

Flight



ISSUE 183

FEBRUARY/MARCH 2022

**Surprise New Year's honour
Three scholarships awarded
Raising ducklings**



FROM THE PRESIDENT

My last two Insights in *Flight* have been a bit of a “rant” against bureaucracy.

This time I wish to focus on some of the positive things that are happening.

We are receiving applications for wetland habitat creation which is exciting because, as we all know, that is the main reason for our existence.

Another reason is the university scholarships are at last being taken up, with three being accepted for the start of the teaching year – two in Wellington and one in Otago (see page 4).

The Wairio Wetland is well on its way to completion although there is still planting to be done at the northern end as well as a bit more digger work.

Something that we had not envisaged when we first started the Wairio project is that it would be incorporated into the Tonganui Project [see below].

This involves setting up a forested corridor from the Aorangi Forest Park in the east across the Wairarapa Valley including Wairarapa Moana to the Remutaka Ranges in the west in the hope that pockets of native birdlife would have easier access to one another

to spread the gene pool and minimise in-breeding.

Having recently been holidaying at Lake Rotoiti, I was pleasantly surprised to find a large number of native birds living and breeding on the lake.

These included dab chicks, scaup, white-faced herons and, of course, a large number of paradise ducks, black swans and mallards. All of these birds and more are found in large numbers on Wairio.

You can all be proud to belong to an organisation like Ducks Unlimited which is actively promoting these things in our community.

Finally, we plan to hold our AGM and conference in Wellington this year, fingers crossed, after the 2021 event was cancelled due to lockdown. Hope to see you there.



Ross Cottle



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Cover: A Cape Barren goose at Otorohanga Bird Park, south of Hamilton. The geese occasionally manage to cross the Tasman but are usually only found in wildlife sanctuaries and some private wetlands.

Photo Sid Mosdell CC BY 2.0

Back: A haven for waterfowl and visitors in the Manawatu – Pohangina Wetlands.

Photo Alison Murray

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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, 20 May 2022 in time for the June/July issue.

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

Tonganui Corridors Project

Tonganui Corridors is a four-year plan to allow native flora and fauna to flourish across the southern Wairarapa basin, creating ecological corridors across what is now farmland to link Aorangi and Remutaka Forest Parks.

The mission is to fence off and plant native trees to re-create corridors that reconnect native biodiversity across the big south Wairarapa valley.

More than 100,000 trees are planned to be planted between 2020 and 2024, all sourced from locally collected seed.

The project involves a partnership between Project Crimson Trust, Aorangi Restoration Trust, landowners, Ducks Unlimited NZ, local iwi, Pūkaha to Palliser Alliance, OMV NZ, South Wairarapa Biodiversity Group, Friends of Onoke Spit, GWRC, DOC, QEII National Trust, and Victoria University.



WAITING FOR DINNER: A pair of swallow chicks wait for their parents to return to their nest above the back door of Will and Jan Abel's wetland home at Lake Huritini, Horowhenua.
Photo Will Abel

Honour comes as big surprise

DUNZ past president John Cheyne had no idea he was in the running for a New Year's honour and doesn't know who nominated him.

John becomes a member of the New Zealand Order of Merit for his services to conservation.

He says he is humbled by it and acknowledges that many people have contributed to his successful career.

"It is a great journey when you can combine a sport, hobby and job mixed with passion into a career. DU have been an important part of that."

His wife Gail has also contributed to his work.

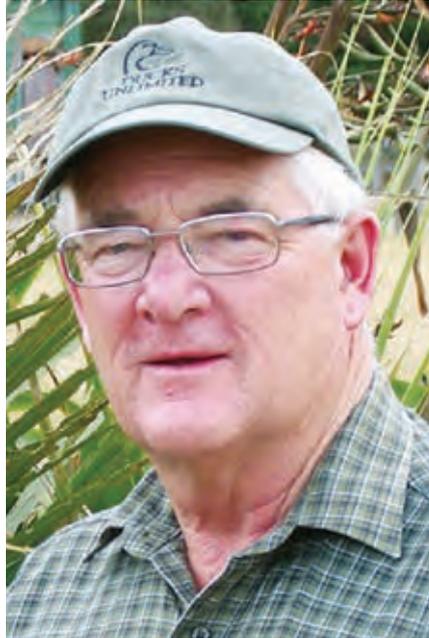
"Gail has played a very important role over the past 12 years by spending long periods of the time in the field over spring-summer with me carrying out wetland bird surveys in the Waikato, Hawke's Bay and Wairarapa," John says.

This has included his work at Wairio Wetland as part of a contract with Greater Wellington Regional Council and helping with the Lake Whatuma bittern monitoring programme.

"She also played an active role assisting me in running the Department of Conservation threatened species detector dog programme for a number of years," he says.

In 1967 John trained to become an officer with the Government's Wildlife Service, where he spent 20 years.

When the Department of Conservation was founded in a Government restructure in 1987, he became Hawke's Bay's first DOC regional manager.



