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WINGSPAN

BIRDS OF PREY FOR OUR FUTURE



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 Volume 18, 2014



Established for the research, captive management, rehabilitation, and public awareness of New Zealand birds of prey.

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CHAIRMAN'S REPORT

Kia ora te au

It has been yet another huge year for Wingspan – as ever I had been it has been incredibly busy in all areas of our work – breeding, research, conservation, education and advocacy.

Wingspan's partnership with the forestry industry continues to go from strength to strength, as has our research partnerships with Massey and Waikato Universities, PhD and Master's student research continues to help us build our understanding of the ecology and behaviour of karearea and ruru.

Our partnerships this year have resulted in significant steps forward in getting practical conservation outcomes for our native birds of prey. In particular, the release of our guidance on managing forestry activities near breeding birds was the result of more than three years collaboration with the forestry industry and Massey University. We have high hopes that this will be a game changer for ensuring the long term future of karearea in commercial forests.

Our school visits have grown in numbers, and we have had a great response to our new behind the scenes options. These have provided a great new way for us to connect with our members, visitors and students to ensure they leave the Centre more knowledgeable about New Zealand's birds of prey and our efforts to secure their long term future.

The urban release of falcons within Rotorua's Government Gardens earlier this year has been a new initiative, and a success beyond expectations. However, behind the success lay months of meticulous planning and preparation, and wide community support.

It could not have been done without the efforts of S.E. Sverret Brown and his staff at the Rotorua Museum – thank you also to the massive volunteer effort who looked out for the birds each and every day.

The birds have done well and I think it is important to be clear that this was not a publicity stunt – we are looking to build further from the experience and knowledge to help us with our mission of restoring the New Zealand falcon to our everyday lives and landscapes – whether it be urban, farmland or the back country of Otago.

It has also been a year of change for Wingspan. After seven years at the helm of the Board of Trustees, Noel Hyde surprised us all with a decision to step down as Chairman in February, although we are all very pleased that he is staying on as a Trustee to continue to guide us. In his time as Chairman Noel has overseen and driven a period of considerable sustainable growth and development for Wingspan. I am equally humbled

and incredibly excited by being asked to be the new Chairman as we move into a new phase of development.

Over the last three years the Trustees and staff have been working to develop a longer-term sustainable future for the organisation. At the heart of this is our commitment to remain true to the vision and inspiration that set Debbie (and others) on the path 22 years ago, but allow us to do it better. We are looking to further grow Wingspan to provide a sustainable base for the long-term recovery of birds of prey (particularly karearea and ruru) into New Zealanders' lives. For this we need to:

- develop and ensure long-term access to better facilities
- provide an even better experience for our visitors – we may be getting larger but we want the experience to be more personal and of even greater value
- draw the strands of conservation, sustainability culture and education together

We also have two new trustees – we welcome back Dr Richard Seaton who left Wingspan staff last year to join his partner in Australia, Richard's presence will enhance the Board's research and conservation knowledge. Also welcomed to the Board is Mervyn Sennell who brings a different and important perspective coupled with business rigour to our governance.

I would also like to welcome Dewi Crimp who has brought new ideas and experiences to the role and has slotted in perfectly into the wise team of Debbie, Andrew and Ineke who, along with our volunteers, do so much with incredible passion and commitment that allows us to be so much more than the sum of the parts.

I am sure it has been this quality and capability that is recognised in our recent award successes. These awards and grants are especially important for us as an organisation that does not receive government support.

And finally to you – our members – who keep us going in every way.

Thank you

Ngo mihi
Jonathan Rudge

a note from the ROTORUA MAYOR

Kia ora,

Wingspan's first Urban release of a threatened New Zealand species has captured the hearts and minds of our Rotorua community, and of many visitors to our tourist city.

The expectant parents we visited anxiously for those first karearea eggs to hatch. We followed their progress via time lapse cameras on the rooftops of Rotorua Museum. We saw the chicks transform into beautiful birds. And with bated breath we watched those first tentative flights after release – all right on our doorstep in the middle of a busy city. What spectacular theatre this has been.

Every day, people enjoying Government Gardens can be seen gazing skywards to catch a glimpse, or maybe snap a photograph, of our new much-loved karearea – New Zealand falcons – as they soar overhead. The falcons have even been visiting accommodation premises nearby, thrilling hotel and motel guests with their presence.

This is an outstanding conservation initiative; one which has proved successful beyond imagination. And it is an exceptional example of a progressive partnership between Wingspan, our council's Rotorua Museum and hundreds of passionate volunteers from our community. From a conservation, research and education perspective it ticks all the boxes. From the perspective of community engagement and broadening understanding about our threatened species, it has been exceptional.

I extend my congratulations to the wonderful team at Wingspan for your bold initiative, and to all of those who have partnered with you to achieve such success. I hope others will continue to support your organisation to help produce more tangible results for our native species.

New Zealand's biodiversity has taken a very positive step forward as a result of this very special programme. Well done.

Har Steve Chadwick JP
Rotorua Mayor



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The first release of a threatened species in the centre of a New Zealand city was a brave conservation initiative. Wingspan continues to have a pro-active approach to the conservation of raptors, and the urban falcon release project 'On the Wing' has now made conservation history.

Because the New Zealand falcon is recognised as a very adaptable species, the philosophy behind the project was to test key objectives: could falcons live in an urban environment? could people tolerate and live alongside falcons? to investigate the methodology of urban falcon re-introductions, increase exposure to a wider audience, and bring falcons into the lives of everyday New Zealanders.

This conservation project was multi-layered; it was about captive management, rehabilitation, education, and public awareness. One layer at a time.

In the general conservation arena, more often than not, threatened species are taken to off shore islands. These islands are considered the safety nets, free of pests and threats. Unfortunately, this approach often disadvantages the general public. Most people don't get to see our threatened species, enjoy them, or be aware of the issues they face in today's environment.

The irony is that biodiversity, in its rawest sense, is seldom recognised on our island sanctuaries. Managers of threatened species recovery programmes usually don't celebrate raptors, sometimes despise them (and shoot them) or remain reluctant to accept raptors until populations of prey species are on a sustainable, natural level.

So an holistic approach and understanding of New Zealand's biodiversity is the key. Being top of the food

chain, raptors are revered and respected around the world – from the pyramids of Horus, the sappers of Mongolia, and the sands of the Middle East, to the big skies of the USA. Sadly, not in New Zealand. We are quick to save and defend the whales, the dolphins, even the sharks on our shores.

They are the marine equivalents of our natural endemic predators but for falcons, our country's top avian predator, there are those who are strictly bird-ist.

Research shows that the biggest problems facing New Zealand's endemic falcon include deliberate shooting, electrocution, and pests like feral and stray cats – all of which are human-based effects on our endemic wildlife.



Every year Wingspan receives injured and rescued raptors and, where possible, we offer rehabilitation, then they are released back into the wild. Unfortunately some raptors cannot be released due to permanent injury so, if we can, the captive breeding programme gains these birds together and their young are released.

By far the most effective and successful method for releasing young raptors has been by the process called 'hacking'. It is the placement of juvenile birds into an artificial 'nestbox' where they are protected from the elements, provided supplementary food and where they can 'moor' on their surroundings.

Wingspan has been successfully releasing falcons by 'hacking' for close to 15 years. The methodology is centuries old and practiced around the world, today the method has been refined by the Peregrine Fund in the U.S. who have re-established raptor populations of Peregrine falcon and California condors. It has been used to save birds such as Mauritius kestrels, Aplomado falcons, Harry eagles, and Red kites.

Sightings of karearea are sometimes reported in urban landscapes, but nesting by adults in strictly urban environments has never been recorded. Throughout North America, Canada and Europe urban releases of falcons have been very successful, with the high-rise apartment buildings within these landscapes being no different to the cliffs and nest ledges of more natural settings.

For Wingspan's 2015/2016 release programme we were keen on adapting and trialling this international experience for karearea, so a suitable urban site was required. Without question, the Rotorua Museum To Whare Tohunga o Te Arawa was an obvious choice.

The ornate and grand Bath House building housing

Rotorua Museum marks the heart of Rotorua City and is centred in the middle of a crater on the shores of Lake Taupo. The Bath House in the Government Gardens was constructed in 1908 as a major tourist spa destination. The south wing opened as a museum in 1959; the north wing in 1977 as an art gallery. In a major redevelopment the building was renovated and finally completed to the original design in 2011 with the addition of a new wing named after the late Don Stanford to house the tohunga treasuries of Te Arawa. This heritage building in which Rotorua Museum tells the stories of the history and culture of the Rotorua area borders a wildlife refuge, and remains the most photographed building in New Zealand.



For the falcons it seemed the perfect urban site with open gardens and lawns, panoramic views of Rotorua, good numbers of prey species, and can be seen from vast distances in all directions.

Evaluating the risks to the falcons was very important. The possibility of electrocution was low due to the underground wiring in the area, and we believed that deliberate shooting would not be an issue once the young falcons began hunting and likely visiting people's back yards.

