

A Story of Hope



The Millerbirds' Journey

G. Wallace photo

Objective:

To establish a self-sustaining population of endangered Millerbirds on Laysan in order to protect one of our country's rarest bird species from extinction.

Passengers:

A team of biologists with 24 Millerbirds on Expedition I and 26 Millerbirds on Expedition II

Dates:

Expedition I: September 2 - 16, 2011
Expedition II: August 10 - 25, 2012

Vessel:

M/V Searcher

Port of Origin:

Honolulu, Harbor, Hawai'i

Destination:

Laysan Island

Stop En Route:

Nihoa Island

In September of 2011, after many years of careful planning, a team of experienced biologists set sail for the remote northwestern Hawaiian island of Nihoa. There, they caught a group of endangered Millerbirds and moved them to Laysan Island, where Millerbirds had become extinct. Nihoa and Laysan lie some 650 miles apart in the Hawaiian Islands National Wildlife Refuge (NWR). The Hawaiian Islands NWR encompasses the majority of the atolls and islands located within the Papahānaumokuākea Marine National Monument.

Following that trip, another voyage was taken in August 2012. Over the two expeditions, a total of 50 Millerbirds—about half male and half female—were caught on Nihoa and taken to Laysan to live and breed in a new environment. And so they did. As of June 2013, the population increased to more than 100 birds, a doubling of the population!

This is a story of hope and inspiration to save a Hawaiian species from extinction. It is the journey to re-establish a second home for the endangered Millerbirds.



R. Kohley photo



Millerbird

Habitat, History, and Ecology



R. Kohley photo

The Millerbird, which weighs less than an ounce, is a lively brown song bird that forages for insects among low shrubs and bunch-grasses. As a generalist insectivore, it eats a variety of insects, both native and non-native. In addition to aerial “fly-catching,” the Millerbird finds its food by hopping around in leaf litter and on the soil surface.

Identified as one of the rarest bird species in the United States, the Millerbird has become the focus of intense conservation efforts. Before these efforts, the Millerbird’s population was restricted to the island of Nihoa, where it was vulnerable to extinction. The Nihoa population fluctuated between 30-to-800 individuals, but the small island could not support a larger population. A hurricane or accidental introduction of an alien predator or disease could wipe out the entire species. Scientists thus worked for many years to plan the historic translocation of the Millerbird to help protect it from extinction.

The Millerbirds that were captured on Nihoa were released on Laysan, where they were once found naturally. They disappeared on Laysan almost 100 years ago when the introduction of rabbits and other livestock led to the destruction of most of the island’s vegetation and the extinction of three bird species including the Millerbird. Since then, the introduced

mammals have been removed, and for the past 20 years, scientists from the Hawaiian Islands NWR have been working to restore Laysan’s native vegetation and island ecosystem.

Today, Laysan offers plenty of room and food for the reintroduced Millerbirds to spread out and raise their young. The colony began with 50 Millerbirds, which was the target number determined by conservationists to give the species the best possible chance of establishing a self-sustaining population on Laysan. The now more than 100 Millerbirds live with other endangered species such as the Laysan Finch, Laysan Duck, Hawaiian monk seal, and several plant species, as well as millions of nesting seabirds.



L. Greig photo

Human Interactions

As the saying goes, “it takes a village” to translocate a species. This project involved biologists from the U.S. Fish and Wildlife Service and American Bird Conservancy, avian (bird) husbandry experts, a wildlife veterinarian, Hawaiian cultural experts, boat personnel, permit specialists, and educators, among others.



H. Freifeld photo

Some biologists have stayed on Laysan for 6-month rotations to monitor, observe and record the Millerbirds' activities. More than half of the birds had temporary transmitters attached to them, and some were fitted with temperature sensors to note if the birds were living. Direct observations, however, remain the most reliable way to collect data about the birds to evaluate their survivability on Laysan. These observations have yielded significant new scientific information about the Millerbird – information that is valuable in the conservation and management of the species on both Nihoa and Laysan. This has included the first observation of three chicks fledging from a nest. Before this observation on Laysan, Millerbirds were only known to produce one or two chicks.

Biologists' Blog

Biologists on Laysan have been recording their experiences and Millerbird milestones on a blog that is available for everyone to read. These are a few of their highlights:

March 20 – April 1, 2012

B John Vetter

We have a fledgling Millerbird! I had to get that exciting bit of news out up front for my first blog post. . . I jumped straight off the boat through large ocean swells into a howling rainstorm, which made for an inauspicious start to my six month tour on Laysan. After the weather broke the following day, Robby and I headed out into the core Nihoa Millerbird territories, so he could point out that there is a reason that more than one person has compared the species to a mouse. A bird that prefers to hop through thick vegetation rather

than fly, and do so silently, makes for a real challenge. And also makes for a constant and eerie feeling that something is always watching you.



After much watching and waiting, a Millerbird born on Laysan—for the first time in nearly a century—has left the nest. On top of that incredible landmark, nearly all of the Millerbird pairs are showing nesting behavior, with seven nests found so far in various states of breeding. That fact shows some amazing resilience by these little birds considering the wind and sand storms of early March. It has also made for a heady and exhilarating first two weeks in the field for me.