John Cheyne has been made a member of the New Zealand Order of Merit.

In the early 2000s he set up a small conservation consultancy where he continued to advise DOC and helped set up the Hawke's Bay Biodiversity Foundation.

In 2007 John set up and helped run DOC's conservation dog programme, which uses highly trained dogs and their handlers to detect New Zealand's protected species, for surveying or capture to rehome.

It is possible that without the programme the kākāpō could have become extinct, and this was one of the highlights of his career.

Over the years John has provided input on how to protect most of New Zealand's significant wetlands and is still heavily involved in the surveying of the endangered bittern/matuku.

John, who lives in Waipukurau, has worked with local iwi, engaging with Māori tikanga around freshwater principles, particularly in his coordination of the Lake Whatuma Wetland Care Group since 2016.

He was a member of Te Taiao Hawke's Bay Environment Forum which helped bring parties together to manage the five main waterways of Heretaunga Plains.

John played a key part in setting up the visitor centre at the Mt Bruce National Wildlife Centre, now the Pūkaha National Wildlife Centre.

John was President of Ducks Unlimited from 2013 to 2018.

He says his plans for the future include involvement with Ducks Unlimited NZ and the NZ Game Bird Habitat Trust – he is a board member – and further bird surveys for GWRC at Wairarapa Moana including Wairio Wetland.

This will include bittern and spotless crane.

Closer to home in Waipukurau, he will continue to assist with the restoration of Lake Whatuma, which is just across the road from where he and Gail live.

After being congratulated by DU Directors, John reciprocates: "The DU Wairio Wetland project is the largest and most successful wetland enhancement project in NZ over the last 25 years. Well done, DUNZ."

Volunteer keeps pāteke recovery on track

Kevin Evans, the captive and reintroduction coordinator for the Department of Conservation's Pāteke Recovery Group, has also been made a member of the New Zealand Order of Merit.

He became involved with DU through Operation Pateke, a breed and release programme to save the endangered brown teal/pāteke, which DU established in 1974.

DU members were heavily involved in the programme, with several breeding pāteke to be released into the wild. In 2014, one member, Mike Camm, said: "Kevin Evans does an amazing job coordinating this effort. How he keeps it up I have no idea."

Kevin has played an integral role in the



Kevin Evans, the vital link in the pāteke recovery programme.

pāteke's recovery from endangered to recovering status, as the population has increased from 700 birds to more than 3000 over 20 years.

His coordinator role is a voluntary position he has held since 1998.

He manages the network of 16 volunteer captive breeding facilities across New Zealand, the largest and most successful "bred for release" programme in the Southern Hemisphere.

He is co-author of the Pāteke Husbandry Manual and has created online and social media resources to educate and increase awareness of pāteke.

He has served 13 years on the Northland Conservation Board, been a councillor for the Northland Fish and Game Council, and a warranted firearms safety instructor for the New Zealand Mountain Safety Council for 20 years.

Kevin is also chief fire officer of the Ruawai Volunteer Fire Brigade.

Kevin's MNZM is for services to wildlife conservation and the community.

DU scholarships have NZ covered

OLYA ALBOT



Three separate Wetland Care Research Scholarships have been awarded this year to students researching wetland conservation.

Their studies extend the length of the country, from Rangaunu Harbour, Northland, to Southland.

The recipients are Cameron Johnson and Olya Albot, both of Victoria University, and Caitlin Daley, of Otago University.

Up to four scholarships, worth \$5000 each and funded by Ducks Unlimited NZ, are available each year for research into wetland restoration and conservation.

OLYA ALBOT

Olya's scholarship will go towards her PhD work on the carbon sequestration potential of coastal wetlands and management approaches to coastal wetlands, particularly in response to climate change and sea-level rise.

"The lack of national data on the carbon sequestration potential of our coastal wetlands and their vulnerability to sea level rise motivated me to undertake a PhD on this topic," she says.

Olya's love of nature began during her childhood, camping and hiking with her family in Siberia close to Lake Baikal and a boreal forest.

After completing a master's degree at Victoria, she worked as an environmental geologist in Wellington. She believes coastal wetlands could become key to climate change mitigation as they potentially represent valuable offsets in carbon markets.

She says coastal saltmarshes, as well as storing carbon in their soils, also provide critical ecosystem services such as flood protection and water filtration.

"The objectives of my research are to investigate the carbon sequestration potential and quantify the impacts of sea level rise on three saltmarsh sites in Rangaunu Harbour, Northland, and a saltmarsh at the Pūkorokoro-Miranda Reserve, Firth of Thames.

"An improved understanding of the wetland response to future sea level rise will help to improve conservation strategies for native wetland bird species."

For the first year of her project, soil cores will be collected across pristine (little human influence on the ecosystem), disturbed (altered ecosystem), modified (drained saltmarsh) and restored (tidal flow has been reintroduced to an altered site) saltmarshes, and will be analysed for carbon sequestration rates.

