

# PsittaScene



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Photos: © Gerald McCormack

In August 2008, the community of Atiu in the Cook Islands witnessed an event that had not been seen in over 200 years - the fledging of a Kuhl's Lory, or Kura (*Vini kuhlii*), from a nest on Atiu. The parent birds were recent arrivals, released only months before as part of a group reintroduced to Atiu from Rimatara. This brilliantly feathered lory, dressed in the brightest red, yellow and purple plumage was once again flying over Atiu, eating from the tropical flowers and fruits and causing the native Atiuans to once again look to the skies.

The Kura ("Kura" in Cook Island Maori means "red"), once common on Atiu, was nearly extinct by the time Captain Cook landed there on Atiu over 200 years ago, having been zealously hunted by the native Maori islanders who coveted its bright red feathers for adornment and trade. This year's successful nesting of this species on Atiu was one more step in a conservation effort that took over fifteen years to accomplish.

In 1993, following the successful translocation of the Ultramarine Lory (*Vini ultramarine*) from Ua Huka to Fatu Hiva in the Marquesa Islands, we first discussed the possibilities of using the same translocation concept to protect the Kura, still found on the French Polynesian Austral Island of Rimatara. Although in the end translocation was selected as the best conservation strategy for the Kura, several other options were considered.

As new technologies and skills are developed and as we gain new experiences, conservation biologists have more strategies to choose from when it comes to species recovery. Such strategies may include captive-propagation and reintroduction (example: Echo Parakeet, *Psittacula eques*); reintroduction to historical islands of distribution (Seychelles Warbler *Acrocephalus sechellensis*); cross-fostering endangered eggs and/or chick under parents of a non-endangered relative (Chatham Island Black Robin, *Petroica traversi* fostered under Chatham Island Tit, *Petroica macrocephala chathamensis*); head-starting wild-collected eggs in captivity and releasing young once hatchling/fledgling risks are over (many species of raptors); and even such simple strategies as



# ISLAND ENDEMIC

## Reintroduction of the Kuhl's Lory

By Alan Lieberman and Gerald McCormack

manipulating diet to reawaken quiescent hormones that may jump-start reproductive cycles (Kakapo, *Strigops habroptilus*).

Although several of these strategies might have been appropriate to establish a new population of Kura on Atiu, translocation was the favoured option for reasons of logistical feasibility, cost, cultural considerations (i.e. historical links between the island populations of Atiu and Rimatara) and the desire to move wild birds with natural behaviours rather than hand-reared individuals.

The Kura historically inhabited several islands in the Southern Cook Islands and the nearby island of Rimatara in French Polynesia. But, since about 1800 it has survived only on the island of Rimatara. This low-lying, small oceanic island is only 3 km (1.9 mi) in diameter, with a human population of about 1000 people who work on agronomy and handicrafts. The Rimatara Lory, as it is called there, (or "Ura" in the Tahitian

language which also translates to "red") enjoys a fairly stable population of about 750-900 birds based on 5 surveys; 1992, 2000, 2002 (twice) and 2004. There are several primary reasons for the stability of the 'Ura population: a taboo placed by Queen Tamaeva III around 1900 forbidding any Rimataran from exporting, exploiting or harming the lory in any way; an abundance of food thanks to the density of horticulture and agriculture on the island; and perhaps most important of all, the absence of Black Rats (*Rattus rattus*). Following the first fieldwork on Rimatara in 1992, Gerald McCormack dedicated himself to finding an island in the Cook Islands that would support a second population of the lory within its natural range - an island that had food, nesting opportunities, a supportive human community and most importantly, an island without the predatory Black Rat. Atiu was selected because it was the only island within the former natural range that fit the profile.

Gerald received early support from the Polynesian Ornithological Society (MANU) and spent several years gaining the cooperation of the Rimatara and Atiu communities as well as approval from government administrators in French Polynesia and the Cook Islands. Finally, authorization was sought and granted to permit a direct, transboundary reintroduction between two remote islands separated by an international border.

In April 2007, with all of the governmental, cultural and legal authorizations in order, the field team was assembled on Rimatara to begin the job of capturing the 27 birds authorised by the island community. Eleven biologists and conservationists from six countries organised themselves into three "teams". Two teams dedicated themselves to setting and monitoring the mist nets and the third team manned the "bird house" where the captured birds were isolated and maintained for observation and health evaluation. The two mist net teams worked in distinct areas: one team concentrated on the areas planted in coconut and garden fruits, while the second team

At one of two observed nest sites, the adult lorries attentively coax their chick to emerge. It finally appeared during the second day of observation and climbed out a day later (below), only to be attacked by Common Mynas. The lorries prevailed and a second chick fledged 2 days later (right).





