DUCKS UNLIMITED NEW ZEALAND INC. For Wetlands and Waterfowl

Flight

ISSUE 172 August 2017

Planting Day
Black Stilts
Wild Canada

from the PRESIDENT

DUNZ has over the last 30 years supported, and often initiated, a number of threatened waterfowl recovery programmes (brown teal/pateke, blue duck/whio) which have been very successful and are now coordinated by other groups. DU's role in lifting the profile of the endangered bittern (matuku) by supporting research by Dr Emma Williams has similarly been successful. Earlier this year an expert panel convened by the Department of Conservation reclassified the conservation status of bittern as "Nationally Critical" which places it in the same category as kakapo and takahe. This classification is the last step before "Extinction".

Bittern are continuing to decline in both distribution nationally and in numbers at some sites. The 7,000 hectare Whangamarino wetland in the Waikato was thought to support approximately 250 birds in the 1980s but over the last two springs less than 15 male birds have been recorded booming. Habitat loss and predation are thought to be the main factors contributing to the decline in numbers.

DU funding has enabled the purchase of essential radio tracking transmitters and also supported Emma to carry out important studies on this shy and secretive bird. DU has helped lead the way with this conservation programme, just like brown teal and blue duck.

DU has also provided significant assistance with the enhancement of wetlands both large (Wairio) and small (numerous farms). DU is able to provide advice and some monetary assistance for members with their wetland projects. Please don't be shy in approaching Wetland Care NZ which is DUs wetland arm if you are interested. Contact details for William Abel who coordinates this programme are included in this issue of Flight on P15.

It was great to meet many old friends and members at our AGM as it has always been a weekend I really look forward to. I thank you for your support.

John Cheyne

Member passed away

With sadness we note:

Gordon Campbell, of Matamaire, Masterton, passed away in January 2017.

Shore Plover

See page 6.

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Editing and Production:
Liz Brook, Brightnook Farm, RD9, Feilding 4779.
Email: liz.brook@farmside.co.nz Tel: 06 328 9836.
Printing: Lamb-Peters Print, 106A Main Street, Greytown.

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Board of Directors

Cover photo: Water at last for Whio. Who was the photographer? Let me know. Liz Brook.

Presidents Annual Report August 2017

It gives me great pleasure in presenting my annual report for 2016-17. While it may seem that we have had a quiet year DUNZ and its wetland conservation arm, Wetland Care NZ, has continued to support a number of very worthwhile projects.

Work at Wairio wetland on the edge of Wairarapa Moana continues with useful on-going research on a variety of wetland matters by Victoria University and their students. Further planting of wetland species has been completed and some additional work carried out on the bunds retaining the water within the wetland. The numbers and diversity of wetland bird species using the area is outstanding. Water levels go up and down over the year, depending on rainfall and inflow from the main lake, and this creates an excellent variety of habitat types. In mid-late summer when extensive shallow mud flats are exposed the wetland supports several hundred pied stilts, while in winter stilts are largely absent but replaced by several hundred waterfowl (black swan, shoveler duck, grey teal and mallard) along with numerous dabchick. During a recent visit by Ross Cottle, DU NZ Chairman and a sponsor they saw three bittern which is a real plus.

While the number of applications for wetland development assistance has dropped off our Wetland Care NZ arm has continued to provide advice and financial assistance where ever possible.

DU continued to support the nationally important bittern research and monitoring programme based at Lake Whatuma by providing funding for the purchase of the ever so important radio transmitters. Some of these have also been used on bittern captured and released elsewhere. This project has been led by Dr Emma Williams. Monitoring of the existing marked birds and possible capture of females and chicks at Lake Whatuma is important and DU NZ has committed to continue supporting this project to allow this important work to be completed.

A significant part of the above projects is supported by our sponsors and landowners and for that we are extremely grateful. We are also fortunate to work in partnership with Greater Wellington Council and the Department of Conservation. Sincerest thanks to you all.

Your Board are very interested in having someone compile the history of DU NZ but unfortunately it has been difficult to find a suitable person with the time available to complete this work. Board members will continue to follow up on this project.

While we are a relatively small organisation, we have been an effective one. Our achievements over the last 30 years are worth restating to remind each of us what projects we have initiated and supported.

- Grey teal – nest boxes
- Pateke (brown teal) – captive breeding, liberation, field research
- Whio (blue duck) – captive breeding, liberation, field research
- White swan – captive breeding
- Bittern (matuku) – field research and monitoring
- Wetland enhancement – Wairio wetland and over 50 other sites.
- NZ Game Bird Habitat Stamp wetland fund – a founding supporter and member
- Education and public awareness – publication of our Flight magazine and Quack Club

Even a small organisation like DU cannot operate without the important contribution of our Secretary, Flight Editor, Web Site Manager and Board of Directors. Thank you to you all.

John Cheyne

President

Transformation of Mangaiti Gully

Earlier this year Jim Law took Rex Bushell on a tour of Wairio Wetland. Rex was impressed. He is involved with the Mangaiti Gully Restoration Trust in Hamilton. Mr Bushell was very impressed with the Wairio project.

When he arrived home Mr Bushell took the time to look on Google-earth to help locate the wetland in what he described as a "rather extensive landscape".

Mr Bushell had spent three weeks touring the country, including the South Island and visited many restoration projects being done by both government institutions (like councils and DOC) and community driven ones.