CAITLIN DALEY



CAMERON JOHNSON



Olya's supervisors are Dr Joss Ratcliffe, Swedish University of Agricultural Sciences, and Dr Richard Levy, Principal Scientist at GNS and Associate Professor at Victoria University.

CAITLIN DALEY

Caitlin's master's project is focused on finding out what determines the "success" of an agricultural wetland restoration project, focusing on completed projects and case studies in the lower South Island (Canterbury to Southland) across a range of wetland types – bog, swamp, plain, etc – and locations – high country, coastal, etc.

"I want to determine, firstly, what is a wetland restoration 'success' and, secondly, what factors influence that success. For example, if it does have funding, what is important to spend it on... ..is funding paramount to a project's success?"

From the data she gathers, Caitlin aims to create an online decision management tool using GIS and interactive media "to allow a farmer to work through a series of questions that will show them how they could best restore or manage a wetland on their property".

"Wetlands on private agricultural land account for the largest proportion of wetlands left in New Zealand and their restoration and management is highly valuable," she says.

Caitlin grew up walking in the bush and volunteering at conservation planting days.

She has worked in native plant nurseries, and in 2020 worked at the Sinclair Wetlands and Habitat Restorations Aotearoa in Otago.

Caitlin's supervisor is botanist Dr Janice Lord, Associate Professor at Otago University.

- For her project, Caitlin wants to contact people who have carried out wetland restoration projects in the lower South Island, from Canterbury to Southland. If you know of anyone able to help Caitlin with her research, please contact her at caitlinolvdaley@gmail.com

CAMERON JOHNSON

Cameron's project for his master's degree is focused on estimating the carbon sequestered by 10-year-old plantings in Stage 3 of the Wairio Wetland.

This area was planted in 2011 by a master's student, Bridget Johnson, who created small blocks of saplings with different treatments such as different combinations of species, planting the trees 1.5m or 0.75m apart, the use of weed mats, and removing or keeping the topsoil.



The hide being moved from the paddock where it languished for months before the final consents were signed off.



DU Patron Jim Campbell, Bill Taylor, who built the hide, and DU President Ross Cottle after the big move.

Photo Jim Law

Hide on the move

After months of waiting, consents to place a hide on Stage 4 of Wairio Wetland have been signed off and, on January 25, it was moved to its permanent home.

An official opening of the hide, made possible through a generous donation from Wairarapa residents Patrick and Janet Velvin, will be held at a later date.

Cameron is estimating and comparing the quantities of carbon stored in the woody biomass of these different planting treatments.

"This will hopefully allow greater estimation of the short-term potential carbon sequestration of riparian and fringe wetland areas to encourage plantings of these areas in the future, or even to attract the possibility of carbon credits," Cameron says.

It is largely unknown how much carbon accumulates in NZ fringe wetland areas within a 10-year period after restoration, he says.

"Quantifying the amount of carbon able to be stored within fringe wetland areas within 10 years of restoration could demonstrate the potential for future

implementations of carbon neutral schemes within NZ wetland fringe areas, potentially incentivising replanting programmes for these threatened and declining areas."

Cameron grew up in a rural area of Tauranga, where his parents regularly took him on bushwalks. He continued "wandering with friends through green spaces and fragments of native bush" through his adolescence and later decided to study ecology.

Cameron's supervisor is Dr Stephen Hartley, who has supervised other postgraduate work centred around Stage 3, including the 2011 project.

- To apply for a Wetland Care scholarship, see p15 or visit ducks.org.nz.

When ducklings need a hand



John Dyer

In an organisation like Ducks Unlimited there is undoubtedly a great deal of collective knowledge about raising ducklings and other waterfowl.

I don't pretend to have all the answers, but here are a few novel things I do that might stimulate others to incorporate these ideas.

People new to this don't always understand eggs. If the eggs are cold in the nest and no feathery down has been added, they are probably not yet being incubated. So, they don't have to be put anywhere warm yet.

My trick is to put the egg to my eyelid, an old gamekeeper's trick. This is one of several particularly temperature sensitive places on the body and even the smallest swallow egg will register if it is being incubated or not.

If the eggs are warm and you need to relocate the clutch, for instance, if the mother was killed, put a hot water bottle in a chilly bin. Then several thick bathroom towels. Then put the eggs in an egg carton and pack that in to stop it moving around.

This will give several hours of sufficient heat. If transferring them to a broody bantam on dummy eggs, do so on dark so she doesn't notice any change in size or colour. And she can't count.

I have only ever used bantams for raising eggs. Old English Game, Cochins and Silkies have good brooding instincts; other breeds may be useless.

Bantams can raise stale eggs that an incubator can't, and they impart knowledge to their chicks. I'd like to



John Dyer feeds 29 mallard ducklings in his backyard – the flock later grew when a second brood hatched; above, a bantam watches over her grey teal ducklings.

experiment with Muscovy ducks which are recommended as surrogate broody mothers. Unlike bantams they can swim and stay with the ducklings when they're let out on a pond.

