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Otamahua/Quail Island
ECOLOGICAL RESTORATION TRUST
Otamahua/Quail Island is predator free, and home to endangered Korora, the White Flipped Penguin.

KEEP DOGS OFF QUAIL ISLAND

- Dogs kill penguins and other wildlife.
- Even small, mild-mannered dogs kill penguins.
- Even if they don't kill or maim, the presence of a dog may cause penguins to abandon their nests.
- Support a dog-free island to keep the Korora safe.



WWW.QUAILISLAND.ORG.NZ

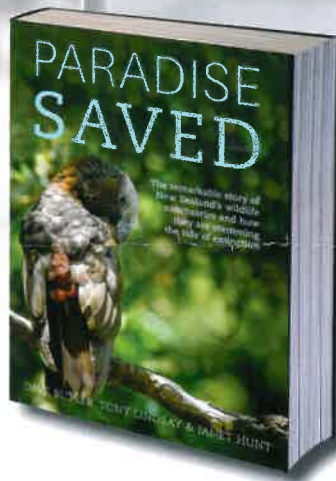
These new signs have been erected at Naval Point, Cass Bay, and Charteris Bay to encourage boat owners not to bring their dogs to the island. We will also erect the signs around the beaches on Quail Island. Thanks to Fulton Hogan for printing and supplying the signs.

We are thrilled to report that a penguin has chosen to stay in one of our new nesting boxes to complete their moult. Penguins moult every year between December and March, and the moult usually lasts for 10 to 18 days. They stay on

land and can't return to the water to feed until the moult is complete and their feathers are waterproof again.

On our trip to the island on 15 March, we were clearing dense spur valerian from around a rocky outcrop above the ships' graveyard when one of our volunteers spied a moulting blue penguin well hidden under a bush. We quietly retreated and continued weeding elsewhere.

PARADISE SAVED



The gripping, inspirational story of the New Zealand sanctuaries and conservationists turning back the tide of extinction.

Quail Island was honoured by being featured in this important new book.

Penguin photo: Di Cowan

Fancy that! The fleeting inhabitation of Otamahua/Quail Island by Red Deer

Druett (1983) records that in April 1897 ten red deer were purchased from Stoke Park near Windsor in England. After one hind died on the wharf in England just before they were due to be shipped, the remaining nine set sail on the ship 'Waikato' on 23 February 1897, transported in luxurious crates.

It was a rough voyage though, and when they arrived at Port Chalmers another hind died. She had already had a healthy calf. These animals were transported by ship to Lyttelton, and then by tug to quarantine on Otamahua/Quail Island. All remained on Quail Island until October that year. The nine deer were then taken by rail to Christchurch, then to the Wilberforce Valley where they were released. These were the first Red Deer imported into New Zealand.



Loopers and notchers – the moths of *Phormium tenax*

Mike Bowie, Lincoln University

Many of us take the odd blemish on a leaf for granted, but more often than not they indicate that an insect species is grazing on them. Flax or *Phormium tenax* is no exception, with two native species of caterpillar relying on it for their survival.

Neither of the two species kills the flax plant. The moths of both provide a food source for insectivorous birds, lizards and invertebrates, such as spiders.

The flax looper moth (*Orthoclydon prafactata*) lays its eggs on the underside of the flax leaves. These develop into caterpillars, brown/green in colour, with three dark red lines on their back and a yellow line on each flank. When fully grown, the caterpillar is approximately 2.5 cm long. The name 'looper' comes from the method of movement whereby they pull the rear part of their body forward, creating a loop.



Characteristic damage of this species is windows near the mid vein of the flax leaf.



The flax notcher moth (*Tmetolophota steropastis*) gets its name from the characteristic V- or U-shaped notches on the outer edges of the flax leaf.



VOLCANIC DYKES

"On the south side of Quail Island the trachyte dykes are unusually numerous, and they are apparently the only ones occurring. The foreshore from the outer wharf to the extreme south-westerly point of the island is intersected by them, nearly sixty occurring in the space of a mile in length. They vary in size from mere ribbons up to masses 12ft across. In some cases injection appears to have taken place twice up the same fissure, or the original dyke appears to have been disrupted and injection takes place up the fissure so formed."

The dykes tend to be radial to the main vent of the volcano. Studies of the dyke system of Lyttelton Harbour revealed that the older dykes (14 million years old) pointed toward the Head of the Bay, and younger dykes (11 million years old) towards Charteris Bay. These were the two locations of the main centres of eruption of the Lyttelton Volcano.

