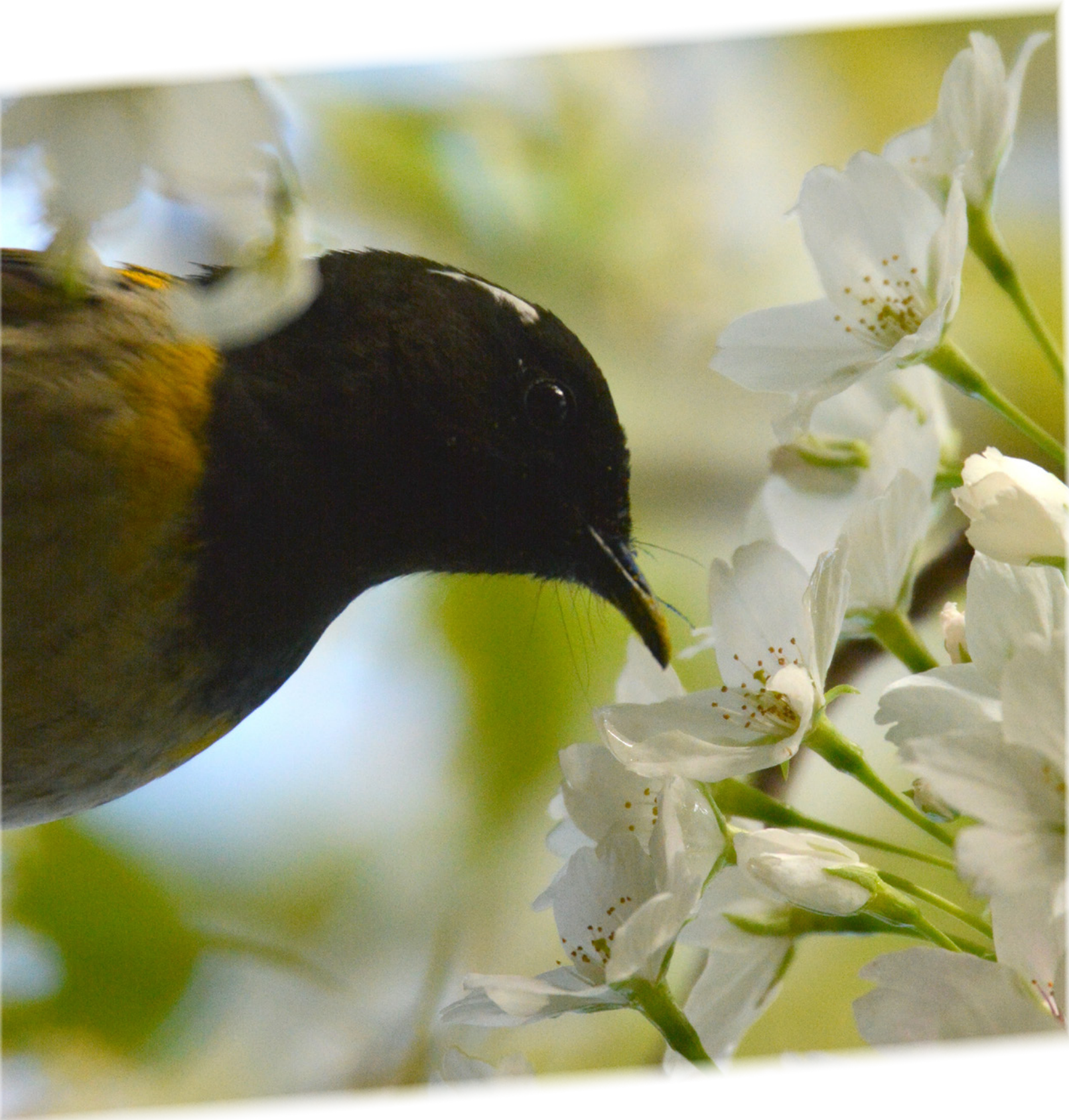


HIHI CONSERVATION

www.hihiconservation.com

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HIHI RECOVERY GROUP

We are a bunch of people that are passionate about hihi and tasked with guiding their recovery.

In a more formal sense we are an advisory group set up by the New Zealand Government through its Department of Conservation. Our model is somewhat unique to match the bird we work towards saving. Our membership is large and consists of representatives from the Department of Conservation, international and New Zealand based universities, conservation research institutions, local community conservation groups and iwi. This mix is viewed as an absolute strength.



We have developed a clear and shared set of management objectives that we work together to achieve, using the best evidence-based management we have available.

The power of this shared vision is evident in the pages of this report, showcasing the latest hihi happenings and our hihi populations. We hope you enjoy our celebration of a year's hard work building on the many that preceded.

