



A forestry track through the rainforest at the 1000 metre level, on the slopes of Savai'i, Western Samoa.

From left: Tony Crocker, Gill Eller and John Brown beside a dakua (Fijian kauri), a few kilometres from Suva, Fiji.

The area of most outstanding natural beauty that we visited in Western Samoa was the inland part of the recently designated O' Le Pupu Pu'e National Park, which lies on the southern slopes of Upolu.

By prior arrangement with Ian Armitage, the Chief Forest Officer in Western Samoa, we were taken to Togitogiga the base and ranger station for the park. Our guide Kalati Poai, the ranger in charge, showed us parts of the 3000 hectare reserve.

O' Le Pupu Pu'e embraces some of the most enchanting forest that we visited anywhere on our voyage through the south west Pacific. The tall rainforest is growing on ancient basalt flows. During the dry season the rivers flow at a mere trickle, and the streambeds, which are almost like solid paved roads, give remarkably easy access into the inland montane valleys.

In one place the streambed drops down to a lower level and disappears into an extensive lava cave, which is home for hundreds of tiny insectivorous bats and nesting white-rumped swiftlets.

It was in the dense forests here that we first encountered the elusive giant forest honeyeater of Western Samoa, the ma'o. Although it is of rather sombre plumage it must have the most bizarre songs of any bird — long wailing notes, which are of a rather similar timbre to those of our kokoko.

One marine reserve has been established on Upolu — the Palolo Deep

Marine Reserve, which was established in 1979. This is situated only about one kilometre from Apia, just outside the harbour proper. It was visited by *Derwent's* three marine biologists, who found that it contained a spectacular diversity of corals and reef fishes.

The greatest area of unmodified forest remaining in Samoa grows on the slopes of the biggest island, Savai'i. The island's 30 000 inhabitants live mostly along the coast, so the forested hinterland is usually little disturbed.

On Savai'i sheltered Asau Harbour was our base. Here Ian Armitage had arranged for the local forestry people, some of them also expatriate New Zealanders, to give us some assistance with transport up to the edge of the virgin forest, about 10 kilometres inland from Asau Harbour.



Asau is the centre for a developing timber industry in Western Samoa. There are extensive young plantings of *Eucalyptus deglupta*, *Tuna australis*, *Terminalia* sp., teak and mahogany over an area of about 8000 ha, an area formerly clothed with dense indigenous rainforest.

We camped for several days at the 1000 metre level. Here we were surrounded by unmodified indigenous forest, which was dominated by immense banyans. It was a place that teemed with birdlife.

We were hoping to locate three rare endemic species, the tooth-billed pigeon, the ma'o, and the Samoan silvereye. We made about a dozen separate sightings of the tooth-bill. It is a bird that has captured the imagination of ornithologists ever since its discovery in the middle of the nineteenth century. It would appear that the tooth-billed pigeon is still quite widespread on Savai'i in suitable areas of undisturbed forest. It probably also occurs in the remoter forested valleys of Upolu.

There were several pairs of ma'o singing within a short distance of our camp. It is certainly a bird of the tall unmodified forest. The Samoan silvereye, which is endemic to Savai'i, was not difficult to find above the 1000 metre level.

Other forest birds were in good numbers. We made five minute bird counts along some of the narrow forestry tracks, which run through otherwise unmodified rainforest. If one ventured off the tracks it

was heavy going — the forest is dense and the rocky terrain is pock marked with hundreds of small craters. These are about 100 metres across and 20 metres deep and covered with a mantle of tall forest — just the country to stop an advancing army and all but the most determined ornithophile!

Bird counts were easier done along the tracks, where there was usually a slight gap in the canopy, and where one could see more than just a metre or two ahead.

It was on Upolu and Savai'i in the dense undisturbed forests that we had our first views of the shy island thrush. It is a handsome relative of our European blackbird — but for a bird that seldom sees man it is unbelievably scary.

It was clear that some of the habitat, where we saw ma'o, tooth-billed pigeon and Samoan silvereye, was shortly going to be felled to make way for exotic plantings. Trials have been set up at various altitudes to establish which of the exotic species grows best. The long term objective apparently was to have 8000 ha in exotic forest; from which about 500 ha would be felled each year to supply the sawmill at Asau. At present a considerable quantity of indigenous timber is being processed at Asau for finishing and veneers.

There is a pressing need for a large reserve on Savai'i, so that a worthwhile area of its mantle of pristine indigenous forest can be preserved. The higher parts of the island have been little studied.

There has been some tentative planning by the Forestry Division in Apia to create a large reserve on the summit and southern slopes of the island — in an area where there are deep valleys and cascades. However before such a reserve can be designated there are many problems of multiple land ownership to be resolved.

From Western Samoa the expedition headed westwards the 1000 kilometres to Fiji, where a month was spent visiting various islands and wildlife areas of interest within the Fiji Group. In Suva on 21 July, Nan Rothwell and John Brown, Ornithological Society members from Auckland joined the *Derwent* crew.

It was perhaps in Fiji more than anywhere else that we visited in the South West Pacific that we saw the most need for some sort of conservation action. One only needed to go a few kilometres from the centre of Suva to Mt Korobaba (a proposed recreation reserve), to see the sort of exploitation that is going on. Despite being a proposed reserve the few remaining large dakua trees, (Fijian kauri, *Agathis vitiensis*), some of which were over a metre in diameter, were being felled and dragged from the forest along badly eroded skidways.

Now that our own kauri is in short supply in New Zealand, Fiji is now New Zealand's biggest supplier of this valuable timber. The director of the Fiji Museum, Fergus Clunie, told us that in less than ten year's time the last big dakua will have been felled in Fiji, and these magnificent trees will only be a memory. The best stands of dakua on Viti Levu have already gone, and now the loggers are rapidly felling the kauri forests on Vanua Levu.

Apart from forest clearing, introduced