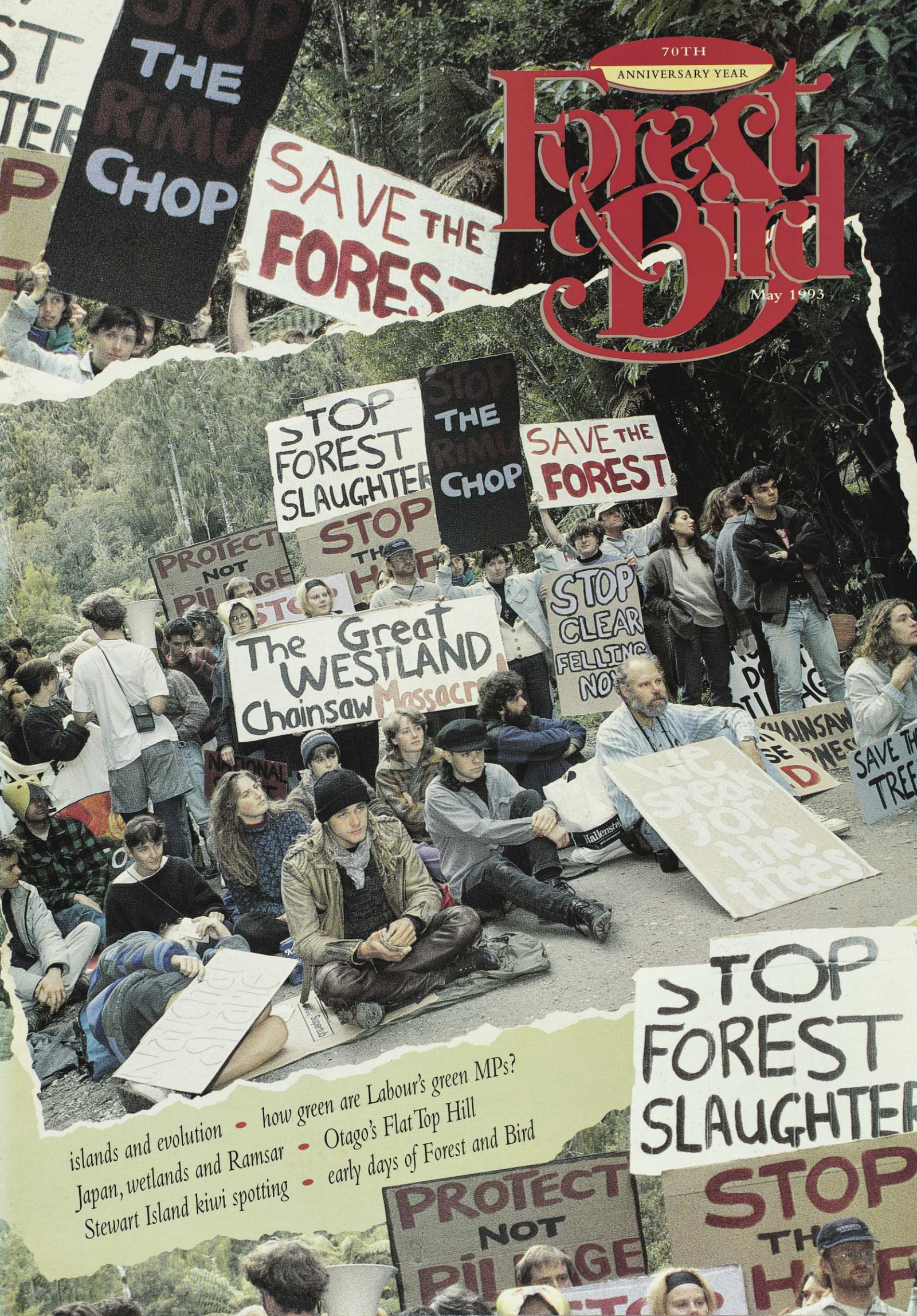


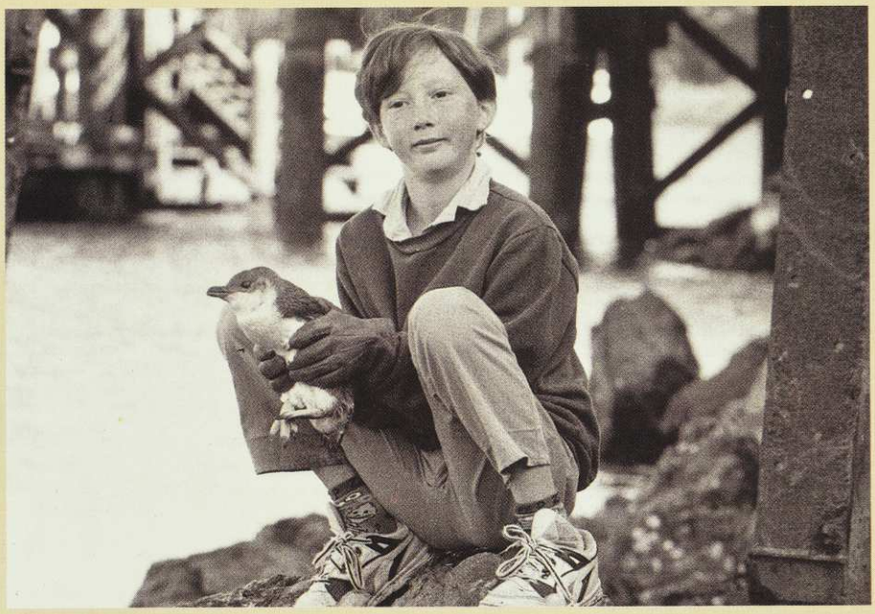
70TH ANNIVERSARY YEAR

Forest & Bird

May 1993

islands and evolution • how green are Labour's green MPs?
Japan, wetlands and Ramsar • Otago's Flat Top Hill
Stewart Island kiwi spotting • early days of Forest and Bird

"I belong to the KCC"



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COVER

In the first major direct action by conservationists since the 1970s, protesters blocked the road out of Ianthe Forest in South Westland in late March. The protesters were drawing attention to the government's decision to breach the West Coast Forests Accord and extend the clearfelling of rimu forests for another two years.

RICHARD COSGROVE

Test your Forest and Bird IQ. Try this easy quiz!

1 What is the most endangered marine mammal in New Zealand waters?

a sperm whale
b Hooker's sea lion
c Hector's dolphin
d basking shark

2 What are compact fluorescents?

a. new highly concentrated pesticides
b energy saving light bulbs that use 75% less electricity than standard tungsten bulbs
c a new all-midget rock band

3 Which two rivers have the world's highest sediment load?

a Waipaoa River
b Ganges River
c Danube River
d Yellow River

4 What does membership of Forest and Bird give you?

a participation in New Zealand's largest and most active grass-roots conservation organisation.
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Answers
1c,2b,3a&d,4f

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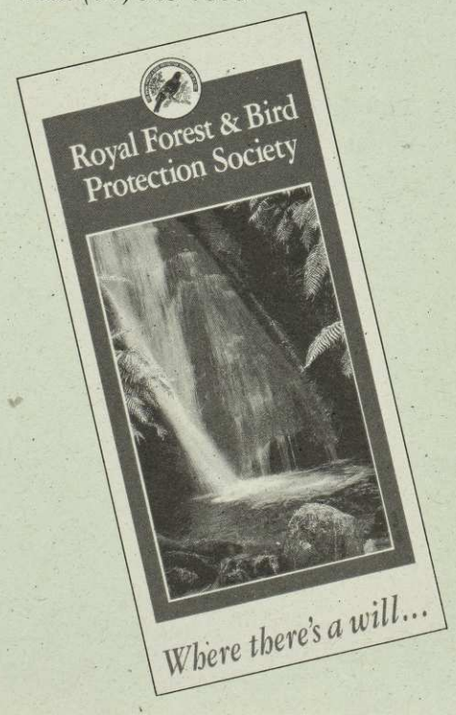

Keeping "them" honest

THE GOVERNMENT IS presently choosing people who will advise on the management of conservation lands for the next three years. These are the 17 regional conservation boards on which quite a number of Forest and Bird members have given dedicated service.

The system represents much of the public input into the formation of policy for parks and reserves. It is disturbing, therefore, to see it suggested that the government would like the size of the boards reduced from 12 to eight members. There is already too much work to do properly.

What is needed is more, rather than less, opportunity for public input. The Department of Conservation talks a lot about public consultation, particularly of its responsibility to consult with tangata whenua as laid down in its Act. Yet it is often accused of going its own way in the face of Maori and wider public opinion. The conservation boards are a vital balance in a process of open government. Simply put, such community advisory boards are a way of keeping "them" honest.

Conservation boards are instrumental in the development of conservation planning – the so-called conservation management strategies for each region, in which the boards have a legal role. To suggest that their resources should be further constrained is not likely to help conservation. Already there are arguments over Maori representation. Generally there is a minimum of three members, and often more, to provide a Maori dimension to each board. In practice many Maori members feel bound to be representatives of their tribe and where there are more tribes than members within a board's region, then others claim not be "represented". Even if a mooted 50:50 partnership in managing public lands were politically acceptable this problem would remain.

The remaining nine seats (five if boards are to be reduced in size) represent the wider community – not just conservationists but local government, tourist operators, farmers, hunters, anglers, skiers, trampers, scientists, women's groups and all the others interested in the department's management of 30 per cent of New Zealand's land area. Add to that the parochial interests of various local communities within a far-flung region and the present system already seems unlikely to satisfy many.

If DoC is to increase its credibility in the community it needs to win the support of local people. There are already several instances where Maori communities have sought a closer involvement in the management of adjacent public land because of their traditional ties with it. Arguments for a similarly enlarged role are also voiced by predominantly non-Maori communities.

Conservation boards represent the only way for many interests to affect policy directly. The boards are run on a financial shoestring. The work is often difficult and requires a financial sacrifice by most members and a large amount of personal commitment and dedication.

Such bodies need more support rather than less, if the interests of conservation are to be properly served.

Gordon Ell
National President

70TH ANNIVERSARY YEAR
Forest & Bird

Issue Number 268
May 1993

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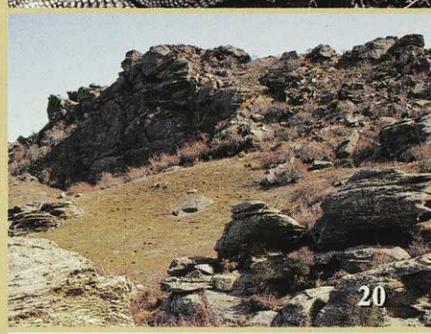

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Conservation update

Forest day of action

IT WAS a wonderful show of concern for the rainforests of South Westland.

On 26 March over 90 concerned New Zealanders converged on the only road access out of Ianthe Forest. The action, protesting the government's extension of clearfelling of rimu forests for another two years, was successful, blocking the road for half a day and holding up three logging trucks and several other logging vehicles.

Other protests, organised by Forest and Bird and university environment groups under the umbrella of the New Zealand Rainforests Coalition, were held round the country on the same day. Over 150 people marched through central Wellington, a picket was held outside the Auckland offices of sawmill owners Carter Holt Harvey, and a timber yard selling rimu was picketed in Christchurch.

"I have never been with such a motivated and united group of people," said organiser of the West Coast action Grant Rosoman. "They came from around the country risking both arrest and confrontation with the logging crews. There was definitely a sense of frustration that the government had gone back on its word to end the clearfelling of native forests, but we were doing something positive and active to get the message through that we have had enough."

The protest, a peaceful statement that rimu forests are worth more than their value as framing and decorative timber, carefully avoided any violent confrontation with the logging crews. "Our row is not with the local community," said Rosoman, "but with the government and Timberlands West Coast which have welshed on their commitments under the West Coast Forests Accord".

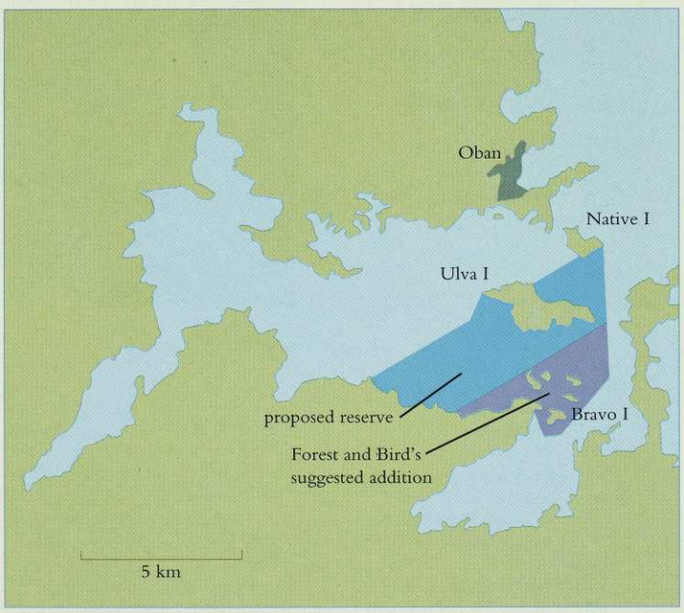
IAN CLOSE

Protesters against the government's extension of clearfelling in South Westland march through central Wellington.

Protecting Paterson Inlet

LAST AUGUST *Forest & Bird* brought you the story of the wonders of Paterson Inlet and the moves to protect at least part of it in a marine reserve.

At the end of last year the committee, set up by DoC to look into possible protection mechanisms, released its discussion document. Mostly made up of Stewart Islanders, the committee has recommended a reserve which includes representative areas of most of the main habitat types in the inlet, such as part of the major brachiopod beds and the kelp-covered rocky reefs.



The marine reserve proposed for Paterson Inlet.

The committee also supported a number of restrictions on fishing methods in the rest of the inlet including banning set nets, cod pots, trawling, commercial harvesting of shellfish and seaweeds, and no extension of marine farming. It was also keen to see reductions in bag limits, including an upper limit for boats of both scallops and fin fish.

MAF Fisheries has now set up another committee with the same members plus another commercial representative and another recreational fisher. This committee will formulate a fisheries management plan for areas outside the marine reserve. Hopefully these proposals will be integrated with plans for a marine reserve and that joint package will be put together this month for further public discussion.

The formation of two parallel committees has overcome the "territorial" dispute between DoC and MAF Fisheries which was paralysing progress last year. Hopefully the new committee will not water down the method restrictions and bag limits.

Forest and Bird supports the proposals but would like to see the colourful two-metre-tall tube worm reefs around Bravo Island, and the mudflats at the head of the inlet included in the reserve. The former are a globally rare community supporting young fish, while the latter are important feeding grounds for waders such as the rare New Zealand dotterel.

Local iwi are involved in both committees and will propose a taiapure, or traditional fishery, in the inlet. The combination of taiapure, marine reserve and fisheries management plan should eventually provide a strong protective framework for the inlet.

Sue Maturin

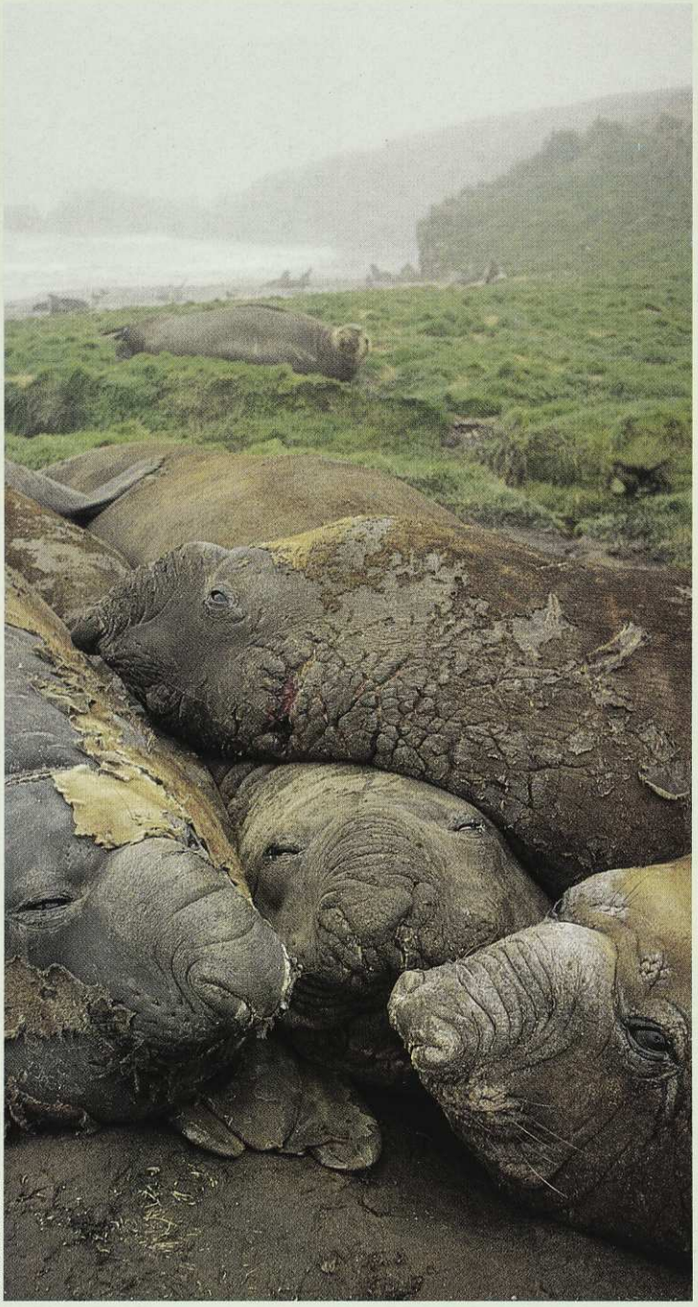
Campbell Island

A SERIES OF recent studies organised by the Department of Conservation have shown a continuing decline in a number of bird and marine mammal colonies on Campbell Island.

New Zealand's southernmost subantarctic island is a critical breeding island for many seabirds and marine mammals because it is surrounded by a vast expanse of ocean that is a very rich source of food. More than 95 percent of the world's southern royal albatrosses, for example, breed on Campbell.

Despite its remoteness, the 11,000-hectare island has also suffered greatly from human impact. Thanks to conservationists, however, there is optimism that one day much of its former glory may return. The effects of removing browsing mammals is already apparent with the spectacular and palatable megaherb species rapidly recolonising parts of the island. Cattle were removed in 1984 and the last sheep was shot in November 1991.

Norway rats and cats are still widespread and they have wiped out all the smaller ground-dwelling birds, such as pipits and storm petrels, and many insects. Fortunately for many of these species, small offshore stacks, such as Dent Island, act as predator-free refuges. The Campbell Island teal now survives in the wild only on Dent Island, but a mainland captive breeding programme is being attempted (see *Forest & Bird* May 1991). Rapidly developing eradication techniques provide hope that one day these mammalian predators will be removed from the main island allowing some of the native species to recolonise or be reintroduced.



ALAN TENNYSON

Moulting elephant seals on Campbell Island. For reasons which are not fully understood, the population of elephant seals on the island is now less than five percent of its 1940s levels.

Some of the more difficult management problems involve marine changes which are still little understood. The spectacular rockhopper penguin colonies numbering almost a million pairs in the 1940s have dwindled to 50,000 pairs at the latest count, and elephant seals have decreased by over 95 percent during this period. Both grey-headed and black-browed mollymawks (small albatrosses) have also decreased, with the grey-heads suffering substantially more than the black-brows.

Populations of all these species and yellow-eyed penguins appear to be still decreasing and while water temperature change has been suggested as the cause of these declines, other factors including the drowning of mollymawks and royal albatrosses on longlines, and the depletion of fish stocks such as southern blue whiting around the islands may also be causal factors.

Alan Tennyson

Mount Aspiring excision reversed

IT SHOWS YOU always need to keep on the lookout.

In a backroom deal back in 1975, the government agreed to remove a small block from the Mount Aspiring National Park and lease it to the adjacent runholder. The purported reason for removing the 74 hectares of mountain beech forest was to "rationalise" the park's boundaries due to survey difficulties.

The removal of any land from a national park, however, has to be approved by Parliament. Luckily, sometimes, the bureaucratic wheels grind slow. The proposed excision was first approved by the local parks board and, in 1988, by the old National Parks and Reserves Authority. But the enabling legislation had still not passed through Parliament at the beginning of this year when the change was picked up by Forest and Bird Otago field officer Sue Maturin.

The area of bush in question is adjacent to the drive to the beginning of the Routeburn Track and an important part of the visual landscape seen from the Dart River. There is little other bush remaining on the river and the adjacent faces along Lake Wakatipu.

DoC, unfortunately, saw the deal as a fait accompli and did not seem particularly worried by the proposed excision. But Forest and Bird discovered that the adjacent run benefiting from the intended change had been bought by the government last year as part of the settlement bank for the Ngai Tahu land claim. With all the land in question now Crown land, any rationale for a boundary change had disappeared.

Sue and head officer researcher Barry Weeber lobbied Conservation and Environment Ministers Marshall and Storey and the offending clause was quietly dropped before the enabling legislation passed through Parliament in March.

The area rescued might only have been a small part of a large park, but it shows that the integrity of even national parks, the pinnacle of our reserve system, is not always as safe from interference as we sometimes assume.

Ian Close

Better news for Stewart Island's dotterels

THE CAT-CONTROL programme designed to protect the highly endangered New Zealand dotterel population on Stewart Island (see *Forest & Bird* November 1992) has just completed its pilot season.

Feral cats are the main threat to the birds, the only remaining members of the species breeding south of Hawke Bay. Last October about 200 bait stations were set up enclosing an area of about 2.5 sq km around Table Hill, and the baits and birds were checked each month through the season. By mid-February, all birds from the protected area had left the breeding grounds and moved to their coastal wintering flocks.

