Battle for Our Birds
• Why Battle for our Birds?

• How do we Battle for our birds?

• Where do we Battle for our Birds?

• How did Battle for our birds go?
The beech forest predator prey cycle

2-6 years

10-20 years
Rat and stoat sensitive
Small birds like mohua
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Beech Flowering prediction for 2013

Based on difference between 2011 and 2012

Warmer: +3.4

Colder: -3.4
Beech seed
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Battle for our birds sites
How were the sites chosen?

• Sites with species that might go locally extinct

• Sites that are highly ranked ecosystem management units

• Representative sites

• Large sites
• Why Battle for our Birds?

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• How did Battle for our birds go?
  – Monitored rats, mice and stoats
  – Monitored birds and bats
Tracking tunnels for rats, mice and stoats

- 1000 lines
- 10,000 tracking tunnels
Rats
170m swaths
Rats before – 94.0%
Rats after 13%
95% kill

150m swaths
Rats before – 97.4%
Rats after 0%
100% kill
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• How did Battle for our birds go?
  – Monitored rats, mice and stoats
  – Monitored birds and bats
Mt Stanley
4,500ha
24 banded birds monitored during the drop
- all survived

62 nests monitored before and after the drop

nesting success
30 nesting riflemen monitored during the drop - all survived

57 nests monitored before and after the drop

Nesting success
33 radio-tagged weka monitored during the drop

1 died, but not from 1080

85 weka monitored during 1080 operations

Mortality rate of 3.5%

Monitored about 50 nests through 2 1080 ops

Nesting success is neither better nor worse with 1080
Queenstown

Dart-Caples
20,000ha
13 mohua nests monitored after the drop.

29 mohua monitored since the drop.
- 49 birds monitored through the 1080 drop
- 22 of them disappeared
- Monitored 24 nests
  - 14 in the 1080 area
  - 10 in untreated

![Graph showing chicks per pair for 1080 and no-1080 areas]
• In the two 1080ed areas the combined population increased by about 50%

• In the untreated area the population remained about the same.
What is the long-term impact of battle for our birds?
Number of birds

Stoat and Rat plague

Years

Stoat and Rat plague

Stoat and Rat plague

0 20 40 60 80 100
Stoat and Rat plague

1080 drop

Stoat and Rat plague

Number of birds

Years

0  20  40  60  80  100
Number of birds

Years

Stoat and Rat plague

1080 drop

1080 drop

1080 drop
Stoat and Rat plague

1080 drop
Number of birds vs. Years

1080 drop
Number of birds

1080 drop

Trap
Profound conclusions

Large scale pest control is new

1980s & 1990s

2000
Killing stoats with 1080 is new
Killing rats with 1080 is new

Pre-feed

2005

toxic
Predicting beech seedfall is new

2014
Knowledge gaps

• 1080 can protect many rat and stoat sensitive species from predator plagues after beech mast

• But

• We can do a better job of 1080

• We haven’t got an effective large scale rat and stoat control tool in forests not dominated by masting species – the permanently ratty places in the lowlands

• 1080 can’t be used protect stoat sensitive species in non beech mast years- kea, kaka, kiwi, whio
6,200km track
31,000 traps – 1 trap/20ha

DOC 200s
$3,500,000 setup
$1,500,000 4 checks per year

A24s
$5,000,000 setup
$845,000 1 check per year

300 huts
$15,000,000
Fly transects 500m apart
Baits every 100m
1 bait every 5ha

$180,000 for one bait spread

PAPP
para-aminopropiophenone
To sustain the benefits from Battle For Our Birds

• A repeat Battle For Our Birds every 10 – 20 years.

• Every other year we’ll have to undertake rat and stoat control at a few places around the country.

• We need to develop an aerial stoat control tool.