

# Pohatu penguins' Newsletter - March 2021

## Autumn in Pohatu/Flea Bay!

We can't deny it... Summer is naturally coming to an end. Even though we are still enjoying amazing warm days, mornings and evenings are here to remind us that it won't take long before jackets and beanies will be part of our daily dressing!

At any time of the year, Pohatu is always just as gorgeous as the previous day and even when we will be working in our rainproof gears soaked to the bone (anyway!) we will still enjoy being out there, knowing that we are giving the best we can to restore our beautiful backyard and its amazing creatures 😊



## End of the breeding season

With an exceptionally early start of the breeding season back in July we were wondering if the season would end earlier or at the same time than the previous years, making it a longer breeding season. We indeed had a longer breeding season but with more early breeders than late breeders. Usually early breeders are doing better than the late breeders which made it a very good breeding season. We did a bit of maths and found out that 90% of the active nesting boxes we monitor were successful this year!

### *The super breeders!*



We had 2 nests this season where the penguins had double clutched. These nests are occupied by "little blues" who are double clutching (versus our slow breeding "white flippered" who have only 1 clutch per year). Both clutches from the 2 nests were raised by the parents until fledgling age which is a real success! In the previous years the 2<sup>nd</sup> clutch of chicks were fed in rehab as parents abandoned them to prepare for the moult...

Above: *These chicks from a 2<sup>nd</sup> clutch were the very last chicks to fledge late February!!*

### *The rehab chicks*

Remember the chicks - introduced in the previous newsletter - brought in rehabilitation? You might wonder how well they did in care... Well, I am very pleased to tell you that they ALL were successfully released in Flea Bay after spending some quality time in the expert rehab hands of Kristina & Thomas in Christchurch.

These two 8 weeks old chicks, victims of a stoat attack resulting in an infection on their back, were released together on a peaceful evening in Pohatu/Flea bay. We waited dusk to make sure there wasn't any Giant Petrels (one of their main natural predators) around to threaten them.



*Right : 2 lucky penguins found on time to be treated*

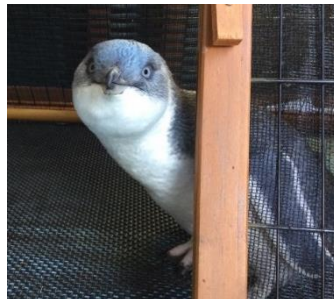


The 2 small underweight chicks found in two neighbour nests spent time together in rehab and bonded really well like siblings. They were also released at Flea Bay/Pohatu.

*Top left : Chick 1 on arrival at rehab facility*



*Bottom Left : Chick 1 a week later has already put on weight.*



*Top right: Chick 1 and 2 bonding together.*

*Bottom right: Chick 2 fully grown*

*Photo credit : Kristina Schuett*

Toward the end of the breeding season, we found a few more nesting boxes with chicks that weren't up to a healthy weight and needed to be hand-fed for a couple of weeks before fledging. All were released with success as well!

Within the whole breeding season 2020-21 we had 10 chicks in care versus 34 last year!

### *How do we release penguins?*

We do what we call a "soft release". Once rehab penguins are mature and have reached a good weight we take them for a daily swim in the nearby creek so we can check their feathers are waterproof. We can also observe their behaviour in term of confidence and willingness to be in the water.



*Left : a penguin diving underwater shows good skills for future release*



*Right : after swimming we can see if the feathers are waterproof and if the penguin is able to preen to re-oil its feathers*

An other sign that tells us a penguin is ready to go at sea is the way it stops feeding from our hands. A way to tell us "I'm ready, I don't need your help anymore!".



When it's time, we take the penguins to the beach at dusk and let them imprint the surroundings (the chicks will be coming back to the bay to breed when they are 2-3 years old) so they can go to the sea at their own pace. For some the call of the sea is strong: you see them aiming for the first wave and off they go!

*Left : Goodbye little penguin! See you in a few years' time...*

For the shy birds not quite certain about the water, we place them in the special "rehab" nesting box by the sea so they can decide to leave whenever they feel ready. They might wait an early morning to go with other penguins and feel not so lonely! We check on them daily to see if they are still there or have left on their terms.

*Right : Averil is giving a last feed to a fledgling before placing it in the "rehab nesting box" by the sea, for a "soft release".*



## Moult season

After chicks fledge, the parents spend some time by themselves at sea to catch up the weight they have lost during breeding season (everyone knows how exhausting it can be to raise young ones!) and also to fatten up and get ready for the moult.

*Right : a fat penguin ready to start moulting. The grey feathers are damaged and no longer waterproof.*



## *What does "moult" mean for penguins*



The moult is a yearly physiological process that consists of losing old damaged feathers that need to be replaced by new ones. All penguins moult and they need to stay on the land as during the process they are not waterproof. This means penguins can't get any food or drink during the moult. That is why penguins need to store a lot of energy in their body otherwise they might not survive the moult. It takes 10 to 15 days for a little penguin to moult.

Don't know how I would feel after a total of 2 weeks fast but I probably wouldn't feel super strong and flash!

