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Nowhere in New Zealand do podocarps grow in the same gigantic proportions as they do in Whirinaki Forest, just south of Rotorua. This kahikatea, near the Whirinaki River canyon, is one of a number of massive trees that pierce the forest canopy here, climbing skywards to 65 metres and outwards by up to three metres.

The fate of Whirinaki — under threat from salvage logging recently — could well be decided by the time you read this, thanks to the Labour Government's commitment to preserve this "dinosaur forest." Furthermore, this move will have been made without placing any of the jobs at Minginui at risk. In fact, the tourism opportunities now opened up could well offer jobs outside the timber industry.

Photo: Greig Royle

The endangered kokako (inset) is just one of the species which finds refuge in Whirinaki.

Photo: Hugh Best



Contents

Articles	
2	Planning for preserving private Catlins forest
4	Why the chipmills are such a threat
6	Palmers Rd — a scenic gem destroyed
8	Setting aside land in a QE II Covenant
10	Maoris attempt to set up a reserve
11	Unique Northland coastal forest reserved
12	Problems and remedies regarding private land
16	The yellow-eyed penguin — an at risk species
20	Ronald Lockley's wide horizons
22	Report from Tuatapere summer camp
24	Society takes a stand on Triune water exports

Departments	
23	Conservation Update
26	Junior Section
29	Bulletin
31	Society officers
32	Society lodges

Cover caption: The North Island kaka (*Nestor meridionalis septentrionalis*) is a victim of the havoc that has been wrecked on New Zealand's indigenous forest. Though once in great numbers, its presence in most districts today is rare, as the native forest it relies on for food and a home has been progressively destroyed, both by Government agencies and private landowners. In this issue, the Society considers ways of protecting forests on private land, in an effort to provide such splendid birds with hope for the future. Photo: Geoff Moon

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In case the notion exists that New Zealand's pioneering days are past, it is salutary to be reminded that between 1978 and 1982, Rural Bank Land Development Encouragement Loans (LDELs) financed the clearance of 30,361 hectares of native forest, 367,101 hectares of "scrub and brushweed," as well as the destruction of major areas of native tussock grasslands and the drainage of many wetlands. Unfortunately, much of this development is uneconomic — stock numbers placed on this land are lower than on existing farmland.

The strong tradition of private ownership in this country, part of which includes the concept that individuals may do what they like with what is theirs, will mean that land clearance will continue, albeit not at the same rate now that many Government subsidies have been cut (wetland subsidies being an outstanding anomaly). What can the Society do to see that such development is sensible and non-exploitative?

Professor John Morton, on page 14 of this issue, argues for the persuasive approach; property owners should not be coerced into setting aside land, but arrive at that decision voluntarily—except in extreme cases. An article on one farmer who has covenanted land under a QE II Open Space Covenant provides an example of this voluntary approach.

Dr Gerry McSweeney and Guy Salmon consider the threat of the chipmills to the Catlins and Nelson regions, while Mark Bellingham reports on Maori initiatives to preserve land, one successful, the other still failing to convince the decision makers.

Some statistics: at present 48 percent of our indigenous forest is in State Forest, 25 percent in National Parks and Reserves, 6 percent is unoccupied Crown land, and finally, 21 percent is "other tenures," much of the latter being in private hands.

The first newsletter of the NZ Native Birds Protection Society (later to become Forest and Bird), on April 16, 1923, carried this comment from its founder, Val Sanderson: 'The study of nature by our children would inculcate that love of country which is so essential to any nation, it would encourage observation and play a large part in the formation of the very best of individual characteristics in the future citizens of New Zealand.'

That sentiment still holds true today, and in recognition of it the Society this issue starts a new format junior section, put together by natural historian, Piers Hayman. Of course, we already have a number of dedicated young Forest and Birders who have joined the Society without the incentive of a special new section aimed at them — here mention must be made of the tremendous effort of 21 pupils from Tokoroa High School who recently became members. To quote from George Crabbe: *Habit with him was all the test of truth, 'It must be right: I've done it since my youth.'* No doubt he was only referring to good habits, such as belonging to Forest and Bird.

Please take special note of the advertisement for the 1986 calendar on the inside back page. This is to be our major fundraising project for the year; for that reason alone it deserves your support, but in addition it promises to be one of the best looking calendars produced in this country.

Finally, the new application cards inserted in the magazine are there for you to tear out to pass on to family and friends. Forest and Bird has been growing beyond expectations recently; with your help that trend could continue.

Gerard Hutching, Editor

Contributors to *Forest & Bird* may express their opinions on contentious issues. Those opinions are not necessarily the prevailing opinion of the Royal Forest & Bird Protection Society.



Planning Gymnastics in South-east Otago's Catlins

In the beginning of the year, the South Otago branch of Forest and Bird took what could be a precedent-making case to the Planning Tribunal, attempting to impose controls on the clearance of privately owned bush in the Clutha County Council. National Conservation Officer, Gerry McSweeney, attended that hearing and here reports on the background to it.

The Catlins is the last remaining expanse of native forest on the entire east coast of the South Island. The inland forests lie largely within the Catlins State Forest Park. However, lower altitude and coastal native forests are in private tenure, Maori ownership, scenic reserve as well as the 550-hectare Lenz Reserve near Tautuku Bay, our largest Forest and Bird reserve.

The forested Catlins coastline, very popular with Otago and Southland holiday-makers, is of growing tourist importance. Since 1977 Lands and Survey have championed the concept of a Catlins Coastal Park. Their 1982 report recommends the establishment of the park centred around existing scenic reserves but expanded through the leasing and purchase of private coastal forests. The Coastal Park concept attracted wide public support but recently seems to have lost its momentum and little progress has been evident in the acquisition of the private coastal lands so vital to the Park's integrity.

Combined assault of chipmilling and Rural Bank grants

Meanwhile coastal forests in the Catlins have fast been disappearing before the combined assaults of the new Government-subsidised chipmill near Invercargill and Rural Bank bush clearance grants.

When Forest and Bird members protested to the Government about the clearance subsidies, they were repeatedly told that the responsibility for private land use controls rested with local, not central government. Therefore in 1982, our 200-strong South Otago branch, which includes many farmers and Catlins residents, made detailed submissions

to a sympathetic Clutha County Council. Forest and Bird sought planning controls on bush clearance for about a third of the privately owned bush in the county — 3,500 hectares of the key scenic bush areas on the coast and along State Highway 92, the main route through the region.

In response, the Clutha County placed restrictions in their District Scheme over clearance of that 3,500 hectares under the Conditional Use provisions of the Town and Country Planning Act. Before clearing bush, landowners had to get County consent for the clearance. This prevents unnecessary clearance. It also allows the County and Government agencies to give that farmer priority if they want to offer alternatives to clearance, such as compensation or purchase of the affected bush area.

The bush areas identified by the County were registered on the District Scheme and owners were eligible for rates exemption for those areas and for assistance with fencing them.

"No man is an island..."

Objections to the County zonings were heard in August 1983. Many farmers in the Catlins regarded any restrictions on bush clearance as an infringement of their landowning rights. They argued that what they did on their own land was their own business. Other farmers and ratepayers disagreed, responding that every individual was part of a broader community and a nation which also influenced what one did on one's own land. Bush clearance controls were just another facet of the individual's responsibility to the broader community. There were already controls over education of children, there were building and health codes and even Catchment Board laws to

protect water and prevent erosion on private land.

Unfortunately in December 1983, Clutha County threw out most of its bush protection provisions.

Planning protection was removed from 3000 hectares of private forest and controls left on only 450 hectares around and south of Tautuku Bay.

Test case for the Planning Tribunal

South Otago Forest and Bird objected to that decision and took its appeal to the Planning Tribunal which recently heard the case from 28-30 January 1985.

Sadly, but predictably, Government agencies made no effective contribution to the appeal. Lands and Survey, Wildlife Service and in particular the highly trained and paid planners in the Ministry of Works, preferred to stand on the sidelines and leave it up to a voluntary organisation to fight to protect a natural and scenic area which all those Government agencies have recognised as being of national importance.

The Planning Tribunal's decision was reserved and could take six months to be announced. Whatever the outcome of this case, it will be a key test of whether New Zealand's foremost planning law, the Town and Country Planning Act, can be effective in promoting wise land use.

Back in 1964, the Forest and Bird Society first put forward the idea of a Catlins Coastal Park. Our latest efforts to make progress towards that objective by using the District Scheme have taken four years and are still unresolved. Meanwhile bush clearance continues.

The following excerpts are direct quotes of evidence presented at the appeal over the Clutha County scheme in late January 1985.



Birds such as the morepork (above) are no longer seen by some Catlins residents because of bush clearance. South Island robins are still present, (below) but for how much longer?

Photos: C. R. Veitch and Wildlife Service.



HENRY JONES is a retired farmer who lives in Balclutha and farmed all his life in the Catlins apart from three years overseas service. His son Roger now owns the Glenomaru property and in 1980 he and his father covenanted and fenced 60 acres of bush on the property.

"Many years ago, the valley looked very attractive with most of the hilltops and gullies covered in native bush.

"Less than half of the bush that existed in the areas when I commenced farming still remains.

"With the reduction in bush areas, run-off is now much faster causing flash-flooding and erosion. The area is also much drier. A lot of the hill-

streams have dried up and I had to put in water supplies for stock before my retirement. I have noticed also that much of the bird-life I can remember is no longer there. For instance, I have not seen such birds as kaka and morepork for years.

"I accept that bush clearing was necessary to establish farms but I consider that a lot of the areas cleared more recently have less productive land which should have been left in its natural state.

"I realise that many farmers intend keeping their bush. I am concerned that when these farms change hands, the new owners may have a different approach to the natural bush. They may well fail to recognise the fact that it gives natural shelter, natural water retention and therefore a continuous water supply over dry periods and a variety of landscape with the bush providing contrast to pasture.

"I believe that controls are important to protect the bush that is left and consider that the County should be giving every encouragement to farmers to retain the bush areas on their farms."

PETER GARDINER farms at Romahapa in the Clutha County. He is on the committee of South Otago Forest and Bird and until last year was the branch's chairman.

"The South Otago Branch of RF&BPS has consistently sought greater recognition and protection of the values of the bush areas that remain in Clutha County. We are very proud that our County has the largest area of bush remaining on the entire eastern coast of the South Island.

"We are lucky to still have examples of a whole range of native forest types from the coastal sand dune forests to river valley and mountain forests. Our forest areas are still extensive enough to host uncommon birds such as yellow crowned parakeet, yellowhead and robin. They are a tremendous asset for recreation and tourism and also play an important role in protecting the soil and yielding a steady flow of clean water.

"Our branch has done its best to develop an appreciation of the natural values of the Clutha County amongst residents by publicising these areas, by running field trips through the bush areas and by giving support, both practical and moral, to Government agencies seeking to protect bush areas under their control. We have also attempted to identify and discourage those activities which are destroying bush in our County. It has been very sad to see how rapidly bush areas continue to disappear in this area.

"These bush areas contribute to the natural and scenic importance of our County. We believe that before they are cleared it is appropriate for the County to have the chance to assess whether such clearance is justified by consulting with the owner and with ratepayers.

"Is bush clearance a wise use of land? Clearly it will depend on personal circumstances. As a farmer, however, it has disappointed me in our County to see areas cleared which I believe should never have been cleared in the interest of wise land use.

"These include scenic areas, south-facing cold slopes and often areas on steep soils. Many of these areas have simply reverted to scrub or low producing grasses.

"The Ministry of Agriculture's message to farmers these days is loud and clear. It is that it makes better economic sense for us to concentrate our development programmes on increasing production off existing cleared land rather than on breaking in new land. Production increases can be achieved by better stock management, by rotational grazing, by better fertiliser use and by the development of improved pastures.

"I have seen tourism grown in the Catlins and provided it is sensitively controlled I believe it will make a growing contribution to the economy and services of our region.

"It is vital however that we retain the coastal bush and scenery which attracts the tourists here in the first place. This is why we need the bush clearance controls in our District Scheme."

PAUL DAVIS, who is the Tourist and Publicity Department's Liaison Officer for Otago and Southland, has worked in tourism for 13 years in New Zealand and New York.

"The tourist appeal of the Catlins area is very much derived from the harmony of the native bush and coastal seascape. Any reduction in the areas of native bush that remain, especially those good examples of bush which can be seen from the road, decreases that appeal. Any such decrease inevitably has an adverse effect on the area's tourist potential.

"Tourism is important to New Zealand both for the overseas funds it brings in and in the widening of New Zealanders' horizons. The Catlins area provides an important actual and potential tourist attraction and the native bush stands are a critical part of the area's appeal. In addition, the preservation of the native bush enables the preservation of part of the diversity that makes our country a tourist attraction."

Chipping away at private forests

by Guy Salmon,
Joint Forest
Campaign Director

Woodchipping is the fastest-growing threat to New Zealand's native forests.

Indigenous woodchip exports have grown seven-fold since 1976. Almost all of the increase comes from clearfelling of native forest on private land.

After clearance the land is burnt off for farm development or pine planting — or in many cases, is simply abandoned. The land being cleared is usually marginal for any kind of productive use. Many cleared slopes soon revert to weeds.

A cheque from the woodchip company can give a farmer an overseas trip or a new swimming pool. For others, the temporary income from woodchipping allows a marginal farm to struggle on a bit longer.

For conservationists, the devastation to landscapes and wildlife caused by woodchipping has grown to a scale where

it can no longer be ignored.

And all New Zealanders must ask, is this a wise use of resources?

The Joint Campaign on Native Forests — alarmed by the upsurge in woodchipping — is mounting a campaign to get controls on native forest clearance, and to divert the woodchip industry toward New Zealand's plentiful exotic forests instead.

Many exotic timber sawmills today have chipmills which use the waste slabs from pine milling operations. These mills attract no criticism from conservationists.

Voracious appetites

The chipmills that worry them are those set up to consume native forest. Whole trees are fed into them.

There are three such mills now in operation, and a fourth in the offing.

The chipmill at Richmond near Nelson was originally set up to make use of immature exotic trees blown down in the Wahine storm in 1968. In recent years it has turned increasingly to chipping beech forests, clearing private land right up to the straight-line boundaries of the Abel Tasman and Nelson Lakes national parks.

Two years ago a second indigenous chipmill was established at Awarua near Invercargill. It is busily clearing mixed native forests in the Catlins and Rowallan districts. Like the Nelson mill, it is completely dependent on a big Japanese corporation which takes all the chips.

A third indigenous mill operates in conjunction with NZ Forest Products Ltd's pulp complex at Kinleith. This

Private clearance on Mt Owen, inland from Nelson.

Photo: Guy Salmon



operation consumes tawa logs, which come mainly from NZFP's huge clear-felling operation on the Mamaku plateau near Rotorua. The company also buys in truckloads of tawa logs from farm clearance operations in the King Country and Bay of Plenty.

An ominous development is a proposal to set up a woodchip industry on the West Coast of the South Island. The Coast makes up only 8 percent of New Zealand's land area, yet it possess almost half of the country's remaining potentially exploitable native forest.

The company proposing the chipmill is the Westland Industrial Corporation (Wincorp) which is the parent company for Aorangi Forest Industries. Aorangi's plywood factory near Greymouth was propped up with \$1.5 million of tax-



The Gowan Valley, gateway to Nelson Lakes National Park, a scarred victim of the greedy Nelson chipmill.

Photo: Guy Salmon

payers' funds last year.

The Government's rescue of Aorangi illustrates the dangers of establishing a woodchip mill on the West Coast.

A mill based at Reefton as proposed, and using privately-owned beech forest as its source of supply, would run out of wood after about 12 years.

It would then be banging on the Government's door demanding a supply of wood from State forest. The alternative for the Government would be to allow a large number of mill and forestry employees to be thrown out of work in an area where governments have traditionally propped up ailing industries.

The longstanding Government policy of sustaining long term wood supplies to the West Coast timber industry is subsidized at a cost of about \$10 million annually while State Mines and Railways also receive large subsidies.

The Government rescued the Aorangi factory in 1984 and the timber complex at Ruatapu near Hokitika was similarly rescued from financial collapse in 1979.

Ironically, a current five-year offering of beech chipwood from State forest could give Wincorp the basis it needs to set up its chipmill on the West Coast. Conservationists are watching the situation carefully.

The company has already taken out options over "several million tonnes" of standing beech forest on private land in North Westland according to its chief promoter, Mr George Ferguson.

Port — hot political issue

Looming in the future is a more intractable problem for the forests: the prospect

of an export port for the Buller region.

Much native forest still remains on the West Coast simply because there is no nearby port. It would probably disappear fast if funds for building the port are made available by the Government.

Indeed beech woodchips — along with coal — are the main export commodities that could pay for the port, according to West Coasters.

Coasters like to dwell on the boom-time prosperity of the past and they see this being restored if only the port can be built.

Certainly the port would speed up the process of shipping out the Coast's remaining natural resources. And large areas of native forest would probably be replaced by exotics.

