MARINE RESERVES IN NZ – TOWARDS 2000

In the past, conservation of the oceans has taken a back seat to looking after the land. The progress of marine reserves in New Zealand provides a simple, but compelling illustration.

Until the Leigh Marine Reserve was created in 1975, there were no totally protected areas of sea – to most people even the idea was preposterous. Although three more marine reserves have been set up since, still less than 0.1% of our coast is protected. This compares with our first National Park (Tongariro) being created in 1887, and over 20% of our land now in parks or reserves. Protection of the sea is obviously orders of magnitude behind.

The reasons for the disparities are quite understandable. Lack of knowledge, difficulty in seeing the effects of our actions, and a general perception of the sea as inexhaustible, have all contributed. Yet the need to totally protect some parts of the sea is just as great as for the land. We have some species of sea sponges which are rarer than the kakapo; some marine habitats are in danger of completely disappearing (e.g. unmodified harbours); and widespread harvesting of some species that no inshore reefs remain in a completely natural state.

Fortunately, our knowledge is increasing, perceptions are changing – and marine conservation is gaining ground. The Conservation Strategy of the IUCN recognises that protection of marine areas is far less developed than its terrestrial counterpart. It states “Governments should greatly accelerate the establishment and management of coastal and marine protected areas.”

In New Zealand, the changing perceptions are reflected in the recent increase in numbers of marine reserves being created. We now have four marine reserves gazetted, five awaiting Ministerial decision and numerous more in the pipeline, see Figure 1.

As well as providing protection for an area of the sea, the reserve at Leigh has also increased interest in the concept of marine reserves and marine conservation generally. While the Leigh reserve was set up cont. p2

IMPORTANT NOTICE TO ALL ECOLOGICAL SOCIETY MEMBERS

Many members have new postal addresses following the establishment of CRI’s. Please send your correct address to the Treasurer, NZ Ecological Society, P O Box 25 178, Christchurch. Please use your work place address where possible to save the Society postage.

NAME: ...........................................................................................................
ADDRESS: .................................................................................................
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primarily as a scientific “control” site, it had unexpected bonuses - insurance against possible mismanagement of non-reserved areas; the public enjoyment of natural marine life; a drawcard for tourist dollars and a “stud farm” for some species. Incidentally (i) it has also been invaluable for the purpose intended - scientific study.

Support has now increased to the point where a whole range of groups are making their own applications for marine reserves: conservation groups, commercial fishers, divers, iwi, schools and community groups. However, creating new marine reserves is rarely without difficulty. In all but the most remote areas, reserves cause short-term disruption to recreational and commercial fishers and this can cause conflict. Parallels have been drawn between marine reserves and schools, we all want them but not necessarily next door!

With the need for marine reserves now internationally recognised and well supported in New Zealand the big question is, where to now? When the Department of Conservation was formed in 1987, it promoted the concept of marine reserves and one proposal in each DoC region. Now that some major progress has been made it is time to look at the longer term.

Over the next one to two years the department will be consulting with interest groups and deciding where to go from here. The task is an onerous one - scarcity of information taken for granted by terrestrial conservation managers, lack of an agreed coastal classification system, the wide range of aspirations of interest groups, Treaty of Waitangi issues, and archaic legislation, all complicate matters.

While we are sorting through the issues and reaching agreement on priorities, the immediate need is still the creation of new reserves. While we have so few marine reserves it is true that "any marine reserve is a good marine reserve", provided of course that it delivers the expected benefits.

What can scientists do to help?

Get Involved!

Everyone has an interest in the creation and management of our marine reserves and we all have a right to become involved. In practice however, usually the only people who do get involved are conservation advocates and commercial and recreational fishers.

While national marine science groups have been actively involved, individual scientists have often restricted their role to an observational one. One reason sometimes given is the lack of complete information for decision making.

It is important and useful for scientists to identify the information gaps and to note that having more information would help us make decisions with greater precision. However, most of these information gaps will not be completely filled for a very long time - if ever. The creation of marine reserves cannot wait until that day. In the meantime, we need scientists to help us make the best use of available information, i.e. active involvement and input into decision making.

How can scientists become involved?

1) Helping the Department Plan its Marine Reserves Programme

In seeking scientific input on planning, the Department consults primarily with the New Zealand Marine Sciences Society. If the Ecological Society believes it should also be consulted on the future direction of marine reserves in New Zealand and has no links to M.S.S it should contact DoC at the address below and express an interest.