"The one thing that stood out was that there can be no template to lay over any restoration project. Each one is individual both in people available (and their abilities) to run them and the natural area being restored," Mr Bushell said.

"I returned to our home project, Mangaiti Gully Restoration Trust, full of inspiration by what I have seen."

Mr Bushell was so inspired by all he had seen on his travels, he went on to write up a management plan for the whole 30 hectares of Mangaiti Gully.

"Ducks Unlimited are doing such great job," was his closing comment.

Rex Bushell, Co-ordinator

854-0973 or 021-237-3857

http://gullyrestoration.blogspot.co.nz

Early Days: Starting out June 2011.

More recent: Same place, new growth. Jan 2016.

Planting day at Wario: Not attempting to name everyone, but you might pick out some familiar faces – Jim Campbell, Ross Cottle, and a chocolate bar for whoever can name some of the others.

Wairio Wetland Planting Day – June 22, 2017

Another great day on the journey to restore the Wairio Wetland! About 40 good folk, including a large and enthusiastic contingent from the local Kahutara Primary School, turned up on a nice fine Wairarapa day to add 300 odd trees to the thousands planted over the last 12 years at the Wetland.

Don Bell, a great supporter of the project, had all the plants on site and some good keen lads from Palliser Ridge Station and Trevor Thompson from DUNZ had holes dug before the planting contingent from the school and others arrived. Thus, the actual planting proceeded at pace and all adjourned for refreshments before mid-day. Apart from one attempt at synchronised swimming (it is a wetland after all) all went to plan! It is hard to beat a day out in the elements helping to make things better in this land of ours!

Ross Cottle

Ross Cottle and Jim Campbell from DUNZ with Lucien Keightley and Josh Johnston from Palliser Ridge Station.

The team from Kahutara Primary School and a few helpers.

Well-deserved refreshments after a good few hours work planting.

Trout big factor in pressure on native fish

The Ministry for the Environment's report Our Fresh Water 2017 has highlighted the pressure our native fish are under, noting that of 39 native species, 28 are threatened or at risk of extinction. Water quality factors play a part but there is also scientific data showing that trout have replaced native galaxiid fish and altered how kōura (freshwater crayfish) and other large invertebrates are distributed.

Algal biomass has been found to be six times higher in some streams with trout compared with neighbouring streams without trout.

Good gains are being made with phosphorous in our waterways but nitrates remain a concern. The Feds believe the report highlights the need for a catchment by catchment approach, concentrating on contamination hotspots.

Read water spokesman Chris Allen's comments, presumably available at the Ministry for the Environment?

Tracker dog helps find and protect birds

Emma Williams and I are helping the South Wairarapa Schools - Martinborough, Pirinoa and Kahutara - to achieve some of their environmental studies assignments and general objectives.

Emma has visited Kahutara School once already and her talk was very successful, she had her dog Kimi with her and the children loved that.

Then Emma went up to Hawke's Bay and further north where she worked with older young people. Emma has developed a package for schools on wetlands and wetland birds with bitterns in particular, and where they are in the habitat.

Emma's lovely black labrador Kimi, helps with her work and accompanies her on visits to schools.

We will start another series of school visits in the South Wairarapa during August and plan to visit Wairio wetlands at some stage and track bitterns that have radio transmitters attached to them.

The overall plan is to introduce pupils to wetland conservation and so attract some new young members for Ducks Unlimited!

Gill Lundie

Fleminton School: Try out a radio tracker.

Bird dog Kimi: Introduction to a bird dog.

Looking for Miss 8: Using technology

Paukawa school: The kids meet Kimi.

Emma and Kimi: At Lake View Kindy.

Photos: Emma Williams and Gill Lundie.

Shore Plover breeding success at Pukaha Mount Bruce

The mission to save more than one endangered bird species has been enriched by last year's successful breeding programmes at Pukaha Mount Bruce.

The Shore Plover programme saw over 10 birds transported from Pukaha Mt Bruce National Wildlife Centre to Motutapu Island in the Hauraki Gulf and Waikawa Island off the Mahia peninsula (see photo).

The shore plover is in a perilous position with fewer than 200 left in the wild and a history of conservation efforts being hampered by rat infestations. Shore plover were first spotted by observers on Captain Cook's second voyage to New Zealand.

The shore plover is the most endangered bird reared and cared for at the Pukaha centre. It is very susceptible to mammalian predators; even one rat can cause enormous damage.

Past Department of Conservation attempts to establish shore plover on Mana and Portland Islands were undone by what was thought to be a single rat in both cases.

The breeding and hatching of over 10 chicks at Pukaha had been a real triumph for the staff and wider conservation efforts.

In another success for the breeding programme, over 10 pateke (brown teal) were bred and hatched at the centre in the last breeding season.

The endangered ducks have a wild population of between 2000 and 2500 making them New

Zealand's most rare mainland waterfowl.

As well as great results in the Shore Plover and Pateke recovery programmes, the whio (Blue duck) also produced more than one clutch of ducklings.

Pukaha new free flight aviary that opened in May 2016 enabled the breeding pair of whio that call it home to lay eggs which were then artificially incubated and hand-reared. Those ducks were sent to Turangi where they spent time in a purpose-built environment to prepare them for release to the wild.

