

Flight



ISSUE 182

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Wairio planting day
Rules around hawks
Counting kiwi



FROM THE PRESIDENT

Applying for a consent to put a viewing hide on the Wairio wetland has shown how difficult it is to do any work on a wetland of significance.

As all wetlands are considered significant these days, it is a major impediment for anyone who is even thinking about creating or restoring a wetland on their property.

We have the case of a farmer in the Wairarapa who wants to create a water storage area on his farm for irrigation purposes spending \$400,000 in consent fees for engineering consents and Greater Wellington Regional Council consents.

The Wairarapa Water Storage Scheme located west of Masterton, which has been on the drawing board for the past 20 years, has been cancelled because of the cost and complexity to gain resource consent.

I have been speaking to a number of

local farmers who recognise that they have areas on their farm that were once wetlands and could be returned to their former state.

This would help nutrient stripping from the water runoff on their farms but the moment they mention it to the local regional council, a heap of regulations get put in their way.

On the one hand, they all talk about the desirability of creating wetlands, and on the other, make it as difficult as possible.

I hope that some common sense may soon prevail but I am not holding my breath.



Ross Cottle



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Cover: An Australasian harrier (*Circus approximans*) at Wingspan, Rotorua.
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Back: The Australian coot (*Fulica prisca*) is a recent arrival in New Zealand, first recorded breeding here in 1958. Photo Bernard Spragg

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Editorial:

Contributions, including photographs and letters to the editor, are welcomed. Please send these to the editor before the next deadline, 21 January 2022 in time for the February / March issue.

The editor reserves the right to edit articles for content, length, grammar, style, and readability.

2021 conference cancelled

This year's annual conference and AGM, which was scheduled to be held on August 20-22, had to be called off with just three days' notice due to a community outbreak of Covid-19 in Auckland.

The conference, which was to be held in Wellington with a field trip to the ecosanctuary Zealandia, was cancelled after all of New Zealand went into Level

4 lockdown on August 18. Conference registration and accommodation fees have been refunded.

DUNZ has now been given permission by Charities Services (formerly the Charities Commission) to not hold an AGM this year but it must bring forward the 2021 accounts for ratification at next year's AGM.



Your nicked, mate: An angry swan was detained recently for blocking traffic in the UK in a scene similar to one in the movie *Hot Fuzz*. Police said it received multiple reports of the "cheeky chap swanning around" the A428 motorway outside Cambridge. After a slight altercation, he was taken away in a police car to "custody (the nearest water officers could find)", police said. In *Hot Fuzz*, the main characters apprehend a menacing swan and take it away in their patrol car.

Photo Cambridgeshire Constabulary

Wetland regulations back on the table

The Government is proposing changes to the wetland rules introduced last year in response to feedback from stakeholders. Its amended National Policy Statement for Freshwater Management and National Environmental Standards for Freshwater would:

- Make the definition of 'natural wetland' clearer.
- Make it easier to undertake maintenance and restoration activities in and around natural wetlands.
- Provide regulatory provision for biosecurity activities in and around natural wetlands.
- Provide additional consenting pathways for quarrying, landfills, cleanfills and managed fills, mineral mining and urban development.

The revised definition of 'natural wetland' would mean wet pasture areas that are highly modified should be able to continue their current use or be able to shift in land use. Other natural wetlands would remain subject to strong regulatory protection.

The Government had received feedback from councils, DOC and restoration groups that the requirement to notify councils about restoration activities was onerous and had resulted in restoration work not being carried out.

The changes would allow the restoration and maintenance of a 'natural wetland' in accordance with a council-approved wetland management strategy.

Other changes would broaden the definition of 'important projects'

that impacted wetlands to include mines, landfills, quarries, and housing developments, on the condition they met stringent resource consent requirements and other provisions.

Previously, projects that drained or partially drained a wetland were only permitted if it was floodwater remediation or critical infrastructure.

Any drained wetlands would need to be offset elsewhere, so there would be no net loss to wetland area nationally.

Public consultation on the changes closes on October 27.

The discussion document can be found at: <https://environment.govt.nz/assets/publications/managing-our-wetlands-discussion-document.pdf>.

Is it boom time for Bird of the Year?

The matuku or Australasian bittern is going into this year's hotly contested Bird of the Year competition with a strong cheerleading team behind it.

To coincide with Conservation Week in September, Go Eco (formerly Waikato Environment Centre) has announced its Bird of the Year contender.

"We know the matuku doesn't have bright colours or a beautiful singing voice but it's critically endangered and can be seen as an indicator of wetland health which is an important conversation to be having in the Waikato," says Geo Eco.

Bittern advocate Margaret Jenkins said: "I first heard the call of the bittern when I was about 9 or 10 years old. We were out exploring the farmland when we heard the boom boom noise. Then we saw it, ever so still, as if listening for a very distant reply.

"Sixty years on, I still recall that distinctive boom boom sound ... I love that memory because it is also attached to an elusive, and very private creature which has managed somehow to survive against the odds of losing most of its habitat. Sixty years from now, I would like others to have that special memory."

Recent winners of the often contentious Bird of the Year competition, which started in 2005, are the kākāpō, hoiho, kererū, kea and North Island kōkako.

