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EDITORIAL

It has often been said that New Zealand is a world leader in conservation, and we can look to this country's environmental law and threatened species management for examples of this. But with indigenous biodiversity doing well in some heavily managed places (off-shore islands or mainland sanctuaries for example) but trending downwards elsewhere, continued habitat loss, colossal unmanaged weed and pest problems, a frightening 40% of bird taxa and 38% of plant taxa classified as threatened, continued cuts to conservation / biodiversity protection budgets, and proposals to mine areas of Schedule 4 conservation land, how long will we manage to uphold this reputation?

This year has been declared the Year of Biodiversity by the United Nations, and it is timely that some hard questions are asked of the nation. What is the true extent of attempts to safeguard our indigenous biodiversity? At what cost comes 'sustainable economic development'?

There are many pressing environmental issues currently needing attention. Ian Spellerberg and Jeff McNeely make the case as to why it is crucial that the "biological diversity imperative" should be at the top of the agenda.

Over the past few years, human-induced climate change has been on top of the environmental agenda. Huge resources have been directed at addressing climate change. It has struck fear into the hearts of politicians. That's understandable given the widespread suffering, displacement and mortality that will accompany climate change.

The very modest outcomes from the Copenhagen Conference last December will do little to address the effects of climate change.

Even an immediate halt of all use of fossil fuels would take a long time to have any effect on the world's climate because the greenhouse gases in the atmosphere will take many decades to return to their pre-industrial levels.

Copenhagen was all about politics and money. Human-induced climate change is but one small component of a much bigger problem, that is, the unsustainable and inequitable use of nature by growing numbers of human consumers.

While climate change is the most dramatic manifestation of this problem, it really boils down to what we call the "biological diversity imperative". After all, the effects of climate change are felt by people through their impacts on elements of biodiversity and ecosystems.

Diversity, be it biological, cultural or linguistic, is undoubtedly the fundamental basis of sustainability and human welfare. The United Nations (UN) has proclaimed 2010 as the International Year of Biodiversity, inviting the world to take action to "safeguard the variety of life on earth".

Ian Spellerberg is professor of nature conservation at Lincoln University and Jeff McNeely is the senior science adviser for the International Union for Conservation of Nature.

INSIDE:

Compared to the 2009 high-profile discussions about climate change, greenhouse emissions, and global warming, an International Year of Biodiversity might seem boring. Why would anyone care about safeguarding the variety of life on earth? Aren't conservation agencies around the world doing enough? Sadly, the answer is no. The fault lies not with the conservation agencies, but with the conflict between the supply of aspects of biodiversity and the resource demands of the nearly seven billion people who inhabit our planet.

But what exactly is biodiversity and why did the UN declare 2010 to be the International Year of Biological Diversity? The term "biodiversity" is a truncated form of "biological diversity". In brief, it means the variety of life on earth.

Scientists argue about the number of species (estimates range from three to 100 million) and there is considerable concern about the rate of extinction (some assessments have identified more than 31,000 species threatened with extinction). There is little doubt that the rate of extinction is greater than has occurred since humans evolved a few hundred thousand years ago. Furthermore, there is little doubt that humans are the main cause of the extinction of so many species. It is not surprising therefore that nature conservation (basically halting the loss of certain levels of biological diversity) has arisen as a human response to a problem that threatens our wellbeing.

However, it's not all about species conservation. While biodiversity includes a variety of species, it is much more than just species. The key word is "diversity" or "variety". Biological diversity is the sum total of variety at all levels of life from molecular levels to whole ecological systems. It's a kind of blanket term that embraces the whole range of biological and ecological scales from microscopic genetic diversity (the biological basis of the variety of crops and breeds of livestock) to large-scale ecological systems that drive the dynamics of oceans, rivers and landscapes. Biological diversity includes the variety of plants, animals and micro-organisms within ecological assemblages or "food webs".

Most local government policy documents on biological diversity dwell on "species" and no other kind of variety of life. Consequently such documents overlook the importance of other kinds of "diversity", though of course farmers are well aware of the genetic diversity of their crops and protected area system planners often focus on ecosystems.

Without any doubt, humans are dependent on biological diversity in its myriad of scales, forms and processes. For example, we are dependent on aspects of diversity in biology for food (both abundance and variety), clean water, productive soils, and clean air. Indeed biological diversity in its many forms sustains our lives by providing both sources of food and materials as well as "sinks" for our waste.

In 1992, in Rio de Janeiro, the Convention on Biological Diversity was adopted by the UN Conference on Environment and Development. The objectives of the Convention is the conservation of biological diversity, the sustainable use of its components and the fair and equitable sharing of the benefits arising from genetic resources. That Convention now has 192 signatories, of which over 100 have produced national strategies to implement the convention.

Worldwide, strategies have been written and rewritten, targets have been set, budgets have been allocated, and actions have been taken. Eighteen years on, how are we doing? In brief, it's not looking good. Plenty of evidence shows that humans continue to exploit nature in an unsustainable manner.

The most damning verdict came five years ago in the form of the four main findings of the Millennium Ecosystem Assessment, the result of work carried out by over 1300 scientists. Those findings were summarised in the statement "humans have changed ecosystems more rapidly and extensively in the last 50 years than in any other period".

So what's being done and who's leading the way? The International Union for Conservation of Nature, with some 1100 member organisations (including

the Government of New Zealand) has biological diversity as its core business. In addition to the expected programmes on species, protected areas and ecosystem management it has a unit working on "business and biodiversity".

It understands that the problems of conserving many aspects of biological diversity can't be separated from the larger issues of social and economic development. Biological diversity is increasingly relevant to businesses and in 2007 the European Union introduced legislation which holds operators liable for damage to water resources, soil, fauna, flora and natural habitats.

New Zealand leads the world in many aspects of nature conservation. It must build on that leadership and establish sustainability credentials that are based soundly on conservation and sustainable use of diversity in biological and ecological systems. More discussion about such things as payment for ecosystem services, incentives for conserving native plant communities and programmes to better inform the public as to what biological diversity is all about, are needed.

Biological diversity is the environmental imperative this year—not climate change.

This article first appeared in The Press *on the 25 February 2010. Reprinted with the permission of the authors.*

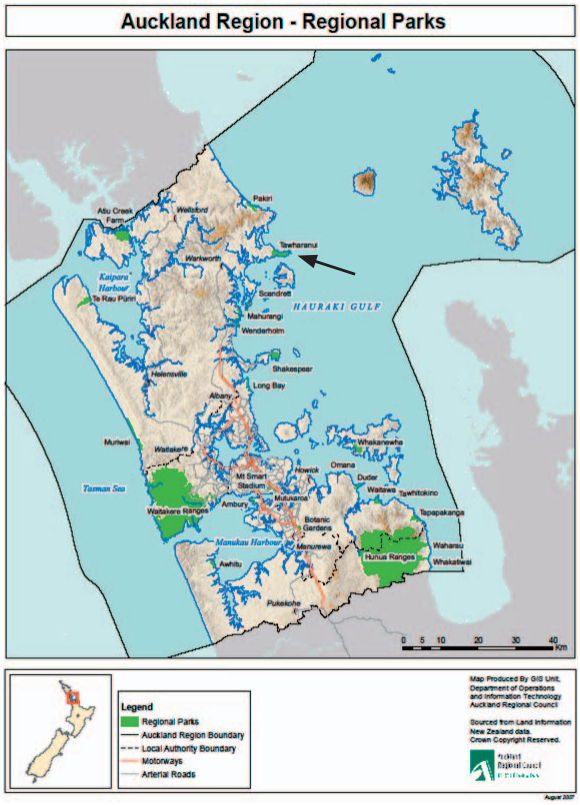
TAWHARANUI OPEN SANCTUARY

Shona Myers
Auckland Regional Council

* A version of this presentation was presented at INTECOL in Brisbane in August 2009, with the assistance of a NZES Grant to attend.

The Tawharanui vision

"An open sanctuary where visitors can freely experience a representative range of natural communities that would have originally been present on the Tawharanui Peninsula"



(left) Tawharanui Regional Park is one of 26 regional parks in the Auckland Region, covering over 40 000 ha. Of the land cover within the parks, three key ecosystems are represented: coastal forest (3%), kauri forest (9%) and duneland (11%). Tawharanui Peninsula (indicated by the arrow) has great strategic potential to link the mainland with offshore islands (such as Little Barrier and Tiritiri Matangi Islands). (above) The Tawharanui Peninsula from the air showing mixed land-use and vegetation cover. (Photos: ARC)

Tawharanui Regional Park was developed as an Open Sanctuary in 2004 and aims to integrate recreation, conservation and farming land uses. Tawharanui is an enduring illustration of the energy that joint ventures generate, with the Auckland Regional Council and Tawharanui Open Sanctuary Society Inc. (TOSSI) working in partnership to fulfil the vision of the park. Such sustained, high level community involvement has been a critical component of the ongoing success of the Sanctuary.

