Kārearea
Protecting a southern land
Dec '17–Jan 2018


Image: Craig McKenzie

Predator Free NZ – what are the chances?

Jane Young

The background

All Forest & Bird members know that it's necessary to kill introduced predators. However, those of us who are less than enthused by endless discussions about the mechanics of the business probably weren't too thrilled to discover that the theme of the 2017 South Island Gathering in Murchison was "Predator Free NZ". As it turned out, the presentations and conversations were less about different trap designs or the relative merits of peanut butter and cinnamon lures, and more about the big-picture stuff and the importance of bringing people and communities together to take on a challenge which the late Sir Paul Callaghan described as New Zealand's 'Apollo moment'.

DOC Threatened Species Ambassador Nicola Toki set the scene by describing the genesis of the Predator Free NZ concept during a two-day meeting at F&B's Ruapehu Lodge in 2012, during which scientists and environmentalists rapidly reached the consensus, "Yes we can!" However, current methods alone cannot achieve this goal. There must be investment in developing new technologies.

Kevin Hackwell showed the dramatic increases in areas that have been rendered predator free since early beginnings in the 1950s when a group of school children poisoned all the rats on tiny Maria Island in the Hauraki Gulf. (One suspects that the operation mightn't have passed muster with present-day health & safety standards.)

Predator Free NZ depends on a number of critical factors for success. Both national and local governments need to get on board, and close collaboration at all levels is essential. Speakers repeatedly stressed the need to "bring the community with us." By and large, New Zealanders love animals, and can find it hard to understand why conservationists spend so much of their time killing them. Nicola made the point that we can – and should – respect all life while facing up to the fact that we are forced to kill introduced mammals in order for our native animals to avoid extinction.

The methods

Many F&B members who devote huge amounts of time and effort to lugging traps through the bush or servicing trap lines would have made exclamations of scorn or disbelief at the announcement of the Predator Free NZ project. Their back-of-an-envelope calculations of the astronomical number of traps required to do the job were reinforced by Graeme Elliot's presentation showing a blizzard of red dots superimposed on a map of the Paparoa National Park. Even if you could get the funding necessary to buy the traps, the sheer physical effort required to service them would be a killer.


Confrontation Jim Young

At present, like it or not, there is no alternative to the use of toxins for predator control on a large scale, but "Ban 1080!" signs throughout New Zealand are a constant reminder of the extent of public hostility. It's good to see that one of the policies of the new government is to research alternative toxins – 1080 is undeniably effective, but is described as only 'moderately' humane, while other toxins may be even worse from this point of view.

Unfortunately facts don't always (often?) change opinions, but it was still useful to get up-to-date information about the effectiveness of 1080 that didn't attempt to gloss over the problems. Graeme gave

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Predator Free NZ – what are the chances?

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examples from the "Battle for our Birds" project involving the prediction and monitoring of beech mast events in which heavy seed fall results in rodent and stoat plagues. Without predator control, mohua (yellowhead) populations recover to some extent after a plague, but trend steadily downwards. If 1080 is dropped at the time when the germinating seeds are a good source of food for the mice then the consequent stoat population explosions can be averted, but – and there's always a 'but' – the control of rats isn't always as effective.

By-kill is a constant worry despite the huge amount of research that has gone into making 1080 drops both safer, eg by using lower concentrations per hectare; and more effective, eg by pre-feeding so that predators are more likely to take the bait. Kea, an endangered species, is a particular cause for concern. Although 1080 drops result in higher nesting success, the birds that hang around humans hoping for a free feed ('junk food kea') are more likely to pick up the bait than their warier relations. (Bird repellents for use with bait are being trialled.) Kaka, on the other hand, don't eat the bait, and both their survival and nesting success is significantly improved after 1080 applications.

So where are the birds? Field trip at the 2017 South Island Gathering in Murchison

Weka are different again. They may eat the bait and become sick for a while but usually survive. Weka have dagger-like beaks and almost literally nest with their backs to the wall, so even cats may think twice about taking them on. However, when stoat populations are going through the 'bust' phase of a boom and bust cycle, then starving predators may kill even the most determined birds. At this stage, the use of 1080 can have a positive effect on both adult and chick survival.

The need for evidence

The importance of research came over loud and clear during the Gathering. We need to understand more about animal behaviour – predators as well as prey. At Lincoln University scientists have set up a stoat enclosure so they can study stoat behaviour at low densities. Which is the main driver – sex or food? In other studies, scientists hope to find out whether 'super-lures' will help to mop up the survivors after intensive pest control has been carried out. Other investigations aim to determine how close together must traps be to provide a buffer zone around a predator-free mainland 'island'.