Young falcons can spend a lot of time on the ground, so feral and stray cats remained one of our biggest concerns despite the fact that the Government Gardens occupies a designated and legally protected wild life refuge. Rotorua City Council representatives told us the wild cat issue within the gardens was 'bigger than Texas', and the Department of Conservation staff concurred.

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CAPTURE THE RAPTOR

On the Wing photography competition

Social media voting via Facebook, and manual voting at the Rotorua Museum and Wingspan. Congratulations to all entrants, finalists and winners, in the three categories including portrait, action and human interaction.



- Supreme Winner and Portrait Public vote
1 'Watching You' by Jill Wong (Rotorua)
- Portrait
2 Judge's vote 'Feeding Time' by Gary Jenkins
- Action
3 Public vote 'Can't Catch Me' by Gary Jenkins
4 Judge's vote 'Tama launching Batman-like from a lamp post' by David Gately
- Interaction
5 Public vote 'They are Fast' by Chris Parkin
6 Judge's vote 'Falcon on my Fridge' by Aroha Wade.

Letters were sent to the local SPCA who confirmed (to their knowledge) at least three supported stray cat colonies, and confirmed their own tag, neuter and release cat releases. They advised against the release of a threatened New Zealand species within the gardens.

At Wingspan in the meantime, falcon pairs were laying eggs and rearing chicks. One of the North Island bush falcon pairs laid three eggs at the end of October which hatched successfully 33 days later. Just like their natural parents would, the Wingspan staff hovered over them providing special care, special diets, and regular health monitoring for their first three weeks.

Media releases were prepared. We completed letter drops to commercial and residential neighbours surrounding the gardens, ordered special transport equipment, and we facilitated research by a Waikato University student.

Safety for both volunteers and the birds was a big consideration. The site remains an active geothermal area; the grounds are interspersed with hot water and steam, mud pools and geysers. Karearea falcons would

have lived within this environment for millions of years, but people for just 700 years. In the 21st century, tracking falcons around hot water and steam required new rules; restricted access areas, high-viz jackets, and traffic signs.

The back box and feeding trays were under construction. The Rotorua Museum staff completed a display in the foyer complemented by exhibit items from Wingspan and Te Papa, Wellington. We introduced the story on Facebook, and started the journey.

It was an early start when in mid-December, while others were preparing to celebrate Christmas and summer holidays, the Volcanic Air Safari helicopter arrived at 5.30am to place the back box on top of the roof of the Bath House.

ACCTV camera was then fitted to the back box in readiness for the transfer of the chicks. Once in the back box they would remain enclosed for two weeks, allowing time to imprint or their new environment.

Transferring the chicks to their new home was a special day. They were checked again, banded for identification,

indeed, they were almost 'dressed' for the occasion. The oldest male was given a green band, the female orange; the other male was given a white band.

The falcons, with their Wingspan attendants, were welcomed to Rotorua Museum on 16 December by representatives of the museum's Pukenga, Mayor of Rotorua Steve Chadwick, staff, volunteers, tourists, plus national and local media. Kaumatua Anaru Rangihoua performed a blessing for the kareareas.

Daily feeding by museum staff was a huge effort. Every day two people climbed - stairs and ladders and lifted a small but heavy traditor, leading to the roof platform so they could feed the chicks through a special chute in the side of the back box. The rest of us watched via the webcam on our computers at the office and at home. We weren't the only ones; the webcam and New Zealand's first urban falcon release went viral.

A week before the planned release date each falcon chick was given another health check and individual transmitters were attached via a light harness over the shoulders. The harness has a weak-link should it be

Three Rotorua Legends



Hatupatu - A Shearwater Albatross falcon, a powerful legend of his release from the bird woman Karangiaki, by lifting his neck and then leading him to a booby named Dick.



Te Rangi Rere I Waho - The late Maureen Walker, a former Miss New Zealand beauty queen, raised a bird that could talk, teach board manners, and then grandfathers and Duke model.



Tama - A bird named after the Maori name for 'boy' named after the Captain of the Te Aroha conservation from Puysegur around 1850 and named after the white sea marlin of the Maori.



ON THE WING OUTREACH 2014

3 KAREAREA - NZ FALCONS FALCO NOVAESEELANDIAE

TAMA, HATUPATU, TE RANGI RERE I WAHO

43,325 VISITORS

TO THE ROTORUA MUSEUM AND WINGSPAN BIRD OF PREY CENTRE

67 VOLUNTEERS 6AM-8PM EVERYDAY!

6,692 HOURS

10,340 TRADE ME HITS

64 BIDS, 10 DAYS - \$3050 RAISED

16,178 WINGSPAN WEBSITE VISITS

TV3 - CABBELL LIVE VIEWERS 543,910

805,102 VISITORS, VIEWERS, HITS, LIKES & VOLUNTEERS

KNOWLEDGE OF THE CROWD

snagged, plus an aerial, extending nearly the length of their tails. These transmitters would allow us to know where they were, and to follow their development and progress.

The actual release was by far the most anxious for everyone. Slowly, centimetre by centimetre, the back box door was lowered. Two of the chicks scuttled behind to the back of the box while the older male remained at the front. We watched the webcam nervously but it was three days before they even stepped outside.

We instantly delighted in their awkward running gaits, wing-flapping practice, and short, clumsy jumps to the railings.

Then the army of volunteers scooped in, almost 70 of them, with two hourly rosters, each all carefully organised by Rotorua Museum's Volunteer Coordinator. Everyday from 8am until 8pm, rain, hail and shine. Some on bikes, others with crutches and enjoy with young children. Each shift were armed with an aerial and telemetry receiver, data sheets for recording behaviour, binoculars and cameras.

Online, a naming competition (plus TradeMe promotion) was held. By the end of January, instead of being referenced by their band colours, Green, White, and Orange, they were officially named as Tama, Hatupatu, and Te Rangi Rere I Waho. BIG names in Rotorua.

The falcons quickly gained confidence exploring their environment and new freedom. Initially they would make short flights to trees and towers, or roost on the grand phoenix palms at the front of the building. Te Rangi Rere I Waho on two occasions hit a window, and Tama was disorientated trying vertical flights up steep sides of the building before finding it was easier to fly around the building. Often they were 'bombed' by nesting Welcome swallows and, on a couple of occasions mobbed by the Black Backed gulls. After ten days of flight, their natural attitude kicked in, the tables turned and the falcons were in charge.

As a first time project we had anticipated some 'negative' responses from the public, but there were surprisingly few. Complaints published in the local newspapers suggested they might attack the black swans at the Lakefront Reserve, or fly to Mokoia Island. Another letter wrote that the release would be the demise of ALL wildlife in the residential backyards of Rotorua.

The big smile moments included their chasing of loaves and lolly wrappers on windy days, and two of the falcons flew into a third floor apartment (Hatupatu photographed in the kitchen). Museum staff took a bus tour of people only to find them outside photographing the birds. The croquet players complained they were missing their turns - distracted by watching the antics of the falcons.

We talked to visitors who had come from far and wide, some had driven from all over the North Island to see them, and one couple from New York changed their travel itinerary just to witness the project.

There were keen photographers that stalked the falcons on a daily basis, using up their memory cards and flattening their batteries. The falcons in just three months became the most photographed birds in New Zealand.

At the end of April the falcons continue to be monitored, photographed, and the project considered a complete success.

People remain engaged and there have been noticeable increases of visitors to both Wingspan and the Rotorua Museum. In April we applauded the Rotorua Museum winning a national New Zealand museum award for an 'Outstanding Innovative Project'.

Museum staff have also reported other beneficial side effects of the release in terms of pest control. A noticeable reduction of gull 'sooties' on the roof of the historic building, a reduction in the swallow's nesting and fouling the building, less sparrows, larks, pigeons, rabbits, and pukeko digging in the gardens.

This falcon release has helped change attitudes and engender more sympathy for the birds. There has been huge community engagement with accessible conservation in our backyard and an estimated reach of the project to more than 800,000 people.

Tama, Hatupatu and Te Rangi Rere I Waho, three karearea, the forest falcons of Aotearoa, three Rotorua legends who have made conservation history.

A programme about the birds, the purpose, the people, and the charm.

Haki i te Karearea a taru, haki i te kaiaki, haki i te iwi, haki i te atahu!

Dobbie Stewart MNZM



*The Dance of the Falcons
Te Rangi Rere I Waho and Hatupatu*

Laughing Owl - 100 Years Extinct

A maniacal shrieking call to action from our not so distant past...

This year marks a sad anniversary in the history of New Zealand. 2014 is 100 years since anyone saw the Laughing owl, or *Whēkau*, alive – a bird that was once common throughout these islands.

The story of the Laughing owl and its demise is one that is all too familiar. It is a story that illustrates just how fragile the natural world can be and how even 'common' species can become extinct without appropriate action. Most importantly it is a stark reminder of how, if we are to avoid similar stories being told about the birds that remain today, we must support the creation of a New Zealand that provides for them into the future.

