

Flight



ISSUE 188

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**Red tape woes
Trees for Wairio
Nest box materials**

Insight

Three years ago I was designated as DUNZ's representative to the Game Bird Habitat Trust (GBHT).

This Trust, which is run under the Fish & Game umbrella, is tasked with allocating funds derived from the sale of duck hunting licences.

From every licence sold, \$5 goes to the Trust for wetland development, similar to the DU model but with a distinct advantage – it's compulsory.

The Trustees, apart from the DU member, are Government appointed, and usually comprise three from the North Island and three from the South Island.

One, also a DUNZ director, John Cheyne, is the Department of Conservation appointee.

Andy Tannock is Chairman and the other three Trustees have wide ranging ecological, botanical and wetland creation experience.

Fish & Game staff are tasked with finding possible wetland projects, do all the assessments, and fill in application forms detailing each project (size, open water, surrounding habitat, photos, etc).

They also provide construction details, estimated total cost, whether resource consents are needed, fish passes and the amount of funding requested from the GBHT.

Once all the information is collated, the Trust Board meets in September to decide where funding will go.

The past few years have seen a massive influx of new regulations, resource management reform, freshwater farm plans, and national policy statements on freshwater and biodiversity and significant natural assets (SNAs), to name a few.

Now if you want to create a wetland, the process is somewhat mind boggling! An engineer's report (if you can find one who will sign off on an earth dam),



probably a resource consent, allowance for a fish passage, is proposed planting locally sourced? – the list goes on and on.

The days of Jim Campbell deciding to build a new pond tomorrow aren't going to happen any more.

The number of requests for DUNZ funds (to build wetlands) virtually stopped in the past few years, and the same trend is happening with the GBHT. Last year there were 23 applications, this time we have only had 11.

People are looking at what has to be undertaken, and the costs associated with the whole process even before the digger comes in the front gate.

We have seen this with the ongoing Wairio restoration project to get water from Boggy Pond and Matthews Lagoon to flow directly into Wairio.

One GBHT-approved project from last year has since found out that a resource consent is now required (they were previously told they didn't need one), and they have decided to abandon the project and returned the funding.

Unfortunately, I think we will see that trend continue, especially for smaller scale projects as the costs are just too great. Very sad!

Neil Candy
DUNZ Director
Game Bird Habitat Trustee

Landmark year ahead for DUNZ

Ducks Unlimited NZ turns 50 next year, and the organisation that began in 1974 with about 45 members has notched up many achievements since then.

Planning for the 2024 conference has begun and it is likely to be held in the Wairarapa, with the venue, accommodation and field trip to be confirmed early next year.

It will be the 49th AGM and Conference (it was cancelled in 2021 due to Covid restrictions).

Next year *Flight* will look back at some of DU's achievements. Please contact the editor on 021 124 8095 or email her on alimurray@xtra.co.nz if you have any good photos or stories that you think should be included.

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Cover: A grey teal. See story, p10-11.

Photo Ed Dunen CC BY 2.0

Back: Black swans in a hoar frost, Twizel, Mackenzie Country.

Photo Shellie Evans CC BY-NC-ND 2.0

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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, 18 January 2024, in time for the February/March issue.

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

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Wetlands run into red-tape roadblock

Impactical and costly regulations are stifling wetland restoration efforts around New Zealand, say several groups involved in restoring wetlands.

Neil Candy, DUNZ's representative on the Game Bird Habitat Trust, says applications for trust funding to build and restore wetlands are dwindling, and a recent successful recipient of funding returned the money to GBHT after being confronted with an additional layer of new restrictive regulations. Full consent for the project had already been given.

At Wairio, DU has faced multiple delays to projects over several years because of bureaucratic and dubious interpretations of the rules by some officials.

President Ross Cottle also says applications to DU to fund new wetlands have declined markedly.

Now Fish & Game New Zealand has publicly criticised the current regulations, saying they are not working to maintain existing wetlands and are hindering the creation of new wetlands.

The organisation has called for a review of the current National Environmental Standards for Freshwater rules.

"We have been providing significant free consultancy services to help communities and farmers secure consents; however, many landowners are walking away from projects to create or restore wetlands on their properties because of the amount of additional red tape and costs the regulations have introduced," says Corina Jordan, chief executive of Fish & Game NZ.

"This is an absurd outcome when wetlands not only provide habitat for indigenous and valued introduced species but are also a key tool in farmers' toolkit to address losses of sediment, nitrogen, and phosphorus from the farm, as well as supporting climate change adaption and mitigation.

"For instance, one owner with nine wetlands has told us about the challenging process required to

Continued next page

What a difference a year makes

The most recent wetland project that DUNZ has contributed funds towards was a large pond on the Chambers' farm in Raetihi.

Paddy Chambers is a long-time DU member and several members, including DU Patron Di Pritt, President Ross Cottle and Director Will Abel have visited to see how it is progressing.



Will said at this year's AGM that the pond expanded the network of wetlands and ponds covering the farm and linked in with others around the district.

"We have had members creating habitat in the Ruapehu district now for 50 years and it shows with the number of waterfowl spread over the area," he said.

Di said the dam wall of the pond took a bulldozer about 100 hours to construct, followed by Paddy putting in a similar amount of time on his digger.