Much of the State forest land suitable for radiata pine on the West Coast has been cleared and used for that purpose in recent years — but much larger areas are suitable for growing Australian eucalypts and blackwoods, which the Forest Service is busily planting in logged-over native forests.

Another thing that could happen is that we could go the Australian way — cropping native forests on very short cycles for the woodchip industry.

While the export port proposal is the number one political issue on the West Coast, it is little known elsewhere in New Zealand.

A government-sponsored study of its environmental implications is now under way. Conservationists throughout New Zealand will be taking a keen interest in the findings.

The Government is committed to a small-scale sustained yield management programme for State forest beech on the West Coast. This is aimed at producing a long-term supply of specialty native timber for New Zealand's furniture and woodcraft industries, and the woodchipping is supposed to be limited to smallwood and waste material.

Conservationists do not plan to oppose this particular scheme outright unless they fail in their current efforts to get adequate safeguards, including a representative network of forest reserves.

But large-scale woodchipping is a different matter altogether, and here there is an urgent need for Government controls.

The Labour Government's election policy on environment contains a number of excellent principles relating to sustainability, reserves, and trusteeship of resources for future generations. Just how far the Government feels it can go in applying such principles to forests on private land is the real question.

The Government is pledged to recognize the protection of native forests as a matter of national importance by an amendment to the Town and Country Planning Act. This change by itself will make little difference unless the Government appoints new people to the Planning Tribunal, which has traditionally been rather one-eyed in its insistence on private land development rights — at least for rural land.



The chipmill at Richmond, near Nelson, fed by native beech forest cut on private land.

Photo: Guy Salmon

Taxpayer handouts

Other measures are available to the Government. It can control woodchip exports through existing regulations used to control other forest produce exports. It can increase its fund for reserve acquisition — a fund whose annual allocation has not been increased since it was established in 1972, and is today worth a paltry amount.

It can remove the subsidies for land-based industries which encourage landowners to clear forest from marginal land. Already agriculture subsidies have been reduced — but the big forestry companies are benefitting from a unique tax incentive arrangement announced in the 1984 Budget to replace the previous government's forestry encouragement grant scheme.

Wealthy individuals on high marginal tax rates can benefit particularly from the forestry tax incentive.

The Timaru businessman who purchased a block of beech forest adjoining Marlborough's Mt Richmond forest park, above the Perlorus River, will reap a handsome return from the government for woodchipping the native forest and replacing it with exotics.

In the Gowan Valley — gateway to Nelson Lakes National Park — beech forest is being woodchipped up to the maximum slope limits for machine operations and above that, the forest is simply being felled and burnt on the site to make way for pine planting.

These and many other examples must surely convince the Government of the need to curb these handouts of taxpayer funds which are being used for the destruction of our national heritage.

Japan operates a system of incentives for land-based industries under which operations affecting forests are subject to plans approved by the Government.

Switzerland has even stronger planning controls, which preserve one of the world's most exquisite rural landscapes — scenes which draw millions of tourists year after year.

New Zealanders will increasingly want to ponder how the short-term gains from woodchipping native forests will compare with the long-term gains from tourists, who might return again and again to spend their money in this country, if we could keep it as gentle and beautiful as it is today.

PALMER'S ROAD

farewell to a scenic gem

by Gerry McSweeney, National Conservation Officer

The mountains, valleys and beech forests around Springs Junction, near Lewis Pass, are a scenic gem and a key tourist area. However, rising beech chip prices threaten much of this Upper Grey-Marua Valley area with clearance. The Nelson chipmill, which has already devastated privately owned native forest near Nelson, is now ranging further afield. Extensive areas of the Victoria State Forest Park are zoned for logging in the draft management plan shortly to be made public. Much of the privately owned forest in the Maruia Valley is signed up for chipping or has already gone. Now even legal road reserves have been devastated because the Greymouth County Council succumbed to the chipmill's temptations.

Until last December, Palmers Road wound beneath huge red beech trees for 15 kilometres from near Springs Junction into the Upper Grey River to a small farm called Newcombes. The beech forests on both sides of the road are protected within the Lewis Pass National Reserve and the Victoria Forest Park, but the chain-wide road reserve is legally controlled by Greymouth County Council.

Shattered stumps mark an orgy of forest destruction

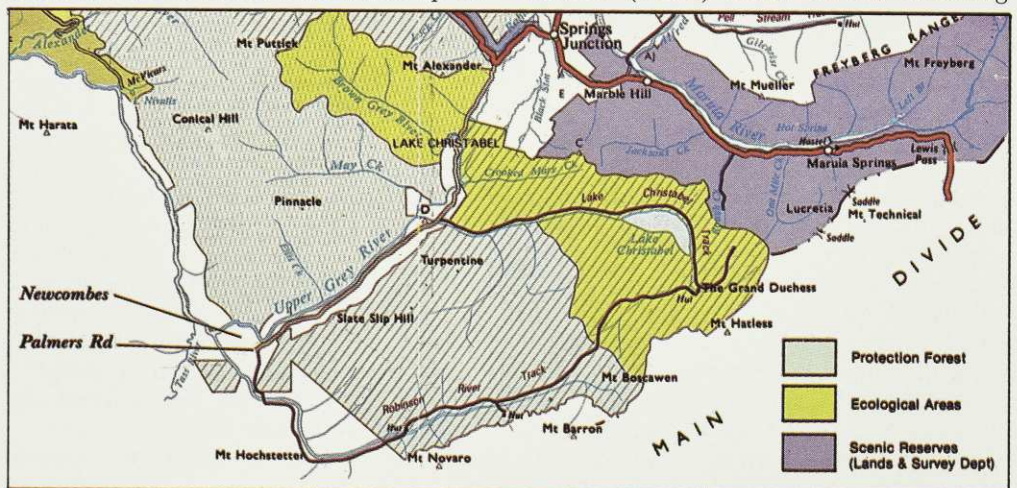
Today shattered stumps, a churned up road and a 30-metre wide swathe of destruction are all that remains of what was widely regarded as New Zealand's finest beech forest drive. The Nelson chipmill has claimed another scenic victim. Over Christmas, the Greymouth County Council sold off all the trees within the road reserve, mostly to the chipmill, for about \$3.50 a tonne. A few of the finest red beech were sawn up for

bridge decking for County roads — a low grade of red beech for which treated radiata pine is usually preferred.

Grey County's action is quite legal, but it is morally indefensible. Most other local authorities would regard scenic roads like Palmers as an asset to be treasured and preserved — not hocked off to the highest bidder.

Subsidised by the New Zealand taxpayer

The supreme irony is that not only will Greymouth County receive timber revenue from their logging operation, but to restore the road from its pounding by logging trucks, Greymouth County will be aided by a special taxpayer grant of \$60,000 from the National Roads Boards (NRB) Back Blocks Roothing



Fund. And this is at a time when the "Beautiful New Zealand" scheme is attempting elsewhere to restore trees and shrubs to enhance the scenic beauty of our roadsides. The Back Blocks Fund is a legacy from a bygone pioneering age. Today pushing roads into wilderness makes no economic or environmental sense and the fund should be scrapped.

Coasters unite to protest vandalism

"As the direct descendent of the very first settlers in Buller and Westland, the Newcombe brothers, and as a daughter of the man who lived in and loved this area, I cannot stand by without protest and watch this senseless destruction of a once beautiful environment" pleaded Norma Streeter (nee Newcombe) of Lake Kaniere, Westland in her 22 February

Today chipmilling has cleared a 20-30 metre wide swathe through the forest in an orgy of taxpayer-subsidised destruction.

Photo: Gerry McSweeney

letter to the Minister of Works, protesting about Greymouth County's vandalism.

"My father, uncle, grandfather and great uncle, unaided by financial subsidy, cut this road through to provide access to their isolated farm without detriment to the surrounding countryside. How can \$60,000 now be justified to upgrade it — and for what? It leads only to Newcombes farm (now Grooms) and there terminates.

"I am appalled to note the unnecessarily wide swathe being cut, turning a scenic and historic area into an unsightly muddy mess." [In a gross breach of Catchment Board regulations some trees along the road were even felled into the Grey River.]

Norma Streeter is not alone in her protests. Vic Hawker owned Newcombes and farmed very successfully there for nearly 20 years until he sold it last year after his wife passed away. Throughout his time in the Upper Grey he fought to protect the huge trees and the scenic roadway of Palmers Road. The narrow scenic road didn't handicap his farming operation. He too is outraged by Greymouth County's action. On 4 February, Forest and Bird's 320-strong West Coast branch passed a unanimous motion at its AGM deploring the Greymouth County's actions. They called on the Minister of Works to suspend taxpayer funding for the road improvements [the County claims they have cleared the 30 metre wide strip in

order to widen the existing road formation from 3.5 metres to 4.8 metres!].

Similar concerns have been expressed throughout Westland. There is growing recognition on the Coast that scenic gems like Palmers Road distinguish Westland from the rest of New Zealand and are the basis of Westland's character and its booming tourist industry.

Footnote: let Newmans show you New Zealand

The Nelson Chipmill is 50 percent owned by the Newmans Group, leaders in the tourist industry. "Let Newmans show you New Zealand" is one of their mottos. Does that include Palmers Road, Maruia Valley, the Gowan Valley approach to Nelson Lakes National Parks and all the other scenic gems their woodchipping has destroyed? Is it too much to hope for more sensitivity from this industry giant that depends on our scenic beauty for its survival. Certainly Newmans should be able to afford it. They recently announced that their interim trading profit had leapt by 83.6 percent. The Royal Forest and Bird Protection Society would far prefer to work with Newmans to promote nature tourism, described in our February journal, than fight them over chipmilling.

Until December 1984, Palmers Road wound beneath huge red beech trees beside the Upper Grey river (see road at bottom right).

Photo: David Harding



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The Fledgling

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The protection of Pirirakau

by Gerard Hutching

It is not difficult for the visitor to pinpoint the exact location of Michael and Pam Garrett's Roto-o-rangi farm, for their impressive stand of kahikatea contrasts sharply with the exotic vegeta-

tion in what is one of the most closely settled landscapes of the New Zealand countryside.

The changes that have been wrought would be startling to someone coming

from the nineteenth century. A visiting historian then reported that Lake Roto-o-rangi — with a recorded depth of 25 feet — looked like a vast inland sea. However, European settlers were swift to exploit the fertile land, and by the early twentieth century the lake was no more.

Lying a few miles south of Cambridge, the Garrett's bush property, in the Waipa county, is now secure from development under a QEII National Trust open space covenant. By the standards of other reserves the area might not appear large — 7.2 hectares — but in the context of what remains in the Waipa County it is significant.

In fact, well before the arrival of the European, the Waipa plains had been largely deforested, as a result of fire. Today, remnants of indigenous vegetation are small and scattered; the Garrett's reserve is one of the largest.

Protection had not come without sacrifice, however. Out of a total of 63 hectares, one eighth has been set aside, a sizeable chunk of prime Waikato dairy land. In a candid moment Michael reveals that if the area had been developed their mortgage would have been paid off some time ago.

However, the couple's feeling for the bush would not allow them to cut it down. Michael, an Englishman who arrived in New Zealand in the 1950s, was struck by how much native forest was being felled at that time, and determined to make good some of the loss.

"When I first came to New Zealand, bush was being felled and I made a vow to myself that if I bought a farm I would create a piece of bush. I wasn't looking for a farm with native bush on it. That was the last thing on my mind," he says.

While no member of his family had ever farmed, he had grown up with a respect for natural values that he regards as part of an English tradition.

"We are here today and gone tomorrow but the land is always there. And there's another saying: 'The best manure for the land is the master's foot'."

Between 1961 and 1968 the Garretts sharemilked north of Cambridge until the property at Roto-o-rangi came up for sale.

So pleased were the previous owners to find a buyer keen to protect the bush that they offered to leave money in the property; if they hadn't, the Garretts would

This kahikatea is estimated to be about 250 years old. Drainage over the past century has caused the peat to shrink, resulting in roots standing high out of the ground (Inset).

Photo: G. Hutching



G

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have been pushed to afford it.

"We didn't have enough money for the property but the owners said we could forget the loans and they would provide the mortgage. They initially preserved the bush but didn't set it aside. They simply didn't fell the trees."

The most important immediate task was to fence off the kahikatea stand from browsing stock, and so allow the undergrowth to regenerate. The area fenced off initially was somewhat smaller than it is today.

For the first three years the Garretts were besieged by "every miller from Taupo to Hamilton", but they were never tempted to put the trees to the chainsaw.

A suitable name had to be chosen for the farm, something that related to their love of trees. With the help of a Maori friend they dubbed it "Pirirakau", meaning "the keeping of the trees".

It wasn't until 1981 that the Garretts heard of the QEII National Trust, and the thought of the permanent protection a QEII National Trust Open Space covenant would provide was attractive.

Unfortunately open space covenants are not always as welcomed by the farming community. Michael says there is an element of suspicion over the effect of a covenant among some farmers.

"A lot of people are frightened it will give open slather to the public. That's not the case. We still have control of it. The QEII National Trust simply has the

right to investigate whether we (or more likely the future owners) are keeping up the agreement," he explains.

No two agreements are the same, allowing the owner to make an individual agreement with the Trust. The covenant is registered on the land title, but the landowner retains ownership; it does not become the property of the Trust or the State.

Another farming concern is that the value of the land will be reduced if an area is set aside, making it difficult to resell. Michael has a ready answer to this fear.

"To us the bush was one of the farm's assets. Some farmers feel the value of the land has been reduced, but in today's enlightened community the reverse could be true. I think that today there must be people prepared to buy a farm with a piece of bush," he says.

Some moves could be made to attract more farmers to covenant their land, he suggests. One important way would be to remove the burden of rates on the reserved land; Michael could have been spared a substantial sum over the 16 years he has fenced his bush off, more especially since the farm is on some of the highest rated farm land in the country. Rates will climb even higher as horticulture makes inroads into the Waikato, as it is certain to do.

For the future it is hoped that school children will make use of the bush for study. Since 1974 the Garretts have



Michael and Pam Garrett: protecting for future generations.

Photo: G. Hutching

opened up their land to children, but they plan to go further with a series of activity points where particular studies can be made. One of the clearings will be turned into a fernery to help people to identify specimens. The Garrett's property is one in the Trust's School Covenant Programme, linking schools with nearby areas protected by open space covenants.

Clearly the bush is a source of pleasure to its present owners, simply for its value as a home for wildlife and the different plants growing there. But thanks to the QEII National Trust open space covenant it should remain an enduring store of delight for generations to come — and that, more than anything, is what satisfies the Garretts.

None so deaf as those who won't hear

by Mark Bellingham, Forest and Bird
northern regional field officer

In the far north of Aotearoa, where turbulent northern waters meet the land, lies Unuwhao, between the wide sand beaches of Kapowairua (Spirits Bay) on the one side and Takapaukura (Tom Bowling Bay) on the other.

These bush clad hills are the turangawaewae of the Ngati-Kuri of Te Hapua. Their cultural and natural importance has resulted in successive attempts to have governments recognise Unuwhao as a special type of reserve, but

to date these requests have fallen on deaf ears.

Even on summer mornings cloud can envelop Maunga Unuwhao, one of the highest hills in the Te Paki region, providing a refuge for moisture-loving and cooler climate plants.

Horopito are conspicuous among the pohutukawa and taraire on the summit. The puriri-taraire-kohekohe forests gradually became confined, over the year, to Maunga Unuwhao and many

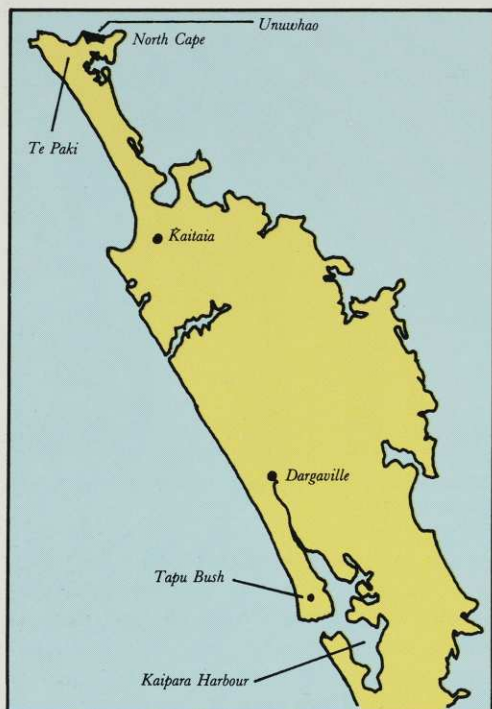
steep gullies across Unuwhao, but recently the forest mantle began to advance. Under the kanuka, a new forest is emerging, linking the remnants of the original bush.

Unuwhao has its own unique fauna. Best known are the large land snails: two sub-species of pupuharakeke (*Placostylus ambagiosus*) survive only there, along with pupurangi (*Paryphanta bushyi watti*). While there is little information about small land snails, more intensive searching will no doubt reveal new species — as has been the case in the nearby Spirits Bay catchment. Three endemic beetles are also confined to Unuwhao.