As an 'open' sanctuary the goals for Tawharanui are very much integrated and encompass:

- Farming
- Public recreation
- Habitat restoration
- Conservation of native species
- Sustainable land management

Working towards these goals is a long-term game, and before habitat restoration could begin in earnest, pest animals needed to be removed and kept out.

Members of TOSSI, in action. TOSSI were initially instrumental in raising funds for the construction of the pest proof fence, and now contribute across a number of areas including: weekly fence checks, the establishment of an on site nursery producing 20,000 quality plants from park sourced seed every year and playing a lead role in coordinating volunteers to plant them, monitoring of threatened and reintroduced species, and fundraising via grants and the successful biennial Art in the Woolshed exhibition. (Photo: ARC)

Controlling the pests

In 2004, a 2.7 km pest-proof fence was constructed from coast to coast, followed by an aerial pest control operation. This operation resulted in the eradication of seven pest mammal species.

Aerial deployment of pest control bait, 2004. This operation was successful in reducing the number of pest animal species from ten (mice, Norway rats, ship rats, rabbits, hedgehogs, possums, weasels, stoats, ferrets and feral cats) to three (rabbits, hedgehogs and mice). (Photo: ARC)

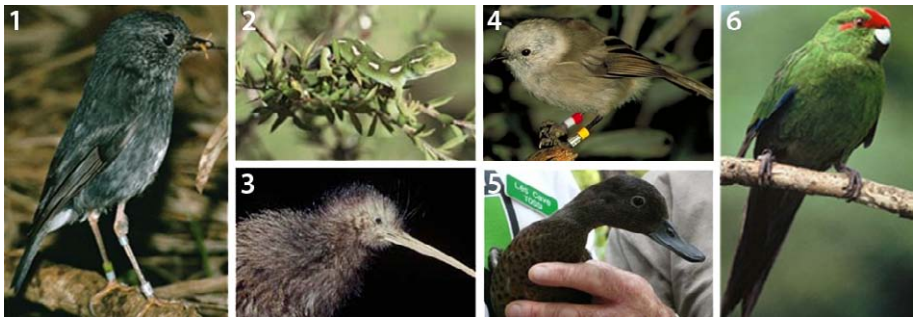
The fence effectively prevents pest ingress along the peninsula neck. However, the predator fence does not extend into the intertidal zone, leaving a potential pest pathway. To overcome this potential for incursions the fence ends were designed to incorporate a spiral 'koru' structure. This design has been experimentally tested to increase interception, containment and deflection of animal pests (T. Day unpubl. data). The fence ends are managed in conjunction with a trap and bait based animal pest management buffer.

The 'koru' endings on the predator proof fence. The fence 'wings' extend into the high-tide zone and angle inland to intercept pests approaching along the beach. (Photo: ARC)

Habitat restoration and species reintroductions

A key objective of the Open Sanctuary is to restore a range of northern coastal ecosystems, with a focus on coastal forest, dune, and wetland restoration. The restoration efforts will reinstate these threatened ecosystems and provide important breeding habitat for numerous species, many of which are also threatened with extinction.

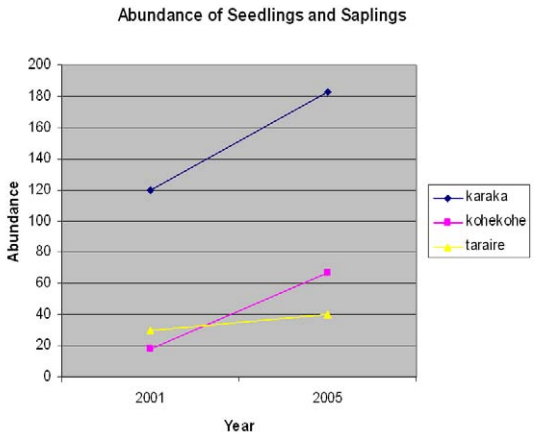
Like elsewhere in New Zealand, a number of species have been lost from the Tawharanui Peninsula. One of the objectives of the Open Sanctuary is to bring back these missing species, and to date seven species have been reintroduced to the Peninsula.



Six of seven species that have been reintroduced to the Tawharanui Open Sanctuary. 1. North Island robin (Photo: ARC); 2. Auckland green gecko (Photo: DOC); 3. North Island brown kiwi (Photo: DOC); 4. whitehead (Photo: ARC); 5. pateke (Photo: ARC) and 6. kakariki (Photo: DOC). Forest geckos (not pictured) have also been reintroduced. At the time of release, both forest geckos and green geckos were considered to be reintroductions. However, since then both species have been shown to have been already resident in the Open Sanctuary.

Success!

The six short but busy years since the predator fence was erected have produced many success stories. Forest health is on the increase and seedling numbers of key tree species within the coastal forest habitat (karaka, kohekohe and taraire) have increased since 2001 with the removal of grazing and browsing pressure. *Streblus* seedlings and saplings have been recorded at new sites, increasing the previous population of one individual.



Number of seedlings of three key coastal forest species (karaka, kohekohe and taraire) have increased since 2001. (Source: ARC)

Bird species that were already resident at Tawharanui have also been monitored for response in health and population. Looking to the 2001–2008 period, tui are now four times more numerous, the kereru population has doubled, and shore skinks are increasing in number. New Zealand dotterel, previously struggling to raise one chick between four pairs, in 2007/2008 produced 17 chicks between 11 pairs.

Of the reintroduced species, North Island robin are breeding successfully, and whitehead are now being recorded at numerous locations at Tawharanui. An incredibly exciting development during the 2008/2009 breeding season was the appearance of six North Island brown kiwi chicks.

The reintroduction of North Island brown kiwi to Tawharanui Open Sanctuary. In the absence of stoats and dogs these reintroduced kiwi became the first breeding population on the mainland in 60 years. (Photo: ARC)

Other species are making their own way to the Open Sanctuary, and the predator free environment has enabled these species to establish themselves in the park. Bellbirds arrived in 2005 (and have become the second most common species) and kaka have been recorded as breeding within the Sanctuary. Both species colonised from Little Barrier Island.

Grey faced petrel have also self-introduced, and hihi and tomtit are known visitors to the Open Sanctuary. Shore skink numbers are now robust enough to allow for exportation of individuals to establish four new populations.

Where to now?

Tawharanui Open Sanctuary is a living example of how Regional Parks can, and should, illustrate best practice sustainable land management. On the back of the success of Tawharanui the same model of Open Sanctuary is being developed at Shakespear Regional Park. Back at Tawharanui, the biggest anticipated challenges ahead are sustaining resourcing and managing any pest incursions. Continued community involvement, ongoing habitat and species restoration are planned for the future.

OPINION PIECE

The demise of native fish

Dr Mike Joy was the 2009 winner of the NZES Ecology in Action Award. Mike has been spearheading the call for a moratorium on the commercial longfin eel harvest. Here, he discusses why.

New Zealand's wetlands have been under the spotlight since the Resource Management Act (RMA) recognised their significant ecological values back in 1991. Since then, rafts of local and regional policies have been developed, with mixed success. A key feature of wetlands that is sometimes overlooked is their role as crucial habitat for our endangered native fish, including the endemic tuna (longfin eel). Tuna, like the rest of our native freshwater fish, have ended up with a rough deal in every way possible.

New Zealand's freshwater fish species are being impacted not just from changes in land-use and pollution but also by current national and local legislation and policy. For example, the Ministry for the Environment has yet to finalise a National Policy Statement on Freshwaters, the Ministry of Fisheries are implicit in the harvest of tuna, and the Department of Conservation administer

the commercial harvest of threatened whitebait species (juveniles of giant and shortjaw kokopu). The Minister of Conservation recently confirmed in Parliament that three eel concessions within the West Coast Tai Poutini Conservancy have been granted, and two recent applications for concessions for commercial eel harvest have been received by the Wellington/Hawke's Bay Conservancy.

How can it be that a threatened endemic species can be commercially harvested?

The answer is complex but starts with the New Zealand Freshwater Fisheries Act of 1983 (the Act). Under the Act, protection of indigenous fish species is subject to paragraph 3 which states fish can be taken for "research purposes or for human consumption...". So the Act offers no genuine protection for indigenous fish at all, with the exception of the explicitly protected grayling, a species that has been extinct since the 1950s.

The longfin eel fishery is showing all the classic signs of impending collapse: recruitment has dropped by 75% since the 1970s, and the size of individuals caught and the total amount caught has declined ever since records have been kept. Further, male longfin eels now dominate in commercially fished rivers by an order of magnitude as the larger sized female eels are harvested as soon as they reach the minimum allowable size for harvest.

