

# Three-year Kārearea / New Zealand falcon study in coastal Otago

Graham Parker

October 31, 2017

Year two of a three-year kārearea / New Zealand falcon study has started in the coastal Otago area around Dunedin. Overall, the research aims to inform conservation management of kārearea *Falco novaeseeladiae* in conifer plantations and adjacent conservation land in the greater South Island, and specifically in the coastal Otago area. This is the first comprehensive study on kārearea in plantation forests in the South Island, and the first research to investigate kārearea breeding in a habitat mosaic of plantations, native forest and grassland reserves, large farms, lifestyle blocks, wetland and peri-urban areas.

Birds NZ provided critical financial support in the project's first year. This support allowed us to test whether the project could return robust and meaningful data. Our first-year results clearly indicated that a three-year study is feasible and justified, so the forestry companies City Forests and Wenita, and the Otago Regional Council, have committed foundation funding for years two and three.

In the encouraging result from the first year, a minimum eighteen pairs of breeding kārearea were identified in conifer plantation and native forests surrounding a centre of farmland (the Taieri Plain). Eighteen pairs are clearly a minimum estimate: the project's small budget limits survey to only a proportion of the habitat in any one falcon breeding season. Records accumulated over three years will enable a baseline estimate of the breeding population to compare with future population estimates.

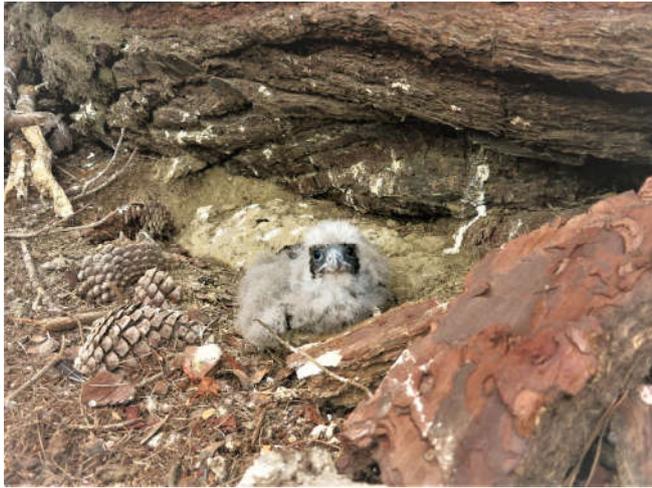
Thirty kārearea were captured and leg-banded in the first year; 12 were breeding adults and the remaining 18 were juvenile birds. Banded individuals will enable survival rates to be estimated in time. One banded female was regularly seen in a suburb on the edge of Dunedin throughout last winter, 9 km from where it nested last season, and is again nesting this season. Thirteen nests were located from 13 pairs and 24 chicks were produced. These data will be used with data from the second and third field seasons to estimate nest survival rates.

Conflict can exist between forest harvesting operations and kārearea breeding. We will work with forestry companies over the next two years to better understand the frequency and outcome of any conflict between breeding kārearea and forestry operations. If necessary, we will collaborate with all involved parties to develop practical methods to mitigate the impact of forestry operations on breeding kārearea.

Birds NZ members provided valuable support for fieldwork. We also welcome the 'new converts': senior forestry company personnel, contract tree fellers and machine operators helped with falcon capture and banding in their spare time, often bringing their children. Outreach, education, inspiration: our community is getting on board with kārearea conservation.

This project illustrates the importance of including production land areas in conservation research and importantly, community-driven conservation of native fauna in those areas. A significant portion of forested land area in New Zealand is plantation, and far more land is plantation forest in this study's area than is in conservation estate. As a large contributor to the New Zealand economy, plantation forests are here to stay. For native forest birds this is better than alternatives like rough sheep country, especially since Forest Stewardship Council (FSC) certification requires that forestry areas maintain 10 % of the land area in indigenous vegetation.

In addition to providing habitat, plantation forests provide forest-bird dispersal corridors linking forested native remnants that could otherwise be farmland. Native bird conservation benefits when community groups like Birds NZ take an interest in the management of native birds by plantation forestry companies. Take a look at the management of forest birds by forestry companies in your area. Good information on native birds in New Zealand plantation forests can be found at the websites of the Forest Stewardship Council or NZ Forest Owners Association.



*Flacon chick (Photo taken by Chifuyu Hawkeby)*



*Some of the keen and invaluable volunteer helpers*



*Partly harvested forest plantation and Taieri River*