The rapid regeneration of forest and shrublands in the whole Te Paki region has paved the way for a more favourable environment for lizards and birds. Tui and pigeon had virtually disappeared 20 years ago but are now on the increase. Unuwhao would be a suitable site to reintroduce bush birds now absent from Northland, thanks to habitat improvement and absence of possums, deer and goats.

In the past the land from Kapowairua to Takapaukura was the most intensively occupied in the whole Te Paki region, for here are found the most fertile soils and year round water supplies that drain from Unuwhao.

Great fortified pa at Maungapiko, Maunga Unuwhao and Tomokanga remain as silent sentinels, reminders of the



The land at Kapowairua (Taylor's Grant) is now the site of a Lands and Survey camping ground, the activities at which have further incensed some of the Ngati Kuri. Toilets have been placed on former kumara gardens, in direct conflict with Maori cultural concepts of soil and water pollution. A large dune and pre-historic midden next to the camping ground was planted in marram, contrary to recommendations by the DSIR Entomology Division and the local people that it should be planted in the native pingao.

Since 1967, all land in New Zealand has been rated on its potential for production, putting a severe financial strain on the Maori community which has large Luxuriant undergrowth characterises Unuwhao, largely because of the absence of possums, deer and goats. Waitori Stream.

Photo: M. Bellingham



The flax snail, pupuharakeke, a species endemic to the Te Pahi region.

Photo: Andrew Penniket

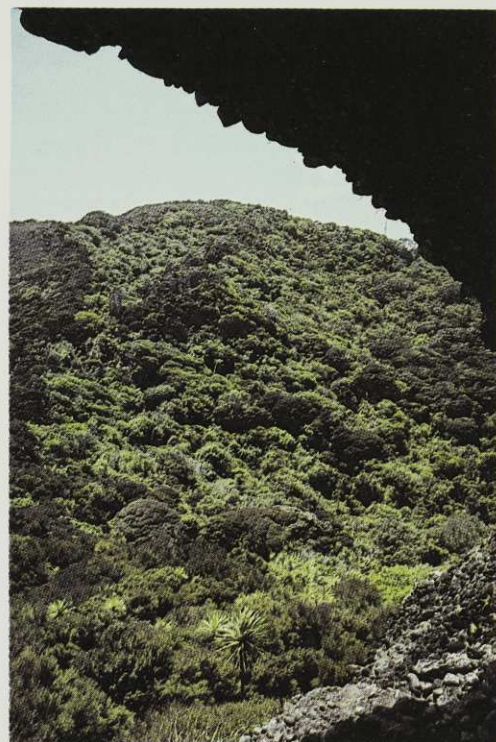
areas of land suitable only for soil and water protection and reserves.

This rate burden was a major factor in Northern Pulp Ltd being granted a 46-year lease for exotic afforestation over a large portion of the remaining Ngati Kuri land. While the exotic forests were being established, Lands and Survey offered the Te Hapua 42 Incorporation, which controls the land, a cross lease — more land for exotic planting, in exchange for Crown control of Unuwhao.

But the seeds of mistrust had been sown long ago, and the offer was soundly rejected. The Incorporation set aside the Unuwhao bush and coastal area from afforestation and have accepted a proposal from Matiu Rata to reserve this for the "national interest."

Unfortunately the proposal for a special reserve has so far been met with a thumbs down. While the Wildlife Service and the Entomology Division of the DSIR have supported the idea, other Government departments have proved uncooperative and intransigent. Furthermore, the development-oriented Mangonui County Council has been extremely reluctant to waive rates, even on such a nationally important piece of coastline.

The reserve proposal — drafted by DSIR's Entomology Division — encompasses protection for cultural, historic and scientific values, with the control and management being held by the Maori owners for the nation. Such a simple concept is not properly catered for in existing reserves legislation. Unless the initiative made by the Ngati Kuri is taken up, the will of Maoris throughout New Zealand to formally protect their land could be lost forever.



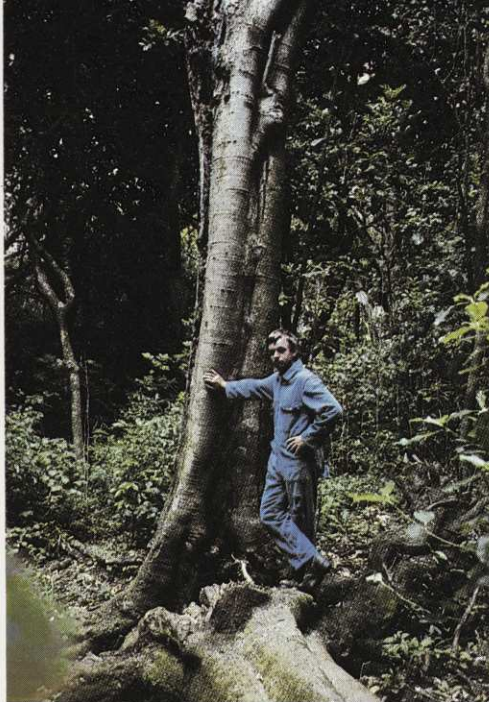
Puriri-kohekohe forest predominates on Maunga Unuwhao, at the very northern tip of the North Island.

Photo: M. Bellingham

proud and strong ancestors of the Ngati Kuri.

But the strength of their tangata whenua, their land, has been inexorably whittled away: "In 1793 our land was 100% Maori owned; in 1896 it was 70% Maori-owned; by 1978 it was 65% Crown-owned," says Saana Murray, kuia (elder) of the Ngati Kuri.

When the missionary Rev Richard Taylor arrived in the 1840s, tribal land disputes racked the people of Te Pahi. Taylor decided to settle these by buying 50,000 acres in contention for £681 — the sale was and still is in dispute, but the land has passed out of Maori ownership. With this went the most fertile land, at Kapowairua, where "Waitanoni the waterfall sustained the kumara garden, taro and other cultivations, and villages of raupo and nikau where weather many a storm."



Trustee Mark Farnsworth in front of a large karaka tree.

Photo: M. Bellingham



Mobile sand dunes invade the western side of Tapu Bush, the last major forest remnant along 140 km of coastal dunelands.

Photo: Ross Cochran

Rare forest remnant granted protection

by Mark Bellingham

The mana of Tapu Bush has long protected the forest there, but in 1982 a charcoal business threatened the future of what is a major cultural site and one of New Zealand's rarest types of forest, prompting the Maori owners to give formal protection to it.

Tapu Bush lies nestled in the dunes of the Pouto Peninsula, south of Dargaville. This 80-ha coastal dune forest remnant is the last major forest area on the 140 km of west coast dunelands that embay the Kaipara Harbour.

When I walked into Tapu Bush, the forest appeared to be low and no higher than the surrounding belt of kanuka — the persistent westerly winds have shorn the canopy down to a level height. But nature only reveals her secrets to those who venture further into this sacred area. The kanuka gives way to puriri, mangeao, kohekohe and rororo (*Nestegis montana*) as one drops off the dune crest and into the gully below, with the canopy rising higher and higher above.

Trees and shrubs below the canopy abound, while the dimly lit ground is carpeted with karaka seedlings, astelias and ferns. On the ridge crests, giant gnarled totara carry a wealth of epiphytic orchids, astelias and ferns.

Drying winds and free-draining sand have a profound effect on Tapu Bush. The predominance of rororo and large mangeao is unusual in Northland, as is the virtual absence of moisture-loving plants like nikau, tree ferns and filmy ferns.

The natural character of the Kaipara dunelands has changed substantially in the past 1,000 years, with the arrival of the Maori and pakeha in New Zealand. Hot, dry summers made the duneland forest susceptible to the fires which were part of the shifting Maori agricultural pattern. But the pakeha probably had the greatest influence, for today the dunelands are covered in pasture and exotic forests. Gone is the broad zonation of coastal scrublands, coastal forest, broadleaf-kauri forest and podocarp-broadleaf forests which once covered these dunelands.

Yet Tapu Bush has been preserved by the mana of the tapu, placed on it by the Maori of the Pouto Peninsula, in recognition of the fact that it contains an urupa (burial ground). Bodies were washed in a nearby lagoon, then taken to burial caves in Tapu Bush. The bush was also used as a training ground for tohunga. However, although it was a burial ground, this didn't stop European settlers from testing the soundness of many totara with their axes. Trustee Mark Farnsworth showed me the scars on the trunks of a few totara, that obviously were too gnarled for felling.

But the greatest threat to Tapu Bush appeared in September 1982 when the lessee of the Te Uri-o-Hau Incorporation land bulldozed a road into the bush and began cutting trees for charcoal. The road was noticed by staff of Pouto Forest Farms Ltd, which owns the northern fringe of Tapu Bush and an injunction was

issued preventing any further damage. The matter was taken before the Maori Land Court, in order to obtain permanent protection for Tapu Bush as a Maori Reservation.

By December 1983 the owners of Tapu Bush had achieved their aim — a Maori Reservation to protect the tapu and cultural features within the forest.

A fringe of kanuka forest is included in the reserve to protect the mature forest and Pouto Forest Farms have set aside a further seven hectares of low manuka and bracken as a buffer between their developed land and Tapu Bush.

At the court hearing Mr Morehu Kena said that his elders wanted the reserve to be made a public reserve for all New Zealanders. It is certainly appropriate that ownership of a reserve such as Tapu Bush, with its deep cultural significance, should remain in the guardianship of the Maori people of Pouto Peninsula.

Footnote:

The southern Pouto Peninsula is also notable in that it has the last major areas of mobile dunelands with good populations of the native sand-binders, pingao, spinifex and *Coprosma acerosa*, dune scrublands and dune lakes, with many dabchicks, crakes and ducks.

It is regrettable that the only area with permanent protection on the Pouto Peninsula has been set aside by the Maori people of Pouto and no lead has come from Lands and Survey and Forest Service on the large areas of Crown land.



Principles

ENTIRELY JUST THOUGH NOT ALTOGETHER POPULAR

The final of our articles on the theme of environmental protection on private land is an abridged version of last year's Sanderson Memorial Address, by Professor John Morton, Professor of Zoology at Auckland University, a member of the Forest and Bird executive and one of New Zealand's best known conservationists.

The battle for our publicly owned forests could soon be over. There remain no good reasons ... (in economics, timber need, export or employment policy) why the Minister could not halt indigenous logging by administrative order tomorrow. This probably won't happen. Political inertia, grudging resentment of the conservationists, foresters' engrossment with techniques that have now become pointless, may be too strong.

But if it did happen, we ought not to spend too long in congratulation. Because the great problem would still remain that is with us now, and that no conservation body has properly confronted: the saving of indigenous environment, especially forest, in private hands, that is today under intensive threat, all the more alarming for being so fragmented and widespread.

You won't need me to remind you where the urgent problem spots are today

- The superb lowland podocarps of the Waitutu coastal forest, owned by the local Maori Incorporation.
- The Catlins coastal forests of south east Otago still unsaved, with the Clutha County Council wavering and reversing upon its own scheme of change, while a mobile chip mill, like St Peter's devil, 'prowls about seeing what it may devour.'

- Kauri coming on to the market from fellings of privately owned bush in the north, whether being cleared for exotic forestry, or by selective extraction of prime trees.
- The host of little remnants of northern forest, of puriri, taraire, kohekohe, falling casualty to farm development encouragement loans. Forested Maori land being cut for the cash crop ... kauri sold, often totara wasted, as happens constantly where parcels have been leased to the forestry companies; or are being privately pine-planted with encouragement grants.
- The clearing of regenerating forest — some would call it 'mere scrub' in the north, with kiwi rescue programmes operating like rape crisis centres!

Against all this, our effective conservation response won't be to wave frustrated arms, trying to save one bit after another from clearing or logging. But crisis reaction like this constantly happens: last ditch appeals to supporters to raise money, the Government to subsidise it, and a little bit more land to come into public ownership. 'If you want to save it, buy it ... or persuade the Government to buy it' — so runs the common assumption. Compensate the owners out of what they want to do; and claim that they are legitimately entitled to do what they want on 'their own land'.

With this contemporary approach, there are several things wrong.

No socialist land policy

First: I don't want to see all the choice environment coming into public hands! I want as much of it as possible to continue permanently in private ownership. I am convinced this is the best place it could be with private or family vision and tradition; and with pride and initiative for what would be collectively no one's responsibility.

It is well that I'm not a socialist when it comes to land policy. For there wouldn't be any chance of such a political blueprint being effective in today's New

Zealand — to save environment, or anything else. Our Labour Government are not socialists: or at least on the available evidence we'd have to find no case to go to trial. Nor would they appear to be conservationists, out of any deep or traditional understanding. They tend to understand the land less than agrarian conservatives; because they don't tend to hold it, or if so, they don't primarily value it for working and farming.

Second: Some of those agrarian conservatives have, however, developed exaggerated expectations. This could be true of some of those in the Canterbury landed tradition, with the Elworthy pressure to freehold high country grazing areas.

But, *third,* other chief conservation problems with land come not today from locking up, but insensitive development. I find it unthinkable that the fee simple of land entitles an owner to do what he will with it, to develop it to the ultimate or alternatively be entitled to compensation for the loss of this development potential, by the rest of the community.

God will make no more of it

To devise a code, then, for the treatment of private land in New Zealand will be a complex task. Not just to prevent Northland Forest or Catlins being cut or sold, or making bush clearance harder. It will entail some regard for the sort of society we want to live in, where the environment is a resource in which we all have a beneficial interest. We shall need to consider a little history, economics, planning, and and rating law, remembering all these things are far too important for the citizen to leave to the experts.

To begin: LAND is a resource calling for special social policies. It is that peculiar sort of property called 'real', and as such has certain characteristics. It is immobile. It is scarce. It is for practical purposes fixed in supply. God will make no more of it (Napier earthquake or reclaiming harbour boards apart). There was (generally) no cost involved in its creation.

Much of the land and its natural cover, under ongoing management policies, will be sustainable. But some parts of it may carry rare, fragile and ancient, and therefore precious ecosystems that, if left to the economic assumptions of land use for profit maximisation, would not be sustainable. There are the threatened communities that for an appealing variety of reasons — not hard-nosed or 'productive' in the accounting sense — we may have to preserve.

Conservation and preservation

An impression is abroad, even among some environmentalists today, that CONSERVATION is a good word, meaning balanced and sustained multiple use, with a little for everyone — being able to log our forests and mine our national parks, all to be accounted admirable and sound-headed. PRESERVATION, by contrast is a bad thing, only to be urged by unrealistic academics and activists, that entails the selfish, unjustifiable locking up of resources.

It is high time every environmentalist learnt the proper place of both, as our own Society painfully had to during the North Island forest campaigns late in the '70's. PRESERVATION is, properly regarded, a special case of conservation with its own appropriate place and occasions. Some resources — like fossil fuels — we have to use up and ultimately run down. We can conscientiously do this if we are using them to tide us over to, say 2020, to the change from stock to flow sources.

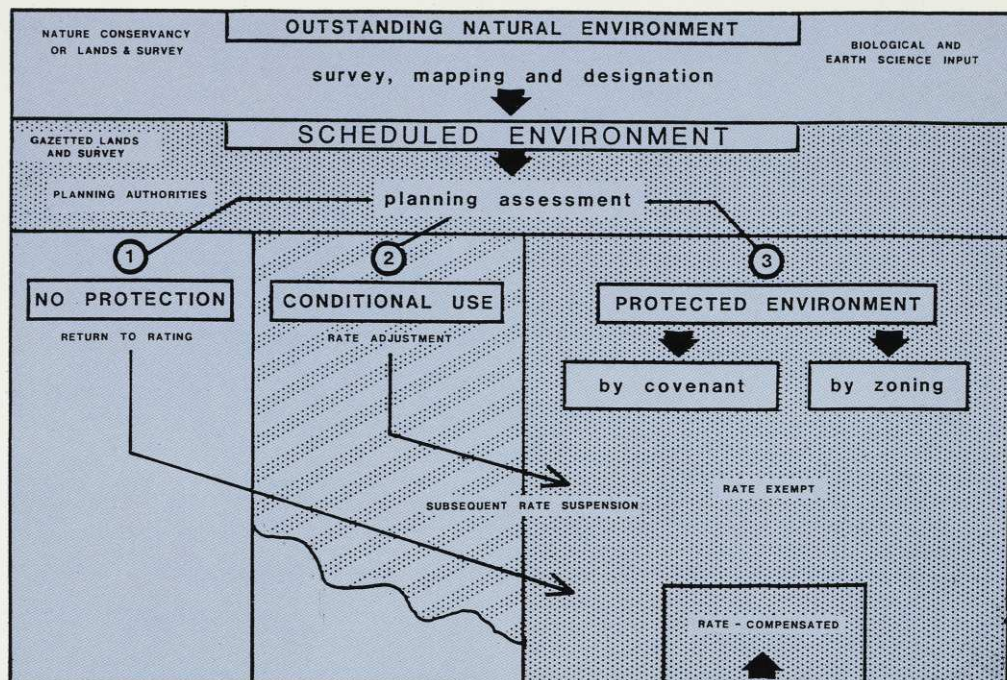
A large range of resources, probably the majority of our ecosystems, can perfectly well undergo sustained yield management: dairy farms, wheat fields, pine forests, snapper fisheries, operated with due attention to growth rate, productivity and the age structure.