Paradise shelducks, mallards and the odd grey duck have been visiting in the past year. ■

Left: The pond on Paddy Chambers' farm in Raetihi in May last year and, below, the same pond a year on, in September.

Photos Di Pritt



from previous page

gain consents to carry out routine maintenance of the canals and more than 125 ponds on their properties.

“These enhancement activities had previously been pretty straightforward to work through.

“Another farmer received a \$25,000 estimate from a regional council for a resource consent and environmental assessment to increase the size of a

wetland on their property.

“That’s simply cost-prohibitive and is inhibiting potential conservation gains on private land.

“We’ve had people say it’s easier to get consent for intensive winter grazing than it is to build a wetland.”

Like DUNZ, Fish & Game has also encountered problems with different regional councils and bureaucrats

interpreting the regulations differently.

Discretionary resource consents are now needed for wetland creation when previously no consent was required.

Quarrying activities have gone from often being non-complying to discretionary (less restrictive) in wetlands. Therefore, it has become harder to create wetlands and easier to destroy them, Fish & Game says. ■

Wetlands bounce back from cyclone

Hawke’s Bay Regional Council is encouraged by the resilience shown by the region’s wetlands, which are recovering after Cyclone Gabrielle’s flooding filled them with sediment.

In collaboration with Manaaki Whenua – Landcare Research, council scientists collected data from 22 sites on the ecological impact of the cyclone, and the results are promising.

Hawke’s Bay Regional Council terrestrial ecology scientist Annabel Beattie says for many of the wetlands in affected areas, plants have survived despite water and silt inundation.

“We’re also excited that we’ve re-encountered threatened species like the pūweto/spotless crane and the swamp nettle plant.

“Their presence shows the resilience of wetland ecosystems to extreme weather events and we’re very grateful to the landowners who have allowed us access to these special places.

“It’s worth noting that while wetlands

are recovering well in general, not all wetlands will recover equally and that the state and health of a wetland will feed into its resilience to extreme weather.”

Regional Council Chair Hinewai Ormsby says wetlands are crucial for the environment. “This is very good news for our taiao (environment) and the value of continuing our recovery monitoring programmes.”

As part of its commitment to supporting the protection of both public and private wetlands, the council has a Wetland State of the Environment monitoring programme that tracks the state of wetlands across the region.

Vegetation is measured, drone imagery maps vegetation types, and bird counts, soil measures, water levels and foliage nutrient testing all combine to form an assessment of a wetland’s condition.

This data has contributed to the assessments of wetland recovery after the cyclone. ■

Pateke numbers up in Northland

Conservation groups are buoyed by the latest results from Northland’s pāteke flock count.

The 2023 count shows an increase in brown teal/pāteke, after a small decline in numbers last year.

Congregations of pāteke at flock sites in Northland have been counted annually in February since 1988 to monitor population trends.

Kiwi Coast works with community groups, DOC, the Pāteke Recovery Group and NorthTec to assist with the flock counts and investigate new sites.

The 2023 data confirms pāteke are continuing to flourish on Northland’s east coast where intense predator control has been sustained. This year the flock count total was 625, up from last year.

DOC senior biodiversity ranger Nigel Miller said the data showed “a positive indication of pāteke population trends, particularly since predator control started”.

“The small increase this year is a result of a couple of good breeding seasons driven by wet springs, but offset to some degree by the same wet conditions discouraging birds from joining flocks at all. So, hopefully the actual population is far greater than the numbers show.”

Mike Camm, from the Pāteke Recovery Group, said: “What is rewarding right now in the middle of their breeding season, is the large number of successfully fledged juvenile families of four, five, and six still with their parent pairs on small ponds and streams from Ngunguru to Sandy Bay.

“This is no doubt due to a combination of factors like a suitable breeding climate, plentiful food supply and suppressed predator numbers. A real testament to the benefit of the large-scale landscape predator trapping being undertaken.” ■



A flooded wetland in Waitangi Regional Park two days after Cyclone Gabrielle.

Photo Alison Murray

In search of grey ducks

JOHN DYER

Each year Auckland-Waikato, Eastern and Wellington Fish & Game Council staff band thousands of mallards and a fair number of grey ducks, pāraera.

We also need volunteers, hint-hint. We can train you to band birds, and ducks are pretty bomb-proof to learn on. Contact me if you're interested: JDyer@fishandgame.org.nz

Grey duck numbers in the Waikato collapsed in the 1930s due to the massive drainage of wetlands several decades before mallards had even made a small bridgehead. Where large wetlands survive, so too do grey ducks.

Having said that, at a DNA level, it would seem mallards and greys are well hybridised, and contrary to popular belief, it may be the randy grey drake who is most to blame.

When we have a duck in our lap, the first check beyond immediate appearance is the wing speculum.

The mallard has a blue speculum with two pronounced white stripes, one on either side. The grey duck speculum is green and there's just one weak white stripe below.

Speculum colour can depend on the light and angle, but stripes are more reliable to judge.

Often, there will be 1½ stripes or some similar hybrid mixture depending on how many generations ago the cross occurred.

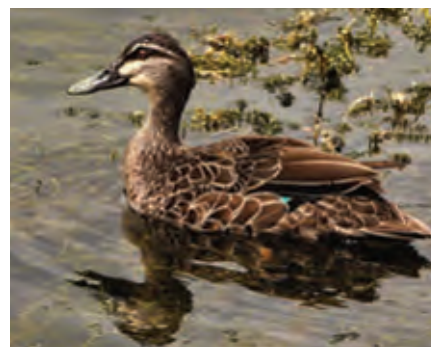


The grey duck speculum, left, is green with just one weak white stripe below while the mallard, right, has a blue speculum with a white stripe on either side.