And of course there are times when everyone's best efforts just don't bring about the outcomes that you'd hope for. Nick Joyce of DOC described both the successes and the failures of the work being done at Rotoiti near Nelson. Failures included attempts to improve lizard survival, using chimney-style traps for cats, and protecting individual kea nests. All very depressing, but at least if you've got the data you know whether or not your efforts are worthwhile.

New technology

One thing we do know is that success won't be achieved by simply doing more of the same. Tom Kay from ZIP (Zero invasive predators) stressed the role that will be played by new technology. This is already coming into play: sensors that detect when a trap has been triggered, motion-activated cameras, automatic resetting traps, global positioning for aerial application of baits etc. (Mind you, some of the research that Tom described wasn't all that hitech. Ever thought of using a toy mouse as a lure in a rat trap?)

Other technologies are more controversial, especially those involving any form of gene modification. GM doesn't necessarily involve transfers of genes from one species to another. For example, rats could be engineered with a gene for sterility and, using a process called gene drive, made to pass on that gene to all its offspring. Sounds good if it could just be confined to New Zealand, but what happens if GM rats end up in other countries where rats are normal members of ecosystems? A new tool called 'daisy drive' is intended to remove the risk that the gene will 'escape', but ….

It is people. It is people. It is people.

People have caused the problem of introduced pests and predators, and only people, working together, can solve it. At present Predator Free NZ is an almost purely aspirational goal, with lots of problems to be ironed out before it can be implemented. Kevin Hackwell pointed to a failure of leadership to date, coupled with a lack of strategy and overall coordination. And of course it will all go for nothing if governments aren't prepared to put in a lot of money.

Even if the goal is achievable, there will still be other problems to confront. Predator Free NZ only targets rats, stoats and possums – not mice, cats, ferrets or hedgehogs. Any Ecology 101 student could predict, for example, what will happen to mouse populations – and consequently to feral cats – when predation pressure on the mice is suddenly relaxed by killing rats and stoats.

Deer and pigs are other introduced mammals that can cause huge damage to native ecosystems but aren't being specifically targeted. In fact we still hear of idiots deliberately releasing them into the wild. It's a simple equation: no forest = no forest birds.

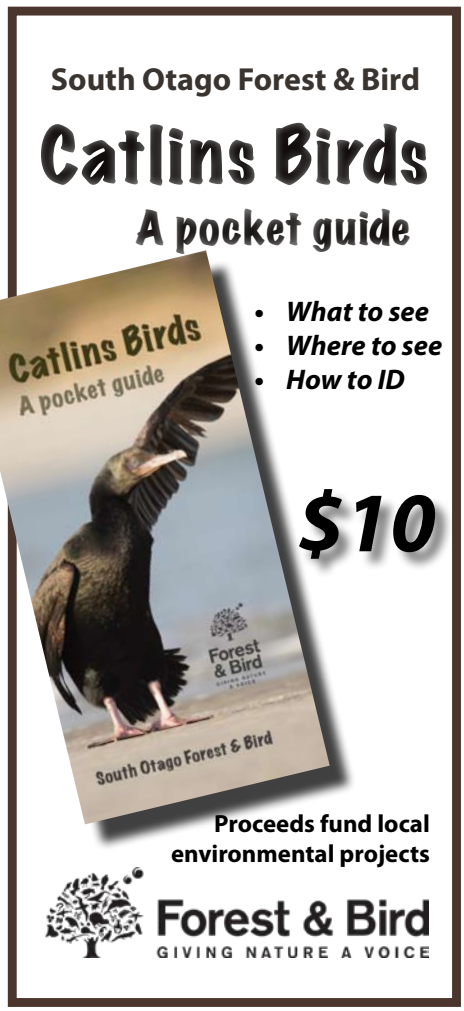
There are no magic bullets and no easy solutions. But the South Island Gathering did give Forest & Bird members cause to hope that maybe, just maybe, Predator Free NZ does have a chance of success. ■

Forest & Bird at the 2017 A&P Show

Sea Bird ID If you missed our competition at the South Otago A&P Show you can still test your skills on the birds shown in the photos below. Answers on p6.

Birds to choose from:

A Black-backed gull
B Black shag
C Pied stilt
D Cape petrel
E Gannet
F Pied oystercatcher
G Sooty shearwater
H White-fronted tern



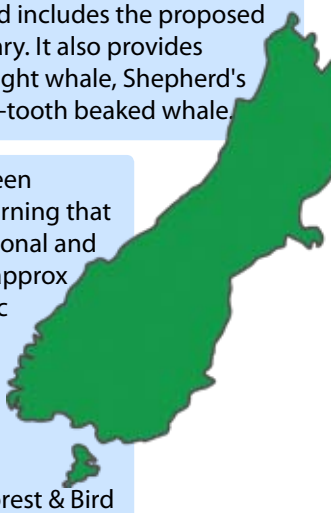
More of Craig McKenzie's bird photographs can be seen in ***Catlins Birds***, available from South Otago Forest & Bird *janejimyoung@slingshot.co.nz.*