The results from the full annual census of the population in April are not yet available but preliminary surveys of the Mason Bay and Awarua Bay flocks in late February suggested that the baiting has been successful and cat predation reduced. Autumn counts at both sites had declined steadily since 1990 but there has now been a rise in the total population for the first time since the study began. A conservative figure for the 1993 population is currently about 70 birds, up from 62 at the same time last year.

The programme was sponsored by Software Education Associates with additional funds from the DoC/Forest and Bird Threatened Species Trust.

Although the result is very encouraging, there are still problems. There is a serious shortage of male birds in the population – males do most of the nest incubation at night and seem to be more at risk from the nocturnal attentions of feral cats. Two more males were lost on Table Hill this season, almost certainly because the programme started a month too late. Nests were already present when we arrived in early October and the two males disappeared before bait stations could be installed.

Also because of the acute shortage of males, some female-female pairs are forming and laying clutches of infertile eggs.

On the positive side, our experience this season suggests we can make significant improvements in future baiting strategy. In the wet conditions on Table Hill, most of the cat-baits went mouldy within two months; by modifying the way baits are prepared and by changing them more often we can improve protection of the area with little extra effort.

Timing can also be improved; the loss of two males early this season was a serious set-back, but something we should be able to avoid in future. If the programme is carried out next season, we must make sure that baits are installed at least a month earlier. This should help significantly, by removing any resident cats well before the birds begin nesting.

Indications from the 1992-93 season are therefore very positive and it is now important to keep up the momentum. The trial programme needs to continue for three to five years for two reasons. First, there will be natural annual fluctuations in dotterel survival and productivity, depending on weather, cat density and so on. We need to know whether the population can be maintained and increased successfully in the longer term, through these fluctuations.

Second, we need to know whether there is significant recruitment in the protected area – will the young birds being produced now return to breed on Table Hill when they are two years old? If not, a few other key breeding sites on the island may need to be protected as well.

Stewart Island's dotterels still have a long way to go, but at least there's some hope. With a technique available which promises help, it is important now to put the whole programme on a more secure footing.

John Dowding

JOHN DOWDING

Feral cats beware: one of 200 bait stations installed around the scrub line on Table Hill. Top: a NZ dotterel chick, only a few days old, hatched this season within the protected area.

Cattle stops kill kiwi

CATTLE STOPS, long identified in England as a source of danger to wildlife, have now been implicated in the deaths of kiwi in Northland.

An alert Forest and Bird member, holidaying north of Russell, came upon skeletons of three kiwi at the bottom of a deep cattle stop on the Purerua peninsula.

In Britain the native hedgehog was falling victim in exactly the same way. Tumbling in and unable to climb out, the animals were condemned to a slow death by starvation until a hedgehog rescue group was formed to highlight their plight and its easy solution, the construction of escape ramps.

Examination of two other nearby cattle stops at Purerua confirmed that when shallow, with naturally formed ramps of road metal, no kiwi prisoners had been taken.

Landowners – please check your cattle stops to make sure they only serve the purpose for which they are intended, and alert any neighbours to the simple, no-cost solution to help safeguard our diminishing kiwi populations.

Jacqui Barrington

Moss harvest

SPHAGNUM MOSS processors in Southland have been lobbying local MPs and the news media to try and change the Department of Conservation's policy on moss collecting on conservation land.

DoC's guidelines decline harvesting applications where a wetland has a specifically protected status such as national park or reserve, is rare or of representative value, is significant ecologically, or is slow growing, such as in alpine areas.

On the West Coast, sphagnum harvesting licences have been granted on previously logged, mined or burnt terrace land with relatively low conservation value. Licences stipulate that the moss must be harvested in a sustainable manner.

Sphagnum's antibacterial properties and ability to absorb up to 20 times its own weight in water make it very popular horticulturally as a growing medium, particularly in the massive Japanese orchid industry. On the West Coast, sphagnum harvesting has become a sizeable $12-million export industry employing up to 500 people. West Coast sphagnum is valued especially because it is uncontaminated. About 25 percent of the harvest is from DoC land and licences have been issued covering almost 4,000 hectares.

But in Southland, DoC's regional conservator Kerry Mawhinney says that no conservation land would meet the department's criteria for issuing harvesting licences.

A lot of Southland sphagnum bogs are within scenic reserves or national parks. Those on stewardship land were allocated to DoC because of their high ecological value and representativeness.

Also it appears the higher altitude and latitude of the south produce a slower growth rate than on the West Coast.

New Zealand has 11 species of sphagnum. They all have a remarkable ability to absorb and retain water and are thought to play a vital role in water storage and flow throughout whole catchments especially in upland areas. Sphagnum-dominated bogs form naturally in areas of high rainfall and low temperature or poor drainage.

The most common species and the one targeted for harvesting, *Sphagnum cristatum*, grows in extensive carpets or as hummocky cushions which are very easily damaged. Many harvesters use four-wheeled motor bikes to drag out their bags and the channels left by the wheel tracks act as drains, causing ponding and eventual death of the moss. The ponding also draws water out of the mounds. The moss dries, its growth slows and eventually it will be colonised by weeds or other bog species better adapted to slightly drier conditions.

Sphagnum bogs in Forest and Bird's Lenz reserve in the Catlins have been raided, causing considerable damage.

DoC says several prosecutions are pending following illegal harvesting on its estate in Southland and the department has been appealing for the public to report suspicious activity.

DEPARTMENT OF CONSERVATION

Camouflaged bags of illegally harvested sphagnum moss in the Seaward Moss conservation area near Bluff Harbour. The area is a proposed reserve adjacent to the internationally recognised Waituna wetlands.

Hovercraft halted in Rotorua

FOREST AND BIRD has succeeded in halting wildlife disturbance by a hovercraft operator on Sulphur Bay in Lake Rotorua.

The waters of the bay are gazetted as a wildlife refuge. They are a very important wildlife habitat for over 40 native bird species, and the breeding place for significant populations of dabchick, scaup and banded dotterel.

The tourist hovercraft operator had sought for some time to take passengers into the geothermal bay and had received a permit last August only to have it revoked when the conditions were broken and the birds disturbed.

Then, in an unorthodox exercise of patronage, the Rotorua District mayor arranged a temporary permit for the hovercraft. While submissions to the council from Forest and Bird and DoC had advocated the development of the area for sensitive ecotourism, conservationists couldn't believe their eyes when they saw the hovercraft operating again in Sulphur Bay over the New Year holiday, without any consent hearing or consultation.

The hovercraft harassed birds in the refuge by driving through them at speeds of up to 40 km/h. At the head of the bay it then landed on a geothermal flat showering sand and pumice over the breeding territories of banded dotterel.

Particularly disturbing was the disregard of the principle of sanctuary that is inherent in the wildlife refuge status of the bay.

Forest and Bird, in particular local members Alan Newman and John Innes, led a determined campaign against this inappropriate venture that masqueraded as ecotourism. Eventually they convinced the council that the disturbance of dotterels and the geothermal flat (gazetted a local purpose reserve) was contrary to the wildlife provisions in the Reserves Act, and that the hovercraft venture was a new activity requiring a consent under the Resource Management Act.

With landing denied, the hovercraft passage across the wildlife refuge was effectively stymied.

Basil Graeme

Lessons from Lord Howe

LORD HOWE ISLAND, a 1,400-hectare volcanic island 700 km north-east of Sydney, is not well known as a holiday destination for New Zealanders. Yet every year thousands of visitors from around the world book in for a week's "nature" holiday: walking, bird-watching, snorkelling and fishing. In fact, tourists are turned away because the number on the island at any one time is limited to 400.

Although politically part of Australia, Lord Howe is perhaps closer biologically to New Zealand. Walking through the forest, a New Zealander would recognise trees from many familiar genera. Its bird life was also once very similar, as Lord Howe had its own species of morepork, silver eye, red-crowned parakeet, fantail and even a gallinule related to the takahe.

All these birds are now extinct because, like New Zealand, Lord Howe has suffered from the impact of introduced mammals. Pigs decimated the ground-nesting seabird colonies; cats and rats wiped out forest birds, a gecko and a skink. Goats and rats interfered with forest regeneration.

But Lord Howe also has its conservation success stories. In 1982 it became a World Heritage site, as "an outstanding example of independent evolutionary processes" and area of exceptional natural beauty. Indeed, in spite of 150 years of human colonisation, Lord Howe retains a remarkable 70 percent of its forests which now have permanent reserve status.

The reason the forests have survived, where so many other lowland forests in the Pacific have not, is the Kentia palm. In the 1870s, the collection and sale of seeds and seedlings of the palm replaced whaling as the island's main economic base.

The Kentia, tolerating low light conditions and low temperatures, became the classic European indoor palm. As the industry was based on the collection of seed from the natural forest, existing forest was preserved and replaced. Today NZ$2.7 million worth of seedlings are exported each year.

The Kentia palm industry has had an impact on other aspects of Lord Howe's natural history. Ship rats arrived on the island in 1918 and quickly reached plague proportions, causing the extinction of nine of the fifteen species of land bird and dramatically reducing the Kentia palm seed harvest.

The islanders declared war on the rats, first by placing a bounty on them and then by an extensive and continuing poisoning programme. This programme effectively controlled rat numbers and maintained the viability of the palm industry. Birds and invertebrates were also winners from the decline in rats.

Cats as well became the focus of a control programme, but in this case not for strictly commercial reasons. In the 1970s attention was turned to the survival of the Lord Howe Island woodhen, at that time one of the world's rarest birds. Cats were identified as the major cause of their decline and the feral cat population was extensively poisoned.

Domestic cats were not overlooked. The islanders agreed to the desexing of all their domestic cats and then not to replace them as they died. Today there are only a handful of aged moggys left on the island and the woodhen thrives in both the forest and residential areas.

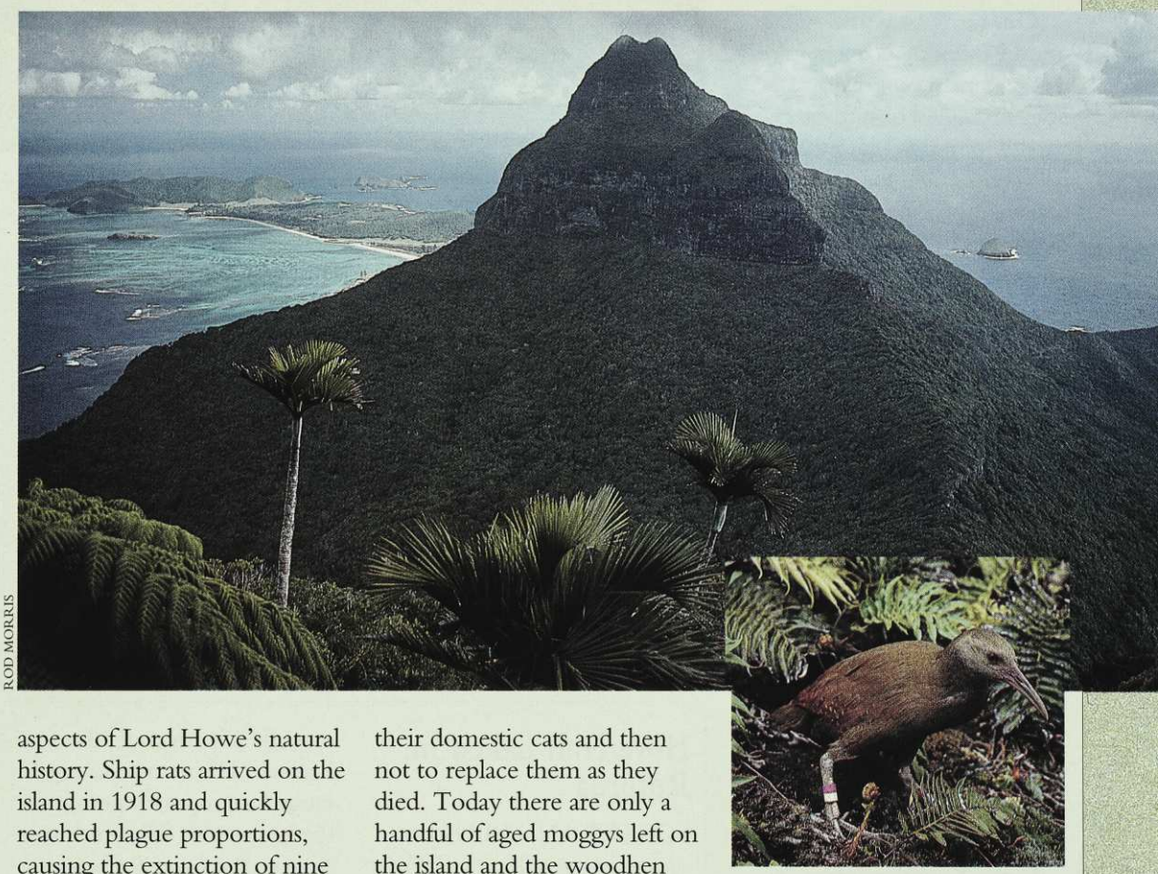
Other birds benefited from the end of cat predation, especially the burrowing seabirds. Fleshfooted shearwaters nest throughout the lowland forest, wedge-tailed shearwaters burrow in the grass alongside the island's roads. The abundant bird life, by both day and night is one of the major drawcards in the island's ecotourism industry.

The Lord Howe Island experience provides a model of how both conservation and commercial values can co-exist and even enhance each other.

In New Zealand, conservation often results in the complete exclusion of the human presence and in many cases this is necessary. There are, however, already inhabited islands in New Zealand where conservation and human values need not necessarily be in conflict. Lord Howe Island illustrates how a different approach can work. The Lord Howe Island woodhen was the Lord Howe equivalent of the black robin. In effect, the islanders were persuaded to exchange their pet cats for a family of friendly woodhens at the bottom of the garden. Perhaps the same principles could apply to New Zealand islands like Pitt, in the Chathams, and Stewart Island.

While we may have something to learn from Lord Howe Island, we may have something to offer as well. Recent New Zealand advances in island rat eradication could perhaps help Lord Howe solve the rat problem that has troubled it for so long.

Julia Morris



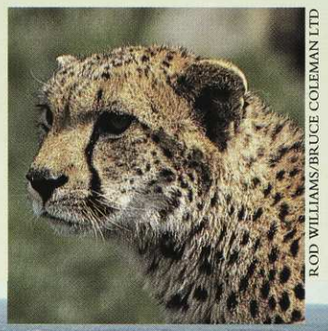
ROD MORRIS

Lord Howe Island and (inset) Lord Howe Island woodhen, a small ground-dwelling rail, rather similar to the New Zealand weka.

Saving the Okavango Delta

THE MOST dangerous animal in Africa is not the lion or crocodile, but the unsustainably farmed cow.

The development of intensive beef farming in Botswana is threatening one of the world's great remaining wetlands, the Okavango Delta in northern Botswana, the point at which the third largest river in southern Africa pours into the Kalahari Desert creating a 15,000-square-kilometre network of channels, reedbeds, hippo pools and flood plains.



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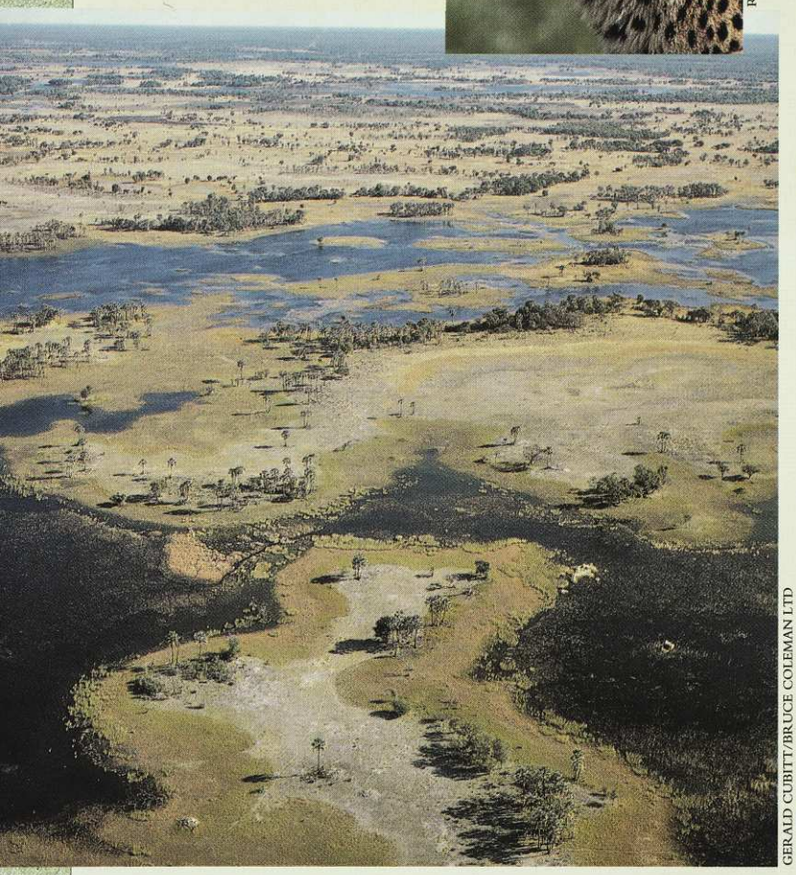


GERALD CUBITT/BRUCE COLEMAN LTD

Stretching to the horizon and beyond, the Okavango Delta is an oasis in the desert and perhaps Africa's last great wilderness. Cheetah (inset) are one of the many large species dependant on the waters of the delta and threatened by the erection of cattle fences across it.

A miracle of plant and animal life, the delta is home to over 540 bird, 164 mammal, 157 reptile, 80 fish and 3,000 plant species.

With Botswana's cattle population at the limit of the land's capability to support it, a lobby of ranchers is using a promise of EEC funding to force the government to allow grazing in the water-rich arable lands of the delta. The pressure on the wildlife and water resource of the delta is immense.

However, the delta's rich web of life is only a mirage as far as successful cattle ranching is concerned. The delta channels are continually shifting, leaving behind infertile soils and grasses unpalatable to livestock. The limited ability of the delta to sustain bulk grazers would soon be exhausted by the ranchers' large herds.

The tsetse fly has kept cattle out of the delta up till now. But the success of an FAO-sponsored pesticide onslaught has already allowed ranchers to encroach into the northern part of the delta.

Also, if the delta is to be opened for grazing, veterinary cordon fences will be needed to prevent contact between the foot-and-mouth-carrying buffalo of the delta and the domestic cattle. Due to seasonal flooding there is a constant movement of native species and it is expected that thousands of large animals would perish as the 25-tonne-breaking-strain fences cut across their migration routes.

The Okavango Wildlife Society is recommending the removal of all cattle fences, that the delta become a world heritage site and that Botswana become a signatory to the Ramsar Convention.

Source: Okavango Wildlife Society/ Earth First

New Arctic park

RUSSIA HAS created a four-million-hectare reserve on the Taymyr Peninsula in northern Siberia – the largest expanse of tundra in Eurasia. From July, only scientists will be allowed access.

The park (more than three times the size of Fiordland National Park) is part of a network of reserves set up under an international Arctic treaty signed in 1989. It contains walrus, and the summer nesting grounds of plovers, brent geese and knots.

Insurers react to Greenhouse changes

WHILE GOVERNMENTS may be tardy in facing up to the serious environmental and economic problems posed by climate change, the reality of global warming and the associated disruptions in weather patterns are being increasingly accepted by the insurance industry.

Insurers are finding that historical weather records are no longer an acceptable way of assessing risk and setting premiums; the future may no longer be like the past. Lloyds insurance brokers report that insurers are increasingly pulling out of disaster-prone areas or else sharply increasing premiums.

Global warming means much more than an increase in the average temperature of the atmosphere. It means more storms, more flooding and more drought in areas which have been relatively free of these phenomena.

Meanwhile the International Negotiating Convention for the Climate Change Treaty, which has made little progress in the last two years, was unable to meet as scheduled in New York last March. Delegates were unable to land in New York as airports were closed due to the worst winter storm this century.

Source: New Scientist

Name change for ICBP

THE INTERNATIONAL Council for Bird Preservation is no more. The UK-based global federation of bird conservation organisations has established a new structure and changed its name.

BirdLife® INTERNATIONAL

Now known as BirdLife International, the organisation comprises over 360 member representatives and organisations in over 140 countries, plus specialist groups and committed individuals. The aim remains to conserve all bird species on earth and their habitats. This is carried out through advocacy, field programmes and research.

The new structure of BirdLife International is more decentralised, throwing responsibility on lead organisations to be known as "national partners" in each country. Forest and Bird has been offered, and accepted in principle, the position of national partner representing New Zealand. This would effectively make us the local arm of the revamped organisation.

Branching out

Reports on the campaigns and conservation projects undertaken by Forest and Bird branches and field officers.