If you come across a mallard duck carcass, and the wing is intact, if that upper white stripe goes all the way to the body, it'll be a female. If it pulls up a few feathers short, it's a drake.

A group at Awhitu, north of Waiuku, have restored large areas of wetland that until their purchase, were all drained swamp. The group has just received a DOC permit to breed grey ducks.

Obviously, any birds used for this need to be as true to type as possible. The wing speculum is one easy way to select



A grey duck.

Photo Sid Mosdell (CC BY 2.0)

for this.

If anyone in DUNZ is breeding grey ducks, I'd love to hear from you about what works best with this species. ■

How grey are they? A handy guide...

Characteristic	Species	Assessment	Value*	Characteristic	Species	Assessment	Value*
Face striping	Grey	2 Clear black stripes on cream background	0-1	Nape	Grey	Cream	0-1
	Hybrid	Obscured face stripes	2-3		Hybrid	Creamy brown	2-3
	Mallard	No face stripe to a thin black eye stripe in the female	4-5		Mallard	Dark brown in female or eclipse male, varying from a dark green to a purple-green in the breeding plumage male	4-5
Speculum border – anterior	Grey	No white bar	0-1	Tail	Grey	Slate gray	0-1
	Hybrid	Thin white bar (2 mm)	2-3		Hybrid	Gray-brown	2-3
	Mallard	Broad white bar (5 mm)	4-5		Mallard	Creamy brown in female or eclipse male, varying from a dark green to a purple-green in the breeding male	4-5
Speculum border – posterior	Grey	Faint white line	0-1	Leg	Grey	Gray-brown	0-1
	Hybrid	Thin white bar (2 mm)	2-3		Hybrid	Gray-yellow	2-3
	Mallard	Broad white bar (5 mm)	4-5		Mallard	Yellow-orange	4-5
Bill	Grey	Slate gray	0-1				
	Hybrid	Gray-yellow	2-3				
	Mallard	Yellow-orange	4-5				

* The value index gives a score of 0 for the purest grey duck and 35 for the purest mallard. If a duck scores more than 7, it is almost certainly a hybrid.
Source: New Zealand ebird: https://ebird.org/newzealand/news/grey_ducks

Wairarapa's 'amazing hidden treasure'



ABOVE: An ATV loaded up with EcoWool mats; Ross Cottle, South Wairarapa Mayor Martin Connelly and Jim Law; Ella Buckley protects a kahikatea seedling with an EcoWool mat. BELOW: From left – DUNZ's Neil Candy and Jim Law with John Argue, of Greytown, and Tony Didsbury, Rotary; Fish & Game senior field officer Matt Kavermann and Neil Candy take a break from planting.



Planting day at Wairio

The sun came out for Ducks Unlimited NZ's annual planting day on June 27 at Wairio Wetland, Lake Wairarapa.

More than 50 people mucked in to help plant 900 trees and flaxes on the left side of Wairio's Stage 1.

DUNZ's first Wairio planting was about 20 years ago at Stage 1, where the now established trees provide a good example of what can be achieved.

One first-time visitor to a Wairio planting day, South Wairarapa Mayor Martin Connelly, said he was highly impressed with the work that DU had done to transform the wetland.

After a late-morning ATV tour with DU President Ross Cottle, the mayor said Wairio was an "an amazing hidden treasure".

"You can drive down the road and have no idea what was there."

On the tour, Ross gave the mayor a good description of what Wairio was like 30 years ago before DU began its restoration.

"It's a really intriguing transformation and fascinating to see all the birdlife," Martin Connelly said.

He was thrilled to see a white swan



DUNZ Patron Jim Campbell

and several other species he did not "entirely" recognise.

For the first time at Wairio, weed mats were pinned around each plant as it was bedded in. The EcoWool mats are made of 100% wool by Advance Landscapes Systems in Christchurch.

The Wairarapa Moana Wetlands Project, a collaboration between Greater Wellington Regional Council, the Department of Conservation, South Wairarapa District Council,

Ngāti Kahungunu ki Wairarapa, and Rangitāne o Wairarapa, has bought 48,000 mats for use around Lake Wairarapa.

GWRC's Ella Buckley and DOC's Ian Brown said the mats had been a good investment, reducing the need for maintenance.

The mats are made from waste wool that has had the lanolin stripped from them and are secured in place by pins made of potato starch.

The wetlands project had used them at Te Pouaruhe, on the western side of Lake Onoke, and Ella said they had worked brilliantly, stopping the tall fescue from falling down on the newly planted flaxes.

"As long as it's not too wet, the pins hold them down really well," Ian said.

Almost half of the mats – 22,000 – will be used for planting around Boggy Pond, across the road from Wairio.

About 25 students, from Kahutara and Pirimai Primary Schools and Kuranui College, helped with the planting.