When ducklings hatch, I feed them hard-boiled egg pushed through a fine sieve. Smaller birds such as quail and partridge should only have hard-boiled egg yolk. Larger birds such as pheasants can have yolk and white so perhaps start smaller teal on just yolk too.

To these crumbs, I sprinkle finely chopped-up white or pink flowered yarrow leaves taken from the top of the plant where they are less tart.

This herb is described in German books as "indispensable" for raising gamebird chicks. Yarrow is an appetite stimulant and I feed it and the egg crumbs for three days only, twice a day.

I also put NRM Meat Bird Crumble

under the egg mix from the second day on. The chicks will accidentally ingest some crumble with the egg and progression from one to the other is smooth. If egg crumbs are fed much after this, the birds may insist on nothing else.

Chicks have around three days to learn to eat and the reserves they are born with carry them to this point.

If they are not eating, one trick is to use a red-coloured M&M lolly. They'll peck at it and sooner or later accidentally get a mouthful of mash and discover it. Or you can gently push their bill into the mash for a second.

If you have a bantam mother, she will pick some up and hold it at their head height while making a certain noise to show them what to do. Putting the orange egg yolk on a green plastic plant-pot tray is another way to stimulate feeding as it provides a colour contrast.

It is also easy to clean and cleanliness is important.

Water needs to be provided in a separate green tray but with a dozen small stones in it so the chicks can reach down and drink in between without getting soaked.

As they get older most of the stones can be done away with though one or two big ones prevent it being overturned. The water supply will need to grow with them, using a poultry font/drinker for instance. They must always have water.

When choosing mash, avoid anything with a coccidiostat. This is poisonous for ducks, dogs and horses.

That likely includes moothing Labradors. I use NRM Meat Bird Crumble which has a high enough protein content to do the job.

However, once birds are starting to feather out (losing their downy feathers), you'll need to switch to a lower protein pellet such as Grower.

Also start adding more and more wheat as they get older. Continuing with too much protein can cause issues with their legs.

Orphans are a challenge. Put them in with the bantam at dusk and make sure everyone is tucked up for the night, but don't disturb them too much. If all is quiet, great.

But if you put them in with a bantam later than a few days after hatching, she can reject them, especially if she hasn't been sitting on dummy eggs for long enough to think they are hers. She will probably attack them and brain them with her beak.

Even if she accepts them, the chicks may be terrified of her as they didn't bond to her in their critical first few days of their life. An adjustable electric brooder such as Brinsea might instead be needed if the temperatures are low.

I have also used a pig lamp which can be raised or lowered on its chain until the chicks aren't bunched up (too high, too cold), or too widely dispersed (too hot, too low).

If you don't have a heat source, be sure to insulate them in their coop off the ground or concrete with dry hay. Perhaps even bring them inside for the first week in cold weather.

I use movable coops to regularly change the birds to fresh grass. It has a removable storm wall which closes them in entirely at night in the first few days or in poor weather. There are, however, a couple of breather holes.

I also cover the coop in corrugated iron weighed down by bricks to shed any rain.



A blended family of mallards after the mother eventually accepted the orphan brood.

Chicks are Houdinis and will escape if there is any sort of gap under their run. Once outside they can chill and die without their mother's regular brooding.

If you throw soil in the run, the bantam will scratch in it, leaving you no better off. Instead, get a garden fork and lift the turf outside until the gap is gone.

If a chick has chilled, which can happen if it was forgotten at night and didn't get back inside to Mum (so keep an eye out for this), and it is near lifeless, one test is to put it in your hand with the head/neck overhanging. If the head is stiff as a board, sorry, you missed that one.

But if the head slowly sinks down, there's still hope. You need to warm it up using a hair dryer (not too hot), or if you have one, a dish warmer or an incubator. Miraculous recoveries do occur.

I have sometimes put a wild duck in the coop with her ducklings, especially if she has been losing them hand over fist to cats. Just be aware that she'll escape in a second, so be careful when you open the cage to refresh feed.



A red-legged partridge brood chowing down on egg yolk crumbs mixed with European yarrow. Note the stones in the drinking water.

On one occasion, I had an orphan brood that I felt was bonding to the semi-wild brood they could see daily through their wire run. But the wild mother duck kept threatening them.

So, I fed the semi-wild ones just outside the wire until several days later when the orphans would try to follow their cousins whenever they left.

I judged they were bonded now so I put a brick under one side of the run and off they went. The wild mother immediately threatened the new imposters that had joined in, only she couldn't now work out who was who (they were of similar size and colour).

After a few minutes, she reluctantly accepted her new charges and they all lived happy ever after.

Ducklings lack waterproofing raised in a coop and introduction to water needs to be careful or they will saturate and chill as a result.

You can start the process of waterproofing by adding a large baking dish filled with water as they get older.

I add duckweed (Lemna or Wolffia species), and/or our native red water fern (Azolla). The ducklings simply love dibbling in this.