Find out more about the call for a moratorium on commercial longfin eel harvest here: longfin eel moratorium

The Ministry of Fisheries have introduced a quota management system (QMS) in an attempt to protect the longfin eel, but fishermen aren't reaching the quota limits set, mainly because the longfin eel population is dropping faster than the quota can be lowered. So it's a 'Clayton's' QMS and, bizarrely, in the South Island both shortfin and longfin eels are treated as one species—a recipe for disaster.

Longfin eels, like the rest of our unique freshwater fauna, are all adapted to the pre-human environment of New Zealand—when the waterways were cool, shaded, clear, low in nutrients and sediment and there were huge areas of wetlands. We have removed 70% of the forests, 90% of the wetlands, dammed the rivers, pumped in nutrients over and through farmland and out of pipes from dairy sheds, industries and towns and cities. Native fish and invertebrate species now find themselves in an alien world of warm, nutrient-rich, flow-controlled water.

The decline in the longfin eel population illustrates how the multitudes of factors which are changing the freshwater environments of New Zealand impact upon particular fish species. While commercial fishing isn't the only cause of their decline it is an impact which can be removed right now. Now that more than two thirds of our freshwater fish species, our freshwater crayfish, and freshwater mussel are on the threatened species list surely it's time to act?

Photo: www.teara.govt.nz

WHAT'S NEW?

The National Wildlife Health Database Project

The Department of Conservation (DOC) has launched a new National Wildlife Health (NWH) Database. Initially aimed at helping wildlife managers plan translocation disease management for native species, it will serve a dual purpose as a tool for wildlife managers, and as a passive surveillance tool for detecting disease on a national scale.

For more information visit the Wildlife Health page on the DOC website: (www.doc.govt.nz/wildlifehealth), or contact Kate McInnes, Project Supervisor (kmcinnes@doc.govt.nz).

The database was designed and built by veterinarian Dr Paul Prosée as a tool for collecting and sharing disease testing information. DOC and community group conservation managers in New Zealand undertake disease screening as part of the process for managing disease risk when they translocate native species to new locations. This data is currently held in files and emails and isn't very easy to access or share. The initial focus of the database project is to gather and store this information in an accessible, searchable form. As data are entered into the database summaries are created for different species (e.g., disease results from all hihi in the database) and locations from which data was collected. Registered users of the database are able to access summary reports of the data which are generated six-monthly.

Sharing results will allow access to up-to-date robust information to help with the disease risk assessment process for conservation work. It is hoped that the database will make disease testing easier, cheaper and reduce the amount of testing being done. The database will also assist with translocations by providing all the information needed to do a risk assessment. The database is maintained at the New Zealand Centre for Conservation Medicine (NZCCM) at Auckland Zoo under contract for DOC. Already 23,411 disease testing results have been entered into the database, and it is anticipated another 220,000 results will be entered over the next two years of the project.

A second valuable use of the database is to provide a tool for passive surveillance for disease. Animals are the source of an estimated 75% of the emerging diseases of humans worldwide e.g., SARS and bird flu. The concept of One World One Health is gaining momentum worldwide and governments are picking up on the need for capability to address this issue. Having the tools available to monitor changes and detect new diseases is important. This database, although not initially designed for this purpose, has the ability to be used in this way. Monitoring submissions to the database will alert to the detection of new diseases or the spread of pathogens to new locations.

As a passive surveillance tool, the NWH Database sits alongside the 'HUIA' Database which is managed by Massey University, also under contract from DOC. HUIA contains results from necropsies on native species undertaken by Massey University veterinarians and other pathologists nationwide. It has proven its value in the detection of significant health issues in threatened native species such as erysipelas in kakapo, iodine deficiency in kaki/black stilt and lead poisoning in wild kea at Aoraki/Mt Cook, and offers the same capability for diagnosing exotic and emerging disease.

These two databases form a part of the wider New Zealand disease surveillance capability which includes industry, the Ministry of Agriculture and Forestry, Environmental Science and Research, and the Ministry of Health just to name a few. It's a small, but very important, piece of the surveillance pie, and an important conservation management tool.

The National Wildlife Health Database project was made possible by financial assistance of the Terrestrial and Freshwater Biodiversity Information System (TFBIS) Programme towards the preparation of the database. The TFBIS Programme is funded by the Government to help to achieve the goals of the New Zealand Biodiversity Strategy, and is administered by the Department of Conservation.

NZES CONFERENCE 2010

Biodiversity: 2010 and beyond
22–25 November 2010
(Student day 21 November)
University of Otago, Dunedin

2010 is the United Nations International Year of Biodiversity. This meeting will address this broad theme in a suite of symposia that include:

- Ecology and conservation of indigenous grasslands
- Molecular diversity of New Zealand biota
- Biodiversity in agricultural landscapes
- Ecological statistics
- Cultural perspectives on biodiversity research and management.

We are delighted to announce five inspiring plenary and keynote speakers: Professors Kevin Gaston (University of Sheffield), Alan Knapp (Colorado State University), Chris Simon (University of Connecticut and Victoria University of Wellington), Katharine Dickinson (University of Otago), and Dr Mike Joy (Massey University). Others are presently being invited.

Field trips to the new Orokonui Ecosanctuary, the Otago Peninsula, the Grand and Otago Skink management areas at Macraes Flat, and the Waihola–Waipori wetlands complex will show delegates the unusual ecological diversity of the Dunedin region.

We invite proposals for additional symposia.

Important dates
Call for symposia closes:
15 June 2010
Abstracts due:
1 September 2010
Registration opens:
June 2010
Early bird registration closes:
22 September 2010

Symposia suggestions and enquiries to
Deb Wilson, Landcare Research wilsond@landcareresearch.co.nz

More details will appear soon at: www.nzes.org.nz/

Conference Logo Competition

There were 30 entries for the logo completion. The winning entry was submitted by Esther Riley (Christchurch) who will receive a $250 cash prize and a t-shirt bearing the winning design.

Iconic silhouettes and a range of New Zealand inspired colours anchor this logo to the New Zealand Ecological Society. The type provides a support and base for the loose circle of organisms, representing the globe, life-cycles and changes over time. The slight interlocking of the forms implies the interrelationships within an ecosystem. The colours and format lend well to application to a neutral-coloured t-shirt, projection and stationery. Overall the design is eye-catching, clean and universally recognisable.

Kauri Seed Fund ScholarShip

The New Zealand Ecological Society has launched the Kauri Seed Programme Scholarship. This is a new initiative that targets undergraduate ecologists in the early stages of their ecological career.

Applications to the Kauri Fund Programme are now being sought from undergraduate ecologists to attend this years conference to be held in Dunedin 22–25 November.

More detail and an application form can be found at the back of this newsletter.

REVIEWS

Island Invasives conference

Mel Galbraith

Island Invasives: eradication and management (Auckland 8–12 February 2010)

This conference, focussing on the issues of invasive alien species on islands, was held at the University of Auckland, hosted by the Centre for Biodiversity and Biosecurity. The conference built on the success of a similar event held in 2001, also at the University of Auckland. There were over 240 attendees from 25 countries - the international presence no doubt because New Zealand is seen as a 'leader' in the fields of management of invasive mammals and management of islands. There was ample evidence of the export market we have in both materials and knowledge in this field.

A notable shift in this conference compared to 2001 was that more continental nations were represented. Advances in knowledge and technology have facilitated the management of invasive species on increasingly larger islands, bringing continental islands into management scope. This may suggest that the need to manage invasive species is no longer just a management imperative of island nations!

It is small comfort to realise that invasive species create similar problems globally, and the principle difference between places being differing management approaches – and much of these can still be considered 'experimental'. But having listened to presentations about invasive mammals from practitioners in countries that have their own indigenous mammals, it is very easy to conclude that our invasive mammals issues here are relatively uncomplicated.

One idea emerging from the conference was a cooperative approach to sustaining the investment in the infrastructure required for eradication projects. Rather than each project gathering the resources independently, a pool of resources and infrastructure moving (internationally) from project to project was mooted. Future developments such as this will be dependent on the ongoing sharing of ideas, an essential outcome of the networking that occurs at international conferences! Peer-reviewed proceedings of the conference are expected to be published in about a year.

Seabird Symposium

Mel Galbraith

Auckland seabirds: conservation, restoration and research (21 April 2010)

Some may find it difficult to think of the Auckland region as a biodiversity hotspot, but that was a very clear message from this seabird symposium. Figures presented on the day by Dr Graeme Taylor (Department of Conservation) conclusively place the Hauraki Gulf as the richest seabird habitat in the world—99 recorded species! This number includes 25 breeding species (three breeding only within the Gulf), 22 regular visitors, 24 rare visitors and 26 vagrant species. The trigger for this symposium was concern that appropriate recognition of seabirds in the Gulf is lacking.

The symposium was attended by about 100 people from government bodies, Territorial Local Authorities, academic institutions, the Ornithological Society of New Zealand, and community restoration groups. The topics covered fell under three main headings: the current state of Auckland seabird populations; seabird restoration techniques and initiatives; and seabird research outside the Auckland Region.