2) Involvement With Marine Reserve Proposals

The Ecological Society has made submissions on some marine reserve proposals, individual scientists can do the same. Individual scientists can also get involved directly with local proposals, offering the input of someone who is a scientist, not just "scientific input”. A newsletter produced by the department (below) will keep you informed of what is happening and Bill Ballantine’s book (also below), suggests a number of ways of getting involved.

3) Positive Discrimination Towards Marine Conservation!

As well as "catching up" in terms of protection, marine conservation needs to catch up to terrestrial conservation in terms of attitudes. Marine reserves help this process through improving opportunities for marine education. As well as supporting the creation of more reserves, scientists can help change attitudes just by highlighting the problem and making it an issue. For example, the New Zealand "Ecological" Society implies interests wider than terrestrial, how about a special marine ecology issue of the newsletter, a marine sub-committee?.....

For more information on marine reserves the Department of Conservation produces a 2-3 monthly newsletter "Groundswell" (free), an information video ($10 to buy, free to loan) and various information pamphlets (free). Also available is the thought-provoking book: Marine reserves for New Zealand by Dr Bill Ballantine, New Zealand’s own marine reserve expert ($10). For any of this material or further information please contact your local DoC office or:

Marine Reserves
Department of Conservation
Box 10-420
WELLINGTON  Ph 0-4-471 0726
Geoff McAlpine, SCO Marine Reserves, DoC
THE IMPORTANCE OF RESOURCE-APPRAISAL RESEARCH

Part of a draft submission from the Council of the Royal Society of New Zealand to the Minister of Science, written by Dr Peter Wardle, FRSNZ. The submission has not been sent in this form.

Research on New Zealand's natural resources has provided an important foundation for the development of New Zealand from the beginning. As the database increased in scope and accuracy, it has become indispensable, not only for development and use of resources, but for their conservation as well. If the Resource Management Act (1991), which specifies that use of resources must be sustainable, is to operate effectively, the need for detailed, up-to-date, integrated resource databases will be greater than ever. The Act also requires that national standards be generated for resource sustainability; for this requirement to be met, input from scientists with experience in resource appraisal is essential.

To adequately cover the many economic applications of adequate documentation of natural resources would take many pages. The use of geological maps in mining and engineering, soil maps in land use planning, insect surveys for protection of horticultural crops, and forest surveys for forest management are only a few examples pertinent to economic activities. Conservation planning calls for vegetation maps, and information on the distribution and abundance of rare plants and animals. Data on distribution of plants, animals and soil types will also be indispensable for monitoring climatic change and assessing its biological impacts.

Surveys and production of maps depend in turn on correct classification, whether of minerals, rock and soil types, or species of plants and animals. There is a popular misconception that classification is a finite task, but this is far from correct. Even in groups that have been covered moderately well, such as the flowering plants, new species are discovered or arise as potential weeds, and new information is brought to bear on existing classifications. In groups such as insects and fungi, only a small proportion of the species have been named and classified as yet.

Resource database bases are also essential for progress in experimental research in natural sciences. Acceptance of this fact is implied in the Report of the Ministerial Task Force (1991) which, on p.90, recommends that Crown Research Institutes should 'retain a core ability to maintain inventories about natural resources', but it cannot be emphasised too strongly that other research expected of CRI's will simply be impossible without such an ability. This applies especially to the 'purposes' listed for the National Institute of Land Environments on p. 95. For instance, 'biophysical and ecological processes' are unlikely to be fully understood if the taxonomic identity of the organisms is not properly known.

Despite underpinning other research, resource-appraisal research is often seen, even by much of the scientific community, as being traditional rather than up-to-date and innovative. Long-tried methodologies certainly remain important for much of the work, but there is nonetheless a great deal of scope for testing, using, and even developing new technologies. Examples are the use of satellite imagery for mapping land forms, vegetation and crop health, and molecular biological techniques in plant and animal classification.

Finally, data bases for natural resources have important social uses, for instance, in educating people about the unique attributes of New Zealand, and about the principle that many resources are finite.

DEFENDING THE ENVIRONMENT - A PUBLIC RESPONSIBILITY

When the Resource Management Act became law last year, a question needed to be raised as to who will defend the environment.

In many respects it will be a field day for the legal fraternity as they argue for their clients and establish precedents and assist with the establishment of new case law. New parameters have been established by the Act and we will all have to learn to live with them... In the cold light of day we will have to read and understand the new environmental law.