Top Photos: © Robby Kohley/San Diego Zoo

The juvenile Kuhl's Lory, on the left in these photos, is fed and tended by the adults who have made a remarkably quick adjustment to their new surroundings on Atiu. Like all of the Vini lorries, the juveniles have dark plumage and a black bill.

focused on bananas as the primary food target of the lorries. Both teams enjoyed success and over the span of six days, the goal of capturing 27 birds was reached. All the birds quickly acclimated to the captive diet of papaya, fresh blossoms and nectar made from commercial concentrate. Immediately following capture, birds were weighed and treated for ectoparasites. As pre-transport health screening was a key component of the effort, all the birds were given a thorough physical examination. Finally, each bird was banded with uniquely coloured and numbered bands to identify it as to time, date and location of capture. This allowed us to monitor the health and weight of each individual and later to monitor them in the wild.

Six days following the capture of the last bird, representatives of the Rimatarua community, several members of the field team and the 27

birds were flown to the island of Atiu where the local community greeted everyone (both human travellers AND the birds) most warmly and enthusiastically. The birds were transported by truck to two sites on Atiu, separated by several kilometers to allow the birds a chance to find foods without the additional burden of competition. Each bird was syringe-fed 2 cc of liquid nectar in-the-hand prior to release. The Atiu dignitaries, officials, and school children all participated in the actual release, and were given the opportunity to put their hands around those of the biologists who were responsible for holding and releasing each bird.

Over the 15 months following the release on Atiu, pairs and small flocks of the Kura were seen feeding in the areas of cultivation over the entire island. Additionally, four birds were confirmed on the neighbouring island of Mitiaro, 50km (30mi)

distant. In August 2008, several biologists from the San Diego Zoo and the Cook Islands Natural Heritage Trust returned to Atiu and documented two active Kura nests. One nest fledged two young and the other nest was assumed to have young based on the behaviour of the parents. Although the young birds from Nest One fledged successfully from the nest, it was apparent that management and future reduction of the introduced Common Myna (*Acridotheres tristis*) would be necessary in order to establish the Kura as a self-sustaining native species on Atiu.

The ultimate success of the program will be measured by how well the new population of Kura can maintain and sustain itself on Atiu without the assistance of the human community. It may be that the flock will always require some intervention in the form of nest protection, especially from Common Mynas. However, to this



Photo: © Bruce Rideout/San Diego Zoo



Photo: © Bruce Rideout/San Diego Zoo

# Kuhl's Lory *Vini kuhlii*



point, the project has been very successful on several levels. The capture, transport and release of the release flock went flawlessly. The Rimatara and Atiu community have been incorporated into the effort from the very initiation of the program and have endorsed it without reservation. As such, they are now fully engaged stakeholders in not only protecting their populations of Kura, but as well, are aware and dedicated to the goal of keeping their respective islands Black Rat-free. This is critical to the long-term health (both avian and human) of these islands. Although the goal was to re-establish the Kura on Atiu, ultimately, success can best be measured by the native communities' recognition of the importance of protecting their island ecosystems from the impacts of introduced species that could do irreparable harm to their respective islands' endemic lory populations.

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◀ Twenty-seven Lories were carefully captured on the island of Rimatara using mist-nets (left). This method uses very fine netting to safely and effectively catch birds of all kinds. The birds were thoroughly examined and uniquely colour-banded (middle). After a charter flight to Atiu and a grand welcome they were given a dose of nectar prior to release (right).

▼ Rats are a real cause for concern for the new lory population on Atiu. An extensive education campaign was instigated to stress the importance of keeping the island Black Rat free and to report any evidence of encroachment. Coconuts gnawed at the base (left) are evidence of either the Black Rat or Pacific Rat (*Rattus exulans*). A side hole (right) through the hard shell is indicative of Black Rat.



Photo: © Marshall Humphries

**AKA:** Kuhl's Lorikeet, Kuhl's Ruffed Lorikeet, Ruby Lorikeet, Scarlet-breasted Lorikeet, Rimatara Lorikeet

**World Population:** ~2000  
**Feeds on** nectar and pollen, preferring coconut palms and banana flowers.

**Range:** Before Europeans arrived the Lorikeet lived on several of the Southern Cook Islands and Rimatara, a nearby island in French Polynesia where there is presently a population of about 1000 birds. Another ~1000 birds live in the northern Line Islands of Kiribati, where they were introduced in prehistoric times. Birds were recently reintroduced to Atiu (Cook Islands).

The prehistoric extinction in the Cook Islands was a result of exploitation for this species' red feathers. The significant present-day threat is the Black Rat, *Rattus rattus*.

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