

Killing the krittters ...
Environmental Defence Society
Conference Dinner 06Aug 2014

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About a year ago I approached the then DG of DOC, along with Gareth Morgan and the head of OSPRI - what used to be Animal Health Board - and some regional councils ... about a new approach to tackling the relentless loss of biodiversity through predation.

DOC was in the throes of major internal changes that I'll touch on in a moment, and the notion of a new nationwide assault on pests, that harnessed the energy of volunteers, seemed timely for several reasons.

Under the banner of Predator Free NZ the project will be announced in a few months... and I am very pleased to have this opportunity, in front of an organisation devoted to the protection of biodiversity, to give you a heads up tonight.

Yesterday marked the centenary of the start of the First World War. If you've been following the daily commentariat, New Zealanders seem divided whether we are commemorating our greatest human sacrifice or if it's a celebration of the birth of our country's independent nationhood.

Either way... nationhood and loss will be recurring themes tonight.

The fact remains 100 years ago we joined up to a mighty conflict and most curiously, we did so in the total absence of any threat of invasion of these islands.

For that waited until 1943 when a Japanese submarine, spotted in Waitemata Harbour put the country on full alert.

This sighting of the enemy in one of our harbours that was, for many NZers the defining point in making sense of the second world war and galvanised support for the crippling impact of the war effort that was to follow.

As Winston Churchill discovered, an invader – visible, determined and aggressive – is a compelling requirement for a war effort that is expensive and sometimes unpopular.

And when you're defending an island state whose shores had seldom been penetrated, the threat of an invader is even more potent ... it was a theme he milked mercilessly.

Tonight is about war stories.

It's a call to arms to engage and defeat an army of invaders that threaten the things we love – invaders that are determined and aggressive, sinister and murderous.

And by dint of the enemy having started this invasion more than a century ago, and entrenched its position under the cover of national apathy ... they already have the upper hand.

Predators. Exotic mammalian predators.

We've known about their unspeakable carnage of our biodiversity for generations.... We've talked about bringing back the dawn chorus and we've campaigned against DOC's adequate budgets. Most recently The Battle of the Birds.

We've eradicated them from islands, we've constructed incredibly expensive fences and we've dropped thousands, probably millions, of tonnes of poison all over the land.

For all this and for all the talk and campaigning ... our biodiversity declines ... pest numbers increase and every year new pests and weeds invade our shores.

In some place we stare defeat in the face. We see it in desolate landscapes. Places where there are no native plants or insects or birds – ravaged, silent skeletons of previous primal native forest.

So this is a well worn campaign ... as many in this audience are aware.

Are we exhausted? Have we tried everything? And are we ready to resign ourselves to defeat?

No, clearly we're not. But if we're to prevail, we'll need to do something different.

Any four star general will explain some golden rules before engaging an enemy force.

You must have a strategy

... know that any war will take longer and consume more resources than you predicted probably by an order of magnitude. So only take on battles you know you can win and defend. Battles may be won in weeks. Wars take years.

people will get discouraged, politicians will lose faith, supporters and opponents will be found in unexpected places.

Understand what is at stake ... and is it worth the cost?

Know your enemy – how good is your intelligence?

Make an honest assessment of the strengths and failings of your own forces?

But finally and most important, have a plan.

If we expect to carry the enthusiasm of the country, we must understand what's at stake to justify the effort ... As I said ... this is about nationhood.

Some say Gallipoli was the birth of our independent nationhood. Others seriously doubt that a military disaster on a foreign beach established who we are and how we see ourselves in the world.

I suspect the dynamics of that complex process started from the moment Polynesian people set foot on our shores ... and has been evolving within all of us ever since.

Surveys too numerous to list show how connected NZers feel to their landscapes and seascapes .. and the rich diversity of things that live within them.

Pakeha or Maori, young or old, we share this sense of being cast together on these remote islands at the bottom of the world – last, loneliest, loveliest

And so different to anywhere else.

Feelings and images that bubble to the surface most when we're away ... and almost overwhelm us when we return.

How our hearts soar when we recognise the landscapes of the Hobbit

How we revel in natural superlatives - largest tree, biggest parrot, most albatross, oldest reptile, heaviest insect ...

How we call each other after our most curious of birds. .. and how we smile when the rest of the world also call us kiwis.