WHO WE ARE

CHAIRS

Lynn Adams, Department of Conservation
John Ewen, Zoological Society of London

MEMBERS

Auckland University of Technology:
Dr John Perrott

Bushy Park Trust:
Mandy Brooke

Cambridge University:
Caitlin Andrews
Dr Victoria Franks

Department of Conservation:
Chris Bell
Mara Bell
Jane Haxton
Troy Makan

University of Helsinki:
Dr Rose Thorogood

Hihi Conservation Charitable Trust:
Mhairi McCready

Massey University:
Prof Doug Armstrong

Ngāti Manuhiri:
Fiona McKenzie

Parker Conservation:
Dr Kevin Parker

Rotokare Scenic Reserve Trust:
Simon Collins
Fiona Gordon

Sanctuary Mountain Maungatautari:
Dr Janelle Ward

Supporters of Tiritiri Matangi:
Morag Fordham
John Stewart

University of Auckland:
Alex Knight
Kate Lee
Dr Anna Santure

University of Otago:
Dr Helen Taylor

University of Queensland:
Dr Alienor Chauvenet

Waikato Regional Council:
Dr Kate Richardson

ZEALANDIA:
Neil Anderson
Dr Danielle Shanahan

Zoological Society of London:
Dr Patricia Brekke

VISIT US ONLINE

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OUR OBJECTIVES



INCREASE THE TOTAL NUMBER OF HIHI NATIONWIDE

We aim to increase the number of hihi populations across New Zealand and the total number of hihi in them.



INCREASE THE NATURAL ECOLOGICAL SETTING OF THE HIHI

Nest boxes and sugar water are provided to help hihi survive and reproduce, but we want more natural sites without the need for these.



REDUCE THE COST OF MANAGING HIHI POPULATIONS

Managing hihi bears many financial costs which we want to minimise. Two major expenses are the provision of nest boxes and sugar water.



INCREASE AWARENESS AND APPRECIATION OF HIHI

We wish to raise the awareness and appreciation of hihi by local residents and visitors to New Zealand. This charismatic and striking bird is little known or understood—something we are working hard to change.

THANK YOU TO OUR SPONSORS

NATIONAL



TIRITIRI MATANGI



BUSHY PARK



ZEALANDIA



ROTOKARE



HELP SAVE THE HIHI

Interested in sponsoring hihi recovery? See **P.5** to learn about the new Hihi Conservation Charitable Trust, or email mhairi@hihiconservation.com.

THE HIHI

He manu ririki te Hīhī e noho kau ana i ngā ngahere o Niu Tīreni. I tēnei wā tonu, ka whakarōputia te manu Hīhī he manu mate haere ki tō te rautaki 'Threat of Extinction' o Te Papa Atawhai.

I mua i te taenga mai o tauīwi mā, ka rere whānuitia te Hīhī ki Te Ika a Māui whānui me ōna moutere. Heoi, i te paunga o te rautau tekau mā iwa, ka noho motuhake aua manu rā ki Te Hauturu o Toi. Nō te taenga mai o ngā kararehe tauhou, o te mate manu, me te muru kohanga, ka mate haere te Hīhī.

Mai rā anō ko te Hīhī he manu kaikai miere (te whānau manu o *Meliphagidae*), he whanaunga pātata ki te komako me te tui. Ahakoa tonu, he tūhuratanga anō tā te aronui 'Phylogenetic', he manu motuhake te Hīhī, ā, he tātai anō tōna ki tōna ake whānau, arā ko te '*Notiomystidae*'.

He rerekētanga motuhake tōna, arā, ka mahi ai te Hīhī kanohi ki te kanohi. He rerehua te tame o tēnei tū manu, he pango, he kowhai tea, he mā ōna tae. Kāore i te pērā te uha o tēnei manu, ka mau i a ia te kākāhu parauri, me ōna neko mā kei ōna parirau.

I te tau 1980, ka timata te mahi atawhai mō te Hīhī, nā wai nā wai, atu i Hauturu, e ono ngā wāhi whakamarumarū anō hei kāinga mō te Hīhī. Nā te mahi atawhai, ka nui haere te maha o ngā Hīhī, ahakoa tonu, he manu mate ā-moa tonu. Ko ngā kararehe kaikai manu, ko te mate manu, ko te korenga o te ira whakaurutau, me te rāweke kāinga ngā āhuatanga e whakararu ana i te orangatonutanga o te Hīhī.

The hihi is a small (30 – 40g) forest dwelling passerine endemic to New Zealand. At present the species is classified as nationally vulnerable under the Department of Conservation's 'Threat of Extinction' system.

Pre-European times, the species was distributed throughout the North Island and its offshore islands. However, by the end of the 19th century the only population that remained was that on Te Hauturu-o-Toi. The disappearance of the hihi was most likely due to introduced predators, habitat loss and disease.

The hihi was long considered to be a honeyeater (family *Meliphagidae*) closely related to bellbirds and tui. Phylogenetic analysis, however, has revealed that it is taxonomically distinct from this lineage and has been subsequently placed as the sole member of its own family, the *Notiomystidae*.

The species is also behaviourally unique, being the only bird known to copulate face to face. The males are one of New Zealand's most strikingly coloured birds with black, bright yellow and white plumage. Females are a less conspicuous brown colour but also with bold white wing bars.

FUN FACT

In spring, you may spot orange-headed hihi. As they probe flowers for nectar, hihi pick up pollen, helping to pollinate many native plants. It's just one reason why helping hihi helps to restore healthy ecosystems!

Management of the species began in 1980 and there are now six reintroduced populations spread across northern New Zealand in addition to its remnant population on Te Hauturu-o-Toi. Under intensive management the hihi has been steadily increasing in numbers but is still at risk of extinction. Introduced predators, disease, the loss of genetic diversity and environmental disturbances continue to pose a risk to the long-term viability of the species.