The second clutch of eggs is allowed to stay with the parents and be raised naturally. The theory is that by letting the parents raise them, the ducklings will be better parents when it is their time to breed.

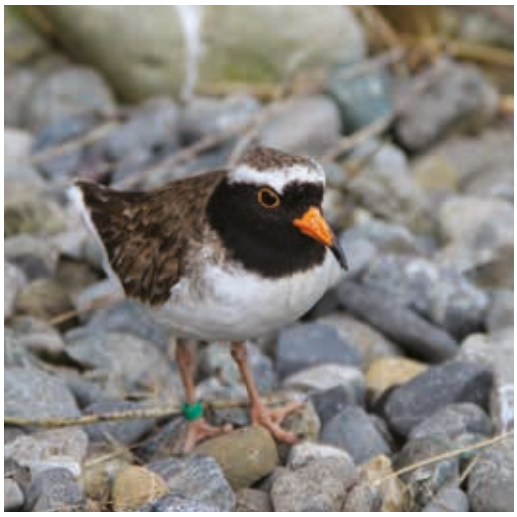
Laura Hutchinson - Marketing & Communications.

Pukaha Mount Bruce

027 244 1221

www.Pukaha.org.nz

Waiwkawa Island: Release Island for shore plover.



Stand out bird: Shore plover with orange bill.

Whio chicks: with mother whio (blueduck).

Parteke: Ducklings and two adults.

The critically endangered black stilt/kaki

The critically endangered black stilt/kaki (Himantopus novaezelandiae) is one of the most endangered birds globally and remains the rarest wading bird in the world, despite over 30 years of intensive management. The species is only found in New Zealand's South Island and is considered a Canterbury icon.

The black stilt was formerly widespread throughout the New Zealand mainland, and was still breeding at North Island locations in the late 19th century. During the 20th century the range contracted from being South Island wide, to being confined to Canterbury and Otago in the 1950s, South Canterbury-North Otago by the 1970s, and the Mackenzie Basin by the 1980s.

Today the black stilt's breeding distribution is limited to braided rivers and wetlands in the upper Waitaki River valley of the Mackenzie Basin. Breeding pairs are now confined to the area between the Lake Tekapo and Lake Pukaki basins in the north, and the Ahuriri River in the south.

The Department of Conservation (DOC) has managed the Kaki Recovery Programme since 1981, when the population declined to just 23 adult birds. The programme aims to increase the population by wild egg collection and captive rearing, captive breeding, predator control, and increasing public awareness. By 1991 the wild population still only consisted of 31 adult birds, while in 2010 the number had increased to 85 birds, and 130 birds in 2012. However, today there are still only 106 black stilts remaining in the wild and the species remains on the brink of extinction.

This is due to a number of challenges from a range of threats: introduced predators, habitat degradation, habitat loss, hybridisation with pied stilt, and human recreational disturbance. Intensive predator control is undertaken due to a whole suite of introduced mammalian predators, as well as native avian predators. These predators are prevalent across the area and are subject to major fluctuations. The development of irrigation has also seen major changes in land use in the Mackenzie Basin, particularly modification for conversion to dairy farming, resulting in extensive habitat loss.

Brood room: Older chicks.

DOC and The Isaac Conservation and Wildlife Trust (ICWT) are the only two organisations globally to captive breed this exceptionally rare species, in order to halt extinction. Annual releases into the wild of captive bred birds and predator control have undoubtedly prevented the black stilt from becoming extinct in the wild. Without this intensive conservation effort, the species would be extinct in less than 8 years.

ICWT therefore plays a pivotal role in black stilt conservation, with up to 61 birds per season housed in two custom-built aviary complexes. ICWT's captive pairs produce three to four clutches each season, with all eggs generally transferred to Twizel for artificial incubation and hatching. More recently ICWT has also been hand-rearing chicks from Twizel, whilst a snow-damaged aviary there minimized capacity. Each season up to 50 juveniles are held at ICWT for pre-release conditioning until release in the Mackenzie Basin. At present there are 121 juveniles in captivity at DOC and ICWT, which will be released in August.

Juveniles: On the beach.

Photos: Leonie Heyder and Sabrina Lluecht.

Releasing black stilts on the mainland remains difficult and continues to be a numbers game, even with intensive predator control and monitoring. Many of New Zealand's threatened species benefit from translocations to predator-free offshore islands; however there are no islands with suitable braided river habitats for black stilt transfers, making releases confined to very limited sites. On average 120 chicks (from wild collected and captive bred eggs) are released annually, slowly increasing the fragile population. However the post-release survival rate is still only 33%, with even fewer birds becoming part of the breeding population. While the species may be rebounding from the brink of extinction (compared to the all-time low population in 1981), the black stilt still has a long way to go, with long-term survival remaining dependent on captive breeding efforts and rigorous predator control.

For these reasons ICWT intends to expand its black stilt capacity by 2025, by building a separate incubation and brooder room facility. This will broaden ICWT's hand rearing capability and increase overall output for the Kaki Recovery Programme.

DOC has also just received $500,000 from Global Wildlife Conservation (GWC), which will fund the replacement of the flight aviary which was destroyed in a 2015 snowstorm. This means the programme will again be able to rear and release an additional 60 black stilt juveniles annually.

Sabina Lluecht - The Isaac Conservation and Wildlife Trust

2017 DUNZ AGM

Yet another well run AGM, with interesting places to visit and plenty of old friends meeting up and catching up.

