

Wet & Wild

Wetland Purchase Completes Wildlife Corridor

The purchase of 240 hectares of wetland and regenerating native forest in Waituna, Southland is expected to ensure the long-term protection of this important ecological area.



"This land is a key addition to the Awarua/Waituna Wetland, as it links two internationally significant wetland blocks," outgoing Labour Government Conservation Minister Steve Chadwick said.

"Less than 10 per cent of New Zealand's wetlands remain and their preservation is a matter of national importance for the government."

The \$1 million block, purchased by the Nature Heritage Fund, joins the Waituna Wetland Scientific Reserve with the large Toestoes Conservation Area. "Wetlands form part of our natural landscape, and play an important role in flood control and water quality, as well as offering opportunities for recreation such as fishing, hunting, whitebaiting, bird watching and scenic strolling."

A third of New Zealand's freshwater fish occur in wetlands and many endangered plants are dependent on wetlands. "Wetlands are special



in many ways. They are highly regarded for their educational, scientific, aesthetic, spiritual and cultural values. Wetlands are not just a place for scientists, they are for all New Zealanders to enjoy and value.

"This area's ecosystem is a mosaic of different communities and it is imperative these outstanding natural qualities are protected for the future."

"I see this as a substantial ecological investment in Southland which will protect threatened flora and fauna and allow the area to return and remain in its natural state."

The Nature Heritage Fund provides financial assistance to public agencies and private individuals to purchase or covenant land with high conservation values. The area purchased will be managed by the Department of Conservation.

NWT NEWS

Save these Dates!

Put these two dates into your diary now.

31 January 2009 is National Wetland Trust World Wetlands Day, see page 4 for details.

March 2010 is the National Wetland Trust and Bay of Plenty Wetland Forum wetland restoration symposium in Rotorua, see our website for more details.

Website upgrade

The National Wetland Trust has a new sponsor, web host, software and multi-media development company Digital Stream who are proud to support wetlands. To celebrate our website has recently been expanded to include a new page on wetland events in New Zealand and overseas.

We have also added information about our trustees, a page dedicated to World Wetlands Day, and descriptions of the range of wetland types

in New Zealand. We will soon add a page on our RAMSAR wetlands.

Let us know about your wetland event so we can add it and a link to your site or contact details for further information. Email us at enquiries@wetlandtrust.org.nz.

A big thanks to Transpower for their generous grant of \$25,000 from the Transpower Community Care Fund towards completing our National Wetland Centre plans.

Wet & Wild is the National Wetland Trust's quarterly publication. We seek contributions, though published at the editor's discretion. Each issue will be available on: www.wetlandtrust.org.nz within two months of publication, where they can be downloaded as pdfs. **Not all the material presented is necessarily the views of the NWT.**

Membership forms can also be downloaded from the website. Submit articles to slindsay@fishandgame.org.nz. A grateful thanks to Mighty River Power for sponsoring the National Wetland Trust newsletter.

Contact the NWT on www.wetlandtrust.org.nz



What next for the environment?

The new political landscape following elections this month is that of a centre-right National Government, supported in crucial financial and confidence votes in Parliament by Act, United Future and the Maori Party. Labour, Green and Progressive make up the opposition, with the Greens winning nine seats in parliament by the final count.

Act and United Future were expected partners for National, but bringing in the Maori Party serves several strategic goals, which could prove crucial for the environment. National neutralises Act's influence while expanding its governing authority in Parliament, and at the same time if they can maintain the Maori Party's support increase their chances of winning the next election.

However, as Matt McCarten points out in a recent Herald editorial, by keeping the supporting parties ministerial posts outside of Cabinet, the National Government can "discuss governing and political strategy away from the other parties."

"This was the case under first-past-the-post but never under MMP. Effectively, it's a return to one-party rule, giving Key unfettered control of the Government. To promote any conservative legislation Key can turn to the five Act MPs and use the Maori Party for any moderate legislation."

So given this scenario what were the key governing parties' environmental policies prior to the election.

CLIMATE CHANGE

NATIONAL: Legislate a target of a 50 percent reduction in carbon emissions compared to 1990 levels by 2050; amend the Government's ETS within nine months of office; incentivise biofuel by exempting it from excise tax or road user charges; exempt electric cars from road user charges; \$1000 grants for solar and heat pump water heating.

ACT: Withdraw from Kyoto Protocol climate treaty; repeal emissions trading scheme (ETS); hold off policies that could damage the economy until they are adopted by major polluting countries.

UNITED FUTURE: Modify ETS to reduce costs on householders; increase public home-insulation funding; give all homes for sale an energy efficiency rating; support environmentally sustainable biofuels; support renewable energy research; carbon credits to forest owners but they must also carry costs if they convert land.

MAORI PARTY: Develop more renewable energy; make major polluters pay for emissions, but minimise effects on households.

ENVIRONMENT

NATIONAL: Expand the Environmental Risk Management Authority into an environmental protection agency with regulatory functions under the Resource Management Act; create a new national park in Northland's Waipoua forest; encourage the Conservation Department to work better with rural communities.

ACT: Scale back RMA to areas not covered by common law and replace it in most cases with case-by-case regulations; refocus it on achieving a balance between benefits and costs.

MAORI PARTY: Keep NZ GE-free.

UNITED FUTURE: Remove environment minister's power to block developments that have already been through Environment Court; allow court to retain expert consultants to reduce costs for groups taking cases; promote planting along all waterways; encourage forestation of non-viable farming land.

The Opposition

With Labour, Greens and Progressive making up the opposition, this is what we can expect to see determining their environmental stance.

CLIMATE CHANGE

LABOUR: Phase in ETS; target of 90 percent renewable energy by 2025; boost funding for energy efficiency projects; support \$1 billion 15-year home insulation scheme; invest in KiwiRail to reduce commercial transport emissions; increase research into sustainable technology.

GREENS: Make companies that import fossil fuels and agricultural sectors that exceed 1990 emissions buy and transfer carbon credits to government; use Kyoto forest credits to promote forestry; set compulsory levels of renewable energy for power retailers; more subsidies and regulation for energy efficiency; \$1 billion 15-year home insulation scheme.

PROGRESSIVE: Support phased ETS; support research into non-polluting technologies; support funding for more insulation for low-income homes; support vehicle efficiency labelling.