Be sure these plants aren't from anywhere that was sprayed or stagnant. A bucketful left in the shade can be used to give them fresh greens every day for several days.

Any time from about six weeks on, they can be released. I try to do so before they can fly so they hopefully stay put. If released locally, they'll likely turn up next spring with their ducklings expecting the same TLC.

Good luck.

Grand Central Station not far from nowhere

It's all go at Blue Duck Station, but there's always time for a yarn.



Snow and Blue lead the way on a horse trek, with mum Sandy following on foot.

Visitors to DUNZ Director Dan Steele's place could be forgiven for thinking they were in Grand Central Station rather than Blue Duck Station, a remote hill-country sheep and beef farm 40 clicks from the Bridge to Nowhere.

At any given time, especially mealtime, the hub of the 2500-hectare station, the Blue Duck Cafe, is heaving with people: farm and other staff, shearing, fencing and other contractors, eco-tourists, horse trekkers, photographers, film crews and, as was the case one weekend last year, the DU Board of Directors and their partners.

Over the two days the Board was there, it seemed that, despite a hectic schedule, Dan somehow managed to catch up and have a good yarn with all of the different groups.

And he does tell a good yarn – with the DU directors getting a crash course in the flora and fauna, Māori history, scandals (murders and mayhem), and legends of the region, and his special conservation subject, the whio.

The blue ducks live in the rivers that run through Blue Duck Station, which sits at the confluence of the Whanganui and Retaruke. About 15 of the remaining 1500 whio pairs in New Zealand can be found on the station.

When Dan was 21, he encountered a family of whio on the Kaiwhakauka Stream. It had a profound impact on him and shaped the course of his life.

He told NZ Life & Leisure magazine: "I love exploring and poking about up every stream; climbing every ridge.

"On this particular day I saw two adults with their five ducklings. The next time I saw them there were only three ducklings. Then there were none. I phoned the DOC ranger.

"They were endangered. It hit me – protecting the blue duck was part of the future of our land."

Dan is always planning new ventures and has several projects on the go at any one time. At the moment, he and wife Sandy are having a big extension added to their 110-year-old home for them and their four kids – Blue, 11, Snow, 7, and twins Forest and River, 4.

It's a big change for the old homestead that once housed the Dobbs family, Ma and Pa and 18 kids.

Besides running the farm, Dan, when he's not out mustering, hunting, fencing, selling lambs, or tending to predator traps, is very much hands on with the eco-tourism business that he and Sandy run.

Sandy generally takes care of the horse trekking side and also takes the reins in running Snowy Waters Lodge, offering tourist accommodation in a restored former nurses' home for the old Waimarino Hospital in Raetihi.



Morning catch-up outside the Blue Duck Cafe, from left, Dan, The Chef's Table's business manager Beth Williamson, DU Director Adrienne Bushell, Sandy Sandford, and The Top of the Table chef Jack Cashmore.

Dan can often be found taking tourists up the Whanganui by jet boat or on a tour around the station in an ATV.

Pre-Covid, his services were also in demand as a guest speaker and in the past couple of years he has addressed diverse audiences ranging from a large group of rural women in Southland to Wellington's elite at the British High Commissioner's residence.

For the diplomats and other guests, Dan was the supporting act to a ten-course tasting menu prepared by Dan's restaurant partner, chef Jack Cashmore.

Jack and Dan set up The Chef's Table at "the top of the world" as a pop-up restaurant in 2019, on a high ridgeline at the back of Blue Duck Station.

Construction of a permanent restaurant began in January 2020 and though Covid-19 interrupted the build, it was completed and open for business by January 2021, offering a degustation menu of locally foraged and sustainably farmed natural ingredients.

Luxury cabins have been built on the site so up to six guests can choose to stay overnight above the clouds.

Dan, the conservationist, is always looking for ways to make the farm more sustainable and environmentally friendly. He believes in quality not quantity and plans to reduce stock numbers but breed animals that are more in tune with the environment.

"We're heading towards more environmentally friendly sheep that don't require dagging, dipping or drenching. We want to be kinder to the animals as well as to the land."

The station's trapping programme is always a high priority and Dan is always on the lookout for more effective ways of staying on top of the pests that prey on his beloved whio, brown kiwi and other native species that live on the station.

He sees environmental protection as a hefty economic driver.

"It adds value to every commodity we produce."

Something that has been bugging him lately is the big divide between rural and urban, and the misconceived view that farmers don't give a damn about the environment and are destroying the land.

Continued next page

From top: The accommodation at the 'top of the world'; getting there by ATV sometimes means the passengers have to get off for a particularly tricky corner; Dan talks traps with DU directors beside one of the wetlands on the station.





from previous page

Dan knows there are plenty of farmers out there, who, like him, are passionate about their land and the creatures they share it with, and he would be interested in setting up a group to promote and educate the public about the farmers who prioritise the wellbeing of their stock and take their guardianship of the

land seriously, focusing on adding value to the environment.