A BRIEF HISTORY OF HIHI CONSERVATION

1980

The first ever translocation of hihi brings birds from Te Hauturu-o-Toi to Hen Island. The Hen Island population sadly fails but inspires the beginning of an important conservation strategy for the species.

1991

The Kapiti Island hihi population is established with birds from Te Hauturu-o-Toi and remains to this day the oldest reintroduced population.

1995

A population is established on Tiritiri Matangi Island, which becomes a very successful population and a source for many future translocations.

2005

Hihi are reintroduced to ZEALANDIA in Wellington with birds from Tiritiri Matangi.



CURRENT POPULATIONS

Since 1980, translocation has been used to establish and maintain populations. Prior to the first translocation, Te Hauturu-o-Toi (Little Barrier Island Nature Reserve) had the only known hihi population in existence. Birds were originally taken from Te Hauturu-o-Toi, but after a population on Tiritiri Matangi Island was established, this became the source for many translocations. As of 2018, six reintroduced populations exist throughout New Zealand, all of which are actively managed through non-native predator control, supplementary feeding, provision of nest boxes, management of parasites, and population monitoring. The success of the conservation strategies employed by the recovery group can best be seen by the steady increase in both the estimated population sizes and the growing number of hihi populations. Population sizes are estimated from an integrated population model combining resighting and breeding data (Parlato et al., unpublished).

Te Hauturu-o-Toi

Pop size: unknown

Tiritiri Matangi

Pop size: 177

Maungatautari

Pop size: 73

Rotokare

Pop size: 49

Bushy Park

Pop size: 43

Kapiti Island

Pop size: 98

ZEALANDIA

Pop size: 116

2006

The total number of hihi in the reintroduced populations exceeds 300.

2009

A population is established at Sanctuary Mountain Maungatautari.

2011

The total number of hihi in reintroduced populations surpasses 400 for the first time.

2013

Hihi are reintroduced to Bushy Park near Whanganui with birds from Tiritiri Matangi.

2018

A top-up translocation brings 10 additional birds to Bushy Park and 30 birds to Rotokare, the newest population of hihi (est. 2017 with 40 birds).



A NEW TRUST FOR HIHI

We have an exciting new member in our support framework for hihi recovery: the Hihi Conservation Charitable Trust. HCCT was established in 2018 and hit the ground running, securing funds to resource the very first Hihi Conservation Officer – somebody to provide essential national vision and expertise to support all hihi sites. Importantly, HCCT can seek funding from competitive sources and develop strong relationships with interested funders. With an associated trust, hihi conservation is heading in an exciting direction with a more strategic approach to achieving the recovery group's ambitious objectives (P.2).



So how does HCCT fit into the world of hihi?

HCCT CHARITABLE PURPOSE

- (a) To carry out and support conservation, research and education projects relating to hihi in New Zealand
- (b) To promote the conservation of hihi across New Zealand
- (c) To raise public awareness and appreciation of hihi in New Zealand



RELATIONSHIP TO THE HIHI RECOVERY GROUP

HCCT's mission is designed to fully support the national management objectives outlined by the Hihi Recovery Group. As a registered charity, it can seek funds to help achieve these goals. If the management objectives of the Hihi Recovery Group ever change, HCCT trustees will discuss how to amend the Trust Deed to ensure HCCT remains relevant to the national approach to hihi management.

RELATIONSHIP TO SITE MANAGEMENT

In addition to supporting the national hihi recovery objectives, HCCT can choose to support site-based activities that align with its charitable purpose, such as:

- Assisting sites with hihi management by allocating funds and/or expert time from a Hihi Conservation Officer;
- Co-developing funding applications with sites;
- Supporting sites in data management, reporting and decision making structures that have been advised by the Hihi Recovery Group.

READY TO JOIN US?

If you are as excited as we are about the future of hihi conservation, HCCT makes it easier than ever before to contribute to saving this amazing endemic bird. If you would like to support us with a donation, no matter how big or how small, please email our Hihi Conservation Officer, Mhairi McCready, at: mhairi@hahiconservation.com

THANK YOU

A big thank you for helping HCCT get set up and running goes to:

CooneyLeesMorgan



Milne Maingay
CHARTERED ACCOUNTANTS LTD



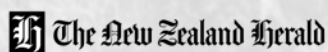
HIHI IN THE NEWS

The past year has been a banner year for hihi in the news! Hihi-related stories have appeared in media locally and globally, covering our latest hihi translocation, ongoing fundraising achievements, breakthroughs in conservation research, and milestones for hihi recovery. Media attention is always celebrated, as it means more people are getting to know this amazing native bird, recognising its importance to New Zealand ecosystems, and valuing it as an important contributor to our global conservation knowledge-base. Read on for some headline highlights, with more details throughout the report.