References: Transactions and Proceedings of the Royal Society of New Zealand Volume 49, 1916 Article XXV1 – The Geology of Banks Peninsula. Mountains of Fire – The Volcanic Past of Banks Peninsula, by Geoffrey J. Cox, Canterbury University Press 1994

The columnar basalt on the north side of the island is only one of many interesting geological features. A walk at low tide around the south coast, particularly at the west end of Skiers' Beach, reveals striking examples of the dyke systems that are typical of Banks Peninsula. Dykes were formed when magma was forced up through vertical cracks along the ridges of the volcanic cone, where it solidified into thin sheets. Over time the surrounding weaker material was eroded away, and the dykes were revealed as ridges of rock standing above the surrounding land.

A 1916 paper by R Speight, Curator of the Canterbury Museum, refers specifically to the Quail Island dykes:

Spur Valerian

The Christchurch City Council is campaigning to prevent the further spread of Spur Valerian into Banks Peninsula. The hotspots for the weed are on the eastern Port Hills and in Lyttelton and, as the seeds can easily be carried by wind, the northern side of Quail Island is badly infested. We have removed a patch by Skiers Beach, and have started work above the ships' graveyard and will continue working to the north east.



Donations 2015

We must acknowledge a further contribution we have received from the Canterbury Community Trust, of \$25,000 towards salaries.



We have also received a \$5000 grant from Sargood Bequest, towards the salaries of fieldworkers for the 2015 planting season.

In addition, we are grateful to PGG Wrightson and Daltons for their donation of products for the 2015 planting season.

The support of these organisations, and the others listed on the back of this newsletter, is of the utmost importance to our work on Otamahua.

CHAIRMAN'S REPORT 2014

At the 2013 AGM, we acknowledged Colin Burrows and the enormous contribution he made to the Quail Island project. Colin had hoped to attend that meeting, but was too ill. Colin died on 16 January 2014. He has left a big gap, and I personally miss his guidance and company on our volunteer trips to the island.

In Colin's absence, the botanical planning on the island has continued successfully with the combined expertise of Jason Butt, Peter Hayward, Tony Giles and Bernice Courneane. During August another 3000 trees were planted on the SW facing slopes above Walkers Beach, and apart from unwanted attention from browsing deer, the spring growth was encouraging.

Again, our efforts to restore the summit saw 250 silver tussock seedlings planted out, and a further 300 seedlings were raised over the winter ready for planting in 2015.

Weed control continues. Our weed pest targets are largely under control, and we take pride in preventing any reaching fruiting stage. The dangers of rockfall have however prevented control of boneseed and boxthorn below the cliffs. Other weeds that are spreading and becoming a problem are red valerian (*Centranthus rubus*), common polypody (*Polypodium vulgare*), and pigs ear (*Cotyledon orbiculata*).

Permission was received from the Minister of Conservation in December 2013 for the release of three biological control agents on the island to control Scotch thistle and Californian thistle. They are the green thistle beetle (*Cassida rubiginosa*), nodding thistle crown weevil (*Trichosirolalus* sp.) and the scotch thistle gall fly (*Urophora stylata*). Landcare Research are providing assistance with the release. Colin Burrows campaigned for many years for this control, and we are grateful to the Department of Conservation for getting the permission through in time to tell Colin.

Pest control remains a high priority. During 2014 two rats and a stoat were caught on King Billy, and two stoats were caught on Quail. The elusive remaining rabbit was trapped in April. Fallow deer remain a problem, and they damaged our new plants during August.

Thanks to a donation from Alan Williams, we were able to purchase a camera trap this year. This camera has been used to track the movements of the deer, and to monitor the penguin boxes.

All the penguin boxes have now been sponsored, and we are planning to construct a further 25 boxes as a fund raising project for 2015. Two penguin update newsletters have been published, and a certificate with a photograph of the sponsor's box has been sent to each sponsor. Thanks to David Watson for doing this work. Following Tina Troup's talk to the Opawa School last year, Tina has continued promoting the Quail Island penguins by leading a trip to the island with children from the Diamond Harbour Playcentre, and talking to children at the Lyttelton Kidsfirst Kindergarten.

