



Hoiho

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Groundbreaking egg hatching programme

A welcome sight – a nesting hoiho with two healthy chicks

Final nest numbers for the season will be presented at the Annual Yellow-eyed Penguin Symposium on August 5, but it looks like numbers of breeding pairs on the South Island are about 10% down compared to last year (157 in 2022/23, 172 in 2021/22).

Each hoiho season the team continue to improve their skills – this year more egg candling (looking inside an egg using a special torch) meant that we were able to identify infertile eggs (which could make good foster nests). The need for management of hoiho eggs and chicks increases year on year; and at sites where intensive management is unable to be achieved, breeding success is much lower. Okaihe Green Island, off Dunedin's south

coast, is one such site where poor access means that monitoring is unable to be carried out regularly. This season twenty eggs were transferred off the island – half were hatched in the wild and half were hatched at the Wildlife Hospital Dunedin before being raised in the wild (once they were a few days old). The Trust successfully raised four chicks to fledge from Green Island (two were hatched at WHD, and two in the wild).

This is the second season that we have fostered eggs, and the first time that hoiho eggs have been hatched in captivity before being raised in the wild.

Disease issues, including diphtheritic stomatitis (DS) and respiratory distress

syndrome (RDS), continue to plague young chicks. Disease treatment has however improved dramatically over the past few years on the mainland. Effective early identification of disease and uplift of chicks to hospital has increased the success rate of treatment and now very few deaths are attributed to DS. There are however still some deaths due to RDS – although this also appears to be minimised by in-hospital treatment. The Wildlife Hospital Dunedin staff and volunteers work hard to provide excellent care for large numbers of young chicks that come through their doors.

The mainland is however in stark contrast to Rakiura where there is a lack of disease treatment for young chicks. Additional monitoring on Rakiura this season found

Continued on page 2 >

Penguins

that many chicks died early in the first 2-3 weeks post-hatch, due to disease, which resulted in low nest productivity. There are huge opportunities in Rakiura to replicate the successful management and treatment of chicks on the mainland to improve survival for young chicks in future seasons.

Our ongoing monitoring of chicks throughout the season has also vastly improved. Rangers use a traffic light system to identify and prioritise birds that need increased monitoring – a system that is based on hoiho growth curves and a chick's estimated weight for its age. Chicks are weighed at least weekly (more often if needed) and then subsequent checks and resources are prioritised accordingly.

Nests were consistently visited several times a week and chicks were supplementary fed in-situ in the Tokakā Catlins (up to 12kg of whole anchovies, sardines and salmon per monitoring round). Chicks on Otago Peninsula and in North Otago fared much better and required fewer visits.

Eight chicks needed to be uplifted for additional feeding and rehabilitation at Penguin Place. There was some minimal monitoring in Rakiura of chick weights

which resulted in two exceptionally skinny chicks being uplifted. Now that we have a rehab facility on the island (at Mamaku Point) there are more opportunities in the future for helping underweight chicks – we just need funding to support it and to find a suitable soft release location. Twenty-two chicks from Murihiku and Rakiura were successfully soft-released in the Tokakā Catlins following rehabilitation at Penguin Place.

Regular moult searches on the mainland and on Rakiura extended well into May and revealed lots of underweight hoiho as well as several injured birds (particularly with leg and foot injuries). These two issues seem to go hand in hand; birds that are struggling for food are often getting injured in the process, likely because they are taking more risks and/or battling with other predators for food.

The team uplifted a massive number of juvenile and adult hoiho (n=93) from YEPT monitored sites between the end of January and start of May. Forty-nine hoiho went to Penguin Place, 22 to Mamaku Point, and 22 directly to the Wildlife Hospital for surgery prior to rehab (44 birds were from the Tokakā Catlins, 26 from Coastal Otago and 23 from Rakiura).

This season food shortages are likely a consequence (at least in part) of severe marine heat waves which have been long lasting and significantly warmed the oceans. Although we won't ever know the full extent of the issues caused by the heat waves, potential problems include: changes to fish distribution (movement to cooler/deeper waters) or range compression, reduced spawning or poor survival of fish eggs and larvae, reduced oxygen availability, and wider food web disruption. This is on top of the raft of existing impacts faced by these birds (e.g. benthic degradation, bycatch, sedimentation and pollution).

