



YELLOW-EYED PENGUIN TRUST NEWS

PENGUINS
PLANTS
PEOPLE
PASSION

May 2008

Has it been a good breeding season?

Each breeding season we wait anxiously to answer the question, "Is it going to be a good breeding season?" While the yellow-eyed penguin will breed every year, like wine vintages, some seasons – whether due to the number of nests laid, weather, amount of food available, disease and predator attacks – will be better than others. That fluctuation is to be expected. The first signs looked for are the number of nests (more or less than last season?) and the apparent health of the birds coming ashore (do they look plump and with good sheen on their feathers?).

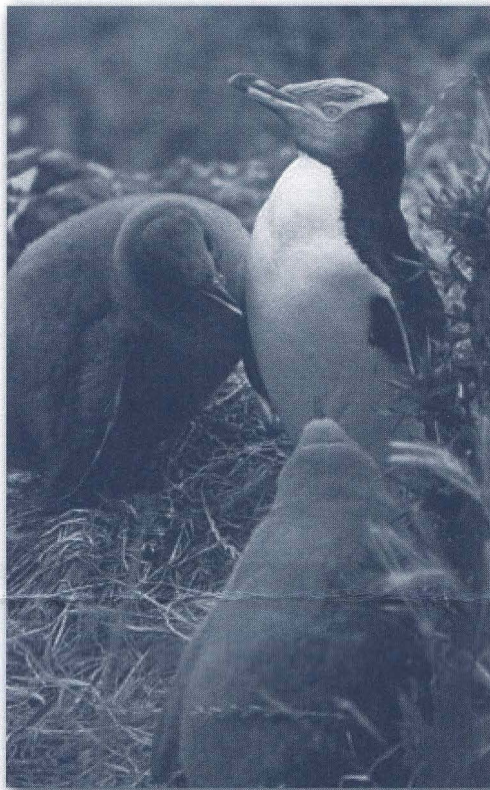
However, as the season progresses there are other indicators that add up to a formula for breeding success. Four visits are made to nests to gather these. The figures can be compared both to previous years and to the relative numbers at any one habitat over time (eg Otapahi) or general locations (eg the Otago Peninsula or Stewart Island) during the same year and/or over time.

The first indicator gives the nest success - not just how many nests, but also how many eggs. Interestingly Stewart Island birds on the Anglem Coast are successful egg layers, comparing well with birds on the mainland. It is only later that the indicators are reduced leading to low breeding success.

The second indicator is measured soon after hatching. How many chicks are there at the beginning of the Guard Stage? This can be a measure of both egg fertility or success at

keeping the eggs well incubated. For instance, young breeders in particular are sometimes not particularly good at maintaining the temperature of the eggs, or they may have nested in a place that is too exposed. One pair of young breeders at Omihi laid an undersized egg that did not hatch.

The third indicator is how many chicks are still alive after Christmas when they are left alone when both parents are needed to gather food for the rapidly growing chicks. On Stewart Island we have established that most of the chick deaths occur during the Guard Stage, before they get to this point, and intensive monitoring every two days has allowed us to establish that starvation and disease (not sure which comes first) killed off all or almost all of the chicks before they were out of the Guard Stage. (See Stewart Island report page 4).



The fourth visit is made just before the chicks fledge and go to sea. This allows a formula to be applied that indicates overall breeding success. At this time the chicks are also weighed because that is a good indicator of the ones that are unlikely to return as juveniles. This year the average weight of most of the chicks was above what we know is needed for penguins to survive their first year.

So how was this season on the habitats we monitored?

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CENTER PHOTO BY NEVILLE PEAT

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Has it been a good season? Continued from page 1

Nests and Eggs

The number of nests (and also eggs) at Okia was up on all previous seasons, reduced yet again on Stewart Island's Anglem Coast, but comparing with the average on other habitats. The number of failed eggs at Otapahi is unexplained and adversely affects the overall breeding success figure there.