Named after its laughing maniacal call, which was described as 'a dreadful doleful shrieking' or 'the howling of a madman', the Laughing owl must have presented a haunting experience to those who ventured into the bush at night. Indeed it is obvious why Maori legend and superstition abound around the *Whēkau*. Only found in New Zealand it was a strikingly beautiful bird with a brown and cream striped (or pied or grooved) chest and large white facial disks surrounding its eyes. Being about twice the size of its more common cousin the Morepork it was able to take advantage of the large prey that once abounded in New Zealand – prey such as *Kiwi*, *Kakapo* and even *Tuarua*.

Records of prey found in their middens (nests and roosts) show that although they were able to adapt to feeding on the *Kiara* rat that Maori brought with them, they were woefully ill-equipped for the onslaught of cats, ferrets and stoats that Europeans introduced on their arrival.

These introduced predators not only fed on the eggs, chicks and adults but dealt a double blow by decimating populations of their prey. Coupled with the large scale clearance of bush it took just 80 years from the time that the Laughing owl was described by western science to the point at which it was last seen alive. So it was that in the process of creating New Zealand's apparently clean, green agricultural utopia it took just one human lifetime for this unique bird to become extinct.

So as we mourn the loss of this haunting, beautiful bird 100 years later what can we learn? Most importantly, even common species can go extinct and they can do so very quickly.



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In terms of our birds of prey it is not just rare species like the New Zealand falcon that we need to take action to support, we also need to support conditions suitable to maintain relatively common species like the Swamp Harrier and Morepork.

News of the decline of common species continues throughout the world today (e.g. the recent 99% drop in vulture numbers in India and the continuing dramatic fall in the numbers of song birds in Europe) reminding us that the story of the Laughing owl continues to be repeated. Species becoming extinct due to poor environmental management is not a thing of the past and it continues around the world today, including in New Zealand.

The big question is what can we do to ensure the story of the Laughing owl is not repeated for the birds of prey that remain in New Zealand?

Wingspan's vision is to bring birds of prey back into our daily lives and to support, maintain and recover populations to where they once thrived. Advocating for the creation and maintenance of a healthy New Zealand environment is a key component, and this is where you come in.

Wingspan is an apolitical organisation and does not support any particular political party, yet the influence of politicians on how our environment is managed cannot be understated.

Local, regional and national government-level politics are where all the big decisions on how our environment is managed are made, yet voting turnout continues to be poor, especially in local and regional elections which arguably have the greatest influence on our day-to-day environment.

As Wingspan members we urge you to take part, to encourage others to vote and to support those politicians who promote sensible environmental management practices and policies that maintain the value of our natural world.

Finally, we ask you, to encourage those around you to visit Wingspan, to come and join about our unique birds of prey and support us in our efforts to ensure the 'maniacal shrieking' call to action of the Laughing owl continues to be heard loud and clear in the future.

Dr Richard Seaton



The Laughing owl once occurred throughout North, South and Stewart Island but declined rapidly once humans began clearing forest and introduced predators against which they were ill adapted to defend themselves



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Flight of the Condors

The Peregrine Fund and World Centre for Birds of Prey in Boise, Idaho has been both a mentor and huge influence on the Wingspan Birds of Prey Trust.

In June 2013 Wingspan representatives Delaine Stewart and Neal Hyde visited the centre as well as the Archives of World Falconry and were very kindly hosted by on-site falconer and legal adviser, Bob Collins.

At the archives we were in awe of the wonderful falconry museum and privileged to be given access to their vast collection of famous old falconry books, old and modern hoods, historical falconry artefacts including bags, traps, pitons, field notes, correspondence, falconry diaries and artwork.

The Peregrine Fund staff were incredibly hospitable with their time. Falconry director Tom Cade signed our New Zealand flag and world falconry autograph book,

and Cal Sandfort gave us a behind-the-scenes tour of their Aplomado propagation facilities and the Californian Condor breeding and release program.

With a captive population of approximately 18 pairs of condors, who produce about 20 eggs, the Peregrine Fund release about 12 per year.

As a follow up to seeing condors at the Peregrine Fund we were able to visit a wild population of condors reintroduced to the central California coast.

Our first view of a wild condor came while driving down the spectacular Big Sur coast. We came around a corner to see the unforgettable sight of a massive vulture soaring not too high above the road coming directly toward us. After pulling the car over for a better look it was here that we met two very special people also watching the condor:

The success of many species introduction programs worldwide often relies on the work of dedicated volunteers. Two such volunteers who follow and monitor the Californian condors are Richard Lewis and Susan Foreman from Cambria, California. They photograph and record the whereabouts of individual birds and provide wonderful advocacy for the program to interested visitors and observers.

On the day we visited we found a large group of birds roosting in the trees above the coastal cliffs. Richard and Susan impressed upon us how fortunate we were to see nearly half the central Californian condor population in one spot. Because they know the birds intimately, we were fascinated as they gave us detailed information on each individually marked bird we saw.

Condors are relics from the age of dinosaurs, they're North America's largest land bird, weighing between 20-

25lb with a wingspan up to 3 metres, and have a lifespan of 40-80 years.

They became extinct in the wild in 1987 and have only been saved by captive breeding programs. Threats to condors in the wild include power lines and deliberate shooting, with the main cause of death lead poisoning through ingesting shot animal carcasses. This has brought about new legislation with California becoming the first U.S. state to ban the use of lead ammunition.

In 2013 the central California condor population fell to just 61 birds. The total population of birds in the wild was 217, with 203 birds in captivity at three institutions.

Neal Hyde



A big thank you to the staff of the Archives of Falconry and The Peregrine Fund, especially to Tom Cade, Bob Collins, Peter Jenay, Cal Sandfort, Bill Hendrich and Pat Burnham.

Special acknowledgement to our Californian hosts, Hannah Nevins and Jonathan Lewis family, plus Sophie Weste for showing us to our dreams!

Thanks to Richard and Susan Foreman for sharing their passion and wonderful photos of these amazing birds.

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Population Genetics of the New Zealand Falcon

The New Zealand falcon is currently a single species with three recognized morphs or races (Bush, Eastern & Southern). The morphology, ecology and, to some extent, geographic ranges support this but no genetic work to confirm this has been conducted.

The question I wish to answer is should the three distinct forms of New Zealand falcon be treated as distinct conservation units and, if so, at what taxonomic unit should they be split? This will be done by analysing both genetic and morphological data. This research will be very influential to management of the New Zealand falcon.

It is presently unclear as to whether the three morphs should be managed as separate taxonomic units/sub-species or as a species as a whole. There is no current management plan in place for the New Zealand falcon; this research will provide a basic knowledge of the population structure and a basis for a management plan. It will also assist in decisions about future translocations and reintroductions of individual falcons. Phylogenetic analysis will be used to determine the relationship of the

New Zealand falcon to falcon species in other parts of the world.

DNA samples and morphometric measurements have been collected from a huge array of sources including Wingspan, Department of Conservation, Canterbury, Te Papa and the Auckland Museum, as well as from many individuals such as scientists and raptor enthusiasts.

So far there seems to be very little genetic variation within the New Zealand falcon population, however there is still a lot of work to do. Many of the tooth and museum skins have been very difficult to extract sufficient DNA from as some are quite old.

Genetic data from many other falcon species has also been retrieved from an international database, which once analysed will provide an interesting insight into who the New Zealand falcons' closest relative might be. Initial results suggest it might be closely related to South American falcons rather than our closest neighbour, Australia.

✈️ Lena Clay



Photo by Andrew Thomas

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Photo by Alex Z. Alex Brighton

What does the Ruru say?

I am a Massey MSc student studying the vocalisations of the New Zealand Muttonbird (*Ninox novaeseelandiae*, or Ruru).

You will likely be familiar with the call of our native owl. You may even be lucky enough to hear one in your garden at night. But do you know just how many calls this special bird has?

Ruru owl's repertoire is far larger than just its well-known "moo-pork" call, including at least seven distinct calls – as well as combinations of these.

On an island in the Hauraki Gulf, I studied a population that includes seven marked birds caught using mist nets and playback calls. We fitted them with radio transmitters to enable tracking them at night with telemetry.

Having spent 160 days in the field since April 2010, recording their vocalisations and behaviour, as well as recording the vocalisations of Muttonbirds at Wingspan,

I'm now reaching the pointy end of my thesis – analysis and write-up. It's been a fantastic experience catching, tracking and recording these fascinating, charismatic OWLS.

I am examining their calls and calling behaviour using sound recordings and playback experiments and then analysing the call structure, temporal variation and context with sophisticated sound analysis software.

Faced with over 4000 hours of automatic night-long recordings and over 400 manually recorded calls, I'm certainly grateful for that software.

The importance of this study is to further current knowledge on bird calls, in particular nocturnal species; to contribute to our knowledge of Ruru; and to provide baseline data on calling behaviour that could be used for their conservation.

✈️ Alex Brighton

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Photo by Michael McLeod



Three of a Kind

It was late in the afternoon when Wingspan received a concerning call from Chifuyu Hawcooby, a Massey University PhD student researching in Kiangaroa forest.

During a close examination of a female falcon she had been tracking, she discovered that the bird had an injury across her breast and was in low condition. Because she was incubating four eggs there was immediate concern about both the falcon's health and the future of her eggs.

