



J. A. Mills photo

A takahe in typical Fiordland habitat. The numbers of this critically endangered species, at present confined to Fiordland National Park, have declined to a meagre 120 birds.

species, which lessened the impact of deer.

In recent years the grassland has shown improvement commensurate with the reduction in deer numbers brought about by heavy deer control. This is an encouraging sign, but the main problem at present is the relatively poor condition of the forest, the winter habitat of takahe. In parts of the bird's range there has been a very slow recovery of the forest understorey. This produces two important consequences: First, there is a lack of variety of food plants for takahe and, second, because the understorey of the forest is depleted, the soils are prone to freezing, which prevents the birds from unearthing fern rhizomes, a staple diet in winter.

Stoats

Several correspondents to newspapers have argued that stoats have been a major cause of the decline of takahe. Though both stoats and wekas have been observed as predators of takahe, and have obviously contributed to the

takahe decline, their preying has not been the major factor in that decline. Stoat numbers fluctuate markedly from year to year. High stoat numbers result from the periodic seeding of the beech trees, which initiates high mouse numbers. An abundance of mice causes better survival and breeding of stoats. When mouse numbers are low stoat numbers are also generally low.

Over the past 10 years there have been two beech-seeding years. There was a decline in takahe numbers in 1976 and 1977 at a time when stoats were plentiful, but we are not sure that the decline was due to high stoat numbers, because the decline occurred in only one area while stoats were plentiful throughout Fiordland.

As well as there being natural fluctuations in stoat numbers, we have some evidence that stoat numbers in the Murchison Mountains may have been kept at an artificially high level in the late 1960s through to 1972 because of the presence of deer

carcasses left during control operations, which stoats could have fed on. Generally, however, the number of stoats in the Murchison Mountains has declined markedly since 1973.

Management of takahe in Fiordland

Though the takahe population is at a very low ebb at present, we believe that with correct management procedures, based on an extensive knowledge of the bird's habitat requirements, the decline in numbers can be averted.

Deer control is an important aspect of management, and the efforts of the Forest Service in reducing deer numbers in the Murchison Mountains have led to a spectacular improvement of the summer grassland habitat. Unfortunately, there has not yet been a similar response in the winter forest habitat.

A major thrust of some experimental management trials is to simulate the conditions which produce tussock-seeding years and thereby increase chick survival. This involves the use of fertilisers on two favoured species of food tussocks. The results of this experiment are encouraging, since over the last 2 years chicks have been produced in territories which normally have been unproductive.

Stoat trapping has eliminated stoats from some localised areas and soon will be extended to other parts of the Murchison Mountains. Other management options include: relocating pairs in parts of their former range; maximising hatching success by swapping eggs to make sure that as many pairs of takahe as possible are incubating at least one fertile egg; and removing eggs and chicks for artificial rearing before returning them to the wild as yearling birds.