TRANSLOCATION SUCCESSES

READ MORE ON P. 10 & P. 12



Little hihi birds released at new Bushy Park home



Hihi breed in Taranaki for first time in 130 years



Self-sustaining endangered hihi population grabs foothold at Taranaki sanctuary



Endangered hihi bird thriving in Taranaki after 130 year absence

FUNDRAISING ACHIEVEMENTS

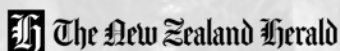
READ MORE ON P. 8 & P. 12



Hihi sperm generates world interest



A sperm race to help save one of New Zealand's threatened birds, the sugar-lapping hihi



Improved hihi feeders installed at Whanganui's Bushy Park, funded from Allan Anderson's Pride of New Zealand win



Sperm race funds rare New Zealand bird's survival



London scientists come to the rescue of rare native bird in Taranaki



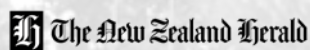
Eavesdropping technology helps protect endangered birds

RESEARCH BREAKTHROUGHS

READ MORE ON P. 21



Happy hihi calls bring cause for celebration



Hihi research: What the stitchbird's plight means for threatened species everywhere



How do you assess if a reintroduced species is thriving? Listen for it



Taking calls

RECOVERY MILESTONES

READ MORE ON P. 8 & P. 14



1000th hihi hatched at ZEALANDIA



Reintroduction efforts bring the hihi back to mainland New Zealand



Department of Conservation
Te Papa Atawhai

Bumper hihi breeding season on pest-free Tiritiri Matangi



Department of Conservation
Te Papa Atawhai

Hihi Best Practice Guide

PERFORMANCE



177 adults in the population



252 fledglings produced



5042 litres of sugar water consumed



100% of females using nest boxes



31868 visitors to the site

TIRITIRI MATANGI

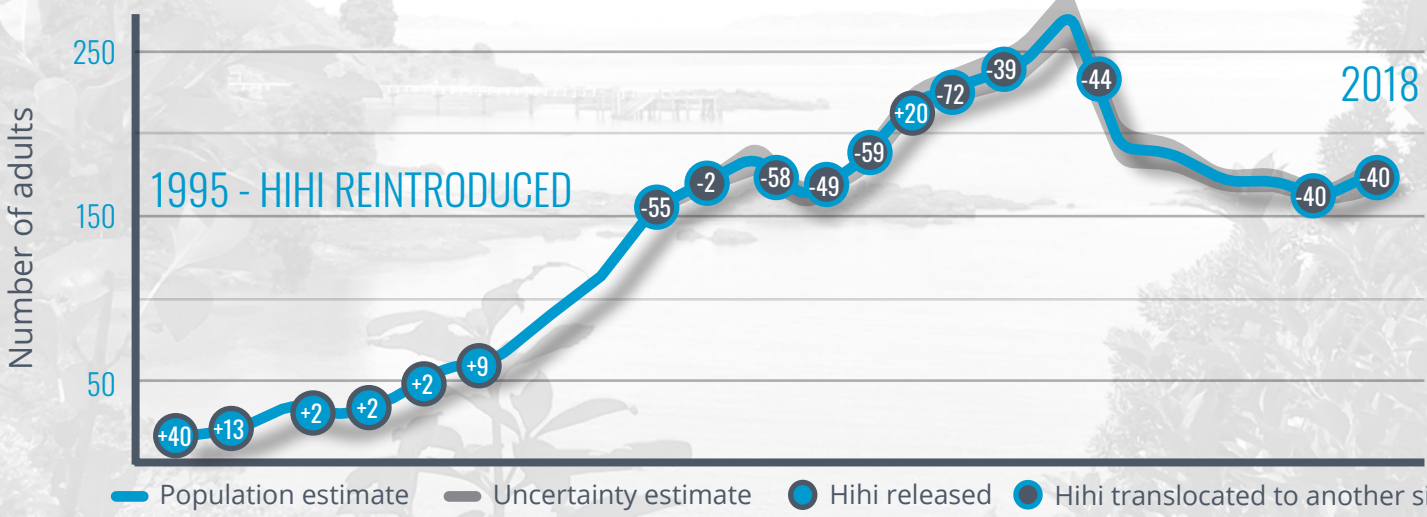


NEWS

At 220 hectares, Tiritiri Matangi may be small, but it has continued to prove its might as a critically important site for hihi. All reintroduced sites can thank the island for providing them with some, if not all, of their original hihi. Most recently, 40 juvenile hihi were sent south, with 30 released at Rotokare Scenic Reserve and 10 released at Bushy Park in April 2018. This marked the 10th time the population has been harvested. As the island continues to build its legacy as a steady source for translocations, we take great care in managing and monitoring the population to ensure its health and sustainability. Even with regular harvesting, the adult population has held steady at around 150-170 adults in recent years. And the future looks bright: the most recent breeding season saw a productivity record absolutely smashed with 252 fledglings produced—99 more than last year!

Tiritiri Matangi also continues to serve as a key site for refining our management strategies and testing new technologies to assist in hihi conservation. After a final round of testing on island, our new state-of-the-art feeder cages have been fully installed here and are rolling out at all fed populations thanks to ongoing fundraising efforts. Our work developing bespoke hihi colour bands with PIT (passive integrated transponder) tags continues, and we are hopeful that a safe and reliable band will be ready for use in the near future. These tags will enable us to remotely track individuals at feeders, providing exciting opportunities to better monitor populations and compare individuals' feeder use. We have also been trialling a new mite spray to control nest parasites, and the early signs are promising. Watch this space!