The well-oiled machine that is the ambulance at the bottom of the cliff (combining a wildlife hospital, several rehabilitation facilities and teams of rangers on the ground) continue to be necessary to provide essential short-term solutions, whilst we attempt to tackle the ever political ecosystem wide issues that affect our biodiversity.

REGION	SITE	NESTS 2022/23	(2021/22)	EGGS	CHICKS HATCHED	CHICKS FLEDGED	CHICKS PER NEST
Kātiki North Otago	Tavora	1	1	2	2	2	2.0
Ōtākou Otago Peninsula*	Okia	1	2	2	2	2	2.0
	Otapahi	6	7	12	10	7	1.2
Tokakā Catlins	Irahuka Long Point	10 ¹	9	19	19	14	1.4
	Cosgrove Creek	5 ²	7	10	7	5	1.0
	Helena Falls	3	2	6	5	5	1.7
	Harts Rock	1	1	2	2	2	2.0
	Purakaunui	0	0				
Rakiura Stewart Island	Rollers Beach	2	2	4	3	0	0
	Golden Beach	0	0				
	The Neck	0	0				
	Glory Cove	5	5	10	9	6	1.2
	Steep Head	2	2	4	3	1	0.5
Bravo Islands	Tommy	1 ²	2	2	2	0	0
	Goat	3	2	6	6	4	1.3
	Crayfish	0	0				
	Refuge	0	0				
	Groper	2	4	4	4	2	1.0
Whenua Hou Codfish Island	Penguin Bay	0	0				
	Sealers Bay	3	5	6	5	2	0.67
	Roderiques	0	0				
	NW Bay	2	5	4	3	0	0
	Alphonse	2	3	4	1	0	0

* Otekiho, Allans, Whareakeake, Kaikai, Omihi and Papanui (south): 0 nests (0 in 2021/22). Fuchsia Gully and Dicks Bush not searched (2 nests at Fuchsia Gully in 2021/22).

¹ Two nests were found later in the season.

² One nest was found later.

Please note that all chicks are represented in statistics for their natal sites, not foster sites.

Six chicks that were fledged from eggs/chicks from Okaihe Green Island are not represented in the numbers above.

Researchers find new virus in hoiho chicks

A multi-agency research collaboration involving the Trust, has found a novel gyrovirus which is associated with a fatal Respiratory Distress Syndrome (RDS) which has been killing young hoiho chicks within the first two weeks of life.

The research was led by Dr Janelle Wierenga (Massey University postdoctoral research fellow) who used next-generation sequencing technology to identify pathogens present in tissues collected from chicks that died of RDS. It is a similar technology used by scientists to identify the coronavirus in humans, later named SARS-CoV-2. The gyrovirus found in hoiho chicks is closely related to Chicken Anaemia Virus that affects poultry.

Typically, hoiho chicks that die of RDS are found with lung congestion and

haemorrhage. In 2020 and 2021, the respiratory disease was responsible for the deaths of 44 and 43 hoiho chicks respectively. The disease was initially identified in 2019, but historical necropsy records suggest that cases may have occurred as early as 2015.

Research is continuing, with the next step being to better understand the links between the disease and the virus. Ultimately, the aim is to prevent or minimise the effects of the disease.

The research has been led by Massey University and the University of Otago, and supported by the Wildlife Hospital Dunedin, Department of Conservation, Ministry for Primary Industry, as well as the Yellow-eyed Penguin Trust.

The Morris Animal Foundation funded the research.

WWF-NZ Community grant

WWF-NZ provides funding to communities in partnership with The Tindall Foundation. Originally called the Habitat Protection Fund and now known as the Community Conservation Fund, these grants fund hands-on ecological restoration projects throughout New Zealand.

YEPT is delighted to receive a Community Conservation Fund grant in 2023 to help fund the critical role of our Operations Manager, Amanda Salt.

Amanda leads the conservation programme and field team to monitor the hoiho and enhance their habitat, all guided by scientific advice and mana whenua. She oversees the field team of five, manages work plans and data, delivers accountability reporting and liaises with many stakeholders.

Jobs for Nature initiative a huge boost

In 2021 at the height of COVID-19, the government invested over \$1 billion in Jobs for Nature to help stimulate the economy and revitalise communities through nature-based employment.

YEPT's funding was for two years and sadly it comes to an end in September this year.

