Department of Conservation
*Te Papa Atawhai*

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Source: Pestlink

# Operational Report for Possum Control in the Poulter Valley and South Hurunui Valley

## 12 Nov 2013 - 03 Dec 2013

27/05/2014
Department of Conservation
Rangiora

Contents

# 1. Operation Summary

**Operation Name** Possum Control in Poulter Valley and South Hurunui Valley
**Operation Date** 12 Nov 2013 - 03 Dec 2013
**Office** Rangiora **Region:** South and Eastern South Island
**Pestlink Reference** 1314WMK03

| Treatment Area | Size (ha) |
|---|---|
| Poulter Valley and South Hurunui Valley | 9500.00 |

| Conservation Unit Name(s) | GA Id(s) |
|---|---|
| Arthur's Pass National Park | 2806320 |
| Lake Sumner Forest Park | 2807535 |

**Treatment Block Details**

| Treatment Blocks | Size (ha) |
|---|---|
| South Hurunui Valley | 2500.00 |
| Poulter Valley | 6870.00 |

**Contractor Name** WaytoGo Helicopters

| Treatment Dates | Start | Completion |
|---|---|---|
| Poulter Valley | 13 Nov 2013 | 02 Dec 2013 |
| South Hurunui Valley | 12 Nov 2013 | 03 Dec 2013 |

**Target Pest Details**

| Treatment Blocks | Target Pests | Control Method | Name |
|---|---|---|---|
| Poulter Valley | Possum | Pesticide Aerial | Pesticide - Aerial in Poulter Valley-(1) |
| South Hurunui Valley | Possum | Pesticide Aerial | Pesticide - Aerial in South Hurunui Valley-(2) |

**Conservation Outcome(s)**

To ensure the long-term survival of orange-fronted parakeet and mohua within the operational area.

| Result Target(s) | Treatment Area/Block | What we got |
|---|---|---|
| • (Poulter and South Hurunui Valleys) Possum populations will be reduced to less than 1% RTC (equivalent to 6% wax tag BMI) to allow orange-fronted parakeet and mohua populations to | Poulter Valley | 9% BMI = 1.5% RTC |

| | | |
|---|---|---|
| recover. | | |
| • (Poulter and South Hurunui Valleys) Possum populations will be reduced to less than 1% RTC (equivalent to 6% wax tag BMI) to allow orange-fronted parakeet and mohua populations to recover. | South Hurunui Valley | 10% BMI = 1.66% RTC |

| Outcome Targets | What we got |
|---|---|
| • All known orange-fronted parakeet nests are fully protected against introduced predators. | Results still to come. |

# 2. Introduction

## 2.1 TREATMENT AREA

### Non-target species

| Common Name | Scientific Name |
|---|---|
| Mouse | Mus musculus |
| Kea | Nestor notabilis |
| Possum | Trichosurus vulpecula |
| Rabbit | Oryctolagus cuniculus cuniculus |
| Hare | Lepus europaeus occidentalis |
| Norway rat | Rattus norvegicus |
| Hedgehog | Erinaceus europaeus occidentalis |
| Cat | Felis catus |

### Target benefit species

| Common Name | Scientific Name |
|---|---|
| Malherb's parakeet, kakariki, kakariki, kakariki karaka, kakariki karaka, orangefronted parakeet, or | Cyanoramphus malherbi |
| Mohua, Yellowhead, bush canary, mohoua, houa | Mohoua ochrocephala |

### Threatened species

| Common Name | Scientific Name |
|---|---|

| | |
|---|---|
| Mohua, Yellowhead, bush canary, mohoua, houa | Mohoua ochrocephala |
| Malherb's parakeet, kakariki, kakariki, kakariki karaka, kakariki karaka, orangefronted parakeet, or | Cyanoramphus malherbi |
| Yellow-crowned Parakeet, Kakariki | Cyanoramphus auriceps |
| Kea | Nestor notabilis |
| Blue duck, Whio, mountain duck, blue mountain duck | Hymenolaimus malacorhynchos |
| Great spotted kiwi, roa, roroa | Apteryx haastii |
| Bush falcon, Karearea | Falco novaeseelandiae "bush" |
| South Island Kaka, bush parrot, brown parrot, kawkaw | Nestor meridionalis meridionalis |
| Red mistletoe, pikirangi, pirirangi, pikiraki, pirita | Peraxilla tetrapetala |
| Yellow mistletoe | Alepis flavida |
| - | Ranunculus godleyanus |
| Grey Duck, Pacific black duck, parera, parera, gray duck, black duck | Anas superciliosa superciliosa |
| Black-fronted tern, tarapirohe, tarapiroe, blackfronted tern, black fronted tern | Chlidonias albostriatus |
| - | Charadrius bicinctus |
| Rock Wren | Xenicus gilviventris |

### Geographical location

The Poulter Valley and South Hurunui Valley is situated 16 km SE of Arthur's Pass.