Chicks Hatched

The proportion of chicks that hatched was average to above average. Chick Survival to Post Guard: On the South Island mainland within the habitats we monitor, chick survival was good, with no predator attacks nor disease outbreaks apparent. One chick at Otapahi had a badly deformed beak and did not make it.

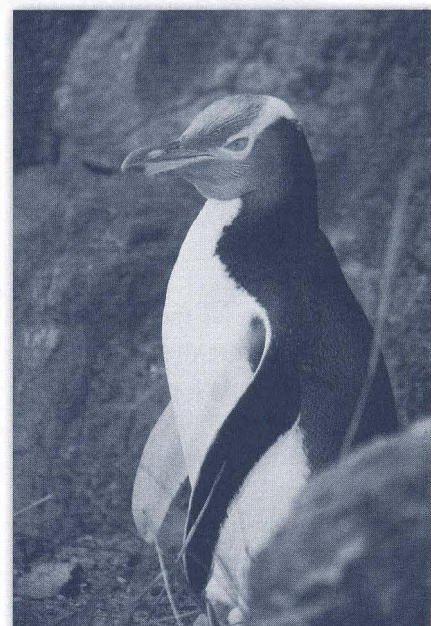
This was true also of Codfish Island and the Bravo Group habitats that we were monitoring in the vicinity of Stewart Island but on the Anglem Coast on Stewart Island itself, all the chicks from Long Harry to Yankee River and a number of the other chicks died. (See Stewart Island report pages 3 and 4).

Chick Fledging

A pleasing number of chicks on the mainland, Codfish and the Bravo Group survived to fledging, and this, combined with good weights, makes us hopeful that we may see some juveniles returning for the 2008 breeding season, after their OE up the coast as far as the southern North Island.

Elsewhere, in the Catlins and on the Otago Peninsula and North Otago, DOC reported that the breeding success was also good.

So the answer to our question posed at the beginning of this article for mainland South Island and the offshore islands from Stewart Island is that 2007/2008 was a good season. However the Anglem coast of Stewart Island itself is a different story.



Summary of reproductive success at Trust managed/monitored habitats 2007/8 Breeding Season

Observation	Tavora	Okia	Otapahi	Omihi	Cosgrove Creek	Stewart Island	Bravo Group	Codfish Is (Whenua Hou)	Total or Average
No. of nests	2	17	22	4	9	16	20	37	127
No. of eggs laid	4	31	40	7	16	31	39	74	242
Ratio 2 egg: 1 egg nests	2:0	14:3	18:4	3:1	7:2	15:1	19:1	37:0	
No. of eggs failed	0	4	17	2	4	6	8	7	48
Eggs Hatched	4	27	23	5	12	25	31	67	194
Hatching success (No. hatched / No. eggs laid)	100%	87.1%	57.5%	71%	75%	80.6%	79.5%	90.5%	80.2%
No. of chicks lost	0	0	1	1	0	19	4	11	36
No. of chicks fledged	4	27	22	4	12	6	27	56	158
Av. Weight of chicks fledged	6.03	5.34	5.21	5.95	4.96	5.79	4.69	4.99	5.37
Fledging success (No. fledged / no. hatched)	100%	100%	95.65%	80%	100%	24.0%	87.1%	83.6%	83.8%
Reproductive success (No. fledged / no. eggs laid)	100%	87.09%	55%	57%	75%	19%	69%	76%	5.3837
Chicks fledged per nest	2.00	1.59	1.00	1.00	1.33	0.38	1.35	1.51	1.27

2007/08 Season

The fifth and final season of field work for the 5 year study on Stewart Island has just been completed. In contrast to Year 4, which resulted



in 0% breeding success in the monitored area on Stewart Island (the Anglem coast) and lower breeding success on the monitored off-shore islands than in previous years, this season was much better. Six chicks fledged from the Anglem coast and 56 and 27 chicks respectively from Whenua Hou/Codfish Island and the Bravo islands, our two monitored off-shore island sites. Breeding success was 19% for the Anglem coast, still much lower than the expected average of around 60% (but better than

0%!), while that for Whenua Hou/Codfish Island and the Bravo islands was 76% and 69% respectively. This is the best season of all during this study for these island groups, perhaps influenced by the spectacularly fine summer and La Nina weather patterns experienced this season.