During this time however, Jobs for Nature enabled the Trust to substantially accelerate our work programme helping save hoiho and its habitat. It allowed us not only to retain two positions, but also to recruit two new hoiho rangers.

Each season, hoiho monitoring work becomes more labour-intensive as more effort is required to help hoiho successfully navigate increasing threats such as disease (e.g. avian diptheria, avian malaria, a novel gyrovirus), food-scarcity, predation, habitat loss, and so on. This funding has provided us with a significant increase in our capacity to deliver more effort protecting and improving outcomes for hoiho.

More staff on the ground has enabled the

operations team to increase its coverage of sites/locations and frequency of nest checks and, at times, to share more resources with others. In real terms this has meant experienced hoiho staff have been there early in the piece when birds are injured, sick or starving, acting quickly to give them a helping feed at the nest or taking them to other care, be it to Penguin Place or the Wildlife Hospital Dunedin.

This, together with increased knowledge and practices from many partners in the hoiho community, has played a significant part in improving the rate of chicks fledged from the nest this season.

We have also been able to send staff to Rakiura to carry out rehabilitation for underweight moulting hoiho which otherwise would not have survived their moult, all while still increasing our efforts on the Mainland.

In the off-season (May-September), Jobs for Nature funding enabled rangers to get through an enormous amount of habitat-related tasks. Examples include weed-

control, vegetation clearance to cut hoiho tracks in current and potential nesting areas, trap and trap network improvements, planting and new fencing.

Reflecting back, where we can assign a measure of the work carried out over the duration of the Jobs for Nature funding, we have.

By the numbers, since September 2021 we completed:

- Wide-ranging and comprehensive hoiho management interventions at a minimum of 19 sites from North Otago to Rakiura.
- 5,605 native trees planted covering 9.11 hectares.
- 343 hectares animal pest control targeting mustelids, rats, cats, possums, rabbits.
- 271 hectares weed control targeting species such as: gorse, elder, sycamore, pine, lupin, boxthorn, non-native broom.
- 1,860m new fencing installed.
- Over 20,000m of tracks cut and maintained.

Hoiho monitoring *through thick and thin*

The dense bush and masses of supplejack on Whenua Hou make it a very real physical challenge for nest searchers.



There has to be a nest in here somewhere...



Spotting other not-so-common species is a thrill for YEPT's nest searchers – a mōhua/yellowhead.



This hoiho chick has just had a successful health check and no intervention was required.



Hoiho monitoring

through thick and thin



Supplementary feeding in situ for these chicks.



A vulnerable adult is grounded on shore as it waits for its moult to finish. This can take up to four weeks.



Chicks are safely transported back.



Releasing a healthy hoiho to its home base is one of the most satisfying outcomes of our work.

Rakiura rehab a 100% community project

The Yellow-eyed Penguin Trust's rehabilitation facility has been up and running again this season at Mamaku Point on Rakiura, after a successful trial last year.

Trudi Webster and Sandy King have been out and about searching for underweight hoiho that need help to get through their annual moult. Due to limited capacity, the focus this year has been on the breeders to ensure that they survive.

Birds were uplifted from various locations in and around Paterson Inlet, including the Bravo Islands, Glory Cove and Steep Head. Matt and Alina Atkins, and the skippers at Rakiura Charters and Water-Taxi are long-standing supporters of the Trust. They provide transport to and from the penguin colonies, ensuring that Trudi and Sandy return safely to the wharf with their precious (but often fairly stinky!) cargo.

As well as underweight moulters, we also found an emaciated chick and an adult with serious leg injuries. Both needed to go to the Wildlife Hospital in Dunedin for specialist care. The female chick made fantastic progress and was soft-released at Penguin Place with a group of other chicks to maximise her chances of survival. Thanks to the skill and care of the vets and staff the adult survived multiple surgeries and was successfully released back at Steep Head.

Three birds that were in rehab at Mamaku Point were repeat offenders having also required help last year. One of these birds had been sighted regularly at Golden Bay and was nicknamed Leo by locals. He had large patches of missing feathers all the way down his back and was also underweight pre-moult. He finally moulted and grew a full suite of replacement feathers. Leo had one of the longest stays in rehab (52 days) – typically birds were in for an average 23 days (range 8 to 55 days).

Twenty-four hoiho have been rehabilitated in total over the past couple of months at Mamaku Point (11 females and 13 males). All were released back to their uplift sites (except for the chick) after some extra care and several feeds of fish.