The auction with Dan Steele as auctioneer ran well, and provided more funds for the coming year. The silent auction also went well, with many interesting items that looked quite fascinating

The AGM on Saturday morning was well attended and run smoothly by members of the DU and other workers.

The trip to Wairio was all in fine weather and the lunch in town (Martinborough) was very tasty.

Finally winding up the day with an excellent dinner and not too far to find our accommodation.

Ben Gillett and book: Ben was only six when he took this winning photo of the Royal Spoonbills, and it is a cracker picture. Now he has the Wildfowl book perhaps we will see more of his work in the future.

Conservation work: Bernard Oakley received an award for land conservation at Wairio, Jim Law presented the prize.

Wooden Whio award: DU president John Cheyne working out the wording on the Bill Barrett Whio trophy, presented to Neil and Julie Candy.

Still sharp witted: Long time DU member Nancy Payne in deep conversation with Ross Cottle.

Predator hunter: Ian Jensen relaxes at the end of the AGM.

Happy winners: Ross Cottle presented the two winners, Ben Gillett and Pula Gillett with their awards.

Hanging out after dinner.

Neil & Julie Candy. Happy and surprised with their trophy.

Mary, John and Ross at the AGM.

Ross Cottle speaking at the Wario Wetland.

Wario Wetland.

Most of the gang.

Trapping Vermin and Brexit

For those of us with access to habitat, trapping is one very positive way we can tip the odds in the favour of native birds. So why would Britain's Brexit have anything to do with such important work?

The EU along with Russia and Canada signed up to AIHTS, the Agreement on International Humane Trapping Standards. This binds all member states and Britain was, until Brexit, one of those. The AIHTS agreement is only based on commercial fur-bearing species, and none of the small vermin trapped by British gamekeepers has a commercial value. However stoats in some of those colder signatory countries are commercial when their pelts turn white in winter. These are then known as ermine. This fur has long been used to trim expensive royal robes and similar. While British stoats, (and their NZ descendants), will sometimes turn white, often it is usually only a partial change. So this species has little or no commercial value in Britain which has always imported the ermine it needs. However this collective AIHTS agreement means that Fenn and also body-grip traps, (known in NZ as Conibears), will shortly no longer be approved to catch stoats in the UK. They're still perfectly legal for weasels and rats, but how do you keep a stoat out of a trapping tunnel set for one of the other species?

The AIHTS agreement might have already put paid to the Fenn and body-grip traps in the UK but Britain successfully negotiated a two year extension, (expiring July 2018), to allow authorities there to find and test suitable alternatives. Brexit also raises the possibility that common sense may again apply. Interestingly the DoC and Goodnature traps made here in NZ are among alternatives, albeit the weight, bulk and expense of these means they are not a direct replacement. But why would the Fenn trap, which has been the gold standard since 1959, fail to meet the new requirements?

Fenn traps work by breaking the backbone of an animal whereas DoC traps inflict a blow to the head. The latter is more or less instant death but the Fenn is sometimes less instant depending on how the animal is caught. In early Fenn trap trials inventor Alan Fenn determined that tunnel height is critical. The animal must not be thrown clear of the trap but must hit the roof and be held there while the traps closes on it. Nor can the tunnel be too low or the trap will expend its energy hitting the tunnel itself, (keeping in mind that the traps tends to jump perhaps 20mm when sprung off). Traps must be recessed and level with the ground and also snugged into the soil, so the animal enters the stable trap straight-on. If used in a wooden trap, the floor needs to be built up level with the trap plate to achieve the same direct animal orientation over the plate. Universal black plastic trap covers in NZ have always been made to fit the larger Mr6 Fenn, not the Mk4. So they are not at all ideal in any critical test. Lastly Fenn traps should be set fine not hard. It is not clear if any of these requirements were factored in to NZ humane trap testing. If just 1 in 20 animals fails to die instantly and takes a minute or so to clinically expire in a Fenn trap, the new standard is breeched. But were all 20 out of 20 traps set wrong?

In this country the stoat was introduced from the UK and also has no commercial value. It is however associated with the decline of many of our iconic native bird species including kiwi especially and also waterfowl. Brown teal, for instance, walk directly to their nest, (rather than fly), which soon leaves a trail that no stoat walking around a pond could miss. This species was one of our most common waterfowl in NZ but soon after the arrival of mustelids, (stoats, weasels and ferrets), their populations collapsed. To this must also be added the destruction of habitat and other factors, but clearly the welfare of stoats in NZ is probably not our highest priority. Or is it?

DoC have recently withdrawn all their thousands of Fenn traps from the field and replaced these with DoC 200, 250 and similar traps to meet new humane standards. Yet DoC use aerial 1080 poison in NZ on a massive scale. This can take up to 18 hours to kill a stoat even in ideal laboratory conditions, so it seems very odd that we should be concerned that 1 in 20 stoats might take a minute to be clinically dead in a steel trap. Perhaps being terribly concerned with traps is a way of offsetting apparent indifference about the wide scale use of aerial poisoning?

What all this means to us kiwis is that the future supply of Fenn traps from the UK is far from assured. This author has spoken to the manufacturer of them in Redditch, who obviously is a worried man. So it would seem that the NZ Government's goal of a Predator Free NZ in 2050 is off to a very bad start if the standard tool of the British gamekeeper is about to become consigned to museums.