However, it is even more obvious that all is not well for the birds along the Anglem coast. Firstly, only 16 nests were located, compared to 32 nests which were found along the same stretch of coast during the Trust's comprehensive survey of Stewart Island in 1999. That is a very disturbing statistic showing a considerable reduction in the number of breeding pairs over 9 breeding seasons.

Secondly, of the 25 chicks that hatched from those 16 nests, 19 died and only six survived to fledge. All of the chick deaths occurred before Christmas, during the Guard Phase, and most chicks died within three weeks of hatching.

No predation was recorded, but starvation and disease were once again evident as causes of chick death. Some very detailed examination of chick carcasses was carried out by veterinarians from the Department of Conservation and Biosecurity NZ in an attempt to determine which is the primary cause of death. Provisional results from 15 chicks examined point to starvation as the most widespread cause of death this season. No evidence of disease was found in 12 chicks, but all 12

of these chicks were small and malnourished. The blood parasite *Leucocytozoon* killed two large chicks which had survived the first three weeks and appeared healthy until a few days prior to death. Only one chick tested positive for diphtheritic stomatitis, although this is not necessarily what killed it as it also appeared to be starving. Other work carried out included the examination of nest material and collection of insects, especially sandflies and mosquitoes, from nest areas to see whether insect vectors may be responsible for the spread of disease. The final report from this investigation had not been completed at the time of preparing this article, and we expect to learn more soon about what the investigation uncovered.





5-year project funding

If the Yellow-eyed Penguin Trust had not undertaken a census of the yellow-eyed penguins on Stewart Island and the adjoining islands in 1999-2002, there would have been only anecdotal evidence of their continuing decline. If the Trust had not then embarked on a five year monitoring of the breeding success of yellow-eyed penguins in selected areas, (2003-2008) the decline on Stewart Island, when it was next measured would have been attributed to feral cat predation, which was our original hypothesis. After the first year, when it became apparent that we needed to make visits more often during the Guard Stage if we were to be able to get the carcasses soon enough to be autopsied, the role of starvation and disease began becoming paramount, with no sign of predation, especially in the area where cats had been eliminated with a 1080 application. (This was demonstrated by recovery of radio collared cats in the area.)

Such labour intensive monitoring in a remote area does not come cheap and would not have been undertaken by DOC. The cost per day of staff and overheads during the season amounts to \$175.61. This excludes the not inconsiderable DOC contribution.

Since the beginning we have had difficulty raising enough money from grant sources and donations to fully cover the costs and have had to dip into Trust capital funds, to the tune of \$63,000, thus foregoing the interest that would have been otherwise used for our general operational costs. Thank you to those of you who have made extra donations and ticked the box indicating that you wished it to go to the Stewart Island Project.

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The five year project is now being pulled to a close with the reports being written and another census of all the original coastlines being re-surveyed to see whether other areas have also declined. Depending on funding, it would be good to do this in the coming season. If you can make a donation to assist with the Stewart Island work it would be appreciated.

5-year project concluded?

The final de-brief meeting to discuss the Stewart Island Project results and future directions was held on 23rd April at the Mercure Hotel in Dunedin. About 30 people attended, including YEPT trustees and staff, DOC staff from Southland and Otago, the Wellington-based DOC veterinarian who also represented Massey University and Biodiversity NZ (MAF), researchers from Otago University, and an enthusiastic volunteer and supporter from the Stewart Island community. The morning was devoted to presenting results from the 2007-2008 field work, and an overview and summary of the past five years which included a breakdown of what the project has cost to run. The cost for the past five years was \$350,000, of which \$104,000 came from DOC as logistical support with the remaining \$246,000 contributed by the Trust. The Trust's contribution came from grants, donations and Trust capital funds.