## TREATMENT BLOCK DETAILS:

| | | |
|---|---|---|
| **Treatment block** | South Hurunui Valley | |
| **Vegetation type** | Southern beech forest with extensive areas of mountain and red beech. Also riparian shrubland dominated by coprosma species and matagouri, bordered by grass/tussockland. At higher altitudes there are alpine shrub and herbfields. Annual rainfall is 3500 - 4500mm spread fairly evenly throughout the year, with generally heavy falls during spring and early summer and the occasional drought. Most rain and some snow is from the NW/SW. Temperature range is -5 to +35 deg C, with between 1600 and 2000 sunshine hours per yr. | |
| **Bioclimatic zone** | sub-alpine<br>montane | |
| **Climate characteristics:** | | |
| **Rainfall** | 3500 mm | |
| **Temperature:** | **Average Summer** | 18.0 |
| | **Average Winter** | 8.0 |
| **Snow level** | 90 m | |

| | | |
|---|---|---|
| **Altitude** | 600-1200 m | |
| **Community and Iwi interests** | Tramping, hunting, bird watching, public shelter, walking track, hut. | |
| **Historic sites** | - | |
| **Treatment block** | Poulter Valley | |
| **Vegetation type** | Mountain, red and occasional silver beech. Extensive river flats with short tussock grassland and mixed riparian shrublands. | |
| **Bioclimatic zone** | montane | |
| **Climate characteristics:** | | |
| **Rainfall** | 450 mm | |
| **Temperature:** | **Average Summer** | 18.0 |
| | **Average Winter** | 8.0 |
| **Snow level** | 900 m | |
| **Altitude** | 600 - 1200 m | |
| **Community and Iwi interests** | Popular area for tramping and hunting with several huts within the valley. | |
| **Historic sites** | - | |

### 2.2 MANAGEMENT HISTORY

Management history was not chosen to be shown in this operational report. This history is, however, available via Pestlink

# 3 Outcomes and Targets

### 3.1 CONSERVATION OUTCOMES

To ensure the long-term survival of orange-fronted parakeet and mohua within the operational area.

### 3.2 TARGETS

#### 3.2.1 Result Targets

The result targets for the treatment area were:

- (Poulter and South Hurunui Valleys) Possum populations will be reduced to less than 1% RTC (equivalent to 6% wax tag BMI) to allow orange-fronted parakeet and mohua populations to recover.

#### 3.2.2 Outcome Targets

The outcome targets for the treatment area were:

- All known orange-fronted parakeet nests are fully protected against introduced predators.

# 4 Consultation, Consents & Notifications

## 4.1 CONSULTATION

28 identified parties were consulted about the proposed activity prior to the original resource consent being sought in 2006. These parties included the local runanga, adjoining landowners/managers, recreational user groups, concessionaires, NGO's and conservation interest groups.
Prior to each of the five occasions (2006, 2008, 2009, 2012 and 2013) that the resource consent needed to be exercised, proposed operations were publicly notified. (nb current consent is for 2011-2016) Based on the responses from the original 2006 consultation and the subsequent public notices, all parties that had previously expressed an interest were contacted in respect of the current consent application.

The proposal was discussed with the Canterbury Aoraki Conservation Board at one of their meetings. All other parties received details, and an invitation to meet or respond, by post or email.

Iwi were sent an initial email outlining the application and inviting further discussion. They replied advising that they have no objection to a new resource consent being granted, provided consent conditions remain the same as the existing consent.

The adjoining land managers/occupiers were contacted by phone and sent a follow up e-mail on 13/09/2013 outlining the proposed application and seeking written affected persons approval.