There are other ecosystems — complex, slow-growing, beautiful in their diversity and precarious stability, that we may not be able to exploit or consume, without losing them. Two of these are forests of mature kauri and of giant podocarps. The oldest podocarps in Whirinaki were seedlings when the first canoe arrived. The middle-aged are as old as the Wars of the Roses. The time scale is too slow and prolonged for human manipulation.

We must nonetheless try to take account of that stately rhythm and pulse. We must not in our human presumption cut off options that it has taken hundreds or thousands of years to create.

This arrogance that, since 'the land is ours', we have unlimited power to change its future by our present exploitation, is a fiction of human law as unrealistic as the notion that our fee simple title reaches in space from the centre of the earth to the vault of the heavens.

The good sense and capacity to live upon the land, in harmony with its cycle through time, is one of the virtues — whatever else may be the faults — of a land-owning class, a squirearchy or a tribe, whose tradition has brought it into a proper respect for that land.



In graphic terms, the way in which the author would envisage private land being protected, and the planning process involved.

Great Britain is today a remarkable country in that the best seashore in Europe is preserved as a National Sea Coast (virtually a national park) in private hands, in some part by protective planning, but far beyond that, by the virtues of private restraint.

So that one of the indicia of a 'gentleman' — in a landed sense — was in being brought up to know how to treat his land. That is why, over so many years, we got along without Town and Country Planning. It could even explain how the loveliest New Zealand areas, city and country, took their present form long before our own first Town and Country Planning Act of 1926.

The New Zealand Experience

In New Zealand, planning has tended to be 'country' oriented. Unlike the landscape of England, much of New Zealand's bio-surface is fragile and primeval; with podocarp forests, groves of kauris, high level forests of beech, swamps and wetlands, marshes with wading birds; high country with scree and shingle, threatened plants like *Ranunculus parviflorus* at Mt Clarence.

Anxiety is also being raised by the amounts of Maori land — small patches in the north, to threatened Waitutu in the far south — that are being effectively signed away from Maori ownership in forestry leases and regularly approved or enjoined by the Maori Land Court. By all the signs Maori people are being pushed into exploitative attitudes, and turning out no more far-seeing or value-conscious than the European did before him.

What shall we do?

First, we need to know the resource we have. Nation-wide ecosystem survey is going on. Much of it is by part-time staff, some working in summer projects: most of it dedicated work by young people with a care for the environment beyond their present weight or influence in the

bureaucracy. Their enthusiasm, and the quality of their work should push departments concerned such as Lands and Survey to go on funding, to get it finished ... and put it into circulation.

One of these student groups showed me a large scale bush and forest map of Northland, made last summer. Its complexity and richness was a revelation. I am not now talking of great forest sanctuaries like Waipoua, but all those many small strips and remnants that are the scattered glory of the North. All these are in danger. Most of them are privately owned. They are confronting us with the problem only a little more urgent in the north than in the rest of New Zealand.

Second, there should be an obligation enshrined in law recognising its as aboriginal New Zealand environment, calling for planning or total protection.

Since 1973 there has been an obligation in the Planning Act to look after our rivers, lakes and the coastline. This should be enlarged to enable mature and regenerating forests, tussock, montane communities and wetlands to be placed under secure planning protection. The gazetting of it as Scheduled Environment would bring it before the attention of local planning bodies.

Third, such bodies would than be charged with giving it explicit planning consideration. They would be nudged with suitable incentives to do this without undue delay. This scheduled environment would be rate exempt until a planning decision was made. Thus, the owner could be given a pleasurable foretaste of the privilege that would attach to any land that became Protected Environment.

Still in private hands

Three results would emerge:

1. The District Planning Authority may decide that a piece of environment will not be put under protection at all.

2. Exploitative use of land might be made a Conditional Use, which would be publicly notifiable and challengeable.

3. Scheduled Environment could become Protected Private Space,



whereupon its exemption from rating would become permanent. Either the owner or district planning authority could decide this.

The first of these latter options means the land would be the subject of a voluntary covenant, to maintain its present environmental quality unimpaired. It would become like much of Britain's National Park system, including the national coastline, still predominantly privately owned.

The covenant would be registrable with the QE II Trust, or with a Nature Conservancy. It would run with the land, against the covenantor and subsequent owners, assignees or heirs. The Trust or planning body would enforce any breach.

The cost of survey, fencing and ongoing conservation would be borne by the Trust or local authority. Rating valuation would be nil. Value upon probate, for estate or succession duties would also disappear. The value upon ordinary sale

Ecosystems such as kauri forests demand preservation, as they take so many hundreds of years to return if destroyed.

Photo: Terry Fitzgibbon

would follow the free market.

Lost rating revenue would be restored to the local authority out of a Government Environment Conservation Fund. Thus the people would bear the burden of safeguarding fine environment in the national interest. But remitted rates would be restored only in proportion to that part of the Scheduled Environment in its area that had been placed under adequate planning protection. Here would be another incentive for the local authority to act with promptness and liberality.

There is no question here of 'nationalising' the development value, as was the philosophy of Harold Wilson's Community Land Act of 1973. Here in distinction, no-one would be harvesting the development value, for it would be eliminated in favour of conservation and enjoyment.

Such land should not be liable for rates. Rating at present has two main functions: the first is the financing of local works and services; second, the accumulating sum taken in rates is the anticipatory levy on the prospect of capital gain from development. Its peculiarity is in being extracted in advance from the landowners at large, for a gain that many might not wish to realise, rather than levied afterwards upon those that have actually recouped a gain.

Will Voluntarism Work?

I would hope these incentives would bring an appreciable flow of Scheduled Environment into protection voluntarily. It would seem so desirable to do this by free consent, that I would prefer to let some be lost, rather than for protection to be seen as a source of inequitable or bureaucratic threat.

But other questions of equity will also arise from owners unwilling to enter into covenants. Should the willing be left to carry the whole burden? What could be done to bring uncovenanted environment under similar protection?

Cases might also arise where trustee or corporate owners lack the power to encumber the land, or charge it with a covenant.

Here a useful procedure could be what I have previously advocated as PPOS (permanent private open space). The owner would permanently keep the title, inalienable by sale or disposable by will. Existing use would generally remain, but with the requirement — as under a covenant — that the environment would not be detrimentally altered. Such a zoning would be applied at the instance of a local (= district planning) authority, or a regional, or maritime authority. It would not come under inspection with each five yearly scheme review, but would be 'permanent' so far as permanence is possible in planning.

A final sort of rating concession might follow where former rating had already been heavy. Here, with covenanted land, some rate restoration might be made, not in cash, but by suitable issue of interest-bearing Government stock, representing in today's values, the accumulated sum paid in rates over — say — the 20 years past.

These measures I have been suggesting could be among the policies our Society could be thinking through and advocating. They would achieve some regard for the long term and crisis action would no longer be necessary as each new piece of threatened environment was brought to notice. Above all, fine environment, so far as possible, would be left in private hands. Then might it be said of us, that Royal Forest and Bird has given signs of caring about the land and whole habitats, not birds and specimen patches alone. And as it was written of William Rolleston, pioneer of Mt Algidus: "He has had the noble audacity to advocate principles which if not at the present time altogether popular are entirely just."

THIS BIRD NEEDS PROTECTION



Photo by courtesy of Wildlife Service

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From the mid-70s onwards, frequent concern has been expressed that probably the rarest penguin in the world — the yellow-eyed penguin — has been gradually disappearing from its traditional nesting grounds on the Otago Peninsula. In order to gauge the accuracy of this feeling, a dedicated group of Otago people has been doing its arithmetic. John Darby, vertebrate zoologist of the Otago Museum, reports on the findings of this penguin census.

Since October 1981, dozens of Otago and Southland people from all walks of life have spent a total of 846 hours sitting motionless gazing out to sea. From windswept, often wet, and mostly cold vantage points on the Otago and Southland coasts they have patiently counted yellow-eyed penguins as they come ashore. During this time 5,014 birds have been recorded leaving the sea, of which 473 were juveniles. Three hundred and sixty nine birds were recorded entering the sea, mostly from midday onwards. In fact penguins have been counted every hour of the day and two nights were spent counting them with the aid of a zeniscope.

So why this counting exercise on the grand scale? The fact is that for some time now people have believed the penguin is disappearing, particularly on the Otago Peninsula. Geoff Harrow, writing in *Notornis* in 1971, suggested that one of the reasons why the yellow-eyed penguin had established on Banks Peninsula was because humans were disturbing them on the Otago Peninsula.

In 1981 the Otago Peninsula Trust sponsored a penguin seminar which brought together interested groups to discuss the problem. It was this seminar that acted as the catalyst for the present programme. Counting was not thought at the time to be an activity that would become a major part of the programme, but it was soon to become almost a pastime in local circles.

Anti-social penguins

The yellow-eyed penguin is a secretive nester. It does not fit into the traditional penguin image of hundreds of squawking birds crowding together with two or three nests per metre. In fact, their nesting strategy appears to be that the further they can get away from their next door neighbours during the breeding season, the better. We have now followed nearly 500 nests over the last four years and only on three occasions have we found birds nesting within sight of their next door neighbour. Of those six nests only one has succeeded and only one bird has returned to its original nest site.

A little more than half of the birds use the same nest site from year to year. Frequently they alternate between two and some may even select a different nest site each year. Perhaps it was because many people considered that penguins use the same nest site from year to year that they thought birds were disappearing from the Peninsula. While many nests are fairly easy to find, most of them are not. In our first year it took us an average of 1.4 hours, often clambering through very difficult terrain, to find each nest.

Birds use almost every type of cover available: from traditional coastal forest habitat to flax; nettle; hebe; scrub; tussock; under logs and rocks. All nests have two things in common. Firstly all have a back to them — the base of flax plant is highly favoured — and secondly, the nesting pair must not be able to see the adjacent pair of birds. We have found nests nearly 600 metres inland and only time will tell us how far penguins will go into forests to nest; from the signs we have found, probably at least one kilometre. All of this suggests that nests are not easy to find, especially if you are trying to find every single one.

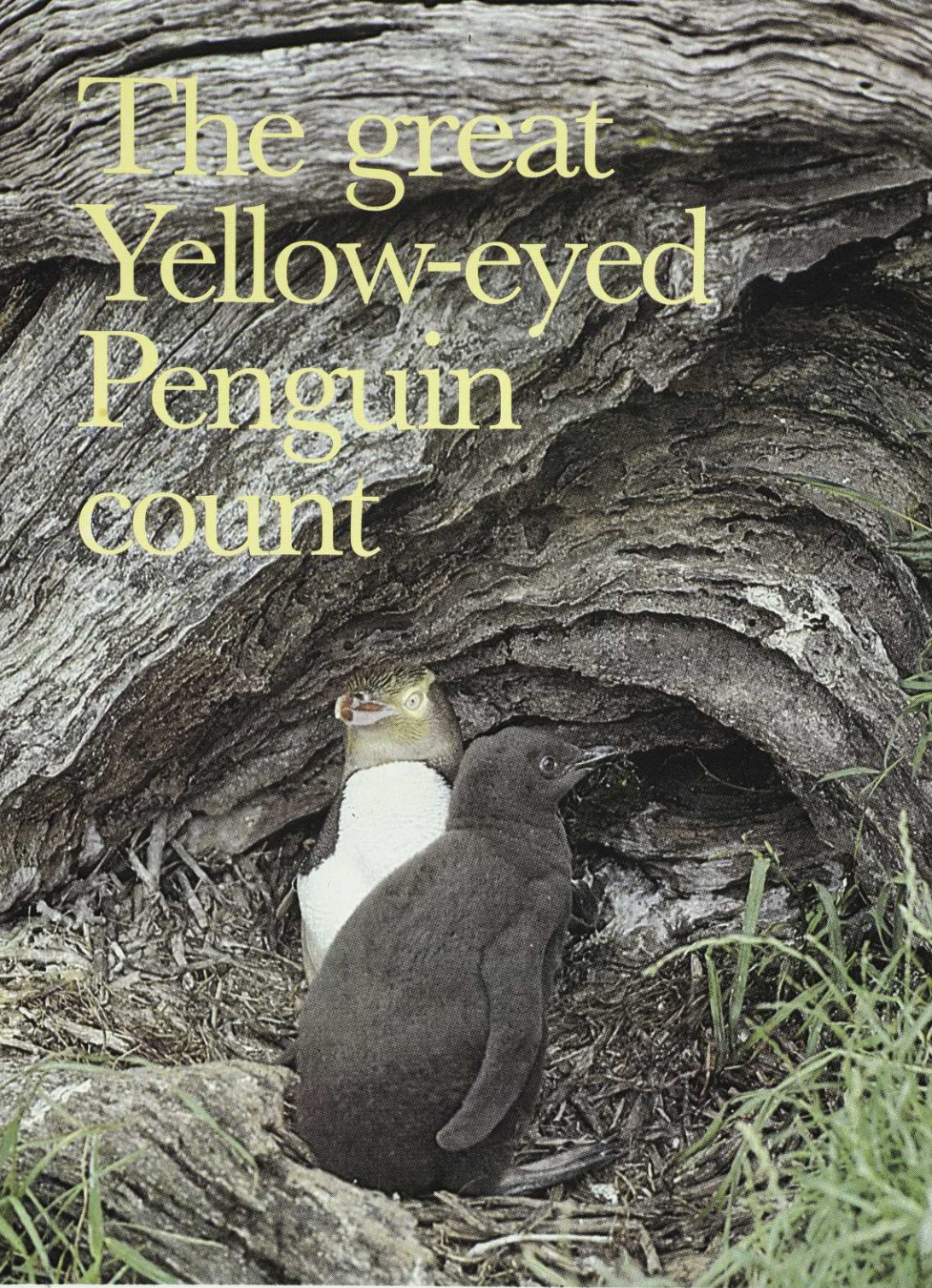
An early suggestion for carrying out the penguin census was simply to count

their footprints in the sandy shores that they are supposed to favour. Two disadvantages soon showed: counting footprints makes no distinction between adult and juvenile birds and secondly, there is no evidence whatsoever (despite popular belief) that the yellow-eyed penguins prefer sandy shores. In fact we have found more penguin colonies near rocky shores than we have sandy ones. The remaining option left was to sit down and count penguins at different stages of their annual cycle. It is reasonable to assume that the number of birds nesting in an area bears some relationship to the number of birds that cross the beach into the breeding area. Counting penguins this way allowed us to make the impor-



Flax planting by many voluntary organisations such as Forest and Bird has helped to provide a greater area of nesting grounds for the yellow-eyed penguin.

The great Yellow-eyed Penguin count



tant distinction between adults (potential breeders) and juveniles (definitely not breeders). And that is why we have counted so many penguins for such a long time.

More males than females

The late Dr Lance Richdale elucidated much of our knowledge of the breeding and behaviour of the yellow-eyed penguin. About half the females may breed at two years of age, almost all by the age of three. A few males only will breed as two-year-olds and not until the males are five to six-year-old do they become established breeders. There is, according to Richdale, an imbalance of sexes with more males than females, hence the difference in the breeding age for the two sexes. Eggs, nearly always two, are almost equally sized and are laid any time from mid-September to early October. Incubation lasts for six weeks and this is shared equally by the sexes although not always.

Most eggs are hatched by the first two weeks of November and from hatching

one parent will always be in attendance at the nest for the first six weeks. This is called the guard stage. From mid-December onwards both adults daily return to the sea to catch sufficient food for the needs of two chicks. I have found that in years in which a plentiful supply of food is available, the guard stage may be extended by up to a month and in pairs that have a single chick the guard stage may continue until the chick fledges at the end of February.

In the rare occasions that one of the pair of adults dies after the beginning of the post-guard stage, a single parent is capable of fledging a chick. From the 90 gram chick hatched in November, most will leave for the sea weighing between 5 to 6 kilograms. Juvenile birds do not have the yellow crown completely around their head until they undergo their second* moult in February of the following year. Juveniles appear to go north for their first three months, possibly spending all their time at sea. The few records we have from northern areas are nearly always of dead birds.

The most important requirement for nests is that they have a back to them and that neighbouring nesting birds are unable to see each other.

Birds moult in February to early April. They are generally very miserable and should be left alone.



Ferrets the felons

In our first year of study, we located a total of 90 nests on the Otago Peninsula, and given the effort taken to locate them it seemed reasonable to follow them through. Once chicks started to hatch, a disconcerting pattern appeared in which penguins in some areas managed to fledge almost all the chicks that had been hatched, while those in other areas suffered a high loss of chicks. Not until the second year of our study were we to find sufficient evidence to identify the culprit. Ferrets were creating mayhem in some breeding colonies and in one all 14 chicks were lost. In another, 12 out of 13 were lost before we trapped the felon. Chicks appear to be taken by both ferrets and cats from a few days of age up to five to six weeks of age. Most breeding colonies on the Otago Peninsula appear to have resident ferrets and feral cats, and the conservative estimate for chicks lost in this area to predation is 22%.

