



# Yellow-eyed Penguin News

## No middle ground:

### You can have either rats, cats, and mustelids - or birds

by Richard Holdaway

For many New Zealand birds, the arrival of human beings was a catastrophe unmatched in recent geological history. Although the role of predation has been debated since

were large enough to be interesting to hungry people. Species associated with water — either fresh or salt — or that lived in particularly wet terrestrial environments, or that lived in the trees survived. The more young a species could raise each year, the safer it was, so, the multi-brooded tomtits, grey warblers, and fantails inherited the forest. They outbred (just) the effects of nest predation while robins hold out where they can recover from bad

years. Saddlebacks were on the brink even with only the Pacific rat to contend with, and most of the wrens (bush, Lyall's, stout-legged, and long-billed) succumbed.

At the other end of the size scale, moa, geese, adzebills, and takahe were simply too attractive as food sources. They bred too slowly to withstand even seemingly insignificant additional losses. Long-lived New Zealand birds, which included

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the mid-nineteenth century, only in the past 25 years has it been solidly implicated in the demise of one-third of the original avifauna. Old scapegoats such as climate change are unsupportable. If the last Ice Age did not kill off species, then the climate change in the past 1000 years could not have caused any extinctions.

The only new factors in the environment when most bird species went extinct or started their slide were Pacific rats and people. And the species affected were just those that the rats could catch and lived where rats were most abundant, or

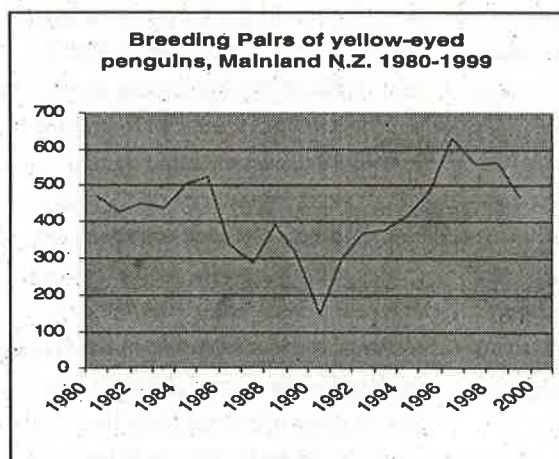
## How are the yellow-eyed penguins doing?

The Yellow-eyed Penguin Trust began in 1987 with the aim of halting and reversing the decline in the penguin population. Initially the Trust efforts appeared to be successful and numbers rose to 395 pairs in 1988. However the next season was a disaster with a bio-toxin entering the penguins food chain and numbers fell dangerously to 150 pairs. Good food years, predator control

and habitat protection by the Trust and Department of Conservation saw the population grow to 671 pairs in 1996.

1997-99 brought El Nino/La Nina weather patterns (altering ocean currents along the East Coast of the South Island) and poor food years with a resulting drop in penguin numbers to 471 pairs breeding last season.

The vulnerability of the penguins to oceanic changes makes the Trust's land based work in predator control and habitat protection absolutely vital. It helps ensure that penguin numbers are at their optimum so that the population can cope with the bad seasons and thrive in the good years.



## A visit from our Patron

Lady Beverley Reeves assisted with some planting at the Trust's Tavora Reserve in North Otago. Seen here with three totara trees which she firstly needed to straighten before surveying her handiwork!

A great day was had by all who joined her for this time.



### No Middle Ground (continued from page 1)

even the smallest, were fatally vulnerable to predation levels even only slightly higher than they had coped with from predatory birds before. For moa, a 1% reduction in adult survivorship from human hunting was too much: all 11 species vanished within 150 years of human colonization. In wetter areas, moa numbers, naturally low because only two or three species used tall forest and the rain forest interior could support few individuals, were insufficient to support moa hunting for very long. For example, moa may have been extinct on the Coromandel Peninsula within five years of human settlement. The people there had to rely on seafood and horticulture from the earliest times, whereas farther south where moa diversity and numbers were greater, moa hunting lasted a century or more.

Adzebills and geese went as fast as the moa, while the ranges of kakapo, king shags, and the two big penguins shrank. King shags formerly bred as far north as Kaitiaki and the two big penguins — New Zealand crested penguin and yellow-eyed — nested as far north as Cook Strait and almost certainly well north of that, too. Their distributions were already relict when James Cook arrived.