Voting begins on Monday October 18 and closes on Sunday October 31. For campaign updates, visit www.facebook.com/VoteforBittern.



Photographer Imogen Warren describes her encounter with the bittern above:

"I have lived in Foxton Beach for five years. I moved here for the birds and as I leave, I can think of so many highlights but the standout for me was the few days that a young matuku, an Australasian bittern, spent here.

"I was able to get so close to it at times that my long lens was too long. That is a problem birders don't have very often.

"On a Sunday morning during that time, I was out walking my dog across a bridge over a creek into the local ponds. The matuku was working its way along the bank obviously looking for food. I spent the next hour watching and photographing it.

"I cannot overstate how unusual and special this experience was. These birds

number less than 1000 in New Zealand and are rarely seen in the open, let alone hunting and feeding.

"I watched as it tracked down something in the mud. It appeared to be listening but it could have also been reacting to vibrations.

"Eventually, it dug down into the mud and dragged out a very reluctant eel. The eel thrashed about and tried to escape, even wrapping itself around the bittern's neck to avoid being devoured.

"Alas, it was not to be. The bittern eventually won and swallowed the eel whole. The entire episode lasted around half an hour and the matuku was triumphant. As was I!"

Trees for an evolving landscape



One of the Better Nature crew wrestles with an armful of plants and students from Victoria University with their supervisor Associate Professor Stephen Hartley, middle. Below from left: John Jamieson plants flax; Jim Law prepares to dig in a kahikatea.

Photos Rebecca Jamieson, Social Nature NZ

A successful planting day was held at Wairio on July 15, with 850 trees planted in two hours.

The ground had been well prepped by spot spraying, cattle grazing, grubbing remnant fescue from spots and auger drilling the selected planting spots for kahikatea – all done by a great crew from Better Nature, said DUNZ Director Jim Law.

Twenty volunteers from Victoria University, Rotary and members of the public, with Better Nature, all rolled up their sleeves and planted kahikatea, ribbonwoods, mānuka, *Olearia virgata*, flax, kōwhai and cabbage trees.

Coffee and hot sausages were provided by DU President Ross Cottle in his mobile cafe, ably supported by DU Patron Jim Campbell.



Te Papa verifies discovery of rare liverwort

A plant found at the Wairio wetland recently has been officially identified as the endangered *Ricciocarpos natans*.

It was found on Wairio Stage 3 during regular monitoring and is the first time it has been recorded there. The plant was confirmed to be the nationally threatened/endangered liverwort by Leon Perry from Te Papa.

DOC senior biodiversity ranger James Harbord told Ducks Unlimited NZ:

“Congratulations on your Wairio

restoration efforts. The confirmation of this precious taonga within Wairio is a wonderful example of the value of the restorative efforts by Ducks Unlimited within Wairio wetlands, and warrants celebration.

“It is also a very good indicator of the improved ecosystem health in Wairio due to the efforts of yourselves and all others who have contributed. In short – thank you.”

Wetland ecologist Helen White noted that previous monitoring by Greater

Wellington Regional Council did not routinely record non-vascular plants, and it might have been there but wasn't recorded, “...though it looks as though its habitat is primarily in the floating weeds – a bit like duckweed and *Azolla*”.

“With the quite significant increase in water loving plants in Plot 3 since [the previous] survey, I would hazard a guess that it's a new arrival, but I can't tell you that for sure,” she said.

“It's a pretty cool find and a nice result for the restoration work.”

Whoio numbers bouncing back

The number of breeding pairs of whoio/blue duck has almost tripled over the past 10 years, according to a survey by the Department of Conservation.

The survey results, released in August, show there are now 863 whoio breeding pairs living in eight protected sites across the country – 565 more pairs since 2011 and an increase of 190 per cent.

DOC director-general Lou Sanson says the whoio population, which is estimated at fewer than 3000 birds, has continued to climb despite the challenges of a mega-mast (heavy seeding) and severe flooding, along with predator control delays due to bad weather and Covid-19.

“Our growing whoio population demonstrates the resilience of the species. But its survival is still very much dependent on our conservation efforts, which demand time, money and hard work.

“The gains we’ve made over the last decade could easily be lost in a season, so we can’t rest on our laurels. There is still a lot more to do.”

Lou Sanson acknowledged the support



A whoio pair. Photo: Matt Binns via Flickr/CC BY 2.0

of Genesis and, in August, DOC’s Whoio Forever national recovery programme and Genesis Energy renewed their 10-year-old partnership to save the whoio.

With Genesis’ support, more than 5000 traps have been laid by hundreds of DOC staff and volunteers at key sites across the country in the past decade. This means almost 1700 kilometres of river is now protected, providing secure sites where whoio can thrive.

- The Isaac Conservation and Wildlife Trust in Christchurch says its whoio pair, River and Meadow, laid their first clutch of eggs for the season and ICWT’s wildlife team removed six eggs from the nest. These were placed in incubators and five ducklings hatched on September 28.

ICWT says whoio in captivity must be hand reared as the parents will try to train them to feed on natural food sources rather than the nutritious pellets they receive and the chicks do not survive.