Goodbye rats, hello bird sanctuary

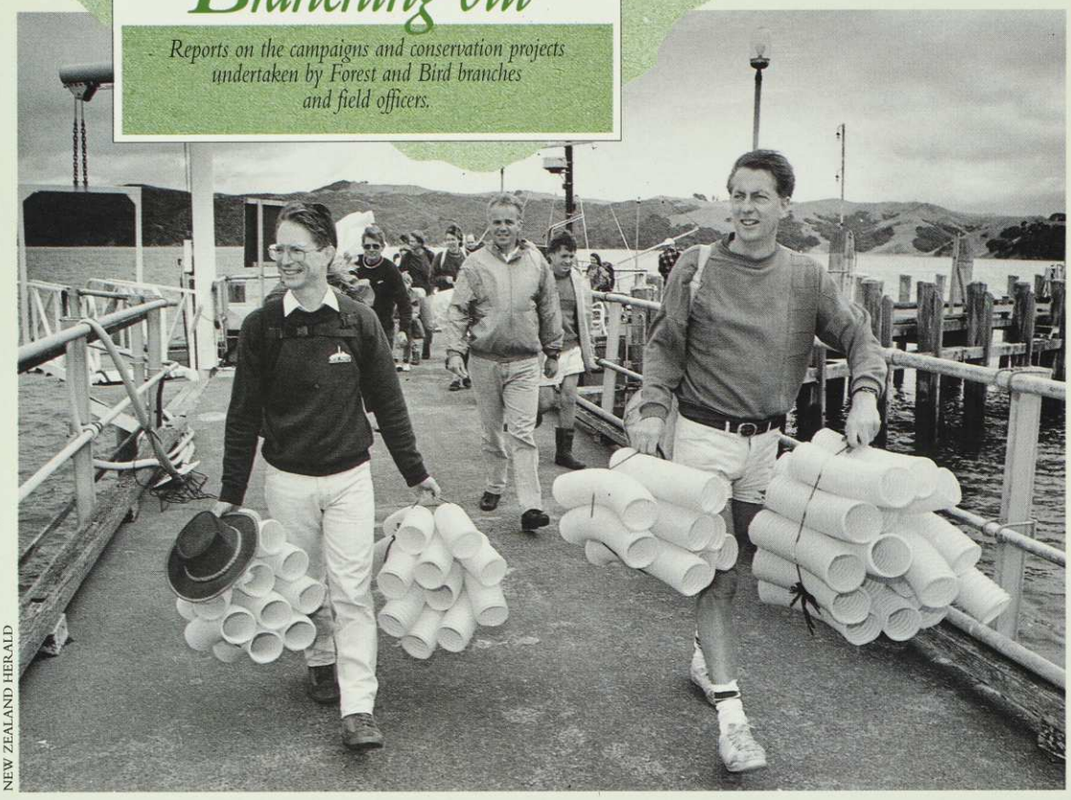
YET ANOTHER Hauraki Gulf island has been cleared of rodents through the efforts of Forest and Bird members. Following a poison-baiting programme organised by the Hauraki Islands branch, 24-hectare Pakatoa Island now has great possibilities as a sanctuary for some of Auckland's rare birds such as saddlebacks, whiteheads, bellbirds, kakariki and fernbirds.

Last month, with no sign of rats and all 140 bait stations inactive, the programme was formally declared a success. The strikingly beautiful island contains a low-impact resort, and the re-introduction of birdlife has considerable ecotourism potential.

The programme involved a number of gulf communities, all veterans of previous successful rat eradication programmes: the Salvation Army members of the Rotoroa Island section provided transport, Forest and Bird members from Waiheke Island did most of the work and the Rakino Island Ratepayers Association paid for the bait stations.

Red-crowned parakeets have been already been transferred to the island and are being held in an aviary for breeding and future release.

The resort has become a corporate member of the society and manager John Grey looks forward to working closely with Forest and Bird in restoring and enhancing Pakatoa's natural habitat.



NEW ZEALAND HERALD

Auckland University scientists Neil Mitchell (left) and John Craig carrying bait stations onto Pakatoa Island. Between them are John Grey, manager of the island resort, and Mike Lee, project organiser and chairman of the Hauraki Islands branch.

Project weka going strong

FOREST AND BIRD'S captive rearing and release programme for the endangered North Island weka continues apace. The programme is jointly managed with DoC, and sponsored by Trilogy Business Systems.

At the release site at Karangahake near Paeroa, members have built a large aviary complex (see *Branching Out* August 1992) and 15 captive-bred birds have been released while 10 are still in residence.

The strategy for the release of the birds has been modified as more is learnt about weka behaviour. In the 16 breeding aviaries, owned by Forest and Bird members around the North Island, each weka pair is encouraged to nest and rear their chicks with a minimum of human interference. Both parents care for the chicks, which at six weeks are fully grown and feathered. These juveniles are then taken to the Karangahake release aviary.

This complex of five aviaries is like a weka "finishing school" where the birds are grouped with their peers to socialise and mature in the environment where they will be released. At about four months old the young adults are freed, simply by opening small trapdoors and allowing them to wander out at will. The released birds tend to stay close to the aviary for a few days, drawn by familiarity and the calls of the remaining birds, but gradually move further afield. Birds released last October are still within calling distance of the aviary.

This release technique seems to have succeeded in overcoming the rapid dispersal and loss of birds which probably led to the failure of many earlier releases. All the birds are released wearing colour bands and the local school and community regularly report sightings. Six birds wearing radio transmitters are monitored more closely by aviary manager Gary Staples and postgraduate student Gary Bramley.

WAIKATO TIMES

Weka researcher and Forest and Bird member Gary Bramley with a young weka about to be released. The bird carries a radio transmitter so it can be tracked in the wild. Gary's research is being supported by the Waikato and Gisborne branches, and also the J.S. Watson Trust, administered by Forest and Bird.

Problems remain, however. The most immediate one is the need for more birds. Forest and Bird has a permit to release up to 100 birds a year in the area. While some captive pairs breed well – one pair having four over-lapping clutches – other apparently compatible pairs are failing to breed. Some chicks have succumbed to disease, and two birds wearing radio transmitters were killed by dogs.

Despite the set-backs, there are encouraging signs. In February, radio tracking found one of the released females sitting on a nest with her mate nearby.

For the members involved in the programme, the unfolding story becomes more and more engrossing.

Island restoration in the north

MICHAEL WINCH

Far North members at work revegetating Motupapa Island.

THE FAR NORTH branch has begun the task of revegetating Motupapa or Cocked Hat Island with local native species. The five-hectare island is near the mouth of the Kerikeri Inlet in the Bay of Islands, and was purchased by the Department of Conservation a few years ago.

The island had been totally cleared, and at one stage had goats on it. Today only remnants of native vegetation remain, scattered around the island foreshores.

The first plantings of pohutukawa, flax, coprosma and other shrubs have survived the dry northern summer, and will be extended this year. Branch members have also installed water collection containers.

The project will recreate both plant and animal habitat. Once initial plantings are established, a number of coastal species of limited distribution or threatened status such as coastal maire, tawapou and bindweed will be introduced.

Torlesse Range

FOREST AND BIRD'S proposal for a Torlesse Range conservation park was given a boost recently by a group of enthusiastic members from the North Canterbury Branch.

Thirty people led by field officer Mike Harding spent a weekend exploring the tussock grasslands and screes of the proposed park, finding several species of rare scree plants and spotting native falcon and a flock of kea.

Threats posed to parts of the area from introduced broom and self-sown pine trees were very apparent and members enthusiastically removed wilding pines originating from plantings several kilometres away.

The field trip has inspired members to once again lobby local politicians and councillors for the full protection of the Torlesse Range and to encourage DoC to pursue the proposal with greater haste. Despite a comprehensive report by Forest and Bird and persistent pressure, little progress has been made on the proposal.

MIKE HARDING

Members amid the tussock grasses and scree slopes of the Torlesse Range.

What on earth?

IN CHRISTCHURCH, Forest and Bird has taken to the airwaves. Since September last year it has worked with Epicentre, the Department of Conservation, and a loose network of Canterbury environmental organisations to produce a weekly television programme called "What on Earth".

The idea for a regular programme to cover "green" issues and places often over-looked by the mainstream media came from Janet Holm, a long-time clean air campaigner, Forest and Bird member, and one of the founders of Christchurch's environment centre. Canterbury TV agreed and staff have been generous with encouragement, support and practical help with film editing and occasional filming.

Topics featured to date include art in the environment, the benefits of marine reserves, the birdlife of the Avon-Heathcote estuary, urban and rural recycling schemes, a Maori perspective on Riccarton Bush, and the use and misuse of rainforest timber.

The venture into "access style television" and coming to grips with turning a bright idea into a watchable ten-minute programme has meant a steep learning curve for all the volunteers involved. Interviewing, script writing, on-air presentation and general media skills have been greatly sharpened as a result, especially among those who had never before handled a video camera.

The range of groups involved in producing programmes, from the Historic Places Trust and the North Canterbury Conservation Board to Marine Watch, has also helped build useful personal contacts and links between individuals and organisations.

The ten-minute programme screens each Tuesday on Canterbury TV.

Members outside West Auckland's Tai Haruru Lodge after a recent successful working bee. They tidied the grounds, constructed steps and replaced furniture. The lodge, close to Piha Beach, is very popular (see Directory *for details) and surplus income from its operation is used for branch conservation work.*

ISLAND MAGIC

REISCHEK'S PARAKEET is one of eight subspecies (two of which are now extinct) of the red-crowned parakeet which have evolved to live in the varied habitats of different Pacific Ocean islands. This subspecies is found only in the subantarctic Antipodes Islands and has slightly yellower plumage than its mainland relative.

New Zealand has produced its own special suite of plants and animals. This is only one instance of how the isolation of islands results in the evolution of weird, wonderful and different organisms. TIM HIGHAM reports on how making a documentary on the Pacific Islands gave one film maker new insights into the evolution of life in this country.

WORKING on *Islands*, TVNZ's recent two-part documentary on the natural history of the Pacific, changed director-producer Rod Morris's perception of New Zealand. The animals and plants he observed resulting from other islands' isolation helped him appreciate the kind of powerful evolutionary forces that shaped New Zealand's own fauna and flora.

"Those forces are ghosts – long gone – and we have to recognise them through clues that are remote, rare and difficult to access," he says.

Two years' researching and filming *Islands* gave Morris a unique and privileged overview into natural history and evolution in the Pacific.

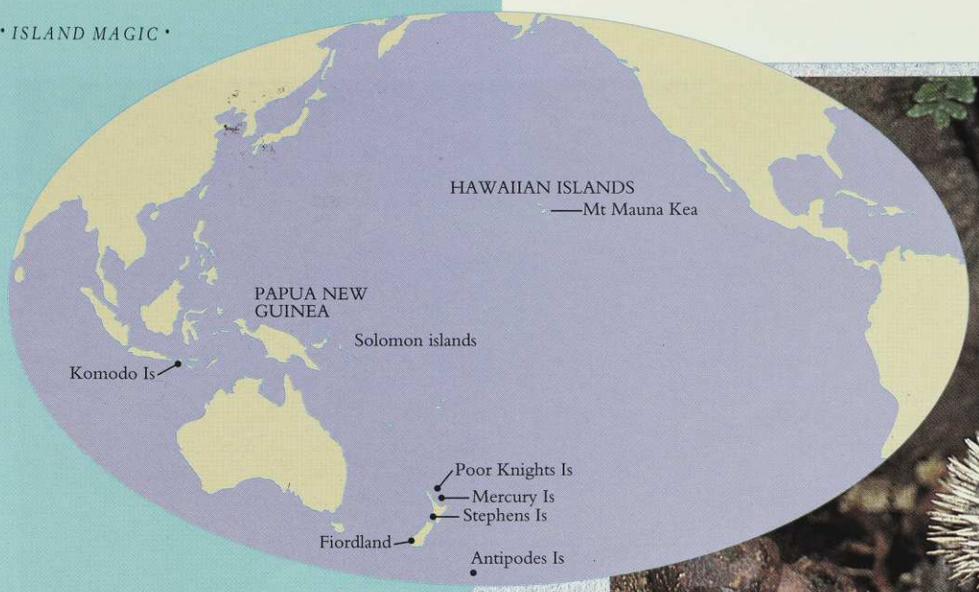
The former Wildlife Service officer and co-author of *Wild South: Saving New Zealand's Endangered Birds*, has plans to work on another popular book based on his *Islands* insights. "I just need a bit more of a handle on how our things fit together – the fish, insects, amphibians and reptiles; not just the rare birds."

Morris says some of the jigsaw pieces are starting to be put in place. It is argued by many scientists, for example, that New Zealand's many divaricating plants are an evolutionary response to moa browsing. A springy bush with its small leaves hidden inside a maze of fibrous stems offers resistance and little sustenance to large, strong-beaked, browsing birds. Some

UNLIKELY PARTNERSHIPS can develop between immigrants: like the tuatara and fairy prions which, thrown together by the lottery of island dispersal, share burrows on Stephens Island. Tuatara reach highest densities on islands with moderate numbers of prions. The reptiles seem to gain most from the relationship: warmth from the birds and the opportunity to predate chicks at a vulnerable age. This sudden, massive protein intake may be an important trigger for egg production in female tuatara. Reptiles are capable of enduring long sea voyages on rafts of vegetation, so like seabirds are well suited to island colonisation.

NEW ZEALAND has its share of extraordinary invertebrates. Fiordland's bat-winged fly (*Exsul singularis*) is probably no less rare than the kakapo or remarkable than the kiwi. It has the body size of a house fly, with black, solar-powered, pantaloon-shaped wings as big as a butterfly's. It is carnivorous and changes its form of flight from that of a fly to one which mimics a butterfly. This allows it to enter the territories of small alpine butterflies, where it captures and eats them.

ALL PHOTOS BY ROD MORRIS



plants like kowhai, lancewood and matai change from a juvenile divaricating form once above the browsing height of moa.

In Indonesia, Morris gained an insight into another long-gone evolutionary process while filming Komodo dragons, three-metre long monitor lizards capable of killing and feeding on adult deer. New Zealand, Morris says, had its Komodo dragon equivalent. The extinct giant eagle, *Harpagornis*, was the supreme predator of these islands, and in that role shaped the way other animals evolved.

Probably *Harpagornis* was a wait-and-pounce killer: sitting in trees usually near the edge of forest, picking its prey with keen eyesight, swooping down and striking with awesome power. With falcons and goshawks also hunting from above, it made a lot of sense for smaller birds to move about the forest floor and avoid daylight.

"The kiwi and kakapo didn't happen out of apathy and general degeneracy," Morris says. Such theories he labels as "continental arrogance". New Zealand's fauna was actively selected for – under pressures exactly the opposite to those created by ground-hunting, smell-sensitive mammalian predators.

Today with only the wreckage of our avifauna left we have to think laterally to try and work out the factors that once shaped it, Morris says.

Before the arrival of humans on the Pacific Islands, new immigrants could arrive only by sea or wind dispersal. With up to 4,000 km of water to cross it was a lottery, for which some groups of plants and animals were better suited.

The red-crowned parakeet, *Cyanoramphus*, has colonised Pacific Islands from the subantarctic to the tropics and successfully adapted to the different foods available on each. While the subspecies on most islands eat seeds, nectar, flowers and leaves, on Macauley Island in the Kermadecs the parakeet eats limpets off coastal rocks.

WHEN IMMIGRANTS arrive on islands they are forced to learn new tricks. This form of Pacific gecko (*Hoplodactylus pacificus*), found on Sugarloaf Rock near the Poor Knights group of islands, specialises in eating regurgitated fish, spilt in gannet colonies. Other members of the same species found throughout the northern half of the North Island feed exclusively on live prey such as insects and grubs, and are nocturnal. But on the barren rock stack of Sugarloaf the geckos emerge in daylight the moment they smell spilt fish to claim the meal before red billed gulls can get to it.

"IF YOU CHOPPED two of its legs off and saw it on a dark night you could be forgiven for thinking you were looking at a kiwi," says Morris of the long-nosed echidna (*Zaglossus bruijni*), a primitive monotreme mammal from the mountains of New Guinea.

The echidna also resembles the kiwi in being nocturnal, burrow-dwelling, an exclusive earthworm eater, and having a long snout with nostrils at the tip and small poorly-sighted eyes.

The kiwi has taken on many mammalian characters: hair-like feathers, whiskers, equivalent body temperature, and comparable size and development of embryos. "Evolution on islands can be carried to such bizarre extremes," says Morris, "that primitive mammals and primitive birds can look more like each other than most other mammals and birds."

IN THE RICHER ISLAND ecosystem of the Poor Knights Islands, Pacific geckos add to their insect diet with fruit, and nectar from flowers like pohutukawa. New Zealand reptiles once played a much greater role in forest ecology than we give them credit for today. On the Poor Knights – which boast a total of eight skink, gecko and tuatara species – reptiles pollinate forest flowers and distribute seeds. Coprosma and kawakawa seeds are suited to passing through the gut of animals and rough scales under geckos' chins can carry pollen for up to 24 hours. "Island ecosystems can operate in a way that is fundamentally different from our understanding of how those on continents function," says Morris.

THE SPECTACULAR Haleakala silversword (*Argyroxiphium sandwichense*) is descended from a nondescript group of small herby to scrubby, sticky, daisy-like plants known as tarweeds which grow on the Pacific coast of America. Their seeds, transported to Hawaii by wind or on the plumage of birds, have evolved into a varied range of species – creeping lianes, shrubs, close-knit mats, large-leaved herbs and cabbage tree-like plants. The Haleakala silversword flowers only once, taking five to 25 years to gather sufficient moisture from volcanic soils to send up a magnificent spike two metres tall, covered in purple-red daisy flowers. While bearing no physical resemblance to its ancestors it can still hybridise successfully with mat-forming tarweeds native to the California coast.

SOME ISLAND IMMIGRANTS evolve to become supreme predators and competitors and as such shape the nature of other animals. Descended from an Australian monitor lizard ancestor, Komodo dragons grow up to three metres long and can kill and eat pigs, goats and rusa deer that have been introduced to the island. "These reptiles have become the tigers that never got there," says Morris. Dragons are safe on Komodo Island, an internationally recognised nature reserve, but are less common on nearby Rincha Island where dogs are present. On adjacent islands in the Indonesian archipelago it has become extinct because of mammalian predators.

Parakeets and penguins seem unlikely bedfellows – but on New Zealand's subantarctic Antipodes Island these two very different birds are well acquainted. Spilt food, guano, flies and carcasses provide plenty of pickings for Reischek's parakeets, a subspecies of red-crowned parakeet, which forage around the edges of the raucous erect-crested penguin colonies.

FRESH ARRIVALS have to learn new tricks and whole ecosystems can develop fresh ways of functioning, like the reptile-dominated forests of the Poor Knights Islands. Here geckos and skinks have become the "birds and bees" of the forest through their pollinating and dispersal roles. Small lizards are also preyed upon by giant centipedes which grow as long as 25 cms.

In Hawaii Morris filmed a species of looper caterpillar, a most unlikely carnivore. But because of the under-representation of spiders and ants on the island, the caterpillar was able to evolve a taste for insects and an effective ambush hunting technique.

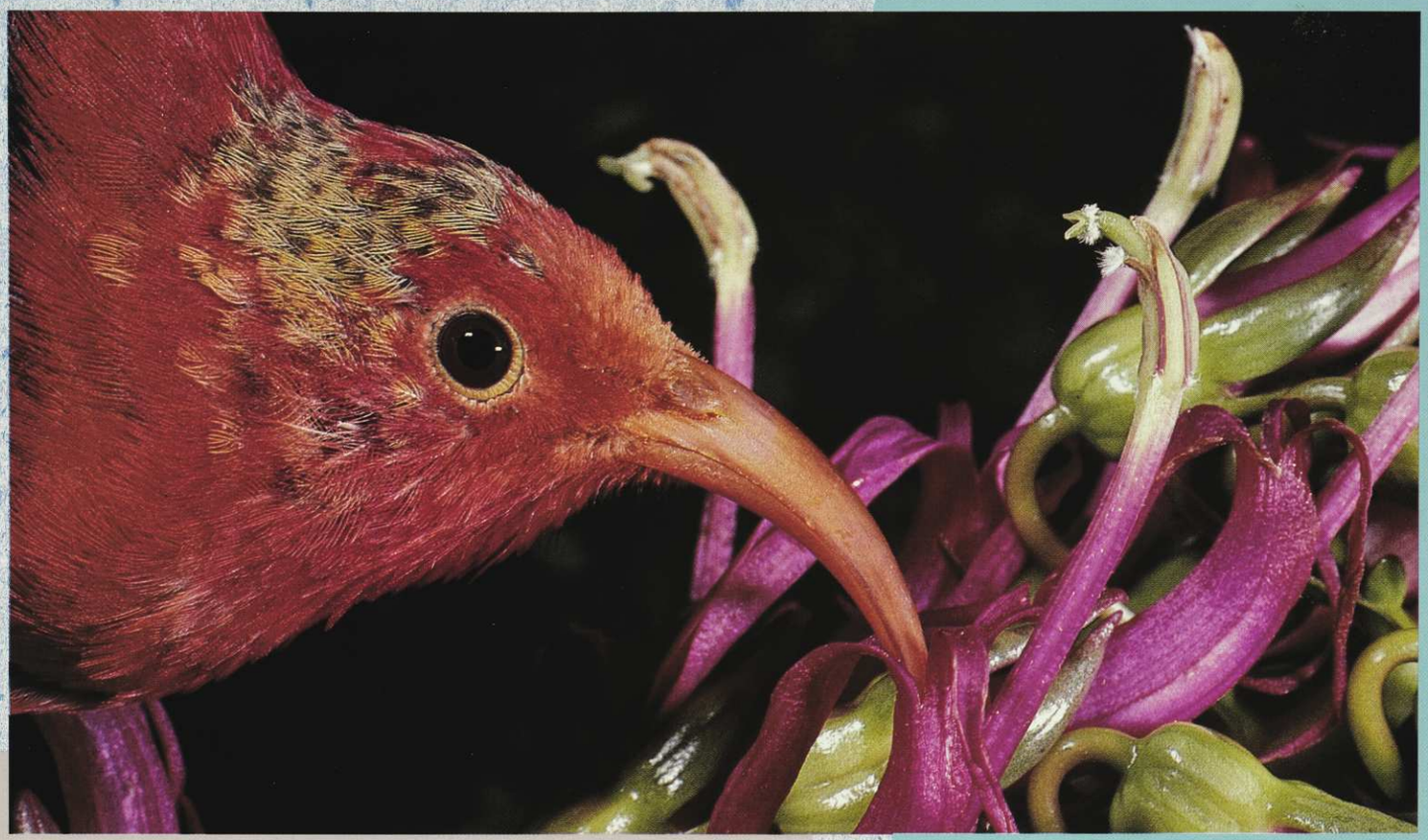
Since ants and spiders have flooded into Hawaii with humans, looper caterpillars have been restricted by competition and predation to higher areas. Similarly, in New Zealand, some native invertebrate populations have been decimated by new immigrants such as wasps.

