

# Environmental Review

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## Restoring Palila on the Big Island

Introduction:

Wildlife scientists recently moved about fifty Hawaiian honeycreepers, a species named palila, from their enclave on the west slope of Mauna Kea to what they hoped would be suitable habitat nearby. However, the birds were having none of it; in the following months they all returned to their home woods. More than 90 percent of the palila population has been reduced to a thirty square kilometer patch of forest on the mountainside. A fire in those woods would be a disaster for the bird population so the wildlife managers wanted to spread the birds out a bit.

Archaeological evidence shows that palila lived all over the main group of islands until the time of the Polynesian settlements, after that the birds retreated to the high country. The Polynesians didn't hunt or persecute the birds, they just converted their habitat to agriculture, and the rats that came along with the Polynesians almost certainly played a part in the birds' retreat. Since European settlement of the islands palila has continued its retreat to the high forests.

This once common and widespread species is down to the last two thousand birds. The causes of the palila's continued decline include the usual suspects such as introduced species, but are primarily, the conversion of their habitat to ranching and

agriculture, and nest depredation by feral cats.

Wildlife scientists have spent years studying Hawaii's remaining native species and are working to restore habitat for palila and other species. We spoke with Paul Banko about his many years of work studying the natural history and conservation of this beautiful and increasingly rare animal.

**ER:** Dr. Banko, what is your training?

**PB:** I got my Ph.D. from the University of Washington in 1988 in wildlife science from the College of Forest Resources. I received my Bachelor's

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Degree in zoology and botany in 1972, also at the University of Washington. All my professional career has been spent here in Hawaii. I should say, my dad established the research station here in Hawaii Volcanoes National Park, so I learned a lot of my Hawaiian biology from him and his work. I was fortunate in being able to go out in the field with him many times. We worked on the Hawaiian crow, alala, together quite a bit and took other field trips including one up Kipahulu Valley where he rediscovered the Maui nukupu'u, which hadn't been seen for over seventy years. However, we were not together on that day. He saw it and I didn't. So it goes.

**ER:** Tell us about palila.

**PB:** Palila is a species of Hawaiian honeycreeper in the *Drepanidinae* family. It's the last remaining seed specialist in the main islands. The cornerstone of its ecology is its specialization for eating seeds of the mamane tree, *Sophora chrysophylla*.

**ER:** They must not have that spectacular crescent-shaped honeycreeper beak.

**PB:** No, they didn't have the big sickle-shaped bills. One aspect of its life history that has attracted me is this strong specialization for seeds, which also plays into the conservation of the species.

**ER:** What islands do they live on?































