

Tracking shining cuckoos

Each year, two species of New Zealand cuckoo perform the longest regular overwater migrations of any land birds. The larger long-tailed cuckoo (*Eudynamis taitensis*) heads for small islands spread across western and eastern Polynesia, but perhaps more remarkably, the shining cuckoo (*Chrysococcyx lucidus*), a fraction of the long-tailed's weight, flies the 4700 km to the Bismarck Archipelago northeast of New Guinea. Whether it gets there direct or makes a pit stop in Queensland is still unknown. Technology has now advanced to the point where archival geolocation tags are small enough, despite having batteries that last 1-2 years, to not seriously inconvenience migrants even as small as a shining cuckoo in their flight.

The Birds New Zealand Research Fund has provided us with a grant that will allow us to deploy 16 of these tags on shining cuckoos this breeding season. Birds from the populations breeding near Kaikoura and Nelson will be fitted with the tags using strong but flexible harnesses. Mounted on the birds' backs, only a light-sensitive wand will protrude above the feathers, allowing the device to record the times of sunrise and sunset. Those times depend on the bird's latitude and longitude, relative to where the device was fitted and retrieved. Previous work on other projects has shown that males in particular return to the same hectare of forest. As well as providing the first evidence for the migration tracks, the data downloaded from devices retrieved next year will provide information that will help us understand how such a small bird can achieve such extraordinary accuracy in its amazing migrations, regardless of wind, weather, mountains, and oceans.