Islands operate as species factories. With different selection pressures from those on continents, new arrivals can evolve in hitherto unimagined ways. In the Solomon Islands Morris filmed a giant skink, *Corucia zebrina*, which evolved over time from a small, fast-moving insectivore to a large, plodding, tree-dwelling, fruit-eater, complete with prehensile [grasping] tail. "It has become the reptile equivalent of a monkey," says Morris. The skink is also involved in an unusual partnership, often sleeping among fruit bats and benefiting from the mammals' warmth.

In Hawaii unspectacular finch and herb plant ancestors co-evolved into a fantastic array of lobelia flowers and specialised nectar eating birds.

Morris wonders what variations of beak shapes in New Zealand's wattlebird family, which includes the saddleback,

"IT IS REMARKABLE that some of the largest and heaviest insects in the world are still being discovered in New Zealand in the late 20th century," says Morris. First seen in the 1980s, the Mercury Islands' tusked weta (still unnamed by taxonomists) has remarkable two-centimetre-long tusks used for ritual combat. The species shows how vulnerable island populations can be, occurring only in a couple of hectares of forest on one island of the Mercury group. The weta has evolved alongside the tuatara, two rare species of skink, and a giant centipede. "It is one of those extraordinary islands," says Morris, "which provide an insight into what New Zealand must have been like in the past."



IT IS THOUGHT the ancestor of the Hawaiian honeycreepers was a finch-like bird that arrived on the newly formed volcanic island several million years ago. It has since evolved into a large number of species, each with a distinctive beak shape suited to its favoured food. Many are now extinct, including the seed-eating Grosbeak finch and the fruit-eating Ou. The Iiwi (*Vestiaria coccinea*) pictured, evolved a beak shape suitable for extracting nectar from the flowers of a species of lobelia. It is one of a range of ornate beak shapes which co-evolved with the long, tube-shaped flowers. Such specialisation has meant that the extinction of either plant or bird has sealed the fate of the other. This co-evolution is mirrored in New Zealand's wattle birds.

THE WEKIU BUG (*Nysius wekiucola*) of Hawaii "shows how island immigrants can completely change their food source and exploit new environments," Morris says. The bug lives only on the summit of Mauna Kea mountain, above the snow line and the altitudinal limits of plants and other invertebrates. It feeds exclusively on dead insects blown up into the snow by the mountain winds. Related to tiny, green seed bugs common on New Zealand road sides, the wekiu bug's plant-eating proboscis has adapted to suck the body fluids of chilled and dying insects.

kokako and extinct huia, were lost in the distant past. The different shapes of male and female huia beaks – enabling them to exploit different food sources – he describes as an example of "island magic".

"To look at the moa, dodo and Komodo dragon is to realise the power of Islands," says Morris. Their downfall has only come since humans harnessed the sea and wind and became the third agent of species dispersal.

Our carry-bag of predatory and competitive ground-dwelling mammals – whose previous absence in New Zealand allowed giant, flightless crickets (weta), singing bats, and dancing night parrots to evolve – is now pressuring such remarkable animals to extinction. While filming *Islands* Morris visited Easter Island and observed the statues of a culture that exploited the environment to such an extent it destroyed itself. Such shameful history need not be repeated he hopes.

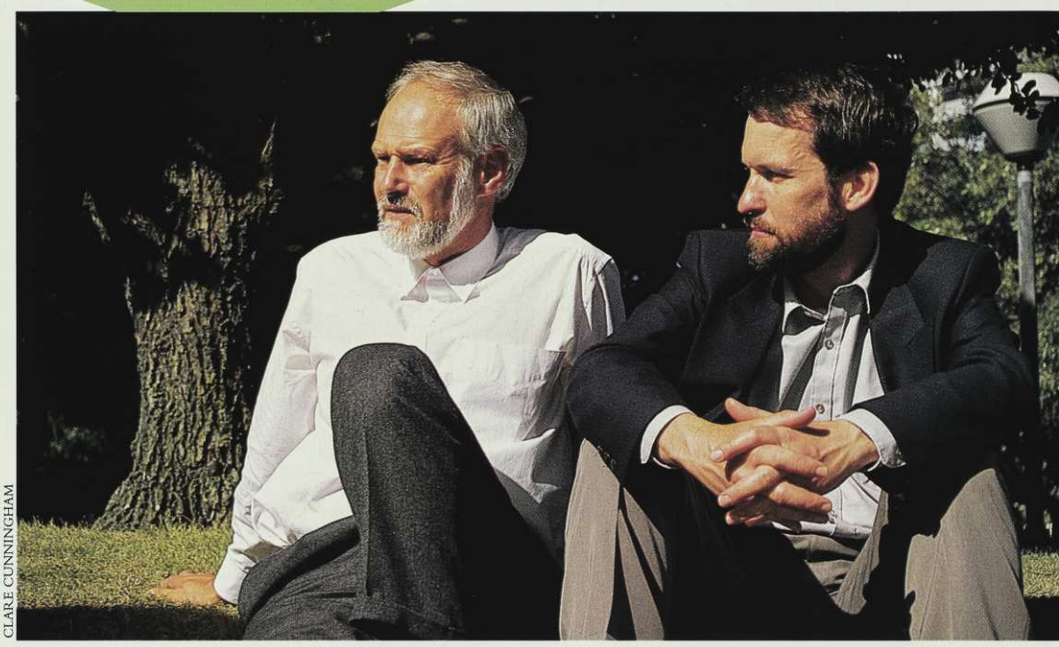
Since cultures are also capable of change there is the opportunity to learn from our mistakes.

American biologist Jared Diamond has described New Zealand "as the closest we can come to studying evolution on another planet". It is essential, Morris says, that we save those species and ecosystems that have practised island magic. ❖

Tim Higham is a journalist specialising in natural history. He works for the Department of Conservation in Southland.

IN SEARCH OF LABOUR'S GREEN AGENDA

Two new MPs with a history of environmental activism front Labour's shadow conservation and environment portfolios. John Blincoe, conservation, and Pete Hodgson, environment, are very keen to retain those jobs should Labour win the next election. ADAM LEAVESLEY spoke to them.



CLARE CUNNINGHAM

Pete Hodgson (left) and John Blincoe: marketing Labour to conservationists.

HIGH IDEALS, sentiment and a strong record from the 1980s aside, what has Labour got to offer environmentalists in the 1990s? What is the likelihood that two relatively junior MPs will secure the backing of the party and give environment and conservation the priority they need?

John Blincoe and Pete Hodgson have brought a new style of cooperation to the green shadow ministries. They point out that the boundaries between their portfolios are blurred. "We have no strict demarcation lines," says Blincoe. An example of cooperation is in the area of resource management. Blincoe with his legal training has played a prominent role, despite the fact that it is technically part of Hodgson's portfolio.

In the Labour caucus, green issues are no longer confined to the conservation and environment portfolios. Attempts are being made to integrate environmental concerns in the Economic, Environmental and Employment Committee of caucus. The party is doing a lot of talking about new creative solutions which incorporate environment at the ground floor.

The rhetoric is about "community involvement", "vision", "ownership of decisions" and the "harnessing of people's wisdom and imagination". "Any government will make dramatically more progress if they work with the community than if they don't," says Hodgson. "You will end up with better policy and better outcomes. You can't ram the Resource Management Act or marine reserves down people's throats." Energy issues have also been incorporated into the caucus committee. Energy spokesperson David Caygill was Labour's representative at the Earth Summit. He and Chris Laidlaw, whose responsibilities include disarmament and international environmental issues, work closely with Blincoe and Hodgson. As associate energy spokesperson Hodgson plays a dual role on the committee and it would appear that energy policy is a major focus of the group.

IF LABOUR wins the next election and John Blincoe acquires the conservation ministry, he will be taking on the job at a time when some fundamental, long-term issues must be addressed.

Much of DoC land has a low ranking as stewardship land and is overdue for reclassification. Possums and other pests are seriously degrading conservation areas. The long term future of many native animal species outside the network of offshore island sanctuaries is in doubt. Conservation values are being compromised by the requirement to raise income through concessions. Marine ecosystems are subject to heavy exploitation and are virtually unprotected. A considerable proportion of the estate is subject to Maori claims.

Direct DoC funding has been cut ten percent by this government, says Blincoe. "Denis Marshall is fighting a losing battle, but we will find the means to hold the line and keep the values of the estate together."

Labour says it will do some creative thinking on the pest problems, in particular on possums. Blincoe favours a mix of controls including a bounty system but the size of the effort will be subject to funding. He cannot promise a major research effort to deal with the problem.

Blincoe would like to introduce the sidelined Protected Natural Areas legislation and speed up the process of selecting and gazetting appropriate natural areas. High Country pastoral land which is marginal economically or of high conservation value will be de-stocked.

The requirement that forces DoC to raise revenue through commercial concessions does not find favour with Blincoe. Unfortunately the problem can only be completely solved by giving the department a bigger allocation. Labour

John Blincoe

THE MEMBER for Nelson might be new to Parliament, but he's not new to politics. His political career dates back to his student days when he served as president of the New Zealand University Students Association for three years.

It was here that he learned the tools of the political trade. Lucky for him that he did. Former conservation minister Philip Woollaston dropped out of the 1990 election with only a month to go leaving Blincoe to fight a very shaky seat. To the surprise of many, Blincoe held it for Labour and has followed Woollaston into the conservation arena as well.

A lawyer by training, he has never practised, preferring to use the law as a tool to help in formulating and writing policy. It is in this field he believes his best contribution can be made.

Describing himself as an "instinctive conservationist", he has been a member of Forest and Bird for longer than he can remember.

He was the founding convener of the Wellington Clean Water Campaign which was set up to solve the sewage disposal problem on the Wellington South Coast. When the council showed little interest in solving the problem he stood on the issue of clean water and was elected in 1986.

Blincoe is a keen tramper and his favourite spot is in the headwaters of the Anatoki River (north of the Cobb valley in North West Nelson). Anybody who enjoys the mountains of New Zealand has got to be a conservationist, he says. "This is how you refresh your spirit."

CLARE CUNNINGHAM

shadow ministers say they are not able to give funding promises so the issue remains up in the air.

While he would like to ban mining in national parks, Blincoe doesn't oppose the use of the DoC estate as part of the settlement for Ngai Tahu claims nor a Ngai Tahu management role. "However, a public process must be involved," he says. "Otherwise hostility will result. If you do things by the right process you get good outcomes. The present process is not up to that." He argues that any settlement would involve guaranteed public access and that Ngai Tahu development would be subject to the same regulations as everybody else.

The expansion of the marine reserve network and protection of marine ecosystems is a major project Blincoe would like to take on. "We should regard the marine environment the same as the coast," he says, and he would like to implement the ambitious Forest and Bird target of placing ten percent of the coastline into marine reserves by the year 2000. He believes public attitudes are changing and that the target is possible.

The problems facing the conservation estate, however, cannot be solved without a commitment of resources, and it is put to Blincoe that volunteers will not establish marine reserves, deal with the pest problems, survey land under the Protected Natural Area Programme or release DoC from the pressure to find funding through concessions. "We'll have to look really hard at how we can achieve more," he responds. "The level of funding needs to be addressed. Clearly I'd like to have more funds but I'm not allowed to promise to spend more money."

While Labour supports the ban on the export of native woodchips and logs, Blincoe does not support a ban on the logging of native forest or a ban on the export of value-added forest products. He believes all logging must be carried out sustainably.

Blincoe would like to apply one definition of sustainability to all forest owners including the Crown. "We want as much native forest standing as possible." However he would not guarantee that the present controls on private land would be extended to cover the Crown's indigenous production forests.

To protect more forest, Blincoe would like to extend the national park system. He supports the Forest Heritage Fund and Nga Whenua Rahui, brainchild of the last Labour administration, but cannot promise more funding to extend their work.

LABOUR APPEARS set to make an election issue of energy policy.

"Energy efficiency, as the fifth fuel, (the others are electricity, oil, gas and coal)," states a direction paper on energy released last August, "will become the most important new energy source under a Labour Government".

Energy efficiency is a "rare gem", says Pete Hodgson, which simultaneously offers economic, environmental and social benefits. It must be integrated into industry and not treated as a "bolt on" policy.

Labour gives a commitment not to privatise Electricorp. Hodgson says some energy regulation is necessary and Labour is considering the use of economic instruments such as progressive pricing to facilitate energy efficiency.

The current spate of private sector proposals to build environmentally damaging power stations such as the Ngakawau hydro scheme will not be implemented under Labour, claims Hodgson. Regulation and an efficient energy environment will discourage them.

Hodgson sees "no significant future for stand-alone thermal generation" and believes that the Electricorp production monopoly will be broken by Electricity Supply Authorities building wind farms.

Labour's response to global warming hinges on the success of their energy efficiency policy. Officially the party still pursues the aim of reducing the 1990 level of carbon dioxide emissions by 20 percent by the year 2000.

The party's direction paper points out that a ten percent reduction in electricity use would result in an eight percent reduction in carbon dioxide emissions. However energy efficiency would have to be extended to other sectors if the goal is to be achieved.

ONE OF THE biggest disappointments with the Resource Management Act was the separation of the Crown Minerals Act so that sustainability principles did not apply to the use of minerals. When the Acts were passed in 1991, Labour said they would put the two back together.

Blincoe today has backed away from that position. He says that since they are now separate, the least disruptive solution for those responsible for applying the law will be to change the Crown Minerals Act so that sustainablity and depletion principles apply.

The Resource Management Act provided for the establishment of a body to control hazardous substances and new organisms. Almost two years later the Hazardous Substances and New Organisms legislation has not even been drafted.

"Progress is zero," says Hodgson. He wants to see categories defined for toxic substances and clear policy on new organisms. He is particularly concerned about micro-organisms because they are impossible to control. Blincoe says Labour will be rigorous in protecting New Zealand from new pest species. He adds that he is adamantly opposed to the introduction of myxomatosis which he describes as crazy, inhumane and a "short-term dirty solution".

Another area which remains outside the ambit of the Resource Management Act is fisheries. Blincoe and Hodgson are concerned about the management of marine ecosystems. Blincoe's electorate relies on the orange roughy harvest. However, he is happy to suggest that quotas will have to be reduced. He adds that the economic implications of the fishery collapsing would be felt across New Zealand.

Internationally, Hodgson would like to return New Zealand to the forefront of the global environment movement. Under the 1984-90 government, New Zealand led the world with the Resource Management Act and had instrumental roles in drift netting and ozone agreements as well as nuclear policy. Hodgson says New Zealand's moral authority on the global stage was high because the government was rigorous at home.

Hodgson would like to see New Zealand make further progress on nuclear issues, ozone protection and whaling. He would also like to introduce a labelling scheme for imported timber and suggests that local forestry expertise could allow New Zealand to play a key role in international forest conservation.

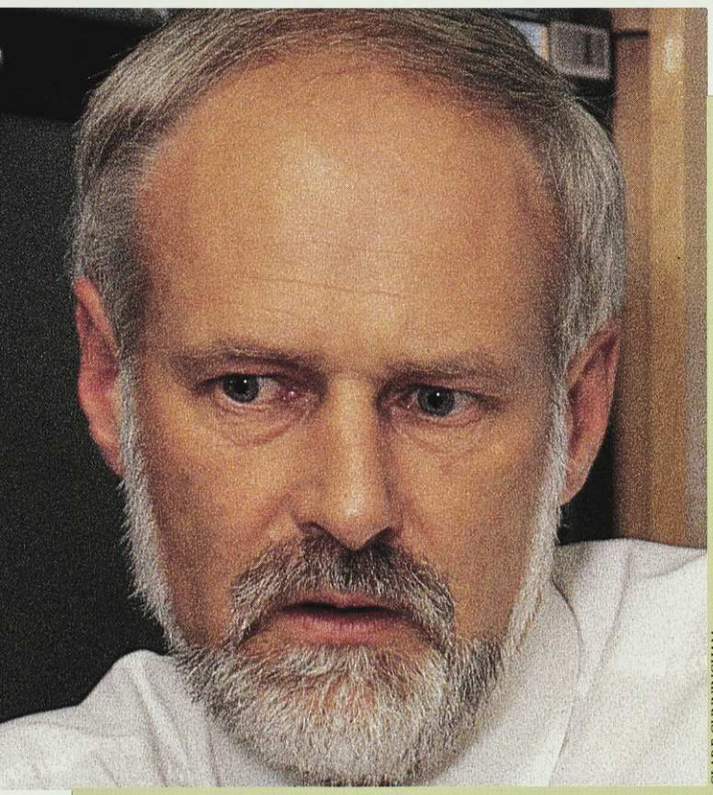
WHILST BOTH Hodgson and Blincoe are keen to make things happen, the commitment of the Labour hierarchy to environmental issues must still be in question. Both MPs point out that David Caygill is Labour's number three, and deputy leader Helen Clark was a former Conservation Minister. They say that Mike Moore is right behind them.

Some other Labour MPs, however, do not have a sparkling environmental history. Sources close to Geoffrey Palmer reported his exasperation in Cabinet with the fiercely anti-green views of some ministers. A number of these ministers departed in 1990, but there are still senior figures such as Richard Prebble who remain trenchantly opposed to an environmental agenda.

Also curbing Labour's environmental enthusiasm is the influence of marginal rural electorates, including the West Coast, where crude anti-green politics still hold sway. Labour's inclination in these areas is to sit tight and avoid commitments. Yet a more visionary approach could be more productive. On the West Coast, for example, tourism has long displaced native sawmilling as an economic force.

While funding remains undisclosed, doubts about Labour's commitment remain. Despite their enthusiasm, will two relatively junior ministers in a Labour government be able to convince Cabinet of the need for strong environmental initiatives and find the funding to make them happen? ❖

Adam Leavesley is a member of the Wellington Rainforest Action Group.



CLARE CUNNINGHAM

Pete Hodgson

THE FIRST thing Pete Hodgson suggests to newcomers to his office is that they take a few minutes admiring the harbour view, before getting down to business. He is new to Parliament, having won the Dunedin North seat in 1990. Despite his inexperience, colleagues describe him as a key strategist in the Labour caucus. He is responsible for the portfolios of Environment and Research, Science and Technology and is associate Energy spokesperson.

After school in Whangarei and veterinary science at Massey University, he worked in rural and urban veterinary practices both in New Zealand and overseas, and also as a teacher, fruit and vegie retailer, and Labour Party organiser.

Opposition to the Vietnam War was one of the first causes Hodgson took up. This was followed by involvement in issues such as the Springbok tour and the environment.

The campaign to stop the raising of Lake Manapouri in the early seventies was his first taste of environmental activism. He also opposed the Clyde Dam and the proposed Aramoana aluminium smelter.

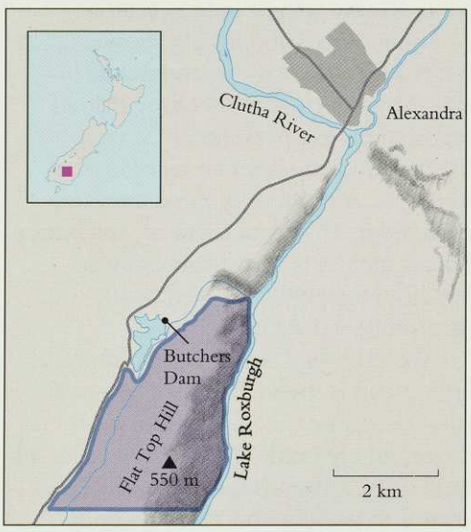
Hodgson is a member of Forest and Bird. He enjoys gardening and often spends free time turning his small corner of Sawyers Bay (near Dunedin) from exotic to indigenous vegetation. He says the garden is starting to look good.

Other interests are swimming, skindiving, windsurfing, tennis and woodwork.

THE MYRIAD FASCINATIONS OF FLAT TOP HILL

The Department of Conservation has acquired the northern end of Flat Top Hill – a representative piece of Central Otago dryland. NEVILLE PEAT reports on the wonderful diversity of the plant and animal life of this new conservation asset.

FLAT TOP HILL is a bulging foothill of the Old Man Range – a "dry, whale-backed hummock of a hill", as one scientist put it. Eleven kilometres long and 813 hectares, it separates the Fruitlands district south of Alexandra from a canyon cut by the Clutha River, now the dammed upper reaches of Lake Roxburgh.



DoC's new acquisition at Flat Top Hill.

In the wider context of Central Otago's block mountain and range-and-basin landscape, Flat Top Hill is a relatively minor event – a kind of block mountain in miniature.

To the uneducated eye the landscape might appear a parched wasteland, good for nothing, not even sheep these days. But there is more here than meets the eye. Flat Top Hill has carved itself an ecological niche.

Notwithstanding the fact this is about the driest place in New Zealand (rainfall averages less than 350 mm or 13.7 inches a year), scientists have counted 180 native vascular plant species.

In terms of biological diversity – a catch phrase at the Earth Summit at Rio de Janeiro last year – this place is a gem.

Some of New Zealand's tiniest plants – most of them regional endemics – live here.

On the salt, wind-eroded soils beside Butchers Dam on the western side of the hill, a native forget-me-not, *Myosotis pygmaea* var. *minutiflora*, turns on a miniature flower show for a few weeks in spring.

Two other tiny spring annuals, long in name but short in stature – *Myosurus minimus novae-zelandia* and *Ceratocephalus pungens* are considered endangered. The type locality for *Ceratocephalus* has been converted to pasture.

All three spring annuals occur together and separately at Flat Top Hill, forming distinctive communities, found nowhere else, with other salt-tolerant species.

From Butchers Dam at 140 metres above sea level, the land rises to 550 metres. It is classic Central Otago. The higher ground is studded with outcrops of decaying schist that tease the imagination with weird angles and shapes. At the foot of the hill, beside Butchers Dam, the characteristic grey and brown shades of the earth give way to splashes of vivid colour – red, orange, yellow, and dazzling white. The colours are contained in a sequence of ancient soils.

Known as paleosols, these soils were formed 20 to 25 million years ago, apparently in a tropical or sub-tropical climate, and remained buried under sedimentary layers until the gold miners arrived. The soils were exposed by alluvial gold-mining operations that sluiced away the sedimentary material.