POPULATION SIZE



PERFORMANCE



49 adults in the population



41 fledglings produced



215 litres of sugar water consumed



82% of females using nest boxes



35000 visitors to the site

ROTOKARE

NEWS

Welcome to the newest member of our hihi family! Hihi were first released at Rotokare in April 2017 and quickly got to work settling into their beautiful new home. Soon after release, groups of happy hihi were spotted exploring new food sources, such as the amazing kahikatea that was dripping with ripe fruit. The positive start continued with a very successful first breeding season: 17 fledglings produced. Since then, the team down in Taranaki has continued to work hard to build on this early success and ensure that hihi re-establish in the region after their 130 year absence.

To help support this population further, 30 additional hihi were translocated from Tiritiri Matangi in the autumn of 2018. Entering the breeding season, the adult population was around 50 individuals, including many from the most recently released cohort and many locally-produced birds. These breeders continued the strong performance of this site, producing a total of 41 juveniles. We are still in the early days, but the birds and the Rotokare support team are doing everything right so far.

In April, Rotokare also kindly hosted our annual Hihi Recovery Group meeting—and what an amazing venue it was to review and plan the next steps for hihi recovery. The group took a walk around the lake to enjoy the forest with a new distinct call added to its chorus. (On that note, check out recent research from Rotokare focussed on hihi calls on P.21). While we were all in Taranaki, we also held a hihi conservation science event at the amazing Puke Ariki Museum in New Plymouth. The event was codeveloped and hosted by Rotokare Scenic Reserve Trust and Wild for Taranaki Trust. Well over 100 guests came to hear all things hihi. Rotokare is a highlight of the Taranaki region and we highly recommend a visit next time you are nearby!



POPULATION SIZE



PERFORMANCE



43 adults in the population



41 fledglings produced



177 litres of sugar water consumed



80% of females using nest boxes



4900 visitors to the site

BUSHY PARK

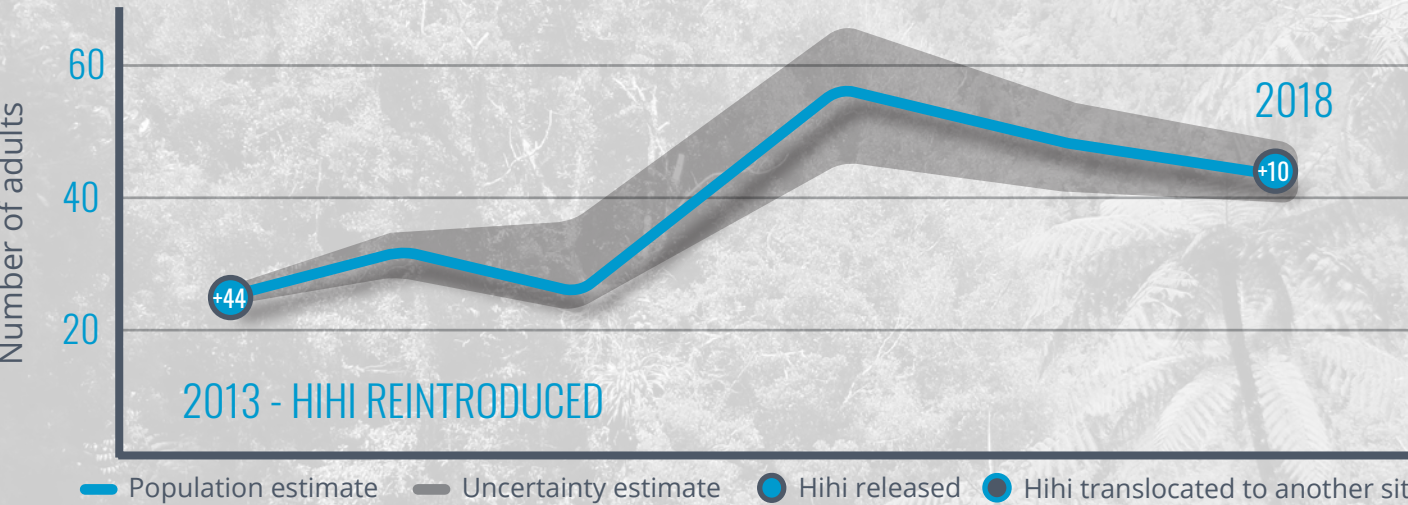
NEWS

At six years old, the Bushy Park population is our second youngest for hihi. In the initial translocation, few birds survived the first year after release. Luckily, the population has since rebounded and now sits at about 40 adult birds. Though down slightly from last year, the population received a boost when 10 additional juveniles were transferred from Tiritiri Matangi last autumn. Importantly, some of these released birds are known to have survived and bred this season. This not only helps increase numbers but also ensures that there is a better level of genetic diversity in this growing population. Bushy Park’s hihi frequently breed in natural nests, and some are thought to rarely use supplementary food. Both of these facts are exciting to see, as we would much prefer our hihi populations to be living as naturally as possible.