ENVIRONMENT

LABOUR: Develop national policy statement on water and continue initiatives to reduce agricultural water pollution; continue to fund clean-up of existing polluted waterways; continue to expand conservation estate; continue to support effective biosecurity.

GREENS: Develop strict national environmental standards to control pollution in lakes and rivers; maintain GE-free environment; increase funding for pest control; tighten biodiversity; make legal aid available for Environment Court cases; ensure better RMA enforcement by councils; create research fund for sustainable land management.

PROGRESSIVE: Review RMA to see if it can be improved; push for international ban on all whaling; reduce allowable fishing bycatches of endangered sea life; push for increased funding for the Department of Conservation; continue initiatives to minimise water pollution from farming.

RAMSAR News

International NGO meeting, South Korea.

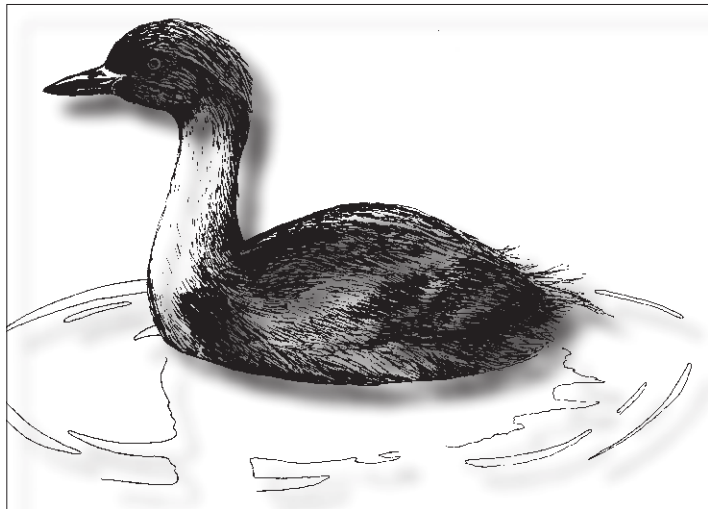
The World NGO (Non-government organisation) Conference on Wetlands was held in Suncheon City, Republic of Korea on October 26th and 27th. The aim was to provide an opportunity for environmental NGOs to discuss issues facing wetlands and to develop and adopt an NGO declaration on the wise use of wetlands. This meeting was held prior to the 10th Conference of Contracting Parties of the Ramsar Convention (Changwon, October 28th-November 4th).

Dr Lew YOUNG, Ramsar's Senior Regional Advisor for Asia-Oceania, made a key note speech about the role of NGOs in wetland conservation and the Ramsar Convention. Based on five broad objectives of the convention, Dr. YOUNG presented mechanisms for greater involvement of NGOs in wetlands management and conservation. He advised NGOs to speak with one voice, base statements on fact and help link ecologists with sociologists to capture livelihood issues at wetland sites.

For more information see: <http://www.birdskorea.org/Habitats/Wetlands/BK-HA-World-NGO-Conference-on-Wetlands-2008.shtml>

Lack of research in how predators impact on indigenous water birds

By Tony Roxburgh, NWT Chair



Wetlands are some of the most productive places on earth and home to a wide range of water birds, both indigenous and introduced. But New Zealand's wetlands are also inhabited by considerable numbers of undesirable species in particular predatory mammals. The impact these predators, which included bush tailed possum, brown rat, ship rat, weasel, stoat, ferret, cat, hedgehog and house mouse, have on wetland wildlife is far from clear.

It has been assumed that the demise of most indigenous wetland birds is linked more to wetland loss and modification rather than predatory pressures. While this is a fair assumption given many water birds require a specific wetland habitat to meet their every day needs or for a critical phase in their life cycle, it does not explain the reduction and even loss of wetland birds from secure wetland sites.

While we have accumulated substantial information on pressures exerted by mammalian predators on terrestrial wildlife, few studies have focused on our indigenous water birds. The exception perhaps is the work undertaken on critically endangered species like brown teal, fairy tern and waders, like black stilt and wrybill which are particularly vulnerable when nesting on the braided river beds in Canterbury.

In my travels throughout the Waikato and elsewhere I have certainly heard anecdotal reports from ornithologists, game bird hunters and land owners, of declining bird numbers in wetlands. Species like Australasian bittern, dabchick, marsh crake, spotless crake and banded rail once commonly seen and heard from wetlands, are now seldom reported. Even populations of the large black shag, little and little black shags, birds that most people suspect could adequately defend their nests and young from climbing predators like stoats and possums, are reported as being less common.

There have also been reports of the "re-appearance" of species considered lost, post predator control. A very good example of this is at Lake Koromātua, a small 18ha peat lake reserve, west of Hamilton City, which is being restored by the Hamilton Fish and Game Association. Banded rail were first reported in 2002 and are now regularly seen around the lake margins following intensive willow and weed control, and trapping which targeted rats, possums and mustelids. No doubt habitat enhancement played a role in this reported recovery, however logic would suggest that predator control has played a significant part!!

This raises two obvious questions. Why has the impact of mammalian predators on indigenous wetland wildlife been largely ignored when compared to research undertaken on indigenous terrestrial wildlife and, what can we do to stimulate interest in wetland research ?.

With the development of targeted pest control techniques in association with predator fence technology, there are many fantastic opportunities to research the impacts mammalian predators are having on our wetland wildlife, and to compare for example, managed and unmanaged wetland sites. Further, one of the advantages of managing a wetland ecosystem, together with a surrounding terrestrial margin, is the diverse range of species likely to benefit. This diversity and the visibility of many species associated with open water, make for a popular and enjoyable outdoor experience for visitors.

Already there are community projects, like the Lake Rotokare Scenic Reserve Trust in Taranaki, that are focusing on removing predators from wetlands. This 230ha Reserve, including the 17.8ha lake, is enclosed by a 8.4km Xcluder predator proof fence. Once mammalian pests are removed, it will become the largest wetland free of mammalian predators on mainland NZ. The National Wetland Trust also hopes to remove mammalian predators from Lake Rotopiko (Serpentine), central Waikato and develop the wetland to a "showcase" standard.