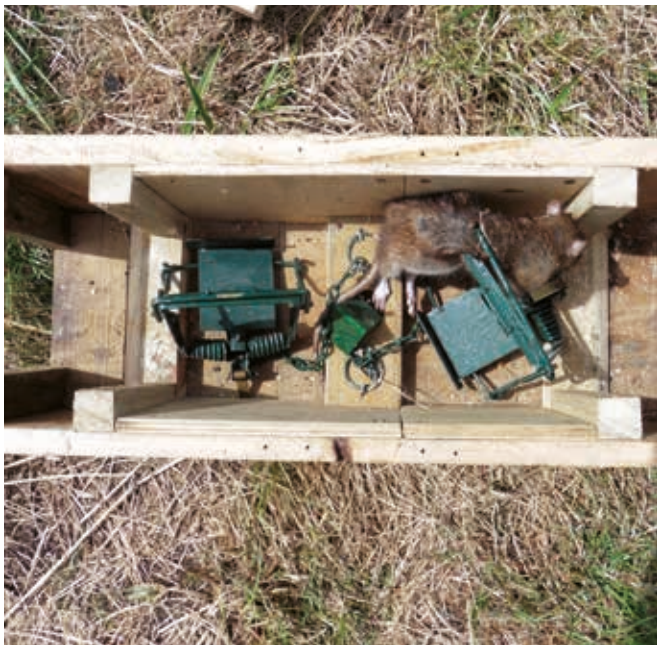
Whether the new DoC and Goodnature traps can be made to do the same job as the Fenn remains to be seen. But if using DoC traps, can I suggest that, if you want to keep playing the piano with a full compliment of fingers, be extremely careful and use the correct safety that should be supplied. At least one Department of Conservation worker was allegedly rushed to hospital having nearly bled-out but for the quick thinking of their work companion.

A tasty morsel.

It is reputed that the cook on Captain Cook's 'Endeavour' had a deal going with the ships cat. He'd let it in the ships hold to catch the rats there, which the chef would cook and eat the rear part of, the cat got the rest. On long voyages, this would have been the only fresh meat available and apparently he thought that with some pepper it tasted quite OK. So there's an option… if meat is scarce.

John Dyer

Dog stoat 400g.



Rat in Fenn shed. **More trapping photos next page.**

The need for continual predator control

I run a yearly total as at November 30 each year as part of the excellent initiative of the 'Swamp Comp'.

For the year ending November 2015 from 6 DoC 200 traps placed around the margins of my wetlands, the list was 11 Weasels, 1 Stoat, 2 Ferrets, 33 Hedgehogs and 7 Rats.

So for the 2016 year where 2 more traps were added in February, with the total of 4 Weasels, and Stoats, 1 Ferret, 12 Hedgehogs and 16 Rats it seemed that we were making a great inroad.

It may seem now that the inroad thought was rather premature, with just under 5 months of the current year run, the total sits at 20 Weasels, 3 Stoats, 7 Hedgehogs and 9 Rats.

The other point is that I have one trap [See photo, note there is an egg, I also bait with the juice from Sardines in spring-water] that is generally located in a central position, with the other traps generally outside of it.

That trap known as Cabbage Tree, has accounted for 15 of the Weasels, 2 Stoats, and 4 Rats, the last one as of April 25.

Possibly the high number may be attributed to the very wet Summer-Autumn where the wetland core which is generally only damp under the Harakeke, Coprosma and Toe Toe associations is this year very wet, so perhaps there is a concentration moving around the dryer margins, however that is only a possible theory as equally the food abundance could be another contributing factor.

Ian Jensen.

Baited trap: With egg. **Photo:** Ian Jensen.

Stoat trap over drain,

Bitch stoat/possum comb –note gut.

Photos: John Dyer.

A duck in spring - in Canada

Each spring, Canadians herald the sights and sounds of waterfowl as they flock to their nesting grounds. But after their long trips, life for our feathered friends isn't easy. Ducks – especially females – undergo arduous physical and biological processes before, during and after their journeys. And once here, most hens have one shot to raise a brood.

Trusting her camouflage: a blue-winged teal hen remains stark still on her nest during incubation. ©DUC/Darin Langhorst

It's early June on the Saskatchewan prairies. A slight breeze gives her wings a lift as she circles over a patch of native grassland next to a shallow pond. She decides to land in a small clearing, then walks into the grassy cover. It's the third spot she's scouted. She feels safe here.

In the coming days, this blue-winged teal hen will construct a nest with nearby vegetation and line it with down plucked from her breast. She'll feed on invertebrates to build her energy for an important role: producing a brood.

It's no easy gig. She'll need all the energy she has to give.

When male and female waterfowl prepare for their journey from their southern wintering grounds northwards to Canada, they do so in similar ways. The process differs between the sexes once they arrive. David Howerter, PhD, director of national conservation operations at Ducks Unlimited Canada (DUC) explains how, and why ducks do what they do – before and when they get here.

A shared experience: preparing for migration

Feeling restless – Ever wonder what pushes migratory waterfowl to bid adieu to their warm winter homes? It's a physiological process called zugunruhe (pronounced: zoo-gun-roo). This German term refers to the restlessness birds experience as migration nears. Zugunruhe is triggered by the endocrine system (a collection of glands that release hormones into their blood stream) in response to longer daylight hours. "As it gets closer to the time for these birds to migrate they become increasingly active," says Howerter. "They'll spend more time flying and their movements will begin to orient in the direction they intend to migrate."