As with all hihi populations, the poor breeding season in 2017/18 left Bushy Park on rocky footing at the start of this year. Thankfully, things went much better this time around! The busy breeding pairs produced 41 fledglings—27 more than last year! This successful season will surely help the population to grow. As we continue to watch this population closely, we are fortunate that much of the hihi monitoring at this site is made possible by a dedicated group of volunteers as well as research students. This year, the birds were under the watchful eyes of Natasja van Nijen and Emmy van der Vijver (pictured below), two master’s students from Wageningen University (Netherlands). We also were thrilled to install brand-new feeders around the sanctuary thanks to fundraising by Allan Anderson.



POPULATION SIZE



PERFORMANCE



116 adults in the population



76 fledglings produced



876 litres of sugar water consumed



85% of females using nest boxes



130000 visitors to the site

ZEALANDIA

NEWS

Another hihi site, another milestone! This year the hard work of hihi staff, volunteers, and of course the birds themselves, was rewarded when ZEALANDIA's 1000th hihi nestling was banded—not too bad for a population that was established back in 2005. Of course, not all young produced in populations survive to adulthood. It is telling that despite 1000 hihi fledged, the adult population still sits at about 100 birds. The key task continues to be tweaking management to find ways to help grow this population. If any team can do it, it will be the folks at ZEALANDIA!

Last year was a hard one for the birds, and we were all nervously waiting to see what this season had in store for us. Happily, the weather gods shined down on Wellington, and the birds responded to a much nicer summer by successfully fledging 76 chicks (an extra 20 compared to last season). Such a positive season gives us great optimism that the population will continue to grow so that the many visitors to the sanctuary (130,000 this year alone!) will continue to enjoy the sight of hihi happily flying around the forest.



POPULATION SIZE



PERFORMANCE



98 adults in the population



Number of fledglings produced unknown



2972 litres of sugar water consumed



0% of females using nest boxes



15363 visitors to the site

KAPITI ISLAND

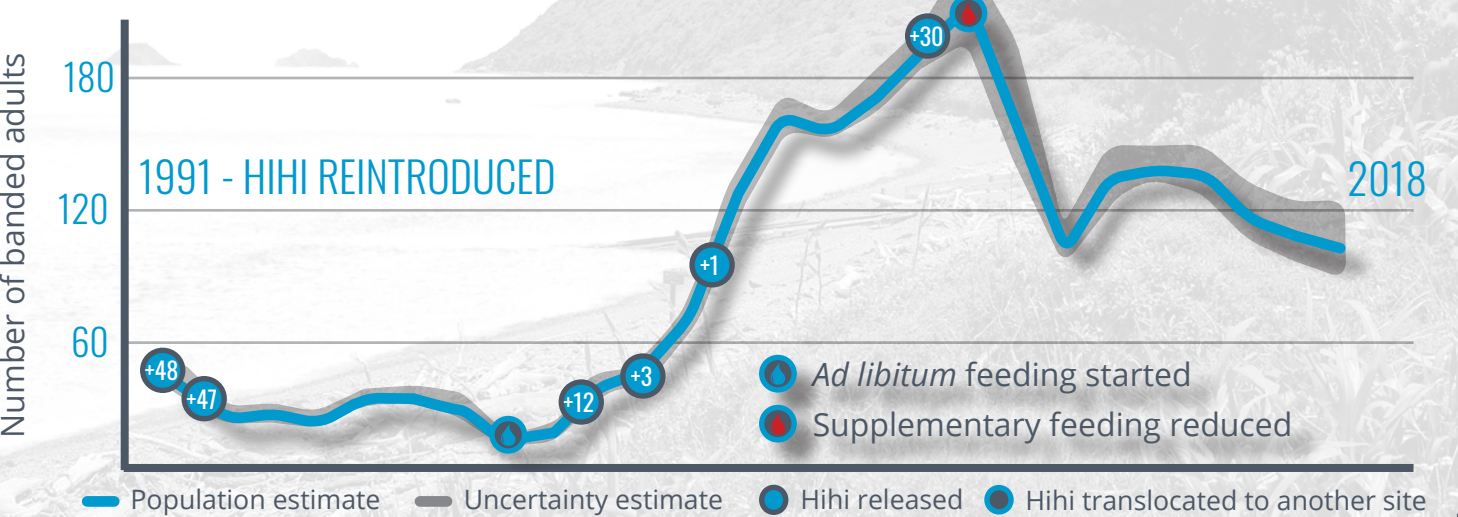


NEWS

Kapiti Island is a special place for hihi and the people who care for them. You only need to head toward the summit of the island, Tuteremoana, to see the progress. Just imagine climbing around the island with a backpack loaded with sugar water to refill the twelve feeders! There is no better reward for this hard work than seeing the hihi population grow, and it certainly has—so much so that the challenge of using feeders has required some changes. Kapiti, unlike other hihi sites, places a cap on the amount of food provided. This cap was put in place in 2010 and then adjusted in 2014. We are working closely with the Department of Conservation to find the best balance between how many hihi we can feasibly feed and how many hihi the island will support.

Kapiti is the longest established of our reintroduced hihi populations, with the first release of birds in 1991, and we are eager to see these birds thrive. As all birds nest naturally, it is difficult to estimate the number of fledglings until we begin to catch and band juveniles at feeding stations. This year, 40 hihi were caught and banded, including 27 juveniles. With every year, Department of Conservation staff observe positive changes in the island's flora and fauna, so we are hopeful that this will help the population decrease their dependence on supplementary feeding and flourish!