He is realistic in knowing he has more than enough on his plate but he would be keen to support the establishment of a group, named, say, Farmers for Nature, to counter some of the negativity around farming.

Left: Looking down the Retaruke to Dan parents' homestead. Above: work on the extension to Dan and Sandy's house; the original inhabitants, the Dobbs family.

Such a group could actively work to promote a different view of farming – one that shows farmers co-existing in harmony with the natural environment.

IN BRIEF

Expensive drain

Clearing a drain in a wetland has cost a Haast farmer \$20,000, plus legal costs.

In its first prosecution involving damage to a protected wetland, the West Coast Regional Council took John Cowan to court last year for excavating a 270-metre-long drain beside the Department of Conservation wetland.

The drain was dug several years ago on a paper road bordering Cowan's farm and the conservation land.

It went unnoticed until the farmer excavated it again in mid-2020, and a complaint followed.

"The wetland is listed in schedule 2 of the Regional Land and Water Plan, and the works were unlawful because they were within 25m of the wetland," the council said.

Cowan was charged in the Queenstown District Court with breaching the regional rules by carrying out unlawful

earthworks and diverting water from a natural wetland.

The prosecution pre-dated the new national environmental standards for freshwater.

Sleepovers at Riverbridge

The old schoolmaster's house at Riverbridge Conservation Park, southwest of Ashburton, now has two beds in it, says owner Russell Langdon.

And he's inviting DU members, as long as they bring their own bedding, to stay a night in his wetland. (See *Flight* June/July 2021).

"We have enclosed a room in the centre and put two beds and mattresses in it (quite comfortable) – no blankets yet."

Riverbridge Conservation Park is an 8.3ha wetland habitat with half-a-dozen ponds and enclosures for native wildlife.

If anyone wishes to visit, contact Russell at riverbridge@kinect.co.nz

Environmental hero

Sam Gibson, DUNZ's guest speaker at its 2020 conference, has been selected as a semi-finalist in the Environmental Hero category of the Kiwibank New Zealander of the Year.

Sam has been recognised for his contribution to ensuring the future of the environment, and protecting unique species, including whio.

Sam, who is now NZ Landcare Trust's Te Tairāwhiti/East Coast catchments coordinator and he is a founder of the Eastern Whio Link project.

He has worn many hats over the years, including working for DOC, Cape Kidnappers Sanctuary, Goodnature and now the Landcare Trust.

The winners of the seven award categories of New Zealander of the Year will be announced on 22 February.

Oasis in urban Christchurch

The largest freshwater wetland remnant on the Canterbury Plains is smack-dab in the middle of suburban Christchurch, a 15-minute drive from The Square.

It's unusual to find a haven for more than 50 species of birds in an urban area but Travis Wetland/Ōruapaeroa is just a suburban bus trip or drive from the central city.

There is a walking track around the perimeter with boardwalks, a viewing tower and bird hide.

The distance around the Travis Wetland loop walk is about 3.5km and takes just over an hour to complete.

Only a decade ago, these wetlands were grazed by cattle and looked like becoming yet another housing development but the Travis Wetland Trust lobbied the Christchurch City Council to step in and buy the land, which it did in 1996.

Travis Wetland is an important site for local and regional conservation of wetland plants. Among the plants are mānuka, baumea reed, a spider orchid, and other small herbaceous plants.

These nestle within the predominant vegetation of rushes, sedges, grasses, herbs, New Zealand flax, raupō, and ferns. Some of the plants were thought to be locally extinct.

More than 600 insect species have been identified and more than 50 large invertebrate species (spiders, snails, worms, etc) – 24 of which are aquatic invertebrates, as well as the short-finned eel, whitebait (inanga), the Canterbury mudfish, and an indigenous skink.



Photos Grahame Bell

Pūkeko, white-faced herons, spur-winged plovers, black swan and Canada geese can be found in the wetland and paradise shelducks, shovelers, scaup, and pied stilts breed there. Less common visitors include bitterns, white herons and grey duck.

Christchurch City Information Centre

sells a full-colour field guide to the wetland.

GETTING THERE

The No 60 (Parklands) bus goes to the wetland from the city's central depot. The main car park and access is at the end of Beach Rd and there is also a car park on Mairehau Rd.

Disaster on four small paws

Dr Carolyn King, DUNZ's guest speaker at its 2018 conference, has published a new book about the history of New Zealand's invasion by small mammalian predators, especially rats, cats, stoats and ferrets.

Invasive Predators in New Zealand: Disaster on Four Small Paws is the story of invasive species in New Zealand.

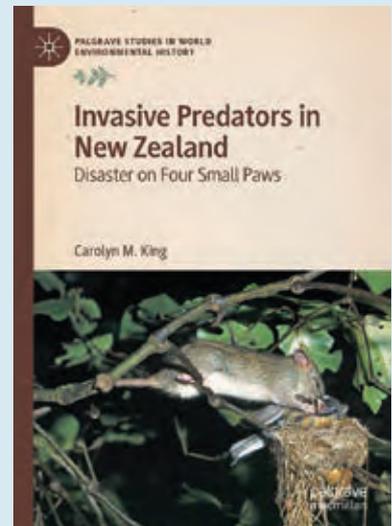
By the mid-13th century, the main islands of the country were the last large landmasses on Earth to remain uninhabited by humans, or any other

land mammals.