A focus of the symposium was whether a seabird plan was required for the management of seabirds within the Hauraki Gulf. While there was mixed reaction to the need for a formal management 'plan', there was general agreement that increased knowledge was essential to inform management actions. Concluding remarks emphasised the need for increased research into the diversity, ecology and restoration of seabirds in the Auckland region.

Journal article review: patterns in ant species richness

K.C. Burns

Latitudinal gradients in biodiversity are among the oldest patterns in ecology. The fossil record shows that they have existed for millions of years, and although they have been studied for over two centuries, their evolutionary origins are largely unresolved. Up until recently, geographic variation in present-day productivity was thought to be the primary factor promoting increased biodiversity in tropical latitudes. However, more recent work suggests that historical effects may play a larger role than previously thought and many researchers have begun to focus on the relative importance of present-day processes and historical effects.

Unequivocal evidence for any explanation for the latitudinal diversity gradient is unlikely to ever be obtained, given that experiments are impossible at the spatial and temporal scales at which the pattern operates. Investigators must instead rely on 'natural experiments', for example how latitudinal diversity gradients vary among geographically isolated regions, in the hope that regional variation in the pattern will provide new (albeit indirect) insight into the processes responsible for it.

In a recent paper published in Ecology Letters, Dunn et al. provide a particularly insightful example of this method. They compiled a global dataset on ant distributions by collating a staggering amount of field data that was collected by both themselves and their collaborators. They found that like most other types of organisms, ant diversity increases towards the equator, which by itself isn't overly insightful or novel. However, they probed deeper into the data and established that the latitudinal diversity gradient in ants differs in the Northern and Southern hemispheres. Instead of a single unified pattern, they found that Southern hemisphere sites housed more ant species than their northern counterparts. Contemporary climate accounted for some of the hemispherical asymmetry in diversity. Yet after controlling for climatic effects statistically, differences in diversity between hemispheres remained, suggesting that historical effects might also be important. When viewed in light of other recent work on trees and bugs, Dunn et al.'s work provides mounting evidence that species diversity is higher 'down-under' and that hemispherical differences in diversity appear to have originated deep within our evolutionary past.

Dunn, RR., Donat Agosti, AN. Andersen, XA, Carsten AB, Xim C, Aaron ME, et al. 2009. Climatic drivers of hemishperic asymmetry in global patterns of ant species richness. Ecology Letters 12(4): 324-333.

ECOTONES

New ecological research by New Zealand ecologists

Compiled by Bruce Burns

Fashion in the field: do sexually deceptive orchids resemble female wasps?

Members of the orchid genus *Cryptostylis*, which includes *C. subulata* present in northern New Zealand, effect pollination by ingeniously fooling males of the ichneumonid wasp *Lissopimpla excelsa* to mate with their flowers, and transfer pollinia through repeats of this process. The principle means of attracting males from afar is by counterfeit pheromones, but once the wasp is close, the flower needs to resemble the female to ensure the male finds the flower and adopts the correct position to receive the pollinia. To the human eye, however, these flowers are orange-red whereas female *L. excelsa* are orange and black. So, do these flowers look enough like a female to fool the male wasps? Gaskett and Heberstein (2010) have recently shown that orchids and the female insects of its pollinator species are colour identical when modelled in a hymenopteran visual system, despite the differences seen by humans. Also, bumps on the labellae of *C. subulata* reflected UV like the wings of female *L. excelsa* wasps, and also mimicked the dimensions of the female wasp's body. So, from a male wasp's point of view, these flowers look like the perfect mate.

Gaskett AC, Heberstein ME 2010. Colour mimicry and sexual deception by Tongue orchids (*Cryptostylis*). Naturwissenschaften 97: 97–102.

Exotic plantation forests provide habitat for both species of native bat

Plantation forests dominated by *Pinus radiata* in New Zealand have been previously thought of as having low biodiversity and wildlife values. Recently, however, evidence is increasing to suggest significant values can and do occur in these forests, and management to maintain or enhance this wildlife would be worthwhile. With regard to native bats, Borkin and Parsons (2010a, 2010b) provide new evidence of the use of plantations by both the lesser short-tailed bat and the long-tailed bat in central North Island. They report that the lesser short-tailed bat use plantation forests as habitat when they are contiguous with a native forest already containing a population. Long-tailed bats are more widespread in plantation forests throughout New Zealand, and occur in some of the largest such forests, e.g., Kinleith Forest. Understanding how management of these forests could be sympathetic with the ecology of these species is a major outstanding question.

Borkin KM, Parsons S 2010a. Plantation forests are used by the lesser short-tailed bat, *Mystacina tuberculata rhyacobia*. New Zealand Journal of Zoology 37: 13–17.

Borkin KM, Parsons S 2010b. The importance of exotic plantation forest for the New Zealand long-tailed bat (*Chalinolobus tuberculatus*). New Zealand Journal of Zoology 37: 35–51.

How important are New Zealand coastal turfs?

Rogers and Wiser (2010) have recently published the first comprehensive survey of the ecology of coastal turfs in New Zealand. These are communities of ground-hugging halophytic herbs, sedges and grasses that grow on coastal rocky promontories. The survey has exposed these areas as extremely rare biodiversity hotspots. They estimate that this ecosystem type occupies only around 40 ha in New Zealand, but supports 139 vascular plant species (about 5.8% of the New Zealand flora). Of those plants present, 33 are threatened or uncommon plants, and many are only found in coastal turfs. The plant communities also showed strong regional distinctiveness. There was also evidence that herbivory plays a strong role in maintaining coastal turfs, and the evolution of these ecosystems with frequent avian grazing and trampling is suggested.

Rogers GM, Wiser SK 2010. Environment, composition and conservation of coastal turfs of mainland New Zealand. New Zealand Journal of Botany 48: 1-14.

Urban landscapes important as sources of plants harvested for cultural purposes

Maori in New Zealand traditionally make use of a wide range of native plants for food, medicine, weaving and dying, but access to these plants is often difficult. Wehi and Wehi (2010) report on an innovative Waikato survey to identify which native species are harvested by Maori for cultural purposes and where harvesting occurs. Elders identified 58 species they harvest regularly or consider culturally important, but few are harvested from conservation lands. Instead most are collected from urban areas and other public areas including roadsides, although some are now difficult to access. This highlights an opportunity for local and particularly urban government and conservation agencies to manage such areas to provide a harvesting resource.

Wehi PM, Wehi WL 2010. Traditional plant harvesting in contemporary fragmented and urban landscapes. Conservation Biology 24: 594-604.

Maud Island frog population stable after 25 years

Until a few years ago, the only known populations of Maud Island frog (*Leiopelma pakeka*) occurred on Maud Island although fossil evidence showed it was formerly more widespread in New Zealand. Translocated populations have recently been established in three other locations since 1997. The original populations on Maud Island have been monitored now for 25 years, and Bell and Pledger (2010) have recently provided an analysis of the stability of these populations. In contrast to

many amphibian populations around the world, these populations remained relatively stable or may have increased slightly over this time period. Recaptures of marked frogs indicated that some lived unexpectedly long lives; two males reaching 35+ and 37+ years, a female 34+ years. This is probably one of the longest studies of a wild frog population undertaken globally.

Bell BD, Pledger SA 2010. How has the remnant population of the threatened frog *Leiopelma pakeka* (Anura: Leiopelmatidae) fared on Maud Island, New Zealand, over the past 25 years? Austral Ecology 35: 241-256.

NEWS FROM THE IUCN

IUCN on mining and the Schedule 4 issue

Wren Green

As members will doubtless be aware, the Minister of Energy and Resources and the Minister of Conservation have released a discussion paper for comment that proposes removing several areas of conservation lands from Schedule 4 of the Crown Minerals Act with a view to potentially opening them up for mining. This has been discussed extensively by the New Zealand Committee of IUCN (without Department of Conservation staff present) and an extensive submission opposing the proposals was prepared by several members of the Committee. Given the internationally high regard with which New Zealand's protected area system is held, there have been big ripples offshore to this proposal.

The Director-General of IUCN and the Chair of the World Commission on Protected Areas (WCPA) have jointly signed a letter that was sent to the Prime Minister expressing their "serious concern" about the proposal. It concludes that

> "…the proposed changes are worrying departures from New Zealand's past progress in conservation over many decades."

It is rare for the IUCN Director-General to comment on country-specific issues and is a measure of the global concern that this current proposal "and beyond" has aroused. If an area can be included (Otahu Ecological Area, Coromandel Peninsula) that is described in the discussion paper as providing "valuable habitat for North Island brown kiwi, Hochstetter's and Archey's frogs, as well as native fisheries" then one can ask—what other areas of high biodiversity value are potentially at risk if they are deemed to have mineral potential?