So if you can provide an answer to these questions above, know of some research that has been undertaken in a wetland near you or, if you have ideas on how we could engender interest in wetland research, we would love to hear from you. Remember, the National Wetland Trust offers the 'Golden Plover Award' a scholarship which is available to students undertaking post graduate wetland research.

Marsh Crake recorded at Tasman Wetland



Tasman landowners observed and photographed in Feb/ March 2008 a pair of marsh crake in their wetland located within the Motueka River bermlands. The wetland was created through gravel extraction into the groundwater, edge

profiling, and planting in the order of 5000 native plants in 2005. It was also connected to the Motueka River via a culvert to allow fish access. Three years on, it is a surprise to have had marsh crake recorded in the wetland so soon.

Freshwater biodiversity advice officer Rhys Barrier was stunned that this cryptic species was so quickly able to colonise an artificially created wetland within an intensively developed horticultural plain and notes that this discovery demonstrates the quick response time of wetland ecosystems in terms of re-creating them from scratch. The discovery bodes well for the success of other wetland creation initiatives currently underway within the Tasman region being funded through aggregate extraction.

The Tasman wetland was created through gravel extraction and marsh crake were observed feeding in the mudflat zone exposed through low summer groundwater level.

Bay of Plenty Wetland Restoration Guide

Preserving and re-creating our wildlife water wonderlands in the Bay of Plenty.



Like the rest of the country Bay of Plenty's wetlands are constantly diminishing resources, with only an estimated 3% of the original extent remaining. So many publications about so many things, but no wetland restoration guide for the Bay of Plenty! Until now.

The lack of a wetland restoration guide for the Bay of Plenty was an issue identified by the Bay of Plenty Wetlands Forum. It is not that it has never been done before, but we didn't have one of our¹ own. We thought we should do something about and so we did.

The simple step-by-step layout was borrowed from Hamilton City Council's Gully Restoration Guide. Page 5 of the guide gives an overview and an index to the rest of guide. At each step we give guidance on what things need to be thought through and tips to achieve them. We've provided a zoning diagram and an example of a simple concept plan with pictures of what real wetland vegetation looks like in each zone. There are four steps involving: what plants to get and how many; where to get them from; preparing for planting; and doing the actual planting. The final step

is the all important maintenance and monitoring of the project.

One of the main things we identified as an issue was a lack of guidance on what plants to use in a wetland restoration project. We wanted to provide a list of plants that are relatively "bomb-proof" and will do well given a little maintenance and the right place. With that in mind, we followed a similar style to other groups and provided a table with photos of each plant (supplied via the New Zealand Plant Conservation Network - thanks!).

We finished with a page of places people could get useful information, including a guide to what each member agency can help with, amongst organisations such as district councils, other regional councils, useful websites and a few recommended readings.

None of these things are new concepts and we gratefully acknowledge contributions from Greater Wellington Regional Council, Environment Waikato, Hamilton City Council, and Auckland Regional Council that meant we didn't have to reinvent any wheels. We adapted other restoration guides to suit our own needs to provide for the Bay of Plenty.

The publication is particularly timely with our new Regional Water and Land Plan's wetlands chapter becoming operative. This provides landowners with the option to do restoration work under a Wetland Management Agreement, which is designed to be a cost-effective alternative to the resource consents process for some works. We're hoping that this, and the availability of the wetland restoration guide for practical help, will encourage more people to restore wetlands on their own properties, maintaining them as a feature of the landscape.

The Bay of Plenty Wetland Restoration Guide is available on the website of each of the member agencies: www.doc.govt.nz; www.envbop.govt.nz; www.fishandgame.org.nz.

¹ The Bay of Plenty Wetlands Forum is a small group of mostly operational staff from member organisations: Environment Bay of Plenty, Department of Conservation, Fish & Game New Zealand Eastern Region and QEII Trust. We meet regularly and the group has been really valuable in building relationships between staff at ground level. The Forum is the organiser of the next National Wetland Trust restoration symposium and is working with the Trust to develop wetland trails in the Bay of Plenty area.

WORLD WETLAND DAY 2009

Upstream-Downstream: Wetlands connect us all, is the theme for this summer's World Wetland Day event.

What better way to celebrate than travelling up and down our mighty river, Waikato Te Awa?

Join the National Wetland Trust on **Saturday January 31st** for a coach tour from Hamilton to Taupo return, to explore the ecology, management issues, cultural significance, recreational opportunities and hidden beauty of our largest river.

Learn about:

The historic Waikato River settlement of 2008;

Wetland changes from hydro generation in pretty Lake Waipapa;

Fish and Game's million dollar wetland creation project near Hardcastle Lagoon;

One of the world's rarest wetland types – driven by steam power!

See:

Stunning white ignimbrite cliffs at Waipapa;

Waterfowl at Hardcastle lagoon;

Steaming geothermal wetlands near Rotokawa;

The historic course of the river at the Hinuera gap;

Little-known features along the river;

The water turn from murky to stunning blue as we travel upstream.

Check our website for details www.wetlandtrust.org.nz,

Email us at enquiries@wetlandtrust.org.nz,

Bookings essential, call 0800 BIODIV (0800 246 348) to book your seat.



Wetlands, emissions trading and sustainable land-use: the plot thickens

By Keith Thompson

In the July issue of Wet & Wild wetland ecologist Keith Thompson described carbon as the 'new black' and explained how wetlands could fit into emissions trading. In a continuation of this discussion he posits that our ultimate goal is sustainable land-use and sustainable conservation with carbon trading and achieving carbon neutrality a means to an end.

Because natural peatlands are 'sinks' for carbon, a 10m deep peat bog could be worth \$1m per hectare in Kyoto units. But this is not the only reason that wetlands are a valuable resource.

They not only perform many essential ecosystem functions (flood control, nutrient processing, sediment removal and soil erosion sinks, water supply, native fauna feeding and breeding, etc), they are also the most endangered of all New Zealand's ecosystem types - particularly in lowland areas.

In an important scientific paper in 1997, Robert Costanza et al estimated that in terms of 'ecosystem services' provided (waste treatment, food, water supply, recreation, etc), wetlands, on a per hectare basis, are the most valuable ecosystems on Earth - many are worth up to \$30,000 per hectare annually.