Our five years of intensive monitoring on Stewart Island have highlighted the facts that the population of yellow-eyed penguins along the Anglem coast declined at an alarmingly rapid rate of 50% over 9 breeding seasons. Breeding success there has been consistently poor, chicks are dying despite not being

predated, and starvation and disease are key causes of chick death. It has also highlighted a lot of questions that we don't yet have answers to; for example, is the problem we have uncovered confined to the Anglem coast, or is it occurring in all yellow-eyed penguin breeding areas on mainland Stewart Island? Also, what are the factors that have caused chicks to starve and succumb to disease along the Anglem coast but not on nearby off-shore islands? Is the problem related to food supply, or something else?

The answers are likely to be complex, and not easy or cheap to obtain. However results may assist us in the wider conservation of the species.

The afternoon session was devoted to what should happen next. The unanimous conclusions were that to nicely round off the study, Stewart Island should be re-surveyed to find out if nest numbers have declined over the whole island or just on the Anglem coast and that the Trust should continue its involvement for another season. Of course, this is entirely dependent on being able to raise sufficient funds without the need to dip further into Trust capital.



Long Point update

After the many months of long protracted negotiations the Long Point project has finally taken off with a hiss and a roar. Firstly was the Clutha District Council granting us the necessary resource consent in very quick time.

Then we've had a succession of distinguished visitors to the reserve since it was opened by the Minister of Conservation Steve Chadwick, back in November. In March some of the Department of Conservation's senior management team based in Dunedin were given a tour. These included Coastal Otago Area staff Robin Thomas (Area Manager), David Mules (Programme Manager Community Relations) and David Agnew (Programme Manager Biodiversity Assets) and Otago Conservancy's Marian van de Goes (Community Relations Manager). Then in April the Dunedin branch of the Forest and Bird committee also inspected the reserve. Prof Alan Mark when walking the headland had to admit that the "scenery wasn't too bad". In spite of a lack of his beloved tussock he thought that the Dunedin Forest and Bird Branch had made a great investment by financially supporting the purchase.

An upcoming visit is planned with the board of the Community Trust of Otago, our other major financial supporter.

In other developments, a very successful "Restoration Brainstorming Day" was held in February. Participants came from as far afield as Lincoln University and Invercargill to give their ideas and visions for the restoration potential of the new reserve. Lots of exciting ideas were floated for both yellow-eyed penguin management and also the conservation of other species – with several people identifying the tremendous potential for restoration of a range of seabirds, possibly including Buller's albatross and titi as well as the smaller storm and diving petrels.

So where to from here? Planning will continue throughout autumn and winter and we hope to have our first meeting of a new Long Point Advisory Group in the next couple of months.

Forest & Bird Committee members near Cosgrove Creek with Long Point in the background. (left to right) Scott Dunavan, Mark Hanger, Ken Mason, Bill Wilson, Alan Mark.



(left to right) Marian van der Goes, Sue Murray, Robin Thomas, David Agnew



"I love yellow-eyed penguins!"

A big thank-you to members who recently completed the membership survey. The Trust received nearly 700 completed surveys, which was far more than expected! The survey was sent out to a sample of the membership base including overseas members. The information received has given the Trust an opportunity to gain a better understanding of who you are, why you belong to the Trust, how long you have been members and how you like to receive information from the Trust, along with the answers to a number of other questions asked.

"I am 85 years - thank you for giving me the chance to put my thoughts on paper for the trust after all these years. I didn't realise I had been collecting bar codes for so long, there is no other cheese like Mainland, may it last"

Your feedback has been invaluable and tells us how much you love yellow-eyed penguins and contributing to their survival! Thank you for your valued support.

Many of you indicated that you would like to continue receiving information from the Trust by post. However, some of you would like to receive information by email as a way of saving money and reducing print costs. We have sent this newsletter to you by post, but we are going to introduce sending the next edition of the newsletter to those members who have provided an email address, by sending you a pdf document or an html email newsletter.

"I enjoy the newsletters and read them cover to cover. Articles on penguins and fieldwork are gratifying"

Many of you also indicated that you would like to see more colourful pictures of penguins in the newsletter. However, some of you really don't want the Trust to spend more money on information/newsletters but rather on directly related conservation activities. We are looking into how we can best meet all of your needs!

