

surveying and fencing costs. In the Chathams – where fences cost \$10,000 per kilometre – this has a huge impact on the feasibility of conservation.

According to DoC's Chatham Island Field Centre Manager, Allan Munn, the Forest Heritage Fund and Nga Whenua Rahui have been central to the protection of significant areas of Chatham Island forest. So far, a total of about \$450,000 has been allocated to cover the fencing and surveying costs of setting aside 700 hectares of native bush habitat.

"People are generally not interested in selling land to the Crown any more. So the great thing about these two schemes is that people can essentially have the best of both worlds. They can protect the forest, which is important to them, but still own the land. That means there are no hassles with subdivision and they retain control over who goes in there."

Allan said the funds were flexible enough to suit most people. Covenants can be made under QEII National Trust, Reserves, Conservation and Maori affairs legislation. Although all require exclusion

within the Chatham Islands. A total of 16 bird species, 12 of them endemic, have become extinct in the Chathams since pakeha settlement began. Amongst the most endangered bird species now fighting for their survival are the Chatham Island pigeon or parea (about 50 birds), the Chatham Island oystercatcher (less than 100) and the taiko or magenta petrel (about 60 banded birds). Of the 37 endemic plants, 21 are considered nationally threatened and many are inadequately reserved.

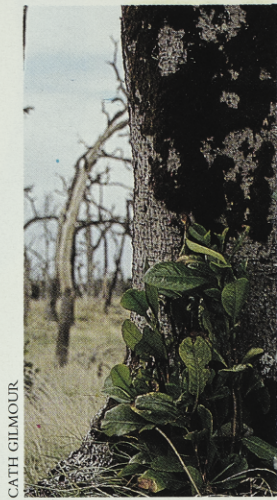
The species' problems intertwine. Stock browsing and trampling, and clearing for agriculture have decimated the islands' forest cover. Once stock has depleted the understorey, wind – of which there is a constant supply – scorches and even rips out those remaining canopy trees. Life is sucked out of the forest edge, in a rolling wave of drying dieback. Where once-rich forest stood, only pale skeletons now remain.

These tree cemeteries symbolise what has happened to the species reliant on the habitats they once provided. As the leaves and berries of the hoho (related to

has worsened the plight of ground-burrowing birds like the titi and taiko.

So where to start in this rich pot of conservation challenges?

Without habitat, no species will survive. According to DoC botanist Geoff Walls, who has spent much time studying Chathams vegetation, it is not too late to reverse this process of habitat loss and deterioration. "I have never seen such incredible rates



CATH GILMOUR

Kopi cemetery at Ocean Mail Scenic Reserve bought by DoC in 1990. Forest and Bird financed the fencing of the reserve through the Lottery Grants Board. However fencing is still not complete and stock can stray in from one end. Above: hope – and seeds – spring eternal. Within the apparently lifeless scene at Ocean Mail, a kopi sprouts back to life.



Bruce and Liz Tuanui – continuing the Tuanui family conservation link. They like the way the Forest Heritage Fund works; it is accommodating, and lets them retain title over their land.

of stock, other activities – for example, removing exotic trees for firewood – can sometimes be continued. With Nga Whenua Rahui covenants, cultural harvesting for medicines is also possible.

THE CHATHAM Islands' unique natural environment is largely the result of its long isolation in the vast, weather-beaten Pacific Ocean giving rise to the diversity and high degree of endemism in the islands' flora and fauna. There are 37 varieties of native plants and 16 birds found only on the Chathams, 50 endemic insect species and many unique habitats.

Many of these unique species are also highly threatened. Nearly half of New Zealand's endangered birds are found only



MARK BELLINGHAM

Tuku Nature Reserve (above) looking from the adjoining area covenanted by Bruce and Liz Tuanui and, (right) inside the covenant area. The covenant protects the lower Tuku valley near the coast where the leaves and berries of native trees are more numerous and thus a valuable food source for the parea during the breeding season.

lancewood), karamu, kopi (or karaka as it is called on the mainland) and mahoe have disappeared, so too have the birds, insects and lizards which fed on them. Add predation by introduced cats, rats and weka, and species already pushed to their limits can break. Trampling by stock



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