Some of the jargon introduced by those who have drafted the law, has placed some challenging perspectives before New Zealanders to consider. It is a considerable task to read and understand the language of the Act, and it will need a process of quiet affirmative education to come to grips with the Act's message.

Who then will take on board the task of actually defending the environmental principles of the legislation? We see local and regional government personnel advocating to their elected members a stance for a balanced interpretation which councillors will have to understand. Some councillors may not be up to standard, especially those without some background in ecology. These particular councillors are in no position to act as the public's advocates in
environmental matters. This begs the question as to who will keep an eye on the decision makers.

Again, it is left to the public every three years to vote off councils, members who do not perform in the environment’s interest. These members may well say, “...but I tried to balance the case”. In my view the environment is not a tradeable commodity and when “balanced” against a commercial argument the environment is what matters, since it must be sustained as to its quality and intrinsic values for future generations.

It therefore reaches a point where the public’s perception of sound environmental management is the fundamental stance that should be acknowledged. It is no use having public participation procedures in the Act unless public advocacy counts in the legal process. In my experience, public advocacy has been an underrated vehicle to substantiate environmental veracity. It has also cost the advocate time, energy, money and considerable personal sacrifice.

The value of public defence of the environment is powerful, truthful, and if handled efficiently should be a critical factor when decisions are made. Members of the public can provide specific examples of environmental quality and their voice should be listened to attentively. At the moment, if one party has the financial muscle, it can annihilate public environmental advocacy. This should not be the case as it places an imbalance as to legal fairness in the eyes of the public.

The public also have responsibilities. They need to understand the arguments, facts and opinion they are advancing. My belief is that the public now need some training in how to advance their ideas and experience. I believe that universities have a role to equip members of the public with the tools of advocacy by organising seminars and short courses on the necessary topics.

We may say that government departments of state act on behalf of the public. Well the truth is that the state has not always acted with consistency at local and regional level and oftentimes environmental advocacy has been left to the public or not carried out at all. The public is again the last line of defence and needs to be prepared to act in the best interests of the environment and the community. Individual members of the public often act from personal experience and can therefore place before adjudicators, arguments and evidence on the wider public’s behalf.

When environmental issues are raised and debated it will again be the public who have to act as watchdogs. The environment cannot be ignored in our life survival systems, and it behoves the ordinary person to make their presence felt in this new arena of resource management. To ignore their personal responsibilities will lead to poor decision making with a consequent degradation of the environment. We cannot allow this to happen.

Raymond C W Zander, Palmerston North

**COMMENT ON ROLE OF CRI BOARD**

Council requested the Chairman of the Establishment Board of the National Institute of Land Environment (now Landcare Research NZ Ltd), Mr John Keebone, to write a few words on his views on the future directions for ecological research in New Zealand. While he declined this request, his letter explained very clearly the role of the Board in relation to the CRI. He emphasised that the role of the Board is not to manage science, but to manage the “business workings of the organisation”. Mr Keebone went on to say that the Board must not “get in between the science managers and the scientists, or the Chief Executive and the Science Managers”.

The Board will seek business contracts, the CEO and science managers will tell the Board which group of scientists will do the work, and what budget will be required “to deliver that business objective be it the extent of the wasp population, reducing nutrient levels in effluent or control measures for rabbits, etc.”

Council is grateful to Mr Keebone for explaining so clearly the way he sees the role of the Board and its relationship to the CEO and science managers.

**NEW DEPARTMENT OF ECOLOGY AT MASSEY UNIVERSITY**

On 1 January 1992, the then Department of Botany and Zoology at Massey University was divided into two departments: the Department of Plant Biology (Acting HOD - David Fountain) and the Department of Ecology. These new departments will, together with the established Department of Microbiology and Genetics (HOD - Tim Brown), form the core of a School of Biological sciences, headed by Tim Brown. The School is expected to gradually expand by the addition of kindred spirit individuals or groups within the University, and will be responsible to the Science Faculty Dean - Geoff Malcolm.
The Department of Ecology comprises the following staff: ACADEMIC: Brian Springett, Robin Fordham (Acting HOD), Ian Latta, Ed Minot, Ian Stringer, Ian Henderson, Nelson Pomeroy, Murray Potter, Gillian Rapson, Clare Veliman, Alison Campbell, Peter van Essen, Russell Death. TECHNICAL: Barbara Just, Paul Barrett, Carolyn Evans, Elizabeth Grant, Jens Jorgensen, Stephen Pilkington, Stephanie Prince. The secretary is Petra van Kan.

