



Beech is not one of the possum's preferred species. However possums are known to de-bark trees in order to mark a territory. Photo: Mike Harding

Arthur's Pass and Westland National Parks are included to protect the glorious alpine rata forests. The areas chosen within the parks are the Otira and Deception Valleys, and the Karangarua and Copland Valleys, respectively. These areas contain the last remaining unmodified rata forests in Westland.

Probably the most important priority are the South Westland forests which form part of the proposed South West New Zealand World Heritage. The southern region, where possums have not fully colonised, has outstanding wildlife values with good populations of kaka, kakariki, kiwi, and yellowheads. The area is also a stronghold for mistletoes and native fuchsia. The goal is to keep possums at very low numbers so they never cause the environmental catastrophe of peak population levels experienced further north.

Control Systems

As well as the process of choosing priorities the Department is debating whether the means of possum control should change. The present day official control method is to use large scale aerial poisoning operations with either 1080 carrots or grain baits. These operations are done on a massive scale about once every five to ten years.

One problem with aerial poisoning is that the benefit to the conservation value being protected is temporary. That is, the protection lasts for a few years after poisoning and is gradually lost as possum numbers increase again. This see-saw protection sets up a basic instability in the ecosystem which may in some cases nullify the benefits of control.

Current thinking is that a "gamekeeper" approach is preferable, where possums are controlled every year. This should produce a more stable environment for the endangered species. Previous intermittent operations required large one-off funding allocations which were not always forthcoming when needed.

Aerial 1080 Poisoning or Ground Hunters?

No conservation manager is happy to use pesticides on such a vast scale despite assurances from scientists that the dangers are minimal. Because 1080 poison is also an insecticide there are many uncertainties about its total effect on the environment. Conservation gains in controlling possums need to be balanced against the potential harmful effects of the 1080 itself.

Large-scale aerial poisoning is never popular with local possum hunters. Possum hunting has traditionally been an important source of income for many rural people. Until the collapse of the fur industry these hunters made an important contribution to national possum control.

It is my personal view that the best answer for possum control is to use rural people. In districts such as the West Coast, with high unemployment, we should use ground hunters if they are as cost-effective as aerial poisoning.

Hunting on wages is rarely cost-effective because of the high overheads of supervising and servicing people in the back country. The

The 1080 Debate

EVERYONE AGREES that possums are a nuisance. The question is how best to control them.

The Northland Conservancy of the Department of Conservation were allocated \$700,000 for possum control in Waipoua Forest, and favoured the use of 1080 poison.

1080 was introduced to New Zealand in 1954 to control possums and rabbits. It is also used against wasps. There is no effective antidote against accidental poisoning, and the poison breaks down in contact with soil bacteria and therefore is biodegradable. It is not an accumula-

tive toxin. 1080 is dropped from the air, mixed into green dyed cereal pellets about 2 cm in length and flavoured with cinnamon. More than 150 tonnes of pellets will descend on the forest, or one bait every 2-3 square metres.

The Department says the use of pellets of this size, colour and smell will make them unattractive to birds, minimising the risk to brown kiwi and berry and insect-eating birds.

Bryan Innes argues that intensive trapping is better than poisoning. He believes it would take hunters 12 months to control possums in Waipoua Forest, and at a cheaper cost than the 1080 drop.

DoC respects the trappers' claims, but notes that the terrain in the 31,000 hectare forest is rugged and that tracks would have to be cut through the forest. As 10-15 percent of the forest canopy dies each year as a result of possum damage, any further delay means more dead trees.

Environmentalist and botanist Stephen King backs the use of 1080 in the North's forests. He makes a distinction between "pre-peak" and "post-peak" forests. The kauri forests are still in a pre-peak infestation phase, but within a year it could be too late, he argues.

"Do the 1080 drop first and bring in the trappers on a permanent basis afterwards," he says. He supports the use of 1080 for safeguarding such threatened species as kokako, believing that if we want to save them on the mainland there is at present little other choice.

Fiona Edwards



Speaking for the trees: conservationist Stephen King has been raising awareness in the north about possum damage to kauri forests. Photo: Stephen King