Ignorance of the effects of predators held back conservation in New Zealand for too long. But it was difficult for biologists trained in the Northern Hemisphere tradition to believe that predation might cause extinction. On continents, predation might induce population cycles in prey populations, but not extinction. Even Sir Robert Falla attributed the decline of saddlebacks on Big South Cape Island in the 1960s after black rats became established to “subtle habitat

change”. He remarked that “if the saddlebacks were really threatened then they were surely saved” by the translocations to predator-free islands. Now predator-control has become an icon of the New Zealand conservation movement, just as translocation became in the years after Big South Cape. It is well to remember how recently predators were regarded as minor problems, and the Pacific rat was a harmless herbivore.

Even more recently, we have begun to realize that many of today's most pressing conservation problems, including takahe, kakapo, and yellow-eyed penguins, began well before Richard Owen published the first account of extinct New Zealand birds. Tim Lovegrove's conclusions that Pacific and Norway rats were eliminating saddlebacks from the North Island mainland before mustelids and black rats arrived support fossil evidence that the range of species such as huia and kakapo had been drastically reduced by the nineteenth century. The reductions had reached a limit with the North Island population of little spotted kiwi and North Island takahe, both of which are known from single nineteenth century records of live birds but whose fossil remains are widespread. The small size of kakapo eggs meant that a slow attrition by rat predation had been happening for centuries. Such long-lived birds are curiously resilient to losses of chicks and eggs, but the general trend was still inexorably downwards. If kiwis laid eggs more in keeping with their body size, they too might have been fossils only by the nineteenth century. As it is, the introduction of ever-larger predators (from Pacific rats to stoats and ferrets, cats and dogs) has probably sealed the fate of mainland kiwi.

So, we are fighting old problems.

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## International Science Festival (ISF)

Natural History NZ Underwater Cameraman Andrew Penniket gave a talk to a packed audience on *Diving with Animals* as part of the recent ISF. Andrew began his address togged in his diving gear, much to the fascination of children and adults alike. Through video footage he proceeded to take the audience through an evolutionary journey. His journey began with the earliest amphibians and continued on through to penguins, dolphins and whales.

Many thanks Andrew for keeping us all enthralled with your adventures!



### No Middle Ground (continued from page 2)

As a community, we have to decide whether we want to pay the costs of mainland islands or predator control forever —whether there is the political and social will to maintain that expenditure *ad infinitum*. Social pressures change. There are many calls on the public purse. Perhaps the future for our birds lies only on offshore islands, but are they really that safe? Scientists are human, and would much rather study the rare and precious, but ultimately it may be those who find a way to eradicate rats and mustelids from the main islands who will ensure the survival of more than the most resilient of New Zealand birds into the next century.

## David Bellamy visits the Trust



Well known British botanist, environmentalist and supporter of the Trust, David Bellamy spent a short time with Trustees and staff during his visit to Dunedin as guest of the International Science Festival. He was updated on various aspects of our work, including the Tavora Reserve in North Otago which he officially opened in 1994. He is pictured here with some Trustees, staff, and a representative from Mainland Products Ltd.

## PhD students to study penguins

This year the Yellow-eyed Penguin Trust is sponsoring two PhD students to study reproductive success in yellow-eyed penguins. Both will be based at Boulder beach (Otago Peninsula) for the summer and will study the resident penguin population. Melanie Massaro will investigate biological and behavioural factors related to reproductive success and Alvin Setiawan will look at the hormonal mechanisms which underlie the reproductive behaviour observed by Melanie, and the energetics involved with raising chicks.

What makes this study so exciting and different to most other reproductive studies on other bird species is that the age and the reproductive history of the penguins are known. Most studies of this type

simply have to ignore the influence of age because they don't have the data. Thanks to the careful collection of nearly 20 years data on the Boulder beach penguin population by John Darby, the effect of age and past breeding success can be included in their analysis.

This is the first year of a three year study. In subsequent years this data and the 20 year database will be used to identify critical factors responsible for long term population changes and individual reproductive success, and evaluate the past management practices on the population.

The students will be supervised by Lloyd Davis in the Zoology Department, Otago University. John Darby will be their advisor.