What penguins need to do in order to be safe during the moult is to find a shelter – most of the time they return to the nest used during breeding as it provides an excellent shelter – and to slow down their body functions. A bit like someone who would do some yoga or meditation! This allows penguins to save energy to survive this crucial time on the land. Of course, penguins are very vulnerable during the moult. Vulnerable to predators, to stress and to events like heat wave...



## *The heat wave*

Late in January - while most of the colony was moulting in the bay - a few days of heat wave hit New-Zealand. We knew this could be fatal to some penguins, especially the weaker ones. The team spent 3 days hiking

under screaming hot sun through the colony to every single nesting box (about 200) in order to check the well-being of the penguins. The nests getting shade during most of the day were doing pretty well. But in some exposed nests we used water mist to provide moisture that cooled the nest down. For the penguins clearly looking over-heated (breathing with their beak open) we dunked them in a bucket of cool water before putting them carefully back in the nest.



The penguins didn't know what we were doing but when they got in the bucket of cool water you could see them visibly relaxed and some even took a drink! A couple of moulters were brought to rehabilitation as their well-being was threatened. All were released at the end of their moult in good condition. We can't emphasize enough how our regular monitoring is enabling us to pick up life-threatening situations for penguins before it's too late.

*\*Please note that the team at Pohatu holds a permit to handle penguins and to have a rehab facility. If you find native wildlife in trouble and concerned about their well-being please call the Department of Conservation.*

#### Horomaka / Banks Peninsula survey 2020-21 on Banks Peninsula



We carried on the penguin survey until Xmas 2020. After that, the signs of occupancy of the nests (fresh poo and nesting material) were becoming less and less obvious so we had to stop. We will finish surveying the remaining sites in Spring 2021. Just like the previous survey 20 years ago, it will take 2 seasons to be completed.

We have already a few results we can release as we can compare each site's count with the previous count (2000-2001). The bad news is that most of the colonies surveyed have dropped in number in the last 20 years. Even in Pohatu with so much conservation going on, we lost about 300 breeding pairs within 4 years! It seems like predation on the land isn't to blame thanks to our intensive predator control program and we actually hardly found predated penguins during the survey.



We are more concerned about the threats penguins are facing at sea:

*Global warming:* Did you know that the ocean is the largest carbon sink on the planet, absorbing 90% of the excess heat generated by increased greenhouse gas emissions? This makes the effects of climate change faster at sea than on the land. If water temperatures raise then fish species will tend to swim deeper to find cooler temperatures. Then sea birds and marine mammals have to dive deeper to find their food. Having lungs like us they struggle to hold their breath longer to dive deeper and if they can't reach their food they are then likely to starve... Little penguins in the North Island have struggled a lot this season due to the "La Nina" effect which warms the surface of the sea.



*Fishing industry:* Little is known about the foraging areas used by penguins, so the fishing industry might operate in the same area marine wildlife is trying to feed. This can result in a lack of food for marine species, or by-catch. Some fishing methods are more destructive to the sea floor like bottom trawling and will have long term effects on the whole marine eco-system. Also, there are not many fishing boats equipped with cameras or observers around Banks peninsula, resulting in a lack of data about what is actually being extracted at sea.

*Pollution:* Plastic pollution and chemical pollution might be responsible for wildlife deaths however there is a lack of data about these casualties. In recent studies, it has been found that the commercial fishing industry contributes to 46% of the plastic in the oceans.

We hope further scientific research will help understand better what is happening to Little Penguins and other marine species within our big blue backyard, so we can protect them better.

### Helps Pohatu Conservation Trust

#### *The difference you guys make*

The penguin adoption funds are held in the Trust and help paying for conservation needs (maintenance of nesting box, predator control, food and vet bills for rehab penguins, research, etc). In "normal situation" (before covid19) our eco-tours also contribute to our conservation work. As you can imagine, with borders being closed many tourism operators are going through tough times... Having support coming from all around the world is so heart-warming that the word "Thank you" never seems to be strong enough. We value so much the interest you all have for our wildlife and your contributions made such a big difference for us. This means that even in quieter times we will be able to provide the penguins with the best protection we can on the land...

#### *Future Projects*

We have been talking about it for a couple of years and still waiting for paper work to be finalised but hopefully next season we should start micro-chipping part of the penguin colony. Micro-chipping consists of placing a

little micro-chip under the skin of the penguin (just like for dogs and cats!). Micro-chips are being used in other colonies and are replacing the controversial metallic flipper bands. In Pohatu, penguins are not banded at all so we can't identify penguins other than relying on some features like their markings, size, scars, etc. This will greatly help research and understand penguins' survival rate and behaviour. We plan to also use GPS devices (size of a small battery) to record penguins' movements at sea: how far they go, how deep they dive, how often, etc.

This is a very exciting project! Averil has already started her training to micro-chip penguins last year and along with our marine scientist Rachel they will drive this program. We are also proud to announce we will be working in partnership with New Zealand Penguin Initiative and the Blue Cradle foundation. Team work makes the dream work!

Visit our new "Pohatu Conservation" page on our website for more info on our conservation actions!

<https://www.pohatu.co.nz/About+Us/Pohatu+penguin+conservation+actions.html>

*Happy Easter to all !*