From the shores of the dam to the flats at the summit, the area contains a range of habitats, including salty ground, short tussock grassland, shrubland, cushion fields and an occasional seepage or wet zone. There is a pond on top of the hill, seasonally dry.

The salty soils harbour plants found in only a few other places.

Not surprisingly, the diverse habitats are host to a variety of insects and other invertebrates.

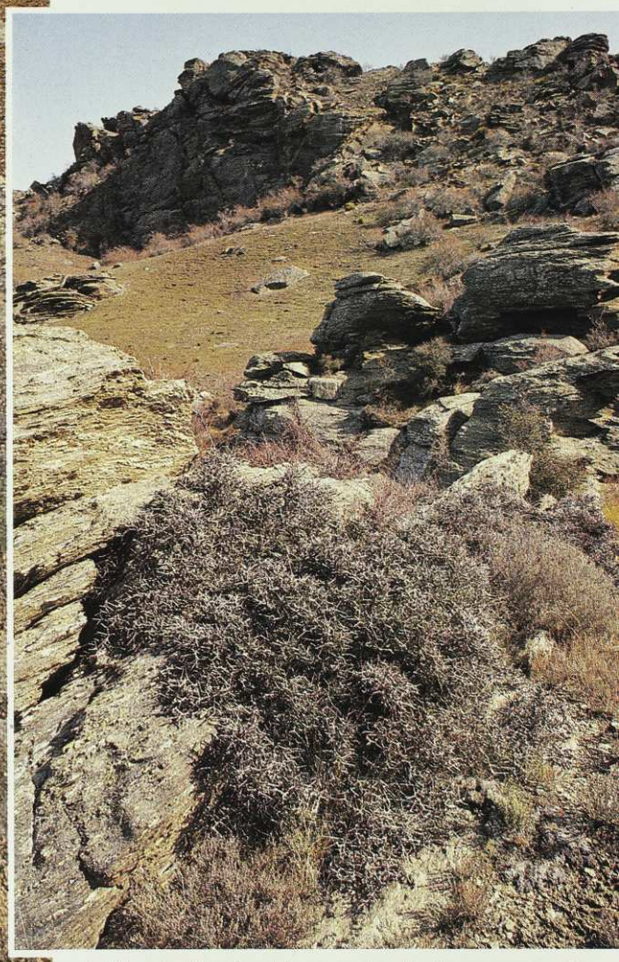
The rare flightless Alexandra chafer beetle lives here. So does a broad-nosed

DoC scientist Brian Patrick examining the ancient soils on the shores of Butchers Dam.

Cushions of ground-hugging Raoulia *decorate the summit of Flat Top Hill.*

weevil that appears to be new to science. Brightly coloured day-flying moths frequent the warm surfaces of the tors.

Like many properties in the region, this one has had its share of rabbits. Local farmers probably thought DoC was buying a headache. But a poisoning programme last year made inroads into the rabbit population and there has been follow-up shooting through the first half of this year.



▲ *Tor shrublands with porcupine shrub,* Hymenanthera alpina, *high up on Flat Top Hill.*

ALL PHOTOS BY NEVILLE PEAT

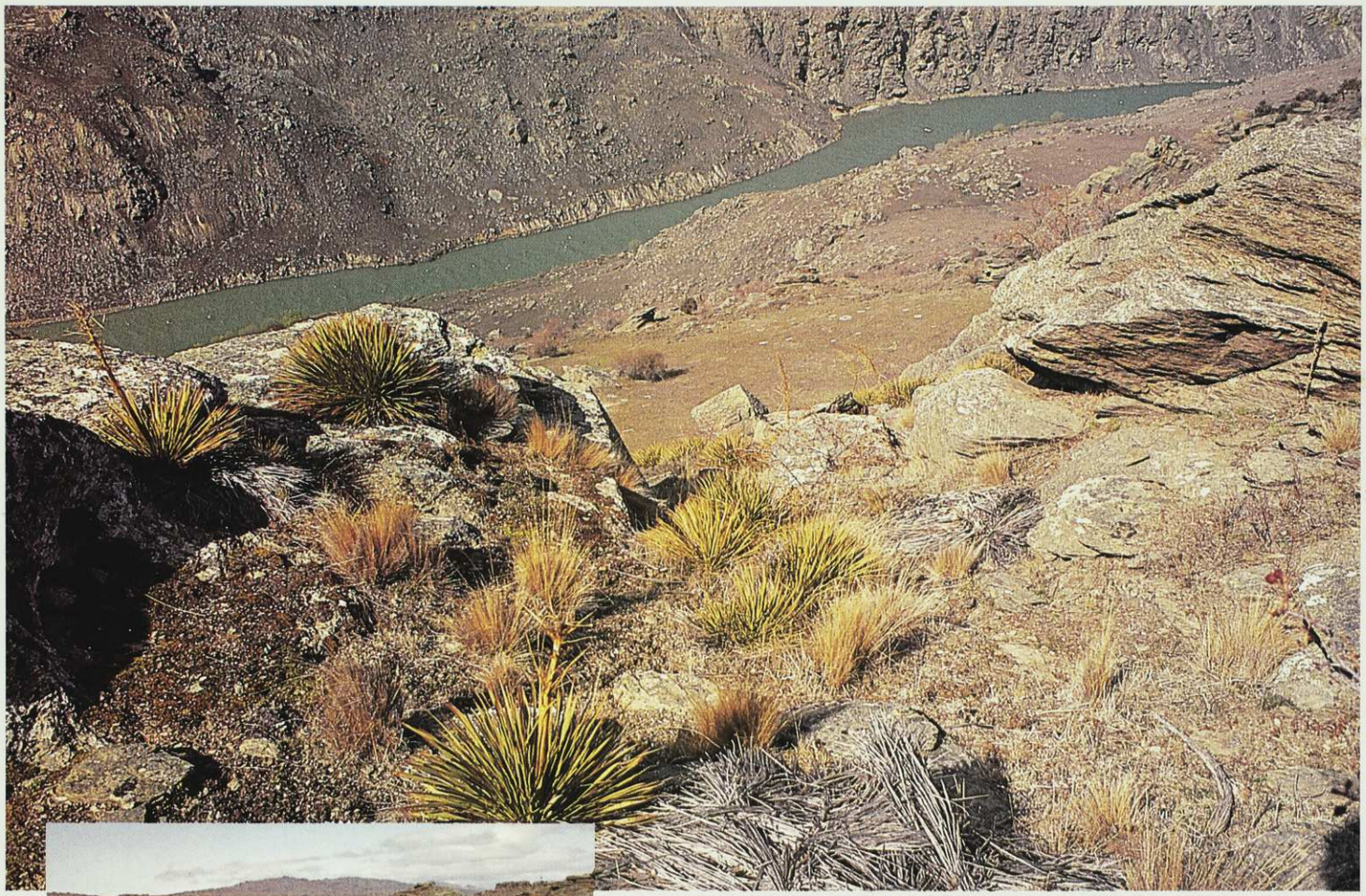
◀ *Small is beautiful. A native forget-me-not,* Myosotis pygmaea *var.* minutiflora *in flower. The hairy brown leaves of this little annual form rosettes no bigger than a fingernail and the single yellow flower at the centre of the rosette is about the size of a pinhead.*

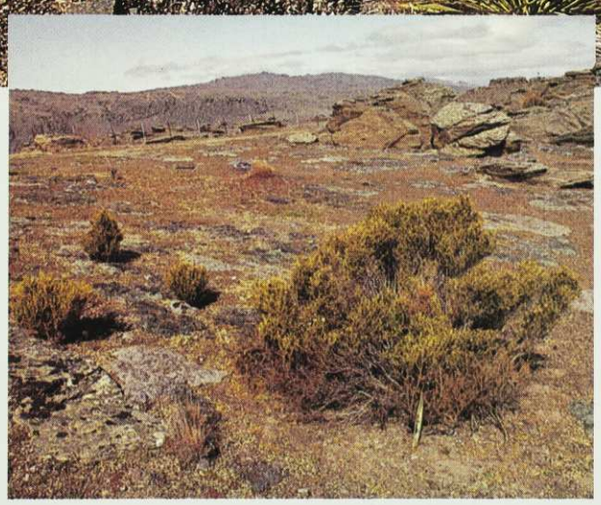
DoC closed the area to the public for a few months to minimise disturbance to the rabbits and encourage them into open spaces where they would become easier targets.

The other scourge of the range lands, *Hieracium*, has had little impact at Flat Top Hill. Wilding pine trees are a potential threat, however, and DoC has plans to remove these before they become a problem.

On the sloping lower areas, introduced thyme blankets the ground, filling the air with its savoury scent, but it is not considered a threat to natural values in the long run.

DoC scientist Brian Patrick organised a





▲ *Looking into the upper reaches of Lake Roxburgh from near the top of Flat Top Hill where speargrass is at home.*

◀ *With the removal of grazing pressure, shrubs such as* Cassinia fulvida *are expected to spread and recolonise parts of the hilltops.*

"THERE'S NO DOUBT," says Brian Patrick, "that Flat Top Hill is nationally important in a conservation context. There's nothing quite like it."

In addition to the natural values, the area is of interest historically. On the eastern side, near the shores of Lake Roxburgh, there are several rock shelters that were occupied by miners last century and as recently as the 1930s. One shelter has been converted into two rooms by the use of rock walling. The fact that many such gorge shelters have been drowned by hydro-electric development makes the examples surviving at Flat Top Hill all the more important.

In Central Otago there are precious few places like Flat Top Hill where people can freely roam and experience the dryland environment first-hand.

Central Otago has very few protected areas at relatively low altitude. Most of the reserves are on the tops of the ranges – the Bain Block on Old Man Range, for example, and the reserve on the summit of the North Dunstan Mountains.

Flat Top Hill has always been Crown land, leased for grazing. Its conservation value was recognised only in the past few years. DoC bought the run for $68,000, including payments of $45,000 to the lessee and $21,000 to Landcorp. A small amount went towards the settlement of outstanding pest rates.

For the time being the area will retain the status of stewardship land.

The site's proximity to State Highway 8 is bound to make it a popular attraction in the future and DoC has plans eventually to establish signposted walking tracks that will give visitors a look at a range of habitats. Views from the summit are spectacular, taking in the Old Man Range, Dunstan Mountains and Manuherikia Valley.

And yet, notwithstanding the panoramas, Flat Top Hill is certain to attract, in spring at least, visitors intent on examining the ground on hands and knees, hoping for a peek at the miniature plants – a forget-me-not experience. ❖

recent visit to Flat Top Hill by a party of botanists, two of whom were from the North Island. They were delighted by their finds, which included several undescribed vascular plants.

Dr Geoff Rogers, a specialist in non-forest vegetation from Landcare Research in Rotorua, took a guess at what would happen to this landscape after 50 to 100 years of protection. He thought it would develop into a kanuka woodland with kowhai trees and shrubs such as *Cassinia*, *Olearia* and *Coprosma* mingling with the groves of kanuka.

On the higher ground, native short tussock (*Poa* and *Festuca*), together with *Cassinia* would probably dominate.

Neville Peat is a writer based in Dunedin. His latest books are The Falcon and the Lark *and* Stewart Island: the last refuge.

Where we came from

the ideas behind the beginnings of Forest and Bird

SEVERAL CURRENTS in ideas and events came together to form Forest and Bird and help it on its way. By the 1920s there was growing support in New Zealand for the idea that native forests and birds were worth saving. This was part of a fundamental shift in outlook.

When European colonists first came to New Zealand in the nineteenth century and set about transforming it, they had taken it for granted that European animals, plants (and people) were superior to their native counterparts. They regarded the displacement and probable extinction of the native species in the face of more "advanced", more "vigorous" immigrants as a natural and inevitable part of the progress of colonisation. Some explained the process as Divine Providence, others as Darwinian survival of the fittest, but either way this displacement, to the colonists, was part of the law of nature.

Any idea of protecting or preserving native species, from this viewpoint, seemed out of the question. With the bush being cut, burnt and cleared as quickly as possible to make way for farms ("one blade of grass is worth two trees" as the saying went), there was little support for saving native forest even for a timber supply. From the 1870s there was some discussion of forest "conservation", but in this context the word was used in the sense of expert forestry management along the lines being developed at that time in India.

In the case of birds and other animals, the colonists were mainly interested in introducing or "acclimatising" European species. From the 1860s they had formed acclimatisation societies to bring in sparrows and thrushes, trout and pheasants, deer, possums and a host of others. Some native species (kiwi and tuatara, for instance) were sought by scientists as museum specimens but, in general, unless they were good for eating (kereru and kaka) or good for hunting (ducks and godwits), native species were considered good for nothing, and all destined to disappear with the advance of civilisation.

By the turn of the century, however, this view of native inferiority and inevitable extinction was being modified. The change seems to have been associated with the development of a national feeling in New Zealand: the colonists were becoming settled New Zealanders and beginning to identify with their new country rather than the old. Their perspective on native things was shifting accordingly. An increasing number were native-born themselves, and were developing a patriotic feeling for New Zealand, its bush and mountain scenery, and its special native birds. Some were even beginning to refer to the bush and the birds as a natural "heritage" which should be cherished and protected, and handed down unimpaired for future New Zealanders.

Forest and Bird was by no means the first group to promote this new kind of conservation. The earliest were perhaps the scenery preservation societies which flourished in many centres in the 1890s.

In 1923 Captain Val Sanderson began what was then called the Native Bird Protection Society, and by his enthusiasm and energy nurtured and promoted the society through its early years. But no movement comes out of a void. ROSS GALBREATH looks at the conservation issues and ideas of those times.

Above: In the 1920s there were still arguments over whether the celebrated huia still survived, and official and private expeditions set out to capture some for transfer to island sanctuaries such as Little Barrier and Kapiti. The growing interest in the bird was part of a change in attitudes to native animals and habitats, with a new belief that they were worth preserving.

BULLER'S A HISTORY OF THE BIRDS OF NEW ZEALAND

Their new attitude toward the native bush that was fast disappearing from the hills was well expressed by W.P. Reeves' widely-quoted poem "The Passing of the Forest", written in 1898, with its closing lament:

". . .Is this the price we pay –
The price for progress – beauty swept away?"

Such sentiments were voiced at this time even in Parliament. Legislation established national parks at Tongariro in 1894 and Taranaki in 1900, and in 1903 a Scenery Preservation Act was passed to provide for the reservation of other areas of particular scenic or natural beauty. There were limits, of course: land suitable for farming was not to be set aside, since, as the new Scenery Preservation Board put it, "the needs of settlement are imperative".

At the same time there were signs of a new, patriotic feeling for the native birds. In 1907 the natural history writer James Drummond declared that "the bell-bird's song is even more bewitching to a New Zealander than the lark's song is to an Englishman. The notes go straight to a New Zealander's heart."

Some moves had been made even in the nineteenth century to protect or preserve native birds. To begin with it had been more a matter of regulating the hunting of particular species, by special provisions under the game laws.

The tui was an early sentimental favourite, and was given some protection in this way in 1873, followed by white heron and crested grebe in 1885. In 1892 huia was added to the protected list (at the request of both Ngati Huia of Otaki and the Governor, Lord Onslow), followed in 1896 by bellbird, kokako, kakapo, kiwi, saddleback, stitchbird (and tuatara). Kereru had been on and off the protected list for some years. But this statutory protection was not very effective. The very rarity of species such as huia made them sought-after as museum or drawing-room specimens, and the "collectors" who shot birds for this trade paid little heed to legal restraints.

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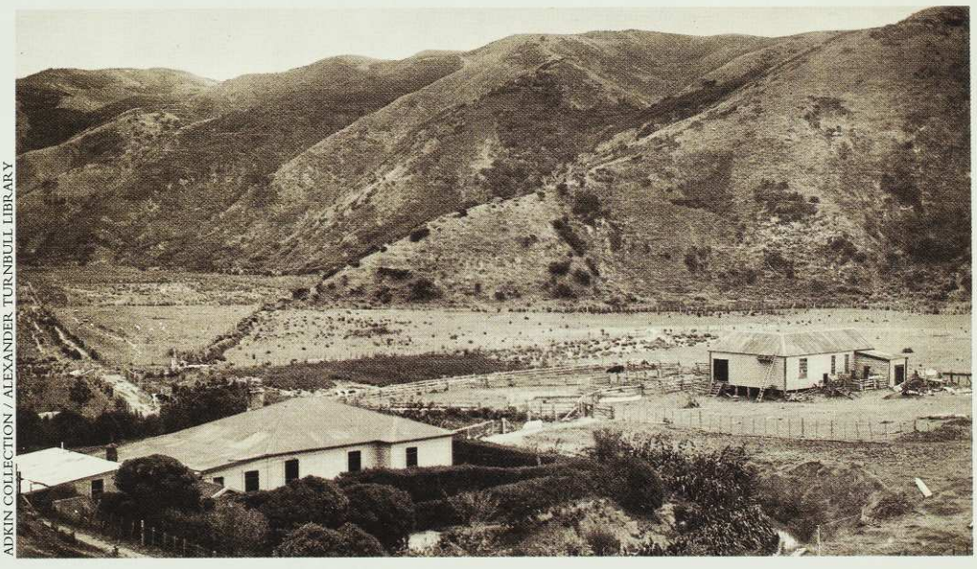


ADKIN COLLECTION / ALEXANDER TURNBULL LIBRARY

THE NEXT approach to bird protection was to establish island reserves as arks of refuge for native species, where it was hoped they would be isolated from the introduced competitors, predators (especially the recently introduced and already widely detested stoats and weasels) and all the other effects of civilisation and progress on the mainland. Resolution Island was reserved for this purpose in 1891, Little Barrier Island in 1895 and Kapiti in 1897, and efforts were made to try to transfer birds such as huia, kiwi and kakapo to them.

Kapiti Island attracted particular attention. It still retained a certain mystique from its connection with the Maori warrior leader, Te Rauparaha, and it was also the most visible and accessible of the island reserves – and the nearest to the politicians in Wellington. In 1914 the state of the Kapiti Island reserve became a matter of public controversy. The northern end of the island was still farmed by the Maori owners, but there was no proper boundary fence. The critics charged that the reserve was overrun with sheep and goats, destroying the very plants and animals it was intended to preserve.

Among these critics in 1914 were E.V. (Val) Sanderson, and a new conservationist pressure group, named the New Zealand Forest and Bird Protection Society. This organisation had little if any connection with our present society. It

▲ *Bush clearance in about 1905. A familiar scene in pioneer New Zealand, but already attitudes were starting to change. Part of the change was a growing national feeling and attachment to native things, part was due to growing urbanisation. More New Zealanders were now town-dwellers rather than rural settlers and were becoming more sentimental about the bush – distance lent enchantment to the view.*

◀ *Waiorua valley on Kapiti Island around the turn of the century showing the cleared hillsides. It was official neglect of the island, a nature reserve since the end of the nineteenth century, that was the spur to the formation of the Native Bird (later Forest and Bird) Protection Society in 1923.*

appears to have been set up by the conservationist politician H.G. Ell (cousin of the grandfather of current Forest and Bird president Gordon Ell). It certainly had an impressive letterhead, listing the Governor as patron and a number of eminent people as office-holders, including W. Guthrie-Smith, Professor H.B. Kirk, and Dr L. Cockayne. But it seems that it was a paper society only – there is no indication that it ever held a public meeting – and it soon faded away.

In 1916 another group with an interest in conservation sprang up. The New Zealand Forestry League was established by Sir James Wilson and Alexander Bathgate primarily to promote properly managed forestry in New Zealand, but also to preserve native forest.

The dual aims of this society were summed up in its motto, "Preservation and Conservation" – with conservation used here in the forestry sense of careful management for future utilisation. By the 1920s the Forestry League had a membership of several hundred. It also sponsored a journal called *Forest Magazine*, edited by Will Lawson, a journalist and publicity agent with aspirations to become a writer and poet.

The first number of *Forest Magazine* in February 1922 carried an article by Val Sanderson on "The Sanctuary of Kapiti Island". After returning from the war, Sanderson had revisited Kapiti and found that despite the earlier public criticism about damage to the reserve by wandering sheep and goats, little had been done by the departments responsible. With the support of like-minded friends, he raised the issue once again. "Kapiti 'Sanctuary' fenceless, therefore defenceless", ran the headlines; "Native birds need native bush".

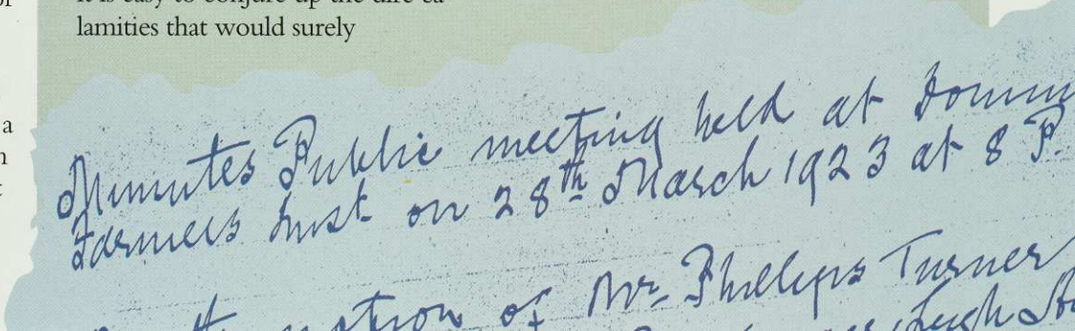
WHILE THE Kapiti controversy was running hot, Parliament was considering the general issue of protection of native birds as part of a general consolidation of the game laws. The Animals Protection and Game Act passed in February 1922 incorporated an extended list of protected native birds. However, there was strong opposition to this from some quarters. Sportsmen of the acclimatisation societies considered that this time the legislators had gone too far in protecting species which had traditionally been regarded as game for hunters. They pressed the government to move paradise duck and pukeko from the protected list back to the "native game" category.