A lectureship appointment is pending and several additional academic and technical positions are anticipated.

The Department of Ecology is responsible for a range of biological, ecological, environmental and zoological courses. Our research interests focus on ecology, conservation biology, entomology, behaviour, limnology, biogeography and population biology and we shall be looking for cooperative ventures with colleagues elsewhere in research areas of common interest.

A list of current post-graduate projects appears elsewhere in this newsletter.

Robin Fordham

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**MANAWATU NOTES**

**Overseas Visitors**

Dr Steve Wratten, a Reader in the Department of Biology, University of Southampton, England, spent last November and December with MAP's Agroecology Group at Flock House, Bulls. Steve worked with Gabor Lovel on the use of novel crops in cereal fields to attract insects which prey on cereal aphids. The novel crop flowers provide a source of nectar and pollen which is required by hoverflies before they can lay. Eggs are laid near aphid colonies and emerging larvae eat the aphids. Steve also did some work on larvae which eat kawakawa leaves, using techniques he had previously used on birch leaves in England.

In February, Dr Sue Hillier of the Unit of Comparative Plant Ecology (UCPE), University of Sheffield, England, gave a seminar while visiting DSIR Grasslands, Palmerston North. She talked about experimental approaches to plant community ecology, using microcosms, manipulations and screening to investigate climate change effects on agricultural grasslands. With climate change, Britain’s climate is expected to become warmer and drier. Rather than using growth rooms, Sue places most of her plots outside, and some ingenious engineering allows modification of individual climate factors. Automatic rain shields simulate lower rainfall, while a soil surface warming system maintained at 3°C above ambient temperature keeps plots snow-free throughout winter. Each climate treatment has shown effects on plant growth and on species composition of the sward. She has also studied gradients of timing and intensity of grazing, and rate of fertiliser application, in an ecological approach to pasture management.

Also in February, Prof. Phil Grime, of UCPE, gave a seminar at DSIR Grasslands about his Unit's contribution to the Terrestrial Initiative in Global Environmental Research (TIGER). A need has been identified to look at vegetation responses to climate change, and feedback influences on climate. Work at Sheffield focuses on individual species attributes by screening and monitoring over 40 grass and forb species in great detail, including anatomy, physiology, occurrence, seed dispersal and longevity. It is felt that vegetation cannot be used in predicting climate change, but from detailed knowledge of species attributes plus monitoring, vegetation can confirm trends in climate change. For example, it has been found that fast growing perennials give the biggest response to increased levels of CO₂, and these species are already increasing in abundance in Western Europe. Monitoring is also showing some phenological changes in some species.

Fran Kell, formerly Flock House (Manawatu members please note that Fran Kell is no longer able to act as your regional representative for this newsletter. Anyone who could take over this role please contact Mary McEwen).

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**ECOLOGICAL THESSES IN PROGRESS**

**MASSEY UNIVERSITY**

**PhD**

Isabel CASTRO-UDY, Post-transfer behavioural ecology of the hihi (stitchbird) and kokako.

Gavln HUNT, Ecology of the New Caledonian kagu.

Vaughan KEESEING, The effects of European heather (Calluna vulgaris) on invertebrate communities in Tongariro National Park.

Dale TOWERS, Food competition between blue ducks and trout.

**MSc**

Clive APPLETON, Fly species succession on possum carcasses.

Paul BARRETT, Quantification of nanoflagellate mixotrophic interactions in marine and freshwaters.
Martin BEEVER, Periphyton dynamics in a regulated river.

Gary BRAMLEY, Ecological studies on the weka (Gallirallus australis) population near Gisborne.

Rochelle CONSTANTINE, Parental investment in the Amazonian River dolphin (Inia geoffrensis).

Peter GODFREY, Ecology of a rare weta.

Roger LENTLE, Diet in wild red deer.

Jonathan MILES, Ecology of kiwi in the Tongariro/Taupo Conservancy.

Vanessa MUNRO, Aspects of the entomology of fly strike.

Paul PETERSON, Relations between Stathorus bifidus and Tetranychus tetranychus (gorse shoot mite).

Grace RICHARDS, Breeding and behaviour of the Mahoe nuei giant wetas.