Removing the eggs encourages the whoio to breed again, which usually happens between 2-3 weeks after their eggs are taken.

Understanding the conservation status of species

The Department of Conservation explains New Zealand’s Threat Classification System for native plants and animals.

What’s the difference between endangered and threatened?

To many people, endangered species and threatened species are just two different ways of describing the same thing – an at-risk plant or animal. However, in the New Zealand Threat Classification System, the system used to give a conservation status to all of our native species, these terms mean two different things.

A “threatened” species is an umbrella term for a range of risk categories, and “endangered” or “nationally endangered” is one specific risk category.

Threatened

Under the **threatened** umbrella, the risk category of **nationally critical** classifies the most severely threatened species that are in an immediate high risk of extinction.

Nationally endangered is similar to nationally critical in that the species faces a high risk of extinction, but this is in the short term, rather than immediately. Lastly, **nationally vulnerable** species face a risk of extinction but it’s in the medium term.

At risk

At risk species aren’t considered threatened, but they could quickly become so if their decline continues, or if new threats arise. **At risk – declining** means the population numbers are dropping but the species is still common. **At risk – recovering** classifies species that have small populations but they are increasing, after declining.

At risk – relict species have a small population that has stabilised after declining and **at risk – naturally uncommon** categorises the species that have a naturally small population and are therefore susceptible to harmful influences.

How are species assessed?

A panel of experts from the New Zealand scientific community look at

factors of a species such as population size, how much the population is estimated to rise and fall over the next three generations, or 10 years (whichever comes first), if the population is stable and if the population state is a result of human-induced effects. They use information from databases, scientific publications and information from the public as well as their own knowledge.

Are all threatened species protected?

The simple answer is no. In many countries, species listed as threatened automatically receive legislative protection from hunting, habitat destruction and other threats. However, in New Zealand, there’s no direct link between conservation status and legal protection.

What’s not protected?

Plants, invertebrates and fish are generally not protected except where they occur in national parks or reserves. Exceptions are the few fish and invertebrates deemed to be animals under the Wildlife Act.

HAWKS ON THE HUNT



Regulations on dealing with these uninvited guests are complicated. **John Dyer** explains.



Left: A harrier hawk/kahu (*Circus approximans*) at Hamilton Zoo. Photo Russell Street CC.

Above: 'Hawk and Yellow' trout flies. If a hawk has been legally obtained, then the feathers belong to the owner, to – for instance – use to tie trout flies (to use or give away, but not sell). Photo Doug Emmett

John Dyer
Northern Gamebird Manager, Auckland
Waikato Fish & Game Council

If you are fostering wildlife such as waterfowl on a pond, birds in cages, free-ranging poultry, or all three, one problem that never goes away is that posed by harrier hawks.

Harriers will take every egg from a mallard's nest and kill every duckling in a brood, coming back again and again.

They have also made brown teal recovery projects complicated. Providing better overhead vegetative cover can help reduce this, but if you want to deal directly with that rogue hawk, the law around this species has never been more complicated.

It pays to know what you can and can't legally do now, and this is my personal interpretation of that. If still in doubt, please refer to the original legislation (available online) and/or consult a lawyer.

Hawks are impressive native birds and their agile courtship flights are something to admire. Destroying them for the sake of it would certainly annoy many people.

Unfortunately, if a hawk causing problems is caught and relocated, even some considerable distance away, it just flies back and won't fall for that same

trap again. Methods to scare off hawks also have limited effect, though they are worth a try. So what can be done?

Until 1986, hawks had no protection, and there were even bounties paid on them. This was especially important when newly released wildlife such as gamebirds were being established.

After 1986, hawks were "partially protected", which was brought about when a group of young hunters in the Whangamarino Wetland shot a bittern, mistaking it for a hawk.

The new law was more about protecting the hawk-like bitterns. More recently, the Wildlife (Australasian Harrier) Notice 2012, in conjunction with the Wildlife Act 1953, further complicates what you can and cannot do. Let us walk through this minefield and look at the options.

It says you can protect "domestic fowl". This has a specific meaning in law, referring only to breeds of birds directly related to the jungle fowl (*Gallus gallus*). In short: any chicken or bantam.

Also listed are domestic ducks, geese and turkeys. Ducks "living in a domestic state" includes Muscovies, Carolina wood ducks, mandarins, etc.

But if a rogue hawk is destroying all your guinea fowl, peafowl or your

homing pigeons, you are out of luck and will need a permit from the Department of Conservation to address this. Canada geese became "wildlife not protected" in 2011, as Cape Barren geese were declared in 1973.

However, the Harrier Notice would seem to include "any domestic... goose". If Canada geese are your pets "living in a domestic state", it looks like they are covered. However, Cape Barren geese are not listed under the definition of "geese" in the Wildlife Act, so they appear to have been overlooked. You'll need a DOC permit to protect their goslings.

It is also the case that the law allows you to protect certain domestic animals from hawks, but only if they are cattle, sheep, horses, mules, asses, dogs, cats, pigs or goats. Hawks are certainly associated with attacks on lambs.

You cannot normally do anything to protect any other animal, even if it is a domestic animal. Examples might be alpacas, chinchillas, guinea pigs, pet rabbits and so on and also farmed deer.