In Parliament one of the strongest advocates for the protection of native birds was a former Prime Minister, Sir Thomas MacKenzie (H.G. Ell would have been another strong advocate, but he had lost his seat in 1919 and returned to Christchurch and other issues). MacKenzie mounted a personal campaign to keep paradise duck and pukeko on the protected list. In October 1922 he even introduced a Bill to ensure this, but the government, under pressure from sportsmen, did not to let it pass. MacKenzie

"A MEETING WAS held in Wellington on 28th March last to discuss the protection of native birds, Sir Thomas MacKenzie MLC occupied the Chair, and a number of prominent scientists and interested persons were present, including Ornithologists, Botanists, Entomologists, Foresters and Agriculturalists. . .

Much interesting and valuable discussion took place on the value and importance of bird life to the community. Amongst other things mentioned an eminent forester remarked that "No forest in the world is so dependent on its bird life for pollination of flowers, distribution of seeds and control of destructive insects as that of New Zealand". He further impressed upon the meeting the fact that should our birds become extinct it would spell the certain death of our forests. Now considering the value of these forests to our own well-being, it is easy to conjure up the dire calamities that would surely follow their destruction. It should be noted that this Society is formed to advocate strongly the necessity of efficient protection of our birds (where none exists at present) by bringing the control of all wildlife under one efficient organisation, and also advocating the institution of a "bird day" in our schools. 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, thus raising the nation to higher ideals and standards." 99

part of a circular letter from Captain Sanderson in April 1923 to supporters of the new Native Bird Protection Society. Within two years the circulars to members had evolved into a bulletin, Birds, *and then in 1933,* Forest & Bird.



then looked outside Parliament for support. He encouraged Sanderson to widen his Kapiti campaign: a body pressing for protection for native birds was needed to counter the opposition from the sporting lobby and apathy elsewhere.

Sanderson took up the challenge. Initially he raised the idea with friends in the Forestry League and suggested that the league might extend its brief to include the protection of native birds. The Forestry League evidently declined this proposal but did offer its cooperation and support for any new organisation which would press for the protection of native birds alongside its own work for the protection of native forests.

Thus, it was in this context of cooperating with the league that the new Native Bird Protection Society was proposed and established at the inaugural public meeting organised by Sanderson in March 1923.

Sanderson also proposed that Will Lawson's *Forest Magazine* should be used as the official journal of the new society as it had been earlier by the Forestry League. This did not eventuate, as shortly afterwards Lawson moved on to bigger things in Sydney, and the magazine folded. Sanderson and the Native Bird Protection Society did, however, retain his Post Office box (number 631 – still used by the society), and soon began its own journal, initially entitled *Birds*.

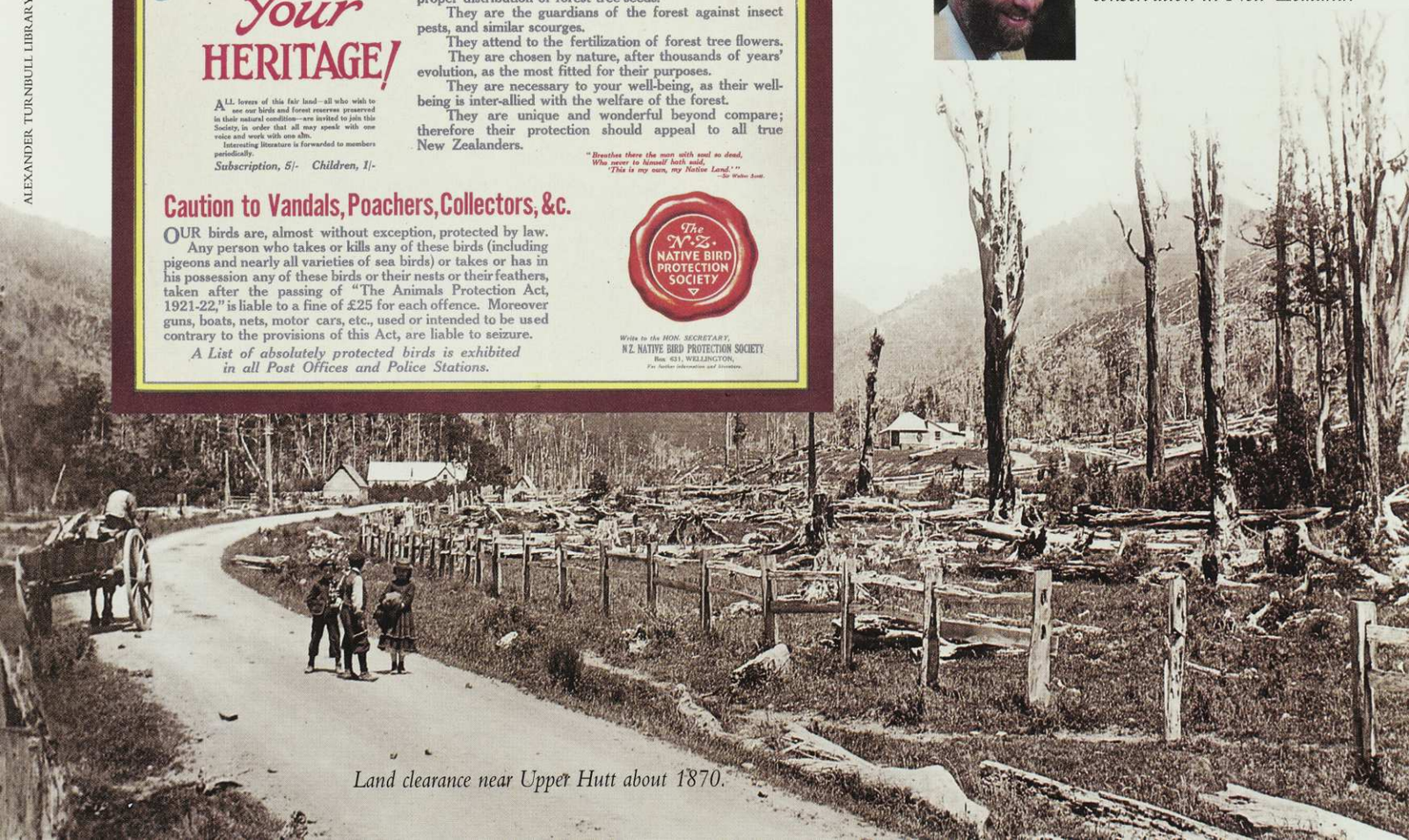
For some years the Forestry League continued to assist the new society with financial and other support, but the society soon had much the stronger voice. Sanderson was its driving force and chief organiser. He built up a band of supporters and cultivated a network of contacts in newspapers throughout New Zealand. With their help he became a very effective publicist for the cause of conservation.

By the 1930s the society was relatively well established, while the Forestry League was declining. It lacked leadership after the death of its first president, Sir James Wilson, and it also lacked a clear focus because of its dual interests in production forestry and preservation of native forests. But the Native Bird Protection Society was already widening its area of concern and taking up the League's cause of native forests as well as birds. In October 1933 the Native Bird Protection Society changed the title of its journal from *Birds* to *Forest & Bird*. It is not clear whether there was any contact with the eccentrically aging H.G. Ell in Christchurch, but shortly after his death in 1934 the society went on to adopt the name of his earlier organisation. As the Forest and Bird Protection Society it has continued to flourish. ❖

A poster produced by the society in the 1920s. Even though the name of the organisation was not formally changed until 1934, the connection between wildlife and its forest habitat was emphasised from the beginning.

FOREST AND BIRD ARCHIVES

Ross Galbreath is a scientist and historian with a special interest in the development of conservation in New Zealand.



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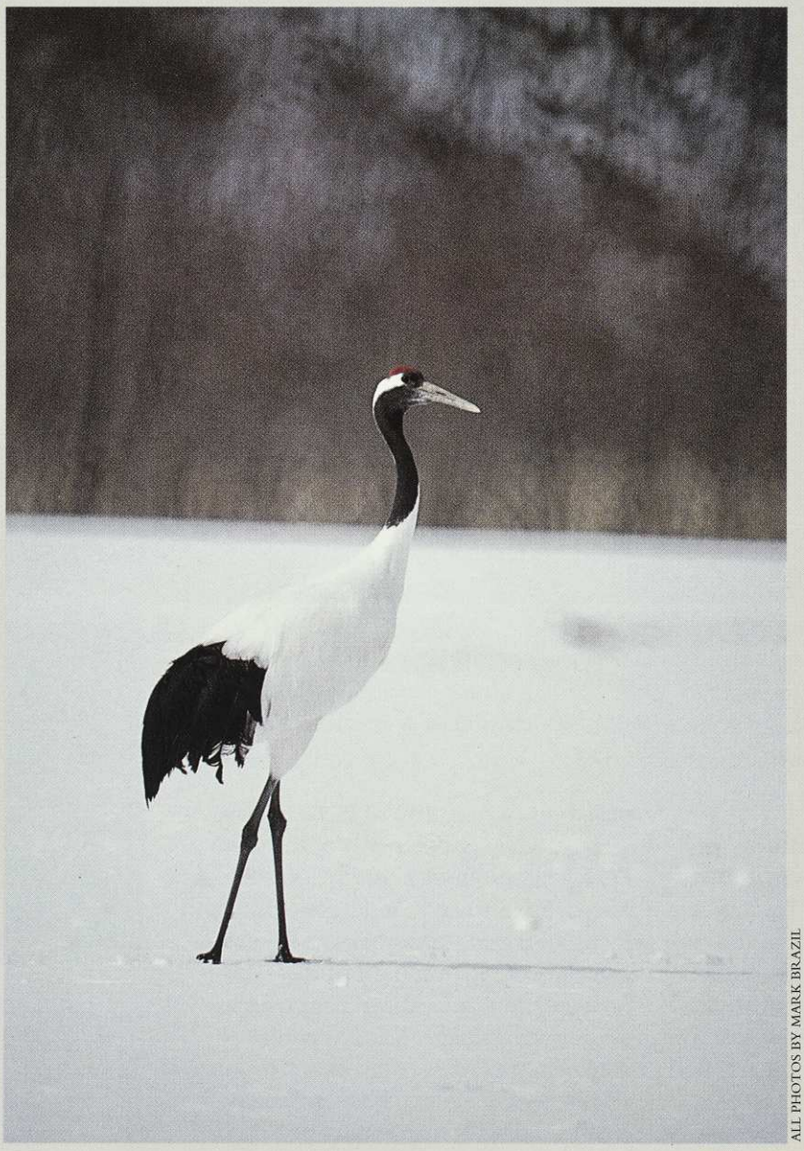
Land clearance near Upper Hutt about 1870.

THE JAPANESE CONNECTION

Next month Japan will host an international show-case meeting on wetlands – the 5th World Ramsar Conference. But as MARK BRAZIL reports, Japan's record in protecting its significant range of wetlands – vital for migratory birds as far away as New Zealand – is less than it should be.



ALL PHOTOS BY MARK BRAZIL

The sacred crane of Japan, tancho, *was virtually wiped out in Japan by the turn of the century. Numbers of Japanese crane have thankfully recovered to around 500 birds but they now face loss and degradation of their habitat, in Hokkaido, which is limiting their breeding population.*

THE JAPANESE archipelago stretches for more than 3,000 km along the Asian coastline linking the subarctic, in Hokkaido, with the subtropics, in the Nansei Shoto islands. Imagine what that means for the enormous range of habitats within a country which, while largely mountainous, has a coastline of more than 27,000 km.

Prolonged geological isolation and the fact that the islands were spared the ravages of north-east Asia's last major glacial period, means these habitats harbour an astonishing wealth of wildlife, from the alpine zone of the Japan Alps, to the coral reefs of Okinawa. Many species are endemic but, as a consequence of Japan's geographical position astride a vital arm of the East Asian/Australasian migratory bird flyway, the archipelago also hosts large numbers of migrants from Siberia, South-East Asia, Australia and New Zealand – and not only birds. Sea mammals such as northern fur seals, and many cetaceans migrate through Japanese waters.

Richest of all of Japan's diverse habitats are its wetlands, ranging from alpine wetlands and subarctic coastal marshes to southern mudflats, mangroves and coral reefs. These wetlands are vital not only for resident species, but also for migratory wildlife such as cranes, vast numbers of waterfowl, gulls and hordes of shorebirds.

Wetlands are widely acknowledged as the most productive ecosystems on earth, supporting high biological diversity, functioning as breeding, nursery or feeding grounds for coastal fish, helping to regulate water supplies, and crucial in flood and erosion control. Yet too often they are viewed as wet wastelands, ideal, because of their topography, for reclama

By far the commonest crane wintering in Japan is the hooded crane. The majority of its world population migrate to Arasaki in south-west Kyushu from north-east China and Russia via the Korean peninsula. Each year they are joined by around 1,500 white-naped cranes (see inset). The total flock in excess of 10,000 birds makes the reclaimed fields and marshes at Arasaki a crucially important Asian "wetland" well deserving of Ramsar status.

tion, and of no other value.

Thanks to drainage, reclamation, pollution or over-exploitation, wetlands are amongst the most threatened habitats in the world. However, wetland destruction and degradation has received little attention, particularly in Japan. Yet the huge numbers of filter-feeding animals that live in tidal flats and salt marshes purify water by consuming immense quantities of plankton and organic detritus. Loss of these precious habitats and their water-cleansing capacities ultimately damages the marine food chain, on which, ironically, the Japanese are particularly dependent.

Japan, like many developed countries, has already lost most of her wetlands. Those left are scattered, like isolated stepping stones, and are threatened. No fewer than 85 of these remaining wetlands, amongst the most important in Asia, have been declared of international significance and worthy of designation as Ramsar sites.

Japan is a crucial link in a chain of feeding and resting sites for long-distance migrants. The entire length of the archipelago forms one arm of the East Asian flyway, while another arm of the same flyway passes up through the Nansei Shoto, Kyushu and the Korean Peninsula. Kyushu, the most southern of Japan's main islands, lies on both of these branches and so wetlands here have a double significance. Yet Kyushu's wetlands are dramatically under-protected and over-threatened. The crisis facing Japan's wetlands is an international one.

One imagines that, in a nation so dependent on marine resources for food, not only fish, but also shellfish and for seaweed cultivation, there would be the highest concern for the survival of an ecosystem which, amongst other things, helps to purify in-flowing river water, and reduces nutrient overloads in shallow waters. The purifying capacity of the tidal flat biota is immense, so great as to be incalculable, yet paradoxically the value of wetlands has been largely ignored in Japan.

The rate of loss of coastal wetland habitats alone in Japan is a depressing one. The result of four decades of targeted continuous development has meant that 35 percent of tidal flats were drained and reclaimed between 1945 and 1978 and a much larger percentage degraded. Yet none of Japan's four wetland sites protected under the Ramsar Convention are coastal. In fact, by 1989, on the four main islands, less than half the entire sea coast was in a natural state. At the current rate all of Japan's natural sea coast, salt-marshes and tidal flats included, will be gone within 65 years.

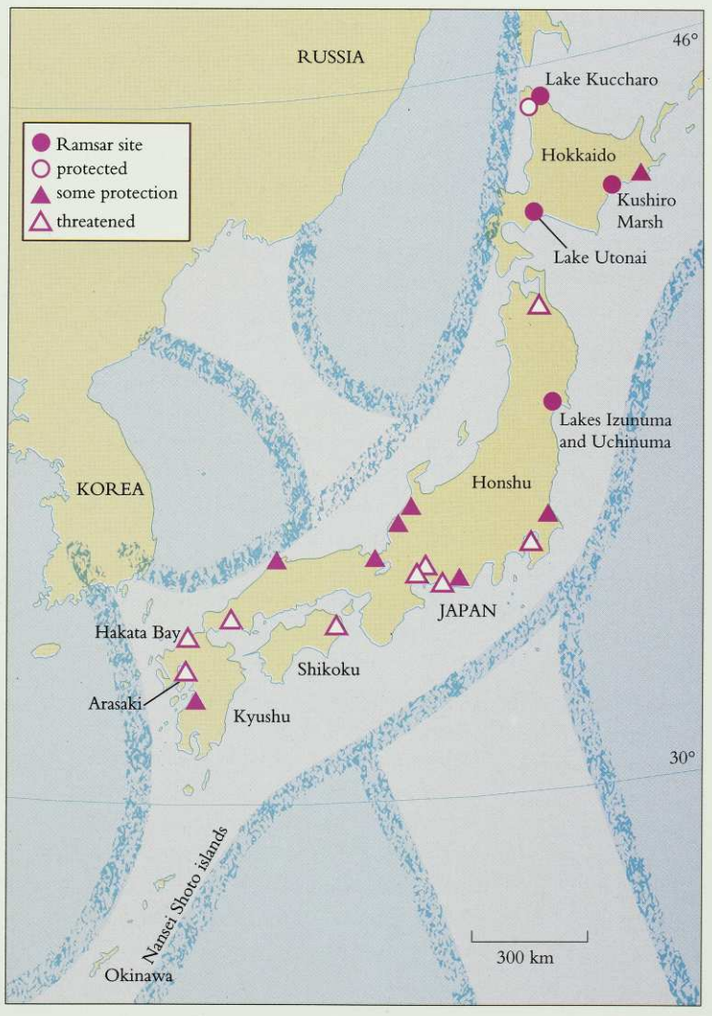
MENTION JAPAN and wetlands in the same breath and most naturalists can summon up images of flocks of graceful snow-dancing Japanese cranes in their Hokkaido homeland, where, dependent on the

remaining, mostly coastal, marshes and reedbeds for nesting, they number about 500. The more widely read may also know of Arasaki, Kyushu, in southern Japan, where 10,000 migratory hooded and white-naped cranes gather each winter and which are a conspicuous eco-link between Japan and her continental neighbours – Korea, China and Russia.

But dependence, amongst birds alone, on Japan's wetlands does not end with the cranes. Up to one and a half million waterfowl, including whooper and Bewick's swans, bean and white-fronted geese, and more than twenty species of ducks, flock to Japanese wetlands each winter, and tens of thousands of a wide range of shorebirds from northern Europe and Asia pass through on spring and autumn migration.

Some of these long distance migrants, such as godwits and knots, moving within the East Asian/Australasian flyway, reach New Zealand in considerable numbers. For others like turnstone, far eastern curlew, red-necked stint, sharp-tailed sandpiper and Japanese snipe, only a few dozen to a few thousand spend any time here. But Japan's position on their flyway is a crucial one for all of them.

Other groups, not only shorebirds, are dependent too. The numbers of wintering gulls visiting Japan's coastal wetlands



▲ *Japanese cranes. Over a quarter of the world population of this crane is dependent on the wetlands in Hokkaido.*

◀ *The most important of Japan's 85 internationally significant wetlands, and the Japanese arms of the East Asian/Australasian bird migration flyway.*

What is Ramsar?

RAMSAR is the name of a town in Iran where, in 1971, the first inter-governmental meeting on "Wetlands of International Importance Especially as Waterfowl Habitat" was convened. Signatories to the resulting convention, known as the Ramsar Convention, the first international conservation convention, now number nearly 70 countries, and more than 550 sites covering more than 35.5 million hectares have been designated as Ramsar sites.

The Ramsar Convention recognises wetlands in their widest possible context, valuing all permanent, temporary, natural or artificial wetlands of any size, including peatlands and bodies of static or flowing water, ranging from salt to fresh, from inland rivers and lakes, to marshes, estuaries and coastal areas, even to coral reefs. The parties to the convention have recognised:

- the ecological importance of wetlands as highly productive environments,
- their value because of their rich faunas and floras,
- the great economic benefits they bring through fishery production, maintenance of water tables, water storage and flood control, shore-line stabilisation, water purification and so on, and
- that wetlands are international, used widely by migratory species, and affected by both water and airborne pollution and development, all of which move across political boundaries.

The purpose of the convention is, having recognised the importance of wetlands, to curb their continued losses, to ensure their current and future conservation, and (with increasing emphasis as time passes) to ensure their "wise use".

Japan became a signatory to the Ramsar Convention in 1980, when it listed Kushiro Marsh in Hokkaido (famous for its cranes). In the subsequent 12 years it has designated three further sites (Izunuma and Uchinuma in 1985, a major wintering ground for geese; Kuccharo-ko in northern Hokkaido, in 1989, a major staging area for migratory swans; and, most recently, Utonai-ko, in south-west Hokkaido, in 1991, a staging and wintering area for large numbers of swans, geese and ducks). The four sites total 10,402 hectares.

But is that good, or bad? Where does Japan stand in the international community of conservers of wetlands? With just four sites, Japan has less than any other advanced industrialised nation. Of Japan's 85 internationally significant wetlands, 24 have been further identified as of the utmost importance (see map). Of these, just four are Ramsar sites, and despite various frameworks within which Japanese wetlands could be protected, only 0.2 percent by area of Japan's internationally important wetlands are currently covered by protective legislation.

By all international comparisons, whether by land area, wetland area, habitat range, species requiring protection and so on, Japan has designated disproportionately few sites and a disproportionately small area. As a result, by 1992, Japan ranked only 31st on number and 54th on area out of 67 signatory countries.

Japan's Ramsar sites fail to span the ecological and geographical range of wetland habitats, let alone protect a significant proportion of them, and fail to protect important aspects of a major flyway and its branches. All four are inland freshwater sites, and none protect coastal mudflats or estuaries, the habitats most critically lacking in protection, and which are absolutely vital as habitat for the conservation of migratory shorebirds. Furthermore, three of her existing Ramsar sites are currently seriously threatened by both development plans and habitat degradation.

Japan's current stance within the Ramsar community is therefore a particularly weak one, a weakness further highlighted by Japan's position on a major migration route, the species dependent on her, and, of course, Japan's enormous, and enviable, financial resources compared with most other countries.