Incubating and then rearing chicks is a huge energy investment for both the male and female parents, especially the female who does most of the incubation and eats little during this time. This was an investment that the injured female could not afford to give.

Hence the decision was made to remove the eggs and transport them to Wingspan. This in turn would give the female the best chance to recover from her injuries without needing to invest energy on eggs and then later chicks.

On the 20th of December all four eggs arrived at Wingspan and were given a "health" check before being placed in the incubator.

Only eight days after they arrived, the first of the eggs started to hatch and by New Year's Day the last of three chicks had successfully emerged from the egg. The fourth egg, which hadn't showed any signs at all from the beginning, was deemed infertile.

Ideally, chicks are fostered to experienced parents, something done several times in the past. All and Wink, who had also previously fostered chicks, seemed like the best option – their older chicks had just been released.

An attempt was made to introduce the three chicks to their new parents, however after an incredibly anxious 30 seconds All simply picked the chick up in her beak and placed it outside the nest box. Clearly she was not interested in resuming her motherly role. With no other

options for fostering the chicks it was up to Wingspan staff to resume rearing them.

They grew quickly, and were soon self-feeding and ready to be given a larger aviary – room to spread their wings, play and practice hunting. Grass, leaves, pinecones and each other were great targets to perfect skills. After these short lived bursts of energy much time would be spent taking baths, preening, eating and of course sleeping.

Because the falcons missed out on being taught to hunt by their parents, the Wingspan team is using traditional falconry techniques to ensure that they develop mentally and physically, as well as learning those all-important hunting skills before being released into the wild.

When spring arrives, with its abundance of prey, the older male and female will be released. The youngest male will remain at Wingspan as part of the breeding programme.

Although it can be hard for trainers to release a bird they have spent so much time with, it is also very rewarding. Giving the birds the chance to learn the skills they need offers them the best chance of survival – this is the ultimate goal in a conservation release programme.

✈️ David Crimp

➤➤➤ All three chicks are sponsored and named by Beverly Guy from Christchurch, in memory of her late son Quentin. The oldest male is called Quentin, the female named Binky, and the youngest male is now known as Lee.

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Ruru Rescue

One morning in early January, forestry workers stumbled across something they did not expect to see. Two morepork chicks, each weighing only 31 grams, unable to see and totally defenceless, were found on the ground in Kaingaroa forest.

Moreporks will often nest on or near the ground, generally preferring a burrow or hollow. This in turn makes them very vulnerable to predators, such as ferret cats, stoats and rats. In this case the nest was extremely exposed - up against a bark with limited cover. Forestry work was going on in the area and there was a very high risk the chicks would not survive, so they were rescued and brought into Wingspan. Hidden in the depths and folds of a large high-v-z jacket the two chicks arrived safely and were placed into the brooder, to be kept nice and warm. They were in excellent condition but at only four days old this meant lots of late nights and early mornings for the Wingspan staff.



around the front of the house offered the perfect moth 'hunting grounds', and they would sit on the balcony waiting for these hunting opportunities. It is common for wild moreporks to be seen near houses or sheds; not only do they go for the moths but also the rats and mice that buildings attract.

One night, not long after the release, one of the chicks disappeared. These chicks were not tracked due to the high cost of such equipment. This of course makes it hard to know where exactly the chicks went. However we do know that it was very capable of hunting and could fend for itself.

To our joy the chicks thrived and after 47 days the two ruru chicks were full fledged, flying and getting ready for release. A further two weeks in a hack box at the release site in Kaharoa, meant that the chicks were used to their surroundings. Then, one clear evening, only two months after the chicks first arrived at Wingspan, the hack box was opened and the chicks were free. This was the first time moreporks were ever back released in New Zealand.

Initially they were both a little wary, with one making a tentative flight only to land next to a disgruntled chicken in the chicken coop. However, after only a short while both ruru chicks could be seen flying and catching moths, silhouetted against the night sky, as if they had been doing it for months. Though both would still happily return to fern moths held up for them.

Once released the ruru chicks could be heard, and seen every night, waiting for food to be left out for them. It didn't take them long for them to realise that the lights

on occasion, yet it seems to be venturing further afield and stays away for longer periods. As the chick got older it was noted that a wild adult morepork started coming in closer to the house, and on several occasions there seemed to be territorial disputes. Just like chicks in the wild eventually it will need to find and establish its own territory.

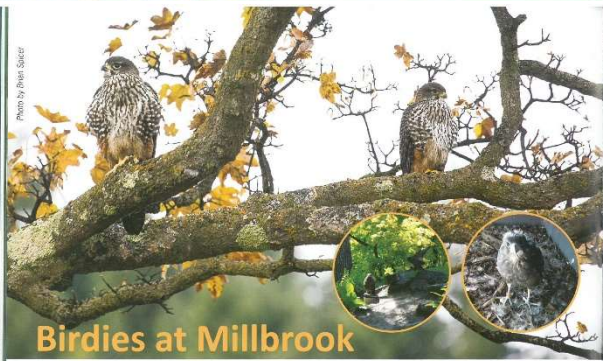
Not much is known about moreporks in the wild and being nocturnal, silent fliers they are difficult to track. This back release of two ruru chicks has been an incredibly intimate opportunity, not only to study their behaviour up close but also observe the interactions with adult moreporks as they progress into the wild.

Looking into the future urban releases of ruru could be a great way to bring birds of prey into the everyday lives of people - Wingspan's ultimate goal.

Ineke Smets



The chicks were named George and Eramiha in honour of forestry workers from Harper & Puketā logging.



Birdies at Millbrook

From birdies to eagles it's fair to say that Millbrook Resort in Queenstown now has a new lake on these golf greens after two female falcon chicks were released in January.

The trip south was a huge adventure in itself. With 150 km head winds, and a huge amount of turbulence and delays it is fair to say both the birds and I were glad to finally arrive. After eight hours of travel the two falcons were placed safely into their hack box, where they were fed for two weeks.

Prior to the falcons arriving I had organized for 400 day-old cockerels to be delivered and 'de-yoked' by the executive chefs at Millbrook - possibly not something they had trained for at culinary school.

Millbrook had installed a GoPro camera in the hack box, which provided a new photo every minute, and could also be viewed online. This gave a lot of enjoyment to not only the Millbrook members but, after being advertised in the Southland Times and other local papers, the wider population too.

After opening the box nothing much happened for the first hour and a half. Then, tentatively, both falcons appeared one after the other and began flapping their wings with great delight. It was only another hour before they began their first forays of flight which they mastered very quickly.

Since then they have been sighted on virtually a daily basis around the entire Millbrook resort. They have made appearances in the restaurants, health spas and fairways.

On one occasion they were seen perched high inside the 'Hole in One' restaurant conservatory, devouring birds they had obviously caught themselves.

On February 21, at the conclusion of the final round of the Peregrine Golf series, a raffle was drawn and both females were officially named. One female is 'Aldara' (winged girl, after ancient, mythical Greek heroines). The other female has been called Macabae, Maori for fearless, courageous, daring and intrepid.

More recently they have both been seen swooping on the numerous ducks that inhabit the golf course, particularly on the greens. This is a pleasure to the green keepers who spend an enormous amount of time and effort keeping the course in top condition.

Duck poo and white golf balls is not a good combination - especially with the New Zealand Golf Open being hosted by Millbrook at the end of this month. In fact, it may be worth keeping an eye out for more than golf birdies on the TV coverage of the event.

The two birds both seem really settled on the golf resort in the Wakatipu and they continue to be a huge hit with visitors, residents and the many members who play golf at Millbrook.

This release is considered an unqualified success and both Millbrook and Peregrine would like to thank the Wingspan Birds of Prey Trust for the opportunity to release them.

Greg Hay



New Zealand Falconers Association

The New Zealand Falconers Association (NZFA) was formed in 2011, after several years of working with the Department of Conservation to develop a permitting system allowing Australian falcons to be held for falconry by people demonstrating adequate experience.

Its purpose is to promote and safeguard responsible and sustainable falconry, and to support and advocate for the conservation of birds of prey in New Zealand.

The NZFA defines falconry consistently with its international definition as 'the hunting of wild quarry in its natural state with the aid of a trained raptor'. The NZFA recognises that impact in this definition is the active role of the falconer in the management of the hunt.

Falconry is a noble, ancient and exciting activity, and the NZFA, over the last year, the NZFA Committee, has worked to develop a Consultation Code of Ethics to guide the organisation and its members, and growing membership.

This year the NZFA approached the Eastern Region of the Fish and Game Council with a proposal to provide for hunting pukeko with falcons trained for falconry.

The NZFA Committee worked with Fish and Game to prepare a Notice to the Minister of Conservation to take the take of pukeko to include trained falconers for the 2016 Eastern Region Game Season. The Minister approved the change and now for the first time in New Zealand's history there is a legal falconry system for a recognised game species. This, along with the new permitting system for holding falcons for falconry means that falconry is now a legitimate activity in New Zealand.

Anyone hunting pukeko with a falcon in this region must hold an appropriate permit from DOC and obtain and be in possession of a valid game bird hunting licence and game bird habitat stamp. The NZFA thanks Eastern Region of Fish and Game for their support.

