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More news and views about kereru, kuku, kukupa and parea

1. Satellite tagged kereru - Ralph Powlesland, Les Moran & Kiri Pullen

It has been frustrating trying to keep tabs on our radio-tagged kereru in Southland over the past 15 months. Although we've searched for them on foot from high-points (not that there are many of note over the Southland plain) using the standard aerial and receiver, and using a multi-directional whip aerial and receiver from a vehicle and a light plane a few times we haven't had a lot of success at locking on to their signals. We've found the occasional tagged bird, which indicated that some really get around, like over to Stewart Island and west to the Longwood Range. Tantalising information, but for months at a time we haven't known where particular birds were.

The technology is available and the transmitters are small enough now to at least monitor their locations via satellite transmitters. However, at NZ$5000 a pop just for the transmitter, and then there is the cost of the satellite time it is not a cheap process. Finally we have been able to afford one satellite transmitter, got DOC Animal Ethics approval to tag a kereru with the device, received the transmitter from the US manufacturer, got Argos (the French satellite company) approval to track the transmitter with their satellite system, etc.

Having just one satellite transmitter, and knowing that not all Southland kereru are gadabouts, we needed to target a specific kereru for tagging. We decided to target 2 kereru that were already used to carrying standard transmitters, were known to make long-distance flights, and were at a location where there was a good chance of re-capturing them. Kereru may seem a bit dumb at times, but having been caught and handled once, they are not keen for a second experience. By the time everything was organised one of them had flown to places unknown. So we were down to one. Attempts to re-capture it started on 10 January. Twice during the ensuing fortnight when conditions were suitable for mist-netting it hit the net and bounced out! Third time lucky; on 26 January it was recaptured and found to be in fine condition. When first caught on 9/10/03, Roger weighed in at 670 g; on 26/01/05 he weighed 745 g - an excellent weight for a Southland kereru.

The satellite transmitter doesn't allow us to locate and sight the bird using an aerial and receiver; we can only get locations from the satellite data. So for a week or so after the satellite tag was attached to Roger we were concerned for his well-being. Although Roger was seen the next morning after the tagging perched up high near the capture location and looking fine, we hadn't seen him since even though the satellite data indicated he was still there somewhere. We thought we knew all his favourite perch sites!

The satellite transmitter is on for 5 hours then off for 72 so that the battery life lasts for as long as possible - about a year. So it is only every 3rd day that we learn where Roger is. Finally on the 2 February it became apparent that Roger was alive and well, and had flown c. 24 km south to Greenpoint near Bluff during the past 3 days. The next location indicated that he had flown across Foveaux Strait (32.5 km) and was on Stewart Island, inland from Port William, where he remained until the 10 March. When next checked on the 13th he had flown 6.5 km to just inland of Horseshoe Bay. Three days later he had flown back across Foveaux Strait and on to Otatara, just outside of Invercargill, a distance of 51 km. At the next check he was still within Otatara, and we assumed fairly soon he would be back 'home' at Retreat Road, Invercargill. However, on the 22 March he had flown another 51 km north to a location in the Hokonui Hills area, near Gore. When last checked he was still there, but for how long and where to next? Although he remained a singleton during the breeding season, we assume the prime motivation for these movements is in search of fruit rather than a mate. However, why go so far? Is it a matter of him returning to locations where he has feasted before, even though it may involve flying over fruiting trees in the process? I guess we may find out in future, but I suspect it will involve tagging juveniles to see if their movements differ from that of adults.

Although Roger is a sample of 1, we stand to learn quite a bit from him, and perhaps we or someone else will get a few more satellite tags on Southland kereru in due course. Interestingly, our tagged kereru in New Plymouth have proven relatively sedentary to date, although a couple are at unknown locations at present. We suspect that the ready availability of fruit in town more-or-less year round has much to do with this.

2. Summary of the breeding of kereru in Pukekura Park - David Medway

The nesting season of kereru in 49 hectare Pukekura Park in central New Plymouth extends from September to March, with a peak of nest building in October and November**.**

Nests I studied were in tree ferns *Cyathea dealbata* (1) and *Cyathea medullaris* (1), karaka (*Corynocarpus laevigata*) (3), rimu (*Dacrydium cupressinum*) (1), tanekaha (*Phyllocladus trichomanoides*) (1), totara (*Podocarpus totara*) (1), mahoe (*Melicytus ramiflorus*) (1), rewarewa (*Knightia excelsa*) (1), macrocarpa (*Cupressus macrocarpa*) (1). Therefore, kereru would seem to have a preference for nesting in karaka in the park. The only introduced tree used was the macrocarpa.

Eleven nests were followed during four breeding seasons (2001/2002 - 2004/2005). Six were unsuccessful. All but one of those (one that failed at the egg stage when the *Cyathea medullaris* frond on which it was built collapsed) failed for unknown reasons. There were five successful nests, 45%. Other nesting efforts in the park during the four breeding seasons were also successful because I saw immature pigeons there that were not associated with any of the nests I studied.

I did not find any evidence which indicated that any of the failed nests did so because of predation. There is no predator control in those parts of Pukekura Park where I found the nests I followed, and there has not been any elsewhere in the park until very recently and that has been very limited. Predator numbers in the park must be low.

It has been suggested that kereru may not come into breeding condition unless fruits are available. But no fruits are available in Pukekura Park for some months before or during the peak of nest building in October and November. The diet of kereru in the park at that time seems to consist entirely of leaf buds and leaves, and flower buds and flowers of various magnolias and kowhai in particular. Some fruits, kawakawa (*Macropiper excelsum*) and puriri (*Vitex lucens*), become available from about mid-late December. One immature pigeon I observed was fed kawakawa fruits at the time of fledging, and another was almost certainly fed kawakawa fruits at the time of fledging, and it was fed both kawakawa and puriri fruits during a period of at least three weeks after that.