Quail Island is an ideal site for penguins due to the lack of predators, but unfortunately visitors are still bringing dogs to the island. The Christchurch City Council gave permission for warning signs to be erected at local boat ramps, and Fulton Hogan kindly agreed to sponsor and print the signs. The signs are now installed and additional signs will be erected on the island's beaches soon.

The theft of our boat was a setback in 2013. The Trust decided not to replace it, and we have been relying on Black Cat Cruises for transport. Their ferries are a much safer option for transporting our workers to the island in rough weather. Black Cat have continued to support the Trust with free transport during the planting season, and a reduction in the charter fee, allowing us to take more volunteers to the island.

Our volunteers have continued to make a large contribution to the Trust's work, and we have around 300 volunteers on the database. In addition

to our regular volunteers, we have been supported by groups from IAG Insurance, Student Volunteer Army, United Nations Youth Canterbury, Christchurch City Council Planning Department, University of Florida, Peninsula Tramping Club, Waitaha Paddling Club, and Wai-Ora Forest Landscapes Ltd. 28 volunteer trips were made to the island during the year, with over 300 people participating. I would like to acknowledge Pat Barry and Lindsay Daniel who have joined nearly every volunteer trip this year. They have both been an enormous help to me.

Our workers Tony Giles and Peter Hayward continue to be essential to the Trust's work. As well as their normal duties, the additional work hunting deer and rabbits have meant early starts and late nights on the two days a week they spend on the island. Bernice Courneane joins them as a volunteer and in spite of a broken shoulder after a fall on the island earlier this year is back to normal hours. We thank them all for their contribution.

We have produced three outstanding newsletters this year, and thank our editor Margaret Meehan and the contributors.

Quail Island was featured in a new book called "Paradise Saved" that was published in August. Thanks to Shaz Davis who contributed the text.

We have given illustrated talks about the island to the over 40s Tramping Club and The Rotary Club of Ferrymead, and given a tour of the island to the Canterbury History Teachers Association.

In early November Tina Troup organised an education day on the island which raised \$600 for the Trust. The event sold out quickly, and over 30 participants heard our experts talk about the island. Mike Bowie talked about the invertebrates, Dr Colin Meurk and Jason Butt covered the botany of the island, Dr James Ross talked about pest control, Tina Troup talked about the island's birds, and Marieke Lettink and Chris McClure showed us the island's geckos and skinks.

We would like to thank the staff at DoC for their assistance during the year, and welcome Ross Millichamp to DoC in his new role as Conservation Services Manager. We are grateful to Murray Lane for his work on the island. Grant Campbell, our usual liaison person at DoC has been ill, and we wish him well in his recovery.

Many thanks to Barbara Price who keeps all the accounts and funding applications in order. We appreciate Barbara works many hours more than she is paid, and we value her fundraising ideas. Again this year we have put a lot of effort into funding applications which have not succeeded.

Having an up to date restoration plan is essential for funding applications. The Quail Island Restoration Plan was written in 2005 with a 10 year term, so it is due to be rewritten in 2015. This work has commenced and will be completed during 2015.

We are pleased to be back up to a full complement of trustees, with Grant Borrie and Jason Butt joining the trust this year. We welcome them both.

We have been supported throughout the year by a number of funding sources and acknowledge that without this help we could not operate.

In June The Rotary Club of Christchurch Sunrise asked the Trust to help with the directing traffic and controlling the car park at the England vs Crusaders rugby match. A good turnout of Trust volunteers assisted and raised \$2500 for the Trust. We wish to thank Rotary Sunrise and David Watson for giving us the opportunity to participate.

This year we also acknowledge the support of The Canterbury Community Trust, Christchurch City Council, Lyttelton Port of Christchurch, Black Cat Cruises, The Honda Treefund, PGG Wrightson, Empak, and Guardian Trust as Trustees of the Robert C Bruce Trust. Our own supporters have contributed around \$8,000 in subscriptions and donations.

SUMMER WORK

It was another busy time for staff and volunteers over the summer. We have been working our way around the island dealing with weeds, and caring for the 2014 plantings. Because of the extremely dry summer, for the first time in a number of years, we had to resort to hand watering. The seedlings also received the unwanted attentions of fallow deer, and we have been trying various control methods including wire netting or Novacoil sleeves, and spraying with Plantskydd animal repellent.

DOC and our staff have been felling ash trees above skiers' beach. Ash is dioecious, which means male and female flowers occur on different plants, so by felling the female trees we hope to eliminate the spread of seed.