Where there's muck there's money, so an increasingly valuable initiative in the United States is 'wetland mitigation banking'. A landowner or developer whose activities have diminished the quality of an existing wetland can pay towards the on-going management of a better sustainable natural or restored wetland somewhere else (= off-site mitigation).

The system is working so well that it is now becoming economic for some landowners to create or restore wetlands specifically to add to this mitigation bank. Maybe we could use this system in New Zealand for improving the effectiveness of buffer zones around some conservation wetlands?

Almost 50 years ago, Horrie Sinclair realised his dream of owning a wetland by re-flooding his farm on the Taieri floodplains of Otago. Today he wouldn't have had to live in a caravan whilst the famous Sinclair Wetlands were maturing - he could have claimed mitigation and carbon credits - or gone for sponsorship! So 50 years later, Franklin District Council are doing just that and, with sponsorship from MWH New Zealand, are restoring a previously grazed area to a fully-functional wetland.

But the most under-valued property of wetlands is the ability of many of them to store carbon - indefinitely, as long as it's kept waterlogged - and healthy natural peatlands not only store carbon, they also remove it annually from the atmosphere and add to the amount stored.

Plantation forests generate carbon credits for only 60-80% of their commercial life - mature native forests only store carbon; they do not generate new credits.

Peatlands are therefore 'sinks' for carbon - adding at least 2t, and

sometimes as much as 5t per hectare per year. This means they have a significant annual value as a source of carbon credits - maybe \$500-\$1,000/ha/yr. In addition, each metre depth of an existing peatland stores about \$100,000-worth of Kyoto units per hectare. Now add that to the value of wetlands for their other ecosystem services . . . !

In comparison, 800 tonnes of radiata plantation, will store only about \$50,000-worth of CO₂ - and for only about 20 years at the most.

Environment Waikato estimates that Waikato's developed peatlands lose 1.4 million tonnes of carbon dioxide each year - that's up to \$70 million-worth of carbon dioxide from degrading peat alone on farms with organic soils.

It has been estimated that 10% of Waikato pastureland (about 140,000ha) is 'marginal' for farming and that it might be better used by planting trees and generating carbon credits. However, there wouldn't be many of these credits left if they were used just to offset carbon dioxide released from degrading peat under the 35,000ha of Waikato peat farmland!

A recent American study for some North Carolina farmlands concluded that it could be economic to re-flood farms for carbon credits once the carbon price exceeds about \$35/ha.

Once emissions charges start to bite in New Zealand agriculture, we could well see carbon traders offering mitigation deals: 'Farm one - flood one'!

We can see everywhere the devastation wrought on under-valued natural resources - from Amazonian rainforests to the world's fisheries. Market forces only work in conservation if you pay people enough to leave something alone - or, better still, to improve it. So by giving emissions a significant market price, wetlands should now be sufficiently valuable for people to be queuing up to save them.

But: the New Zealand government doesn't yet seem to realise how important wetlands are to the economy. Amazingly, despite their importance, neither wetlands nor peat have even been mentioned in the New Zealand Emissions Trading Scheme!

In the recent Budget, the Greens secured a welcome \$12m for climate change and the protection of biodiversity. Two of the projects will investigate how encouraging carbon capture and storage might enhance biodiversity values. Only forests are mentioned in this context - but it's early days yet and hopefully, the importance of including wetlands in these studies will soon become apparent.

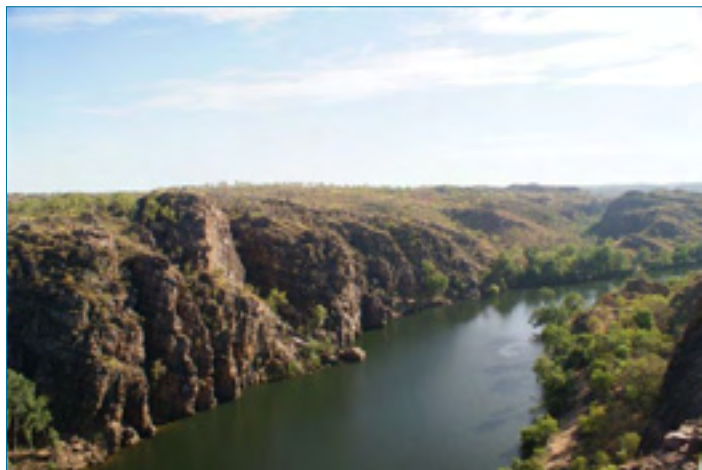
Our ultimate goal is sustainable land-use and sustainable conservation and, to be realistic, it's going to cost us all more to get there, because we've been freeloading on the environment for a long time without counting the cost.

Carbon trading and achieving carbon neutrality is a means to an end, but we can't for ever pay someone else to balance our books.

Keith Thompson is a wetlands ecologist who lives in the Waikato.



Exploring the Northern Territory Wetlands



By Marie Bradley, Environment Policy Advisor, Nth Shore City Council

Five chaotic days exploring the wilds of the Top End was the best start to any October I've had. The crushing build-up heat and humidity that is a precursor to the monsoon rainy season was (very nearly) forgotten as I visited some of the most famed natural features our Pacific neighbour boasts.

The biodiversity and the palpable sense of wilderness were the most striking features of northern Australia. Freshwater mangroves, paper bark trees, water lilies and pandanus palms were the dominant vegetation types in most damp areas, and are inhabited by a breathtaking array of wildlife. First stop was Fogg Dam Conservation Reserve, a Bird Protection Area since 1959 and a remnant of a failed rice plantation in post WWII years. A flat easy stroll around the area is made possible by a boardwalk, the likes of which are present in most of the locations I visited in the Top End.

Splashing sounds below the boardwalk were a constant reminder of the reptilian members of the wildlife that were never far away! Water snakes are very abundant in Fogg Dam, so going for a dip is really not recommended, whatever the air temperature! Allow at least a couple of hours, if not a half day at this location. My rushed visit of an hour to two didn't yield near the number of wildlife sightings a longer spell would have. Window on the Wetlands is a must-see location, an observatory sitting on Beatrice Hill, elevated above failed rice paddies. The building has some amazing interpretative signage and education material. Water buffalo (*Bubalus bubalis*) are visible in small groups from the observation deck, although culling efforts have seen the population shrink significantly in the last twenty years.