Over the next year the NZFA Committee will continue to advocate for and support the long term presence of falconry in New Zealand as another way in which people can express their passion for nature. More information on the NZFA can be found at www.falconersassociation.com

Laurence Barea
NZFA President

Falcon Sightings

Falcon sightings are reported to Wingspan throughout the year, with the most common reports occurring during the spring when the falcons are nesting, and the autumn when juveniles are wandering. Sightings of falcons are reported by recreational fliers and rompers, landowners, or from forest estate managers and contractors, such as Kairangi Timberlands and PF Olsen Ltd. Some falcons are spotted in the back yard! But occasionally we receive correspondence a little more out of the ordinary, or about other birds of prey seen in New Zealand.

Help us understand more about these wonderful birds and report any New Zealand falcons you see by sending an email to wingspan.nz@gmail.com

The required details include date observed, location (with GPS references), number of birds seen, and a description of the activity observed.

Wingspan would like to acknowledge the mapping provided by Canmap, Lawry, and ACM Web Designers for the website update.



Tim Heiser, Bards



Jan Houston



Keith Mitchell, Porirua



Peter Pryor, Havelock



Samuel Richmond, Gore

We were standing in front of our house when we heard a great commotion. Looking round we saw a wood pigeon and a brace of sparrows burst from the mist of a tree, seconds later out flew a falcon with an unfortunate sparrow, wow! What a sight!
- Richard Jewson, Upper Hutt

We walked the Waikaremuans last week and guess what?!! We saw a pair of falcons up a beech tree and then blow me over but they started mating. Hamish didn't know whether to be embarrassed or excited!
- Nicky Blackely, Rotorua

Today I was having lunch on a bench in the grounds of parliament in Wellington when a dead pigeon fell on the path in front of me. On looking up into the trees I saw a NZ falcon on a branch waiting to pick up the pigeon. Is it usual to see falcons in built up areas?
- Vicki Herbet, Upper Hutt

Chick Developments

The growth and development of birds of prey is remarkable. When the chick hatches it is altricial (unable to fend for itself), but within about 40 days they are full size, feathered and flying. Throughout this process there are key stages in a chick's growth, which are important for both their physical and mental development. Over the years Wingspan has had the pleasure to record these special events.

EGG

Once the egg is laid the embryo doesn't start growing until it reaches a temperature of 22°C and from this point the vital temperature is 36-38°C, extended time above or below increases the risk of egg failure. We can check fertility and embryo growth by candling the egg - a high powered light is held up to the shell which makes it possible to see changes and movement inside.



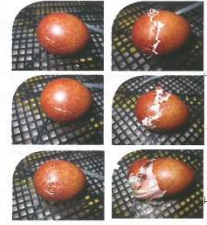
Candling a morepark egg



Chick inside egg at hatch

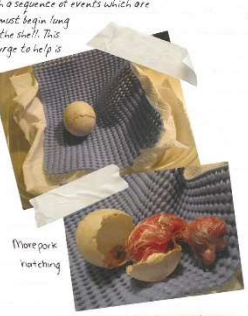
HATCH

About 3 days before hatching the egg goes through a sequence of events which are essential for the chick's development. The chick must begin lung breathing, retain its yolk sac and then break up the shell. This is always a nervous time for Wingspan staff. The urge to help is strong, but it is important not to do as it can cause irreparable damage!



Falcon chick hatching from egg

INCUBATION it takes about 33 days before the chick hatches.



Morepark hatching

Even though a chick's growth is remarkably rapid they can still spend up to 3 months with their parents. This time is vital. If they don't learn the basic skills before winter they are unlikely to survive. For example, possibly up to 75% of falcons die before they reach 1 year.

FEEDING

Falcons, hawks and owls don't regurgitate food for their chicks. Instead they tear little pieces of meat off their prey and gently feed it to the chicks. In the nest the loudest chick gets the most food, so it pays to be noisy.

When Wingspan hand raises chicks a feed schedule is followed. Initially it is little bits often. As the chick grows it can have more food less often, until it self feeds.



Morepark 'weigh-in'

DOWN

When the chick hatches it is covered in a fine coat of natal down, and after about day 10 they grow a second, thicker down. This secondary down allows the chick to stay warm and survive for short spells without brooding. By day 24 a chick's feathers have started to grow, which results in much time spent wing flapping, preening and playing - with big bouts of sleeping too.



Morepark

BESIGHT

Morepark chicks have their eyes closed for the first 10 days after hatch - unlike falcons and hawks who can see straight away. However, their sight is limited and only improves as they get older.

As a chick's eyesight improves they start to track movements in their environment and this results in lots of head turning and bobbing. Especially with moreparks who have the ability to turn their head 270 degrees.



Falcon chick growth



Qualifier, Auckland Islands

FIRST FLIGHT

At only 40 days old a chick is starting to fly, albeit short distances with unsteady landings. From this point on the chicks will spend much of their time playing and perfecting hunting skills. Initially they target leaves and blades of grass, and later move to insects before finally catching larger prey.



Morepark - Lisa O'Sullivan

Theory of Flight

Hawk-Torque



Without question Ryan Thomas has more than just a passing interest in flying. Ryan is a big supporter of Wingspan, has an appreciation of raptors that soar the skies, and has a professional career as a commercial pilot for Air New Zealand. We invited Ryan to share his knowledge on the principles of aerodynamics, with a particular focus on the flight of Kahu, the Australasian Harrier.

Different raptors have different feathers depending on where they live and how they fly.

So why does the Australasian Harrier have stiff, slotted primaries, and how does this make them great soaring birds? Indeed, could we compare their flight with a modern glider, or a Boeing 747?

Modern sports gliders have a basic aspect ratio of about 27:1. Fran, Wingspan's resident Harrier, has a wingspan of 65cm from her body to her longest [left] primary, with an average width of about 23cm. By calculation, this gives Fran a rough aspect ratio of about 6:1, considerably less than a modern glider and comparatively about the same aspect ratio of a small training single engine aircraft.

So why can Fran stay up in the air so much longer than a highly efficient glider? When I asked my flying mates if lift was scratching our heads. But after a little debate we were able to come to a conclusion on how Fran does it.

It comes down to two reasons. The first (and the one that confused us the most) is that unlike aircraft, Fran can change her wing size, shape and angle with very fine

muscles movements. The second reason is her pointed primary feathers.

Unlike aircraft, birds can manipulate the size, shape and angle of their wings. By doing this they are able to very efficiently change their wing to suit the subtle changes in wind speed, thermal uplifts and other environmental factors that help the Harrier to soar. This effectively changes the Harrier's coefficient of lift.

I hear you ask the question, but can't aircraft change their wing size by extending flaps and thus improve lift? Yes, but not as quickly as birds and with an increase in flap there is also a significant increase in drag, which although increases the size of the wing, reduces the shape and angle of attack, as well as the dynamic pressure associated with the lift equation.

So how do the stiff, slotted primaries with flexible tips help soaring? In short, the more rigid a feather the more aerodynamic it becomes. With a wing that is made up of rigid feathers the air is able to flow smoothly over the surface of the wing, and with streamlining greater lift is achieved.

Another factor, interference drag which is caused by the mixing of converging airflows at joints (such as between body and tail feathers), is also reduced by these slotted

primaries. In aircraft this is reduced by 'fairings' around wings, and the joints to engines.

Birds achieve this by a 'muscle' before flight. By shaking its feathers it helps to realign the feathers before flight, therefore increasing streamlining, reducing interference drag, and achieving greater lift.

The Australasian Harrier's large finger-like primary feathers help them soar through the air by reducing a coefficient of drag, known as induced drag. When the wind passes over a wing it creates vortices at the tips of the wing. This is why large aircraft like the Boeing 747 have large fins on the wings; they lower the induced drag that is created as a function of lift.

Fran, on the other hand, doesn't have fins on her wings, hers are many other birds have dynamic wings that bend and twist and come to a point. When you look at a bird on the wing you will see that it flexes at the tips to be almost vertical. This flex, coupled with the stiff primary feathers, create very little drag. If you look closely at the new Boeing 787 Dreamliner, the designers have tried to replicate this.

The principles of flight are complicated for aircraft and pilots, and yet the harrier's distinctive 'flap, flex, glide' enables it to soar through the air with such ease and grace.

 Ryan Thomas

The Maths

The Australasian Harrier has a particularly large aspect ratio. With a wingspan of 126.145m - compared to that of the New Zealand Falcon which has a wingspan of just 45cm. The aspect ratio (AR) can be effectively calculated by the birds wingspan (b) divided by the wing area (S).

$$AR = b^2/S$$

The coefficient of lift formula consists of wing shape, angle of attack (the angle between a line from the rear of the wing to the forward most point in the wing), the relative airflow (CL), the current dynamic atmospheric pressure (1/2 rho V^2), and the wing area or size (S).

For aircraft the wing area for a size is normally considered constant, hence our confusion with the question of why Harriers' aspect ratio is so much lower than gliders.

$$Lift = CL \cdot 1/2 \rho V^2 S$$



Wingspan remains one of the few New Zealand charities with no direct government or local body funding, but the term 'not-for-profit' is misleading. The truth is, Wingspan, for all intents and purposes is a business.