August Planting

Our planting season begins in August and we are planting on every Saturday and Sunday for the first four weekends:

1 & 2 August

8 & 9 August

15 & 16 August

22 & 23 August

Bookings essential, please book with Ian McLennan:
email volunteers@quailisland.org.nz, phone 384-5338

ISLAND VISITORS

Quail Island has been very popular over the summer, with Black Cat Cruises taking record numbers of visitors for day trips.

Christchurch Boys High School, St Margaret's College, CPIT, Kiwi Conservation Club, the Lincoln Girl Guide rangers and the Diamond Harbour Scouts have camped overnight on the island.

On 6 February, over 200 runners descended on Quail Island for the Waitangi Day weekend Tour de Peninsula event organised by the Peninsula and Plains Orienteers.

Trust volunteers have given guided tours to the Canterbury History Teachers Association, the Lincoln Girl Guides, the Canterbury Explorers, the Royal Society, and Medbury School.



EDUCATION DAY

Pictured are some of the 30 participants who attended a successful education day on 2 November. They heard our panel of experts talk about the island. Mike Bowie talked about the invertebrates, Dr Colin Meurk and Jason Butt covered the botany of the island, Dr James Ross talked about pest control, Tina Troup talked about the island's birds, and Marieke Lettink and Chris McClure showed us the island's geckos and skinks.

Seabirds & Associates

There is a suite of plant species that may be termed "seabird and seal associates". As such, their fate is tied to the fate of the seabirds and seal haulouts upon which they rely.

Quail Island, like much of mainland New Zealand, once hosted innumerable colonies of land-nesting sea birds. Some of these birds, such as albatrosses, nested above ground. Some, such as tīti or mutton birds, dug burrows – blue penguins also fall into this category. Yet others roosted and nested in trees. Today, a few relict populations of sooty shearwaters can be found around the headlands of Otago and Banks Peninsula, and small numbers of a handful of other species can be found nesting on parts of mainland New Zealand.

These colonies in turn hosted a number of specialised plant species, which thrived on the disturbance and high nutrient status that comes with a densely packed burrowing or ground nesting seabird colony. Some associated plant species are more reliant than others on this disturbance regime. As these bird colonies were wiped out following the introduction first of kioere, and then the suite of predatory mammals European colonists brought with them, the more specialised of these plants were similarly expunged. Quail Island hosts one of these plant species and as the numbers of blue penguins that nest on the island increase, so too will the extent of soils suitable for this "associate". The high input of nitrogen in particular makes the soils toxic to many other species, thus opening a niche free of competition.

On Banks Peninsula there are only a few species strongly associated with seabirds. One such species is Cook's scurvy grass (*Lepidium aegrum*). This plant is not even remotely related to grasses – in fact it is a close relative of cabbages! Once thought extinct on Banks Peninsula, this species was rediscovered in 2000 on a tiny rock stack. It was not until the publishing in 2013 of a taxonomic revision of the *Lepidium oleracium* group that the Banks Peninsula Cook's scurvy grass was treated as a species. A small population of Cook's scurvy grass has been established on Quail Island, and is flourishing. One of these plants has even been the best seed producer of this species. Refer to Quail News issues 36 and 47 for more information on Cook's scurvy grass.

Quail Island is unlikely to host great numbers of seabirds in the near future due to a number of factors, such as light pollution from the Lyttelton township. While there are still a handful of seabird colonies on mainland New Zealand, by far the majority that remain are on islands, like Quail Island, where predators like rats and pigs are absent.

Patron—Allan Williams

Trustees

Ian McLennan, Chairman

Sharon Davis, Secretary

Grant Borrie, Treasurer

Peter Anderson, lawyer,

Forest and Bird Representative

John Lewis, Ngati Wheke Representative

Mike Bowie, pest control, invertebrates

Colin Meurk, botanical

Jason Butt, botanical

James Ross, pest control

Trust Conservation Fieldworkers

Peter Hayward

Tony Giles

Bernice Cournane, volunteer

Advisors

Grant Campbell, DoC

Tina Troup, birds

Laura Molles, birds

Marieke Lettink, lizards

Nick Allen, bird counts

Administrators

Barbara Price, project co-ordinator

Margaret Meehan, newsletter editor

Ken Bain, auditor

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acknowledgements