Our final conclusion on the welfare of this penguin on the Peninsula is that it appears to be more than holding its own and that while numbers are down in some areas they have increased in others. Population numbers appear to be limited by the availability of suitable habitat rather than other factors, although clearly predation of chicks, if it were to get out of hand, could be serious. How serious could only be determined by firstly testing the level of predation in areas to the north and south of Otago, and secondly by making a population estimate for the species throughout its range.

The yellow-eyed penguin has an unusual distribution. The northernmost significant breeding area is the Otago Peninsula, although there are a few minor breeding areas to the north of the

Peninsula up to Banks Peninsula. The next most significant aggregation of these birds is centred on the Tautuku Peninsula with their northern limit at the Nuggets and their southern limit on the mainland at Slope Point in Southland. They are found on Stewart Island and its small offshore islands, on Campbell Island and the Auckland Islands but are absent from the Snares, Antipodes and Bounty Islands.

We shall never know what the population of the yellow-eyed penguin once was. Richdale considered that they bred in their thousands on the Otago Peninsula. It is sobering to realise that nowhere on the east coast of the South Island is there more than a few metres of unmodified coastal forest which is inhabited by penguins. Of even more concern is the fact that there is barely half a kilometre of coastal forest, modified or not, that still retains a colony of breeding penguins.

Greatest single threat

A comparison of some colony sizes in the Catlins area with Richdale's early figures

traordinary work on this species, he provided no formula for conservation other than his dedication and enthusiasm for this penguin. Many aspects of the bird's biology need urgent attention. Habitat type determines the density of birds, but where the density is high, populations tend to be subject to high levels of predation. There are 38 known breeding areas on the South Island. On average there are 1.6 pairs per hectare on the mainland. Of the 323 hectares with breeding penguins, only 137 hectares are theoretically afforded any sort of protection on the South Island, but if we exclude the one offshore island population adjacent to the mainland (Green Island off the Otago Peninsula) only 14 hectares providing protection for 32 pairs of birds are adequately protected. By adequate protection I mean here the **TOTAL** exclusion of farm stock.

Rarest of world's penguins

There are a number of compelling reasons why stock should be excluded from penguin breeding areas. The chief



Penguins co-exist very uneasily with farmstock.
All photos John Darby

A pair of chicks four months old. They go to sea for the first time at between 16 to 18 weeks old. It appears that they may spend all their first three months at sea and to the north of where they were born.



Antarctic and Stewart Island, this is not the case on the east coast of the South Island where even now, small remaining pockets of forest are rapidly being brought under the plough. While it is heartening that a few land owners have already taken the initiative to protect small colonies of penguins on their land, the total number of areas adequately protected on the South Island is still less than six.

In New Zealand we take the presence of this bird for granted. It is easy to forget that there is no other penguin quite like it anywhere else in the world; it is only found in New Zealand; it is the only member of its genus and is also the rarest of the world's penguins. It surely deserves more consideration for the protection of its nesting grounds than it presently receives.

suggests losses of up to 60% in some areas. It is not that the penguins have deserted or moved away, it is their habitat that has been moved. And it is this loss of habitat to farming and recreation that must remain the greatest single threat to them.

Stewart Island is probably the main stronghold of this species. But here too, as on the main Auckland Island, Campbell Island and the South Island, it shares its nesting grounds with feral cats.

What lies in the future of this bird? Its population is estimated at 1200 to 1800 pairs throughout its range. About 550 pairs are to be found on the mainland, about half of those are on the Otago Peninsula. Despite Dr Richdale's ex-

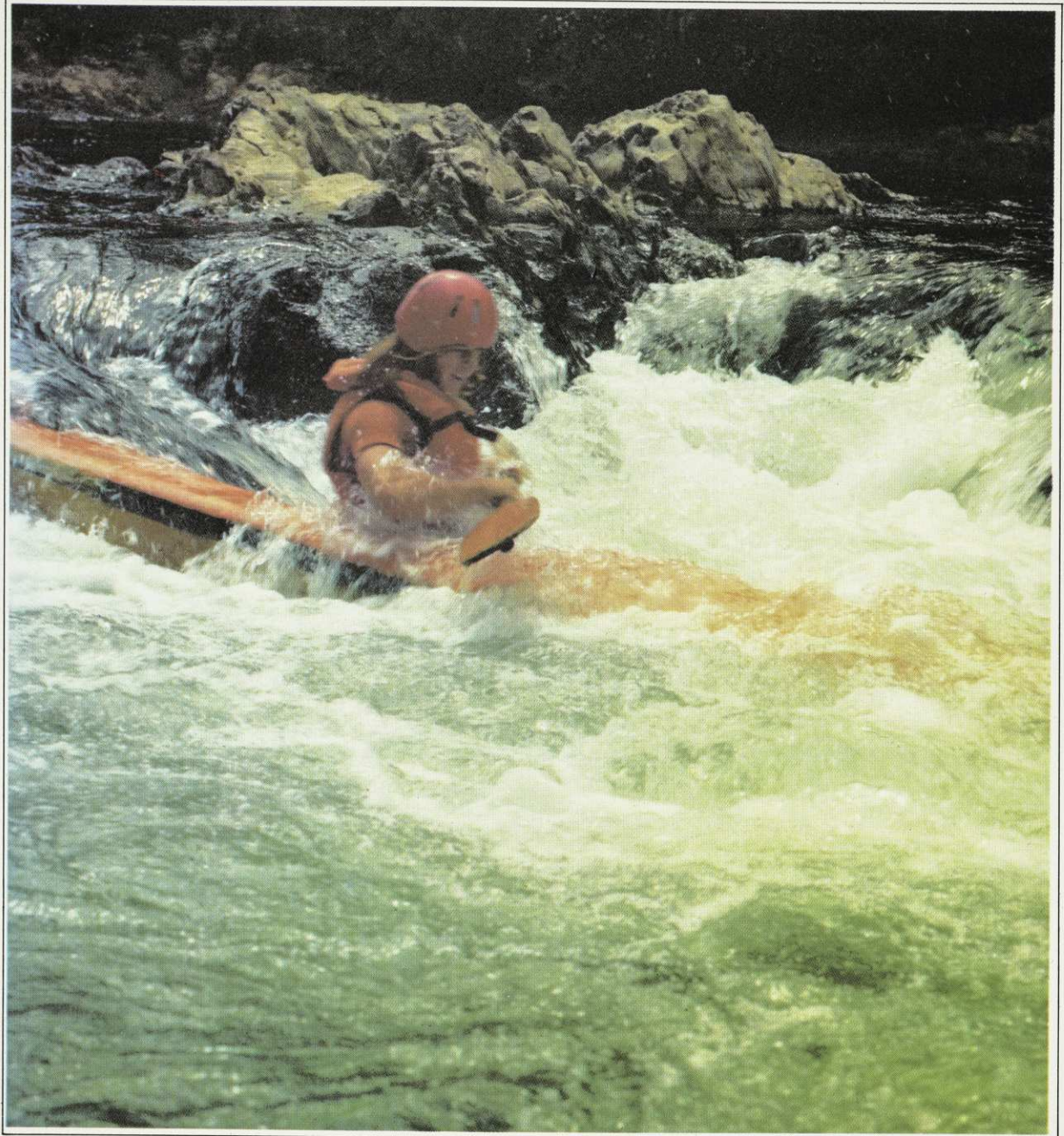
one is the continued loss or reduction in the integrity of the habitat. The second and no less important reason is that wherever stock are found so are the ubiquitous rabbit and hare. I believe that these animals provide the dietary mainstay for ferrets and cats for most of the year; penguin chicks in season are a bonus. If we can reduce the rabbits and hares in areas adjacent to penguin breeding areas then we can probably go some considerable distance towards removing a significant threat to the survival of penguin chicks.

But the main problem lies in the protection of what little remains of this penguin's habitat. While this appears to be secure on the islands of the sub-

Acknowledgements

I am grateful to the considerable number of people who have helped with the many census counts that have been made, and to all the farmers who have so willingly provided access to their properties to enable us to make them. The Wildlife Service, the Environmental Council, the Otago and Combined South Island Acclimatisation Societies, Mobil, the Department of Lands and Survey, the Otago Peninsula Trust and the Otago Branch of the Royal Society have all provided financial support. For this I am grateful.

SHELL IN NEW ZEALAND



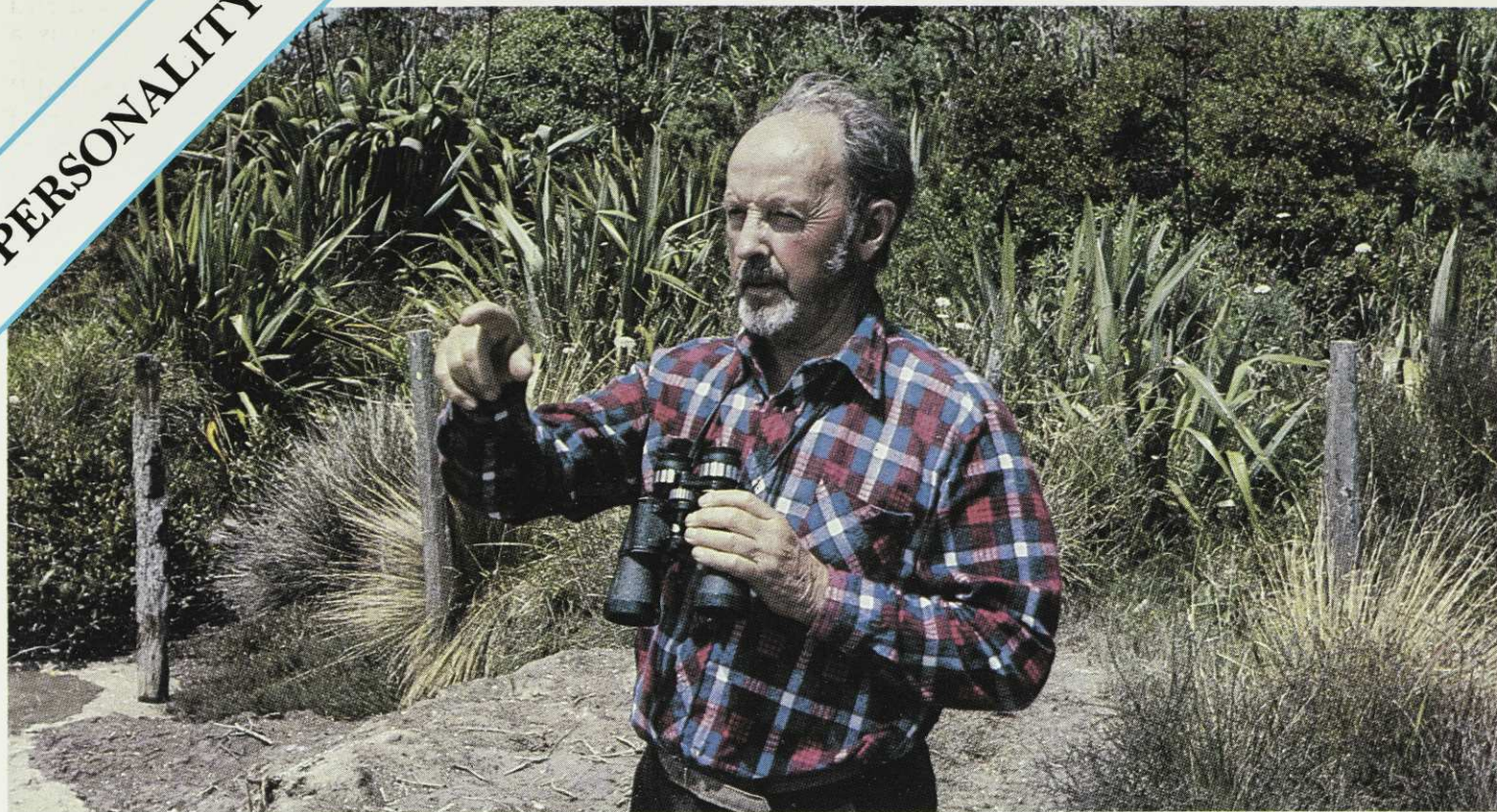
Shell continues its support of youth groups, including the Outward Bound School at Anakiwa.

Business must achieve its economic objectives in order to survive and to grow; but its survival is dependent on its acceptability to society and its environment. Shell, recognising its responsibilities as a corporate citizen within the community,

continues to expand its contribution in areas devoted to; preserving the environment, fostering youth development in sports and the performing arts, in all areas that develop the talents and resources of New Zealand for the benefit of all New Zealanders.

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A life of islands and adventure

by Gerard Hutching

Remote, bird-haunted islands have always attracted Ronald Lockley; as a child he was profoundly influenced by such books as *Robinson Crusoe*, *Coral Island* and *The Swiss Family Robinson*. Skokholm Island, of the south-west coast of his native Wales, may not have been a Pacific paradise but it held sufficient romantic adventure for him to pioneer there for 12 years until the Second World War broke out.

These days the 81-year-old Lockley is content to gaze out from his Auckland "House Above the Sea" to nearby Rangitoto, Waiheke, Motutapu, Motuihe, Motukorea and more distant Great Barrier Island in the Hauraki Gulf. At an age when most people's horizons have closed in, he continues to have a boyhood longing: "I still dream of retiring to live on a remote, unspoilt island, but know that at my age I probably won't," he says with regret.

Despite that, at 75 he took a pack on his back and lived with Eskimoes in the Canadian Arctic. Since then he has visited Antarctica twice (stopping off at Scott Base, the Auckland, Campbell, Macquarie and Snares Islands) and in 1982 landed on islands in the pack ice north of Spitzbergen where he encountered polar bears, walruses and Arctic sea birds. A year later he cruised to Tierra del Fuego, the Falklands, South Georgia and the islands of the Weddell Sea.

It is the naturalist's abiding fascination with nature that has inspired these journeys to remote parts — coupled with a love of adventure and inability to live a humdrum existence that is the lot of most.

At 75 he took a pack on his back and lived with Eskimoes in the Canadian Arctic.

As a young man he wrote: "Most men spend their whole lives earning their daily bread in the bowels of darkness — for it does not matter whether it is a city office, a cowhouse or coalmine, they are all dark enough."

The patterns of his life were set early; well before he had heard of Henry David Thoreau he had discovered the truth of the statement: "I have never found the companion that was so companionable as solitude," although with four sisters and a brother he was never short of human contact.

From a young age, inspired by his literary heroes, he decided to pursue the career of a lone naturalist. He was "mentally stunned" upon reading Thoreau's *Walden, or Life in the Woods*, a book which became his bible, expressing all his youthful ideas and wishes in exquisite prose.

Longing to live like Crusoe

However, it would be some time before Lockley could live in quiet contemplation on an uninhabited island. A determined mother with thoughts of security persuaded him, on leaving school, to start a small holding in Monmouthshire.

"I was forever longing to get away, like most young men, and live a Crusoe life on a remote island, especially one which might be full of birds." In 1927 he discovered and settled on Skokholm — its little farm was derelict, occupied by thousands of seabirds (10,000 pairs of muttonbirds or shearwaters, 500 of storm petrels, 20,000 puffins and many others).

"Here I established the first coastal observatory and ringing station in Britain in 1933. After the war it was reopened and you can still stay there. I was able to celebrate its 50th anniversary in 1983 by visiting the island."

Lockley was also responsible for establishing bird observatories elsewhere on British coasts, including the Channel Islands. On coming to live in New Zealand he became co-founder of this country's first, on the Firth of Thames, managed by the Miranda Naturalists Trust.

Among the studies he carried out on Skokholm were long distance homing experiments with sea birds, sending shear-

Ronald Lockley, at 81, still dreams of far-off, remote worlds.

Photo: G. Hutching

waters breeding on the island to Venice, Boston and elsewhere. They returned at amazing speeds to their mates and burrows on Skokholm.

One such occasion took him to Ireland, 60 miles across the sea from Skokholm. He took the train west to Shannon, where he planned to release a shearwater.

"When you release a sea bird, it's best to drop it into the water from a height so as to give it space to gather its wings. I planned to release it from Shannon Bridge, which is a tremendous high bridge above the sea like the one across the Waitemata.

"I had this shearwater beside me in the train compartment. It was very restless, making squawking noises, so I opened the top of its box to give it air. Presently a guard came along and said 'Phwat have you got there, sir?' Ah, I said, just a shearwater. 'And phwat would you be doin' with him?' Just a homing experiment, I said, explaining that when I got to Limerick I was going to walk back to the Shannon Bridge and drop it. 'Begorra, there'll be no need for the trouble to be walking so far, sir. Begorra, I shall stop the train in the middle of the bridge for thee.'