The Kahutara students took time to stop at Stage 4 to see how well the trees they planted at the last year's planting day had grown. ■



Pirinoa Primary School students with Chris Hodson from Rotary, left, and Principal Richard Goodyear. RIGHT: Kahutara School kids at Wairio with teacher aide Mary Mason. The students have their own wetland, Mangatete, just around the corner from their school. This year the students have done all the annual planting at the small wetland that DU helped fund. *Photos Jim Law, Paul Mason*

Rat tracking project update

Victoria University student and DUNZ scholarship recipient **Ellen Carlyon** reports on her work at Stage 1, Wairio Wetland.

I have now completed the field work portion of my study and am in the thick of data analysis and writing. I'll be handing my thesis in very shortly if things go to plan.

The field work was very rewarding, and I loved spending lots of time in Wairio Wetland.

There were lots of foggy mornings and hot afternoons working in Stage 1. It was difficult at times and there were a few setbacks, as to be expected when running a field-based study, working with animals and a novel technology.

One particular setback occurred when I had everything ready to go after months of hard work to set up the system. I set my live traps ready to catch rats and on the first day discovered that rats and possums had chewed through multiple cables on my radio tracking base station.

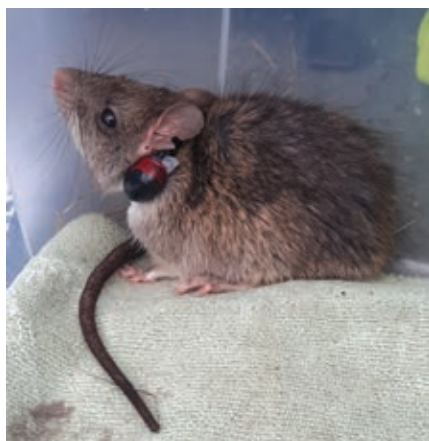
So I had to take everything down, cart it back to Wellington, find help to fix the broken cables, then go back to Wairio and set everything up again.

The live trapping involved checking my traps early every morning, resetting them and checking again the next morning. I did this for about a month and trapped three rats in that time. I also caught a lot of hedgehogs and mice; possums were also a nuisance and set off the traps most nights before any rats could arrive.

I am incredibly grateful to Ducks Unlimited NZ for the support of my project and allowing me to conduct research at Wairio.

My aim is to produce quality research

that contributes to the protection of wetland ecosystems and taonga species that call them home. It is exciting that Jess Wagner is looking at continuing some of this work at Wairio. ■



Clockwise from top left, Ellen with a rat during the collaring process. The rat is anaesthetised and the procedure is ethically approved and fully supervised by a professional; Victoria University student Jess Wagner checks Ellen's monitoring station on planting day; one of the chewed cables; a rat with a radio tracking collar fitted.

Nest boxes – choosing the right materials

JOHN DYER

This is primarily about grey teal, but mallards will also sometimes accept nest boxes so the same advice applies.

Using hay is not recommended because nest boxes are not dry places and rotting straw can quickly develop aspergillosis spores that will kill young ducklings. Hygiene is important.

Ducks don't bring their own nesting material so usually around pegging day, I remove all last year's material and replace it.

The first grey teal usually start nesting around King's Birthday. If boxes are subsequently flooded, and the eggs inside spoiled, I throw out the saturated nest material and start again.

The teal will be back in there laying in just a few days.

Annual servicing makes a much safer environment, for instance, removing old infertile or unhatched eggs that can potentially explode, sending their rotten contents over the good eggs.

It also removes insects, for example, myna mites left from their rubbish that has been added to the nests.

One thing specific to grey teal is they will only accept nest boxes over water. I have had some success with mallards using nest boxes, typically on islands including moored floating islands.

They need a different style of box as their ducklings do not climb. Boxes mounted on poles have had less acceptance by mallards.

Overseas, mallards readily accept nest baskets made from woven willow, especially in the Netherlands where this is a popular habitat enhancement.

It is likely ducklings hatched in these then look for the same nest environment when they are adults, so nest-basket use there is high.

Woodwool is long thin spaghetti-like wood shavings, pine or sometimes poplar. It comes as a small compacted bale that can be teased apart as required.

Putting it in a large black rubbish sack will minimise mess in storage or in the boat.

The only manufacturer I know of in the North Island is Woodtex in Ngaruawahia but this product is used as packing and can sometimes be picked up free from users when its job is done.

I buy direct from Woodtex to avoid punitive mark-ups. Grey teal and



Annemieke Hendriks, from the Department of Conservation's Banding Office, on a recent banding trip to nest boxes near Pōkeno; nest boxes, one with pin oak leaves and the other with woodwool and breast down.

Photos John Dyer

mallard readily accept woodwool and weave it into a nest bowl shape.

When they add their own breast down, you know they've moved into the incubation stage.

This year I've experimented with dried pin oak leaves, collected at a local park, which teal seem happy to accept.

Overseas publications talk about using cedar shavings and also sawdust. Teal



The floating mallard nest box which was used this year and grey teal chicks nestled in down.

don't like either, and on a windy day, sawdust can blow out the entrance hole leaving nothing behind.

When the first eggs start hatching, the ducklings stay inside the box until they've all popped out and then dried off.

Then, when Mum thinks the moment is

right, she'll make a special quiet quack on the water just beside the nest-box pole.

The ducklings respond by peeping back, "Wait for me", and head for the light at the opening.

A small ladder of wire-mesh allows them to climb up to this and then jump,

flapping their tiny wings.

When the peeping stops, Mum assumes she has all of them and she's immediately off into the safety of cover before the hawks and pūkeko catch on.