How other countries may print the names and faces of famous citizens on their coins and banknotes, and we present pictures of our beloved birds and trees.

All things weird and special that we value so highly, that together they frame our sense of national identity... they define us.

The kaupapa of Mataranga Māori
That's what's at stake.

Every decade more bird and invertebrate species from this country, and far more than any other country, are listed on the endangered list.

DOC estimates 25 million birds die every year through predation by mammalian pests.

It seems incomprehensible we have been such appalling stewards of the creatures we love so deeply.

Of countries measured for their record of protecting endangered species, NZ comes 193rd ...

Our beloved kiwi. Once so plentiful from North Cape to Stewart Island, now the population declining at 2% per annum .. a net 27

deaths of kiwis a week ... kiwi will be extinct in the wild in 3 or 4 generations from now.

Our symbol. The creature so synonymous with what we are, that we put its image everywhere and name products, teams, companies, people after it, will, on our watch or the watch of our grandchildren, arrive at the brink of extinction.

That's what's at stake.

Know the enemy – how good is our intelligence?

Well actually our intelligence is excellent.

We've spent nearly as much money researching predators as we've spent killing them. Landcare Research is a world authority on the behaviour and breeding of possums, rodents and mustelids

We know this force is a complex, vast and fast growing army of small carnivores with high demand for protein. Their invasion of New Zealand's islands have, for some species been going for more than century; they have become common, and in some cases plague proportions in most of our landscapes.

Forest and farm, alpine to seashore, city to wilderness,

The most dangerous – the species with the most heinous records for killing – are rats, stoats, possums and cats. They're selected as our prime targets because of their ...behaviour ... because of their numbers and breeding and ... because of their consumption of protein.

For example let's have a quick look at the most prevalent invader – *rattus rattus*.

No one has been game to put a number on NZ's rat population, but if I guessed there were a billion rats in our islands I'd probably be underestimating. Rats can quadruple their numbers in a season.

They hunt at night and when they're not killing birds or eating bird's eggs they're devouring the seeds of native trees. But their vileness doesn't end there – these filthy creatures infest our towns and homes.

Enlightened western cities like Paris and Budapest are so concerned about the disease risk they have launched zero rat campaigns.

Then there's that large greedy omnivore, the possum, that's already wreaked havoc on our and iconic rata and pohutukawa and devour the birds they can reach.

and the stoat, the ultimate killing machine that murder for sport and times her reproduction to maximise her destructiveness.

The odds are very heavily weighted in favour of the invaders and in terms of the time window we have to roll them back, every year bird populations reduce and predator populations increase, the task gets harder and the odds shorten.

They have no resource constraints.

They increase their numbers without cost.

.. while our ability to use some of the most potent weaponry we have to fight them, like 1080, is often compromised

So what's the plan?

In my small way I have been killing rats and stoat on our 1000 acre Waiheke block, where miraculously there are no possums, for more than 15 years. I reckon I've fed the blighters 6 or 7 tonnes of broudicoum .

It's heavy, tedious work filling about 600 bait stations and setting traps in heavy steep bush every 3 weeks through winter and spring, complete with a soggy paper clip board to record activity in every station.

There are about 8000 permanent residents on Waiheke and I've often reflected on what it would take to make the island rat free.

The obvious thing you'd start with is a map.

A map that shows what people are already doing.

a couple of years ago I met Jack Dangermond, the now elderly founder of ESRI ... the company that pioneered high resolution GIS mapping or the world.

He said "why stop at Waiheke. Let's do New Zealand". This country is like no other in terms of being able to detail a geospatial map for a campaign like this.

So, with Jack's support through his NZ agents Eagle Technology, PFNZ has started with a map.

Like a great patch work quilt of NZ showing all the places where DOC, OSPRI and regional government are currently blasting predator.

The plan is we'll overlay this with the locations of what everyone who's killing predators, all over the land.

Quite a big task. Surprisingly there were many places where even these big agencies are not co-ordinated with each other.

For the PFNZ strategy we've got two secret weapons, both simple and inexpensive.

- One is technological – the map, its website and an app on your smart phone to make your job in the bush easier
- And the other secret weapon are the thousands and thousands of NZers, mainly volunteers who already tirelessly spend millions of hours killing stoats, rats and possums.

Like little guerrilla groups all over the country, pockets of NZers are out there .. every weekend with buckets of bridificoum and their stoat traps ... killing little furry animals on their farms, setting traps on their local council reserves..