# A Natural Celebration

## "DUNEDIN ROCKS!"

This was the Minister of Conservation Sandra Lee's first comment in her speech. The heavy rain had not deterred the many theatre and concert goers filling the Dunedin streets, nor had it stopped over 150 people attending the Yellow-eyed Penguin Trusts "Natural Celebration" event. There was a real party atmosphere in Dunedin that Friday night.

We were celebrating the recent Biodiversity funding initiative. Just a few months ago the government injected \$187 million over 5 years into this programme and we had invited the Minister to our celebration to accept our appreciation.

It was a really enjoyable evening. Ngai Tahu's Tat Wesley, supported by the Otago Girls and Otago Boys High School Kapa Haka group welcomed the Minister with a Mihi. Long Beach Amenity Society presented us with plates of 'noxious nibbles'—wasp surprise, stoat spread, possum balls were some of the names of the dishes.

Our evening was full of well-known faces. Our Patron Lady Reeves flew in from Auckland especially to attend. Dame Elizabeth Hanan, the Deputy Mayor of Dunedin and a keen supporter of environmental issues came, as did Pete Hodgson, Minister of Fisheries, who arrived from a week under the spot light in Parliament. Professor Alan Mark, recently retired Chair of the Conservation Board (who incidentally was described by Sandra Lee as her mentor in conservation while they were both members of the Forest and Bird National Executive)

and other local dignitaries were also present.

We presented the Minister with the book 'Wild Dunedin' by Neville



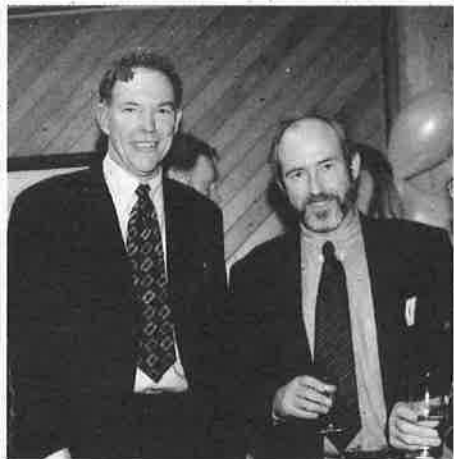
Peat and Brian Patrick and a cuddly toy penguin to thank her for coming. Her twenty minute speech in which she barely referred to her notes, impressed the audience, including those of other political persuasion. Highlight of the evening was a talk by Professor Richard Holdaway on the decline of our native birds due to predator introductions. It was a fascinating talk and one that nicely introduced the weekend workshop on Mustelid eradication.

*The evening was made possible by the generous support from Michael Stedman and John Crawford of Natural History NZ Ltd.*

Photos by Izumi Uchadi



Dunedin Deputy Mayor, Dame Elizabeth Hanan; Lady Reeves Director, Michael Stedman; Mainland Products Ltd Legal Sec



Richard Holdaway and Rod Morris from Natural History NZ

(Left) Minister of Conservation, the Honourable Sandra Lee and Spokesperson for the Trust, Peter Simkins

Tui, Vick Bennett



Trustees and staff: Mervyn Cranefield (Treasurer), Sue Murray (Executive Officer), Margaret Murrell, Euan Kennedy, Jim Ellison (Field Officer), Anifa Pillai, Ruth Littlewood, Lala Fraser, David Blair (Projects Officer), Peter Simkins (Spokesperson), Pat Mark, the Honourable Sandra Lee (Minister of Conservation), Alan Wright, Lady Beverley Reeves (our Patron)

# People enjoying the evening ...



Natural History NZ Managing Secretary, Mark Mitchell.



Tat Wesley



Otago Girls High School & Otago Boys High School Kapa Haka Group



Yates; Kiwi Alannah Holgate; Kaikariki Jilenna and Pukeko Corinna Bennett (OGHS)



The 'penguin wine waiters' Otago University Environmental Students, Michael, Stephen and Jeitsje



Past Trustee Lyn Dowsett



DoC Bruce McKinlay



Kiwi-Callum James and Kokako-Peter Sims (OBHS)

