

Intensive ground searches for dead birds after the drop revealed four saddleback, one morepork and a few introduced passerines. This level of mortality is well below the threshold of concern. The birds probably died from eating bait directly, apart from the morepork which would have eaten a rat full of bait.

Subsequent monitoring of the island's saddlebacks showed that, despite a very dry summer which usually results in increased juvenile mortality, there were higher than normal numbers of young birds alive. Survival of the banded adult population was equal to that in a normal year. The conclusion had to be that saddleback fared better after the removal of kiore than before, and that any deaths due to the poison were more than compensated for by increased productivity due to the absence of the rats.

Since those early days of "suck it and see", a lot of resources have been applied to ensuring environmental safety. The persistence of toxins in soil, effects on invertebrates, freshwater animals and, in particular, native birds have all been studied. To date, we have been unable to detect the presence of the toxins in the soil using the most sensitive methods of analysis available. Certainly there have been deaths of non-target species but the level of these has always been well within the limits of natural mortality, and more than compensated for by the productivity achieved after the removal of the rodents. Although we know there could be a toxin persistence issue, every possible step is being taken to ensure those species we are attempting to protect do not suffer.

OF COURSE the problem of introduced predators is not just a story about rats. Of all the pest predators in New Zealand, stoats are by far the most difficult to control. Unlike rodents they seem to need live prey, so developing a bait is very difficult. In particular, female stoats need a stimulus derived from catching live animals to trigger breeding. Also it is very difficult to detect stoats as they are essentially solitary, secretive and very wary. Fortunately, apart from islands within about a kilometre of the mainland (stoats are good swimmers), they are not a problem on offshore islands. If by some chance, however, they were to get onto a place like Little Barrier we are ill-equipped to do much about it. The recent report of a stoat on Stewart Island highlights this dilemma.

There is some stoat-control work being carried out at present with poisoned

eggs which, while labour intensive, is producing encouraging results. The reality, sadly, is that because the problem of stoats is so widespread any control method is only going to be localised and for specific threatened species.

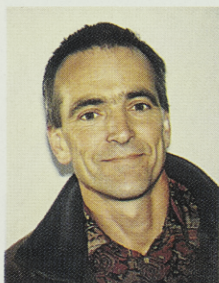
It is too soon yet to predict exactly where this will all lead, but, if past progress is any indication, by the turn of the century a long hard look will be being taken at islands like Campbell (11,000 hectares) which is infested with Norway rats. Already DoC is putting in place a strategy that will answer those questions relevant to eradication on Little Barrier, Raoul, Codfish, and Mayor Islands. We may be a long way off actually ordering bait for those operations, but if the majority of New Zealand's endemic species are to make it into the next century with a realistic chance of unaided survival then ambitious projects like these need to be started now.

International interest in New Zealand's achievements in island pest eradication is growing. Many overseas wildlife agencies also want to create pest-free environments for endangered species or embark on more ambitious restoration programmes, and New Zealand is seen as a world leader in island restoration.

Requests for advice and assistance have come from as far away as Canada, the US, Saudi Arabia, France, South Africa and Australia. This is encouraging, not just because it gives New Zealand recognition for its pest eradication achievements, but it gives us a way of contributing in a practical way to conservation around the world.

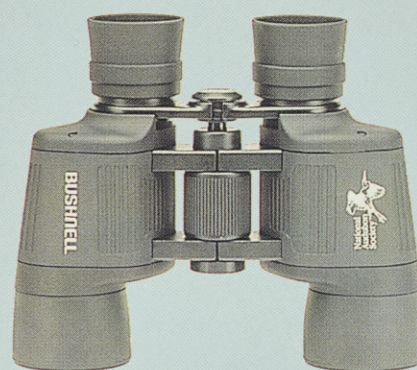
Methodology has changed somewhat – from putting out bait stations in the early '80s and recording the position using a hand held compass, to plotting weigh points into the computer as an island's perimeter is flown. Ten years ago a global positioning system (GPS) to provide accurate flight paths was not even a consideration. Now it is a regular tool of the business.

Logistically some of our big islands will be a bit of a nightmare. But with good planning those problems should be as easy to overcome as the original scepticism apparent when work first began all those years ago. ♦



IAN MCFADDEN is DoC's national technical coordinator for island pest eradications.

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