IN THE NEWS

Hope for the Tasmanian devil

3news 11 March 2010

The discovery of a genetically distinct colony of Tasmanian devils may save the species from being wiped out by the contagious cancer that has decimated the population, according to Australian scientists. Devil Facial Tumour Disease was discovered in 1996. Since then, the numbers of Tasmanian devils have plummeted by 70 percent. Last spring, Australia listed the Tasmanian devil as an endangered species and current estimates suggest the Tasmanian devil could be extinct within 25 years. But Kathy Belov (University of Sydney) said the new findings, which were published in the Journal Proceedings of the Royal Society, buy more time for managing the disease and developing a vaccine.

Moa in the city

Yahoo News 8 April 2010

Moa bones and an adze head have been found in a hangi site in Torpedo Bay, Devonport, on Auckland's North Shore by construction workers. The site was significant because it was believed to be where some of the very first settlers landed in Auckland, possibly about 900AD. Bev Parslow (the Historic Places Trust's regional archaeologist) said that the rare find was "incredibly exciting".

Voxy 23 April 2010

Pest seaweed found in Fiordland

A single specimen of the introduced Japanese kelp *Undaria pinnatifida* (a fast-growing seaweed that can spread rapidly, displacing native species, and have major impacts on marine ecosystems) has been found in the remote Sunday Cove, Breaksea Sound in Fiordland. The solitary mature plant was found on a barge during a joint-agency surveillance and compliance checking exercise in the Fiords involving staff from the Ministry of Fisheries, Environment Southland, Department of Conservation and MAF Biosecurity New Zealand. The specimen has been removed and a rigorous search was conducted to ensure no other specimens had established.

TVNZ 7 may 2010

Didymo found in three more rivers

The number of infested rivers in the Tasman Region has now jumped to 21. However, a Department of Conservation (DOC) spokeswoman Trish Grant says there are still only two rivers known to be infested in the Marlborough and Kaikoura Regions, and there have been no new infestations recorded there in the past year. "Didymo is in several waterways that are important for whio, including the Fyfe and Baton Rivers, Sandstone Creek, and now the Pearse River," Nelson/Marlborough DOC manager Martin Heine says. It is important to keep didymo out of the parts of these rivers, and other Kahurangi National Park waterways, on which whio live, as the long term effect of didymo on the insects - caddis fly, mayfly and stone fly - on which whio fed is not yet known, but the algae could form massive blooms on the bottom of the streams, and potentially reduce the food supply.

3news 4 March 2010

Kiwi could be saved by hunting dog

Rein, (an enthusiastic eight-week-old hungarian vizsla), has joined Department of Conservation (DOC) staff in Franz Josef to be trained to help find the critically endangered rowi kiwi, without transmitters. A dog's natural instinct to hunt kiwi will make it a valuable tool to help save New Zealand's rarest species of the bird, DOC says. Rein's trainer and handler, ranger Iain Graham said vizslas were bred as all-round hunting dogs, which made them genetically predisposed to hunt birds. Given the risk dogs pose to rowi kiwi it will take considerable training during the next couple of years for Rein to become a detection dog, and he would never be allowed into the kiwi zone without a muzzle and handler, Mr Graham said.

ABCNews 4 March 2010

Welcome back to the yellow-spotted bell frog

Thirty years after it was thought extinct, the yellow-spotted bell frog has been found in the Southern Tablelands of New South Australia. A fisheries conservation officer, Luke Pearce, had been walking along a stream trying to catch the endangered southern pygmy perch when he spotted the frog next to the water. Pearce returned in the same season in 2009 with experts who confirmed it was a colony of around 100 yellow-spotted bell frogs.

Stuff 10 May 2010

Whaler's data used to protect whale species

American offshore whaling maps, log books and strike documents from the 1700s to the 1920s are being analysed to shed light on southern right whales and sperm whales in Australasia. Whaling was big business in the 1830s, so very detailed records were kept, said marine ecologist Dr Leigh Torres, (NIWA). "We are using these data, that are over a hundred years old, to tell us what the key foraging, migratory, and frequently used habitats were for southern right whales and sperm whales". From this historic data, collected in a time when whales were abundant, models can be developed. The models will be used to predict modern-day habitat use patterns of these two whale species.

DNA study sheds light on the demise of a population of woolly mammoths guardian.co.uk 11 October 2009

Some 9,700 years after woolly mammoths became extinct, mysteriously dying out at the end of the last ice age, DNA analysis is being undertaken on the increasing number of mammoth remains that are emerging from Russia's thawing permafrost. Russian experts say that the question of why the mammoth died out may shed light on our own prospects of survival in a world gripped by rapid climate change. "Mammoths are a window into changing climate and ecology," says Fedor Romanenko, a mammoth specialist and senior scientist from the geography department of Moscow State University.

Compiled by Fleur Maseyk

RECENT STUDENT RESEARCH

This column highlights the abundance and variety of post-graduate ecological research coming out of the country's research institutes.

This issue: Auckland University.

THE UNIVERSITY OF AUCKLAND
NEW ZEALAND
Te Whare Wānanga o Tāmaki Makaurau

DOCTOR OF PHILOSOPHY

2008

Aleksa, A.I. Vulnerability of indigenous forests in changing landscapes.

Bassett, D. The predatory behaviour of temperate nocturnal reef fish.

Bassett, I.E. Ecology and management of alligator weed, *Alternanthera philoxeroides*.

Burnett, D.A. Assessment of potentially invasive aquatic plants under modified temperature conditions.

Freeman, D. The ecology of spiny lobsters (*Jasus edwardsii*) on fished and unfished reefs.

Miller, S.D. Stochastic modelling of rat invasions among islands in the New Zealand archipelago.

Olavarría, C. Population structure of Southern Hemisphere humpback whales.

Oremus, M. Genetic and demographic investigation of population structure and social system in four delphinid species.

Rayner, M.J. Population biology, predator prey dynamics, foraging ecology and conservation status of *Pterodroma cookii*.

Wiseman, N. Genetic identity and ecology of Bryde's whales in the Hauraki Gulf, New Zealand.

2009

Corfield, J.R. Evolution of the brain and sensory systems of the kiwi.

Dekrout, A. Monitoring New Zealand long-tailed bats (*Chalinolobus tuberculatus*) in urban habitats: ecology, physiology and genetics.

Le Port, A. Phylogenetics, phylogeography and behavioural ecology of short-tailed (*Dasyatis brevicaudata*) and longtail (*D. thetidis*) stingrays.

Newcombe, E.M. The nature and implications of variation in a seaweed-epifauna-fish food chain.

Storey, A.A. Migrations most fowl: archaeological and ancient mitochondrial DNA signatures of Pacific chickens.

Vesely, E. Natural capital restoration and economic efficiency.

MASTER OF SCIENCE

2008

Allwood, J.S. Gondwanan relationships of native New Zealand invertebrate fauna.

Cameron, C. Strategic approaches to conservation management: a comparative analysis of New Zealand, the United Kingdom and Australia.

Charuchinda, B. Evaluation of *Colletotrichum* spp. as mycoherbicides for biocontrol of environmental weed species.

Dare, J.E. Remaining unseen in the pelagic world: the conflict between camouflage and feeding in *Trachurus novaezelandiae*.

Davy, L. The temporal and spatial patterns of rodents at Little Windy Hill, Great Barrier Island.

Hamner, R.M. Population structure, gene flow and dispersal of Hector's dolphins (*Cephalorhyncus hectori hectori*) around the South Island of New Zealand.

Khin, J.M. A comparison of the ecological, social and economic values of ex-situ and in-situ conservation methods for North island brown kiwi in Northland.

Mairs, R.J. Continuity of riparian vegetation and stream integrity in the Twin Streams, Waitakere.

Nygård, B. Population ecology of *Gambusia*: the effect of habitat quality and interactions with Inanga.

Ryken, A. L. Biophysical investigation of coastal revegetation into kikuyu grass (*Pennisetum clandestinum*): Arrigato, Pakiri.

Shaw, R.C. Testing the Hamilton-Orians hypothesis for the evolution of obligate brood parasitism in a captive population of zebra finch (*Taeniopygia guttata*).

Tooman, L.K. A genetic investigation into the population structure and invasion dynamics of *Charybdis japonica* (Crustacea: Decapoda: Portunidae) within New Zealand.

2009

Behrens, S. Bryde's whales (*Balaenoptera brydei*) in the Hauraki Gulf and the effects of vessel traffic.

Booth, K.A.M. Ecological modelling for urban reserve design: A case study of isolation effects upon the beetles of North Shore City.

Cunningham, C.M. Trace metal accumulation by *Potamopyrgus antipodarum* and biofilms of Auckland streams.

Gibson, S.J.T. Inking behaviour of pygmy sperm whale (*Kogia breviceps*): behavioural responses of a model elasmobranch predator and potential mechanisms of action.