New Zealand's endemic fauna evolved in isolation until first Polynesians, and then Europeans, arrived with a host of companion animals such as rats and cats in tow.

As a comprehensive historical perspective on the fate of an iconic endemic fauna, this book offers much-needed insight into one of New Zealand's longest-running national crises.

This book will appeal to scholars, pest control authorities, community conservation groups and readers interested in environmental history, ecology and conservation policy.



Welfare performance rating

Predator traps commercially available in New Zealand vary in quality, effectiveness and, importantly, their ability to minimise prolonged suffering for the target animal.

Last year Manaaki Whenua – Landcare Research updated its list of traps showing which ones killed their target animals quickly and consistently enough to meet the welfare guidelines set out by the National Animal Welfare Advisory Committee (NAWAC).

There are no legal requirements for trap manufacturers or suppliers to submit traps for testing so some commercially available traps might not have been tested.

The welfare of trapped animals does not depend solely on the trap, but also on how the trap is baited, and where and how the trap is set.

Information on how to improve the welfare of trapped animals can be

found at: www.bionet.nz/library/npc-publications.

The testing of traps and identification of traps that perform poorly help ensure that the welfare of trapped animals in New Zealand improves.

Results from pen and field-based research continue to add to best-practice knowledge of how traps can best be used to trap different target species.

The tests relate only to the welfare performance of traps used in New Zealand for capturing and/or killing small to medium-sized mammals, not capture efficiency, safety, costs, or target specificity.



The BMI 160 (conibear type trap), set in a wooden cubby, passed for possums.



The Modified Victor Easy Set/Victor Professional rat trap passed for Norway rats, ship rats and stoats. The trap was set in a Predator Free NZ wooden tunnel when tested on Norway rats and a plastic tunnel for ship rats and stoats.



The SaF trap is marketed for ferrets and failed the test.



The Trapper T-Rex/Tomcat rat trap in a Predator Free NZ wooden tunnel passed for ship rats.



The SA2 Kat trap set at the top of a leaning board passed for both cats and possums.



A wooden tunnel used for testing the Belisle, Conibear and BMI traps on feral cats.



DOC 150,200, and 250 traps set in wooden tunnels. All passed for stoats, Norway rats and hedgehogs. The DOC 250 also passed for ferrets and ship rats.



The Possum Master has been tested on possums and ferrets but failed for both species. If used for possums, it should be set vertically above the ground so captured possums can hang freely.



A Steve Allan trap set on a tree trunk with leaning board and metal shelf for attaching the trap. The trap must be able to hang after a feral cat is captured.

for traps

Traps tested by target species

The results show which traps killed a target quickly and consistently enough to meet NAWAC guidelines.

Feral cat

Belise SuperX in wooden tunnel	Pass
BMI 160 in wooden tunnel	Fail
Conibear 220 in wooden tunnel	Fail
Possum Master	Fail
Set n Forget	Fail
Steve Allan at top of leaning board	Pass
Timms	Pass
Twizel cat trap in a Philproof Fenn tunnel	Pass
SA2 Kat at top of leaning board	Pass

Ferret

Belisle SuperX	Fail
Conibear 120	Fail
DOC 250	Pass
Holden Multikill	Fail
KBL tunnel	Fail
podiTRAP	Pass
Possum Master	Fail
SaF	Fail
Set n Forget	Fail
Timms	Fail
Tunnel trap	Fail
Warrior	Fail

Hedgehog

DOC 150, DOC 200, DOC 250	Pass
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Norway rat

DOC 150, DOC 200, DOC 250	Pass
Victor Easy Set rat trap with plastic shroud and treadle trigger	Pass
Nooski	Pass
Modified Easy Set/Victor Professional rat trap in Predator Free NZ wooden tunnel	Pass

Possum

Possum Master	Fail
Sentinel	Pass
Set n Forget	Pass
Steve Allan	Fail
Timms	Fail
Warrior	Pass
SA2 Kat at top of leaning board	Pass

Ship rat

DOC 250	Pass
Modified Victor Easy Set rat trap	Pass
T-Rex/Tomcat rat trap in Predator Free NZ wooden tunnel	Pass
Victor Easy Set/Victor Professional in Predator Free NZ tunnel	Pass

Stoat

DOC 150, DOC 200, DOC 250	Pass
Fenn Mk4	Fail
Fenn Mk6	Fail
Goodnature A24 rat + stoat trap	Pass
Modified Victor Easy Set rat trap	Pass
Victor snap-back professional	Fail



A Twizel trap with cover.



The Sentinel trap passed the test for possums.