Don't be too quick to dismiss the threat posed to these smaller animals should a hawk regularly land on their cage and cause them to injure themselves in wild panic.

As an aside, twice I have been told about pukeko killing guinea pigs through the cage wire. So why not a hawk?

By law, you cannot normally do anything to deal with a hawk that is systematically preying on gamebird wild ducks or their eggs or ducklings, be they mallards or native grey ducks or black swan cygnets.

That's because wild ducks belong to the Crown, according to a principle called *res nullius* (meaning they belong to no one person). If a duck is shot, ownership then legally transfers from the Crown to the licensed hunter who obtained it.

If the hawk attacks that same duck once it is the hunter's property, and on private (not Crown) land, look out. You cannot protect grey teals, because they are not an Absolutely Protected Species, being instead on Schedule 3 of the Wildlife Act along with mute swans.

You can, however, protect New Zealand scaup, brown teal or blue duck, but note, only on land "undertaking activities" to protect these species (see later).

In practice, there is some overlap in these provisions. You cannot defend wild mallards, grey or shoveler ducks, but if there is a small flock of domestic Muscovy ducks on the same pond, the land-occupier, or someone authorised by them, can defend these if a hawk threat is "posed".

Muscovies make excellent surrogate mothers for raising young ducklings from eggs (for instance, excess eggs from grey teal dump nests), so why not get some?

You can protect caged pheasants from hawks, but once they take two steps into the wild, their ownership ceases to be with the pheasant owner and they are then legally considered wild birds. So, you would need a DOC permit to continue to protect them.

Here's the conditional good news. If Fish & Game has an interest in your property, if it traps or tries to trap gamebirds there (for instance, for banding), or if it is holding gamebirds there in a cage (for instance, for release), or if it has released gamebirds on that property, then the hawks had better steer clear.

The Fish & Game Council may now hunt, kill or possess harrier hawks there. You will need its authority as well as the landowner/occupier's permission.

There is a caveat; you must retain that bird afterwards and you must notify DOC as soon as practicable. If it accepts that bird, you must freeze the bird and send it to the DOC office as soon as



A legally shot hawk. If the occupier of the land "is undertaking activities on the land to protect, monitor, rehabilitate, feed or support the breeding of Absolutely Protected Wildlife" that hawks have killed or pose a risk to, then they may hunt or kill harrier hawks and have them in possession.

practicable. DOC, however, may or may not accept this offer.

Obviously, if you shot a harrier at 10 metres with a fully choked magnum load of 4s, it's probably not much use to anyone. But a nicer bird could be offered by DOC to a Māori cloak-maker or a museum for display.

Similarly, if the occupier of the land "is undertaking activities on the land to protect, monitor, rehabilitate, feed or support the breeding of Absolutely Protected Wildlife" that hawks have killed or pose a risk to, then the occupier, or anyone they authorise, may hunt or kill harrier hawks and/or have them in possession.

Someone in this situation does not have to retain and freeze the bird afterwards and offer it to DOC. Nor if the hawk was killed because it posed a risk to aircraft safety – or it was killed posing a risk to the aforementioned domestic birds or animals.

The new Wildlife Order requires you "to take all reasonable steps to minimise the harm to other wildlife". In practice, this probably means to protect the much rarer New Zealand falcon. I've observed the falcon in recent years in places where they haven't commonly been seen in generations, such as around Pukekohe and Te Puke.

If there is any risk of them being accidentally trapped, then some form of live trap that allows them to be quickly released would be a sensible choice. In comparison, the harrier hawk, in many parts of New Zealand, is now one of the most common birds present.

This self-introduced Australian species has obviously benefited hugely from

the conversion of much of New Zealand from bush into farmland, which makes it far easier for them to find prey.

That land is also often liberally sprinkled with carrion from numerous introduced species: rabbits, possums, sheep and other animals. This raises the question: how many harriers is too many and therefore hugely detrimental to other valued species?

You cannot sell any harrier hawk you obtain legally or any part of it. For instance, "hawk and rabbit" trout flies used to be quite popular once.

You cannot simply pick up a dead harrier you find on the side of the road either, but if you have legally obtained it, you can use these feathers for your own use or give them away freely to a fly tier, cloak-maker, etc.

You could probably have such a hawk professionally mounted (something that used to be quite popular once pre-1986), but the taxidermist will want to see a DOC permit before taking possession of it.

There is a gamekeeper's saying: "If you shoot one, three more will come to its funeral." Removing a problem hawk might be a never-ending battle and recent research would suggest a better longer-term solution is to let grazed or mown pond-paddocks revert to rank grass.

This defeats the patrolling hawk looking for an easy nest to plunder. Likewise, plant shrubs, flaxes and other cover. However, if a hawk is harrying (hence their name) or destroying valuable waterfowl and you need to take immediate action, you should now have a much clearer idea of what you can and cannot do.

An ecology of hunted waterfowl

Supplied by **Mark Newcomb**
Home of the Duck

New Zealand's hunted waterfowl (greys, mallards, shovelers) are all *Anas* ducks – the dabbling ducks.

