Diet, dispersal and distribution of kereru (*Hemiphaga novaeseelandiae novaeseelandiae*) in a lowland podocarp-hardwood forest

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Frontispiece

Kereru (photo courtesy Matt Wong)

Abstract

The complex relationship between food availability, nutrient content, diet and feeding behaviour, and how these factors relate to home range and movement of kereru, was examined at Whirinaki Forest between 1999 and 2001.

The phenology of 11 plant species was monitored and the availability of mature and immature fruit and vegetation was measured and considered in relation to climatic factors. Kereru were mist-netted and radio-tagged, then the birds were radio-tracked and observations on diet, feeding ecology and location were made. The spacing and movements of kereru within Whirinaki Forest were examined, and home ranges calculated for 18 radio-tagged individuals. Six species of fruit and two species of leaf consumed by kereru were analysed to determine their nutritional content and physical composition.

Phenology results showed two main fruiting groups, which fruited in summer and autumn. At different times of year, the most important species to kereru in Whirinaki appear to be miro, tawa, makomako and kowhai. Miro and tawa were clearly preferred fruit in autumn and summer respectively. Kereru specialised on these species, but behaved as generalist feeders when the ripe fruit of preferred species was not readily available. Diet was related to the habitat in which the kereru foraged and the accessibility of trees in the forest and food on the trees is likely the main force behind many aspects of feeding ecology. The results from nutrient analysis are consistent with a view that there has been some co-evolution of kereru and the nutritional value of their significant food species. The species that contain the necessary nutrients for differing seasonal requirements are species sought after by kereru. Diet, forest composition and habitat most likely had an influence on range size, which varied from 13.9 ha to 704.2 ha. Movements were related to changes in food availability and food types.

The preferred food species and the habitat that surrounds them need to be protected to ensure the future survival of kereru.

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