

# The Rimatara Lorikeet or *Kura* on Atiu (Cook Islands)

## First annual report

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Gerald McCormack, Director, Cook Islands Natural Heritage Trust (10 September 2008)

For further information: [gerald@nature.gov.ck](mailto:gerald@nature.gov.ck)



## Background

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The Rimatara Lorikeet or Kuhl's Lorikeet (*Vini kuhlii*) is a Red Listed endangered species. Fossil and historical evidence show that it was native throughout the Southern Cook Islands, and Rimatara – a small nearby island in French Polynesia. It was prehistorically extirpated throughout the Cook Islands by harvesting for its esteemed red feathers, while it survived on Rimatara, where it is known as '*Ura*', and where it presently has a population of ~1,000 birds. There are also ~1,000 lorikeets in the Line Islands of Kiribati, where they were recorded by the European discoverer in 1798, indicating that they had been introduced by Polynesians before the islands were abandoned in prehistoric times. On 24<sup>th</sup> April 2007 twenty-seven Rimatara Lorikeets were reintroduced from Rimatara to Atiu (Cook Islands), where they are known as *Kura*.

Atiu was selected because it is the only inhabited island in the Southern Cooks without Ship Rat (*Rattus rattus*), the modern destroyer of lorikeets, and without a resident lorikeet, which would compete with the reintroduced birds. Both Rimatara and Atiu have an abundance of Pacific Rat (*Rattus exulans*), which is not a threat to the lorikeet. The only factor of concern on Atiu was the abundant Common Myna (*Acridotheres tristis*), which had been introduced in 1916 to control the Coconut Stick-insect (*Graeffea crouanii*). It was concluded that the myna was not a serious threat because the introduced Blue Lorikeet (*Vini peruviana*) thrives on Aitutaki in the presence of abundant mynas.

The lorikeet is protected under CITES (appendix II) since 1981, national legislation since 1996, and a Rimatara *tapu* (taboo) since c.1900. The transnational reintroduction required a wide range of approvals and support in French Polynesia, Cook Islands and France. It was implemented by the Cook Islands Natural Heritage Trust, Te Ipukarea Society, the Ornithological Society of French Polynesia and the Zoological Society of San Diego.

The birds were translocated by a direct 400km flight between the two remote islands, to eliminate the risk of exposure to avian disease that might be associated with the international ports-of-entry in Tahiti and Rarotonga. Each captured bird was inspected for signs of ill-health for a period not less than three days by an avian veterinarian from San Diego Zoo, and inspected at the time of transfer by the Zoo-sanitaire veterinarian of French Polynesia. The post-transfer analysis of samples confirmed that the birds had no pathogenic viruses or bacteria.

## Four lorikeets to Miti‘aro

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Despite the community-to-community agreement that no birds would be transferred from Atiu to any other island or nation, within two months four birds flew 50km to the neighbouring island of Miti‘aro. A survey throughout June 2008 by Hannah Wheatley of Leeds University confirmed that Miti‘aro still has four birds, although she was unable to confirm the claims of a fifth bird. Her trapping showed an abundance of Ship Rat and Pacific Rat. These birds will be monitored to learn more about the effects of Ship Rat on the Rimatara Lorikeet, which is larger than the Blue Lorikeet and the Ultramarine Lorikeet (*Vini ultramarina*) that have been devastated by Ship Rat in French Polynesia.

## Keeping Atiu free of Ship Rat

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In November 2007 a poster campaign was launched to prevent Ship Rat invading Atiu and to ensure that there was not already a small unknown colony on the island. The campaign focused on increased surveillance of incoming cargo and the destruction of any accompanying rodent; the reporting and destruction of any unusually large rats on the island; and on reporting any fallen coconuts with rat-gnawed holes.