You may find that we are able to put more information up on the website for those of you with internet access, or continue to produce two main newsletters, with one being a colourful newsletter once a year, with the second newsletter as it normally appears. Those of you receiving it electronically will get the full colour version.

Along with other feedback you provided, we are looking into how we can make information more interesting for children and you also mentioned that you would like to have items or gifts that you can buy for friends or family or overseas visitors.

If you are interested in reading more about the membership survey results, we will make this information available on the website shortly under the news section, go to:
www.yellow-eyedpenguin.org.nz

If you are interested in receiving information from the Trust via email and didn't receive a membership survey to complete, please send your email address to: yeptrust@gmail.com

Once again, a huge thanks for participating in this survey.

Yellow-eyed penguin Annual Symposium

The Yellow-eyed Penguin Consultative Group supported by the Trust and the Department of Conservation is holding its annual symposium on

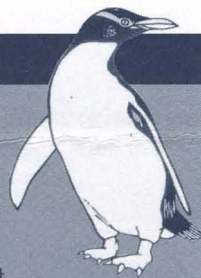
Saturday 2nd August

at ground floor meeting room at University College (same place as last year).

The format will be the same as previous years, with report backs during the morning. The afternoon session's topic is still to be confirmed.

All Welcome

For further information and registrations, contact the Trust Office or Bruce McKinlay, Secretary of the Yellow-eyed Penguin Consultative Group
bmckinlay@doc.govt.nz



"...think trust is fantastic and value the work by volunteers and organisation, staff"

Biodiversity Fund

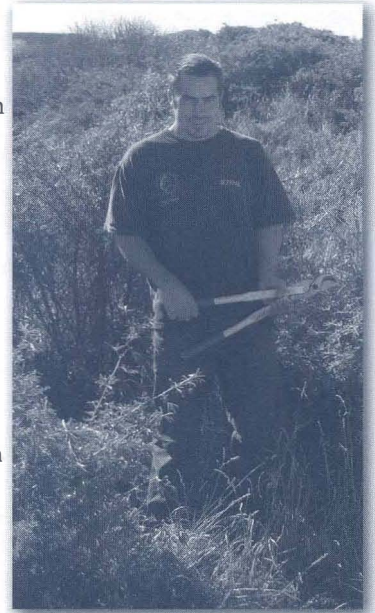
The Yellow-eyed Penguin Trust has been fortunate to again receive funding from the Department of Conservation's Biodiversity Condition Fund for conservation projects on private land.

The announcement was made at the end of March by the Conservation Minister Steve Chadwick and Environment Minister Trevor Mallard, We are one of 83 projects nationwide that has shared nearly \$2 million.

Our grant is for three years and funds the Ranger position and associated costs. It is particularly welcome because very few granting agencies allow for salaries and our work is very labour intensive. The Ranger is responsible for overseeing the maintenance, revegetation, and controlling predators on all of the Trust's reserves and working with private landowners and community groups on other coastal habitats.

This is the second time this fund has supported this position, which is a deviation from its policy, and a true vote of support and recognition for the work the Trust undertakes.

The Trust is delighted to receive this acknowledgement and looks forward to future planning for this next three year period.



2008 Planting Dates

Join the Staff and Trustees to plant native plants...

Thursday, 5 June

World Environmental Day

Sunday, 20 July

Phone the Trust office the week before for time and place. 03 479 0011

Don't forget to visit our website...

www.yellow-eyedpenguin.org.nz

VOLUNTEER OF THE TRUST



Bill Armitage retires

Our highly valued Honorary Solicitor, Bill Armitage, is retiring. Bill is a partner of prominent Dunedin law firm Downie Stewart. Through Bill's avid support and advice, Downie Stewart have stood alongside the Trust for all of our 20-year history.

Bill attended as legal 'mid-wife' to the Trust at its establishment in 1987. His calm, thoughtful manner reassured founding Trustees otherwise daunted by the task of setting up New Zealand's first species conservation trust. Bill was unfaltering in his encouragement and drew on his extensive knowledge of other Trust Constitutions, despite this venture and its Constitution being relatively new experiences for him too.