Thanks to Sanfords, Penguin Place and Solander Gourmet Seafoods for donating silversides, sardines and anchovies.

We couldn't do this work without the kindness and support from the local community. The crew at Mamaku Point Conservation Trust have been instrumental – in particular thanks to Rachel and Roy Thompson for allowing us to set up camp at their reserve. And to Ant Simpson, Matt Hare and Ernie Mason for building the new shed (amongst many other things).

The storage shed is massively helpful to the rehab operations. It means we can store equipment, prepare and store fish, and clean gear all in the one location near to the rehab enclosure.

Thanks also to Helen Cave, Carolyn Squires and Southern Seafoods for allowing us to store additional fish supplies at the Fishermen's Co-op. Department of Conservation operational staff have also supported the venture and provided some funding towards the moult and rehab efforts this season. Rakiura Māori Lands Trust have been supportive, and Jill Skerrett, Lou Sanson and Shane Anderson visited the facility to see hoiho that came from out near The Neck.

The Yellow-eyed Penguin Trust has continued the partnership with Halfmoon Bay School Te Kura o Rakiura. Acker's class visited the rehab facility as they had been learning all about hoiho, so it was fantastic to be able to show the tamariki these special birds and



Who is happier? Halfmoon Bay School Te Kura o Rakiura students Aiden and Josh, or the hoihos the boys have returned to their home?

Jill Skerrett of the Rakiura Māori Lands Trust (left) and Trudi Webster (YEPT) check out penguin progress at the Mamaku Point rehab shelter.

support their learning about the local environment. Several of the older students also helped to release the healthy birds back into the wild.

There is definitely a continued need for the rehab facility on Rakiura. There was not enough space for birds this season and two temporary pens needed to be created in the forest to provide additional space. The hope is that this can be expanded next year, with another mosquito-proof enclosure built to house birds, and locals trained to run the facility. The Trust will continue to champion hoiho in Rakiura with the aim of improving their prospects and chances of survival.

Yellow-eyed Penguin Annual Symposium

SATURDAY 5 AUGUST 2023

Registrations will be opening soon.

More details on Facebook closer to the date.

It's all go at Mainland!

It's all go here at Mainland with the New Zealand Cheese Awards season. We put on our glad-rags in the first week of May and headed to a gala dinner to crown the tastiest of cheeses across the country, served with a healthy side of cheese puns too!

The Mainland team was chuffed to take out a huge 10 medals this year including a Gold Medal for one of our personal favourites – Mainland Special Reserve Epicure Aged Cheddar. It's aged for up to three years and this award really does prove that good things take time.

With a couple of long weekends on the horizon, we're looking forward to taking some time out to do some baking. If you need a bit of inspiration, we think these tasty girdled cheese scones are the perfect treat as the weather cools down. You could say they are fit for a King!

You can find the recipe at mainland.co.nz or here: <https://bit.ly/37O2yhv>

The Team at Mainland



Farewell Pat

It is with sadness that the Trust acknowledges the passing of Patricia Lady Mark who was a trustee from 1994 to 2018.

Pat joined the Trust Board in 1994, when the Trust was in its teenage years and after participating in numerous planting days. Her deep understanding of conservation and her botanical knowledge was of huge value.

Pat remained on the Trust Board until 2018, and after that continued her involvement with the Trust through our operations sub-committee and continued to actively participate on planting days or visits to reserves. As one trustee reminded us, she served as a 'conscience' for the Trust, seeking validation for decisions to ensure they were in fact the right ones.

Pat willingly volunteered at functions and events including conferences, attending meetings in Wellington etc. But she was far happier doing the physical conservation work than attending such meetings or even sitting around the Board table. She just loved having a spade in hand and participating in planting days, or weeding previous plantings, or seed collecting and planning where next year's plants would go. When physically digging holes in the ground was too much for her, she still attended planting days to ensure the job was done correctly and to gather planter bags from other volunteers, and to just make sure the volunteers were doing their jobs correctly.

Pat was down to earth, dedicated and committed and hugely supportive of both the Trust and the plight of hoiho. Her interest in everything YEPT and hoiho never waned, and regular visits with her saw us being grilled for the latest statistic on their survival or how the weeds were doing.

Last year the Trust was delighted to receive a generous gift from Pat and Sir Alan for the development of Long Point / Irahuka Reserve in the Catlins. Her legacy will continue through this work.