Treated ply boxes last 25 to 30 years so the cost per duckling produced must be just cents. ■

IT supercharges predator control in Taranaki

Digital technology is joining the fight against predators in an isolated and rugged part of Taranaki.

The Eight Hundred Trust, which owns more than 1500 hectares of steep manuka-clad Taranaki land, aims to create a biodiversity corridor between Lake Rotokare and Omoana with funding from Jobs for Nature.

As well as being used for paying for planting and setting up and maintaining traplines, the funding has supercharged the trust's data-driven approach to controlling predators.

Trustees Daryl Egarr and Bjorn Doherty have professional backgrounds in IT, and have used their skills to develop wifi connectivity and repeater stations across the property.

More than 40 cameras monitor areas of the property, with images captured transmitted via wifi repeaters dotted across ridge tops and hillsides. The images from the cameras are monitored by object recognition software written in-house, and determine where traps need to be located to control pests such as mustelids, feral cats and possums.

The system's effectiveness was put to the test when a feral cat was picked up by a camera monitoring the decking on the property's hut. Image recognition detected that it was a cat and alerted staff, and it captured within hours by a



Lake Rotokare.

Photo Kathrin & Stefan Marks (CC BY-NC-ND 2.0)

repositioned trap.

Daryl says in a remarkably similar set of circumstances, the same method worked with a stoat – picked up on a camera and trapped in the same spot a week later.

The trust's use of technology isn't limited to cameras and wifi guiding predator control efforts. They're working on an advanced telemetry product, an acoustic recorder to detect and log the calls of native birds and bats more specifically than many current similar tools, allowing for more distinct identification of the sounds of particular native species.

Daryl says the digital telemetry tool will potentially supercede human bird call counters, whose expertise is built

up over 100s of hours of field work understanding and identifying the sounds of different native birds.

And although humans will still be needed to install the telemetry devices, the trust's intention is to have a technological tool that can carry out the work of a group of people – and deliver the information digitally to a central IT storage location.

By deploying the telemetry bird recorder, they will have access to "all of the data, all of the time", says Daryl – rather than just when human bird call counters are available and conditions suit.

With the trust's device, information from the recorders is relayed instantly and the recorder is listening 24/7. ■

Vagrants from elsewhere

John Dyer dips into Archives NZ to gain a better understanding of ducks through research.

When odd birds arrive unaided from another country, they are known as “vagrants”.

Examples include pelicans and a wood duck from Australia, both appearing in the Waikato, and recent sightings of a northern shoveler at the Orongo Wetland at Nick’s Head Station in Gisborne (see next page) and a glossy ibis, spotted from a bus on SH2, at Lake Poukawa, Hawke’s Bay.

Often vagrants are single birds that tantalise us with their novelty but fail to find mates and establish populations.

Occasionally a pair arrives somewhere and starts to breed. For example, just two spur-winged plovers were originally recorded in Southland in 1932.

From such tiny beginnings, they increased and colonised the length of New Zealand. Did more spur-wings follow? We have no way of knowing unless they were banded and later recovered. However, DNA could perhaps tell us if all the New Zealand spur-wings share just one ancestral mother.

Any arriving bird is automatically protected by the Wildlife Act. It might later shift to a different status, such as a gamebird. Birds arriving unassisted by humans that start to breed are considered “native”.

An example might be the Australian barn owl, which now has a foothold in Northland. If you want to see one of these up close, book a show with Wingspan in Rotorua.

In contrast, the Little Owl, which is established in the South Island, was repeatedly introduced by the Otago Acclimatisation Society from England (from 1906 to 1911). It is not considered native and is now only partially protected.

When the Wildlife Service was absorbed into the Department of Conservation in 1987 many of its old files were moved into Archives New Zealand.

These can be searched online, and the public can book on-site viewings in Wellington and other regional centres.

There is a wealth of historical data, which can throw up leads about the



At Wingspan, John Dyer has a close encounter with a kareare/NZ falcon, and a staff member with an Australian barn owl.



A glossy ibis in South Africa.

Photo Craig Adam (CC BY-NC-ND 2.0)

whereabouts of vagrants that can still be followed today.

And what of the claim that grey teal arrived as an “influx” in 1957?

This species has been recorded in Māori middens but most were misidentified juvenile grey ducks caught as “flappers”. It seems grey teal in New Zealand then were strictly vagrants, as the Wanganui Museum noted in 1900.

Wildlife Service staff assumed grey teal must have been more common because Māori had a name for it, “tete”. In fact, tete simply means a small duck and can be equally applied to brown and grey teal, as well as shoveler.

It wasn’t until 1941 that the first grey teal nest in New Zealand was discovered and photographed by Robert Stidolph near Gladstone in the Wairarapa.

Around 1957, large droughts in Australia caused a variety of waterbirds from there to turn up in odd places including New Zealand, but significantly only in ones or twos, not “influxes”.

When five grey teal turned up on Lord Howe Island in 1957, they were the only ones there. However, Ornithology Society counts of numerous species around New Zealand had already shown a steady increase in grey teal since 1952; 75 in five localities then rose to 100 in 1960.

To these were added 220-plus grey teal seen on Lake Whangape in the Waikato by Ken Miers, of the Wildlife Service.