Minister of Fisheries Pete Hodgson



Researcher John Darby



Life members Donald & Margaret Malcolm



Eco-tour operator Fergus Sutherland

Local conservationists Les Cleveland & Alan Mark

# Mustelid Workshop



Stoats, weasels and ferrets make up the Mustelid family. This gang of vicious killers were first brought over from Europe in the 1860s to control the rabbit numbers. It did not take them long to realise

applauded the work of the Yellow-eyed Penguin Trust. Dr Justine Ragg (researcher) and Craig Gillies (DoC) talked on mustelid biology, followed by Dr Hiltrun Ratz (researcher) Peter Cook (DoC), David McKay (farmer) Dean Nelson (DoC), Arnie Elbers (trapper) Bourke Thomas (Southlight Wildlife) and Graeme Loh (DoC) who spoke on habitats and controlling predators. Francis Helps (farmer) spoke on White flipped penguins at Banks Peninsula habitats. Bruce McKinlay (DoC) wrapped up the proceedings.

Sunday was the hands on day where Bourke Thomas and Arnie Elbers took the party to Okia reserve where everyone had the opportunity to set a trap. Bourke had set a line of

traps during the previous week and although none was successful on that day, a stoat was caught during the following week.

A resource booklet for trappers will be produced using a Lotteries grant and upon completion a follow up day will be organised.



Bourke Thomas explaining his trapline at Okia Reserve.



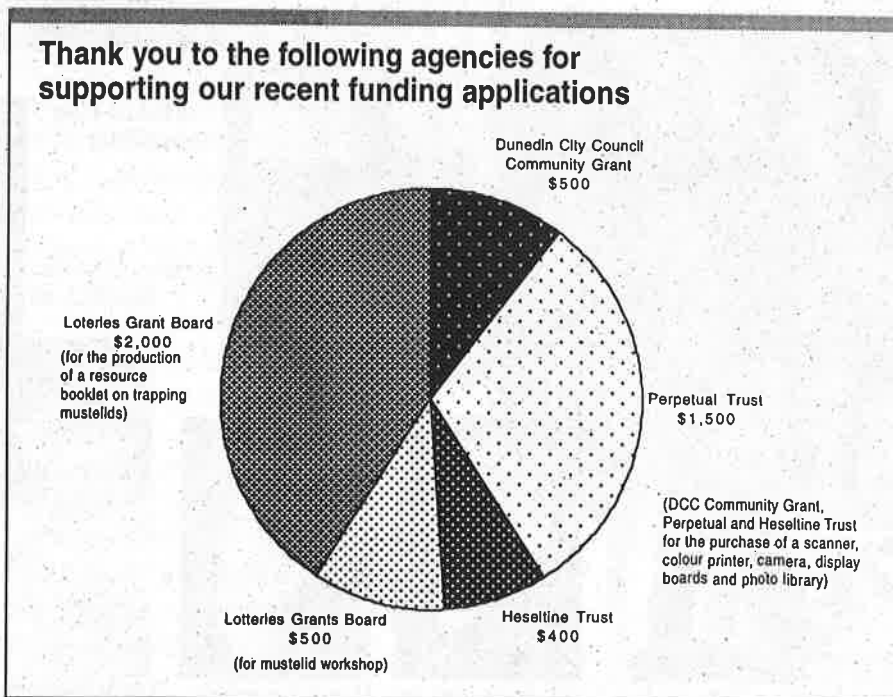
DoC trapper, Arnie Elbers demonstrates his trapping methods.

that New Zealand's flightless and ground nesting birds the Kiwi, Dotterel, Black Stilt, and our penguins were a much easier meal. Last year 47 yellow-eyed penguin eggs and chicks were taken by mustelids from breeding sites on the Otago Peninsula. It was this disaster and requests from locals for help and support that prompted the Trust to organise a weekend workshop to discuss the many aspects of mustelid control and share techniques and skills in the field.

75 people assembled in Pukehiki hall on the Otago Peninsula and Sandra Lee, Minister of Conservation opened the proceedings and spoke of the urgent need to arrest the decline of our biodiversity and



Minister of Conservation, Sandra Lee



# NEWS IN BRIEF

The **Annual General Meeting** will be held on Tuesday 28 November at 7:30pm in the Otago Art Society Rooms, Great King Street, Dunedin. Guest speaker yet to be confirmed. All welcome. The Mainland Art Exhibition will be still be on view.

Our **Nursery has a new home** – it recently was moved to a new site in Company Bay with better facilities and more sunshine! Thanks to the Dunedin City Council for making the site available and all their assistance with the changeover from a decommissioned sewage treatment site to a plant propagation nursery!