"To my amazement and joy he stopped this train in the middle of the bridge, with people staring out of the windows. I had to warn him I couldn't throw the bird direct from the train, it might hit the steel of the bridge. He said not to worry, I could get down from the train and do the job properly. How wonderful and typically Irish," Lockley recounts the tale with pleasure.

Fighting for wildlife

His encounters with New Zealand officials haven't run as smoothly, however, especially over the battle to save his beloved Tahuna Torea Reserve from becoming a rubbish tip. Situated just below his Tamaki Estuary home, where he has lived since settling in New Zealand in 1972, this open space was threatened ten years ago. Becoming honorary secretary of the local protection society, Lockley mobilised resistance to fight the tip, enlisting the help of the Forest and Bird Society, the university and other conservation bodies.

Today the reserve is a peaceful area much visited by those who wish to contemplate the rich wildlife — the godwits, knots, torea, stilts, terns, herons and kingfishers. By an ironic twist, in 1974 the Tamaki Estuary Protection Society was unexpectedly awarded a \$1500 prize for the best example in New Zealand that year of environmental improvement — recognition that the city council, once eager to turn the reserve into a dump, are now proud of, boasting of "this fine asset, a wilderness within a city."

Lockley's first visit to New Zealand was in 1962, when he had an immediate introduction into the unfortunate fate of

some of this country's endangered birds — he was taken to camp in Fiordland's Notornis Valley and shown what the Wildlife Service was doing for the takahe. The general state of environmental awareness was not high at the time, he recalls.

"The Government seemed totally uninterested in wildlife, despite pioneers like Sir Robert Falla, Sir Charles Fleming and the Royal Forest and Bird Protection Society, which had a smaller membership then.

The fact that Forest and Bird has 40,000 members is a triumph when you consider there are only three million people in New Zealand.

"I hadn't any plan to live in New Zealand then until our children began to produce some grandchildren here. I was delighted with the pristine beauty of New Zealand, and the wonderful welcome when you come here — one is accepted as part of a big happy family. The country people are splendid, with no nonsense about a stratified society as in Britain. You are taken on your merits, and it's 'shake hands and get on with the job,' which suits me very much," he says.

The Wildlife Service comes in for his praise because of the willingness of its staff to get stuck into its task.

"For the miserable amount of finance allotted by our Government, the Service does absolute wonders. Its dedicated field officers and scientists have got tremendous determination and flair to go places and do things — they're not office bound. Write a letter to the Wildlife and you will be lucky to get a reply in a month — they are all working outdoors," he says.

Remarkable achievement

Pressure groups such as Forest and Bird also have an enormous role to play in making politicians and officials aware of the need for conservation, he emphasises. Lockley has been an active member of the Society, becoming chairman of the Auckland branch in 1977. He notes with satisfaction that nationwide membership has doubled over the past decade.

"I think it's one of the most remarkable achievements of any conservation organisation in the world. I used to be a council member of the Royal Society for the Protection of Birds in Britain, which now has about half a million

members. The fact that Forest and Bird has more than 40,000 members is a triumph when you consider there are only three million people in New Zealand."

His life habit of keeping a daily diary of nature observations has helped Lockley to produce more than 50 books on outdoor subjects. One of these, *The Private Life of the Rabbit*, was the pioneering study acknowledged by Richard Adams as the major source for *Watership Down*.

His first New Zealand book, *Man Against Nature*, was a *cri du coeur* for conservation. At all times a despair for the future informs his writing — in his eyes humankind deserves less sympathy than the animals.

The House Above the Sea contains the following passage: "There is a deep, underlying dread today that the fear-ridden warlords of the Kremlin, Pentagon and Peking, stockpiling more and more highly sophisticated long range weaponry, will one day soon (purposely or by accident) pull the trigger on a chain atomic blast that will wipe out our decadent urban civilisation, and most other human life on the land."

Lockley sees examples for man in the "wise cetaceans" — whales and dolphins — which do not pollute or over-populate their environment. He believes they are wiser than humans, with their larger brains and capacities for the "higher emotions" supposedly only present in humans.

The naturalist continues to lead a busy and productive life. Rising at between four and five each day, he writes, then depending on the weather and state of the tide might nature watch in the Tahuna Torea Reserve. High water is the best time for waders, here provided with special mud islands on which they can rest and sleep, safe from humans.

Reading has always been his special relaxation. Like many dreamers — he says he is an escapist — Lockley did not enjoy the routine of school, failing matriculation and early abandoning high school as a result. His late discovery of good books was an exciting revelation: "I seemed to sit on a stage with an audience of a hundred authors of genius shouting at me, demanding to be read. Read my philosophy first! Read my theory! Read my economy! Read my Utopia! Read my poetry! Read my idealism! Read my realism!" (*Myself When Young*).

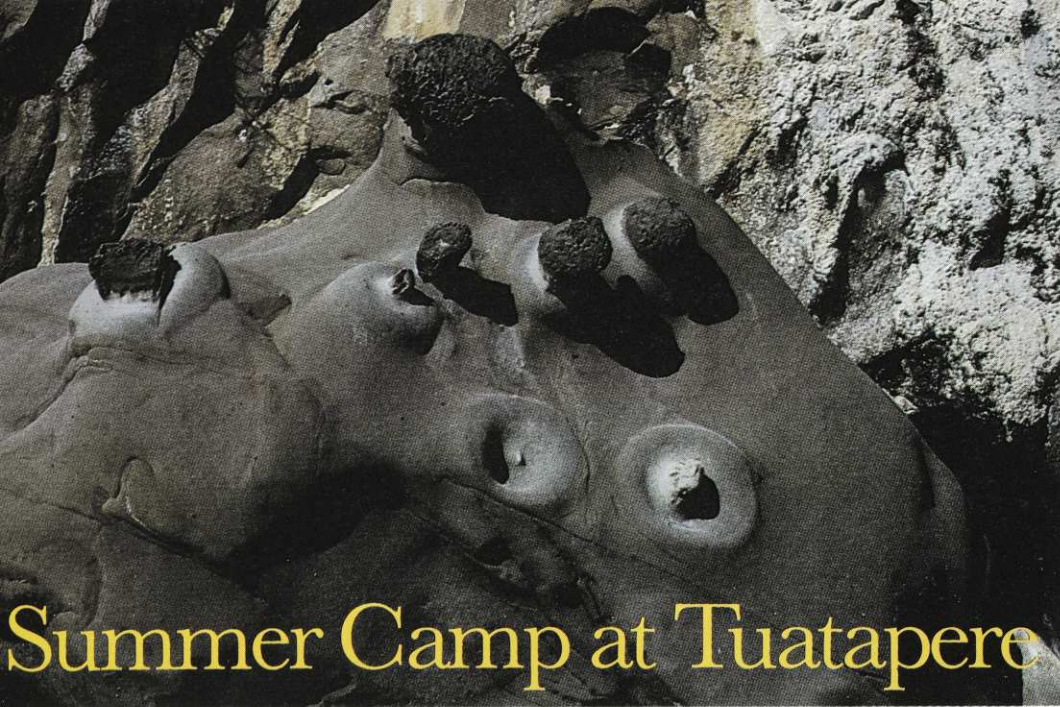
At present he is reading Tolstoy's *War and Peace*, "probably for the twelfth time."

Like his beloved shearwaters, in the autumn of his years Lockley has migrated to warmer climes. After living in beautiful, wet, windy Wales for 60 years, he says he enjoys the constant sunshine and warm climate of New Zealand, and the equally warm welcome of New Zealanders. "I can't think of a better environment for retirement at my age," he says.



Lockley in the Tahuna Torea Reserve, just below his Tamaki Estuary home.

Photo: G. Hutching



Summer Camp at Tuatapere

Unusual rock sculpture on New Zealand's "premier coastal walk" — the track to Port Craig.

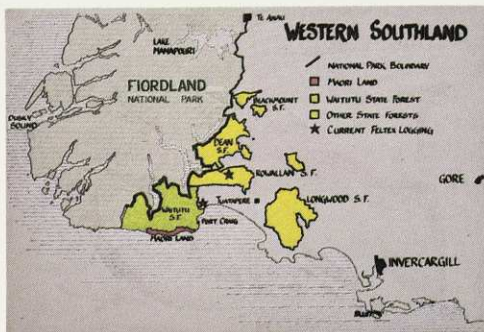
Photo: G. Hutching

Waitutu Forest, the controversial wilderness that everyone wants but no one has yet taken responsibility for, was the main attraction for 60 environmentalists who gathered at Tuatapere, the "timber capital of Southland," in early January for a Forest and Bird/NFAC summer camp. In actual fact, we only managed to skirt the fringe of this famous forest; David Bellamy may be able to fly in and jet boat down river, but for the rest of us it was satisfying enough to gaze across the forest, and to be assured it is still there, much as it has been for thousands of years.

Tuatapere itself provided a quiet setting — the annual New Zealand holiday period lulls even the giants of production. The domination of Feltex and the timber industry in the town seems a figment of the imagination of forest owners and sawmillers. The growing town is a service centre for the prosperous farming district, with a big future in exotic forestry and excellent prospects as a tourist centre.

Doubtful weather is no encouragement to those embarking on a day trip to the Hump for a view over Waitutu, when low cloud obscures the panorama and makes for unpleasant conditions on the tops. So a poor outlook early in the week caused us to postpone the Hump trip, until one day dawned fine and clear, and we set out.

Waitutu's attractiveness extends from the west, eastward past the ridge, and reaches out to the visitor with increasing appeal the closer one gets. The cliffs for which Bluecliffs Beach are named are full of fossils, which for our licensed fossil collector were an endless source of fascina-



The view from the Hump looking across to Lake Hauroko.

tion. Low forest close to the beach makes way for large forest trees such as the southern rata, and the colour and finery of the tui, bellbird and tomtit are set against the bright red flowering of mistletoe, perched in a solid mass above the road.

A whole new perspective on visiting forests is gained when one uses logging roads. The Te Wae Maori land presents a wasteland, logged out and left, accentuating the beauty of the forest that remains. A long slog uphill for two or three hours leads through fine silver beech forest and patches of bog pine forest to the Hump Hut, and thence to the top from where one can view the mountains of Fiordland to the north, the ocean to the south, and the rivers and forests of Waitutu in between.

Lake Hauroko can also be seen, on the very edge of the rugged Fiordland landscape. A day trip to this allowed us to take in a boat trip to the outlet of the Wairaurahiri River.

Looking from the Hump to the east are the state forests — Rowallan, Dean and Longwood. Here we observed the Forest Service experimental beech management areas, looked at giant totaras, walked beside rivers and glades, and saw the fringes of the enormous exotic forests.

Ten kilometres from Tuatapere is Clifden Ranger Station, from where rangers are responsible for the southern section of Fiordland National Park. Ranger Russell Montgomery spoke to us about the values of the park and about projects for the future, which should include Waitutu. As a sideline, he guided us through the famous Clifden Caves. These are directly accessible from the road, and a large group of us armed with torches ventured into glowworm grottoes, through narrow gaps, up and down rocky steps, past stalactites and stalagmites.

Mark Sutton of the Acclimatisation Society addressed the camp on wetland conservation, and later took us to Redcliffs, a showpiece for the Society. This is a created wetland where a small dam, planting and careful management have enhanced a swamp so that now it is a valuable habitat for a wide range of game, fish and non-game species.

The track to Port Craig and further on around the coast has been described as "without a doubt our premier coastal walk" by Federated Mountain Clubs, and the keener members of the camp made sure of testing the truth of this claim.

Those who were fast on their feet managed to see the viaducts and remains of the Port Craig enterprise, as well as to explore Sand Hill Point and the beaches and forest on the fringe of Waitutu. The most attractive route to Waitutu is also the proposed route of yet another logging road — right through historic remains and regenerating or virgin forest.

What did conservation gain from our camp? Firstly, 60 people got to see some of the things that western Southland has to offer, although in this case their appetite could have only been whetted, so much more was there to see.

Secondly, it's important to note that the camp was a joint Forest and Bird/NFAC effort. It was not the first of its kind, as Easter gatherings have always been this way. But at Tuatapere it was impossible to say which group had organised the camp, because in Dunedin most active conservationists are members of both organisations, and our branches continue to cry out for more co-operation.

by Carolyn Munro, Otago Councillor

Karamea's Swampy Tarn deserves protection

Forest and Bird's newest group at Karamea are fighting to save virgin forest around a tranquil lake near the Karamea end of the famous Wangapeka Track. Swampy Tarn and the kahikatea/rimu in its catchment are in the North-West Nelson State Forest Park. That hasn't stopped this area being zoned for logging in the 1981 Buller Management Plan. Clearfelling of podocarps has progressed from the end of Wangapeka track right up to the edge of the Swampy Tarn catchment.

Many Karamea people support efforts to protect the Swampy Tarn catchment and the now famous Oparara Valley from logging. These are key natural areas in the heart of New Zealand's largest Forest Park and if they are lost to logging it will reveal once and for all the inappropriateness of the "Park" title.

Forest Service, Nelson have promised to "look into" this issue.

New Zealand Forest Products Mamaku reserve decision shows sensitivity to public concerns

Forest and Bird members throughout the Bay of Plenty-Rotorua region have welcomed the decision to reserve 1700 hectares of native forest near the Waipari-Kuhatahi stream in Mamaku State Forest near Rotorua. The Government recently announced that New Zealand Forest Products had agreed to relinquish its 1972 exotic conversion lease over 1700 hectares of Mamaku State Forest to allow the area to become an ecological reserve. This is a credit to the company's sensitivity to public concern.

Forest Products made the decision based on recommendations contained in 1983 reports by Forest and Bird on botanical values of the area and by Wildlife Service. Both these studies considered the area to be of major ecological importance. The forest contains kokako and other native wildlife. It also contains a representative sequence of the forested western fall of the Mamaku plateau, a rare stand of black beech and virgin rimu/pukatea forest and unusual hard beech forests.

Less welcome however is the announcement by Government that Forest Products have agreed to relinquish only 27 hectares of their lease over the nearby Puwhenua State Forest. A much bigger area of this forest should have been excluded from the lease because the whole area is a key kokako forest. It has all been ranked by Wildlife Service as outstanding wildlife habitat and unprotected

forest is now destined for exotic conversion.

New Zealand's first lizard reserve

On 10 March, Forest and Bird's National Executive inspected New Zealand's first lizard reserve at Pukerua Bay, Wellington and have since congratulated Internal Affairs Minister, Peter Tapsell and his Wildlife Service on their efforts and progress in lizard conservation. Although our best known reptile, the tuatara, has been legally protected since 1895, no native lizards received similar status until 1981.

There are 38 recognised species of lizards in New Zealand which divide into two scientific families; 16 species of geckos and 22 species of skinks. *All but the four common species (two skinks, two geckos) are now legally protected and must not be collected in the wild.* Unfortunately eleven species of lizard are classified in the *New Zealand Red Data Book of Endangered Species* — some of which featured in last year's Post Office endangered species stamp series.

Since assuming responsibility for lizards in 1981, Wildlife Service have appointed two staff to work full time on lizard conservation and have initiated studies to determine the conservation status of many of the rare or poorly known lizards such as the Great Barrier skink, our largest skink which grows to over 300 mm in length and the Otago and Grand skinks which are nearly as large and occur in the eastern South Island tussock country. However no trace has yet been found of the monster lizard, known from a single specimen, 600 mm long collected in the 19th century. Searches for it in inland Taranaki have so far

proved unsuccessful.

At Pukerua Bay, Wildlife Service has purchased eight hectares of steep coastal shrubland and scree slopes, home to five lizard species including the very rare Whitaker's skink *Cyclodina whitakeri*, a nocturnal species known to live only at Pukerua Bay and on two islands near the Coromandel Peninsula. Native coastal vegetation around Wellington has been devastated by roading, quarrying, housing development, and by fire and heavy grazing. It is hoped now Whitaker's skink can have a secure future.

Nuclear Policy

A nuclear winter, following a nuclear war between the United States and the USSR, would be devastating for survivors, however far they might live from the conflict. A recent fact sheet produced by New Zealand doctors, engineers and scientists showed that the threat of a nuclear war is the number one ecological problem facing the earth, and certainly human beings. "The scientific studies conclude that eventually there might be no human survivors of a nuclear war in the Northern Hemisphere. The complete extinction of our human species cannot be excluded," the document points out.

With this in mind, Forest and Bird's executive resolved at its March meeting that "as ecologists believing in the imminence of the threat to all life posed by the possibility of a nuclear winter, the Executive of the Society opposed nuclear weapons and their presence in New Zealand." This motion now becomes the basis of an executive remit to the June Council meeting to formulate Society policy.

Dr Gerry McSweeney, National Conservation Officer



This year's summer camp at Turangi was a great success, to go by the numbers attending — 110 people spent the days between December 28 and January 6 exploring the Tongariro National Park, the Kaimanawa Ranges, Pureora Forest and other interesting sports in the region. Planned by the Wellington branch, the camp provided a blend of outdoor activities by day and stimulating entertainment in the evening by way of films or guest speakers. Phil Rider, chairman of the Wellington branch, points out that, while Turangi Park Ranger Lee Busby and Forest Service head Dave Wilson might have been somewhat overwhelmed by the thought of adding up to 80 people to their day trips, they responded well to the challenge. Let's hope that this coming summer the scheduled camps will be as well attended.