He noted then that this species was “apparently increasing and spreading in the North Island”. This is all the explanation that was logically needed to account for his observation then. However, he subsequently wrote:

“Though for a long time considered to be a rarity, with only two known breeding areas, (Rotorua lakes and Wairarapa district), there is evidence of them increasing in numbers and of breeding elsewhere.

“There is also circumstantial evidence to suggest that recently, probably in the autumn of 1957, there was a large-scale invasion from Australia, the slowly growing New Zealand population receiving a big boost from natural immigration.”

He subsequently wrote: “In a previous issue of this journal, (March 1959), the writer mentioned circumstantial evidence suggesting there had been an invasion of grey teal from Australia.

“Proof of this surmise was forthcoming less than two months later when a bird banded near Melbourne in May 1957 was recovered during the 1960 season near Te Kauwhata.”

This grey teal, OBS-615358, was banded on May 12, 1957 at Lara Lake, in Geelong, Victoria. The adult male was later recovered on May 7, 1959 at Lake Whangape. It is the only banded grey teal ever to make such a trans-Tasman journey and be recovered and reported.

Whether just one banded bird is sufficient “proof” of an “Australian influx” is debatable. We should note that Miers was very cautious making his claim, saying, “apparently... unsupported... suggested... surmise...”



The first grey teal nest in New Zealand in 1941. Photo Robert Stidolph



Grey teal, above and right.

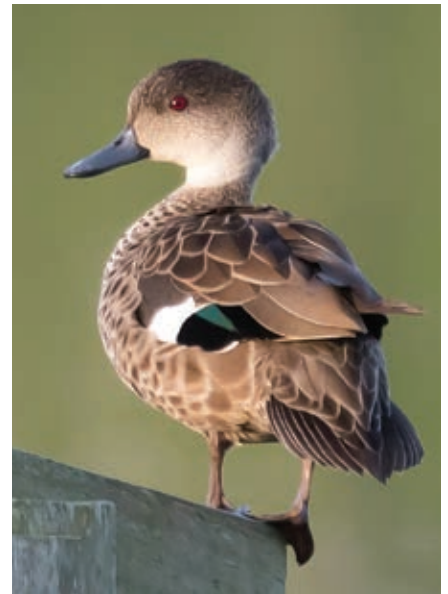
circumstantial”.

Ralph Adams from the Wildlife Service wrote on 2 March, 1963: “I wish to report that grey teal are now present in the Waikato (at Lake Whangape), in equal numbers at least to the influx that was recorded in 1957.”

He added that they were also breeding but no suggestion here about these birds coming from Australia. They could as easily have come from the Wairarapa, which even Miers admitted.

The Ornithological Society counts would then have been a trend count, not a total count. In hindsight we know from banding that grey teal are extremely mobile within New Zealand.

In 1974, Wildlife Service researcher Jim Mills speculated: “An important aspect of the (current banding) study is to determine whether the New Zealand population is self-supporting or dependent on recruitment from Australia...it may be that some grey teal are leaving New Zealand.”



Photos Imogen Warren

Despite 23,111 grey teal having been banded in Australia up to 2006, resulting in 4467 recoveries since, still no other grey teal has ever reached NZ and been recorded, (pers. comm. David Drynan, Australian Bird and Bat Banding Scheme, 25/09/06).

That’s inconsistent with a “massive influx” theory yet alone wilder claims of “periodic irruptions following droughts in Australia”.

About the same time, I asked Graeme Taylor, Scientific Officer, (Banding & Marking), DOC, if any of the 1759 grey teal banded in New Zealand had ever flown westward to Australia.

He advised: “There are no recorded movements of banded grey teal moving in either direction between NZ and Australia.”

If only one grey teal had been confirmed turning up in 64 years, any thoughts of grey teal “being dependent on recruitment from Australia” are fanciful at best. ■

Visitor from the north

A visit from some rare vagrants took former wildlife ranger Sandy Bull by surprise in Gisborne recently.

“I haven’t seen [northern shovellers] since 1996 and then I only saw one drake on the Awapuni Lagoon,” he said. He believed that sighting was the first recorded visit of a northern shoveler to the Gisborne/East Coast district.

“At Nick’s Head, I was able to establish there were three male northern shovellers and possibly one female,” Sandy said.

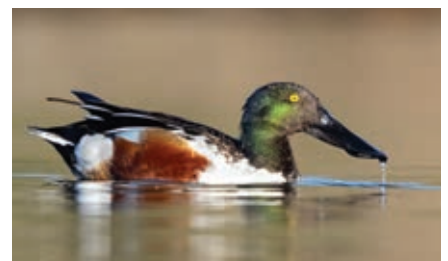
“The distinguishing feature of these

birds is a white breast and another white patch on the tail of the bird.”

According to the New Zealand Birds Online website, the northern shoveler is usually found only in the northern hemisphere, with about 500,000 in East Asia.

The website says: “There are about 30 northern shoveler records from New Zealand, with an influx of at least five males in breeding plumage in 2017. Some birds were still present in 2020.”

Sandy works part-time at Nick’s Head Station’s Orongo Wetland, which Ducks



A northern shoveler.

Photo Mick Thompson (CC BY-NC 2.0)

Unlimited NZ members visited during their 2020 conference in Gisborne.