When Wingspan was formerly registered as a legal entity there were no existing comparative business models, so at the heart of Wingspan has always been about identifying goals and finding solutions.

One of the biggest impacts to Wingspan as a business came in 2011 when MBA students from Massey University undertook a review of the Trusts business activities. This study was a critical business evaluation that firstly helped Wingspan to refine operations, and secondly provided advice on how best to secure the resources necessary to purchase a new Wingspan property and move operations.

In recent years Wingspan has further refined operations, determined best practice methodology, conservation

outputs, business performance and customer satisfaction. The latter is important considering that 60% of Wingspan's source of revenue is dependent on visitors to the Centre and their conservation buy-in donating to the programme. Through the MBA study Wingspan was delighted by a customer satisfaction score setting the Trust comparatively right next to 'Aspley'.

So Wingspan is a programme not just about the birds. The biggest asset of Wingspan is the people directly involved; for the Board of Trustees, staff, volunteers and Wingspan members to feel they are making a difference and their input is valued and important.

As a commercial venture, the future of Wingspan is looking positive.

Excerpt Biz Achievers, New Zealand Business Magazine October 2013.

Winner 2013 Community Business Award, in the Westpac Rotorua Business Excellence Awards.



Raptor Honours

Wingspan celebrates the investiture of founding Director Debbie Stewart as a Member of the New Zealand Order of Merit MNZM.

Debbie was named in the 2013 Queen's Birthday Honours List in recognition of her lifelong services to bird and prey conservation.

Since the late 1970s Debbie has worked for the captive management and breeding of New Zealand wildlife from kiwis to watawa, as well as both native and introduced freshwater fish. However, Debbie's passion has always been strongest for kites of prey and her aviculture skills saw her being the first New Zealander to hand raise day-old New Zealand falcon chicks to adulthood.



From humble beginnings the Wingspan National Bird of Prey Centre is the leading voice for conservation of birds of prey in New Zealand today, and under Debbie's leadership continues to facilitate research within the academic and commercial sectors, and produce innovative and pragmatic solutions to raptor conservation within the greater community.

Her investiture at Government House on 18 September 2013 saw Debbie proudly wearing a korowai Maori cloak (kahu huarahuru) made from kauri feathers, kindly loaned by Opeuki Master Weaver Wiremu Baker.

"It was a real honour to be offered and to wear the cloak for such a special occasion, and while very humbled by the investiture, it was absolutely fabulous for conservation to be recognized," said Debbie.

Wingspan also celebrates the investiture of Dr Nick Fox as a Member of the Order of the British Empire (OBE) for services to Falconry and the Conservation of Raptors worldwide.

Dr Fox is the first person to be honoured for services to falconry and the conservation of raptors, and this is the highest award ever given for services to falconry.

A scientific advisor to Wingspan, Nick is a UK raptor biologist and lifelong falconer. His 1977 PhD on 'The Biology of the New Zealand Falcon' became the first major research of this species, which he has continued to study for over 40 years. He was the first person to breed New Zealand falcons in captivity, and has done studies on Australasian harriers, Northern Goshawks, Saker and



Peregrine falcons, and Mauritius Kestrels. He was also the main player in saving the Red Kite in Wales.

Through his company, International Wildlife Consultants, he runs conservation projects from high arctic Siberia down through Asia and Eastern Europe. He has studied Saker falcons in captivity and in the wild, including a very successful Mongol artificial nest program - the largest of its kind in the world.

Dr Fox facilitated three International Festivals of Falconry both in the UK and UAE, uniting the world's falconers in their passion for birds of prey.

Further, Nick was the primary writer of the 'Falconry' submission to UNESCO, resulting in the 2010 inscription of Falconry on the Representative List of the Intangible Cultural Heritage of Humanity.

A New Experience

For those who have not met me yet, my name is David Crimp, and I am the latest addition to the Wingspan Team. I have been a Wingspan for six months now and it has just flown by.



a gram to a creature smaller than my hand, when I was so used to animals much larger.

A wealth of information has been shared with me in the short time I have been here. But what I have also learnt very quickly is that the birds will always teach you something new, no matter how long you have been here. Every day that I come to Wingspan and work with the birds or talk to the team, I am inspired to help continue the work Wingspan has begun and I look forward to all the new experiences.

David Crimp

From tonnes to grams

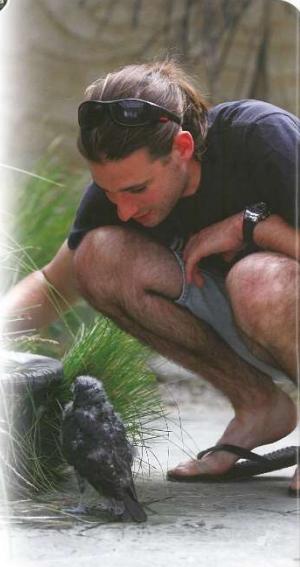
Previously I worked at Auckland Zoo as a 'Fridelands keeper'. I was caring for springbok, zebra, flamingo, ostrich, hippo, giraffe, rhino and lions - arguably some of the most dangerous animals at the zoo. My passion was for rhinos, each weighing around 2 tonnes, but with the demeanor of a small puppy - just wanting food and attention.

With family inRotorua I had the chance to visit Wingspan often and was always in awe of the work that was being done. I strongly believed land still did that Wingspan was a very special conservation trust, with values similar to mine. I have always felt that ex-situ institutions can play a huge part in conservation. I have seen it myself, the change that happens in people when they touch a rhino or see a giraffe up close for the first time. It sparks emotions that just can't happen when flipping through a book or watching a YouTube video.

It happened to me. I will never forget watching a baby giraffe only a few hours-old learning to walk. And, I will never forget on my first visit to Wingspan, watching Ozzy fly and then having the privilege to hold him up close. From that moment on working with these birds became a dream of mine.

Hit the ground running

I started at Wingspan in October, and I'm sure reading this journal you will understand how busy this time of year is. But what a great time to start. Within the first month of my training I was already working up a relationship with an Australasian harrier named Fran, and being shown how to feed precious little newborn chicks. I was incredibly nervous the first time Debbie Stewart asked if I wanted to try feeding the monopark chicks myself. Such a foreign concept for me - feeding a piece of meat less than



WINGSPAN WELCOMES VISITORS

Zoe and Kara Armstrong at the book education table

Robert Bevan holding Fran

Bowling Day and Care Camp (last year)

Aria Fish Candy Tours

Tick Fox and Neil Hyde

Ripper Gea Miling Wingspan

Dzzy and Blake Foster from Otago and County

"I would like to thank you all for giving me the opportunity to be able to make my wish happen"
- Neville Ross

"It inspired me to love birds"
- Jessica Weston

"Many thanks for such an enlightening experience I had yesterday when visiting with the Zoological Society. I will be back."
- Viona McCallum

Congratulations on providing an exceptional experience as well as the education and conservation work that you do... well done.
- Lasi Keller, Rainbow Springs

A tick on my bucket list
- Steeph Fowlie

Loved it all - a real labour of love here
- Samira & Naomi

Lovely family experience, thanks
- Jackie McMahon

HERE AND THERE

Oldest wild falcon

Generally in the wild a falcon would be lucky to make it to 10 years of age, yet in captivity the oldest falcon is 17 years.

There are a number of factors that contribute to this, deliberate shooting, predators and starvation are all problems falcons face in the wild.

However, in captivity these threats are eliminated which makes it easier for a falcon to live longer.

This past summer an 11 year-old male falcon was sighted in Wairakoi Estate making it the oldest wild falcon ever recorded. He was originally banded by Wingspan as a chick in December 2012, and we were able to look back through records to find out his history.

Not only is it impressive that he has reached it, but this breeding season he still managed to pair up with a first-year female.

Falcons in the scientific literature

In collaboration with Massey University, the Wingspan National Bird of Prey Centre continues to study the biology of falcons in order to support their conservation in the wild.

The latest journal of Raptor Research Foundation includes a leading article by Dr Richard Seaton describing how falcons use exotic plantation forests in New Zealand - helping us to make recommendations to forestry companies on how best to manage their estates to support this threatened species.

To read the abstract type this link into your web browser: <https://www.biorxiv.org/doi/abs/10.3355/jrr-12-26.1>

Ever more fitting, the journal edition celebrates New Zealand falcon, with a painting by Marlborough artist Nick Dillon.

The Journal of Raptor Research
Volume 47, Number 3, September 2013

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VOLUNTEERS & ACKNOWLEDGEMENTS

With only four full-time staff, volunteers remain a vital and integral part of the Wingspan programme. This year Wingspan has recorded 912 volunteer hours on site. Without this immense effort the Centre would simply not survive, or be the success it is now.