The alarm was raised on 22<sup>nd</sup> May 2008 when Andrew Matapokia reported a rat-gnawed coconut. In response an extensive survey was undertaken. Of the 2,000 palms investigated, 18 had a total of 37 rat-gnawed nuts – typically one to three per palm, with a maximum of four. Trapping around some affected palms caught several Pacific Rat but no Ship Rat. It was concluded that Ship Rat was still absent, and on rare occasions the abundant Pacific Rat caused coconuts to fall by gnawing a hole through the soft basal area. Further research in June on Miti‘aro clarified the situation and new posters were distributed on Atiu to show the difference between basal-holes gnawed by either species of rat, and the side-holes gnawed by Ship Rat. Residents are now asked to report any fallen coconut with a side-hole passing through the hardened shell as a means of detecting any unknown colony of Ship Rat.



Left: a basal-hole can be gnawed by either species of rat.

Right: a side-hole passing through hard shell is indicative of Ship Rat.

## Community help to find juvenile birds

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In October 2007 posters were distributed to establish a contest with prizes for residents finding the first, second and third juveniles. After the release in April the lorikeets were seen in large flocks on many parts of the island, except at the two release sites. Later in the year they were more settled into small groups which appeared to establish themselves in particular areas. Although little is known about the breeding cycle of the bird, it was concluded from other native birds that the lorikeets would mainly start nesting in the later part of the year – September through December. From other lories it was likely that incubation would take about 25 days, and nestling feeding about 60 days – about 12 weeks from egg-laying to fledging. Adult lorikeets have bright orange beaks and legs and bright red breasts, while newly fledged lorikeets have dark grey beaks and legs, and bluish-red breasts. It was thought that this difference persisted for at least three months and possibly five.

The first juvenile was reported on the 21<sup>st</sup> February by Roger Malcolm and George Mateariki. This juvenile, or other juveniles, was seen a few times around Atiu Villas throughout March and April. Because the observers were participants in the reintroduction programme the prize money remained intact.

On 22<sup>nd</sup> June Ana Akava reported a nest in an albizia tree (*Falcataria moluccana*) and a special prize of \$100 was awarded. This nest, at the Sawmill, was about 9 metres off the ground, in the end of dead branch about 15cm thick and half-a-meter long. It was seen by numerous people and photographed by Danish photographer, Finn Neilson on 20<sup>th</sup> July. One photograph showed a myna inspecting the entrance of the nest, and Neilson reported that at the time a Kura was in the nest.



At dusk on the 10<sup>th</sup> August Angela Nga Maaka saw two large and two small Kura fly from the nest to a nearby tree and back to the nest. With the support of Nooroa Parataingna and Joy Tangi Jim, this report earned Angela the \$200 for the first juvenile reported by a resident. The prizes were presented by Rongomatane Ariki in a ceremony beside the reintroduction commemorative plaque at the island's administration office on the 27<sup>th</sup> August.

Left to right: Man Unuia, Ina Teiotu, Robby Kohley, Mayoress Nellie Mokoroa, Jean-Pierre Montagne, Ana Akava, Kau Henry, George Mateariki, Angela Nga Maaka, Rongomatane Ariki, Roger Malcolm

## First annual census

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The first annual census was undertaken from 20<sup>th</sup> to 28<sup>th</sup> of August. Coordinated by Gerald McCormack, the census involved Robby Kohley and Jean-Pierre Montagne of San Diego Zoo; George Mateariki, Kau Henry and Roger Malcolm of Atiu; and Judith Kunzlé and Greg Parker of Rarotonga. The cherry-picker for detailed nest observations was arranged by the Island Secretary, Man Unuia.



During the island-wide survey at least 16 Kura were seen. The eight closely-inspected birds had bands, which indicated that they were reintroduced birds. At two widely-separated locations three birds were seen flying together and although one appeared to have a much faster wing beat it was not possible to confirm either as a juvenile by plumage or the lack of bands. The only Atiu fledged birds confirmed by the census are reported below.



