pesticide spraying, urbanization and loss of pollination mutualism," the agency said.

Conservation groups hailed the moves by Fish and Wildlife but urged further action.

"This is great news for these two imperiled insects, but we can't prevent their extinction without actually giving them the emergency-room protection that only the Endangered Species Act can offer," said Tara Cornelisse, a scientist at the Center for Biological Diversity. "We're losing insects across the globe, and our rapidly declining fireflies and native bees desperately need our help right now."

While the two insects are due to receive further consideration, the agency officially denied further consideration for five additional species.

Two of the species located in the Southeast – the Ozark chub and the purple disk honeycomb head – are impacted by development, agriculture and habitat loss, but have not lost population to the extent where it would merit listing.

The Ozark chub lives in the streams of the Ozark mountains spanning Missouri and Arkansas. The small ray-finned fish sports a gray, tan, yellow or green back with dark blotches along its belly.

The service acknowledged mining, agriculture, dams and other development hurt the fish's population but said the species has proven resilient.

"The best scientific data available indicates that the Ozark chub still exists in 91% of its historically occupied watersheds, despite many of these populations being partially or entirely isolated by dams and impoundments for more than 50 years," the agency said.

The purple disk honeycomb head is a perennial wetland herb found in the pine savanna and flatwood ecosystems throughout the southeastern United States. It is characterized by the violet color of its disk-like petals arranged in a honeycomb receptacle.

While the plant has been harmed by habitat loss in Georgia, Florida, the Carolinas and Alabama, the service says recovery efforts have proved helpful.

"Five populations have high resiliency and four have moderate resiliency, all in Georgia and Florida on public and private lands being managed with prescribed fire or mowing," the agency said.

The service declined to list three other species – the red tree vole in northern Oregon, the sand verbena moth and the perennial wildflower known as skiff milkvetch.

The agency also expanded the open comment period for the Pacific fisher by 15 days.