Hancock, P.G. The effects of stream riparian cover and insect contributions to the diet of banded kokopu (*Galaxias fasciatus*).

Leader, C. Anti-predatory behaviour of endemic New Zealand moths to the calls of endemic bats.

Martin, J.L. Investigating maternal effects in a batch spawning teleost.

McLeod, I.M. Green-lipped mussels, *Perna canaliculus*, in soft-sediment systems in northeastern New Zealand.

Muchna, K.J. Rainbow skink: invasion ecology of an introduced lizard.

Riding, T.A.C. Intertidal movement patterns and navigation of the New Zealand eagle ray, *Myliobatis tenuicaudatus*.

Smith, J. Pollination by New Zealand geckos.

Subedar, K. Homing in two New Zealand triplefins: *Forsterygion varium* and *Forsterygion lapillum*.

Taptiklis, S. Chemical defence in New Zealand macroalgae : the influence of grazer density on the speed of defence induction in *Carpophyllum flexuosum* and *Cystaphora torulosa*.

Thammavongsa, S. Use of macroinvertebrates to assess the condition of urban streams and wetlands in Vientiane, Lao P.D.R.

Williams, P.J. Diets of larger (>10cm) fish in two northeastern New Zealand estuaries.

Wong, N. The reproductive biology, larval ecology and morphology of the clubbed tunicate, *Styela clava*, in Auckland Harbour, New Zealand.

BATCHELOR OF SCIENCE (HONS)

2008

Branislav, I. The mechanism of cuckoo host-race egg mimicry.

Dhami, M.K. Do microbial endosymbionts play a role in the ecology of *Coelostomidia wairoensis*?

Fraser, E. The winter ecology of the eastern rosella (*Platycercus eximius*) in New Zealand: a threat to native parakeet translocations?

Miner-Williams, C. Vocalisations of the Australasian gannet (Morus serrator).

2009

Wills, R.J. Biodiversity and the Resource Management Act 1991: policy statements, plans and private land.

Wyse, S. Barking up the wrong tree? The effects of host bark characteristics on vascular epiphyte communities.

CALL FOR PAPERS

Special issue of the *Australasian Journal of Environmental Management*

The Editors of the *Australasian Journal of Environmental Management* invite offers of papers on 'Biological Diversity' for a special issue of the Journal in December 2010.

Recognising the importance of biological diversity, the Editors have agreed that the 2010 December issue of the *Australasian Journal of Environmental Management* will be a special issue devoted to papers on biological diversity. Papers submitted for possible publication in this special issue must follow the 'guidelines for contributors' including length limit of 6000 words (see guidelines for contributors). The emphasis will be on 'diversity' or 'variety' in nature at any level of biological or ecological organisation. The topics may be wide ranging and could include accounts of management and conservation of diversity as well as the benefits and functions of diversity in nature. Those benefits could be environmental, ecological, social, cultural or economic. Papers that use the term 'biological diversity' in a general sense and without qualification will not be accepted.

Papers to be presented at the Environment Institute of Australia and New Zealand annual conference are welcome, subject to the timelines below.

Timelines

Abstracts or expressions of interest: please submit abstracts or expressions of interest to the Editors at ajem@uq.edu.au as soon as possible.
Full manuscripts: **18 June**. Earlier submissions are welcome.
Contact Prof. Helen Ross for further details
phone: 0408-195324
e-mail: ajem@uq.edu.au, (please allow time to respond as the email account is staffed part-time).

FOLIAR BROWSE INDEX (FBI) MANUAL REVISION

The Foliar Browse Index (FBI) is a ground-based assessment of plant indicator species designed to determine the impact of possums on forests and/or vegetation response to possum control.

The recent development of a monitoring toolbox by the Department of Conservation has identified a need to revise the Foliar Browse Index (FBI) manual. A questionnaire and some follow up phone survey has been undertaken

NOTICEBOARD

of FBI users to determine what needs to be revised and these comments are currently being worked through. Thanks to those who have already provided feedback.

If you haven't been contacted but have some views on this method please contact Phil Knightbridge at the Department of Conservation's West Coast Conservancy.

phone: 03 756 9137
e-mail: pknightbridge@doc.govt.nz

NATIONAL VEGETATION SURVEY DATABANK

The National Vegetation Survey databank (NVS) is a physical archive and computer databank containing records from approximately 77,000 vegetation survey plots. The free software package NVS-Express provides an easy way to enter and analyze data in NVS.

This winter Manaaki Whenua – Landcare Research will be running a series of one-day workshops offering an overview of NVS and training on 'NVS-Express'. The workshops will be held in computer classrooms for 'hands-on' training. Each workshop will be divided into three sessions: An introduction to the NVS databank, data entry with NVS-Express, and data summary and analysis.

Department of Conservation and Regional Council staff, resource management and biodiversity consultants, policy makers and any others who measure and monitor vegetation using standard plot-based methods will benefit from these workshops. The workshops will be free thanks to a generous TFBIS grant and the workshop locations will be selected based on registered interest.

Interested participants should contact Anna Marburg for further details.

phone: 03 321 9729
e-mail: marburga@landcareresearch.co.nz

DONATE NOW! KAURI FUND FOR ECOLOGICAL SCIENCE

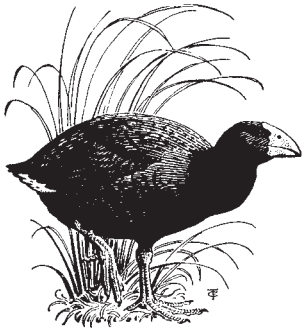
We invite you to help grow the science of ecology in New Zealand by contributing to the NZES Kauri Fund. This fund was established in 2001 to provide resources for initiatives that assist the development of ecology and ecologists in New Zealand. As the Fund grows, it will play an increasingly critical role in advancing the Society's goals and fund exciting new initiatives for New Zealand ecology.

Please consider a contribution, whether $10, $20 or $50, to the Kauri Fund now or at the time you renew your subscription.

You can make your contribution to the Kauri Fund in two ways:

Send a cheque made out to the "NZES Kauri Fund" to the New Zealand Ecological Society, P.O. Box 25 178, Christchurch 8144.

Use internet banking, to credit your donation to New Zealand Ecological Society, bank account 06 0729 0465881 00, identifying the payment as "Kauri Fund".



UPCOMING MEETINGS

ORNITHOLOGICAL SOCIETY OF NEW ZEALAND

The OSNZ Annual Conference and AGM

The Conference Centre, Tahunanui
Nelson

Queen's Birthday Weekend 4–7 June 2010

OSNZ Conference

ECOLOGY SOCIETY OF GERMANY, AUSTRIA AND SWITZERLAND

Ecological Society of Germany, Austria and Switzerland (GfOe), Annual Meeting
30 August – 3 September 2010

Justus-Liebig-University of Giessen, Germany

The GfOe will celebrate its 40th Anniversary Meeting under the theme "The future of biodiversity—genes,species, ecosystems".

The meeting will include

- Keynote lectures, about 200 oral presentations and more than 200 posters
- Workshops and counseling sessions
- The first European EcoSlam (the most original presentation of ecological facts within 10 minutes)
- A salsa night
- Conference dinner,
- Excursions and much more

Early bird registration and submission of oral presentation proposals due **1 June 2010**
For more information see: www.gfoe-giessen-2010.de/

NEW ZEALAND PLANT CONSERVATION NETWORK

Plants in a human landscape – conservation outside nature reserves

Canterbury Horticultural Society Rooms, Christchurch

8–10 October 2010

If you are not a Network member and would like to receive information about this conference when registration details are confirmed then please email us (info@nzpcn.org.nz)
For details see: http://nzpcn.org.nz/publications/Conference10-flyer-100326.pdf

ENVIRONMENTAL INSTITUTE OF AUSTRALIA AND NEW ZEALAND

2010 EIANZ Conference at Te Papa: From Discovery to Delivery: Science, Policy, Leadership and Action

Wellington, New Zealand

26–29 October 2010

Hosted by the New Zealand Chapter of the Environment Institute of Australia and New Zealand (EIANZ).

The title of the conference is "From Discovery to Delivery: Science, Policy, Leadership and Action". These are the four elements which, together, are essential for sound environmental management. Because 2010 is the International Year for Biodiversit**y, we expect** that many of the conference papers and workshops will address this particular aspect of environmental management.

We are currently seeking submitted papers for the seven conference streams:

- Valuing ecosystems
- Community action
- Business leadership
- Urban challenges
- Natural resource governance
- Assessment and monitoring
- Wicked problems

These topics are designed to appeal to a wide range of disciplines including ecologists, economists, local and central government policy analysts, urban designers, community development specialists, business leaders and industry representatives.