### Consultation outcomes

N/A

### Lessons learned

N/A

## 4.2 CONSENTS

| Consent | Consent date | File Reference | Permission ID |
|---|---|---|---|
| Resource Consent | 29/08/2011 | NHT-02-04-04 | CRC120176 |
| MOH Consent Poulter | 29/10/2013 | NHT-02-02-04 | 13/16/CHRPH/BW |
| MOH Consent Sth Hurunui | 29/10/2013 | NHT-02-02-04 | 13/17/CHRPH/BW |
| DOC Consent | 23/10/2013 | NHT-02-04-04 | 1302157 |
| Landowner consents | | | |

### Lessons learned

Combine consents where at all possible. One MOH consent should have been sufficient for both areas.

### 4.3 NOTIFICATION

The following parties were notified in September 2013 by letter and fact sheet: concessionaires, permit holders, conservation interest groups, recreation and hunting groups, community groups, police, local government and adjoining landowners.

Public notices were posted in the Christchurch Press and the Greymouth Evening Star.

**Lessons learned**

None

# 5 Methods

### 5.1 TARGET SPECIES

| Treatment Block | South Hurunui Valley | |
|---|---|---|
| **Control method** | **Name** | **Target pest species** |
| Pesticide - Aerial | Pesticide - Aerial in South Hurunui Valley-(2) | Possum |

| Treatment Block | Control Method | Name | Target Pest Species |
|---|---|---|---|
| South Hurunui Valley | Pesticide - Aerial | Pesticide - Aerial in South Hurunui Valley-(2) | Possum |

| | |
|---|---|
| **Trade name of pesticide** | 0.15% 1080 Pellets RS5 |
| **Name of pesticide** | Sodium fluoroacetate |
| **Type of bait** | Cereal pellet |
| **Toxic loading** | 1.5 g/kg |
| **Bait quality sampling** | Not Conducted |

**Bait Details**

| | Pre-feed | Toxic |
|---|---|---|
| **Bait type** | Cereal pellet | Cereal pellet |
| **Lure/ mask/ deterrent** | Cinnamon | Cinnamon |
| **Lure/ mask/ deterrent** | 0.30% | 0.30% |
| **Dye** | None | Green |
| **Individual Bait Weight** | 6.0g | 12.0g |

**Sowing Rate Details**

| Pre-feed | | | |
|---|---|---|---|
| **Date** | **Rate(kg/ha)** | **Wind Speed** | **Direction** |
| 12/11/2013 | 1.00 | Calm | Nil |
| **Toxic** | | | |
| 03/12/2013 | 2.00 | Light | NW |

**Time between pre-feed and toxic** 21

| | |
|---|---|
| **End of Caution Period Date** | 03/08/2014 |
| **Aircraft type** | Hughes 500D or E<br>Squirrel AS 350 |
| **Number of Aircraft** | 1 |

**Sowing gear details**

| Description | Capacity |
|---|---|
| Purpose built sowing bucket. | 500 kg |

| | |
|---|---|
| **Type of navigational guidance system used** | DGPS Trimble flight line 3 |
| **Loading Method** | By hand into loader hopper then loader into heli bucket. |

**Complaints and Incidents**

An adjacent farmers dog suffered poisoning symptoms 2 months after the toxic drop and had to be euthanised. Tests showed it was not 1080 poison.

**Other Details about this method**

-

**Deviations from planned operation**

-

**Lessons Learned**

-

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## Treatment Block Poulter Valley

| Control method | Name | Target pest species |
|---|---|---|
| Pesticide - Aerial | Pesticide - Aerial in Poulter Valley-(1) | Possum |

| Treatment Block | Control Method | Name | Target Pest Species |
|---|---|---|---|
| Poulter Valley | Pesticide - Aerial | Pesticide - Aerial in Poulter Valley-(1) | Possum |

| | |
|---|---|
| **Trade name of pesticide** | 0.15% 1080 Pellets RS5 |
| **Name of pesticide** | Sodium fluoroacetate |
| **Type of bait** | Cereal pellet |
| **Toxic loading** | 1.5 g/kg |
| **Bait quality sampling** | Not Conducted |

**Bait Details**

| | Pre-feed | Toxic |
|---|---|---|
| **Bait type** | Cereal pellet | Cereal pellet |
| **Lure/ mask/ deterrent** | Cinnamon | Cinnamon |
| **Lure/ mask/ deterrent** | 0.30% | 0.30% |

| | | |
|---|---|---|
| Dye | None | Green |
| Individual Bait Weight | 6.0g | 12.0g |

