Looking through Cook Strait from Kapiti Island. Little spotted kiwis were present on the mainland either side of Cook Strait until late last century.
Photo: J Jolly

Seventeen chicks have been caught during the study on Kapiti Island. This young kiwi, about two months old, had left the nest and, during the day, sheltered separately from his parents in often shallow cavities.
Photo: J Jolly

One of many eggs found to be preyed on by wekas during the study of the breeding of little spotted kiwis on Kapiti.
Photo: J Jolly

heard. The results suggest over 1000 birds were present and, since it is primarily the territory holders that call, this is an estimate of the size of the breeding population. The little spotted kiwi's endangered species status, then, comes more from its vulnerability in being confined to one island, rather than from just its population size.

This kiwi certainly has its stronghold on Kapiti Island, but over the last five years a disquietening trend has emerged: very few chicks hatch. In one of our study areas that embraces regenerating forest, typical of two-thirds of the island, there appears to have been no breeding success at all. We think this has much to do with the island's wekas.

In the first two years of study, nest burrows were found by laborious searching through the study areas. We found five nests with broken eggs and only two incubating kiwis. These two soon lost their eggs. We came across a weka carrying off a kiwi egg, having stabbed through the shell and downed most of the contents. On another occasion I arrived at a kiwi nest to find a weka eating the egg from beneath the incubating kiwi!

Over the last three seasons we have been able to assess how many eggs are lost by monitoring the breeding of up to ten pairs of kiwis with the aid of radio-telemetry, a video nest monitor, and the efforts of an extremely hard-working field team led by Rogan Colbourne. We found that probably all of the ten pairs had nests with eggs each year, some pairs had replacement second nests, but only two chicks have hatched.

Wekas have preyed on at least one third of the nests but, judging by the type of damage to eggs, another third of the nests have probably suffered the same fate. The male kiwi, who alone incubates, leaves the nest unattended each night and occasionally for whole days, with only sticks or leaves pulled over the entrance. The bird seems peculiarly vulnerable to the weka, our native ground predator, who is well capable of making the most of these opportunities, even to the extent of seizing the eggs at night when the kiwis are active.

Little spotted kiwis had to contend with wekas in their natural range but the density of wekas on Kapiti is very high, perhaps much higher than it ever has been on the mainland. In addition, the younger regenerating forest on Kapiti does not have the ground cover of old logs and stumps that would conceal a nest burrow in older forest on the mainland.

Predators most probably also attack chicks, since chicks do not follow their parents in the evening at foot and even leave the nest independently of the adult. We have found seventeen chicks in four seasons of all-night "chick patrols" but have little idea of how many survive to breed themselves. The indications are that, with this rate of egg loss, the population can only avoid going into decline if not only adults live for an average of 20 years but also as many as 50 percent of the chicks survive to become breeders. Neither is likely, even though the kiwi is a long-lived bird. Future research is designed to test these ideas and a decision will then have to be made as to whether or not wekas should be eradicated from the island.

Whatever the outcome, the importance of the island transfer programme is clear. Red Mercury (206ha) and Hen Islands (476ha) have been checked and look to be excellent for little spotted kiwis. The first step in this programme was taken in July 1983 when six males and six female kiwis were flown from Kapiti to Red Mercury. Subsequent visits to Red Mercury indicate the prospects for the birds are good as at least three pairs have established. This transfer, along with a proposed release on Hen Island, will be important stepping stones in the programme, but the Wildlife Service can only feel the future of the little spotted kiwi is safe once they are on larger islands where a population similar to that on Kapiti could establish. Only Little Barrier and Codfish Islands of the larger islands are free from mammalian predators.

The present size of the Kapiti population allows for ample birds for these transfers. It is also the right time to be finding out about the poorly understood biology of this bird, rather than as so often happens with endangered species, at a time when numbers are critically low and most of the effort must be concentrated on management that is, of necessity, all but desperate in its approach.