Kerry SANDERS, Aspects of the ecology of young Kakarori (Rerotongan Flycatcher).

Deon STRONGE, Ecology of feral goats in the Mahoe nuei giant wetas reserve.

Robert WARING, Possum population dynamics.

Peter VAN ESSEN, The aut- and synecology of leatherwood (Olearia colensoi) scrub.

BSc (Hons)

Iain MAXWELL, Effect of remnant stands of native forest on freshwater macro-invertebrate communities.

Kelvin STEEDMAN, Recovery of sub-tidial flora and fauna following perturbation.

OTAGO UNIVERSITY

Botany

PhD

Nell HARRIS, The ecology and physiology of limestone plants.

Brent KELLY, The influence of environmental factors on the alginate chemistry of Durvillaea spp.

Warren KING, Native and exotic plant guilds in the Upper Clutha catchment.

Megan OGLE, Establishment of native species under gorse.

Anita PILLAI, The ecology and physiology of Gracilaria chilenensis.

Stephen ROXBURGH, Estimation of the parameters of the community matrix in a lawn and in algal cultures.

Ben SMITH, Comparative textural analysis of Nothofagus forests.

Ray TANGNEY, The taxonomy and biogeography of the moss genus Campylochaete.

MSc

Philip GROVE, Vegetation of the Hawkdun Ecological District.

Simon MOORE, The physiology and ecology of seed germination in some New Zealand ericaceous plants.

Tom MYERS, Physiological response to salt stress of two ecologically different Gracilaria spp.

Zoology

PhD

Richard ALLIBONE, Aspects of the biology of non-migratory Galaxiids in the Tuki River system.

Gordon COURT, The ecology of non-breeding south polar skuas and a toxicological assessment of the south polar skua at Cape Bird, Ross Island, Antarctica.

Stephen DOWNES, The effect of food enrichment upon the social behaviour and mating system of the Hanuman Langur (Presbytis entellus).

Kerri-Anne EDGE, Artificial brood reduction in the Yellow-eyed Penguin (Megadyptes antipodes) - a viable management option?

Brent EMERSON, Evolutionary relationships among flightless chafer beetles of the genus Prodaoria.

Hilltrum RATZ, Temporal and spatial patterns of predation of Yellow-eyed Penguins (Megadyptes antipodes), by small mammals, and their control.

Michael R SCARBROOK, Flood disturbance of stream communities.

Stephen G SCOTT, Results of stress on salmonids in hatchery situations.

Cathy SHAVE, Investigation into the evolution of bright colouration in male bullies, a group of New Zealand freshwater fish.

Beth SPEIRS, Mate choice in South Polar Skuas.

Barbara HAYDEN, Factors affecting spat settlement and survival of green-lipped mussels (Perna canaliculus).

Mark JAMES, Microzooplankton in aquatic ecosystems.

Tanja KING, A genetic, behavioural and ecological study of the alpine weka Hemideina maori, on the Rock and Pillar Range.

Mark LOKMAN, Induced maturation and spawning of NZ freshwater eels.

Dan MCLARAY, Hybridization in the Pseudochinuss species complex (marine invertebrates).

Angus R McINTOSH, Predators in streams and their affect on prey behaviour.

Adrian PATERSON, Seabird phylogenies using isozyme, behaviour and lice studies.

Murray BRASS, Short-term movements of New Zealand fur seal (Arctocephalus forsteri) on the Otago Coast.
Carron CHESSUM, Distribution and population structure of sperm whales off the Kaikoura Coast.

Brent EVANS, Coarse woody debris and its influence on processes occurring in New Zealand streams.

James FRASER, The diet of wild tuataras (Sphenodon punctatus) on Stephens Island, Cook Strait.

Philip LESTER, The effects of the introduced willow tree Salix fragilis on Central Otago stream invertebrate communities.

Shirley McQUEEN, Reproductive endocrinology of Fiordland Crested (Eudyptes pachyrhynchus) and Adelie (Pygoscelis adeliae) penguins, in relation to control of foraging trip times during incubation.

Sara METCALF, Comparison of the brain morphology and sensory mechanisms of 3 Galaxias sp. with reference to habitat and behavioural ecology.

Shaun OGLIEVIE, The effect of the New Zealand fresh water mussel Hyridella ameniates on the water quality of Lake Tuatapito, South Otago lake.

Christine TISDALL, Feeding ecology of the Chatham Island pigeon (Parea) and impacts of possums on their food plants.