The paradise, however, is a shelduck, which has more of a land-based lifestyle and can be viewed as something as a bit between a goose and a duck.

Obviously, they use water but they don't rely on it as heavily as the dabbling ducks. They also have differences in their social structure and lifecycle as well.

Starting at the beginning of the lifecycle, *Anas* ducks have a synchronous hatch of the eggs in the nest. The female achieves this by laying one egg per day during clutch formation, and for this, she must also mate once per egg so a brood of ducklings may all have the same mother but several fathers.

The eggs are not incubated until all the eggs are laid so the unincubated eggs essentially arrest their development until the female starts sitting on them.

There is a lot of variation between the incubation time of the different species. Mallards go for quantity over quality and have large clutches of relatively small eggs and take around 27 days to incubate.

Brown teal go the other way and lay small clutches of large eggs (it's the waterfowl equivalent of a kiwi and a full clutch may weigh close to 100 per cent of the bodyweight of the female) and incubate for about 30 days.

Grey teal can push incubation through in 24 days, but they evolved in Australia where the wetlands just might dry up so moving fast was a response to that.

Waterfowl young are precocial in that they hatch with feathers, have their eyes open and can feed themselves. This compares with songbirds, etc, which have altricial young, which hatch with no feathers, eyes shut and must be fed by parents.

Because the clutch hatches synchronously, Mum can then take all the ducklings and leave the nest straight away. Waterfowl do no brood rearing in the nest as opposed to songbirds, which do all their brood rearing in the nest, and when their young leave, they are pretty well fully independent.

Female waterfowl can move their broods straight to water and the ducklings can feed themselves. They may nest some distance from a wetland in suitable



A pair of mallards, Wellington.

Photo Alison Murray

habitat and move to the wetland after the young have hatched.

The females on the nest maintain a small exclusive-use area around their nest so nests are spaced out, but because females don't carry nesting material, they must find a site that has everything they need.

During nesting, the female plucks the down from her breast and lines the nest as incubation progresses. When she is away from the nest, she covers the eggs with down so the embryos stay warm.

Eggs can cool down and arrest development before incubation but once incubation has begun, if the eggs chill, the embryo will die.

Males do not incubate eggs but may stay as guardians during the first part of incubation. However, they are always on the lookout to mate with an unguarded female and the literature is full of discussion about "forced copulations", however it means the gene pool is always well mixed, hence there is often little regional variation between waterfowl populations.

Once the young are hatched and the brood has left the nest, the female maintains an exclusive area around the brood but this is not a territory in the normal sense as it is an exclusive space which moves with the birds rather than being fixed – and move they do sometimes by many kilometres.

The development of the young is entirely food dependent. If food is plentiful, they grow quickly; if food is short, they stay ducklings for as long as it takes.

The young hatch with a down covering that is not waterproof so Mum has to pull them out of the water and brood the ducklings to dry them off to prevent them dying from hypothermia.

As they grow, they develop their contour feathers on the body and their flight feathers on the wings. Their oil gland also begins to work so they can oil their feathers which makes them waterproof.

You will see birds oiling their feathers when they are roosting and they stretch their bill back towards their anus (to pick up oil from the gland), then rub their bill on their feathers.

The down remains underneath and keeps them warm as the contour feathers keeps this dry.

Waterfowl have a nuptial plumage and an eclipse plumage. Young birds develop the eclipse plumage first and they all look like brown females.

Immediately after the breeding season, the adults moult all their feathers so the males lose their colour and look like females during summer. This is a monomorphic plumage in that it's one size fits all.

During this spring moult, all birds change their wing feathers and they

moult synchronously so, for a period of time, they are flightless.

This compares with songbirds, etc, which moult asynchronously so they only lose one flight feather at a time so can continue to fly throughout the moult.

The birds' plumage is almost 100 per cent protein so you can imagine the food demands that the moult places on the birds. For the females, this comes after the nutritional demands of forming and laying a clutch of eggs.

Young feed on insects for the protein but adults feed more on plant material (carbohydrates) for the energy.

The birds remain in the eclipse plumage through summer, then with the onset of autumn, they moult again, but this time only the body feathers are changed and the males assume their nuptial plumage, which for the mallard is the classic "greenhead". This is a dimorphic plumage as now males and females are different.

Being winter nesters, waterfowl are unpaired during summer and move about to feed wherever the opportunity arises.

Around Easter, birds begin courtship where the classic waterfowl displays can be seen.

The general belief is that males compete for the attention of the females by showing off and when the female has chosen a mate, they pair, leave the flocking site and move away to establish their breeding territory.

With waterfowl, the arrangement is not one of monogamy and birds generally don't have the same mate in subsequent years.

Birds breed in their first year so many females may only be 10 months old when they nest for the first time, but life expectancy in the wild is pretty low.

About half the young of the year are shot in the first season, so, because they were hatched in July/August and shot in May/June, they never breed.

Of those that make it through, the vast majority only get to breed once, and only a few birds make it to two years old.

Females can be shot in the same numbers as males, and by the close of a season, females are being shot with partly formed eggs.

One waterfowl management response to this suggests hunters target mostly males, eg, aim for a bag based on a couple of females but many more males.