From around the country

The Beast The ***Amazon Warrior*** the world's largest seismic blasting ship aka ***The Beast*** has entered NZ waters on its way to Taranaki where it plans to seismic blast for oil right in the middle of blue whale habitat. Greenpeace NZ is calling on the Prime Minister to stand by her climate-change commitments and stop oil and gas exploration off the Taranaki coast. Forest & Bird has sent an open letter to the company urging them to abandon their plans. The seismic survey area covers 19,000 square km and includes the proposed Taranaki blue whale sanctuary. It also provides habitat for the rare pygmy right whale, Shepherd's beaked whale and the strap-tooth beaked whale.

Myrtle rust has been discovered in Auckland for the first time. The fungal disease was found to have affected several hundred ramarama plants at a commercial nursery in West Auckland. Myrtle rust has been relatively dormant over the winter months but new infections are likely to break out as we head into summer. Susceptible plants include kanuka, rata and pohutakawa. A phone app has been developed so that citizen scientists can help to monitor the spread of the disease.
http://naturewatch.org.nz /nz/projects/myrtle-rust-reporter

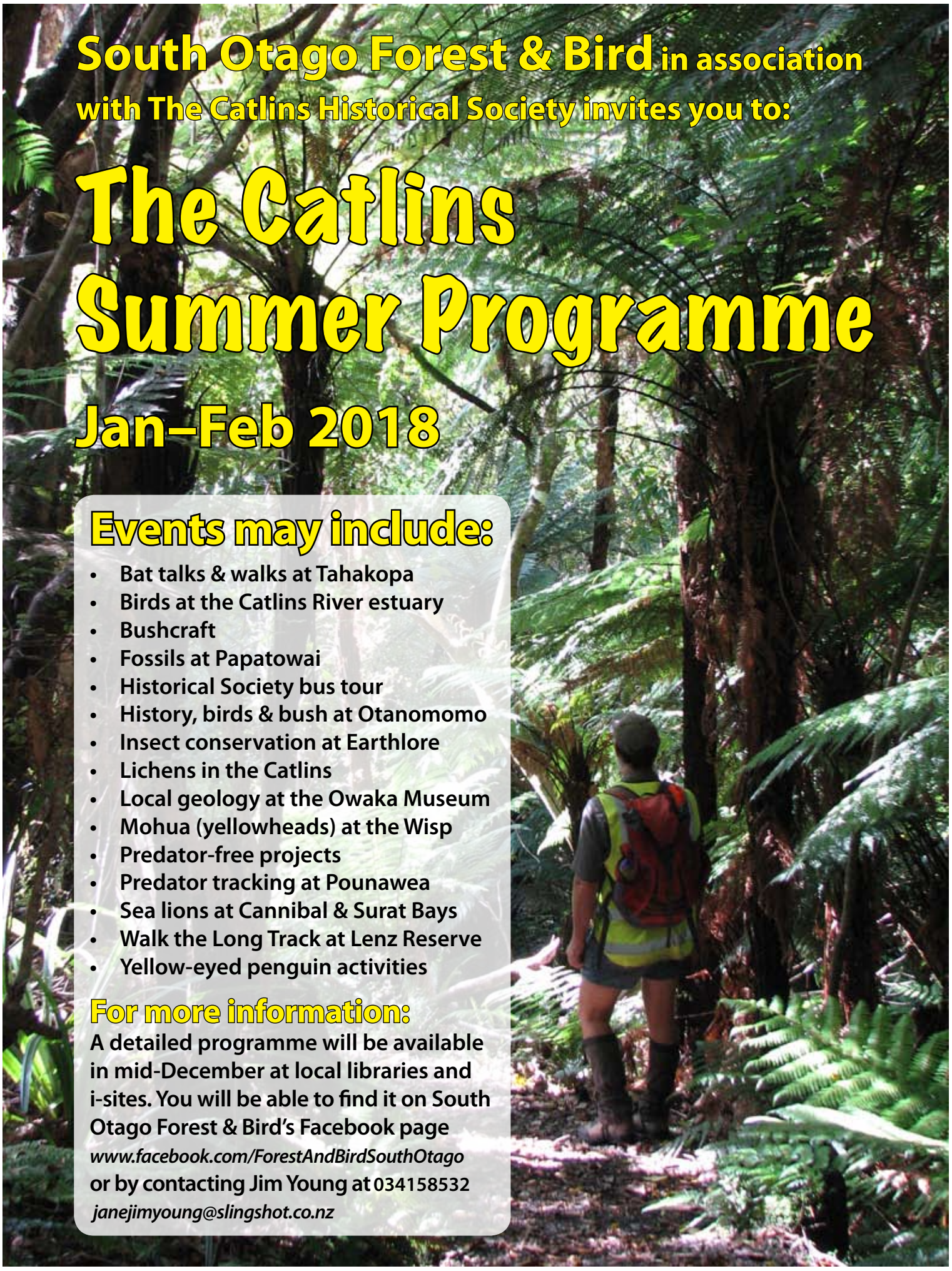
Ramarama infected with myrtle rust *MPI*