Prior to the control programme, the impact of the buffalo on the wetlands at a landscape scale was enormous as the hydrology was significantly altered. The habitat of choice for these beasts are wetlands where they create bogs, swim channels and destroy floating grass mats leading to salt water incursion into freshwater areas. The buffalo have a range of other negative effects on the wetland ecosystems of Northern Australia, including the transfer of invasive species seeds and other material and the loss of large chunks of palatable vegetation. Another threat to the expansive wetland ecosystem around the Window on the Wetlands centre is Mimosa. Mimosa (*Mimosa pigra*) is a prickly invasive plant that has spread rampantly over several hundred square kilometres of Arnhem Land, and more than 80 000ha Territory-wide. Staff at the Wetland centre advised that biological control efforts, such as using the moth (*Leuciris fimbriaria*) are underway to combat this pest, also known as the 'sensitive plant', as it curls up when touched.

Mimosa represents an interesting study in the perils of controlling a weed in areas subject to inundation for months on end, because traditional control methods such as spraying or mechanical removal are often not possible. Regarded as one of Australia's worst weeds, the efforts to contain it cost many millions of dollars as it out competes all other plants, reducing habitat quality for all wildlife. A careful programme of weed control and observation is presently keeping it from invading Kakadu National Park to any serious degree.

Next stop was the gorgeous Mamukala Wetlands. Over half the world's population of magpie geese converge at this location, as the floodplains are a favourite stop on their annual migration route. The huge flock is accompanied by plumed whistling ducks in their thousands. A single obnoxious plover managed to frighten an entire flock away however, and stalk contentedly around the (then) unpopulated shoreline so the area isn't without disturbance! A large shaded hide is present, and the high quality boardwalk is fully wheelchair accessible. A wall length mural assists in identifying the range of wildlife present and a webcam is located here, although an in person visit is a much more exciting way of experiencing why RAMSAR includes Mamukala in its convention.



Visiting this incredible area at the beginning of the famed 'build-up' meant most days were in the late thirties with very high humidity. Outdoors in the highest heat of the day, the temperature regularly broke forty so lots of water, a hat and lashings of sunscreen is essential. Good walking shoes are also needed, although almost all attractions I visited had superb tracks, ample parking and good visitor accommodations. A pair of binoculars and a camera is essential as well, as photos are all that should ever be taken away from places like these.



Puni's Wetland Revegetation

By Alison Brown , Courtesy of the Waiuku Post

When Franklin cyclists were looking for land to build a track they approached the Franklin District Council who granted permission to use Puni War Memorial Park. The property was surveyed and planning started.



Photo courtesy of MWH

Many hours of back breaking labour with picks and shovels, rakes and spades and chainsaws resulted as the group slowly created the track, which today is well developed and includes extra smaller down hill tracks established for the more adventurous riders.

Council has assisted with contacts to get native trees and plants to help beautify the area. Once these were planted, again by volunteers, an area was prepared for development as a picnic area so that the facilities can fulfil their function as 'home' to this family orientated mountain bike club.

And now club members are on to the next phase of their plan: the Franklin Mountain Bike Club (FMTBC) is doing its bit for the environment. With \$2,500 of funding from MWH Ltd to buy native plants, a working bee was called and in late June, despite initial rain, these plants were planted in the ephemeral stream/waterway that runs through the back paddock at Puni, behind the pines and near where the BMX track is being built.

Engineering, environmental and management consultancy MWH has pledged \$30,000 in all to help support 12 wetlands and estuaries throughout New Zealand, including Franklin's Puni War Memorial Park.

MWH explained: " New Zealand's wetlands and estuaries are home to a vast range of native birds, fish and plants, including many endangered species, yet, over 90% have already been drained or filled. MWH's sponsorship will support a range of planting, weed control and interpretation initiatives designed to improve both the ecological and amenity values of these twelve important sites."

MWH are working with the FDC and FMTBC to restore the previously grazed environment to a fully functioning wetland, which will enhance the biodiversity of the adjacent regenerating vegetated area and this area of stream/wetland. As well as the financial commitment, MWH staff donate their time to assist with these projects.

So, when FMTBC president Roger Whitefield invites his team to come along, help with planting and show Council and MWH that mountain bikers give back to the community and the environment...a number of MWH staff turned out too.

A mammoth planting task was completed on that Sunday in late June, with top quality plants coming from Tui Glen Nurseries. Plants included 250 each of *Carex secta* and *Phormium tenax*; 100 each of *Leptocarpus similis*, *Leptospermum scoparium* and *Carex virgata*; and 25 each of *Schoenoplectus vallidus* and *Cordyline australis*.

Puni War Memorial Park is currently experiencing an increase in usage as more people discover and learn about the mountain biking track, historic Pa site, sports fields and soon-to-be-developed international BMX track.

FMTBC members believe improvement of this portion of wetland will act as a catalyst for further restoration and improvements of the stream as continuing native plant restoration is an important step in improving the environmental, cultural and amenity values of the area.

For more information about wetlands see the National Wetlands Trust website www.wetlandtrust.org.nz

KAHIKATEA FACTS

Kahikatea will actually grow on dry land, in fact the trees grow bigger and faster in drier areas, but it tends to get shaded out by other plant species there. It is more abundant in the wet because few other trees can grow in that environment so less competition.

The key need for kahikatea is light, so you won't find many young kahikatea saplings under their parents' shady canopy, although there are usually plenty of seedlings, they just don't grow very well there. Where such areas have been drained the parent trees will survive for many centuries but will eventually be replaced by broadleaf trees such as tawa and titoki.

Kahikatea forest tends to establish in areas of vegetation damaged by flooding, opening up new sites to germinate and establish in, but we control the rivers and flooding so much more now that there is less opportunity for new stands to establish, and the original extent has been decreased by an estimated 98% nationwide.

Seedlings can be transplanted into shrubby areas among flax and sedges. Most native plant nurseries will have kahikatea plants for sale.

You can find out more about kahikatea on Environment Waikato's excellent website - also available in factsheet format.