Nursery manager, Jim Ellison spent a week at the Department of Conservation Nursery **Motukarara** on Banks Peninsula, learning techniques used by them. Jim has several new ideas he will trial this year.

Off cuts of old **woollen carpets** have been placed in two of the Trusts reserves in the hope of controlling some of the rapid grass growth, thus allowing the penguins loafing areas, and better access from the beach to their nesting sites. It may also help keep their feet clean!

An extra special thank you must go to one of our dedicated volunteers, **John Hodgkins** formerly of Invercargill, and now in Wellington. John has been the typesetter and designer of the Trusts biennial newsletter for several years. We are extremely grateful for all the volunteer hours John has given to the Trust for this work.

Avian enthusiasts may like to try out this site for real live full-motion user-controlled cameras to the internet, and watch these amusing birds.  
<http://livewave.com/cobrand.asp?feed=18>

The Trust Office can now provide **credit card facilities** – zip zap your donations, subscriptions and purchases. Mastercard, Bankcard and Visa.

The Trusts new **web page** is currently under production. Keep watching for this site.

Please consider remembering the Yellow-eyed Penguin Trust in your **will**. Managing and/or purchasing penguin breeding habitat and controlling predators such as stoats and ferrets are some of the ongoing tasks undertaken by the Trust. Saving the yellow-eyed penguin is a long term task and **bequests** will help secure the survival of this extraordinary and endangered species.

**Stewart Island Hoiho counting** continues this breeding season. Watch out for these findings in the next newsletter.

**Penguin nesting time** is here again – remember to hide, talk quietly, keep to the tracks and **DON'T** take your dogs near them.

## Xmas Penguin fairies –

Try this unique idea for the top of your Xmas tree! Unfortunately there is not room in this newsletter to send you the pattern for making these, so if you are keen, send us a self addressed envelope and we will send it to you.

## YEP Consultative Group Annual Symposium

The morning began with summaries on penguin happenings at various sites. The afternoon began with a scene setting address by



chairman Bruce McKinlay on “Revegetation for Hoiho and other coastal species”. This was followed by a variety of speakers on topics such as the revegetation of Te Rere Reserve after a devastating fire in 1995 destroyed much of the vegetation and many of the breeding birds. Methods of planting have changed over the years, with experience and successes paving the way for these changes. For example, initial plantings of flax with 1/2 metre centres have been increased to 3metre centres, and now dynamite is used to remove and break up large flax bushes for replanting.

Other topics covered included the preparation of support documents, overtopping by rapidly growing species, the importance of defining microsite areas and having good planting management to obtain forest structures as quickly as possible. Restoration work using Pingao along road edges was discussed, as was the preservation of a local Dunedin area, Craigieburn Reserve, and the importance of a vision to initiate a revegetation project. The afternoon concluded with a discussion on the issues that had been raised – thinking about **WHY** as much as **HOW**, relevant time frames to retain interest levels, good documentation, and illustrations of all stages of change through revegetation.

# Wetland Enhancement

Our property Tavora, near Palmerston has a new permanent fence as a result of funding from the Otago Regional Council's Wetland Enhancement Scheme. The Trust is grateful to Graham Thurlow our lessee at Tavora, who drove the posts for this fence and for the Malcam Trust and the Department of Conservation Dunedin Conservation Corps who helped with the construction.

This permanent fence will protect the area which will allow the public a more interesting walk along the creek and wetland and through the dunes to the beach. Careful planting of the appropriate native species will return this part of Tavora to the way it was 150 years ago, and provide ideal

habitat for many species including the yellow-eyed penguins. The Trust also commends the DoC Dunedin Conser-

vation Corps for construction of a walking track extension on the hillside above the beach to form a loop track.



## We are the Conservation Corps 2000



**H**aving just completed week 10 of our course we have hit 1/2 way and looking back its been a busy 2 1/2 months of travelling, digging, planting, track building, fencing and nest building.

On first arrival at our new site, stepping from the van, we were faced with what would be our toughest task to date. A recently trampled cow paddock stretched out before us – on the hill was grass in clumps everywhere. There were wooden penguin boxes above the beach and a decrepit fence supported more by the maram than the rotten posts.

Who would have thought that about 3 weeks solid work would have seen it turned into the semi-planted, re-fenced beauty we see today, housing a 860m track and village of nesting boxes and maybe even real live penguins!