POPULATION SIZE



PERFORMANCE



73 adults in the population



Number of fledglings produced unknown



117 litres of sugar water consumed



0% of females using nest boxes



14363 visitors to the site

MAUNGATAUTARI

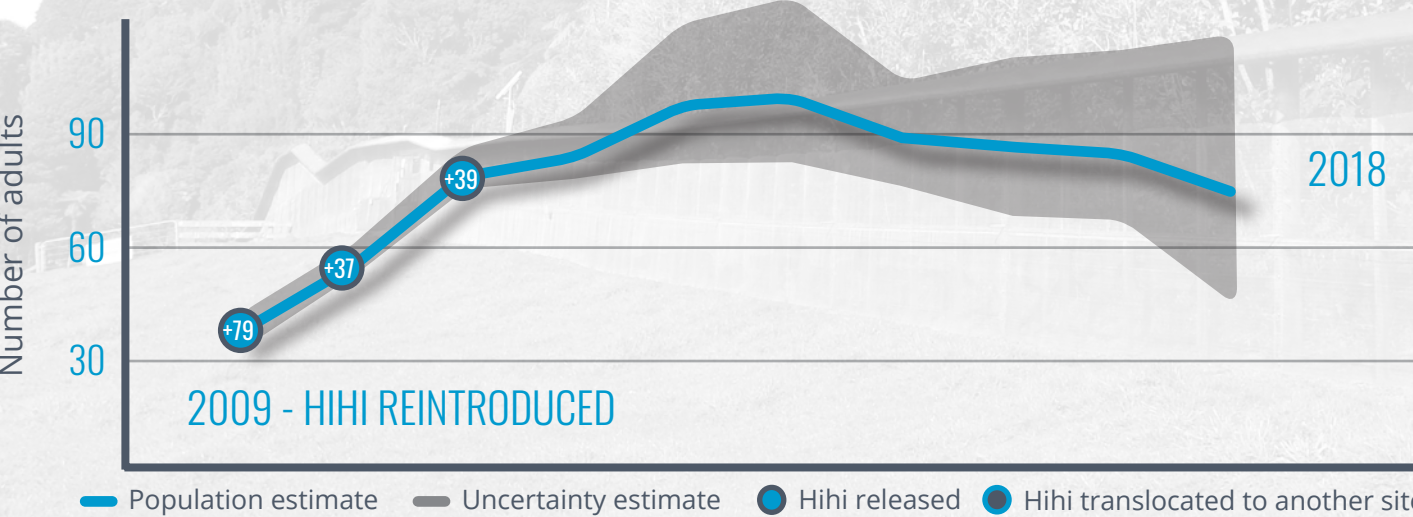
NEWS

Maungatautari is absolutely stunning. As far as hihi sites go, the forest is huge – an impressive 3363 hectares of old growth forest surrounded by an imposing 47 km long fence to exclude non-native predators. The forest-clad mountain is a conservation beacon right in the heart of the Waikato district. These impressive attributes also create a challenge when it comes to monitoring this reintroduced hihi population. Because the forest is so massive, we just can't get the same level of detail as we do at other sites. However, the data we do have show the population is small but has remained stable for the last few years. Adult survival rates fall in line with what we would hope for a "good" hihi site, comparable to those on Tiritiri Matangi. All birds nest in natural tree cavities, which means that we don't know how many fledglings are produced. However, it also means that hihi are much more natural here than at some of our other sites. The Maungatautari team does a fantastic job staying on top of banding as best as they can, and they caught and banded 15 young birds over the last winter—so we know this population is breeding successfully.

A previous study at Maungatautari showed that breeding birds using supplementary sugar water were able to produce more fledglings. This led volunteers at the site to establish additional feeding stations outside the southern section of the mountain in the hope that more breeding birds would have access to this baby boosting resource. It looks to have worked, with birds finding and using the new feeders. Only a few months ago, a camera trap installed to spy on hihi visitors captured images of an unbanded juvenile enjoying a wee drop of sugar water. We hope this is a sign of good things to come for this population.



POPULATION SIZE





TE HAUTURU-O-TOI

NEWS

The hihi population on Te Hauturu-o-Toi (Little Barrier Island Nature Reserve) was the only population of hihi left prior to the species being reintroduced to other sites. While the reintroduced populations are all intensively managed, this population is not. No sugar water or nest boxes are provided, nor are the hihi monitored routinely. For these reasons, we do not have performance metrics or long-term population estimates for this population. While it is believed to be the largest population of hihi, there has been much debate surrounding just how many hihi are on the island. Most of the research that is done here is related to answering just that. To better understand how well this population is doing, we need to know how many hihi there are, how genetically diverse they are, and how they make use of the island’s habitats.

Over the last year, there have been two important studies published that include a focus on Te Hauturu-o-Toi. The first is a genetic study that shows how little genetic diversity remains in hihi (see P.21). The second is a study of hihi densities spanning 2005–2013 (Toy et al. 2018). This study shows substantial variation in hihi densities over time, with relatively high numbers in 2005–2006 (3.1–4.0 hihi/ha), a decline in 2007 (1.3 hihi/ha), another peak in 2009 (3.1 hihi/ha), and a decline to low levels from 2010–2013 (0.8–1.1 hihi/ha). It is still difficult to know how these estimated values relate to true changes in hihi population size, but it is highly valuable information from a population that is very difficult to monitor.