Over the years, Bill has contributed enormously to our work. He has guided us through land purchases, sponsorship arrangements, membership matters, bequest and employment issues. His door was always open to us, and his interest in helping was deeply respected by the Trust.

Whilst Bill's retirement is a significant change for us all, we are delighted that Downie Stewart will remain our honorary solicitors through another partner, Gerard de Courcy.

We wish you a pleasant and rewarding retirement, Bill.

Signing the original Trust Deed (1987).
L - R: Lala Frazer, Warren Hurley, Moira Parker, Bill Armitage, Christine Johnston, Paul Every, John Darby



Many thanks to...

Thank you to our regular supporters:

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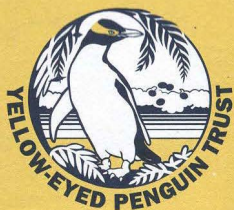
Bridgette Gibb
John Ingrams

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 co-opted sub-committee members for their valuable contributions to our work.



TrustPower Community Award

If it wasn't for community volunteers NZ would probably grind to a halt and if it wasn't for our Nursery volunteers we would not have been able to produce the 12,000 plants we did last year. They are the most fabulous all-weather hard-working bunch of dedicated people that one could ever meet. I know we are a bit

biased, but back in September last year it was truly confirmed when we were the winners of the Supreme Award for the TrustPower Dunedin City Community Award. As the supreme winner the next stage was to represent Dunedin City at the National Awards in Wanaka. Margaret Suman and Sue Murray accompanied the Mayor Peter Chin and his wife for a most inspiring three days. Hosted by TrustPower, 22 other voluntary groups from all over NZ gathered to give their presentation and vie for the national award. Everyone deserved to win and although we did not come away with the national trophy Peter, Margaret and Sue told the assembled crowd of volunteer groups and their civic leaders all about our outstanding volunteers and the plight of the yellow-eyed penguin.

The large majority of people who help at our Nursery are busy retired people who have scheduled us into their diaries many months in advance, but helpers also include international visitors, young people on training programmes and people working on their own environmental projects wanting space or to share and/or learn skills.

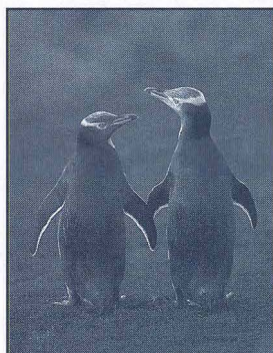
There is a great family feeling amongst our volunteers. We celebrate birthdays with cakes and have great morning tea sessions where everyone has something to say – mostly all at once! We believe that the good friendships and conversations that develop have enabled them to do some of our most monotonous jobs for long periods of times and enjoy it.

Most interesting is the support shown for this project by volunteers both young and old. It indicates a need within our community to look after our environment by taking ownership and becoming involved. The Yellow-eyed Penguin Trust Nursery has become such a venue, a place where all sectors of the community are able to mix freely. In particular young people work alongside retired people. For many of our young students this is one of the few opportunities they get to talk to senior citizens whilst working for a common cause. We have found that the positive attention that our young visitors receive from our other volunteers and the opportunity to understand life from the other people's perspective has enhanced their learning experience.

Thank you TrustPower for giving us the opportunity to brag about our volunteers and the wonderful work they do for us. Thank you also for giving us such an enriching weekend in Wanaka where the Street Van (Palmerston North) volunteers were certainly deserving winners. Thank you to our Mayor Peter Chin for all his support and thank you to all our wonderful volunteers who make the Trust what it is today.



Sue Murray and Mayor Peter and Noleen Chin



BRUCE FITZGERALD

Please remember us in your Will

Managing and/or purchasing penguin breeding habitat and controlling predators such as stoats and ferrets are some of our ongoing tasks.

Saving the yellow-eyed penguin is a long-term task.

Bequests will help secure its survival.

Please remember us in your Will.