Towards the other end of the spectrum, for example, is the UK, which joined Ramsar in 1976 with 13 sites and now has 53, covering a wide range of habitats the length and breadth of the country. Japanese wetlands are generally far more important than those of the UK, as Japan spans a wider range of climatic zones and resulting habitats than the UK.

are huge, but unstudied; one of them, Saunders gull, ranks as a world rarity, numbering only about 2,000. We now know it to be especially dependent on the estuaries of northern and western Kyushu, where 25 percent or more gather during winter. Kyushu's wetlands form a crucial part of its range, yet not only are its wintering areas unprotected, they are seriously threatened (see item on Hakata Bay, *Forest & Bird*, November 1992), though they also support other endangered species such as black-faced spoonbill and Chinese egret.

Japan, through ratifying the Ramsar Convention and by establishing a number of bilateral migratory bird treaties in Asia and Australasia, has expressed a commitment to the protection of wetlands and such species as the far eastern curlew, Saunders gull, and others. An expressed commitment unfortunately is not enough. Conservation action is necessary to protect habitats, to fulfil that commitment. Only when Japan has made practical efforts to protect habitats at home will she be able to begin to tackle issues elsewhere along the flyways. Japan is of course implicated further afield, especially now in the Russian Far East, where a massive

Once an abundant and widespread winter visitor throughout much of Japan, the population of white-fronted geese was dramatically reduced by hunting last century and steadily by habitat destruction since then. Now the majority of the 19,000 wintering population is restricted to one plain in northern Honshu.

◀ *Approximately 14,000 of the east Siberian breeding population of whooper swan migrate to Japan to winter in the northern parts of Honshu and in Hokkaido. Formerly abundant as far south as Tokyo it was killed for its down and quills so extensively last century that numbers were severely reduced. While hunting has since ceased and numbers have increased, it has not yet returned to its more southerly wintering areas.*

drive for logging is being fuelled by Japanese and South Korean corporations whose activities will have serious impacts on the wetlands of the region and the many species dependent on them.

The natural meanderings of the rivers flowing through Kushiro's peat swamp – Japan's largest – hide the high levels of inflowing silt and pollution from surrounding development and agricultural land. ▶

IN SPITE OF, or perhaps because of, her poor showing in the arena of wetland conservation, Japan, in particular Kushiro City located adjacent to Japan's largest remaining peat marsh, offered to host the next meeting of the parties to the Ramsar Convention in June this year.

Promises made at the last meeting of the parties, that Japan would designate at least ten more sites now seem unlikely to be met. In fact rumours indicate that Japan may even fail to bring numbers up to ten. Perhaps then Kushiro is hosting the meeting despite Japan's stance. There is talk of local electioneering, of taking advantage of the meeting to boost the tourist potential of the area, and not, unfortunately, enough talk about boosting the environmental protection of Japanese wetlands. In June, however, all eyes will be focused on Japan and her apparent desire to take a firmer lead in Asia based not solely on economic might.

The Ramsar Convention is, however, something of a contradiction since it is the very governments promising to protect wetlands which are actually destroying them. In Japan alone government public works projects threaten 80 percent of the wetlands identified as of international importance. Will hosting the 1993 Ramsar conference set the stage for conscientious conservation action in Japan, or will it be a convenient smoke screen behind which unchanged destructive policies can hide?

What will delegates see at the 1993 meeting? They will certainly see an apparently pristine marsh and beautiful cranes, though the unseen hydrology of the marsh is actually in an endangered

Coastal "reclamation" Japanese style.

◀ *Hooded and white-naped cranes wintering in Arasaki.*

For all its locally perceived "shortage" of land, Japan's post-war development has been of low-rise suburban sprawl which has consumed enormous areas of both productive agricultural land and large areas of once-rich wildlife habitat.

state and the breeding success of the cranes remains poor. I doubt that they will grasp the atmosphere of powerful negativity towards local NGOs held in Japanese government circles, nor the fact that public opinion is largely ignored. They may also miss the fact that the role of development in Japan has been and remains paramount. Discussion and emphasis on sustainable development and "wise use" could play straight into Japanese hands here as they divert it to their own economic ends, particularly because "wise use" seems to defy definition, even by the Ramsar Bureau, leaving it open to enormous abuses.

If Japan does take a lead, she will do so with a concept of environmentalism and conservation sometimes subtly, sometimes vastly different from that in the western mind, with the emphasis on technological advancement and development of the human environment – an environment with its focus on energy conservation, water purification, sewage treatment, and industrial pollution emission control. All these are worthy, and essential, in terms of global reduction of human impact, yet they are vastly different from the emphasis westerners place on species, habitat and ecosystem conservation and maintenance.

NEW ZEALAND has five Ramsar sites totaling 38,000 ha and, as a member of the convention, we will be sending a representative to next month's conference. However, New Zealand's recent record on wetlands is poor. In 1991 in a breach of its Ramsar obligations the current government allowed Landcorp to sell 1,100 hectares of the internationally significant Kaimaumau swamp in Northland, containing the largest resident number of threatened species of any wetland in New Zealand, to developers. The government's action has forced Forest and Bird, at considerable cost, to take out a heritage order for the wetland.

◀ *From its wintering grounds in Australia (and very occasionally New Zealand), the Japanese snipe migrates to Japan along the East Asian/ Australasian flyway. Its main breeding range is on the lowlands of the northern island of Hokkaido though small pockets of birds breed in highland areas further south.*

WHILE JAPAN'S education system can justifiably claim honours in the extent of literacy and numeracy, when it comes to teaching a balanced view of the natural world, it fails. A survey in 1983 revealed that over 70 percent of science and social studies teachers considered environmental education to mean teaching children to tidy their rooms and not to drop litter.

The long-term absence of real environmental education is reflected in the current generation of policy-makers and planners whose misunderstanding of basic ecology is shocking. One town planning department official in southern Honshu, in supporting estuarine reclamation, referred to complaints that the mudflat was home to mosquitoes, as if that were the major issue. "Greenery can be preserved on the reclaimed land," he added, without explaining how populations of wetland species, shellfish, crabs and migratory birds, could somehow, suddenly make a home on dry land.

While paying lip service to international environmental concerns, Japan's vast overseas development aid contributes to environmental degradation on a massive scale, and at home no greater concern is shown for the local environment. Japan's destruction of its own wetlands is misguided and thoughtless, but through development aid it is blindly exporting that destruction further and further afield. Without a concerted effort to develop meaningful environmental education, and without pressure from abroad, Japanese attitudes and actions are unlikely to change. ❖

Dr Mark Brazil is a specialist on Japanese wildlife and the environment. He is the author of The Birds of Japan *and* A Birdwatcher's Guide to Japan, *writes a "Wild Watch" column in* The Japan Times *newspaper and has published in a wide range of journals and magazines on his research into the ecology and behaviour of local bird species.*

KIWIS SEEKING KIWIS

B. HARCOURT/DOC

New Zealand's national bird is in trouble. Surveys by the Department of Conservation show an alarming decline in many populations. But JUDITH DOYLE looks at one population of kiwi that appears to be doing fine.

YOU MAY HAVE tramped New Zealand bush tracks from one end of the country to the other. You may be an enthusiast for our flora and fauna, but chances are you've never seen a kiwi in the wild. Heard them, yes. But few Kiwis have seen their namesakes except in artificial environments.

And that is why the kiwi-spotting trips run by fisherman, Phillip Smith, on Stewart Island are so popular, despite the unpredictability of wind and weather and the necessity to brave the elements at night in order to see the nocturnal kiwi.

On only one occasion, did his group fail to see kiwi, he claims. (He doesn't give the same guarantee in regard to the weather – a good strong westerly can put paid to his best-laid plans and the trips have to be cancelled at these times.)

The kiwi-spotters are briefed before departure from Oban. Phillip Smith is on the left.

The secret of his kiwi-spotting success is seeking them on an isolated beach where their dark feathers are visible against the white sands, even at night. The birds come out on the beach to forage for sandhoppers which they find beneath the washed-up kelp.

The tours start at twilight from Golden Bay which is over the hill from Oban – Stewart Island's main settlement.

After crossing Paterson Inlet, that large slice of water that nearly divides the island, the kiwi-spotters head for a bay at the base of a narrow peninsula called The Neck.

Early last century sealers and whalers settled just north of this area, joining a long-established Maori community. But humans have long departed and the bush and the silence has reclaimed its own.

Often it is the kiwi that pierces this silence with its plaintive shrill call. Phillip Smith frequently hears them from the boat before he ties up. There is a sizeable wharf here, used in the early days as a

Until recently Stewart Island kiwi were considered a distinct subspecies of the brown kiwi found throughout New Zealand, but with recent reorganisation of kiwi taxonomy they are now classed as part of a new Haast/Fiordland/Stewart Island kiwi species known as tokoeka (weka with a walking stick). They are larger than brown kiwi and, unlike other kiwi whose juveniles leave the nest after a few weeks, they stay in close family groups for up to two years.

"heave-down" for whaling and sealing craft that required repair work.

The wharf is a godsend for the kiwi-spotting groups as they disembark in near-darkness and, with the help of their torches, tackle the 10-minute walk over the hill to the wide sands and dunes of Ocean Beach – the area over which DoC has granted a trial concession.

Visitors must be quiet as kiwi have good hearing. They can also smell humans, says Smith – those nostrils at the tip of the kiwi's bill are one of its more bizarre features, but they are very effective.

Their sight, however, is poor. And the food source on the beach is good. Which keeps them busy enough to be relatively unconcerned by the presence of humans. Smith uses a torch, sparingly, on the beach and he asks that no-one else use either a torch or a camera flash.

The sand provides a light background, so the kiwi are not too difficult to pick out, once people's eyes have adjusted to the darkness. They dart about, poking their long bills into the kelp. But the kiwi has more serious business on hand and that nimble bill goes up and down, up and down, to catch the sandhoppers that jump about underneath.

"I make sure the group stays on the beach," says Smith, "That's where they'll see kiwi and anyway, it's safer. It's extremely difficult to find kiwi in the blackness of the bush at night – there are few tracks – and I would be nervous of losing someone! Especially after one incident when a tourist went looking in the bush and we took ages finding him."

ON RETURNING to the boat, Smith gives some background information on the kiwi over hot drinks and cake. He believes they are increasing on Stewart Island, unlike the worrying decreases being reported elsewhere.

"The Stewart Island kiwi is quite different from other kiwi found throughout New Zealand," says Smith. "It has larger eggs, slightly greyer feathers and a longer beak than its more northern cousins, and females are generally bigger than males."

The Stewart Island birds are also unusual in being active both at night and during the day. Scientists believe this may be because, unlike other kiwi, parent birds share incubation, requiring one of them to feed during the day. Or it may be due to a comparatively poorer food supply, forcing birds to forage longer to attain breeding condition.

He prides himself on disturbing the birds as little as possible and this must be

ERWIN BRINKMANN

A Stewart Island kiwi explores Ocean Beach in search of sandhoppers.

working – they often come up and pick at his boots.

Andy Roberts of the Department of Conservation reports healthy populations of the bird in several areas of the island, as well as Ocean Beach. "It's the healthiest kiwi population in New Zealand," he said. "That is in numbers and in actual condition. At Mason Bay (on the opposite coast to Ocean Beach) where we did a kiwi study, we haven't lost any birds that have been banded over the last five years.

"They are stroppy little birds. They seem to be able to cope with the feral cats on the island and thankfully we have no stoats or weasels – they were not introduced in the early days as the island had no rabbits."

He thinks the trips to Ocean Beach may well be scaring off these wild cats, while they do not seem to be affecting the kiwi who know a top class feeding area when they find one.

At a rough estimate, he gauges the population of kiwi on the island at 20,000 from counts that have been made in different areas.

Phillip Smith is helping with a kiwi count by keeping records each night of the number he sees on his trips. During late winter, the kiwi seem more numerous as they become more vocal – this is the start of their mating season when their calls get more insistent. But by then the number of tourists in Stewart Island have dropped off.

One enthusiastic tourist, a fellow-guest in the lodge where I was staying, had been on a kiwi-spotting trip the night before. He spoke of his delight at seeing five adult kiwi and one chick. His only regret was that flash could not be used to photograph the birds in case it disturbed them and he had no photos to take back to the States.

Perhaps if more New Zealanders gained an appreciation of kiwi in the wild, then they would press for action needed to save kiwi on the mainland. Sensitive nature tourism opportunities such as Phillip Smith's show the potential that can be realised if this country's wildlife is able to thrive in accessible areas rather than be confined on off-shore island museums. ❖

Judith Doyle is a Wellington-based freelance writer.

A kiwi concession

PHILLIP SMITH operates his tours under a concession from the Department of Conservation.

Leonie Hishon at DoC's Invercargill office says that no problems have emerged with the kiwi-spotting trips, as the numbers of birds are, if anything, increasing.

But Phillip's concession is currently up for renewal. Before it can be confirmed on a more permanent basis, questions such as optimum numbers, photographic restrictions plus long-term impact need to be monitored. However, DoC has not yet put in the monitoring work to assess risks and determine a total carrying capacity for visitors. A planned monitoring programme over summer never happened.

There is no indication that the population has declined, but the information is based on Phillip's records. There is also no information on breeding success before and after the tours started.

There are a number of other operators interested in kiwi tours to Ocean Beach and other parts of the island such as Mason Bay, and DoC will need to decide on the total number to be granted concessions.

Forest and Bird feels that DoC needs to be more organised and rigorous before issuing concessions in relation to protected species. The department should also require concessionaires to carry out an interpretation programme as part of the concession. At present there are no such requirements.

DEBBIE McLACHLAN

FIGHTER FOR THE FORESTS

Fourth-generation West Coaster Debbie McLachlan has been a forthright and articulate advocate for an end to the clearfelling of native forests in South Westland. EUGENIE SAGE went to meet her.

AT OKARITO TRIG, nature's famous canvas of wild sea coast, mirror-like lagoons, verdant forest, and mountains arching white against the sky has been defaced by the ugly strokes of logged forest in the middle distance.

For Okarito nature tourism operator, Debbie McLachlan, the ragged scar in Waitangi Forest epitomises the disdain with which government, the state-owned Timberlands and the milling industry is treating the West Coast Forests Accord.

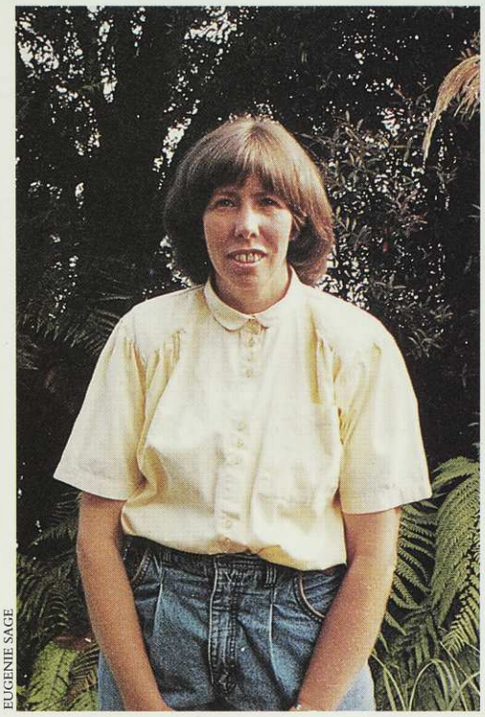
"The spirit of the Accord was not to clearfell every stick of timber that was available – it was simply a measure giving industry a volume of timber and a length of time in which to get their act together," McLachlan says.

Angered that the Accord's December 1992 deadline for an end to clearfelling has not been honoured and at the thought of loggers ransacking the pristine Poerua Forest, this saw-miller's grand-daughter is galvanising local opposition to the clearfelling juggernaut which the Accord unleashed.

Over the last three and half years McLachlan has been lobbying Ministers and MPs, speaking out in the media and on public platforms, and fronting up to Timberlands.

Even if her photograph has been used for dart practice in the Whataroa pub, McLachlan commands local attention and a certain good-humoured respect. McLachlan is more familiar than most with the rich character of South Westland's small communities and they with her. For two and half years she operated the Westland Bank's mobile banking service, travelling the 430 kms from Harihari to Haast and back again each week in a camper van. McLachlan drove all the way, completed transactions for everyone from whitebaiters to overseas tourists, and balanced up at the end of each day, doing business up gravel driveways, at the roadside and at school gates.

In an area bereft of post offices it was a busy job and no place for the timorous. During the whitebait run and in the holiday season when garages, hotels and motels were enjoying good takings, there were generous sums of cash on board. "People said they used to sit and dream about how they could bump the van off but you knew they'd never do it – they relied on the service," she says.



EUGENIE SAGE

MCLACHLAN'S West Coast roots are deep and strong. The Ross gold rush brought her Irish forebears to the Coast in the 1860s and early this century Grandfather Minehan tackled the lowland forest on the fertile Poerua River flats near Harihari to establish the family's sheep and cattle farm. Except for her secondary school years, when she was forced to exchange the warmth and support of a boisterous family of seven children for the austere and restrictive regime of the convent boarding school in Hokitika, McLachlan has lived most of her life in Harihari.

Debbie McLachlan: ... "In 1993 things are no different to what they were in 1981 – we have spent over 10 years feeding the industry as much timber as they've wanted and made no changes in forest management. We have simply killed the golden goose and dipped into the egg basket."

In 1991 McLachlan and her partner, forestry consultant Ian James, moved to Okarito to begin a small nature tourism business. Rows of colourful kayaks at their front gate and a small, jet engined runabout for the less mobile, tempt many European and North American back-packers and cyclists and occasional kiwi family groups to wander on water as well as land.

Okarito is New Zealand's largest unmodified wetland and on a rising tide it is an easy paddle up the main channel to marvel at kahikatea swamp forest, oyster catchers gorging themselves on cockles, and the languid elegance of kotuku, or white heron, in flight.

In the late 1970s Okarito's kotuku and the threatened destruction of their only New Zealand feeding and nesting habitat were a potent symbol for the successful public campaign to prevent the logging of South Okarito and Waikukapa Forests and have them added to Westland National Park. For McLachlan, married at 18 and with three children before she was 21, white nappies were a more pressing concern than white herons. Divorced and solo parenting at 25 meant life was a hectic blur of domestic responsibilities.

McLachlan says five years as a "mill worker's wife", living with her first husband in a mill house and washing clothes filthy with mill dirt, gave her little first hand experience of what was happening in the nearby forests. Apart from occasional weekends collecting firewood, most women in the timber town had scant contact with their husbands' work. "Women led their own lives with the kids and had their own companionship, and men had theirs at the pub," she says.

Interest in forest issues and the ability to tell a rimu from a kahikatea came later after meeting Ian James. Editing his reports, encircling trees with tape measures, and kitchen table conversations with visiting politicians, scientists and students all keen to talk forestry, helped provide McLachlan with a rich cache of information on forest dynamics and the theory and practice of managing forests for timber.

But South Westland forests really have gold mining to thank for her conversion

to their cause. In 1980 when gold prices hit $US800 an oz, a small black-sanding claim at Green's Beach north of Harihari seemed an attractive way to boost the family income. On some West Coast beaches fine alluvial gold which has been washed down river and out to sea can be deposited again near the high tide line, clinging to grains of black sand. When and where it is found depend on recent weather and coastal erosion patterns.

The family worked the claim on and off for nine years. They now have access to a similar beach claim at Okarito and McLachlan believes many tourists would be keen to try their luck should favourable seas expose the yellow glister again.

From the State Highway much of the West Coast appears an ocean of untouched nature, thanks to the former Forest Service's practice of leaving narrow strips of roadside forest as scenic or amenity corridors. Seeing the carnage of clearfelling in Ianthe Forest, every time they drove out to their Green's Beach claim, took McLachlan behind the "beautiful facade of the show along the road". Flying over Ianthe in a plane piloted by Ian during trips north was another shock. "The landscape created by clearfelling is like looking at pick-up sticks or something akin to Hiroshima."

EUGENIE SAGE

Behind the show along the road: logs at a landing in Ianthe Forest in February 1993. "We're cutting so much rimu that it's being burnt up smoke-stacks and going rotten sitting round in the yards."

DISBELIEF at the scale of the devastation hardened into action in late 1989 when a Timberlands logging gang ventured over the skyline in Wanganui Forest and began to flatten part of the forest backdrop to the Harihari township. The whine of chainsaws and crashing trees was uncomfortably close.

A phone call from local farmer Lindsay Molloy prompted McLachlan to poke her head up from out of the shy and silent majority. She and Molloy spent two days door knocking with a petition calling on Timberlands not to allow clearfelling over the skyline near the town or in other identified vista areas visible from the State Highway. Around 70 per cent of the town's adult residents signed and the logging gangs retreated.

These days when McLachlan speaks out she still does so as an individual but one who knows that a sizeable local constituency also cherish the forest landscapes which distinguish South Westland. At a recent meeting with Timberlands several residents from each of the Whataroa, Waitaha Valley, Harihari, Franz Josef and Okarito communities were loud in their opposition to the possible clearfelling of Poerua Forest.

"As local people have become aware of how the Accord is being twisted to justify large areas of forest being clearfelled we're seeing a real body of opinion come out in opposition."

Despite their best efforts, McLachlan knows that locals on their own cannot end clearfelling in South Westland. In the spate of lobbying before the Accord was signed, "the loudest voices" on the West Coast were those of industry. At that time McLachlan welcomed the letters written from "off the Coast" in defence of the forests and believes they are just as necessary today. She is delighted that Forest and Bird has made the campaign a national priority.

McLachlan sees a legitimate role for a long-term milling industry on the West Coast which operates under sustained yield prescriptions to produce small volumes of high-priced native timber for the domestic market. Her passion for the forests is not just for their antiquity, beauty and the web of life they support but for the "huge waste of a resource which could have been used on a small scale to provide long-term employment and wood products".

"We're cutting so much rimu it's going rotten sitting round in the yards and they have signs out which say trailer-loads of firewood for $5.00 – that's for our 500-year-old trees."