Wingspan would like to extend a huge thank you to the many volunteers for their assistance with grounds maintenance, aviary cleaning, food preparation, front-of-house, along with the various other jobs that need to be done on a daily basis at the Centre:

- Don Hocking
- Laurine Jackson
- Tlaw Willis
- Kirsteen Pearse
- Di Ruffler
- Patrick Walsh
- Marcy Jacobs
- Robert Okell
- Caroyni Osborne
- Liz Keck
- Gan MacMillan
- Lena Braur
- Luisa Egger
- Gillaume Audo
- David Thomas
- Kayla Brett
- Anna Kopp
- Chitaya Hawksby
- Kate Akers
- Ben Hunt
- Karolina Sobka

Todd Harris is a local scrap metal sculptor. From owls made out of forks, to hawks made from lawn mower parts, these wonderful sculptures would look great in or outside of anyone's home.

Thank you Todd for supporting Wingspan and sharing your awesome artwork with us!

For eight years Mary Staal has been running front-of-house on the weekends. Wingspan would like to extend an extra special thank you to our longest-serving volunteer.

There always remains the need for regular food such as rabbit, hare, ferret piglets and ducks. Thank you to these people for the contributions throughout the year.

- Hilary Piner
- Gus Knopier
- Eastern Region Fish & Game
- Nigel Wehnam
- BDF Regional Council
- Dave Robinson
- Dave Hutchings

We would like to thank Wera & Michael McFeyden, Brinnet Goo, Norma Hill and Neil Lena Braur for their help in translating our new international visitor guides.

A huge thank you to Rachel Stewart who once again has edited articles for this year's journal.

A special thank you to Stephen White, who continues to distribute brochures around the Rotorua district Phil Trenchelby (Wairakoi) for talking to a local primary school about New Zealand falcons, Mike Bailey for the donation of a brass eagle, Mihirangi for donating her lovely CD, and Aart Janssen for computer donations and repairs.

Wingspan would also like to thank Black Station Photography for the donations from photography sales and for producing a wonderful 'On the Wing' Calendar last year. Check out some of the fantastic photography at www.igal.co.nz

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Wild Chicks

Every year falcon chicks are banded within Kaingaroa Forest. This is in-situ monitoring and conserving falcons in their natural habitat. A band combination is unique to an individual bird and if a falcon is sighted and the band noted, important information about dispersal, pair bonding and age can be determined.

SPONSOR A WILD NEW ZEALAND FALCON
 It is a pleasure to help Kaingaroa Forest & Nature reserves research, banding and release of wild caught falcons. See pages for more details.

Sponsor: Aileen Lord
M BK 148781 (left) - 26FR (right) ♀

Sponsor: Eason's Family
1294 (left) - W (H-37342) (right) ♂

Sponsor: In Charnovitch
MH 382721 (left) - 07R (right) ♂

Sponsor: Pam McElroy
MK 143971 (left) - 02G15 (right) ♀

Sponsor: Leo Ombao
MH 143971 (left) - 02G15 (right) ♂

Sponsor: In Feildon
M BK 142741 (left) - P6PS (right) ♀

Sponsor: Dee & Pam Dingman
M BK 148277 (left) - 1 (right) ♂

Sponsor: Joyce Sherr
M BK 148277 (left) - PE (right) ♀

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Sponsor: Paul & Nancy Handberg
R/R (left) - W (H-33064) (right) ♂

Sponsor: George Bettle
W/R (left) - M (H-33375) (right) ♀

Sponsor: Shane & Lou Orr
W/R (left) - PE (H-34274) (right) ♂

Sponsor: Fran & Blanche Lubbeck
M (H-38353) (left) - P6R (right) ♂

Sponsor: Te Eanga EG Inc
EG/EG (left) - W (H-38353) (right) ♂

Sponsor: Abby van der Raay
M (H-38353) (left) - M (H-38353) (right) ♂

Sponsor: Rob & Sue Dorn
M (H-38374) (left) - P6G (right) ♂

Sponsor: Michael & Patsy Trigg
M (H-38353) (left) - 8791 (right) ♂

Sponsor: Roger & Jane Myles
M (H-38353) (left) - 196R (right) ♂

Sponsor: Geoff Muesman
A/R (left) - W (H-37382) (right) ♂

Sponsor: Mary Staal
M BK 148281 (left) - 8791 (right) ♀

BAND COMBINATIONS
 Left leg (top band over lower band); Right leg (top band over lower band)
 Colour band key: K-Black, W-White, DG-Dark Green, PG-Pale Green, O-Orange, R-Red, Y-Yellow
 Metal band key: The letter indicates the size of the band, combined with individual identification number.

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Hacking it

Hacking is the term used to describe the release of captive bred raptors into the wild. Essentially, it is the construction of an artificial nest and release platform. The birds imprint on the hack box which provides shelter and secure protection, and supplementary foods are provided until the birds become independent and disperse into the wild.

Sponsor: Shauna McKelvey
M BK 148271 (left) - 04 (right) ♂

Sponsor: Paul & Maryanne Richardson
1106741 (left) - M ♂

Sponsor: Kate & Murray
1528191 (left) - M ♂

Sponsor: Maureen
M BK 148271 (left) - 0 (right) ♀

Sponsor: Maureen & Murray
M BK 148271 (left) - 0 (right) ♀

Sponsor: Mollie's Nest
M BK 148271 (left) - 0 (right) ♀

'George' & 'Eramiha' - two moreorks rescued from Kaingaroa Forest at just four days old
see Moreork Chick Rescue (pg 26) for more details!

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In the Mews

FALCONS

Ali ♀
Originally from Nelson, Ali has permanent injuries after being deliberately shot. Important for the Wingspan breeding programme, she has fostered eggs and chicks, and is now paired with Wina.
Absolute sponsor: Noel and Alison Lamberton

Atareta ♀
The 'entertainer'. For the past two years trained by Andrew Thomas and featured in the flying displays at Wingspan, visitors 'wooed' by her feet flight, lure work and manoeuvres on the wing.
Absolute Sponsor: Kath McIndoe

Ayola ♀
She was found injured on a farm in Maungatua, Otago. She was unable to fly and had trouble standing upright. She has been paired up with Hamdan to create an Eastern Falcon breeding pair.
Absolute Sponsor: Mary Staal

Fovea ♀
A successful breeding female, and remains respected by staff as one of the most territorial and aggressive falcons during the breeding season!
Gold sponsors: Mark & Patricia McKenna

Hamdan ♂
He was a rescued chick from the Linnemoor Range in Otago in 2013. He has been paired up with Ayola to become part of the captive breeding programme.
Available for Sponsorship!

Julie ♀
Originally from Kaingaroa (2008), found after breaking her wing hitting a deer fence. At just one year of age, she laid her first egg, and successfully fostered another three young chicks.
Gold sponsors: Chris and Enkhjargal Morgan

Lee ♂
He was rescued as an egg from Kaingaroa Forest. He has been paired up with Rita to become part of the captive breeding programme at Wingspan.
Absolute Sponsor: Beverley Guy

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From: Bryce McClellan



Millie [Millennium Falcon]

Captive-bred, Millie featured on the falcon growth posters and, currently trained by Ineke Smets. Considered Wingspan's 'orange queen'.
Absolute sponsor: Millennium Hotel

Mojo

Captive bred at Wingspan [2007], but rescued at one day of age after almost being killed by his parents.
Absolute sponsor: Mary Staal

From: Bryce McClellan



Ozzy

The 'falcon ambassador'. Trained by Debbie Stewart, he features during the daily displays and remains popular with visitors with his fast flight, and hunting antics.
Silver Sponsor: Lyle Pritchard;
Contributing sponsors: Charlie Foster & Tracey Wheeler

R2D2

Originally from Taupo, arriving at Wingspan [2008] from Massey Vets (Palmerston North) with a broken wing. Subsequently paired with Julz, and since 2009 have successfully bred each year, and fostered other falcon chicks.
Gold sponsors: Chris and Enkhjargal Morgan;
Contributing sponsors: Craig Irving; Sam Dunlop

Shaheena Tetsuko - Bryce McClellan



Rita

Found with a broken wing in Raetihi, Rita was caught at Wingspan [2010] after medical care at Massey Vets (Palmerston North). Unable to fly again, Rita has been paired up with Lee and will play an important role in the captive breeding programme.
Available for sponsorship!

Shaheena Tetsuko

The first 'trademe falcon'! Shaheena meaning female falcon in Arabic, and Tetsuko meaning 'Lady of Steel'. She lives up to her name and is currently being trained by Debbie Stewart.
Gold sponsors: Catherine Pierard & Rupert Steinbeis;
Contributing Sponsor: Ilsa-Marie Eri-French

From: Bob DeWit



Tuhoe

Brother to Ozzy and Kalliski, hatched December 2002. Tuhoe is paired with Finesa and part of the breeding programme since 2005.
Gold sponsors: Malcolm Macrae & Janet Green;
Garry & Erin Burt

From: Lee Crosby



Wink

Found in Weihapai, blinded by a stick in his eye and remains partially sighted. Paired with Ali, their progeny will contribute towards annual releases in the South Island.
Gold sponsors: Brian & Les Turner;
Silver sponsors: Lindsay and Alison Moore;
Contributing sponsors: Brian & Vivian Mansel

From: Chris Parker



Ivy

Also rescued as a chick, Ivy was found on farmland in the Waikato. She has a fiery character and is a great hunter, proving that harriers can do it too!
Contributing sponsor: Paula Lowe

Sky

Sky is a male harrier that first arrived at Wingspan in 2002. Sky is a display bird and is the oldest and palest harrier on display.
Gold sponsor: Trisha Nazzari;
Contributing sponsor: Jamie Halkyard

From: Elmer Fisher



If you would like to help out, Wingspan welcomes any enquiries or volunteer enquiries - we at Wingspan always have the future, new opportunities will evolve out of us - the conservation needs of the programme.
For further information, or to apply to become a Wingspan Volunteer, please contact the Wingspan office.