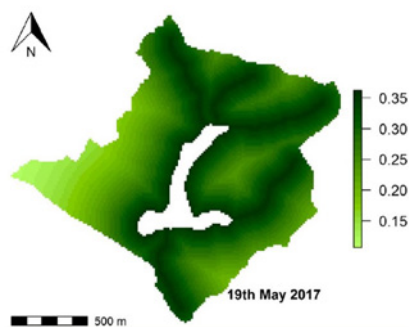
RESEARCH HIGHLIGHTS

A key strength of the Hihi Recovery Group group is the research partners which are part of it. Each year, our recovery group researchers produce high quality science examining hihi ecology and conservation, which goes on to be published in peer reviewed, specialist journals. Not only do we use this science to learn more about hihi and improve how we manage them, but we also welcome the in-kind support (resources and people) that the staff and students of these research institutions provide. Hihi are a world renowned study system in small population recovery, and the recovery group has supported a large

and growing number of research students through MSc and PhD studies – growing both the number of hihi we have and the number of future conservation leaders for the world! This year we especially want to congratulate Dr Vix Franks on successfully passing her PhD defence through the University of Cambridge and Ollie Metcalf for obtaining a distinction for his MSc project through Imperial College London. Below are highlights of the science published in the last year. It is only the tip of a much larger body of science currently underway.

‘EAVESDROPPING’ TECHNOLOGY USED TO PROTECT ONE OF NEW ZEALAND’S RAREST BIRDS

For his MSc at Imperial College London and the Zoological Society of London, Ollie Metcalf tested how well acoustic recorders could monitor hihi after their release at a new site. Knowing what hihi (and other translocated species) do once released is incredibly challenging and important for learning how animals explore and settle into their new homes and whether reintroduction is successful.



Map of hihi occurrence probability at Rotokare Scenic Reserve at the end of the study period.

Prior to this study, nobody had ever used acoustic recorders in this way, and the results proved exciting. Ollie and co-authors show that a combination of recording hihi calls and using machine learning and occupancy modelling can reveal both the exploratory and settling phases following release of birds. Similar patterns were found compared to more traditional (and more invasive) techniques like using radio transmitters attached directly to the birds. Acoustic recorders have a lot of potential for better understanding the fates of reintroduced species globally... as long as they are vocal!

REFERENCE

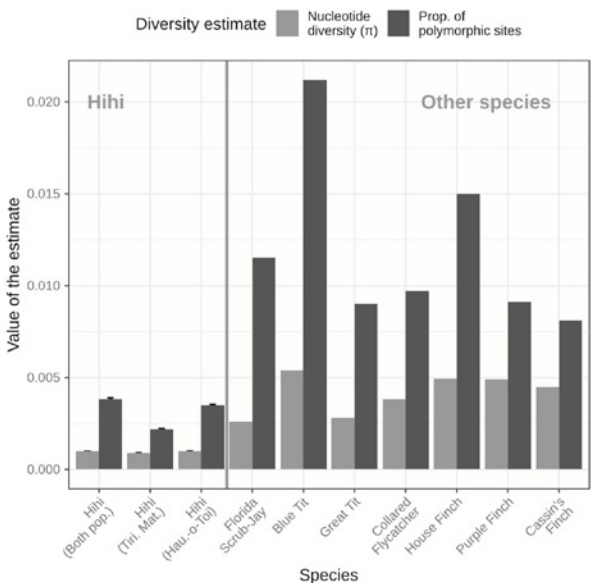
Metcalf, O.C., Ewen, J.G., McCready, M., Williams, E.M. & Rowcliffe, J.M. (2019) A novel method for using ecoacoustics to monitor post-translocation behaviour in an endangered passerine. *Methods in Ecology and Evolution*.

LITTLE ADAPTIVE POTENTIAL IN A THREATENED PASSERINE BIRD

This work was led by Dr Pierre de Villemereuil, a post-doctoral researcher who was based at the University of Auckland (but is now back home in France). Pierre and colleagues show that there is little adaptive potential in hihi using three different methods. They show that hihi lack diversity at the genomic level, heritability in a range of adaptive traits, and genetic variance in relative fitness – all signs of a strong lack of adaptive potential. This is the first time such extensive analysis has been done on a threatened species, and it is highly likely hihi are not unique in facing this challenge. The authors go on to suggest that the best, and only, way for hihi to regain adaptive potential is to be supported in growing large populations to allow this process to occur naturally. Luckily for hihi, this is exactly what the Hihi Recovery Group is doing!

REFERENCE

de Villemereuil, P., Rutschmann, A., Lee, K.D., Ewen, J.G., Brekke, P. & Santure, A.W. (2019) Little adaptive potential in a threatened passerine bird. *Current Biology* 25: 889-894.



Nucleotide Diversity and Proportion of Polymorphic Sites Estimates provided for the hihi populations along with estimates for other species.

CREDITS

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REPORT PUBLISHED BY



Department of Conservation
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