Company social clubs, school kids, community groups, farmers, bach owners, life stylers, marae groups, Forest and Birders, Friends of Tiri, Deans Bush, Kapiti, Keplar, Waipoua and Mahia.

They will be the heroes of this war but for the time being they're unknown warriors

No one knows who they are or where they are. No one knows exactly what they're doing and whether they're making any difference.

They can't communicate to each other so they don't know where the geographic gaps and opportunities are between them and their neighbours.

Unrecognised, unsupported, uncoordinated, they're just bound together by passion and resolve.

So for them we want PFNZ to be a call to arms ... an aspirational bumper sticker of a slogan that proclaims, in the words of Sir Paul Callahan, that this is possible.

To give this plan oxygen, last year we called a meeting in Wellington of anyone who was interested in a national predator campaign.

We were overwhelmed.

The group that showed up included councils, fed farmers, fish and game, all the NGOs, QE2, all the universities, Landcare, MPI, DOC, Osprey, Fish and Game, Nga Whenua Rahui, along with people like Gareth Morgan and so on.

The charitable trust we formed included a number of these people including:

- DOC who have funded us to employ a project manager and there's some more resource coming to roll the project out
- The Morgan Foundation which gave us some seed money and Gareth who continues to inspire with projects like pest free Steward Island and his national cat campaign

- Eagle Technology who have the IT smarts to complete this map and get it up on a powerful national server
- OSPRI who already have excellent coverage and systems of national predator control networks
- Landcare Research and Vic and Auckland Universities who are the key people in our technical committee driving research

Why hasn't someone tried to harness this army of volunteers before?

Well I think there are a several answers to that.

DOC has only recently come to the blindingly obvious realisation that, with its pathetic budget and tiny army of field staff, it cannot prevail against a foe the size of NZ's predator population.

But for a long time DOC gave out the impression that it could. It presented a face to the community of being exclusively responsible for the protection of New Zealand's biodiversity, as though nobody else knew enough about it, to join the club.

This culture of exclusivity did not serve it well, and most particularly among people who also loved the land – like iwi groups and farmers. As we all know as we know relationships between these groups and DOC have been strained for generations.

Enlightenment arrived a couple of years ago and DOC is fast learning the value of partnership. ... we'll look back on this shift within DOC as the moment the tide turned in the war against predators.

In summary, our analysis is that we have a powerful army to make an all out assault on the predator population. What's missing is connectivity which is made possible with technology and a strategy.

PFNZ is the glue. Its role is to co-ordinate and facilitate, to the extent that the community groups want that support.

... and some may not. This is a long game. We don't expect everyone to want to engage with us from the get-go.

In the next three years, the target is to create this national network of connectivity and feedback systems between numerous, existing conservation efforts and to encourage new participants.

We'll complete the patch work quilt – the national map,

and we'll develop a hand-held app for your smart phone that anyone who wants one, can have. It'll capture data and store it in your own cloud or on the PFNZ website, it'll collate and showcase this growing army localised predator control initiatives.

The PFNZ website will be the go-to place for anything you want to know about killing predators.

Behind all this, with the intelligence of our researchers, we'll work up a strategy that optimises effort for these volunteers. ... PFNZ has become an integral part of the National Science Challenge – NZ Biological Heritage.

Finally, we're not going to win this battle by killing millions of predators one at a time. We need new devices, multi killing weaponry which PFNZ will advocate for.

The long term economic and environmental benefits of this crusade are substantial, and to maintain political and social support, we need to put a number on it.

A credible economic cost benefit analysis is essential if we want this campaign to be supported consistently by the State.

Folks, despite our best efforts, we carry the shame of being a world loser – one of the worst countries on the planet for protecting our native flora and fauna.

What's missing is a plan to harness and focus this resolve.

When our brave young men headed to war 100 years ago they believed they were fighting for freedom. By the end of the war they were fighting for survival.

They were known as kiwis,

and 100 years ago there were literally millions of kiwi thriving on our farms and forests.

Today there are 70,000 left.

Their letters home from the trenches speak of images they missed most – images of landscapes and a yearning for nature. That what kept them going – those same deep emotional beliefs that keep our army of volunteers going today.

We owe to them... and ourselves ... and generations yet unborn ... to make sure some kiwis are still here.