Ruby - Our show girl 1997-2014

At 17 years old, the oldest ever known kararewa, Wingspan is sad to announce the passing of Ruby; a female New Zealand falcon like no other.

She was an amazingly beautiful bird, a great hunter and a spectacular ambassador for her species. Etched on a commemorative New Zealand coin, featured on the cover of the New Zealand Geographic, and showcased on TV, it is fair to say that Ruby was a bit of a show girl.



Held by thousands of visitors on the gauntlet, and as part of the Wingspan legacy she will now be held in our hearts.
"Goodbye, Ruby Tuesday... still I'm gonna miss you".

MOREPORKS

Frado

In 2012, Frado, the male morepork was rescued as an egg from the breeding pair Nestor and Wairuru. He has been hand-raised by Wingspan staff and is now used for advocacy work.
Sponsored by the Wingspan Team

Nestor

Rescued as a young chick in 2002, and successfully paired with Wairuru two years after being nursed back to health - they are the only breeding pair of moreporks held at the Centre.
Absolute sponsor: Mary Staal

Wairuru

In 2005 Wairuru arrived with broken wings, and is unable to be released. Paired with Nestor she produced her first chick in 2007.
Silver sponsor: Maxine Powick;
Contributing sponsors: Ian & Maaike Niemeijer; Eleanor Duff

Whisper

Originally introduced to Wingspan as a rescued egg from Kaingaroa Forest in 2007. Artificially incubated and hand raised, Whisper remains the friendliest morepork at Wingspan, and is the foster mother for other morepork chicks.
Absolute sponsors: Edward and Wendy Goodwin

BARN OWL

Tahi

Found on farmland in Kaitake with a severely broken left wing which after seven months of trying to save it, amputation was the only option remaining. Tahi is the only captive barn owl in New Zealand.
Gold Sponsors: Gary & Annette Hall;
Contributing sponsors: Michael & Melva Triggs

HARRIERS

Fran

Found March 2010 in Morrinsville, she arrived at Wingspan starving, and unable to fly. Nursed back to health, her tractable nature made her perfect for training, education and advocacy.
Gold sponsor: Mary Staal

Jack

Rescued at around 13 days old in 2010, after being found abandoned, Jack is now being trained by Andrew Thomas and is a very capable hunter.
Gold sponsors: Mary Staal; Suzi Phillips



From: Lee Crosby



From: Lee Crosby



From: Bob DeWit



From: Robert Bevier



From: Sharon Photography

SPONSORS AND ASSOCIATES OF SPECIAL NOTE

Helping Wingspan's conservation programme are a number of associates, academic, and promotional partners. Each provides a way to put our conservation, research and key messages in front of new audiences, and who contribute time or money (often both) for the cause.

Being a registered charitable trust, Wingspan does not receive Government or local body funding in support of the raptor conservation programme. Essentially, Wingspan is a project about birds of prey and people - it's a conservation buy-in for us all, and collectively we all make a difference for the Raptors of New Zealand.

Donations to the programme are always welcomed, and it's easier than ever before! You can write or email directly, or give us a call. Some members have organised regular donations, bequests and memorials, or direct credits, even small regular payments help too (and saves reminders for renewals).

Contact Wingspan directly ... we'd be thrilled to hear from you!

I thank you for your support

- TE KAWHŪ**
 Peter & Sarah 2013
 Peter & Sarah 2013
 Peter & Sarah 2013
 Peter & Sarah 2013
 Peter & Sarah 2013
- TE HĀNGA**
 Peter & Sarah 2013
 Peter & Sarah 2013
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- TE RĀKE**
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- WAIKARE**
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THE WINGSPAN CENTRE

Wingspan offers unique, once-in-a-lifetime raptor opportunities. Don't forget your camera!



Open daily 9:00am-3:00pm
Best times 1:30pm ready for
2:00 pm Flying & Training Displays
1164 Paradise Valley Rd, Rotorua
 Casual Visiting Welcome
Group (10+) Tours by appointment
Adults \$25.00, Seniors \$20.00, Children \$8.00

SPONSOR A NEW ZEALAND RAPTOR AT WINGSPAN
 Name the bird, receive a colour photograph, free admission to the Wingspan National Bird of Prey Centre, and special acknowledgement in the annual journal. **Absolute Sponsor: \$1,000; or Gold \$500; Silver \$300; Contributing Sponsor \$100.**

SPONSOR A WILD NEW ZEALAND FALCON
 Name the wild bird, receive information on band numbers and combinations, a photo folder, plus free admission to the Wingspan National Bird of Prey Centre. **Wild bird sponsorship assigned and mailed (April of each year) with the annual journal, \$200.00 per falcon.**

RAPTOR EXPERIENCE
 An extra behind-the-scenes hawk/tour of the breeding, research and display facility with a Wingspan falconer. Perfect for those interested in a unique interactive experience in addition to the daily flying display - by appointment only.
\$80.00 per group (plus admission per person)

LIFETIME SUPPORTER
 Includes the benefits as a Wingspan member and supporter, including lifetime subscription to the annual journal, special Wingspan pin and complimentary admission \$1,000.00

SPONSOR AN AVIARY/CORPORATE SPONSORSHIP
 Sponsorship is welcomed for specific raptor research projects, rescued birds, breeding pairs, including naming rights. Formal registration and signage within the aviary facilities with logo branding. Specific project costs on application. Limited availability.
From \$5,000.00 per annum

SCHOOL VISITS
 Wingspan offers a unique educational experience for students.
\$80.00 Group Tour Fee and then just \$5.00 per person.

DONATIONS
 If you wish to contribute towards the Wingspan programme, donations are welcomed.
Donations of \$5.00 or more are tax deductible within New Zealand.

WINGSPAN MEMBERSHIP
 Wingspan membership includes the annual journal, a special Wingspan member's pin on joining, plus year round complimentary admission to the Wingspan National Bird of Prey Centre.

Individual - \$45.00 per annum
For couples and families residing at the same address, try a family membership! \$70.00 per annum

Gift Memberships welcomed!
 (DEPT) If available a package of sponsorship to give the recipient will be included or given the opportunity to purchase sponsorship.

INTERNATIONAL MEMBERS

The international members provide continued support to Wingspan through donations/sponsorship.

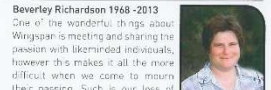
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IN MEMORY OF

Wingspan celebrates two special people, life members, who have shared our raptor journey. We will remember them not with a tear, but with a warm smile.

John Kendrick OSM 1922-2013
 Johnny, 91 years young, a pioneer within the wildlife community and well thought he would live forever. A man of boundless energy and infectious enthusiasm for the flora and fauna of New Zealand, he was an ornithological legend and real inspiration to a generation of us. A life spent tracking to the remotest corners of New Zealand, rescuing, discovering, sharing, and recording bird songs. Johnny was always armed with his camera and audio equipment. He is missed and remembered fondly, and each day on the National programme Johnny's beautiful recordings of bird songs continue to be brought into the everyday lives of New Zealanders.

Beverly Richardson 1968-2013
 One of the wonderful things about Wingspan is meeting and sharing the passion with like-minded individuals, however this makes it all the more difficult when we come to mourn their passing. Such is our loss of Beverly, who, after a courageous battle was taken too soon. Bev was an accountant, company director, landlady, lover of the outdoors - particularly kayaking her favourite place on Lake Rotoua. With Bev's great sense of humour, infectious smile, and support of Wingspan, her feathered friends, duckweed network, moneyspot rana support, volunteering, and accounting advice, Wingspan extends its condolences to Laurie and her family.



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How you can help
 As a volunteer, organisation and charitable trust donations to the programme enable us to provide the research and education programme for the benefit of our members.

Member # _____ New Gift

Name _____

Address _____

Postcode _____

o Do not wish to be signed up for newsletters
 Family \$70 Individual \$45
 Lifetime \$1,000

Sponsor a wild or captive bird
 Individual \$45
 Captive bird (from \$1,000) \$ _____

Make a donation
 1000 500 250 100 50 25 10 5 Other \$ _____

Bequests - Contact Wingspan for more information

EASY PAYMENT OPTIONS
 Online (secure server) by credit card
 www.wingspan.co.nz
 Direct Credit VISA/MC - Account 93 1545 0002/93 00
 For funding purposes, please give name as preferred
 Send cheque to Wingspan, PO Box 993, Rotorua 3040



Please fold leaflet, with your personal details on the inside, and tape along the edge before posting

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Wingspan Bird of Prey Trust
PO Box 993
ROTORUA 3040

Sender: _____

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Photo by Sara Coney