For more information about the programme, confirmed keynote speakers and submitting an abstract see: www.confer.co.nz/eianz2010/programme.html or contact:

Conference Secretariat:
Conferences and Events Ltd
PO Box 24078, Manners St
Wellington 6142
phone: +64 4 384 1511
e-mail: eianz2010@confer.co.nz

Do put this event in your diary—it is a unique opportunity to present your work and ideas to a multi-disciplinary environmental practitioner audience.

The deadline for abstract submission is 4 June 2010.

NEW ZEALAND PLANT EVOLUTION AND SYSTEMATICS NETWORK

Hosted by the New Zealand Plant Radiation Network

Allen Wilson Centre
Massey University
Palmerston North Campus

November

The New Zealand Plant Radiation Network aims to bring together researchers interested in botanical research to promote collaboration and discussion of ideas, methods and projects around several themes including: delimitation of species, ecological drivers of radiation, reconstructing the evolutionary history of species radiations, and evolutionary significance of hybridisation and polyploidy.

For more details contact Claudia: c.voelckel@massey.ac.nz

AUSTRALIAN SYSTEMATIC BOTANY SOCIETY

"Systematic botany across the ditch: links between Australia and New Zealand"

Lincoln University
Lincoln

Monday 29 November – Friday 3 December 2010

The conference will include the following themes:

- Palaeobotany
- Biogeography

- Phylogeny
- Algae
- Hybridisation
- Biosecurity/weeds

Organised by Landcare Research, Australian Systematic Botany Society, and the New Zealand Plant Radiation Network.

For conference registration form, speakers abstract form, accommodation, field trip details, and key dates see:

www.landcareresearch.co.nz/news/conferences/asbs2010/index.asp

or

e-mail: ASBS2010@landcareresearch.co.nz

ECOLOGICAL SOCIETY OF AUSTRALIA

Annual Conference: Sustaining biodiversity – the next 50 years
6–10 December 2010

The 50th anniversary of the founding of the Ecological Society of Australia provides a timely platform for retrospective and prospective, considerations of ecology in Australia. A series of themes will focus on the challenges that will be faced by Australian ecosystems over the next 50 years, and the way that our science will need to adapt to meet these challenges. We will take a long term perspective of ecology in Australia and engender a sense of urgency to consider how ecologists can provide solutions to those problems with which we are now familiar, and those on the horizon.

www.esa2010.org.au/

INTERNATIONAL BOTANICAL CONGRESS

IBC2011
XVIII international botanical congress
MELBOURNE AUSTRALIA | 23-30 JULY 2011

The Australian botanical community invites you to Melbourne, Australia in July 2011 to participate in the XVIII International Botanical Congress. Australia has a vibrant scientific community active across all botanical disciplines and its researchers play a prominent and highly collaborative role in international biological sciences.

Themes include:

- Systematics, evolution, biogeography & biodiversity informatics
- Ecology, environmental change & conservation
- Structure, development & cellular biology
- Genetics, genomics & bioinformatics
- Physiology & biochemistry
- Economic botany including biotechnology, agriculture & plant breeding

Proposals for general symposia are now being sought.

For full details see: www.ibc2011

NEWS FROM YOUR COUNCIL

Membership report

A warm welcome to new members

New members as confirmed by Council on 19 March 2010

Justine Coup, Morphum Environmental Ltd
Karen Palmer
Stephanie FitzGerald
Danielle Middleton
Catherine Davis
Sheryl Krull
Michael Lee, Auckland Regional Council
Erin Patterson

NZES Council also welcome our **new journal subscribers**:

Bay of Plenty Polytechnic

The following **resignations** were acknowledged:

Dave Morgan	Rachel Keedwell
Sarah Kelly	Lisa Langer
John Kean	Melissa Renganathan
Monika Merriman	Samuel Brown
Danilo Hegg	Tamsin Ward-Smith
Katharina Doehring	Jason Roxburgh
Jamie MacKay	Sarah Van Herpt

The following have **cancelled journal subscriptions**:

International Pacific College, Palmerston North
La Trobe University, USA
Serials Librarian, NIWA, Wellington

Council Minutes

These minutes have been edited and abridged.

19 March 2010, Auckland

Present: Bruce Burns, Laura Young, Ruth Guthrie, Mel Galbraith, Fleur Maseyk, Chris Bycroft, John Sawyer, Shona Myers, Clayson Howell
Apologies: Isabel Castro, Kevin Burns

Minutes from skype meeting 22 January

Clayson moved that minutes be a true and accurate record, seconded Fleur, Carried.

Noted that former Treasurer Rachel Keedwell has resigned from NZES. Ruth moved a vote of thanks for her contribution as Treasurer during her time on Council.

Finances (Clayson)

Clayson provided his financial report:

Account balances 18/03/2010

Cheque	7,135
Westpac	9,244.54
Cash flow	74,469.86
Barlow	56,481.53
Kauri	62,179.11

Cash fund down a bit currently because of a transfer in February to cover some cheques.

We are keeping track of donations to the Kauri Fund, Susan will keep Clayson up to date and he will make a point of transferring that money across.

Presented a year to date against budgeted spending (see below). One thing to note—the budget for journal production is underestimated due to the cost of

Feathers to Fur. Seed money for the Dunedin conference and sponsorship to the Island Invasive Conference are new additions.

There is still a larger than expected amount spent on the newsletters— Fleur will contact the Secretariat and get a list of people receiving hard copies and see if we can manage this a different way.

For the next meeting Clayson will clarify the costs around the website development, and add the profits from INTECOL.

Clayson moved that report be accepted, seconded John. Moved.

2010 Budget and Year to Date

General accounts: Day to day, Westpac account and Cash-fund

Income		**YTD 18/03/2010**
Memberships	31,000.00	18,887.26 (+ Westpac)
Journal Subscriptions	10,000.00	—
2009 Conference profit	16,179.82	0.00
Return of Intecol Seed funding	12,521.32	0.00
Interest	7,000.00	624.59 (+ Westpac)
TOTAL PREDICTED INCOME	**76,701.14**	**19,511.85**
Expenses		
Journal production	16,000.00	26,040.16
Newsletter printing	900.00	256.16
Secretariat	9000.00	2,534.43
Council travel	3000.00	947.00
Preparing accounts	562.50	0.00
Auditor	750.00	0.00
Contribution to Kauri and Barlow funds	2400.00	600.00
Awards	3,600.00	1,000.00
Website development	c 10,000.00	0.00
Conference seed/sponsorship	0.00	4,000.00
TOTAL PREDICTED EXPENSES	**49,212.50**	**37,765.36**

Kauri Fund (National Bank)

Income		
Contributions from main account	2,400.00	600.00
Interest	3,000.00	453.09
Expenses		
Grants	0.00	0.00

Barlow Fund (National Bank)

Income		
Contributions from main account	0.00	0.00
Interest	2,000.00	403.91
Expenses		
Grants	0.00	0.00

Journal

The next issue of the journal was close to being out in February.

John has found a journalist to use for Media releases around journal issues; for future issues we will run a press release. John to contact K.C. about this.

We had an extra run of the 'Feathers to Fur' journal edition; some were to be sent to key people. There are a number of extra copies that could be sold or sent out to other key groups; in particular policy makers (suggested Regional Managers Group, Minister for Environment/Conservation). Bruce to prepare a cover letter explaining the significance of the publication.

Newsletter

Clayson and John pointed out that we have the ability to buy another module for our website that could manage our membership database and contact with members for things like the newsletter.

Website

John is working on moving the front end of the website into the journal database which is part of the Royal Society webpage's, Jon Sullivan is working on migrating the website as it is into the new environment. Each section will have a person in charge of content with John and Laura as back up of the overall content. We have options to add modules in the future that would allow online payments, conference website facilities (e.g., registration, abstract upload) and membership subscriptions among other things.

There is a huge potential with the new website system which we are not fully utilising initially. Laura, John and Jon will work together to develop a long term plan for future development, the obvious add-on we should get is the membership renewal facilities.

Conferences

INTECOL final result

Bruce received a report/folder from the Conference which outlined all aspects of the conference. The company will be wound up once the final profits are in.

Dunedin conference

Landcare Research are going to sponsor the conference with $10,000. Deb Wilson is working with an events management company looking at options for online registration.

John pointed out that 2011 is the 60th anniversary of the Society, there should be some fanfare around this for the 2011 conference which is set to be hosted in the Bay of Plenty.

Awards

Chris indicated that the Council needs to think about recipients for awards for the upcoming year: Honorary life member, Te Tohu Taiao Award and Ecology in Action. The changes to the best publication by a new researcher award have been published in the newsletter.

Correspondence

We received a letter from the Royal Society about changes to their structure. We need a member to be on the advisory panel to the president of biological sciences in the Royal Society. We can opt to elect a member (probably based in Wellington) to act for council on this panel.

General Business

a. Banner

Mel brought in the banner put together for the Islands Invasive Conference which looks great and professional. Mel will put together another banner for the Dunedin conference.

b. Archives at the University of Canterbury

The biology department at UC is moving into a new building and some archived material needs a new home.