Diploma in Wildlife Management 1992

Karen BENNETT, The diet of Hector’s dolphins, and the NZ Fur Seal in the Otago Peninsula.

Malcolm BRENNAN, Improving the cost effectiveness and monitoring of goat control operations.


Emma CROWTHER, Educational package for secondary schools covering conservation in New Zealand.

Daryl EASON, Captive rearing of takahe and methods to determine their sex.

Adrian EVANS, Densities and fatos of spent lead gunshot in Otago wetlands.

Aaron McGlinchy, Educational package for secondary schools covering conservation in New Zealand.

Justine RAGG, Invasion ecology and how it predicts the success and impacts of introduced animals in New Zealand.

BSc Honours

Roger YOUNG, The inputs and decomposition of tussock leaf litter in Otago streams.

AUCKLAND UNIVERSITY

MSc

Astrid DIJKGRAAF, Investigation of some aspects affecting the marketability of puriri (Vitex lucens) as a timber tree.

A basic ecological survey will be undertaken of selected areas in the upper half of the North Island to ascertain present day conditions in which puriri are to be found. This will be coupled with a look at the quality of the wood and a genetic survey using techniques similar to DNA fingerprinting. An attempt will be made to correlate phenotypic occurrences, especially those relating to timber production, with environmental and genetic indicators.

Paula REEVES, The structure and function of peatland ecotones in the Whanganui wetland.

A baseline study for the development of a monitoring programme to assess the impacts of the proposed raising of the water level at the Whanganui wetland.

Bronwyn ROSIE, The effects of the heavy metal content of mine tailings on the establishment of wetland plants.

This project will be carried out for Golden Cross Mine in Waipa. Attempts will be made to identify the potential difficulties of establishing a wetland in the mine’s tailings dam post closure, with specific investigation of the effects of heavy metal toxicity on plant establishment. Tuts will determine the effects of high concentrations of Cu, Pb, Mn and Fe on the establishment of a variety of wetland species using both glasshouse and field trials.

Mark HORROCKS, Holocene vegetation history of Mount Hauhungatahi, Tongariro National Park.

The timberline on the mountain is not only very irregular in shape but is also lower than the present climatic limit to tree growth for the region. This suggests a history of forest instability and the main objective of the research is to reconstruct this history using the local pollen record. Changes to the local vegetation during the last two thousand years are of particular interest since this period encompasses the last Taupo eruption and the first possible human disturbance of the vegetation.

Sandra WOTHERSPOON, Regeneration ecology of pohutukawa.

An investigation into:

(1) patterns and characteristics of natural pohutukawa regeneration in the Auckland region.

(2) the effects of light intensity and temperature on germination.

(3) the effects of water availability on establishment of seedlings.

(4) the effect of light intensity on the establishment of seedlings.

(5) treatment of retired pasture to facilitate regeneration - possible alternatives to planting pohutukawa.

CONSERVATION CORPS PROJECTS

The Conservation Corps have become an important part of life here at Nelson as we have reported before. Their last report struck me as indicating the great variety of tasks and experiences that are part of doing ecology... for those of you who may be stuck behind desks, here they are.

In Breaksea Sound, Fiordland, they worked with a team of seven scientists and volunteers to continue ecological studies of islands in the Sound. They were particularly following the progress of species transferred since rats were removed.
They banded and surveyed robins; observed and recorded Fiordland skinks; completed night counts of weevils; counted seabird burrows; set and collected 60 invertebrate pitfall traps; counted seals; recorded shellfish plots; slashed tracks; reset stoat traps.

Nearer Nelson they have surveyed flowering flax at Lake Rotoiti (a kaka food source), tracked kaka using radio telemetry, completed kaka roll calls and assisted with supplementary feeding. Kaka field observations have been transcribed and feed-out data entered on computer. Rodent and stoat trarines were activated for three nights at Lake Rotoroa (Nelson Lakes National Park) and St Arnaud to monitor rodent numbers. This is part of an ongoing study to monitor the relationship between beech seedfall, rodent populations and kaka breeding. Rodents and stoats were autopsied and records completed. They collected beech seed monthly from 82 seed trays, then dried, identified, counted and tested them.

On the wasp front, Corps members assisted with monitoring, pre-baiting and poisoning wasps in two 30 ha study sites. They have collected samples regularly from 60 invertebrate traps and from beech clipping samples in four study sites to help determine the effect of wasp numbers on native invertebrates (and therefore birds). They mapped the study sites and helped find, record and map 550 wasp nests. They dug these nests and analysed their contents.