## Nests and fledglings

At the Sawmill nest the parents were seen regularly visiting the nest tree and sometimes chasing away one or two mynas. One or both adults usually entered the nest for short periods of time, and on the 23<sup>rd</sup> they started standing on the top lip of the nest hole while coaxing the nestling to emerge. The nestling first appeared at the entrance at 16.30hrs. The coaxing continued and the nestling was often at the entrance throughout the 24<sup>th</sup>. On the 25<sup>th</sup> at 09.43hrs, when the parents were absent, the juvenile climbed on top of the nest stump and after repeatedly exercising its wings for 13 minutes, two mynas flew into the nest tree and immediately attacked. The three birds fell

together and then separated. The fledgling recovered and flew up onto a coconut fond where it was attacked again by two mynas. It retreated downward into dense cover settling about 2 metres from the ground, before moving into the top of intertwined weeds about 1m elevation. The presence of observers kept the mynas away, but probably also prevented the fledgling reuniting with its parents which flew overhead a few times. With more space given at 13.00hrs, the fledgling established contact with its parents at 15.15hrs, and with difficulty it launched itself off the weeds to fly up into a nearby tree where the parents immediately fed it several times.

Left:  
First fledgling above the  
nest entrance before the  
myna attack.

Right:  
Second fledgling in an  
albizia tree.



The next morning (26<sup>th</sup>) the fledgling was high in a tree about 7 metres from the nest cavity. At 08.57hrs it made a short flight and two mynas immediately attacked. The parents returned and chased the mynas away and then left. Ten minutes later at 09.08hrs, the mynas returned and appeared to search for the fledgling. The parents returned at 09.15hrs and immediately started a serious contact fight that with the two mynas that lasted about fifteen minutes. The noisy fight attracted more than 15 other mynas and a subdued conflict continued not only between the lorikeets and mynas but also among the mynas, until 09.45 when the mynas departed. The fledgling remained hidden. At 11.07hrs a young bird was seen in the nest entrance and it was not known if it was the lost fledgling or a second nestling. Thereafter, a .177 airgun was used to scare mynas from the area, but they persistently returned.

The mystery was solved at 07.50hrs on the 27<sup>th</sup> when the lost fledgling was found in a tall tree about 50 metres from the nest tree. At 11.00hrs the parents coaxed the second nestling to fly from the nest entrance and they flew with it about 5m to an adjacent tree. There were no mynas present.

The parents were still tending and feeding both chicks without any myna interference when observations stopped the next day at 10.00hrs.

A second nest was found at Aretou at 07.00hrs on the 22<sup>nd</sup> August and was observed in detail throughout three mornings. The parents usually left together and were away 10-30 minutes. Once they were seen about 200 metres from the nest. They usually returned together and moved around the nest tree for a few minutes, and on four occasions, in 10 hours of observation, they chased one or two mynas from the nest tree. Usually one bird, sometimes both, would enter the nest for 2-5 minutes, and on four occasions they both stayed in the nest for more than 20 minutes (25, 61, 60 and 24 minutes).

It is not known if these birds were sitting on eggs or feeding nestlings, although the frequency of short visits of 2-5 minutes would suggest that they were feeding nestlings.

## Conclusion

The sighting of the fledgling in February 2008 and the emergence of two fledglings in August confirms that the reintroduced lorikeets are breeding. The further work on rat-gnawed coconuts provided strong support for the idea that the Ship Rat is still absent from Atiu, and a new system of detecting any undiscovered colony has been put in place. At the two observed nest sites, mynas regularly moved into the nest trees and the parents chased them away with only minor conflicts. Two fledglings were observed and one was twice physically attacked by two mynas. The second



encounter lead to a prolonged contact conflict between the parents and the mynas, which extended into a less intense conflict with more than 15 mynas. The fledgling survived – partially aided by the presence of observers and the removal of several mynas.

The transferred birds were unable to be sexed. With the best scenario the 23 adult birds on Atiu have formed eleven pairs, but nine or even eight would be more realistic. The mynas are very numerous and while most harassments are mild, they periodically become involved in serious contact conflict with adult and fledgling lorikeets. It is therefore recommended that the number of mynas be drastically reduced on Atiu to give the few pairs of lorikeets a head-start in establishing a more robust population.

## Acknowledgements

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Photographs by Gerald McCormack