Females will all be mated as males may mate with multiple females, but only females can lay eggs.



Top: DUNZ members, after an evening shoot at Home of the Duck circa 2013, from left, Gus Gardner, Wendell Phillips, Mark Newcomb, Buzz Rathbone, Laurie Bell and Ron Baskett. Photo Fred Bailey Above: Back row, from left: Simon Robertson, Mark Newcomb, Fred Bailey, Wendell Phillips, Ron Baskett, Laurie Bell. Front, John McDowell, Gus Gardiner, Mike Cormack, Buzz Rathbone, Paul Quin.

HOTD – 25 fabulous years

By Mark Newcomb

Fred Bailey and I had been keen duck shooting mates for some years, and after various pond developments in the Waimarino area, we wanted to purchase and develop a wetland of our own.

By synchronistic chance, fellow DUNZ member Ian Pirani was selling his wonderful wetland site at Reporoa, midway between Taupo and Rotorua, and in August 1988, a deal was struck.

The property was 75 acres (30 hectares), 50 acres in run-off grazing to the adjacent dairy farm, and 25 acres of oxbow wetlands and small creek boundary areas.

Ian had made a great start on developing the wetland potential of the property along with shifting on a basic farmhouse, but there was still plenty more to do.

Fred and I decided the property needed more people involved, both for cost sharing, and just as importantly, as a social sharing exercise. We invited eight more like-minded friends to join us, and the

Home Of The Duck was under way.

We commissioned Grant Dumbell—who was also associated with DUNZ—to prepare an overall wetland development plan with an emphasis on habitat improvement.

Over the next 25 years, the wetlands witnessed dragline diggers, bulldozers, tree planting galore, maimai building, hard work, a lot of laughs and fun and the strong evolution of a wonderful bunch of mates.

In the late 80s, the shooting was pretty OK, but in later years there was a gradual decline in resident mallards, which was largely subscribed to the development of large open dairy country in place of the surrounding pine forest.

We did not mind too much, as the wetlands and our surrounding property were outstanding, the small creek boundary provided excellent trout fishing, and we all took great pride in what we had achieved.

The Home of the Duck was disbanded in 2013 after 25 absolutely fabulous years, but the memories linger on... and on...

Counting kiwi in Raetihi

After nearly 10 years of extensive predator control on their bush block near Raetihi, DUNZ Director Will Abel and his wife, Jan, are heartened by signs that it is making a difference.

In early June, a kiwi call count was conducted on the Abels' land, which is named Delaney's Bush after a previous owner, and adjoining properties. The land is part of a 650-acre QEII Trust protected forest block called Manunui.

A group of kiwi folk from Rainbow Springs and the Kiwi Burrow at Wairakei Golf course took part in the count. About 10 volunteers stayed at the Abels' cosy, modern bush bach, venturing out in teams of two over three evenings, from 6pm to 8pm, to stake out different mapped areas and count any kiwi calls they heard.

Blake Cole, a neighbour who works for the National Kiwi Hatchery at Rainbow Springs in Rotorua, went out on the third night and heard the best count of 31 calls for the two hours.

The location of eight pairs of kiwi on the land are already known, with six of the male birds carrying transmitters.

For several years now, the eggs in their nests have been collected by Kiwis for kiwi to be safely incubated and released into predator-free habitats such as Sanctuary Mountain Maungatautari, New Zealand's largest predator proof fenced sanctuary.



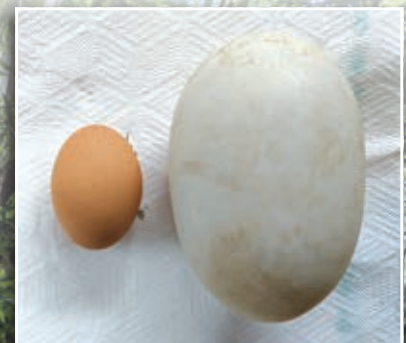
Will refills a bait station on his way out to listen for kiwi calls. Below: Out in the bush and an unfertilised Kiwi egg from a nest at the Raetihi bush block beside a chook's egg.

Once the results of the June call count were tallied, there were at least nine pairs that had not been recorded before, now making a total of 17 known pairs.

The team also found that the results from a chew card and tracking tunnel survey showed only a few mice prints in the tunnels – over the 400 hectares there

was evidence of only 20 per cent mice in the stations and no rats or stoats.

Will says he hopes the kiwi call count may become an annual event and reports that they are hoping to collect six eggs from the property this season. They have already gathered five fertile eggs to be incubated at Rainbow Springs.



In the past five years they have supplied at least 30 chicks to the sanctuary, including two juveniles found by kiwi dogs in the course of their work.

Will says when he and Jan first became involved in the national programme to help save kiwi, they were thrilled to be in a position to support the strategy. "Before this, we'd only ever seen kiwi at the zoo."

In 2018, an egg collected from the Abels' property became the first chick released by Kiwis for kiwi at Maungatautari. It was appropriately named Tahi and the Abels have agreed for more chicks from kiwi on their land to go to the sanctuary.

"While the land belongs to us, the project belongs to the wider team and the birds belong to New Zealand. We look forward to welcoming back Tahi's offspring in due course," Will says.