We need to find out if the Secretariat has storage space available still. Shona will check with ARC to see what is archived there. Bruce will contact the national archives to see if they would like another full set of journals, and the Royal Society to see if they archive things.

The artwork—John suggested we could scan these and make prints, originals could be auctioned for the Kauri Fund. Further artwork must be held by KC or Anne. Ruth will secure this material.

c. Meeting of Kauri Trust and seed fund programme

Bruce ran the Kauri Fund Trustees meeting. Minutes were ratified. Chris will receive the applications directly and will convene the selection panel. Chris and Laura will be on the selection panel.

d.Listserver
This has become largely obsolete and out of date. John will ask Modica about different options for a more modern listserver.

e. NZES charitable trust status
No changes here.

f. Clarification of Secretariat's role
Council to review and update the job description for the secretariat position to include reporting measures, handling of confidential information and protocols for data backup.

g. EIANZ accreditation
Draft document on best practice for ecological assessment: EIANA has asked for ratification of the principles used to make up this document. There may be some professional certification guidelines developed from this, and therefore may have impact on professional standards for ecologists in New Zealand. These are likely to have the most impact on consultants.

h. Forest and Bird/Federated Farmers 1080 public information campaign
Kevin Hackwell sent a letter about Forest & Bird and Federated Farmers putting together a fact sheet about 1080. Sent to Wren Green (part of ERMA 1080 assessment) and Phil Cowan and Penny Fisher (Landcare Research toxicologists); they had some concerns that the facts were not completely scientifically based. Bruce sent comments back to Kevin and said that the Society will not support without some changes. We are still waiting to get a response.

We have an option to release a position statement for the Society. We will wait to see if they come up with a fact sheet that we are happy to endorse before we go ahead with this.

i. Honoraria
Bruce has started a position paper on this. The idea would be a fixed payment we make to a person in lieu of services to the Society which would be less than the services are actually worth. We are thinking in particular that the journal and newsletter editorships are at risk because they require a large amount of work, therefore support is appropriate to these positions. There has been a move towards a more professional approach to journal editorship. If we don't recognise the position with some money we will struggle to find people to take on the work, and we may lose some of the professional quality which we need for our flagship publication. Bruce was thinking of about $5000 per year (after tax) for the Journal editor. This would have to go to an AGM before this can be implemented.

j. Initiatives to raise the profile of the Society
Mel reported that the Ornithological Society has produced a poster which is available electronically, and suggested that we could produce a similar poster (e.g., What is ecology?) which could be downloaded from the website and printed out by members. We could also consider printing coloured folded brochures for conference packs etc.

Next meeting
Skype meeting Friday 28 May 2010.

NZES LISTSERVER

Dave Kelly
Dave.Kelly@canterbury.ac.nz

RULES FOR THE NZES LISTSERVER

This listserver is for "issues of general interest" to NZ ecologists (conferences, jobs, etc).

The list has three key guidelines:

1. Only messages of genuine general interest. No ads for things being sold (this does not include job ads which are OK) and no fringe interests. If in doubt check with me first.
2. If you want to reply to a posting, the default is for you to reply only to the sender. Do not reply to the whole list unless you are sure your point will be of "general interest", which most replies are not. Please check what "To" field you have set before pressing "Send". Remember this listserver is primarily for announcements, not discussions.
3. No attachments—put your message in plain text, with if necessary a link to a pdf on a web page.

HOW TO SUBSCRIBE

To subscribe to this server, e-mail a message to the automatic Mailserv processor at:nzecosoc-request@it.canterbury.ac.nz following text in the body of the e-mail:

SUBSCRIBE NZECOSOC
END

To unsubscribe from the listserv, send this message to the same address above:

UNSUBSCRIBE NZECOSOC

Once subscribed, you will receive instructions on how to send messages, unsubscribe etc. PLEASE READ INSTRUCTIONS AND FOLLOW THEM.

TO SEND A MESSAGE

To send a message to everybody on the list, use the address, nzecosoc@it.canterbury.ac.nz. Only people subscribed to the list are able to post to it. If you are not on the list and don't want to subscribe, but want a message, send it to me (Dave.Kelly@canterbury.ac.nz) to forward on.

IF YOU CHANGE YOUR E-MAIL ADDRESS

If you change your e-mail address, you have to unsubscribe from the old one, and subscribe from the new address. The easiest way to unsubscribe your old email address is to send a message while you are logged on at the old address; if the old e-mail address is dead you will not be able to unsubscribe it because the system sees you as someone else. In that case e-mail me and I can do it for you.

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(Effective from 18 August 2009)

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This Newsletter was produced by Fleur Maseyk and Jeremy Rolfe.

Contributions for the newsletter—news, views, letters, cartoons, etc.—are welcomed. Please e-mail to editors (newsletter@nzes.org.nz) with document attached (Word formatted for Windows) or post. If posting, if possible, please send articles for the newsletter both on disk and in hard copy. Please do not use complex formatting; capital letters, italics, bold, and hard returns only, no spacing between paragraphs. Send disk and hard copy to:

Fleur Maseyk
Horizons Regional Council
P.O. Box 11025, Manawatu Mail Centre, Palmerston North

Next deadline for the newsletter is Friday 13 August 2010.

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 (2009)

Full (receive journal and newsletter) .$75* per annum

Unwaged (with journal) .....$45* 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.....$75* per annum
Joint members get one copy of the journal and newsletter to one address.

Overseas Full .....$95* per annum

Overseas Unwaged.....$65* per annum

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.

Overseas members may send personal cheques for their local equivalent of the NZ$ amount at current exchange rates, for most major overseas currencies.

For more details on membership please write to:

NZ Ecological Society
PO Box 25 178
Christchurch
NEW ZEALAND

or e-mail: info@nzes.org.nz

* There is a $10 rebate for members who renew before Feb 15 each year, and for new members

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The Kauri Seed programme

Goal

The Kauri Seed Programme has been established to mentor and encourage undergraduate ecologists in the early stages of their ecological career so they will become involved in the study and application of ecological science in New Zealand

Method

Kauri Seed Programme Scholarships will be granted each year for up to 4 undergraduate ecologists to enable them to attend the New Zealand Ecological Society's conference and student day. The NZES conference for 2010 will be held in Dunedin from 22–25 November 2010 (Student day 21 November). The conference theme is **Biodiversity: 2010 and beyond.** During the conference students will be allocated mentors that will help them get the most out of the conference. Students will not be required to present a paper or poster.

Eligibility and conditions

Applicants must be enrolled as undergraduates at a New Zealand tertiary institute and be studying ecological science or a related degree within New Zealand.

Nominations

Nominations for a Kauri Seed Programme Scholarship must include a completed nomination form (see over) and two references from New Zealand Ecological Society members (see attached form).

Scholarship rules

1. Up to 4 scholarships shall be awarded each year and will provide for a student's conference registration, travel and accommodation for the duration of the society's conference.
2. The scholarship is to be awarded by the Trustees of the Kauri Fund.
3. The selection committee may refrain from awarding scholarships if, in their opinion, there are no nominations of sufficient merit.
4. Written applications on the nomination form (see over) should be sent by Ecological Society members to:

   "Kauri Seed Programme"
   New Zealand Ecological Society,
   PO Box 25-178, Christchurch 8144
   (chris@wildlands.co.nz)
5. Referees must be New Zealand Ecological Society members.
6. Two references should be sent directly to the Ecological Society at the above address using the attached referee forms.
7. The person making the nomination may also act as one of the two referees.
8. ***Applications for the 2010 Dunedin Conference close on 31 July 2010.***

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Kauri Seed Programme Scholarship – Nomination form

Student

Name:

Address:

Email: *Phone:*

Degree enrolled for: *Year:*

Tertiary institution:

Brief explanation of why this student is a worthy candidate for a Kauri Seed Fund Scholarship (see also attached referee form):

Confirmation that the student is willing to be nominated:

Nominated by

Name:

Address:

Email: *Phone:*

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Kauri Seed Programme Scholarship – Referee form

Two referees must each complete a copy of the form below for each nomination for a Kauri Seed Programme Scholarship. Only Ecological Society members may act as referees. The person that nominated the student may act as one of the two referees.

The referee must complete, print and sign this form and send to the New Zealand Ecological Society, PO Box 25-178, Christchurch 8144 (chris@wildlands.co.nz) marked "Kauri Seed Programme".

Student

Family name: *First name:*

Referee

Name: *Position/Title:*

Address

E-mail: *Phone:*

1. How long have you known the student: _____ *Years* _____ *Months*

2. Describe briefly the student and his/her interest in ecology and why they would make a good candidate for a Kauri Seed Fund Scholarship:

Signature of referee: *Date:*

References must reach the New Zealand Ecological Society on or before 31 July 2010.