

Kiwis may dig burrows two metres or more long as daytime shelter. Some, like this one, are shallow and may be shared by the adult pair.

Photo: D P Murray



Little spotted kiwi: Paradise Regained or Paradise Lost?

Is its Kapiti Island sanctuary a Garden of Eden or not for this endangered species? Jim Jolly, Wildlife Service Scientist, reports.

Although the kiwi is the best known and most unusual of New Zealand's array of intriguing flightless birds, the decline of the smallest species, the little spotted kiwi, went almost unnoticed until the late 1970's.

This was partly due to the difficulties of finding and identifying a nocturnal, forest bird like the kiwi. The similarities, both in calls and appearance, between great and little spotted kiwis result in many doubtful field and museum records. It now seems the last specimen of little spotted kiwi was collected in Southland in 1938. Since then a pair of leg bones from a recently dead little spotted kiwi were recovered in Fiordland in the early 1970's. Apart from a single feather, also from Fiordland, there are no other recent confirmed reports of little spotted kiwis from the mainland of New Zealand.

The only substantial population is that on Kapiti Island. Although there is still the possibility of finding odd individuals in the South Island, the only other little spotted kiwis known were, until recently, on D'Urville Island. That population dwindled and three birds, all that could be found, were removed from the island and away from the predators found there — stoats, pigs, pig-dogs and cats.

It has always been assumed that Kapiti's little spotted kiwi population originated from a release of kiwis in 1912. If this was the origin of the population then the bird is a remarkably adaptable animal. Early this century about two-thirds of the

island was cleared for grazing. Feral stock, including hundreds of goats, roamed over the island depleting the forest understory. Possums, Norway rats, kiore (the Polynesian rat) wekas and even some cats had all been introduced and threatened the kiwis' survival either by predation, particularly on eggs or chicks, or by competition for food and shelter.

An alternative possibility is that the bird persisted on the island from the last ice age, marooned from the influences that brought about this kiwi's demise on both sides of Cook Strait late last century. Whatever the origin of the kiwis on Kapiti, the species clearly has the resilience to adapt to new conditions. On the other hand, given this adaptability, its disappearance on the mainland was presumably caused by factors not present on Kapiti, such as predation by stoats.

My Wildlife Service colleagues began research on little spotted kiwis in the mid-1970's. Initially, South Island reports were checked, the Kapiti and D'Urville Island population were assessed, and birds were sent to the Otorohanga Kiwi Centre where there had been success with breeding brown kiwis.

The two males of the three D'Urville Island little spotted kiwis were sent to Otorohanga but failed to settle into captivity, as birds from Kapiti had done, and one died. The second male was then sent to Maud Island to join the female but, although apparently established, it eventually disappeared. In July 1982, follow-

ing the devastating news of the arrival of stoats on Maud Island, the female was moved to another island in the Marlborough Sounds, along with two males from Kapiti, in an attempt to preserve as much of the genetic diversity of the species as possible. Again the kiwis appear to have established but we have been unable to detect any signs of breeding success in the dense forest of the island.

The selection of suitable islands for transfers of the kiwis is a part of an intensified research programme on the little spotted kiwi begun in 1980. Apart from assessments of suitable islands and investigation of this kiwi's foods and other habitat requirements, the aims of this research are to determine the size and health of the Kapiti population.

Using the knowledge that kiwis call loudly and often, we developed a technique for estimating the number of kiwis on the island from the position and number of calls. By counting calls from the same listening points for two years we found how kiwi calling varied with time of night, time of year and weather. Then the Service's eight-man Fauna Survey Unit spent a month working from one end of the island to the other recording calls. There was clearly a dense population widely distributed throughout the mosaic of forest types on the island. By relating the number of calls heard from a known number of birds in the study area, we were able to calculate the number of birds on the rest of the island from the number of calls