The Warrior trap passed for possums but failed for ferrets.



The Set-n-Forget trap passed for possums, but failed to kill ferrets consistently. It also killed feral cats well except one cat was captured by the front leg.



The KBL Timms tunnel trap is marketed for ferrets but failed the test.



The Tunnel trap is marketed for ferrets but failed the test.



The Timms trap failed for possums because one possum escaped and the NAWAC trap-testing guidelines stipulates an escape is unacceptable. It passed for feral cats. It's important the bait is horizontal and not vertical on the bait bar.



The Nooski rat trap passed for Norway rats.

Not everyone's cup of tea

Nelson recently held two planting days with a difference.

On November 30 and December 1, the city council called for volunteers to help plant 960 teabags, not trees, in two estuaries in Nelson – The Haven and Waimea Inlet.

Scientists, contributing to a global study called TeaComposition H₂O, are looking at wetland health and carbon sequestration potential. The study involves analysis of litter decomposition in wetland ecosystems using teabags, a novel technique for measuring carbon decomposition at low cost.

Two types of teabags are being used – green and red (rooibos) teabags made by Lipton – and nearly 20,000 have been planted in more than 300 sites in 30 countries: in coastal wetlands (mangrove, tidal marshes, and seagrass), freshwater wetlands (bogs, fens, riverine, lacustrine) and aquatic ecosystems



Lipton teabags are being used in the research as they have a fairly standard rate of decay in wetlands.

Photo Simon Fox

(seaweeds, streams, ponds).

Wetlands are among the world's most effective ecosystems for carbon sequestration by trapping and storing greenhouse gasses naturally. The teabag study aims to collate data on how carbon retention varies among wetland types.

The teabags are buried 8cm deep and

left for three months before being dug back up again. They are weighed before being planted, and again after retrieval and drying. Decomposition can then be calculated. Little to no decomposition indicates carbon sequestration in the seabed.

The Nelson council says, "This information will help us locally when we undertake saltmarsh and/or seagrass enhancement projects, by identifying areas where there may be blue carbon sequestration occurring.

"This means we can enhance our estuarine ecosystems while doing our bit for climate change at the same time by sequestering carbon. If the seabed is left undisturbed, this carbon can remain sequestered for millennia."

Volunteers will also be needed to help dig up the teabags in March. Auckland is the only other site in New Zealand involved in the project.

Brown kiwi move out of the red

Kiwi conservation groups are feeling decidedly chirpy after hearing that numbers of the North Island brown kiwi have improved greatly in the past five years.

The latest assessment of the conservation status of birds in New Zealand released at the end of 2021 reveals the North Island brown kiwi has been reclassified from At Risk – Declining to Not Threatened.

Classifications are based on an estimated number of mature birds, the area occupied, and the predicted change in the population over three generations or 10 years, whichever comes first.

Save the Kiwi executive director Michelle Impey says the "announcement is momentous for kiwi conservation".

"It proves that the work that groups on the ground have done so tirelessly over the past five, 10, even 20-plus years to protect kiwi in their backyards has been fruitful – and it works."

Department of Conservation kiwi scientist and report lead Hugh Robertson says it's a major milestone.

Things are looking up for other species of kiwi too. The three rarest – Haast tokoeka, rowi, and kiwi pukupuku/little spotted kiwi – are all increasing.

"For the first time since assessments began in 2000, no species of kiwi is listed as being critically threatened, which is



amazing," he says.

But he says it's not all good news.

"While the North Island brown kiwi is classified as Not Threatened, there are still only 25,000 to 30,000 adults in the wild which is less than 3 per cent of the population that existed when humans first reached Aotearoa New Zealand.

"The brown kiwi still remains very much 'conservation dependent'. Programmes like Operation Nest Egg and Save the Kiwi's Kōhanga Strategy combined with intensive predator management and responsible dog ownership are essential for the ongoing survival of kiwi."

Of the 491 birds assessed in the threat classification report, 25 species have improved in status and 22 have declined since the last assessment in 2016.

Five species have moved out of Nationally Critical – the last category

before extinction – and none were added to it.

Researchers have uncovered more black-billed gulls than were previously known, taking them from Nationally Critical to At Risk – Declining.

Antipodes Island snipe and pipit have reaped the benefits of the Million Dollar Mouse eradication project on Antipodes Island.

Likewise, Campbell Island teal continue to increase, and have a status upgrade, nearly two decades after rats were removed from that island.

Haast tokoeka have benefited from intensive management including predator control as well as the discovery of another small subpopulation in 2019, bringing the total population to about 450 birds.

In contrast, the status of spotted shag has worsened, moving from Not Threatened to Nationally Vulnerable.

The number of animals in the Threatened – Nationally Critical category dropped from 25 in 2012 to 18 in 2021, the report showed.

Only an estimated 30 tara iti/fairy terns remained in the wild, the report said, and two birds – the South Island pāteke/brown teal and the South Island kōkako – were classified as functionally extinct.



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.