Sowing Rate Details

| Pre-feed | | | |
|---|---|---|---|
| Date | Rate(kg/ha) | Wind Speed | Direction |
| 13/11/2013 | 1.00 | Light | NW |
| Toxic | | | |
| 02/12/2013 | 2.00 | Light | NW |

| | |
|---|---|
| Time between pre-feed and toxic | 19 |
| End of Caution Period Date | 02/08/2014 |
| Aircraft type | Hughes 500D or E<br>Squirrel AS 350 |
| Number of Aircraft | 2 |

Sowing gear details

| Description | Capacity |
|---|---|
| Purpose built sowing bucket | 500 kg |

| | |
|---|---|
| Type of navigational guidance system used | DGPS Trimble flight line 3 |
| Loading Method | By hand into hopper loader and then loader into helicopter bucket |

Complaints and Incidents

Minor toxic overfly of a boundary near Ranger Biv. (cleared by hand)

Other Details about this method

-

Deviations from planned operation

-

Lessons Learned

-

## 5.2 ENVIRONMENTAL EFFECTS

### 5.2.1 Effects on Non-Target Species

Death or injury.

| Performance standard(s) | Followed ? | Monitored ? |
|---|---|---|
| | | |

Effectiveness of performance standards

Effective

Bykill of non-target species

No known non target effects. A dog showed poison symptoms but tests showed that it was not due to 1080.

### 5.2.2 Effects on Soil and Water Quality

Effects on Soil and Water Quality Not Applicable

### 5.2.3 Effects on Ecosystems

Effects on Ecosystems Not Applicable

### 5.2.4 Effects on Human Health

Potential for poisoning

| Performance standard(s) | Followed ? | Monitored ? |
|---|---|---|
| MOH and DOC performance standards.- Exclusions around waterways. Signage, advertising and pesticide summary | Yes | Yes |

**Effectiveness of performance standards**
Effective

# 6 Monitoring Results and Outcomes

## 6.1 RESULT MONITORING - TARGET SPECIES

**Result target(s)**

(Poulter and South Hurunui Valleys) Possum populations will be reduced to less than 1% RTC (equivalent to 6% wax tag BMI) to allow orange-fronted parakeet and mohua populations to recover.

**6.1.1 Target Species Monitoring Method:** WaxTag

**Species monitored** Possum - Trichosurus vulpecula in Poulter Valley

**Monitor method details**
Standard wax tag monitoring lines as per protocol.

**Deviations**
N/A

**Target pest result details**

| | Pre | During/Post |
|---|---|---|
| Monitoring dates | 14/11/2012 | 26/03/2014 |
| Results | 70% BMI = 12% RTC | 9% BMI = 1.5% RTC |

**Result target met?** No

**Lessons Learned**
N/A

**6.1.2 Target Species Monitoring Method:** WaxTag

**Species monitored** Possum - Trichosurus vulpecula in South Hurunui Valley

**Monitor method details**
Standard wax tag monitoring lines as per protocol.

**Deviations**
N/A

**Target pest result details**

| | Pre | During/Post |
|---|---|---|
| Monitoring dates | 16/10/2012 | 8/04/2014 |
| Results | 31% BMI = 5.2% RTC | 10% BMI = 1.66% RTC |

Result target met? No

Lessons Learned

N/A

## 6.2 RESULT MONITORING - ENVIRONMENTAL EFFECTS

### 6.2.1 Non Target Species

No monitoring of non target species was undertaken.

### 6.2.2 Soil and Water Quality

No monitoring of soil and water quality was undertaken.

### 6.2.3 Ecosystems

No monitoring of ecosystems was undertaken.

### 6.2.4 Human Health

| | |
|---|---|
| Monitoring of: | Sign compliance, DOC Performance standards, MOH and product label requirements. Tracking of pesticide. |

Monitor Method details

Observe and comply with all above standards and requirements.

Deviations

Nil.

| | |
|---|---|
| Monitoring dates | As required. |
| Results | Standards followed as required. - Bait monitoring and checking signs became an issue as baits took longer than expected to break down. |

Lessons Learned

N/A.

## 6.3 OUTCOME MONITORING

Outcome targets

All known orange-fronted parakeet nests are fully protected against introduced predators.

No monitoring of outcomes was undertaken