Maungatautari Species Ranger Craig Montgomerie has noticed different visual traits or characteristics between kiwi from different source sites and says the chicks from Manunui have noticeably paler legs.

"They also tend to have a white face with a vibrant bronze tone to their feathers. And if that wasn't enough, they come with a fiery aggressive attitude to boot," he says.



Left: Blake collecting one of the eggs last season. Above: A kiwi chick at the Rainbow Springs Hatchery. Below: Will and Jan back at their wetland home at Lake Huritini, Horowhenua. Bottom: A view of Tongariro National Park from Delaney's Bush.



Thirty spades make light work



The 'blank canvas' before the work began, with Stellar the St Bernard. Left, excavations begin, and right, spades for the planting day. All photos: Nigel Binks



Avid explorer and DOC biodiversity Senior Ranger Nigel Binks describes how he has created a wetland on his small rural property near Hamilton.

It was during my time abroad travelling, I came to realise the importance of biodiversity and developed a stronger appreciation for the natural beauty that persists here in New Zealand.

When I returned to New Zealand in 2012, after a series of adventures overseas with my wife Shiro, I began working in the conservation sector as an ecologist.

My aim is to improve our understanding and appreciation for nature and to communicate restoration science to the broader community.

I am fortunate to own a four-acre property on the outskirts of Hamilton. If you close your eyes, it's easy to picture the property in your mind as it was a large completely flat square patch of land dominated by grazing pasture and separated into several paddocks.

There are no contours to the land and no water body or water input except Waikato rainfall.

We bought the property in 2015. It had been used primarily as grazing pasture for horses and other large livestock.



Tavita pulls out one of the old macrocarpa stumps.

Although we keep a few farmyard friends as pets on the property (Wilson and Betty, the kunekune pigs, Daphne and Velma, the highland cattle, and our family of goats, Agnes, Harold, Fred and Iris), their grazing requirements mean there is ample spare space for alternative land uses.

As my wife pointed out to me, "You have a blank canvas to do what you like with."

With this in mind, and taking inspiration from my adventures in nature and the restorative work I undertake with DOC, I began planning a wetland zone for my own property.

This project is a self-funded labour of passion and required considerable planning time.

The concept was to create built-up areas above ground and to excavate shallow wet zones below ground level. This would facilitate the planting and establishment of native trees and shrubs and filter overland flows of water from the surrounding land down into the deeper wetland areas.

I anticipate the creation of the wetland will improve the diversity of visiting and roosting native bird species, increase invertebrate diversity and abundance, and this may provide food resource and

draw in critically threatened long-tailed bats which roost nearby.

This project featured three primary phases: excavation, fencing and planting.

Phase 1 Excavation

This began in May 2021 and took about 40 hours with a 5-tonne digger to complete the contours and shape the land to my wetland vision.

Watching the development of the excavation phase was like unwrapping a gift daily, peeling back the layers of wrapping to expose the beauty of the present underneath.

The wetland itself has been created as two interconnected zones – a shallow zone which tapers down into a deeper wetland (35m long by 7m wide) featuring a bowl-shaped depression at either end.

After the excavations were completed, a fencing contractor installed deer-netting fencing around the perimeter of the wetland paddock. Although I have no deer, 1.8m-high fencing will prevent my animals from grazing on the native plants.

This is an ambitious long-term project, and the first phase was physically demanding, however, Phase 2 required a lot less of my physical input but lightened my bank balance considerably.

Phase 2 Fencing

Watching my green pastures transform into a wetland has been a dream brought to life.

My friend Tavita undertook the landscaping excavations in Phase 1 and helped me remove several large macrocarpa stumps from along my boundary line. These aged timber trees (felled decades ago) were installed as features and micro-habitat within the wetland. Some remain in prominent positions on dry ground, whereas others provide habitat and structure within the wetter zones of the wetland.

I have always fancied the shape of tree stump root systems, and have intentionally positioned these upside-down to take advantage of their vegetative architecture as visual features and habitat.

A 2m tall deer-net fence now completely surrounds the wetland. This includes a 4m fringe buffer within the fenceline for vehicle movement, and future access to the planting zones.

John, the contractor helped me fence off an area beside my existing shade-house where I grow and house native plants. This will enable me to expand my native nursery area.

In addition, he rammed posts in a



Stellar and Vera cast a canine eye over the work in progress, and below, Nigel on site after the planting had been completed.



prominent position in the wetland as foundations for a “false-maimai” platform (2.4m squared). This will be created at a later date to provide a contemplative spot to overlook the wetland.

Once the fencing work was completed and my farm animal whānau (cows, pigs and goats) excluded from the wetland (they're very disappointed), I began organising Phase 3 – site preparation and a community planting day.

I accrued about 800 native plants, from native grasses and shrubs – pūrei, karamū, koromiko, mānuka and harakeke, to trees – rewarewa, rimu, miro, pukatea, pūriri and my favourite lowland podocarp, kahikatea.

Phase 3 Planting

Sitting in my home office amid a Covid-19 Alert Level 4 lockdown, I've had a chance to reflect on the wonderful opportunity that was the wetland planting day at my home just over a month ago.

