

# Invasions and Reintroductions

By Rachael Heptonstall

After 28 hours of flying and 3 aeroplane changes, I arrived on the stunning tropical Cook Island of Atiu on 27th May 2010. This was to be my home for 6 weeks while I carried out research for my MSc project at University of Leeds, UK. I would be studying the distribution and abundance of the Common Myna Bird (*Acridotheres tristis*) following an eradication programme launched by Gerald McCormack, Director of the Cook Islands Natural Heritage Trust, the previous year. Mynas were brought to Aitu in the early 1900's to control agricultural pest insects and have since become pests themselves.

In April 2007 twenty seven Rimatara Lorikeets (*Vini kuhlii*), "Kura" as they're known on Atiu, were reintroduced to the island from Rimatara, French Polynesia. Within two months of their release four had flown to the nearby island of Miti'aro leaving 23 on Atiu. Fossil evidence suggests the Kura resided on Atiu prior to the 1820's but were extirpated through the exploitation of their colourful feathers for ceremonial use.

Mynas had been observed harassing and attacking adult and juvenile Kura at their nests. The eradication programme was introduced to reduce the population size of the mynas and give the



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Kura a couple of (peaceful) nesting seasons to establish their population on Aitu.

As no one had estimated the lorikeet population since 2007 I decided to survey their numbers in conjunction with the myna survey.

Due to the potentially irregular distribution of lorikeets during daylight hours, I tested four methods to estimate the birds' distribution and abundance. I chose to use a Group Observation Count using pupils from the local Enuamanu school. A large team of people was split into 10 pairs. Each pair was

dropped off at a popular lorikeet feeding site at roughly the same time to ensure that the birds recorded at each location were different individuals. I further reduced the possibility of double counting by selecting locations that were spread far apart. The recorded counts from 2 days of observations were 104 and 111 respectively, which suggests that the lorikeet population has increased successfully from 23.

The logistics only allowed for simple observation counts so results obtained on the lorikeet population may not be as reliable as we had hoped. Still, the count does suggest with some confidence that there has been a significant increase in population size. The presence of healthy juvenile lorikeets confirms that lorikeets are breeding successfully on Atiu.

Incidentally, the results of the myna survey showed an overall reduction in the Common Myna population from approximately 6,000 birds before the eradication programme to just over 3,100 a year later. Future assessments of Myna, Kura and pest insect populations as well as comprehensive habitat assessment are recommended.

This was a wonderful experience, enhanced by the warmth and generosity of people of the Cook Islands, especially Atiu, a number of whom will remain lifetime friends and colleagues.



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The stunning Kuhl's or Rimatara Lorikeet was reintroduced to the island of Atiu in 2007. From 23 individuals the population has increased successfully despite interference by introduced mynahs (inset).