<http://www.ew.govt.nz/Environmental-information/Land-and-soil/Native-plants-and-animals/Forest-fragments/Kahikatea-forest-fragments/>

See also the NZ online encyclopaedia

<http://www.teara.govt.nz/1966/K/KahikateaOrWhitePine/KahikateaOrWhitePine/en>



www.weedbusters.org.nz

Zantedeschia aethiopica arum lily

*One of the most pernicious invaders of wetlands is arum lily (*Zantedeschia aethiopica*), a South African import that for many years has been grown as a hardy, long-lived 'architectural' plant in gardens, especially in boggy areas where not much else will grow.*

Unfortunately, this hardiness, love of wet feet, and ability to spread rapidly has meant that arum is equally as happy in wetland areas, where it rapidly forms large clumps to 1.5m tall. It also persists under regenerating canopy, forming dense patches excluding other vegetation. Arum tolerates wet, wind, salt, hot to cold, most soil types and moderate shade, and is drought-resistant once established. Stock avoid it as it is poisonous, allowing it to gradually dominate grazed sites.

Zantedeschia 'green goddess' is a particularly bad culprit, and has recently made it onto the National Pest Plant Accord, banning it from sale, propagation and distribution. While it does spread by seed, the most common way for new infestations to occur is by dumping of garden waste containing tubers or shoots, which quickly establish.

What does it look like?

Arum lily is an evergreen, tuberous herb, with new tubers arising from shoots on the rootstock. Dark green, arrow-shaped leaves are large and leathery. Produces large white 'flower' with a yellow spike and yellow-green berries (10 mm). *Zantedeschia* 'green goddess' has distinctive green shading on the flowers.

"For detailed information on how to control this weed see: http://weedbusters.co.nz/weed_info/detail.asp?WeedID=43"



Submissions on National Policy

The National Wetland Trust wishes to draw your attention to the following calls for submissions.

National Policy Statement for Freshwater Management - submission date 24 January 2009

As part of its role, the Board of Inquiry is now calling for submissions on the proposed National Policy Statement. All submissions will need to be directed to the Board. Your submission should state whether you support or oppose the proposal. You should state any changes you want to the proposal. You should give reasons for your views. Your submission must state whether or not you wish to be heard on the submission.

Copies of the proposed national policy statement, section 32 evaluation document and submission forms are available at: <http://www.mfe.govt.nz/rma/central/nps/consultation/index.html> **Phone: 0800 000035 _Email: freshwaternps@mfe.govt.nz**

National Environmental Standard on Ecological Flows and Water Levels

The Ministry for the Environment is proposing a national environmental

standard on ecological flows and water levels to facilitate the sustainable management of New Zealand's water resource. It intends to promote consistency in the way decisions are made to ensure sufficient variability and quantity of water flowing in rivers, ground water systems, lakes, and wetlands.

The Ministry has produced a discussion document outlining the subject matter and rationale of the proposed standard for the Environment.

If you would like a copy of this document please visit the MfE website <http://www.mfe.govt.nz/laws/standards/ecological-flows-water-levels/public-notice.html>. **For hard copies email publications@mfe.govt.nz or phone (04) 439 7615.**

Buy the KIWI Diary and support the NWT

THE Kiwi Diary 2009 not only features the NWT but it contributes 15 cents for each diary sold to the Trust, so buying a Kiwi Diary not only supports a local business it also supports us!

A diary and conservation awareness book rolled into one, it's also the perfect Christmas gift for lovers of Aotearoa! Instead of a blank-paged office diary you can plan your work and life while viewing work from local artists, writers and poets, all in full colour. The concept for the diary originated at Te Onetahua, Farewell Spit, during Easter 2004. Inspired by the beauty of this wild coast at the top of the South Island, Annabel Wilson dreamt of creating a publication reflecting the uniqueness of New Zealand's art,



culture, environment and heritage.

The Kiwi Diary is a solid, spiral-bound 220-page A5 format, printed locally with vege-based inks and paper from sustainably-managed forests, making it a unique, functional and plucky publication that will strike a patriotic chord with New Zealanders at home and abroad. ____

Articles in the diary include stories on Suzanne Aubert and Maori Herbology, Parihaka, Abel Tasman, an excerpt from Janet Hunt's book on NZ wetlands with information from Karen Denyer, NWT Executive Officer; there are also a photo-essay on the Hokianga by Rosa-May Rutherford,

Oh Honey! The Story of Honey by Alan Quin, Tramps at Green Lake and Tasman Glacier by Nick Groves, the Tasman Glacier by Petr Hlavacek, Tips from Organics Aotearoa and Sustainable Living Network; and loads of delicious recipes from Nicola Galloway, Wildfoods (Nelson), The Mothered Goose Deli (Bulls) and Zibbibo in Wellington.

The Kiwi Diary 2009 is on shelves now! See www.thekiwidiary.co.nz for a full list of stockists.

Stream to Summit Walks in the Waikato

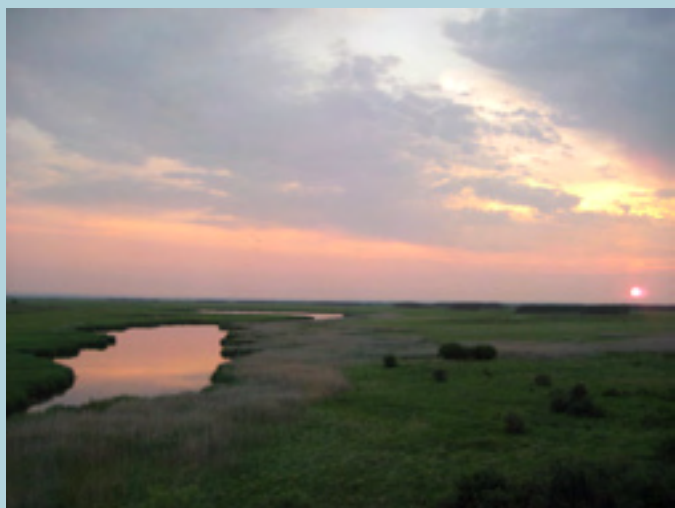
Waikato DoC with support from Mighty River Power have now got a great webpage up with walks from streams to summits throughout the Waikato - check it out at: www.stream2summit.org.nz/ And Don't forget to be prepared on any walk.