Sunday, July 11, 2021 was a surprisingly warm winter's day. On the previous Saturday, my friend Dan and I spent six hours carefully positioning the plants around the planting area.

We determined which species, trees such as kahikatea and rimu have soil quality and drainage preferences and found the most suitable site for each plant. This

Continued next page



Progress in mid-September, with an observation/contemplation platform in place.

From previous page

took quite some time, but as the sun went down on that evening, we felt we were prepared. The 30 spades were all laid out and ready for use.

Dan had joked: “Imagine if we managed to get all those spades going at the same time...” To which I replied, “We’d probably get it smashed out by lunchtime if we had a few extras to help them out too. I’d be surprised though if we get that many people here all at once. Here’s hoping.”

So as the morning dew was rising from the grasses at 10am on the Sunday, I was pleasantly surprised to see a community of volunteers, friends, and family arrive to undertake a solid day’s work – and sure enough, there weren’t enough spades for every individual. I was stoked!

Not only did 25 people arrive in the first half hour, there were about 60 helpers across the span of the day, including my fencing contractor and the digger operator who undertook the excavation work.

By 11:40am we were running out of plants, with the team having already put in about 850. Bamboo stakes were inserted beside each plant and a small squad moved about securing the plants to stakes using hemp string.

With the task so well in-hand, I hurried to prepare a barbecue and hot chips lunch for all, and we took a well-deserved break at 12pm.

Although the plants were in the ground, the after-lunch task required considerable gusto and everyone chipped in to shovel load after load of wood mulch onto trailers before wheelbarrowing it, unloading and

distributing the mulch around the wetland plants and main raised area.

Together we transported and unloaded nine trailer loads of wood mulch that day, providing a weed suppressant and substrate cover around the bases of all the native plants.

We still finished at 2:45pm, 15 minutes early.

Now the long wait occurs. Winter is passing, spring is coming and in time the native plants will begin to grow, dominate the area and eventually repopulate the wetland over time with their offspring.

To follow Nigel’s progress, and for more photos and videos of the work already completed, go to: www.facebook.com/nigel.binks.7

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DETOUR

Whistle-stop on SH2 – Pekapeka

One of New Zealand’s most accessible wetlands in New Zealand is on SH2, between Hastings and Waipukurau.

Pekapeka is one of the few remaining large wetlands of its type (a palustrine wetland, or swamp) in Hawke’s Bay.

The tracks and boardwalks are in good condition, and extend around the perimeter as well as through the middle of the wetland, taking only about 20 minutes to walk around.

Informative noticeboards contain general information about wetlands and describe the history of Pekapeka and the region.

Bird species that frequent Pekapeka include NZ dabchick, little black shag, little shag, white faced heron, Australasian bittern (rare), mute swan, grey teal, marsh crake, spotless crake, pied stilt, shining cuckoo, morepork, kingfisher, welcome swallow, North Island fantail, silvereye, black shag and Australasian harrier.

There are more than 82 species of plants in the 98-hectare wetland (both native and introduced, including weed species).

For many years, Pekapeka was used as an illegal dump and the remains of the demolished Pacific and Mayfair Hotels are there – some of the rubble and reinforcing rods have been left there, see photo, as a stark reminder of how badly valuable natural resources like wetlands have been treated in the past.

The wetland facilities include picnic areas and tables, boardwalks, hides, information signs and a special Canteen (teen cancer organisation) reflection area with table and seating across the boardwalk from the lookout.

There are no toilets and dogs are not permitted. The wetland is closed to the public in the first weekend of May each year for gamebird shooting.





Wetland Care Scholarship



*Interested in studying wetland birds or wetland restoration?
A Wetland Care Scholarship could be for you!*

BACKGROUND/PURPOSE

Wetland Care Research Scholarships are Ducks Unlimited-sponsored scholarships applicable to any student currently enrolled or affiliated with a New Zealand university.

Funds are aimed at encouraging and supporting students who wish to push the boundaries of what is known about wetland restoration and conservation.

Up to \$20,000 is available annually to cover up to four separate scholarships of \$5000 each.

Funds can be used to support student living costs or cover the costs of equipment purchase, logistics and consumables.

CRITERIA

Applications will be accepted from students/researchers affiliated with universities interested in making a difference through wetland conservation.

Funding is aimed at student projects

designed to facilitate better management of New Zealand wetlands or their environment. The student project must be based in New Zealand or be of direct benefit to New Zealand based on current wetland conservation issues.



Preference will be given to applications that demonstrate some of the following criteria:

- projects of direct benefit to New Zealand based on current wetland conservation issues
- innovative thinking that pushes the boundaries of what is known about New Zealand wetland conservation

- research on native threatened wetland bird species
- research with clear objectives and measurable outcomes
- research with a strong wetland management and conservation applications.

VALUE

Wetland Care will award up to four scholarships annually in two funding rounds.

Funds will be paid in one lump sum to successful candidates upon completion of the milestones agreed at the time the scholarship is accepted.

INTERESTED? WANT TO KNOW MORE?

Please email swampbird.research@gmail.com with your questions or to request an application pack.

Terms and conditions are also available on the Ducks Unlimited NZ website, www.ducks.org.nz.

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