There's a catch in her voice as she describes the vandalism which clearfelling in Poerua Forest and the remnant stands of trees in Waitangi and Ianthe Forests would involve. The lively warmth and generous hospitality which make her paddling clients feel more than welcome give way to a formidable blend of emotion and concentrated determination. The listener realises that it is not just the natural taonga of the forests which are at stake but the identity and sense of place of South Westland's human inhabitants. ❖

Eugenie Sage is a freelance journalist based in Christchurch and secretary of Forest and Bird's North Canterbury branch.

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Book reviews

Stewart Island: the last refuge

by Neville Peat, photos by Erwin Brinkmann (Random House New Zealand) 1992, 118pp, $49.95

"It is hard to speak of the scenery of Stewart Island without using a superabundance of superlatives," wrote pioneer botanist Leonard Cockayne in 1909. His opinion still holds true today, thanks to the island's geographic isolation and a climate politely described as inhospitable. But when the sun shines and the roaring forties let up, Stewart Island looks like a primeval paradise of beaches, forests and mountains. I was particularly interested to learn of the extraordinary diversity of plant species and communities, the abundance of tree daisies, and also that plants of alpine or subalpine habit further north, grow at sea level on the island.

Neville Peat's readable and informative commentary looks at the island's natural features, its plants, animals and landscapes and its human and geological history. Sadly, as Peat explains, this primeval world is no longer pristine, for possums and deer ravage the forests, and cats and rats plunder the birdlife. But to a Mainlander, the birds are remarkably numerous, and the forest still runs from the mountains to the sea.

The text reflects the author's love of Stewart Island and its little community. And this love is evidently shared by Erwin Brinkmann, whose photographs capture the rugged and brooding landscape and the essential wilderness of this untamed island.

Ann Graeme

The Rockpool Fishes of New Zealand

by Chris Paulin and Clive Roberts (Museum of New Zealand) 1992, 177pp, $49.95

Of the 1,000 fish species in New Zealand waters, 83 are found in the narrow rock pool area between the tides, and over two-thirds of these latter species are endemic. This is the best book to date about them.

Paulin and Roberts have included a wide range of information to assist snorkellers, coastal fossickers and others identify and understand the fishes of the intertidal zone. The large format publication is devoted unreservedly to live fish, providing relief from the lengthy descriptions of edibility in many other books on fish.

Easy to use for the layperson or amateur marine biologist, the book gives details of the ecology of fishes, including unusual features of feeding or mating. For each species there is specific information, a clear line drawing (by Helen Casey), a photograph of the fish in the wild and a map of its New Zealand distribution.

The authors have also included a short history on the collection of fish specimens and a description of the coastal environment.

A simple key helps to distinguish similar fishes and the book is well referenced for the coastal naturalist who wants further information.

Barry Weeber

PADDY RYAN

Clingfishes are found on the bottom of rockpools with their ventral fins modified into suction disks for sticking onto rocks or seaweed. All 12 New Zealand species are endemic. The urchin clingfish shown here lives in close association with sea urchins and will often be seen sheltering beneath the spines. From Rockpool Fishes of New Zealand.

The Mosses of New Zealand

by Jessica Beever, K. W. Allison and John Child, (University of Otago Press) 1992 (2nd edition), 214pp, $79.95

Mosses are all around us and are the major constituent of the lush green carpet that clothes much of New Zealand's forest trees and ground. Generally overlooked because of their small size, they abound from the coast to the alpine herbfields; a few hardy species even live in city pavement cracks. Many mosses play an important ecological role through their pioneering ability to establish on bare ground, acting as a germinating "bed" for other plants and as a surface "sponge", thereby decreasing soil erosion from wind and rain.

New Zealand has a very rich moss flora both in abundance and diversity, with about 550 species. Although most are small, New Zealand does have one of the world's tallest mosses and others which form large pendant veils across tree branches.

Sainsbury's *A handbook of the New Zealand mosses* (1955) and Allison and Child's original *The mosses of New Zealand* (1971) are well outdated. This major revision by Dr Beever of Allison and Child's book fills a large gap, adding over two decades of recent knowledge.

The book includes 75 descriptions plus illustrations of New Zealand's commonest mosses, distinguishing characteristics of a further 380 species and, to complete this comprehensive study, a listing of 98 rare, local or poorly understood mosses. Included is a clearly set out 42-page key to all genera and common species, a glossary and bibliography.

This new edition contains 49 new colour photographs, with beautiful close-ups and cellular plates and 82 original line drawings by Dr Beever. These new drawings frequently compare related species.

Jessica Beever and the publishers are to be congratulated on producing such an attractive, comprehensive and user-friendly book. There is no longer an excuse to ignore these beautiful plants.

Ewen Cameron

The Living Forests of New Zealand

by the New Zealand Native Forests Restoration Trust, (David Bateman Ltd) 1992, 224pp, $49.95

The Native Forests Restoration Trust grew out of Stephen King's tree-sitting experiences in Pureora forest in the late 1970s. Set up in 1980, the trust has begun what David Bellamy described as the first major rainforest restoration project in the world – an attempt to link up the remnants of the once-great Pureora forest. As 6,000 hectares of pines are harvested from previously clearfelled land, native trees will be planted over a 30-year restoration period.

The trust raises money through subscriptions, public appeals and government grants to purchase cut-over land and carry out its replanting schemes..

This book is an intelligent coffee-table publication, a story of a love affair with the forests of New Zealand based around 200-plus wonderful forest photos by John Cobb and Geoff Moon.

Although John Cobb's text is reduced to two-page bites and long captions it manages to range eclectically through the country's forests, their many facades and intricacies, from the rare survivors of the Three Kings to the stunted rata forests of Auckland Island. Along the way it examines cycles of change, cycles of regeneration, what happens beneath the leaf litter, how forests survive natural disasters, the frogs, the parrots, the fungi and other inhabitants (even the unwanted possums and the cats) which go to make up the intricate web of a forest ecosystem. A good pictorial introduction to what makes this country's forests special.

Ian Close

classifieds

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Add $7.00 if an Index of Scientific Names is required.

Executive meetings

YOUR NATIONAL executive has had a busy schedule lately, meeting in February (Wellington) and April (Auckland).

Forest issues have been high on the executive's conservation agenda. Frustration over the long-running delays in establishing the proposed kauri national park was expressed to the minister and the NZCA, and campaigns were instituted to end the clearfelling in South Westland, and direct the East Coast forestry project away from the felling of kanuka forest.

The executive reaffirmed the society's opposition to the killing of protected native birdlife on cultural grounds and expressed strong opposition to the proposed transfer of title and management of Stephens Island in settlement of a Treaty claim.

Sandra Lee has resigned from the executive due to pressures of a burgeoning political career, and secretary of the Mid North branch Joe Crandle will fill the short-term vacancy.

Loder Cup nominations

SINCE 1926 the Loder Cup has been "offered to lovers of nature in New Zealand to encourage the protection and cultivation of the incomparable flora of the Dominion". Forest and Bird members have figured prominently as recipients of the cup.

Any branch of Forest and Bird may nominate a person, association, firm, local body etc that it thinks has contributed to the protection and/or cultivation of our native flora.

Nomination forms can be obtained from the Secretary, Loder Cup Committee, c/- Royal NZ Institute of Horticulture, PO Box 12, Lincoln University, Canterbury. **Nominations close on 30 June.**

J.S. Watson Conservation Trust

THIS TRUST IS administered by Forest and Bird. Applications are invited from individuals or conservation groups for financial assistance for conservation projects over the 1993-94 year.

The criteria for assistance are:

- the conservation of plants and animals and natural features of New Zealand;
- the advancement of knowledge in these matters by way of research, literary contribution, essay or articles, or other effort;
- general education of the public to give them an understanding and love of the earth in which they live.

A total of $10,000 is available. It may be awarded to one or more applicants, or held over for a subsequent year.

For further details and application forms, write to the National Secretary, PO Box 631, Wellington. **Applications close 31 July.**

Waikato Branch conservation grant

APPLICATIONS ARE invited for a grant of approximately $4,500 to support or assist with a conservation project during the summer of 1993-94.

There is no restriction as to the type of project eligible provided it contributes to the protection of the natural environment and/or its flora or fauna, though relevance to the Waikato-Coromandel area could be an advantage.

An acceptable proposal could involve: direct practical work such as acting as a wildlife warden or fencing bush; research relevant to conservation, whether in the field, laboratory or through the literature; an enterprise of an educational, journalistic or legal nature aimed at promoting good environmental principles; any combination of these or any other conservation-orientated activity.

Proposals will be considered from people of any age or standing or from groups, provided they can show that they have the time and skills to undertake the project.

Each application should clearly present: the aim of the proposal; an outline of how it would be carried out; the estimated total cost; the amount sought from this grant and any other sources of funds available or being sought; evidence of suitability of the applicant and the names and addresses of two referees.

For further details write to the Secretary, Forest and Bird, Waikato Branch, PO Box 11 092, Hillcrest, Hamilton. **Applications close 31 August.**

Birthday parties

STAFF AND A number of Forest and Bird identities from the Wellington area held a small evening function at head office on 26 March to celebrate the society's 70th birthday.

IAN CLOSE

Admitting to being "two months older than the society", Stan Butcher, long-time Forest and Bird member and councillor from Lower Hutt, cuts the cake at the head office birthday celebration.

Executive councillor Cathryn Ashley-Jones read from Captain Sanderson's account to supporters of the founding meeting of the society on 28 March 1923, and conservation director Kevin Smith spoke of how the society had maintained its cohesion and effectiveness over the 70 years.

A larger official birthday celebration will be held on 26 June during the AGM and Council meeting in Masterton.

Continuing the search for green paper

YOU PROBABLY won't have noticed but, from this issue, the magazine is printed on a different type of paper. We do get occasional questions from members along the lines of "why do you use glossy non-recycled paper" in the magazine. The answer is that the magazine has built a reputation for the standard of its photographs and many more of you tell us that you want us to continue with a pictorial magazine of high-quality.

We use coated ("glossy") and bleached paper because photographs reproduce much better on a non-absorbent white surface. At present in New Zealand there are no coated papers made from recycled material that are not exorbitantly expensive. There is always a juggling act between maintaining the production quality of the journal and constraining expenditure.

Even though paper production is inherently a resource and energy guzzling activity, we are of course always on the lookout for papers that are more environmentally acceptable. One Japanese-made paper looked at last year contained 70 percent post-consumer waste, but on investigating the source of the 30 percent virgin fibre we found it came from old-growth Canadian forests. The paper also cost considerably more.

The new paper, called Euroart, that this issue of the magazine is printed on, contains a greater recycled content than our previous paper – 30 percent of the pulp is made from recycled mill broke (reject batches or offcuts from the mill floor). Since mill broke has never left the mill it is not reducing the waste stream as much as using post-consumer waste paper, but it is an improvement.

The other, more important, factor about this new paper is that it is bleached using hydrogen peroxide rather than chlorine and hence does not produce any of the deadly organochlorines such as dioxin. As with the previous paper, the wood comes from Scandinavian plantation forests.

Correction

THE PHOTOGRAPHIC credit for the fine picture of the kereru on the cover of the February issue got dropped off the caption. The photographer was Brian Enting/Key-light Image Library.

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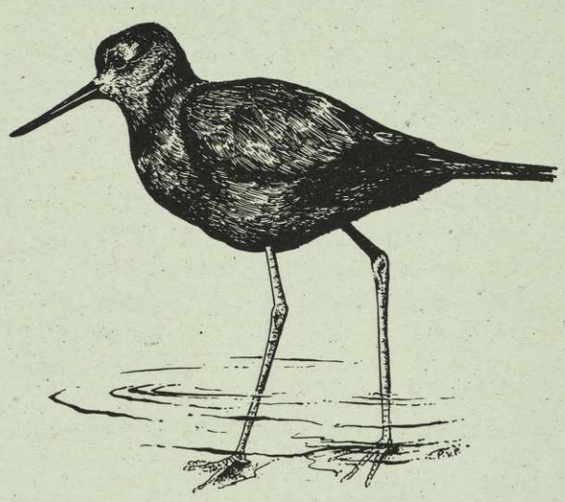
We need your support and the support of your friends to protect New Zealand's natural heritage.

Being a member of the society means being a part of New Zealand's most effective conservation group.

And of course you receive 4 copies a years of *Forest & Bird*, the society's superb magazine.



Our key campaigns for the future are:

- marine reserves
- high country tussocklands • fisheries
- native forest protection • pollution • threatened species
- Antarctica • energy conservation • waste reduction

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☐ Student (with ID proof)	$25.00	☐ Single	$10.00
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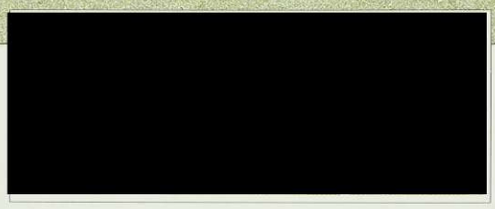

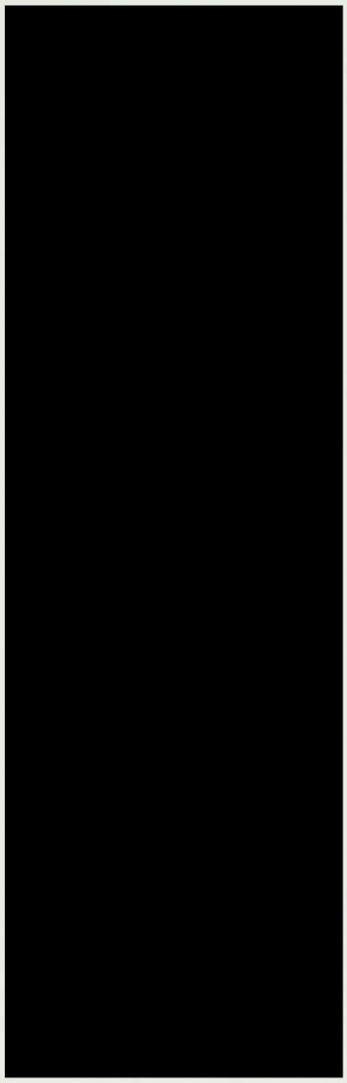

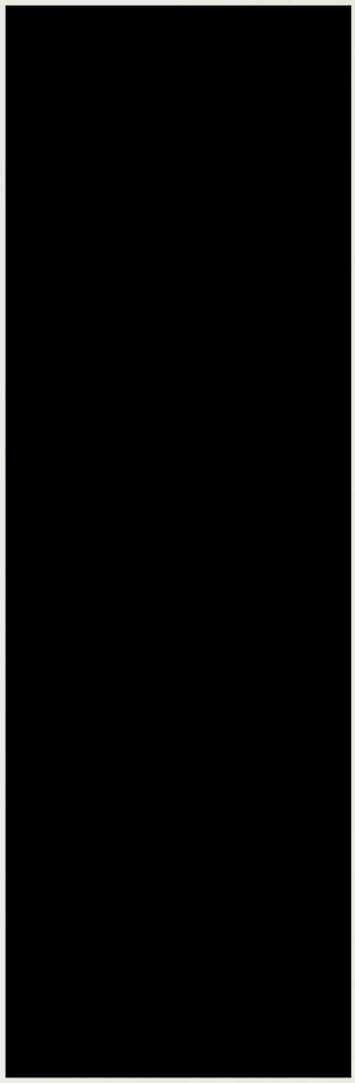

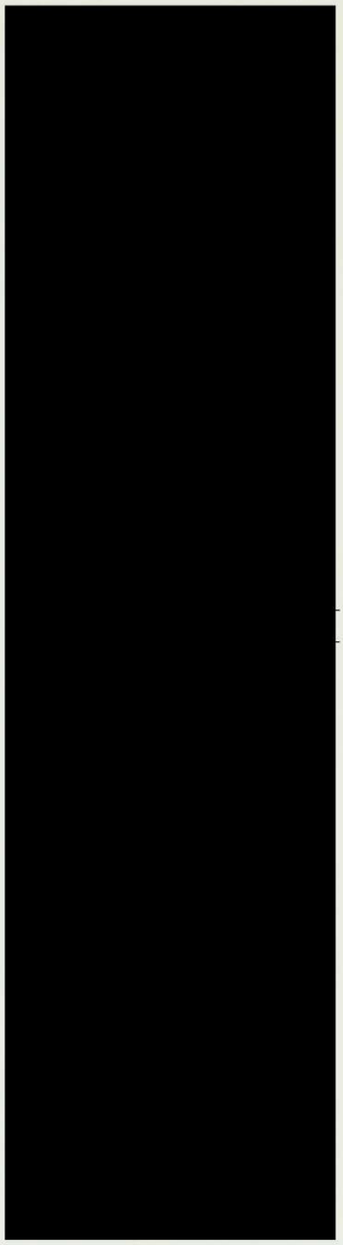

• Lodges and houses •

Ruapehu Lodge, Whakapapa Village, Tongariro National Park

Set within the national park this lodge is available for MEMBERS ONLY, and is an ideal location for tramping, skiing, botanising and exploring.

The lodge holds 32 people in four bunk rooms, and provides all facilities except food and bedding. Private parties are restricted to 10 members.

Bookings and inquiries should be made to PO Box 631, Wellington (04) 385-7374. The lodge is very popular, and bookings may be made six months in advance, if secured with a 20% deposit. The rates are reasonable, and fluctuate seasonally.

Full payment is required four weeks prior to occupation, after which time there is no refund for cancellation.

Arethusa Cottage

An ideal base from which to explore the Far North. Near Pukenui in wetland reserve. Six bunks. Fully equipped kitchen. Separate bathroom outside. Inquiries and bookings to Howard Ockenden, Waipapa Rd, Kerikeri, (09) 407-9457 or John Dawn, Doves Bay Rd, RD 1, Kerikeri, (09) 407-8658.

William Hartree Memorial Lodge, Hawke's Bay

Situated 48 km from Napier, 8 km past Patoka on the Puketitiri Road, the lodge is set amidst the 14-ha William Hartree Memorial Scenic Reserve, and close to many varied walks in the area including the Kaweka Range, as well as hot springs and a museum. Information sheets are available.

The lodge accommodates up to 20 with 10 bunks and 10 mattresses, has fully equipped kitchen including microwave, refrigerator and stove plus hot showers and an open fireplace. Visitors supply own linen. The nearest store is at Patoka (8 km). No animals.

For rates send a stamped addressed envelope to the booking officer, Mrs Colleen Mackay, 89 Rogers Road, Bayview, Napier, (06) 836-6836.

Tautuku Lodge

Tautuku State Highway 92, South East Otago. Situated on Forest and Bird's 550-ha Lenz Reserve 32 km south of Owaka. A bush setting, and many lovely beaches nearby provide a wonderful base for exploring the Catlins. The Lodge, the Coutts cabin and an A-frame sleep 10, 4 and 2 respectively. No animals.

For information and rates please send a stamped addressed envelope to the caretaker: Miss M. Roy, Papatowai, Owaka, RD2. Phone (03) 415-8024.

Tai Haruru Lodge, Piha, West Auckand

A seaside home situated in Garden Road, Piha, 38 km from central Auckland. Eight minutes' walk from the Piha store and close to bush reserves and walking tracks in the Waitakere Ranges.

The lodge is fully equipped and sleeps six to eight people. Large lounge with open fire, dining area, and modern kitchen.

You will need food, 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 Henderson Valley Road, Henderson, Auckland, (09) 838-5859.

Waiheke Island Cottage

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

Different rates apply for winter and summer. For rates send an addressed envelope to the booking officer, Mr D. McLean, 55a Queens Drive, Oneroa, Waiheke Island, (09) 372-6494.

Bushy Park Lodge

Kai Iwi, 24 km northwest of Wanganui on sealed road off SH 3. Historic home-stead, fine grounds and 89 ha of virgin bush with tracks and trees identified.

Accommodation for 16 in six bedrooms, single and double beds, electric blankets, heaters and vanity units. Six extra folding beds. Bedding, linen and towels supplied. Showers, drying cupboard, kitchen with electric stoves, microwave, refrigerator, deep freeze, cutlery and crockery. Bring own food. Milk may be ordered.

Open 7 days; reduced off-peak rates.

A bunkhouse for 12 is available for group bookings. It has kitchen facilities, mattresses and pillows. Toilets and showers are in the adjacent building.

Bookings and information leaflets: Manager, Bushy Park Lodge, Kai Iwi, RD8 Wanganui, (06) 342-9879.

Turner Cottage, Stewart Is.

This three-roomed dwelling accommodates six people.

For details send a stamped, addressed envelope, to: "Turner Cottage", C/- Mrs M. Tait, PO Box 48, Stewart Island, (03) 219-1396.

And that's a garment made using Gore-Tex fabric. We know that getting wet in the New Zealand wilderness is no laughing matter.

So, keeping you dry is something we take seriously. So seriously infact that a Gore-Tex "Guaranteed to Keep you Dry " garment carries the most comprehensive guarantee ever offered in the clothing industry.

We start with genuinely waterproof fabric. Every fabric we make is waterproof to an absolute minimum pressure of 4.6kg/cm^2. (To put that in perspective, a common world-wide military standard is 1.8kg/cm^2 and the highest pressure that you will commonly put on a fabric is the 1.1kg/cm^2 exerted when you kneel in a puddle.)

But great fabric is not enough by itself - the garment must be first designed and then carefully constructed to maintain that performance.

That is why we subject every style to rigorous, performance - proving testing before we allow it to carry our Guarantee. Each test garment is artificially aged and then subjected to the Storm Test - 16cm of pounding rain over just one hour! Only if it remains completely dry inside is it passed for production.

You may think we're a bit serious. But we did crack a wry smile when we found that the only garments in Australia and New Zealand that have withstood this test are those made using Gore-Tex.

We appreciate dry humour too.

GORE-TEX™
Outerwear
Guaranteed To Keep you Dry™
GORE
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Advice and Service: *Consult trained shop staff and our User's Guide when choosing a garment for your outdoor needs. For service phone W.L. Gore and Associates free on 0800 441709.*

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WATERPROOF • BREATHABLE • WINDPROOF • DURABLE • GUARANTEED