M. Dalton photo

October 2012

B Michelle Wilcox

This two-week period has been full of excitement. Two of our Millerbird nests have fledged chicks. One of the nests was built by a male and female translocated from Nihoa and released on Laysan on August 18th of this year. They began building a nest 17 days later, laid eggs, incubated for about 14 days, fed nestlings for another 14 days, and fledged the chicks this week! This is an amazing example of the success of the translocation of this species: in just over two months the two parents have “replaced” themselves with two juveniles added to the population. Two additional nests have nestlings, and at least five pairs are still incubating eggs.

Blog: <http://www.fws.gov/pacificislands/nihoamillerbird.html>



Challenges

Translocating the Millerbird from Nihoa to Laysan presented many challenges.

- Every individual bird was important due to the small population on Nihoa. Scientists needed to be careful not to injure any birds while they were being caught.
- Special care and strict quarantine procedures needed to be taken so that alien species were not accidentally introduced.



T. Work photo

- Keeping a small, energetic bird alive in a cage on a boat for many days was very difficult. The captured Millerbirds required a continuous supply of live insects, which is their staple diet. The long transit time from Nihoa to Laysan meant that this was one of the most physiologically challenging translocations ever attempted for perching birds.

Further Inquiry:

Hawaiian birds are facing increasing threats. Yet translocating species to protect them from extinction is controversial among scientists. What are the pros and cons of this strategy? Should translocation be limited to a species' historical range, or should areas outside its historical range also be considered?

- Landing at Nihoa and Laysan can be dangerous, especially during rough seas and bad weather. The safest periods are limited to June and September.



C. Rutt photo

Sometimes emergencies occur that are out of anyone's control. For example, on November 4, 2012, all personnel were evacuated from Laysan and the camp was closed for the duration of the winter season due to a medical issue. The birds and other wildlife, however, remained to live and breed on their own, as nature would have it.



G. Wallace photo

On The Horizon

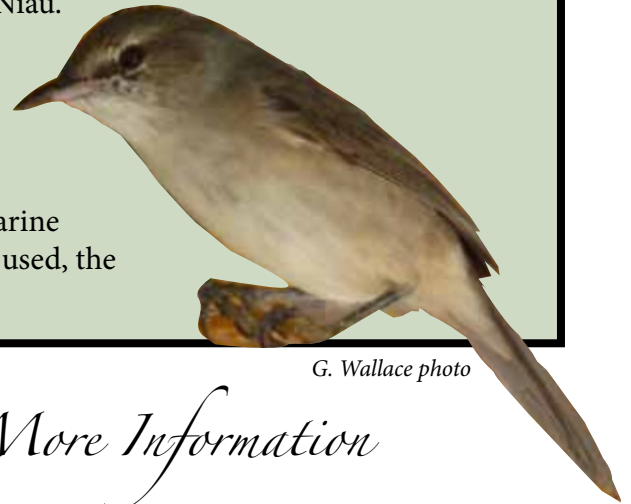
While the Hawaiian Islands present some of the greatest conservation challenges on Earth, the success of this project stands as an outstanding example of what can be achieved through dedicated teamwork, careful planning, and passion for conservation. As we learn more about Millerbird biology and ecology, we can become better stewards of these birds and these islands. The lessons learned, moreover, may help save other endangered Hawaiian birds.

Introducing New Names!



The Millerbirds on Nihoa and Laysan now have names that reflect their Hawaiian origins. The population on Nihoa is called Ulūlu and the population on Laysan is referred to as Ulūlu Niau. Ulūlu can mean “frayed” and “growing things.” Both meanings apply to the Millerbird: its physical appearance, in tone and texture, is similar to frayed rope and the growth of its population signifies growing things. The Ulūlu that was moved from Nihoa to Laysan became Ulūlu Niau. Niau means to move, flow, or sail smoothly, swiftly, silently and peacefully.

These names were selected after careful research by the Cultural Working Group of the Papahānaumokuākea Marine National Monument. It is hoped that the more these names are used, the more the birds will grow in number.



G. Wallace photo

Definitions

- **Translocation:** the movement of living organisms from one area with free release in another (IUCN 1987)
- **Reintroduction:** the intentional movement of an organism into a part of its native range from which it has disappeared or become extirpated in historic times as a result of human activities or natural catastrophes (IUCN 1987)
- **Fledgling:** the stage in a young bird's life when the feathers and wing muscles are sufficiently developed for flight and the bird leaves the nest, though it is still dependent upon parental care.

For More Information

- USFWS - Nihoa Millerbird Translocation Project, <http://www.fws.gov/pacificislands/nihoamillerbird.html>
- American Bird Conservancy, www.abcbirds.org/abcprograms/oceansandislands/hawaii.html
- Papahānaumokuākea Marine National Monument, www.papahanaumokuakea.gov/
- Hawai'i State Department of Land and Natural Resources, <http://www.state.hi.us/dlnr/dofaw/kids/teach/NihMillBird.pdf>

The Millerbird Translocation Project is a partnership of the U.S. Fish and Wildlife Service and American Bird Conservancy within the Papahānaumokuākea Marine National Monument and World Heritage Site. The Monument is managed by the Departments of Interior and Commerce, and the State of Hawai'i as Co-Trustees. This document was produced by the Mālama Learning Center in July of 2013.