To round off, one member is continuing to monitor video of captive tuatara to evaluate methods of rearing and maintenance.

Peter Williams

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MEETING OF WELLINGTON MEMBERS

Fourteen members of the Ecological Society attended an informal meeting at Victoria University on 19 August. The main purpose of the gathering was to discuss the future of the New Zealand Journal of Ecology, in response to a letter from the President asking members for their views. The Society has been approached by SIR Publishing, (managed by the Royal Society of New Zealand), with the suggestion that they take over publication of our journal. Following much discussion the meeting came down with the strong opinion that the Society should maintain complete control of the journal even if this meant an increase in subscriptions.

Helen Hughes, Parliamentary Commissioner for the Environment and Society member, asked the meeting to consider how the Society could establish some quantitative data to document the widely perceived decline in the amount of ecological research, and research into related and essential disciplines, such as systematics, in New Zealand in recent time. In similar vein, a copy of a letter to the Minister of Conservation from the Science Committee of the New Zealand Conservation Authority was read, which also expressed grave concern at the huge losses of research experience and knowledge, naming as examples the loss of David Given, Bill Sykes, Graeme Stevens, John Flux and Graham Ramsay. This was at a time when New Zealand has recently signed the UNCED Biodiversity Protocol which requires a sound knowledge of this country’s flora and fauna. The report of the Science and Technology Expert Panel on Long Term Priorities for the Public Good Science Fund, however, recommends that investment in the natural science outputs (classes 30 to 35) should be further reduced by over 10% over the next five years, if overall funding levels stay constant.

Helen Hughes also questioned where she and Government Ministers were going to obtain their scientific information about the environmental effects of proposed developments etc., now that there was no longer an environmental co-ordinator as in the former DSIR. Will it be left to the Ecological Society to do this very large and important task? And this at a time when those ecologists and other natural scientists still in employment are experiencing unrealistically large workloads.

The meeting provided an opportunity for members to find out what has been happening to ecologists in the Wellington area and we plan to hold another meeting later in the year. My apologies to those Wellington members whom I did not manage to contact. If you would like to know when our next meeting is to be and you are not attached to either Victoria University, Landcare Research, MAF Fisheries Research, or the Department of Conservation Head Office, please contact me (phone of fax no. 476 6163).

Mary McEwen
MEMBERSHIP

Membership of the society is open to any person interested in ecology and includes botanists, zoologists, teachers, students, soil scientists, conservation managers, amateurs and professionals.

Types of Membership and Subscription Rates (1992/93)

Full (receive journal and newsletter) .......... $45 per annum
Unwaged (with journal) .................. $20 per annum
Unwaged (newsletter only) ............... $20 per annum
Unwaged membership is available only on application to Council for full-time students, retired persons etc.

Unwaged members may receive the journal but must specifically request it.

Joint ........................................ $45 per annum

Joint members get one copy of the journal and newsletter to one address.

School ........................................ $12 per annum

Educational institutions may receive the newsletter at the cost of production to stay in touch with Society activities. By application to Council.

There are also Institutional Rates for libraries, government departments etc.

For more details on membership please write to NZ Ecological Society, PO Box 25 178, Christchurch, NZ.

LETTER TO THE EDITOR

Forest & Bird has several concerns about the Ecological Society’s support for the Minister of Conservation’s thrar policy as outlined in the letter reproduced in newsletter 66. I have prepared a response to this letter and would be grateful if it could be reproduced in the next newsletter.

There are several aspects to the Ecological Society’s support for the Minister of Conservation’s thrar policy (newsletter 66) that concern Forest & Bird.

Firstly, there is no mention of the destructive impacts of thrar on flora, fauna and soils in the Southern Alps. There is not even an acknowledgement that very little is known about the effects of thrar on palatable alpine herbs or on the habitat of vulnerable fauna, such as the kea, rock wren, grey spotted kiwi or the diverse range of invertebrates.

How can managers “set and prioritise conservation goals” when basic biological information is lacking? It is inevitable that the presence of thrar, even at low population levels, will cause irreversible changes to high altitude plant communities and the native animal populations that depend upon them. It is not “good science, good conservation, and good management” to maintain thrar at prescribed levels when the impact on the resource is so uncertain.