Wetland monitoring - demystifying the wetland monitoring handbook

The Handbook for Monitoring Wetland Condition was revised in 2004. Since then a number of wetland monitoring programmes have commenced around the country. This field trip will provide an in-the-field practical demonstration of the wetland monitoring guidelines at several coastal wetlands along the Taranaki coast giving delegates an opportunity to practice the monitoring methodology and discuss their own wetland monitoring programmes.

GO HERE to download a copy of this handbook: <http://www.landcareresearch.co.nz/research/biocons/restoration/docs/handbook2004.pdf>

International News



The government of France has designated a fascinating collection of eleven new Wetlands of International Importance. In addition to several lagoon systems along the northern and southern coasts, there are two additional lagoons along the beautiful east coast of Corsica. Perhaps most interestingly, there are also several new sites in France's overseas territories, or outre-mer, including a coral reef system near Tahiti in French Polynesia, sites on Martinique and in French Guyana, and a 2.2 million hectare expanse of the southern Indian Ocean that includes the French sub-Antarctic archipelagos Crozet and Kerguelen and the Amsterdam and Saint-Paul islands.

In addition, the new sites include the long-awaited "Impluvium d'Evian", the plateau across Lake Geneva (Lac Léman) from the Ramsar Secretariat from which rainwater filters downward over

twenty years to become the purified mineral waters of Evian-les-Bains, the lakeside spa centre and home of the Ramsar centre and botanical garden "Pré Curieux". The

Danone Group, owner of the Evian bottled water company, has generously supported the Ramsar Convention's outreach efforts over the past ten years through the "Evian Initiative" and the "Ecoles de l'Eau" project. France now has 36 Ramsar sites, covering an area of 3,315,695 hectares. Ramsar's Assistant Advisor for Europe, Monica Zavagli, has prepared these brief site descriptions for the Annotated Ramsar List.

Estuaire du fleuve Sinnamary. 15/09/08; Guyane Française; 28,400ha; 05°25' N

053°05'W. The site, located in French Guyana coast, represents a combination of intertidal mudflats, active sand flats, mangroves, freshwater swamps and seasonally flooded areas that extend towards the delta of the Sinnamary River. It represents the preferred habitat for the aquatic mammal *Trichechus manatus*, a threatened species in the Caribbean region. It is an important area for migratory birds, and *Calidris pusilla* winters here with up to 1,000,000 individuals. The site also serves as nesting and foraging area for the Green Turtle (*Chelonia mydas*) and hosts the spectacled and dwarf caiman. The mangroves play an important role in coast protection and spawning ground. The site also hosts an important archeological site "la roche Milot" from the pre-Columbian era. Although hunting is prohibited, illegal practices are observed in the site. Ramsar site no. 1828. Most recent RIS information: 2008.

Etang de Palo. 15/09/08; Corse; 212 ha. 41°57'N 009°24'E. SPA, ZNIEFF

Naturelle d'Intérêt Ecologique, Faunistique et Floristique). A very well preserved natural freshwater lagoon on the east coast of Corsica, temporarily connected with the sea through a semi-natural

narrow channel that gets timely opened to regulate the concentration of nutrients, thus avoiding eutrophication events. The lagoon is the fourth largest on the island; with its sandy beaches and surrounding vegetation, it constitutes an important ecosystem for its ecological, faunistic and floristic values. It hosts rare plant species such as *Kosteletkyia pentacarpa* and supports five protected bat species, including *Barbastella barbastellus*, *Miniopterus schreibersii*, *Myotis capaccinii*, and *Myotis emarginatus*. The site has high hydrological value in helping the recharge of the aquifer, slowing down the water flow into the sea, and thus also reducing erosion phenomena. Agriculture and aquaculture are the main activities practiced in the surrounding area. Ramsar site no. 1829. Most recent RIS information: 2008.

Etang des Salines. 15/09/08; Martinique; 207 ha; 14°25'N 060°50'W.

A coastal lagoon in the south of Martinique located in the Lesser Antilles archipelago at the limit of the Saint Lucia Channel. The waters getting into the lagoon from the Atlantic Ocean and Caribbean Sea create special ecological characteristics, which favor diversified and rich aquatic populations. The site is the last stop for many birds coming from North America before crossing the Saint Lucia Channel. Mangroves provide feeding ground for many invertebrates and other marine species. The area used to play an important role for the local livelihood thanks to its salt production and exploitation between the 18th and 20th centuries, hence the name of the lagoon. Beyond several threats related to pesticide and pollutants run-off, the tourism-related developments are becoming a problem in the area as the site includes one of the most popular beaches in Martinique with more than two million visitors a year. Ramsar site no. 1830. Most recent RIS information: 2008.

Etang d'Urbino. 15/09/08; Corse; 790 ha; 42°02'N 009°29'E. SPA, ZNIEFF (Zone Naturelle d'Intérêt Ecologique, Faunistique et Floristique).

On the east coast of Corse, the second largest lagoon on Corsica with a maximum depth of 9m. The site is separated from the sea through a narrow strip of sand where *Juniperus macrocarpa*, *J. phoenicea* and *Pinus pinaster* dunes are found. The lagoon plays an important role for avifauna - it is a stopover for many migratory birds on their route towards the south, and it is also habitat for many birds during the reproduction and breeding season. Inventories reveal the presence of 113 different bird species, of which 37 breed here. *Netta rufina* and *Tadorna tadorna* are two species no longer common on Corsica but that still find good conditions for reproduction here.

Aphanius fasciatus is an endemic fish species typical of the northern part of the Mediterranean. Mismanagement of the aquaculture activities practiced within the site could lead to anoxia events and spell ecological disasters. Ramsar site no. 1831. Most recent RIS information: 2008.

Etangs palavasiens. 15/09/08; Languedoc-Roussillon; 5,797 ha; 43°30'N 003°51'E. Natura 2000, Nature Reserve.

A complex of seven main coastal brackish and saline lagoons typical of the Mediterranean bio-geographic region, with dunes and sandy beaches that separate them from the sea. The site represents an important bird habitat during the migration period, in particular for the Caspian Tern (*Sterna caspia*) and the White Stork (*Ciconia ciconia*), but it is also an important breeding site for Little Tern (*Sterna albifrons*), with more than 80% of the French breeding population, and the Greater Flamingo (*Phoenicopterus ruber roseus*). The high habitat diversity of the lagoons supports many Mediterranean amphibians, reptiles like *Emys orbicularis*, fishes such as *Anguilla anguilla* and *Atherina lagunae* and the endemic and endangered insect species (*Metrioptera fedtschenkoi azami* and

Gryllotalpa septemdecimchromosomica) In the site fishing and hunting are practiced, and it is also very popular for tourism and leisure activities.

