

Rat eradication in Breaksea Sound



Wherever they reach, introduced rats spell disaster for native birds, lizards and invertebrates. The introduction of European species of rats to New Zealand was first recorded during Cook's 1773 visit to Fiordland. A major eradication programme currently under way on two important islands in Breaksea Sound will help, at least in part, to rectify this unfortunate legacy. In this article Bruce Thomas and Rowley Taylor, of DSIR Ecology Division, Nelson, document the events leading up to the ambitious project, and discuss its significance to conservation and where it could lead from here.

"You're dreaming!" — this was the typical reaction back in the late 1970s to our suggestion that the small (9ha) bushclad Hawea Island that we were passing could be cleared of its infestation of Norway rats — a dream that was later to become a reality. To the north appeared the magnificent sight of Breaksea Island (170ha) rising 300 rugged metres into the Fiordland mist; a scene epitomising this wild and beautiful corner of New Zealand. A

nod towards it with the comment "we'll get rid of rats on that one too" invariably provoked the predictable retort "You must be joking — you're crazy." But we couldn't have been more serious.

Today, with the success of Hawea Island behind us and preparations well under way to eliminate rats on Breaksea Island itself, we are quite confident that this major objective will be achieved.

Early Days

Our story really begins a millennium ago when, in legend, Tu-te-Rakiwhanoa took his great adze (with blade of ice!) and hacked out this rugged place. Tane, the god of the forest, clothed Fiordland's naked slopes to provide a home for a myriad of wonderful and varied creatures, but Tawhirimatea and Tangaroa in jealous rage battered its coasts with incredible fury. Many of Tane's children learned to survive, and even thrive, under these relentless attacks of wind and sea, but finally proved no match for what beset them with the introduction of rats and other exotic mammals.

People eventually made their way to this hostile environment, at first visiting only seasonally to gather a rich harvest of kaimoana, nesting seabirds, plump pigeons and parrots, and to collect the highly-treas-

ured takiwai (Fiordland greenstone). Unfortunately, the Maori brought their dogs and rats — kuri and kiore — the first of the introduced mammals. Today Fiordland is one of the few mainland localities where kiore still persist.

These aliens were bad enough, but in May 1773 a new rodent scourge from Europe was introduced when Captain James Cook tied up his rat-infested ship, the *Resolution*, at Pickersgill Harbour in Dusky Sound. According to one of the expedition's naturalists, Anders Sparrman¹, "it is well known that rats readily swim ashore after a long sea voyage" but here "our rats (almost certainly Norway rats *Rattus norvegicus*) had the best chance to come ashore dryfoot by way of the bridge," from the ship to the bank. He further commented "it seems a terrible thing that the European visits to these parts should be the cause of spreading the disagreeable and noxious breed of rats", but he also pondered that perhaps the ship was benefitting the New Zealanders in giving them rats as food! Cook spent several days exploring Breaksea Sound and with his officers visited "the rocks which lay off the entrance to gather a supply of seals"². It is conceivable that rats became established on Hawea and Breaksea Island at this time but it is more likely to have hap-