“I’ve been lucky to be still involved with the wildlife monitoring for Nick’s Head Station in association with station manager Kim Dodgshun and Steve Sawyer of Ecoworks,” Sandy said. ■

Mangarakau – place of many trees

Mangarakau Swamp is a freshwater wetland at the southern end of the Whanganui Inlet, south of Farewell Spit on the West Coast.

Mangarakau, meaning plenty of sticks (many trees), is the largest remaining wetland in the Nelson/Marlborough region – almost as big as all the other freshwater wetlands in Nelson put together.

It covers about 350 hectares (864 acres), of which half is owned by the Department of Conservation. The Native Forest Restoration Trust owns most of the balance and the swamp is managed by Friends of Mangarakau Inc which was formed in 2003.

To the west of the wetland are tidal bays and inlets and towering limestone bluffs, and to the east, the forested ranges of Kahurangi National Park.

Take binoculars as it's a great place to see wetland birds like Australasian bitterns/matuku and fernbirds/mātā. Fifty-four bird species have been sighted in or around the swamp.

A long history of human habitation pre-dates Abel Tasman, whose log records the first European sighting of New Zealand's earliest settlers at Mangarakau: On December 17, 1642 "in the morning at the rising of the sun [we] were about 1 mile off the land, saw in various places smoke rise where fire was made by the inhabitants".

Gold, coal, timber, fishing and flax have all been thriving industries in the region in the past 100 years and there was once a large community of sawmillers in Mangarakau village which had many more facilities than today.

Gleichenia fern/manuka scrublands can be found on the drier soils, with Typha (raupo) and Baumea in the wetter areas.

Some of the small lakes are home to the endangered *Myriophyllum robustum* and the reedlands also have some rare plants, including the pink ladies' tresses orchid (*Spiranthes sinensis*).

The mature forest that once covered the wetland was dominated by kahikatea and pukatea, with a wide array of understorey species. Only a remnant now remains along the western edge, which will be extended by planting.

The old community hall, all that remains from the forestry/farming days and a modern lodge, on a central high



Photos TGN1 (CC BY-NC-ND 2.0)



point overlooking the wetland, provide accommodation for recreational visitors and tree planters.

The farm and forestry roads have formed the basis for an excellent network of tracks through the reserve, though the wet road is often impassable after heavy rain. ■

How to get there

Follow the main highway from Nelson through Motueka and over the Takaka Hill. Passing through Takaka, continue on past Collingwood to Pakawau.

Take the left road that leads west then south, following around the eastern shore of Whanganui Inlet.

Where the road leads around the southern end of the inlet, the wetland is to your left, though mostly hidden by manuka scrub and some exotic plantations.

As you turn south again, the wetland is visible to your left and the lodge and hall are just opposite the old school.

To obtain permission for day visits or to book the lodge, phone Robyn Jones (03) 524 8266 or email mangarakauswamp@gmail.com

Dam safety rules change next year

Dams on private property will need to meet new safety regulations from May next year.

New Zealand is one of the few countries in the OECD that does not have an operative dam safety framework, says the Ministry of Business, Innovation and Employment (MBIE).

“From 13 May 2024, the owners of dams that meet the height and volume requirements will need to confirm the potential risk their dam poses, put in place safety plans and undertake regular dam inspections. This will help to ensure that an essential part of New Zealand’s infrastructure remains safe and reliable,” MBIE says.

“The new regulatory framework will reduce the likelihood of dam failures which have the potential to cause significant harm a great distance downstream.”

Dams that fall within the scope of the regulations will be given a potential impact classification based on their potential to cause harm in the event of failure.

Medium and high potential impact dams will be required to have a dam safety assurance programme. These dams will be required have regular monitoring and surveillance practices

in place.

Low potential impact dams will have no ongoing requirements except for their initial classifications and then regular classification reviews every five years.

“Most small farm dams and ponds and weirs will be excluded from the regulatory framework as they are unlikely to meet the minimum size or storage volume thresholds,” MBIE says.

The new dam safety regulations also require dam owners to review their dams against flood performance criteria every 5 years as part of a comprehensive safety review.

- The regulations will apply to dams that are: 4 metres or higher with a volume of 20,000 square metres (8 Olympic-sized swimming pools) or greater, or
- 1 metre or higher with a volume of 40,000 square metres (16 Olympic-sized swimming pools) or greater.

When the regulations come into effect in May, dam owners will have a further one to two years to undertake the necessary work to classify their dam and put in place a dam safety assurance programme.

For more information, visit www.building.govt.nz/managing-buildings/dam-safety.

Call to recognise wetlands as carbon sinks

Farmers with wetlands on their land are urging the Government to do more to explore their potential to absorb carbon.

A recently released Cabinet paper said New Zealand’s reliance on exotic forests to remove carbon from the atmosphere is risky and could be costly, and it recommends exploring other options such as restoring wetlands.

South Taranaki farmers Donna Cram and her husband Philip built a wetland three years ago to improve water quality.

“The purpose was to do the right thing for the environment and for our farm,” Donna says.

Their wetland is monitored regularly by scientists who say it is a hardworking swamp.

“As well as removing nutrients, they’re also sequestering or storing carbon in the wetland, and they’re also reducing the greenhouse gas emissions from those contaminants as they pass down through the waterways,” says Chris Tanner, NIWA aquatic ecologist.

The Cabinet paper said New Zealand’s reliance on forests to remove carbon from the atmosphere has risks and costs.

It recommends the Government incentivise other carbon removal activities such as restoring wetlands.