Ramsar site no. 1832. Most recent RIS information: 2008. Impluvium d'Evian. 15/09/08; Rhône-Alpes; 3,275 ha; 46°22'N 006°36'E.

Natura 2000. Close to Lac Léman (Lake Geneva) near the border with Switzerland, the site is located in the heart of a plateau where the popular mineral waters of Evian have their origin as rainwater is absorbed in the soil. During the infiltration process it is purified and redistributed underground, feeding the aquifer. The site is composed of seasonal and permanent freshwater marshes, forested and non-forested peatlands, rivers and streams. Although the site does not support an outstanding number of species, it provides an important habitat for invertebrates, in particular for two butterfly species

Coenonympha tullia and *Boloria aquilonaris* whose populations are in decline everywhere else in the region. *Liparis loeserii*, a very rare orchid, is still well represented in the site. Urban development and water abstraction are possible threats for the maintenance of the hydrological balance of the site. Ramsar site no. 1833. Most recent RIS information: 2008.

Lagon de Moorea. 15/09/08; Polynésie française; 5,000 ha; 17°30'S 149°50'W.

A coral reef ecosystem developed in the tropical waters of Moorea island in the Archipel de la Société (Society Islands) west of Tahiti, also including beaches, permanent shallow marine waters, and saline lagoons. The coral reef system is one of the best known in the world - it provides habitat for many marine endangered species such as corals, sponges, mollusks, crustaceans, and is also spawning ground for fishes. A number of waterbirds such as *Pseudobulweria rostrata*, *Puffinus pacificus* and *Puffinus bailloni* regularly reproduce here. Many of the human activities on the island are linked to the resources and services provided by this ecosystem for tourism, pleasure, and construction. One of the main threats is the increasing urbanization of the coastal zone. Ramsar site no. 1834. Most recent RIS information: 2008.

Le marais audomarois. 15/09/08; Nord-Pas-de-Calais; 3,726 ha; 50°46'N 002°16'E. Natura 2000 SPA, Nature Reserve.

This is a unique human-made place where cultural and natural heritage have been mixing together for the past 13 centuries. With its 56,000 inhabitants, the site is a green lung, which supports high biodiversity within a very urbanized and densely populated area. Through canals (700km), draining channels, and hydraulic systems that allow water level control, people were able to cultivate and live in this area. The aquatic flora represents one-third of the French species and the site also supports different life history stages for 26 fish species. Amongst 13 bat species, the rarest bat of France, *Myotis dasycneme*, is regularly found here during the reproduction period. Ramsar site no. 1835. Most recent RIS information: 2008.

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West Coast Artist supports Shearers Swamp



Mother for Grebe



White Heron

Wildlife artist Mark Neilson is giving 10% of the proceeds of two exhibitions to Friends of Shearer Swamp - a nearby wetland to his home in Ross, on the beautiful West Coast - to help with their conservation effort.

The first exhibition held on the 31st of October 2008 at the Ross Art Studio, Westland raised \$500, with the second being held at O Gallery in The Art Centre, Christchurch on the 27th of January 2009 where it runs for two weeks.

Originally a self-taught artist, Mark describes himself on his website as taking great pleasure as a child "in drawing the plants and animals around me using graphite pencils. In my late twenties I started to experiment using watercolours."

In 2006 he moved from Canterbury to Wellington to study a foundation course at the Learning Connexion, where he was given a scholarship in his final year to complete his diploma in Art and Creativity. During this period his watercolour and gouache paintings have won Telecom White Pages Art Awards two years running for the West Coast region 2007-2009.

Forest Gecko



Mark says he tends to work from a combination of painting from photographs and direct observational drawings of nature and wildlife, recently spending a week observing a pair of blue ducks, which let him come within a metre as he finished final sketches in heavy rain.

When painting bush scenes he often brings in cuttings from nearby bush or his own garden to incorporate their detail, continuing many years of immersing himself in the nature around him.

"My working life thus far has been a constant search for employment where I can be in and around nature," says Mark who so far has worked in both paid and voluntary work for the Department of Conservation, the Christchurch City Council (the Halswell Quarry Park), and Orana Wildlife Park.

It was Janet Hunt's Montana Award-winning book 'Wetlands: A Bitter-Sweet Story' that led to his donating exhibition proceeds to the Shearers Swamp. "I was given her book as a Christmas present, read about the local swamp, visited it and remembered the times I'd spent as a child getting wet and dirty in wetlands." A conversation with Kathy Gilbert, Friends of Shearers Swamp chair, turned over possibilities leading to his current financial commitment. He has now completed several paintings in the swamp itself, including Lone Damsel Fly which sold at the west coast show, and is planning a series of landscapes depicting its watery habitats.

To see Mark Neilson's work visit: www.markneilsonart.co.nz

A Mother for Grebe

Mark says the Grebe juvenile featured in this painting is based upon a young Grebe injured by a boat on Lake lanthe. Given to a local bird lover to rehabilitate, she featured in a local newspaper story asking for fresh fish to feed her patient. Mark was inspired to visit, getting to hold the young Grebe, "a wonderful feeling." But a few months later read that the juvenile bird had not survived its transfer to Willowbank in Christchurch motivating him to depict the bird with the mother it had so sadly lost and failed to survive.



The National Wetland Trust was established in 1999 to increase the appreciation of wetlands and their values by all New Zealanders. Our first major task is to build a wetland interpretation centre for people to learn more about wetlands and experience their special qualities. For more informationn visit our website: www.nationalwetlandtrust.org.nz

Other Trust aims are to:

- Increase public knowledge and appreciation of wetland values
- Increase understanding of wetland functions and processes
- Ensure landowners and government agencies commit to wetland protection, enhancement and restoration.

The trust has thirteen elected trustees representing, iwi, landowners, tourism and farming industries, local government authorities, Fish and Game Councils, the Department of Conservation, NGOs, Crown Research Institutes, and universities.

MEMBERSHIP FORM
An annual family subscription is \$20

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