No exceptions – Zugunruhe impacts migratory waterfowl wintering close to the equator, where daylight hours remain consistent, year-round. This may be a result of evolutionary hangover from when the species had a different distribution, or because of the changing angle of the sun.

Blue-winged teal launch into the sky, heading north to their summer breeding grounds. ©Merceaux/Stockphoto.com

Packing on the pounds – "Before ducks begin their journey north, they'll go through a phase biologists refer to as hyperphagia, where they'll spend a lot of their days consuming calories," explains Howerter. "This is done to prepare for their long trip." Like zugunruhe, hyperphagia's also triggered by hormonal changes, influenced by changing daylight hours.

Growing closer – Migratory waterfowl can only procreate from spring until late summer. This is because in the "off-season" their reproductive organs shrink, making it easier to fly over long distances. As birds close in on their breeding grounds, their endocrine system releases hormones that stimulate their reproductive organs to grow larger again in anticipation of breeding.

It's all about her: producing a clutch

Once waterfowl arrive at nesting sites, the male-female experience begins to diverge. "Once they have fertilised the eggs and the hen is incubating, the drakes will take off. Often they'll go further north, to the boreal forest," says Howerter.

Meanwhile, the hens prepare for one of the most difficult processes they'll go through in their lifetime: producing a clutch of eggs.

Size matters – How waterfowl behave once they arrive at the nesting site depends on whether they're capital or income breeders. "Capital" breeders are large-bodied ducks that can store enough energy (calories) to migrate thousands of kilometres and arrive ready to lay a clutch of eggs, and incubate them for about 30 days. One example of a capital breeder is the common eider, which averages between two and six pounds.

"Income" breeders like the far smaller

Continued next page

blue-winged teal (weighing in at 400 grams) are unable to sustain the same kind of fuel reserves. When they arrive at the nesting grounds, they're looking for protein- and calcium-rich foods, like invertebrates, that provide the nutrients they need to produce a clutch of eggs.

Medium-size waterfowl like mallards fall somewhere between capital and income breeders. "Birds of average size usually have enough nutrients to initiate the first clutch of eggs, but they don't have enough reserves to re-nest," says Howerter. However, some duck species (like mallards, which are persistent re-nesters) will produce a second or third clutch if their first one is unsuccessful.

Nesting is natural – Birds, like people, experience the urge to nest before they welcome offspring into the world. Expectant bird and human parents alike can trace this feeling to the hormone prolactin. Prolactin is released into the blood stream by the pituitary gland, found at the base of the brain.

Laying a clutch of eggs – A hen's pituitary gland will also release two hormones that stimulate egg production: follicle-stimulating hormone and luteinizing hormone. They trigger ovulation. Once a duck begins to ovulate, a drake can fertilize her egg – then things begin to take shape. "Once the ovum is fertilised the egg starts to develop. The yolk provides nutrients to the developing embryo and albumen (egg white) is deposited around it, followed by the shell. About seven days later, the hen will lay an egg," says Howerter.

A blue-winged teal hen will lay between six to 14 eggs, provided she has the energy required to develop them. "Producing a clutch is very energetically expensive," says Howerter. "In humans, it can be compared to giving birth to an eight-pound baby once a day for nine to 10 days."

Sitting still – Once a duck has laid her eggs, she will spend nearly one month incubating them. While some ducks, like common eiders, will stay on their nest nearly continuously, other birds take more frequent breaks to eat. "But even they will lose roughly 30 per cent of their body weight," says Howerter. In some cases, hens may abandon their clutch if conditions become unfavourable (bad weather, predators, disease).

Once drakes have fertilised the eggs and hens are incubating, they leave the scene. ©DUC/Tye Gregg

Crack! – The eggs have hatched. Finally, mom can focus on relaxing and refueling, right? "Not exactly," says Howerter. Instead, she'll help her ducklings find food high in protein and calcium, required for muscle and skeletal development. While ducklings are precocial (mobile after hatching), they still need help to find suitable habitat and food.

Bidding farewell – After 30 to 40 days, many hens will leave their broods to prepare for moulting (the process in which ducks lose their flight feathers). "The ducklings are on their own after that," says Howerter, noting at this point young waterfowl are able to source their own food. At a month old, ducklings are also faster and stronger, making them far more difficult for predators like foxes, raccoons, red-tailed hawks and mink to catch and eat.

Back amidst the grasses, the blue-winged teal hen has hatched a healthy brood of ducklings and led them to the nearby wetland. In future years, these ducklings will return to the prairie landscape to produce their own offspring and repeat this fascinating but strenuous process of duck-rearing.

Continuing that cycle depends on a key ingredient, says Howerter. "Good habitat across Canada's waterfowl breeding grounds is essential to overcoming the many challenges of successful reproduction for returning birds."

Healthy and plentiful habitat. It's the best welcome mat we can roll out for waterfowl every spring.

Julielee Stitt

Communications coordinator for Ducks Unlimited Canada.