Though wetlands absorb carbon and store it, they also emit greenhouse gases, so their benefit is hard to measure, Tanner says.

“We certainly have to do some more work to be able to quantify those benefits from the on-farm wetlands given the huge diversity of different situations that they’re operating in.”

He Waka Eke Noa, the farming partnership tasked with deciding how to cut emissions from the primary sector, not enough is known about wetlands’ ability to suck carbon from the atmosphere, so it left them out of consideration as a way farmers could offset their emissions.

“As farmers, in order to make the investment in a wetland, we need to know how much carbon it will sequester,” Donna says.

In future, the proposed biodiversity credit scheme may be a way for farmers like the Crams to cash in on their hard work.

Shot bittern euthanised

An Australasian bittern, matuku-hūrepo, had to be euthanised in July after it was shot in Waikato, prompting the Department of Conservation to call for information from the public and remind hunters to clearly identify their targets.

DOC principal compliance officer Hayden Loper says the bird was shot near Oparau on Kawhia Harbour in late May.

The bird was taken to a local bird carer before being transferred to Otorohanga Kiwi House, and on to Massey’s Wildbase facility, which specialises in native bird care.

X-rays of the bird confirmed it had been shot through the right wing, fracturing it in several places. A lead pellet was embedded in the bird’s

neck, causing lead poisoning.

Hayden says Wildbase staff tried to repair the wing through surgery, but the bird was euthanised to prevent further suffering. There have been investigations locally, without success, so DOC staff opted to publicise the incident.

“There are two really concerning aspects to this,” says Hayden. “Firstly, matuku-hūrepo are absolutely protected wildlife and it’s a breach of the Wildlife Act to harm or kill them.

“Secondly, whoever has shot this bird has used lead shot, which is banned in the vast majority of hunting and shooting circumstances.”

He said the shooting reinforced the need for all hunters and shooters to clearly identify their target.

Female swan looking for love

The sole remaining white swan has gone from Whanganui's Virginia Lake to a new home at DU member Mike Bourke's Mangahua Wetlands in Rangiwhia, northern Manawatū.

Mike has unpaired male swans at the wetlands and he will introduce the female to them in the hope it will find a mate and breed.

Whanganui District Council's general manager community property and places, Sarah O'Hagan, says, "With white swan numbers at the lake declining over time due to natural attrition, and because these birds also pair for life, we've chosen to rehome the last swan for its own welfare and wellbeing."

In time, Bourke hopes to return to Virginia Lake with a breeding pair of white swans to establish a new population.

The white swans at Virginia Lake originated from captive birds gifted by the Virginia Lake Trust in the late 1990s.



A white swan on Jim Campbell's pond at Kiriwhakapapa, Wairarapa.



The weevil *Hylobius transversovittatus*.
Photo CC BY-SA 3.0,
commons.wikimedia.org/w/index.php?curid=262931

Council seeks to recruit insect army

The Environmental Protection Authority (EPA) wants people's views on an application to release four different insects to control the spread of purple loosestrife, an invasive wetland weed.

Horizons Regional Council has applied to introduce the four insects in the Manawatū-Whanganui region as biocontrol agents to target different parts of the purple loosestrife plant, *Lythrum salicaria*.

The insects are two beetles that eat the plant's leaves (*Neogalerucella calmariensis* and *Neogalerucella pusilla*), a root-feeding weevil (*Hylobius transversovittatus*), and a weevil that eats purple loosestrife

flowers (*Nanophyes marmoratus*).

Purple loosestrife is a bushy plant that forms high, impenetrable stands which overwhelm other plants, threatening native biodiversity and significantly impacting wetland ecosystems.

It is native to Europe, parts of Asia, and Australia, and was introduced to New Zealand as an ornamental herb before naturalising in the wild in the 1950s.

The plant can be found in Canterbury, the West Coast, Wellington, and Manawatū-Whanganui regions, with the largest populations at Lake Horowhenua and the surrounding area.

Purple loosestrife is considered a noxious weed in the US and Canada, where it has affected large areas of wetland ecosystems.

The two leaf-eating beetles proposed to control this weed are from Europe and Asia, while the two weevils that feed on the roots and flowers are from Eastern Europe.

"The applicant's risk assessment includes studies that show they are highly unlikely to harm native plants or animals," says Dr Chris Hill, the EPA's general manager of hazardous substances and new organisms.

"None of these insects bite or sting, so there is no potential risk to people."

Horizons Regional Council says the same insects have been used together as biocontrol agents in the US, where they reduced purple loosestrife infestations by up to 90 per cent in some areas within the first 10 years.

Public consultation enables the wider public and people in relevant industries to provide additional information on the risks and benefits of introducing four new insects as biological controls for purple loosestrife.

Submitters can provide information, make comments, and raise issues to contribute to the EPA decision-making process. Submissions close at 5pm on October 17, 2023.



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 of \$5000 each in two funding rounds a year, with applications closing on March 31 and September 30.

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

INTERESTED? WANT TO KNOW MORE?

Please email scholarships@wetlandcare.org.nz with your questions.

Terms and conditions, plus an online application form, are on the Ducks Unlimited NZ website, www.ducks.org.nz.

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We deliver and advocate for effective wetland restoration, development, research and education; and support the preservation of threatened waterfowl and the ethical and sustainable use of wetlands.