Secondly, when discussing the options available for thrar control, there is no mention of the costs of reducing thrar to low numbers. It has been estimated by John Parkes (October 1991) that maintaining thrar at very low densities would cost $1 200 000 annually. This estimate does not include control by private operators, which costs the Department of Conservation nothing.

It should be remembered that commercial helicopter hunting reduced thrar numbers from over 30,000 to under 4000 in 10 years, at no cost to the taxpayer. The primary reason that thrar population is now closer to 10,000, and that its range is increasing, is that since 1983 there has been a moratorium on the commercial hunting of thrar.

Parkes estimates that it would cost $30,000 annually to prevent further spread of thrar to up to $56,000 to manage thrar at different densities within their present range. This management cost includes only $20,000 for vegetation monitoring. There is no mention of monitoring native fauna. A combination of private control and departmental mop-up operations should cost considerably less than that of thrar management at set densities.

It alarms Forest & Bird that the Ecological Society, in its letter to the Minister of Conservation, can be so complacent about the prospect of deliberately maintaining arbitrary population levels of such a destructive introduced animal in an area with vulnerable native plant and animal communities. The only justification for the Minister’s policy can be to satisfy the demands of recreational and safari hunters for a feral thrar herd, and the desire of his department to boost its income from a levy on trophy heads.

Thirdly, for clarification, Forest & Bird’s policy on thrar is that all outlying populations of thrar should be eradicated (or maintained at “zero population” in the current jargon) and that thrar in the central part of their range should be eradicated if and when it is practicable. Failing that, thrar populations should be strictly controlled at the lowest possible level. Forest and Bird also supports the use of recreational and safari hunters to achieve this goal.

Thrar are one of the few animals introduced to this country that could be kept at very low levels or possibly removed entirely. Their presence in our mountains is a threat to native species and communities and compromises our international obligations towards maintaining species diversity and environmental protection. In the circumstances the approach to thrar control should be one of extreme caution, not experimenting with arbitrary population levels that have little scientific basis.

The Ecological Society, with extensive scientific expertise within its membership, is well placed to provide effective comment on the impacts of different thrar control strategies on the plant and animal communities of the New Zealand mountains. I hope the Ecological Society’s final submission on the thrar control plan includes a clear scientific assessment of the effects of thrar on native species and an analysis of the potential impacts of the different control strategies available.

Mike Harding
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This Newsletter was produced by Mary McEwen and Jeremy Rolfe. Duncan Cunningham organised the mailing out.

Contributions for the newsletter – news, views, letters, cartoons, etc. – are welcomed. If possible, please send articles for the newsletter both on disk and in hard copy. Disk can be any size: MS Word, Word Perfect or ASCII file text, formatted for Macintosh or MS-DOS. Please do not use complex formatting; capital letters, italics, bold, and hard returns only, no spacing between paragraphs. Send disk and hard copy to:

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The deadline for the next issue is 1 December 1992.

Unless indicated otherwise, the views expressed in this Newsletter are not necessarily those of the New Zealand Ecological Society or its Council.
HAWKWEED PROCEEDINGS: PUBLICATION

Get it while it's hot! Proceedings from the October 1991 hawkweed workshop are now available. *Vegetation change in tussock grasslands with emphasis on hawkweeds* NZ Ecological Society Occasional Publication No. 2, is in similar format to the previous occasional publication *Managing the New Zealand Natural Estate*.

The publication includes 25 papers, summaries of discussions and workshop sessions, and a comprehensive bibliography. Many aspects of the hawkweed debate are addressed and future research requirements are summarised.

Copies of the proceedings cost:

- $15 for workshop participants and/or NZ Ecol. Soc. members
- $20 for non-members and institutions,

and can be ordered with payment, from Di Robertson, Landcorp, PO Box 142, Christchurch. Please make cheques payable to NZ Ecological Society (Inc.)

NETWORK OF INDEPENDENT ECOLOGISTS

A group of 15 ecologists and resource managers, employed in consultancy and contract work, met during the Christchurch conference and decided to form a network to exchange information and assistance. Topics discussed were contracts, peer review, editorial assistance, confidentiality of information. We also decided to produce a newsletter with the first issue listing names and addresses of participants, and a brief outline of areas of expertise.

Those interested in joining the network should contact Jim Jolly

PO Box 29-035

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giving name, address, one-paragraph résumé, and $10 to cover costs of postage and newsletter.

Jim Jolly