

There are two examples of where New Zealand has tried to have some direct involvement in conservation in the Pacific through its aid programme. Since 1970 New Zealand foresters have recommended that a National Park be set up on the island of 'Eua in Tonga, as this is one of the last areas of untouched native forest in Tonga. A formal request was received by New Zealand to fund the project in 1986, but it has been stalled while land issues are resolved. In 1986 New Zealand agreed to fund a kauri reserve in Fiji. Since that time the two coups have caused some disarray in Fiji and the gazetting of the reserve has been delayed.

As our Pacific neighbours have developed, and as developmental philosophies have evolved, it has been possible for New Zealand to adapt its aid programme. But New Zealand responds only to requests from its partner countries and must balance priorities within its aid programme. The forestry programmer has to compete with other sectors of the aid vote including health, education, and water supplies. Conservation issues are being addressed within the programme and deserve wider attention from the New Zealand public.

However, there are some concerns for the future. New Zealand's official aid vote as a percentage of national income is very low, and decreasing due to the current economic



An example of agro-forestry in Tonga. Small trees are planted between bananas, taro, and coconut. Haniteli Fa'anunu is the man behind it all.

situation. This will undoubtedly influence the number and type of aid projects that New Zealand will be able to contribute to. Perhaps its time we all thought about just how generous New Zealanders really are with their aid money, and just where we want that money spent.

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## FIJI'S MOIST AND MYSTIC LANDSCAPE



by Sean Weaver

The Fijian group of islands are set in the tropical South Pacific, lying at the same latitude as Townsville (Queensland) to the west and Tahiti in the east. Fiji has an extremely rich fauna and flora, much of which is still unstudied or unknown to science. It also lies on the eastern fringe of a tropical zone that is said to include the highest biotic density on earth, and this extends to Java in the west.

Few people who visit Fiji get a true perspective of its size and the extent of the wilderness that exists beyond the fringe of white sand beaches and coral reefs. The remoteness of the mountains and forests prevents easy access, but the explorer is amply rewarded.

During the summer of 1986/87 my friend Ian MacDonald and I carried out a three-month field trip to Fiji for our BSc Honours projects in forest ecology (Victoria University). The Royal Forest and Bird Protection Society assisted us with a QEII Scholarship.

My study was on the regeneration of Fijian kauri (*Agathis macrophylla*), known to Fijians as dukua makadre (pronounced ndakua makandre) and notable for being the largest and most widely known native Fijian tree. The dukua resembles our own kauri, but it usually does not grow as tall; however, it may reach diameters of close to 3 metres. It is patchily distributed on the large islands of the Fiji group, with few virgin stands remaining.

### Stately Giant

The timber of this magnificent tree has been sought after for centuries by Fijian and more recently European sawyers. As a result, few of the old forests remain intact, and one has to travel considerable distances to see this stately giant and its allies in undisturbed surroundings.

I was interested to know whether dukua would be able to regenerate on sites following logging. I suspected that it would be unable to compete with the lush tangle of vegetation which usually occupies such sites, unlike New Zealand kauri which forms even-aged stands after logging. What I found, however, contradicted my hypothesis: dukua appears capable of forming even-aged stands.

Ian MacDonald studied the way in which dukua regenerated within mature forest, and was working on an old growth stand not far from my study area on Mt Lomalagi. He found dukua to be a long lived tree that could benefit from small scale disturbances in these mature forests. The high frequency of hurricanes and storms is an environmental feature that enables dukua to regenerate within gaps formed in the forest canopy by windthrown trees. The tree evidently maintains a permanent position in Fijian forests and appears to be a successful competitor in both secondary and mature forests.

One noteworthy feature of these higher altitude forests is their similarity to many

New Zealand conifer/broadleaf forests. The forest in which we spent most of our time could easily have been in Northland: we came across mahoe, ake ake, and mamaku. There is a relative of the kahikatea (*Dacrycarpus imbricatus* var *patulus*), and other podocarps including *Podocarpus nerifolius* var *degeneri*, *Decussocarpus vitiensis* and *Dacrydium nidulum* var *nidulum*. Kohekohe has a relative *Dysoxylum richii*, as has pigeonwood (*Hedyocarya dorstenioides*) and titoki (*Arytera brackenridgei*).

Although we entered these forests primarily as botanists, it was impossible to ignore the richness of the bird life, endowing the scene with the ambience of a tropical rainforest.

In the past the bright colours of the parrots and lorikeets made them prime targets for feather hunters, their plumage used for traditional adornments and in ceremonies. Red feathers in particular were a sought after commodity in pre-colonial days, becoming one of Fiji's earliest exports to other Pacific islands. Fiji has two parrots, the yellow-breasted musk parrot and the red-breasted musk parrot. Related to this colourful pair are the lorikeets which include the collared lory and the red-throated lorikeet. Of these four, the yellow-breasted musk parrot and the red-throated lorikeet are generally found only in mature rainforest.

Then there are the two native frogs, the