The Te Kuha coal mine has been granted consent. Forest & Bird is warning that the decision by the West Coast Regional and Buller District Councils to allow an approx 150 ha opencast coal mine on public land – some of it on New Zealand's conservation estate – could push Great spotted kiwi and other endangered species such as South Island fernbird and the West Coast green gecko closer to extinction. Forest & Bird CE Kevin Hague commented: "Everybody agrees that this area has high ecological values. It's one of our forgotten places – home to the largest population of our rarest butterfly, but languishing in the lowest category of conservation land. The mining industry claims the economic benefits outweigh the costs, but in fact these benefits are overstated and the costs much higher than suggested."

Great spotted kiwi *Rod Morris*

Yellow-eyed penguin crisis The steady decline of South Island populations of the endangered yellow-eyed penguin (hoiho) has continued in 2017. Most worryingly, nearly half the breeding population on the island sanctuary of Whenua Hou (Codfish Island) has disappeared at sea. Forest & Bird say the evidence indicates the birds most likely drowned in commercial set nets and is calling for an immediate action to eliminate the risks from set netting in the penguins' feeding areas. Nearly all recorded penguin deaths as bycatch have come from boats with observers on board, indicating that many deaths are simply not being reported.



South Otago Forest & Bird in association with The Catlins Historical Society invites you to:

The Catlins Summer Programme

Jan–Feb 2018

Events may include:

- Bat talks & walks at Tahakopa
- Birds at the Catlins River estuary
- Bushcraft
- Fossils at Papatowai
- Historical Society bus tour
- History, birds & bush at Otanomomo
- Insect conservation at Earthlore
- Lichens in the Catlins
- Local geology at the Owaka Museum
- Mohua (yellowheads) at the Wisp
- Predator-free projects
- Predator tracking at Pounawea
- Sea lions at Cannibal & Surat Bays
- Walk the Long Track at Lenz Reserve
- Yellow-eyed penguin activities

For more information:

A detailed programme will be available in mid-December at local libraries and i-sites. You will be able to find it on South Otago Forest & Bird's Facebook page *www.facebook.com/ForestAndBirdSouthOtago* or by contacting Jim Young at 034158532 *janejimyoung@slingshot.co.nz*

The Kea 2017 Bird of the Year

Jim Young

'Junk food kea'

Southern Events

Sat 9 Dec 1–3pm
Te Rere Full Day Penguin Count
Leader Brian Rance
rances@southlandcommunitynursery.org.nz

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Sat 9 Dec 1–3pm **Southland KCC**
Beaks and feet and nests
Southland Community Nursery Education Centre
185 Grant Road Otatara.
Leader Bronwyn southland@kcc.org.nz

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Wed 20 December 7.30pm
Southland Forest & Bird (with OLG & Tramping Club)
Bushy Point Trig Walk
Leader Barry Smith bjsrdms@gmail.com
Meet at 173 Grant Rd Otatara. Bring some supper to share.

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Jan–Feb South Otago Forest & Bird
Catlins Summer Programme

Answers to Sea bird ID p3

1 A **2** C **3** H **4** E
5 G **6** F **7** B **8** D

Contact Details

South Otago Forest & Bird
www.facebook.com/ForestAndBirdSouthOtago
Roy Johnstone 03 418 1319 johns-stones@rivernet.co.nz

South Otago KCC
KCC coordinator 0274180044 southotago@kcc.org.nz

Southland Forest & Bird
Chris Rance 03 213 1161 rances@ihug.co.nz

Southland KCC Bronwyn KCC 2130017

The Catlins Bat Project
Catriona Gower 0223 914 698 catlinsbats@gmail.com

Coal Action Murihiku (CAM)
Jenny Campbell 027 351 0180 jennycam@xtra.co.nz

Conservation Volunteers Coastal Otago
volunteerscoastalota@doc.govt.nz

Yellow-eyed Penguin Trust
www.yellow-eyedpenguin.org.nz

New Zealand Sea Lion Trust www.sealiontrust.org.nz

Kārearea: protecting a southern land
Contributions welcome. Copy for Feb 2018 due on 31 Jan.
Editor Jane Young: janejimyoung@slingshot.co.nz

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