Blue-winged teal hens can lay up to 14 eggs. ©DUC/Chris Benson

A blue-winged teal hen and her brood. After 30-40 days, the young can source their own food and she will be free. ©DUC/Brian Wolitski

Going wild for Canada's 150th

Ducks Unlimited Canada celebrates by conserving 150,000 acres of important natural habitats

What do you give a country for its 150th birthday? A country renowned for its wildlife and wild places. A country whose heart beats to the rhythm of four distinct seasons. Whose identity is reflected in every shining lake and stream. How about a gift that keeps it this way? A gift of conservation.

In celebration of Canada's 150th birthday, Ducks Unlimited Canada (DUC) is conserving 150,000 acres of the country's most important natural habitats. It's a gift for all Canadians. From shallow wetlands to dense forests, grasslands, salt water marshes, coastal estuaries and more, these acres are part of an environmental legacy created with the support of people across the country.

Visit www.ducks.ca/150000-acres/ - DUC's storymap and take a trip across the country to see the acres that have been impacted thus far. Learn about the people and partnerships that are ensuring these areas remain part of Canadian lives and history.

"Most Canadians would agree that much of our national pride is rooted in the landscapes around us," says Karla Guyn, DUC's chief executive officer. "Every citizen can describe a special place where they feel most alive, at peace or enjoy nature. Wildlife and the outdoors are simply part of who we are."

Established in 1938, DUC has been active for more than half of Canada's lifetime. Conservation efforts take place in every province and territory. Supporters come from all walks of life, but are united by a desire to make the country a healthier place. To date, DUC has secured 6.4 million acres across the country, and positively influenced 152.4 million acres more.

"We believe the work we do to protect and conserve the life-giving elements of natural landscapes is patriotism in its purest form," says Guyn. "It's linked to our culture, our identity and our traditions. We're proud to be safeguarding these important parts of Canada's natural heritage."

Ducks Unlimited Canada (DUC) is the leader in wetland conservation. A registered charity, DUC partners with government, industry, non-profit organisations and landowners to conserve wetlands that are critical to waterfowl, wildlife and the environment. www.ducks.ca

Want to know more, even take a trip to Canada?

Contact: Ashley Lewis, Communications Specialist, Ducks Unlimited Canada, 204-467-3252 or a_lewis@ducks.ca

David Blom elected 43rd President of DUC

Ducks Unlimited Canada (DUC) elected David Blom as its 43rd president at the organisation's national board of directors' meeting in Calgary, Alta. The Calgary businessman credits the conservation influences of family and friends for fostering his passion for water, wildlife and the environment. Blom has been volunteering with DUC for more than 30 years.

"I was raised with the attitude that we all have a responsibility to leave the land in a better state than how we found it," says Blom. "It's an honour to serve as Ducks Unlimited Canada's president, and to help lead efforts that are conserving critical natural areas across the country."

Established in 1938, DUC has been conserving wetlands for 79 years. Wetlands are among the world's most productive ecosystems. In addition to providing essential habitat for a host of wildlife, they also naturally filter pollutants from water, guard against flooding and drought and store carbon that would otherwise end up in the atmosphere. To date, DUC has secured more than 6.4 million acres through 10,366 habitat projects.

DUC is backed by a conservation community of more than 137,000 people who are taking action in support of wetlands and wildlife. This includes more than 5,900 volunteers who help promote the importance of wetland conservation in the lives of all Canadians. The role of president is DUC's top volunteer position.

"David brings a tremendous amount of knowledge and experience to the presidential role," says Karla Guyn, DUC's chief executive officer. "His business acumen is second-to-none, but most importantly his belief in the mission will inspire others to join us on our conservation journey."

Ducks Unlimited Canada (DUC) is the leader in wetland conservation. A registered charity,

David Blom

DUC partners with government, industry, non-profit organisations and landowners to conserve wetlands that are critical to waterfowl, wildlife and the environment.

For more information, contact:

Ashley Lewis, Communications Specialist

Ducks Unlimited Canada

204-467-3252 (office)

PO Box 1160

204-941-3097 (cell)

Stonewall, Manitoba, Canada.

a_lewis@ducks.ca

www.ducks.ca.

wetland care
NEWZEALAND

Our business is to harness community, business and government resources to restore and develop lost wetland areas within New Zealand.

Wetland Care members recognise that wetlands are vital to the wellbeing of the environment, acting as huge ecological sponges by soaking up pollutants and filtering water before it reaches streams, rivers, lakes, aquifers and the sea.

Our initiatives focus on matters as far-reaching as groundwater replenishment, flood control, nutrient and contaminant management and climate change – all critical factors for the conservation of freshwater and saltwater wetlands and marshes.

We want to preserve and conserve the flora and fauna of our most endangered ecosystem so that vibrant wetlands are our legacy to future generations.

Funding for projects comes from the Waterfowl and Wetlands Trust established by Ducks Unlimited New Zealand Inc in 1991 and for specific reasons from an assortment of trusts and community based charitable organisations that like our work. Membership donations and corporate memberships also help.

Central to Wetland Care New Zealand's mission is forming partnerships with people and organisations with similar aims.