Thanks to Dave Blair, Jim, Sue and Annie for working with us.

## THANKS



Mainland Cheese continues to support the Yellow-eyed Penguin Trust

Nursery supporters; Members; Canon Copiers; Carpet Court; Catriona Matheson; Citiworks; Conservation Corp Otago; Converge; Cooke Howlison Toyota; Dave Asquith; Denis Paterson; DoC - Coastal Otago; Dunedin City Council (Brian Turner & John Rance); Mr. Gallagher; John Darby; John Hodgkins; Impact Studio; Mainland Products; Maree Johnstone; Mike Hazel; Natural History New Zealand; Neville Peat; Paul Pedofski; Rod Morris; Sandie Legge; South City Print & Copy; Southlight Wildlife (Bourke Thomas)







# KINDS PAGE


Hi all you penguin lovers out there. Thought I would see what you know about Herbie Hoiho and his kind. We have a little competition for you. Have a go and send the results back to me at the Trust Office and I will arrange for some small prizes for bright and interesting ideas. All ages from 1 to 100 welcome! Up to 16 years old, please tell me your age. Others excused. Entries back by Christmas please.

## The Adventures of Herbert Hoiho

This is a story about Herbert the Hoiho. This is Herbie's comic strip cousin and he is going to have an adventure, but he isn't born yet and is

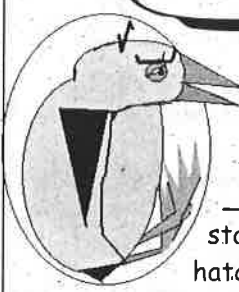
having funny thoughts in his egg, brought on no doubt by his cramped conditions. Please fill in the boxes.

1



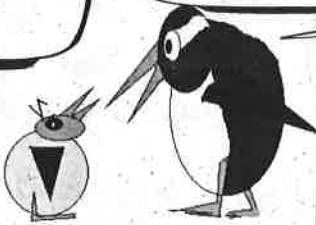
Here is Herbert Hoiho. What is he thinking?

2




Well Herbert put up with the cramped conditions for about \_\_\_\_\_ days until he could stand it no more so he decided to hatch. That balloon bit is the food sac and soon Herbert will suck it in so every thing is tidy and he can face the world with clean feathers. What do you think is Herbert's first impression of the world?

3



Well no doubt Herbert managed to struggle out of the shell and was encouraged by the smell of a fishy breath. It was dad. Both mum and dad in \_\_\_\_\_ the eggs and chicks. This is Herbert's dad. What good advice do you think he is giving Herbert? What is Herbert thinking?

Well that's about all for now. I will continue the cartoon of Herbert's adventures next newsletter in May. Send those bright ideas back. Don't forget your age and no bad words please. In the meanwhile be nice to your mum and dad. This is me, I am a wise old penguin. Take care. *David.*



Name \_\_\_\_\_  
 Address \_\_\_\_\_  
 Phone \_\_\_\_\_ Age \_\_\_\_\_

Please post to: Yellow-eyed Penguin Trust, Attn: David, P.O. Box 5409, Dunedin. Competition closes 12/2000

## Birthday Parties to help save Hoiho...

What about you trying this novel idea on your pals? This idea came from one of our 'penguin pals' in America.



Since I was 4 years old, penguins have been my favorite animals but I have never really done anything about it, aside from buying penguin-lover merchandise, and making penguin crafts. I was looking through the penguin internet sites again when I saw your site. Eureka! This was my ultimate chance to prove that my love of penguins was more than stuffed animals and posters. More than a few minutes spent watching humboldts at the zoo. It was time to take action, to make a difference. I had also not chosen a theme for my 13th birthday party and didn't ~~feel like~~ really want to receive the usual junk. Then I had an idea. Instead of gifts, I would have the guests bring money, money to rescue the endangered penguins! So, I still got a few gifts for big <sup>13</sup>, like a cuddly otter toy, a diary, and a tiny glass penguin, but the rest was so much more. It was my way to help real penguins survive. I hope that you can use this money to plant trees for the penguins, and please excuse my horrible handwriting.

Your Fellow Penguin-Lover,  
Kelsey H.



Kelsey H.



Hey thanks Kelsey. We think your idea was really unique and the penguins will benefit from the money donated to help them.