Her legacy will also continue through Tavora Reserve. In April, Pat's family and the Trust marked her passing with the installation of a seat and plaque at Tavora Reserve in North Otago (pictured left with Sir Alan) where she spent many hours in active conservation work and chairing the Reserve Management Committee.

Pat's legacy for YEPT will also live on in knowing she contributed so much to hoiho conservation and through the passion for conservation that she has mentored in other trustees and staff. RIP Pat.

A note from the Chair

Tēnā koutou katoa

This newsletter provides a milestone for our organisation; Sue Murray, our General Manager, leaves us in September having been the one and only person to have filled this salaried position since the Trust was formed. Sue has some fascinating stories to tell, of people and penguins and how these two groups sometimes are able to be brought together.

Over the years of regularly preparing this column I have felt obliged to keep up with good business and professional practice. The Trust operates alongside a variety of individuals and organisations and of possible interest to our readers is a description of how we went about recruiting Sue's replacement, a task being completed as I write.

First, and in keeping with New Zealand tradition, we formed a small group from within the Board. This included Sue herself who had an advisory non-voting role to play, was able to share more detail as required, and this helped with the preservation of the Trust's Institutional Memory. This group would oversee the robust appointment process, especially making sure that whatever we did was informed by good practice and relevant employment law.

One of the early discussions revolved around setting the exact nature of the position. As part of this we worked with the full Trust Board to understand the key skills, experience, and personal qualities we sought in a new General Manager. We also invited a retired senior DOC manager, with good knowledge of the Trust having worked alongside us for years, to help us with this process.

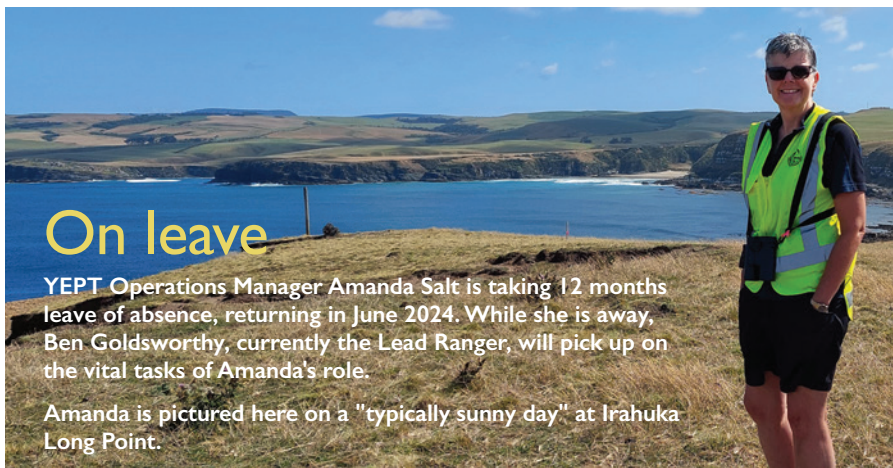
We advertised widely and received 34 responses, all of which were acknowledged. From there we produced a short list of 13, whittled down to six candidates suitable to be offered an interview. Of these six candidates three were invited to attend a second interview.

I am happy to report that the whole process has been extremely robust, in part because Sue was able to give us a lengthy notice period allowing for plenty of time. I look forward to announcing the new General Manager in due course.

A synopsis of Sue's contribution over 24 years with the Trust will be included in the November newsletter.

Nga mai

Eric J. Shelton
Chair



On leave

YEPT Operations Manager Amanda Salt is taking 12 months leave of absence, returning in June 2024. While she is away, Ben Goldsworthy, currently the Lead Ranger, will pick up on the vital tasks of Amanda's role.

Amanda is pictured here on a "typically sunny day" at Irahuka Long Point.

Our thanks

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WWF Community Conservation Fund
Sincere thanks to all those people who make donations through our online portal. We truly appreciate this support.

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YEPT staff partners

Thank you to:

All the landowners who have contributed to our habitat protection work

Thank you to all Volunteers:

We are tremendously grateful to all the other volunteers, including the regular Nursery workers and the Habitat Volunteer Team for their valuable contributions to our work.

Special thanks to AdArt Brand Promotion for the design of this newsletter



The production of this Hoiho newsletter by AdArt Brand Promotion ticks all the green boxes

Penguins. Plants. People. Passion.

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