Jock Lee, former Environment Commission employee and today project co-ordinator of the Triune Resources Ltd proposal to ship fresh water out of Deep Cove, would be offended if anyone questioned whether the cause he is championing is in the best interests of New Zealand. He is, after all, as he often points out, a fifth generation New Zealander.

But despite the patriotic assertions, Lee has been waging an uphill battle trying to convince the people and politicians of his native land that a foreign owned company, wishing to locate one of the country's largest ports in the heart of its finest National Park, does in fact have a concern for what is in the best public interest.

Ever since American company Triune bought the water right to take water from the Deep Cove tailrace of the Manapouri Manapouri power project in 1982, the scheme has been greeted with opposition from environmentalists.

At its recent executive meeting, Forest and Bird formally declared its opposition, although making the point that the Society is not against the concept of exporting water. The motion read "that in the Executive's view, any shipping or industrial activity in Doubtful Sound to do with the export of water which would substantially impinge on the intrinsic qualities of Fiordland National Park, would be unacceptable to the Society."

Triune, in not properly addressing environmental concerns, has shown itself to be its own worse enemy. It has also demonstrated a large public relations problem. Since announcing the proposal, Triune has:

- Failed to admit that bringing five 120,000 tonne tankers into Doubtful Sound a week *might* be environmentally damaging.
- Made exaggerated statements of backing from local people.
- Made unsubstantiated claims that the scheme would be of enormous economic benefit to New Zealand — as much as \$75 million a year.
- Continued to pressure the Government to make a quick decision in order to fulfill impending contracts, claiming that the viability of the scheme would be imperilled if such a decision was not made. However, despite the contracts lapsing, the project is apparently still viable.

Forest and Bird, through one of its members, Captain Phil Robins — a harbour pilot — prepared a scathing submission on the safety aspects of the proposal, and the possible consequences on the delicate environment. Lee has referred to this submission as now out of date, since a new "operations manual" has been drawn up. The public, however, has not been allowed to see this yet.

The Society has also pointed out that Fiordland National Park will probably be struck off its expected listing as a World Heritage Site, described by David Bellamy as one of the cheapest advertisements an area can get.

Tankers

in troubled waters



by Gerard Hutching

Finally, the Society took issue with a report of the Tourist and Publicity Department that tankers in Deep Cove would attract tourists. The report, prepared by another former employee for the Commission for the Environment, Peter Brooks, claimed that tourists would appreciate the ingenuity of New Zealanders in conserving nature and at the same time exploiting natural resources.

The Society's reply was that if tankers were such a tourist drawcard, why was there not a thriving trade at Marsden Point.

While Triune has been attempting to persuade politicians and civil servants to its point of view in Wellington, most of the public debate on the issue has been carried on in Southland. There, letters columns have been running hot with

M

MEMBERSHIP APPLICATION

TO: THE NATIONAL SECRETARY
ROYAL FOREST & BIRD PROTECTION SOCIETY OF NZ INC
P.O. BOX 631, WELLINGTON

YES, I want to join the Royal Forest and Bird Protection Society.
Start my subscription to *Forest and Bird* magazine
immediately.

Please tick the appropriate category:

Subscriptions	1985
<input type="checkbox"/> Junior (under 17 or at school) Age	\$10.00
<input type="checkbox"/> Ordinary	\$20.00
<input type="checkbox"/> Family (Partners with or without children) No. of children under 17	\$20.00
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Forest and Bird believes that the intrusion of a huge port in the centre of Fiordland would destroy the integrity of one of the world's finest national parks. The natural values of the area, exemplified by this photo of sub-alpine beech forest, would be grossly undermined.

Photo: Brian Enting

assertion and counter-assertion from opposers and backers of the scheme.

One of the most vocal opponents is Les Hutchins, managing director of Fiordland Travel, and a member of the National Parks and Reserves Authority, the Guardians of Lakes Manapouri and Te Anau, and the Deep Cove Hostel Committee.

"I don't think anybody has said they don't want water exports. But surely there is an alternative to Deep Cove," he says.

In fact, there are a number of options which Hutchins believes should be investigated. There are an abundance of sites in the Fiordland region which would not pose the same threat to the integrity of the National Park that the Deep Cove proposal would. Furthermore, there are alternative sites elsewhere in New Zealand which could be considered.

At present the Ministry of Works is investigating a number of alternatives to the Deep Cove site; a report on this should be released shortly.

Hotly disputed by some Southlanders is "evidence" gathered by Triune that the people of Manapouri and Te Anau are in favour of the scheme. In fact, the Fiordland branch of the Travel Association has drawn attention to the dangers of a major port to the growing tourist industry in the region. At present it is estimated that tourists bring in approximately \$40 million annually to the region, with this rising to \$80 million by the year 2000. This represents about 900 new jobs in the tourist industry.

Meanwhile, Triune will have to overcome possibly its biggest public relations headache when and if it becomes known overseas that the power station workers' toilets discharge into the Deep Cove tailrace (as reported in the Commission for the Environment's audit). While the pollution is infinitesimal relative to the amount of water pouring out of the tailrace, Triune's advertising could well look over-inflated once the truth is out ("The last of the globe's uncontaminated snow and rain is caught by the Southern Alps, filtered through the many mountain tarns and waterfalls of Fiordland National Park, and decanted in the protected environs of Lakes Manapouri and Te Anau.")

At the time of writing, Triune were predicting that the first shipment would be heading for its destination in June of this year. Like many of its predictions, however, this is another which is certain to be over-optimistic.

Members Special Prices

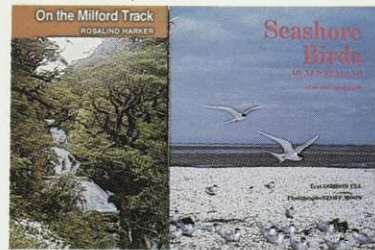
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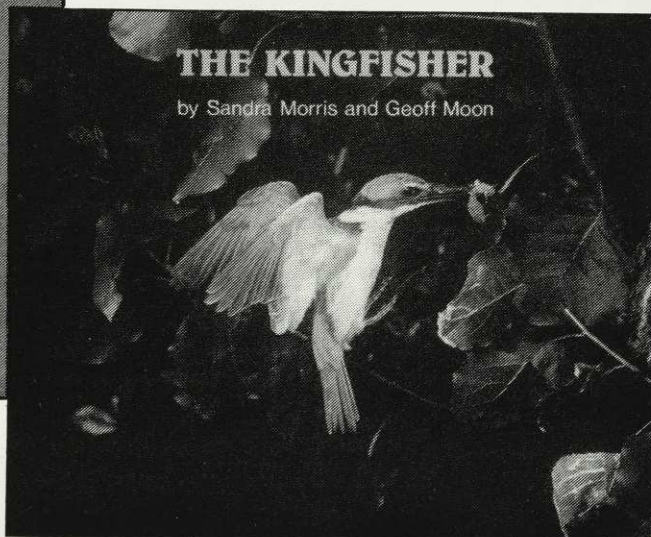
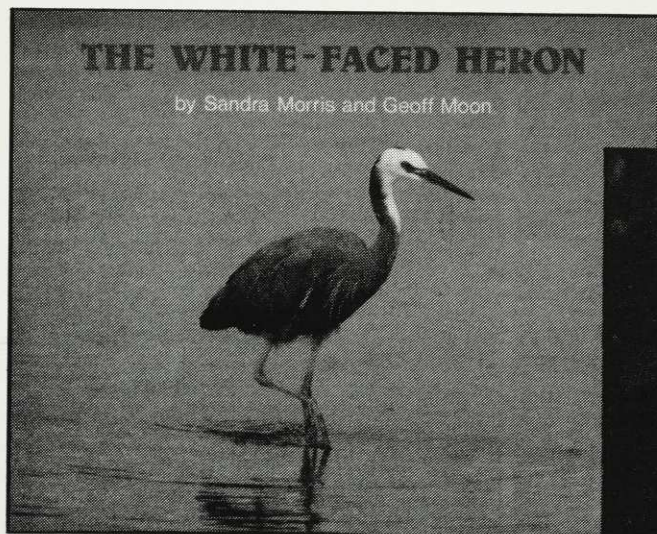
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Quest

Welcome to the first edition of Quest, the section for younger readers of *Forest and Bird*. It is our intention to offer you plenty of interesting things to read and do, and we hope that you will write to us with your ideas and comments. This is *your* section so you must let us know what you think about it. Stories, drawings, useful tips, dreadful jokes — put them on paper and send them in. Who knows? We might even print them! So remember, Quest is for you and we look forward to hearing from you.

Herb Heyman

Editor.

The “Forest and Bird” bird....



Photo: Wildlife Service

Most of us know the tui. Perched on his kowhai branch, this bird is the Society's emblem, a symbol for all the native animals and plants in New Zealand that need our protection. It is one of the fortunate few which has been able to survive the change from the old New Zealand to the new. Huge amounts of the native bush that was its original home have been cleared away to make room for our farms and cities, but up to now it has been able to find enough food to keep going in the small scattered patches that remain.

Tuis belong to the family of birds known as Honeyeaters. This is rather a confusing name as it gives the impression that they raid beehives. Actually, it is not honey, but nectar that they eat, which tuis reach by pushing their narrow downward curved beaks into the flowers and poking out their long pink tongues. A tui tongue is specially equipped with a feather-like tip for lapping up the nectar,

and as well shall see later, the birds perform a valuable service for the flowers by feeding in this way.

Tuis will feed on nectar all the year round, although in the winter it is obviously more difficult to find. With so little native forest left they are now using substitute supplies from our parks and gardens, and they will often travel at least 30km to find a fresh source. You can help tuis by having the right sort of plants in your garden, and over the page you will find a list of these, together with details of how to make a tui feeder to provide sugar water for them as well.

Nectar is not the only thing that tuis eat. In the summer, when they are feeding their young, they will take spiders and insects, and in the autumn they will happily gobble up the fruit from plants like the *coprosma* pictured above. Here again your garden can play a valuable part in helping the tui.

One of the most remarkable things

about the tui is its song. It contains an amazing mixture of warbles, coughs and sneezes, and no two tuis seem to sing alike. The young appear to pick up sounds from their parents and they can be heard 'practising' rather squawkily throughout the autumn. They will add variations of their own which they learn from other birds that they hear around them, and they don't only stick to tuis. In fact, it doesn't even have to be another bird, for tuis have been heard singing away using noises that sound suspiciously like cats and even chainsaws! One would think that neither of those sounds would be exactly top of the pops among the tuis.

[Information about tuis and tui feeders was kindly supplied to Quest by Carol Bergquist. Carol is researching tui behaviour with Auckland University and is special tui consultant for the Auckland Bird Rescue group.]

Bellbird on flax: K. Dolman



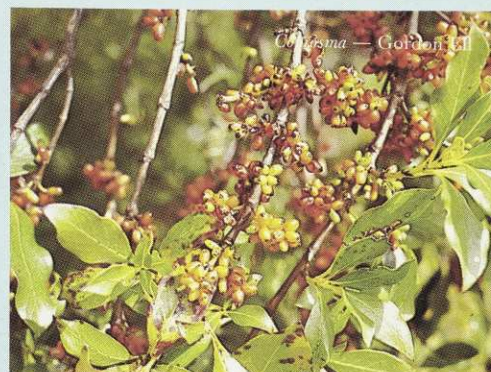
One of the favourite foods of birds like the tui and the bellbird (pictured) is the nectar in the flowering heads of the flax plant. Flax or harakeke, is just one of a number of native flowers especially adapted for pollination by birds of the honeyeater family. Others are kowhai (pictured, top right), puriri and kaka beak — what these flowers share in common is that the nectar is found at their base, and that it takes something with a long beak, like a

tui or bellbird, to bring the nectar out.

The tui also enjoys other foods such as insects and berries. *Coprosma* berries (bottom right) are favoured, along with mahoe, supplejack, maire and karaka berries. The famous bird lover, Sir Walter Buller, reported in the 1870s that “at certain seasons of the year, when its favourite berries are fully ripened, the tui becomes exceedingly fat” — a bit like humans at Christmas perhaps!



Kowhai — Gordon Ell



Coprosma — Gordon Ell

People need plants

Without plants we would all be dead in three minutes.

That's about how long we would live without oxygen. All the oxygen in the air comes from plants — from trees, shrubs, herbs and grass on the land and from algae and tiny phytoplankton (plant plankton) in the sea.

Plants take carbon dioxide out of the air and water from the ground. They use carbon from the carbon dioxide and hydrogen from the water to make carbohydrates — sugar, starch and cellulose. There is a lot of oxygen left over which the plants release into the atmosphere.

Oxygen is a very reactive element which can't exist for very long by itself. It joins together with other elements very easily in a process called oxidation. Fires, rotting vegetation, animals breathing and oxidising minerals take oxygen out of the atmosphere as fast as plants can put it back.

Even if we had some magical or scientific way of supplying ourselves with oxygen we would not last very long without plants. We would starve to death.

All our food comes from plants. Seeds, roots, leaves, flowers and fruit are eaten by people all around the world. And the animals we eat are fed on leaves and seeds.

Cereals are the most important human food. They are made from the seeds of cultivated grasses — wheat, rice, maize,



oats, rye and barley. And these aren't the only seeds we eat — there are peas, nuts and many different kinds of beans.

We also eat leaves like cabbage, puha and spinach, flowers like cauliflower and broccoli, and hundreds of different kinds of fruit. Without the vitamins and minerals they contain we would be very ill.

The meat we eat comes from cattle, sheep, pigs and chickens, and all of these eat grass, green crops, root crops or cereal grains. Even our food fishes eat smaller fish which eat plant plankton.

Many people around the world burn wood to cook their food and to heat their homes in cold weather. Millions of hectares of trees are cut down every year by people who depend on wood for fuel. Most are never replanted.

The world's industries burn millions of tonnes of coal every year as raw

Rata (*Metrosideros fulgens*), Abel Tasman National Park Photo: David Gregorie

material, or to heat furnaces or generate electricity. And coal is fossilised plants that grew millions of years ago.

In New Zealand and Japan most of our houses are made from timber and we use wood for partitions, doors, cupboards and furniture. We make wallboard, cardboard and paper from the *Pinus radiata* trees in our exotic forests.

Plant fibres are used for clothing and cordage. Cotton cloth is made from the fluffy seed-heads of the cotton plant, linen is made from the leaves of linen flax and ropes and string are made from hemp and from New Zealand flax (*Phormium tenax*).

The native trees in our national parks and state forests are more important than most people realise. They protect steep

hillsides from heavy rain and floods and provide a habitat for our native birds. They also give us unique and wonderful scenery shared by no other country in the world.

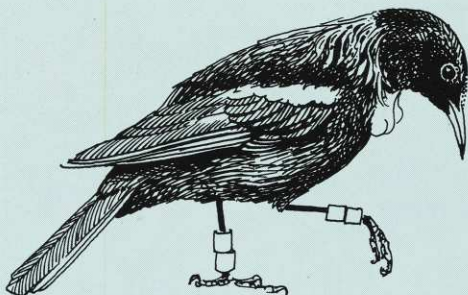
And who would care to live in a world without flowers? They brighten up our homes and cities and make life more pleasant for all of us.

by David Gregorie,
Press officer for Conservation
New Zealand.

Competition Corner

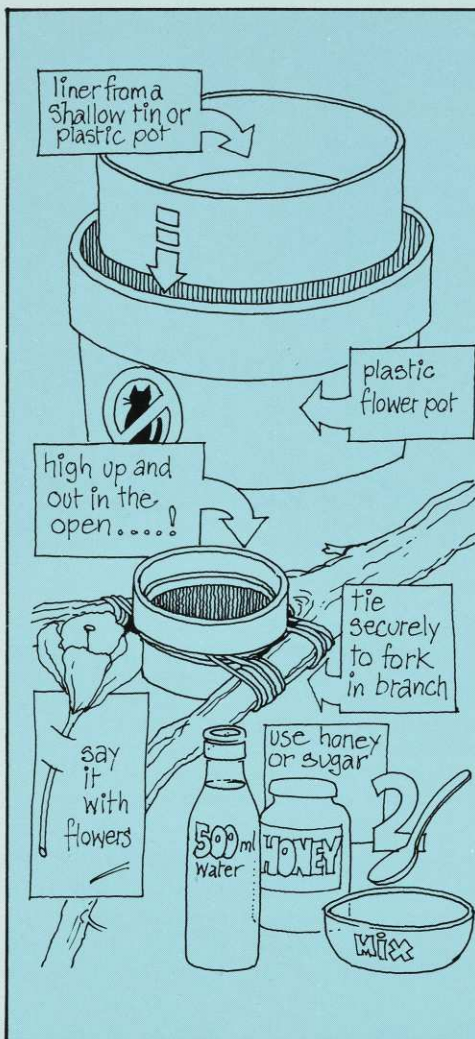
Some tuis may be fooled by an insect that looks like a stick. The tui in Sue Bell's cartoon was fooled by a stick that looked like an insect. Sue could not think of a good name for her foolish tui — can you? There is a \$10 book token prize for the best one.