Tutukaka Landcare Coalition
Tawharanui Open Sanctuary Society Inc.
Ducks Unlimited Operation Pateke
Port Charles release 2005 at Coromandel
Henley Trust, Masterton
Karori Wildlife Sanctuary, Wellington
Kitchener Park, Feilding
Manawatu Estuary Trust, Foxton
Mangaone Wetland, Raetihi
Masterton Intermediate School
Steyning Trust, Hawke's Bay
Travis Wetland Trust, Christchurch
Wairo Wetland, South Wairarapa
Wetland Trust New Zealand, Rangiriri
Waitakere Branch Forest and Bird
Yellow-eyed Penguin Trust, Dunedin
Cape Kidnappers pateke release, 2008 and 2009
Fiordland pateke release, 2009.

For further information, please contact:
William Abel – Director, Wetland Care New Zealand, phone 06-362 6675
PO Box 281 Levin.

Wanted, a pair of Cape Barren Geese and or, single birds to form a pair. Please contact Chris Bindon at kereruchris@gmail.com or on 021 914 799.

Change of Address – are you moving? Please send us your new details.

Name.....

Old address..... New address.....

....Postcode.....

Phone..... Email.....

For membership and general inquiries, Ducks Unlimited, PO Box 165, Featherston, Wairarapa, 5740,

or email: info@ducks.org.nz

DU Membership form

☐ YES, I wish to join Ducks Unlimited as a member

☐ Please send me further information, I may join later.

Title..... First Name..... Surname.....

Address.....

POSTCODE.....

Phone..... Fax.....

E-mail.....

DUCKS UNLIMITED NEW ZEALAND INC.

For Wetlands and Waterfowl.

All subscriptions include GST. Membership is available in eight categories:
Junior (under 16) ☐ $10 Contributor ☐ $60 Family ☐ $70 Business ☐ $110 Life (one payment) ☐ $3000
Note: Bronze, silver and gold sponsorships, which can be changed annually, include the membership fee of $60, For the balance, sponsors will receive a receipt as proof of a tax deductible donation.
Bronze Sponsor ☐ $90 Silver Sponsor ☐ $160 Gold Sponsor ☐ $310
My Donation of $ ..... is enclosed. Please find my cheque attached.
Please charge my VISA/MASTERCARD No: .....
Expires: ..... Signature: .....
Please renew my membership each year and charge my credit card ..... YES/NO

Ducks Unlimited, PO Box 165, Featherston, Wairarapa, 5740.
ALL DONATIONS TO DUCKS UNLIMITED NEW ZEALAND INC ARE TAX DEDUCTIBLE.

DU Flight NZ Game Bird Habitat Trust

The NZ Game Bird Habitat Stamp programme and the Game Bird Habitat Trust Board play an important role in the protection, enhancement and creation of game bird habitat in New Zealand. While the major focus has been on wetlands, upland game bird habitat is also included. In addition, any improvement of wetlands is also of benefit to a wide range of other wetland birds and fish.

The NZ programme was initiated in 1993 and was based on the programmes operating in Canada and the USA. DUNZ actively supported its establishment. The programme is ably administered by Fish and Game NZ who process the funding applications and provide the secretarial support for the Trust Board.

Board Members

Board members are appointed by the Minister of Conservation on the recommendation of Fish and Game (4 members), Ducks Unlimited (1 member) and a member nominated by the Director General of Conservation.

Current members are:

Andy Tannock – Chairperson (Manawatu), Ian Hogarth (Canterbury, formerly Northland), Mark Sutton (Southland), Steve Cragg (Gisborne), John Cheyne, DU representative (Hawke's Bay), Susan King, DOC nominee (Malborough).

Functions

The functions of the Trust Board are set out in Section 44D of the Wildlife Act 1953. The Board's primary focus is applying funds obtained from the Habitat Stamp programme as grants to applicants for the protection, restoration, improvement, creation, or procurement of game bird habitat.

The Board can also:

- Identify and evaluate areas for protection or restoration of habitat
- Negotiate with landowners and other agencies for the protection and restoration of habitat
- Promote or provide advice on protection and restoration of habitat

NZ Game Bird Trust Stamp

- Promote the sale of game bird habitat stamps and associated products
- Recommend the game bird or other wildlife species to be depicted on stamp.

Funding

Funding for the Trust comes from the $3 Game Bird Habitat Stamp, recently increased from $2, from every game bird hunting licence and a proportion of the external sale of stamps to collectors and prints of the annual bird painting. The money raised each year from game bird habitat stamps is transferred from Fish and Game Councils to the Game Bird Habitat Trust. Currently this is approximately $100,000.

Major Projects

The Trust Board is working with wider community interests in implementing a wetland management plan involving a small number of large projects in both the North and South Island. This has included the Para Wetland near Blenheim and Taikitakitoa Wetland near Dunedin. It is currently considering how to help with the JK Donald Block on the north-eastern edge of Lake Wairarapa and the Underwood Wetland near Dargaville. These projects are ranked highly by the Habitat Trust Board for development of a sponsorship package on the basis of game bird and other wildlife habitat enhancement potential.

DU received significant financial assistance from the Trust in developing the Wairio wetland.

Annual Grants

Applications for grants from the Trust close on 30 June each year and are open to anyone with support from the landowner and a recognised habitat referee. Information and forms are available from the Fish and Game NZ website.

This year (2017) the Trust has received 30 applications and these will be considered by the Board when they meet in the Wairarapa 24-25 August. They will also be visiting Wairio wetland during their visit.

Supplied by **John Cheyne.**

NEW ZEALAND GAME BIRD HABITAT TRUST