You can find many different kinds of stick insect in New Zealand. Some of the spiny or knobbly looking ones belong to a group or 'genus' known as *Acanthoxyla*. If you can pronounce that you are a most unusual person. What is so unusual about a male *Acanthoxyla*?



This tui is wearing bands on its legs so that researchers can tell which particular tui it is. There are four different coloured bands and they can be arranged in different orders on both legs. What is the maximum number of individual tuis I can band without repeating myself, if I cannot use more than two bands per leg? (I can of course use less than two.)

Those are a couple of knotty problems. You are not expected to know the answers, unless you are a stick insect expert and a mathematical genius, but



How to make a tui feeder

Half a coconut shell or a plastic flower pot with a shallow tin or plastic tub liner will make a good and easily cleaned feeder. Tie the feeder securely in the fork of a branch, as high as possible so as to be out of the reach of cats. Choose an open position so that the tuis can keep a good lookout for danger while they are feeding. If possible, use a tree that the tuis usually visit. They can also be attracted to a feeder if you surround it with nectar flowers, such as flame, bottle brush or gum, and if you use a red plastic liner. If all else fails, visiting silvereyes will bring the tuis in.

Honey or sugar water is made by mixing 2 tablespoons of honey or sugar with 500mls (1 pint) of water.

Tui-friendly plants to have in your garden could be banksia, waratahs, flowering gums, bottlebrush, Taiwanese cherry, proteas, kowhai, rewarewa, flax and pohutukawa, all for nectar. Totara, kahikatea and *coprosma* will provide fruit.

Next time you go to the garden centre, how about bringing back something for the tuis?

you should be able to find them out. Write your answers on a piece of paper with your name and address at the top, and post them in an envelope to: Quest Competition, PO Box 33220, Takapuna, Auckland. We shall start opening the envelopes on Monday 10th June, so make sure they are in by then. The first one opened with both answers right wins a \$20 book token.

Answers and winners in the next edition of Quest.

The Frank Alack Award

Famous mountain guide, world explorer and conservationist Frank Alack is offering an award to junior members (under 17 or at school) for the best description or story about the native



birds found in your garden. You may include illustrations if you wish.

Entries of not more than 500 words should be sent to Quest, to arrive not later than 1st August 1985. (Please keep a copy of your work as we shall not be able to return it.) Remember to include your name, address and age. Prizes will be awarded for the best three entries: A first prize of \$90, a second prize of \$30 and \$10 for third. The winning entry will be published in the magazine.



BY SUE BELL



Bulletin

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THE BEST BEQUEST

Legacies to the Society have been one of the best methods of support it has had. Remember that a donation now or a gift from you in your will could help provide for your grandchildren the best bequest of them all: the preservation of new Zealand's native animals and plants.

Here is a suggested form of bequest: "I give and bequeath aproportion of my estate to the Royal Forest and Bird Protection Society of New Zealand (Inc), PO Box 631, Wellington, and I declare that the receipt of the secretary for the time being of the said Society shall be a complete discharge to my executors of the legacy hereby given to the Society."



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INTERNATIONAL COUNCIL FOR BIRD PRESERVATION

The ICBP announces the publication of two new books, Conservation of Island Birds (Editor P. J. Moors, price £16.50); and Status and Conservation of the World's Seabirds (Editors J. P. Croxall, P. G. H. Evans, R. W. Schreiber, price £26.90). ICBP says the books have been published by the Council itself, so as to keep the cost reasonable. Orders should be sent to ICBP, 219c Huntingdon Rd, Cambridge CB3 0DL, England.

ANNUAL GENERAL MEETING

The 62nd annual general meeting of the Society will be held at the Student Union Building, Victoria University, Wellington, on Saturday 22nd June, at 9 am.

Note: The annual report and statement of accounts is enclosed as a supplement to this issue.

COUNCIL MEETING:

A council meeting will follow, with the election of president, deputy president, treasurer, and ten executive councillors.

HEAPHY ROAD OPPOSITION

The Organisation to Preserve the Heaphy Track is up and running again, ever since the recent Ministry of Works and Development decision to reassess the feasibility of a road through the track. The last time pressure was put on the Government was in the early and mid-70s; a big difference between then and now is the change of heart by locals to the prospect of a road. It's estimated by long-term Karamaea residents that about 60 percent of local people would be opposed to the idea of a road through this magnificent area of native bush.

Contact for the organisation is: Secretary/treasurer, Colin Fussell, 505 Harwood Rd, Christchurch 5. The spokesperson is Neil Fitzgerald.

1986 SUMMER CAMP

A camp for Society members will be held in January 1986 at Havelock North. Excellent facilities have been booked at Hereworth Private School, and plans for a full and interesting programme are already underway. For full details please write to

Alistair Donaldson
38 Tokomaru Drive
Havelock North.

OBITUARY

Norman Eric Dalmer, who died on December 26, 1984, was National Treasurer of the Society from 1973-76 and Deputy President from 1976-1978.

Born in Cheshire, England on July 26, 1903, he came to New Zealand as a small boy in 1908. He attended schools in Canterbury and was a pupil of Waitaki Boys High School 1917-1919. His working career began in the Public Works Department, until in 1936 he joined the Industries and Commerce Department, where he rose to Assistant Director of Industry and during the war was seconded to the Reserve Bank as adviser on manufacturing.

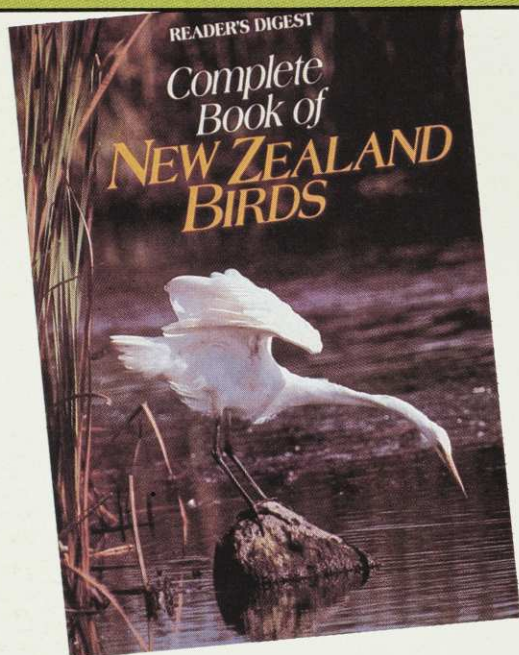
In 1960 Norman Dalmer joined Royal Forest and Bird; in 1969 he formed the Horowhenua section, by then having become a councillor and executive member of the Society. Those close to him

remember him for his strength of character, loyalty, a fervour for service and good works, a loving and friendly nature, with over all a keen and incisive mind. He was steadfast and active, and when struck down so cruelly by a long, impairing illness, grit determination restored him again and again.

Norman Dalmer gave much to the Society: setting its finances in order, keeping people who wandered in committee on the track. He is succeeded by his wife, Florence Emily Dalmer, whom he married in 1928, three daughters, one son, 11 grandchildren and one great grandchild. The Society extends its sympathy to them in their bereavement.

(Footnote: Mrs Emily Dalmer and family would like to express sincere thanks to Society members at the Turangi summer camp for their telegram of sympathy).

David Collingwood



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Society's Lodges and Houses

Bushy Park Lodge

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Accommodation: for 12 in five bedrooms, single and double beds. Sleeps 18 with mattresses. Bedding, linen and towels supplied. Showers, drying cupboard, kitchen with electric stoves, refrigerator, deep freeze, cutlery and crockery. Bring own rations. Milk may be ordered.

Fees: (House Guests) Members \$14 single, \$18 double. Non-members \$20 single, \$25 double. Children 5-12 \$6. Continental breakfast available \$4. (Day Visitors) All adults \$2, children 5-15 \$1, Family \$3 or \$5. Closed to day visitors but not House Guests Mon. & Tues.

Books and Information Leaflet: Custodian, Bushy Park Lodge, Kai Iwi, RD8 Wanganui. Telephone Kai Iwi 879.

Okarito Beach NFAC Cottage

Sleeps 4-6 in basic but comfortable facilities, water, wood stove, 2 rooms. Sited in historic township, coastal and bush walks, Okarito lagoon, Westland National Park and glaciers.

\$3 per person per night. Bookings: Kevin Smith, Box 57, Harihari, Ph 33090 Harihari.

Patoka Lodge, Hawke's Bay

The lodge is situated 48km from Napier on the Puketitiri Road and 8km past Patoka, amid the 14ha William Hartree Memorial Scenic Reserve.

The Lodge accommodates 10 people. Extra mattresses and pillows are available to sleep up to 20. The lodge has a full equipped kitchen, including refrigerator.

Visitors supply their own linen and cutlery. The nearest store is 8km away. No animals are permitted.

For rates sent a stamped addressed envelopes to the Booking Officer, June Northe, 212 Kennedy Road, Napier, Telephone Napier 438-193.

Ruapehu Lodge, Whakapapa Village, Tongariro National Park

Ruapehu Lodge is now available for MEMBERS ONLY, and all bookings must be made with the Society's head office, P.O. Box 631, Wellington.

Fees: Winter Season (1 June to 31 October and Christmas and Easter holidays \$8.00 per night. Summer Season 1 November to 31 May) Adults \$6.00 per night Children \$3.00 per night

Full payment must be paid four weeks before occupation, (otherwise bookings may be forfeited) after which time there is no refund for cancellation.

No animals or pets are allowed in the lodge or the National Park.

There is no key at the lodge, but one will be posted ten days before occupancy. No member may occupy the lodge without first booking through Head Office, Wellington.

Tautuku Lodge, Coastal Otago

Situated 72km from Balclutha on State Highway 92, Tautuku Lodge on the Society's 550ha bush-clad Lenz Reserve in coastal south-east Otago.

The lodge is fully equipped and accommodates eight or nine people. Bring with you food supplies, bed linen, blankets, towels, tea-towels etc.

For rates apply to the Booking Officer Miss M. Roy, Papatowai, Waipati, RD, Owaka, enclosing a stamped addressed envelope.

Turner Cottage, Stewart Island

Turner Cottage, is on Stewart Island and is a two-roomed dwelling furnished for three people.

For details write, enclosing a stamped, addressed envelope, to: "Turner Cottage", C/o Mrs N. Fife,

P.O. Box 67, Halfmoon Bay, Stewart Island.

Tai Haruru Lodge, Piha, West Auckland

A seaside home situated in Garden Road, Piha, 38km from central Auckland. Eight minutes' walk from the Piha store, with right-of-way access to the surf beach and close to bush reserves and walking tracks in the Waitakere Ranges.

The lodge is fully equipped and sleeps six to eight persons. It has a large lounge with open fire, dining area, and modern kitchen.

You will need food supplies, bed linen, towels, and tea-towels.

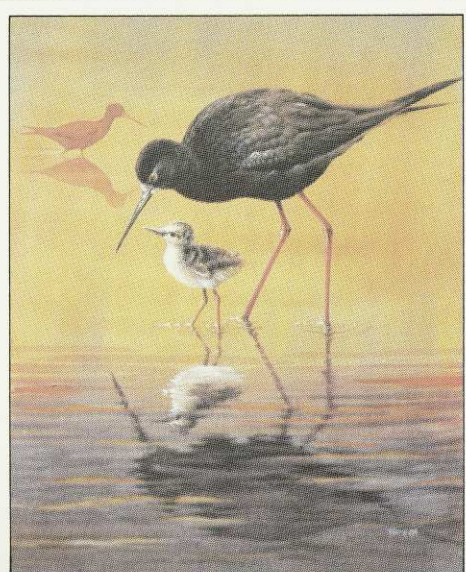
Different rates apply for winter and summer, for rates send a stamped, addressed envelope to the Booking Officer, Mrs B. Marshall, 160 Valley Road, Henderson, Auckland. Telephone 836-5859.

Waiheke Island Cottage, Onetangi, Waiheke Island

The cottage has comfortable bunk accommodation for eight people and has a stove, refrigerator, and hot water. Adjacent to a 49ha wildlife reserve, belonging to the Society it is in easy walking distance from shops and beach. It is reached by ferry from Auckland City (two or three returns daily) and by bus or taxi from the island ferry wharf. Everything is supplied except linen and food. No animals are permitted.

Different rates apply for winter and summer. For rates sent an addressed envelope to the Booking Officer, Mrs R. Roley, 23 Stoddard Street, Mt Roskill, Auckland. Telephone Auckland 696-769 (evenings).

Limited Edition Art Prints



The Black Stilt

by Piers Hayman 1985.

Once widespread in New Zealand, the black stilt is now restricted to a few braided rivers of the South Island, where less than 40 adult birds struggle for survival. This courageous bird is now the world's rarest wader, and possibly the rarest endemic bird on the New Zealand mainland.

Help us save this bird from certain extinction by sending \$25 for a copy of this superb and appealing print, each individually numbered and signed by the incomparable wildlife artist, Piers Hayman. Only 2000 prints were personally selected by the artist and the printing plates have been destroyed.

By ordering your print today, you will be making a valuable personal contribution towards the future welfare of this critically endangered bird.



NEW ZEALAND WILDLIFE SERVICE
Department of Internal Affairs
Private Bag, Wellington

Conservators of your wildlife heritage

Book Review

READERS DIGEST COMPLETE BOOK OF NEW ZEALAND published Readers Digest Sydney and Reed Methuen. 320pp. \$45.

The Readers Digest makes lovely books: fine colour, clear prose, high quality paper and binding, and this one is no exception. It is a review of modern knowledge about our birds contributed by more than 80 ornithologists under the consultant editor C. J. R. Robertson. The book also acknowledges the pioneering work of Dr W. R. B. Oliver whose *New Zealand Birds* this book presumes to replace.

It begins with the usual Digest introduction — Understanding Birds — well illustrated with New Zealand examples. The major part of the book, however, is devoted to studies of birds. Generally there is a large page for every bird report from the New Zealand region, each with an essay supplemented by a column on field characteristics, moult, voice and distribution, plus a highlighted paragraph on recognition. There is also a puzzling reference to size: a single measurement but for what? Every bird appears in a colour portrait, looking good, often on the nest, sometimes in Australia.

The scope of the book produces some curious features. A single record of a vagrant bird dating back, perhaps to the nineteenth century, still rates the standard entry. The result is that in looking for a familiar bird one wades past plate after plate of species one will never see. It might have been more helpful to spend the space on pictures of birds which cause confusion to birdwatchers, showing the differences between more familiar ones such as the male and female chaffinch, young and adult black-backed gull, the black and pied phases of the fantail, the pheasant or even the sparrow.

On the credit side there is a lot of material published in popular form for the first time. This is particularly so for several rare and endangered species.

If this criticism sounds testy it is because of the book's implied claim to be a complete and worthy replacement for Oliver. Viewed instead on its own merits this is a very nice, and interesting work about New Zealand's birds, at a very fair price.

G.C.E.

New Zealand '86 High Country

Preserved by Otago's extremes of temperature — from harsh cold winters to sweltering dry summers — these goldmining ruins at Bendigo lie before the snow-covered Pisa Range. Once a hive of goldmining activity, Bendigo is today deserted, although these legacies of the past live on.

Across the Clutha Valley, the Pisa Range rises nearly 1500 metres. While the valley below often roasts in summer heat, the range summit has an arctic-like climate, with severe frosts throughout the year. Special plants and animals are found in the tundra vegetation on the range top, yet grazing still occurs to the crest of the range. Near the summit, at

Lake Mackay, is a refuge for nesting colonies of black-backed gulls.

This magnificent scene is just one of a number to be found in the Society's 1986 High Country calendar, which can be ordered now at a special pre-publication price of \$8.95 (down from \$9.95). Photography is by Barney Brewster, one of New Zealand's outstanding natural history photographers and responsible for the much acclaimed 1984 Friends of the Earth calendar about the Oparara area. Proceeds from the sale of the calendar will help with the Society's pastoral lease campaign — remember, this is the Society's major fundraising campaign for the year.



ORDERS

Please send me calendars at the DISCOUNT price of \$8.95 (includes postage within New Zealand. Direct to a nominated overseas address by surface mail: \$9.45. Offer ends August 1, 1985.

My \$..... is enclosed

Name

Address

.....

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Send cheque or postal order (payable to RF & BPS)

High Country Calendar

PO Box 631

WELLINGTON

Please note: Publication date is not until August.



The koru, a Maori motif derived from the emerging mamaku fern frond, was the appropriate symbol for the recent Environmental Summit, signifying “awakening, process of growth, joy.”

Photo: Terry Fitzgibbon

