



Whangarei Kiwi Sanctuary

Annual Report June 2012-May 2013



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Te Papa Atawhai

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1.0 Introduction

The Whangarei Kiwi Sanctuary (WKS) was established in 2000 to protect the rapidly declining population of the Northland provenance of the North Island Brown kiwi.

Since the creation of the WKS the focus was primarily on protecting kiwi through predator control using traps and toxins, and monitoring a sample of the kiwi to ascertain the effects of the protection. However, because predation on kiwi by dogs is the strongest driver of population trends in Northland (de Monchy *et al.*, 2009) it was decided in 2008/2009 that the dog issue needed to be addressed. The dog threat is essentially a people issue, as people can stop their dogs from wandering. Thus the shift in focus of the WKS has been from a science-based approach to a community relations-based approach.

The Dog Campaign is being driven by a ‘dogs and kiwi’ community relations engagement plan that was completed in June 2011 ([DOCDM-795028](#)). The plan is a five year programme of work and describes ways to manage the specific impact of dogs, based on existing and developing knowledge, experience and research. Key findings from the dogs and kiwi social research show that there is a lack of general awareness about kiwi and where they live. People think that their dog is not a problem if they don’t have kiwi on their property and also the belief “my dog wouldn’t kill a kiwi” is alive and well. Social and other research also highlighted key points that need to be addressed. These include:

- Consistency of approach
- Consistency of appropriate key messages
- Awareness, promotion and publicity
- Following through with the hard-stuff e.g. prosecutions, fines
- One-on-one contact is critical in some communities
- The importance of the experience of hearing and especially seeing live kiwi

Another important document that is guiding the actions of the WKS team is the Northland Brown Kiwi Taxon Plan ([DOCDM-836137](#)). The taxon plan sets goals for Northland Brown Kiwi recovery and describes in detail the management and research actions required to achieve and maintain these goals. The WKS has a significant responsibility in working with individuals and organisations to reach the taxon plan goals.

1.0.1 DOC restructure

The recent restructure of the Department of Conservation has led to a change in office location and changes to the staff and management of the Whangarei Kiwi Sanctuary.

1.1 Objective

The objective of this document is to provide a summary report on all aspects of the WKS operations for the 2012-2013 species year (June 1 2012 – May 31 2013). This report includes a summary from the Whangarei Heads Landcare Forum (WHLF) who carries out predator trapping, kiwi monitoring and a great advocacy initiative “Backyard Kiwi” at Whangarei Heads.

2.0 Dog Campaign

The Dog Campaign was officially launched, along with the Northland Brown Kiwi Taxon Plan, at a celebration event in September 2011.

The goal of the dogs and kiwi plan is that *‘dogs no longer pose a significant threat to the growth of Northland brown kiwi populations in Whangarei district. Kiwi flourish alongside people and controlled dogs’* (Campbell, 2011: p3). Results from the research conducted in developing the plan strongly suggest an overall two-pronged approach will be most effective. This means:

- (a) targeting a more general public audience within Northland, and;

- (b) targeting specific audiences, whether these are individual communities/groups of interest or localities

2.1 Increasing General Public Awareness

2.1.1 Media

WKS produced 13 media hits with kiwi content via media releases, a media note, web story, a radio interview and media columns. Overall 46 media hits were recorded with Northland brown kiwi content. These were produced by DOC and a range of community partners, with 26 of these including dog messaging, showing that the partners are well engaged in the dogs and kiwi social marketing message delivery (Table 1). During the year BNZ Operation Nest Egg (BNZONE) was mentioned seven times and Kiwis for Kiwi was mentioned five times, acknowledging the branding changed during this year. The Whangarei Kiwi Sanctuary was mentioned four times. The months April and May, when the kiwi translocation occurred resulted in the highest media hit rate. This was community-led media activity (not requiring input from DOC).

Key messaging across all partners (including DOC) showed 'dog threat to kiwi', 'Kiwis for Kiwi' and 'BNZ Operation Nest Egg' were well used. There is a definite move away from mentioning the 'Whangarei Kiwi Sanctuary', though localities within the sanctuary are often referred to.

Table 1. Media exposure for Northland Brown Kiwi.

| 2012-13: Month | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Total |
|---------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----------|
| Media Hits | 6 | 1 | | 2 | 4 | 1 | 3 | 6 | 2 | 3 | 6 | 12 | 46 |
| DOC Whangarei media hits | 2 | | | | 2 | | 3 | 1 | 1 | 1 | 1 | 2 | 13 |
| Dogs mentioned | 4 | | | | 1 | 1 | 3 | 3 | 1 | 1 | 5 | 7 | 26 |
| Kiwis for kiwi mentioned | | | | | | | | | | | | 5 | 5 |
| WKS mentioned | 2 | | | | | | 1 | | | 1 | | | 4 |
| BNZONE mentioned | 1 | | | 1 | | | | | | | 5 | | 7 |

A record of media articles and filming can be viewed at docdm-1273719

2.1.2 Signage

The WKS team has been focusing on making the dog issue more prominent not just within the Whangarei Kiwi Sanctuary but also in Northland. In order to do this large roadside banners have been installed in prominent areas. In Whangarei roadside banners have been installed on the way to Whangarei Heads and at Tutukaka and Hikurangi. The Hikurangi site is on the SH 1 and is a significant turnoff to many communities with kiwi including the WKS kiwi sanctuary core study block area, Whananaki, Tutukaka, Mimiwhangata and Whangaruru but also populations further north. The process has been a learning curve, mainly due to the paper work requirement to get signs installed. Paperwork for the signs included landowner approval, resource consent and approval from the NZ Transport Authority when the sign is located on a State Highway. The signs, once installed, received positive community feedback which has been encouraging.

Support has been provided for other areas in Northland with one sign installed south of the Waipoua Forest and paperwork finalised for another six in the Far North. One site in particular was requested by

the Mangamuka pig hunting club and was also asked if it could be in Te Reo. The signs provide an important reminder for visitors, particularly over the summer months when Northland population expands with the influx of holiday makers and tourists.



Figure 1. Dogs killing kiwi message in Te Reo Maori



Figure 2. Sign on roadside

2.1.3 Car Branding

Pete Graham's truck was the original truck branded with the dog campaign message - 'Any dog can kill a kiwi – where is your dog'. Pete says that it gets plenty of attention from people and is a good way of getting people to see the message as he travels around a lot doing aversion training and kiwi dog work. The WKS has sponsored for the branding to be spread out Northland wide. This roll out has resulted in six DOC vehicles throughout Northland being branded with the dogs can kill kiwi message. Three private cars have also been branded for individuals who have a significant role in kiwi conservation. The car message has been a cost effective method and the result has been wide spread branding with Whangarei District Council Dog Control having the branding for some time now as part of their fleet of cars.



Figure 3. An example of the DOC vehicle signage

2.1.4 Internet

The WKS has made one YouTube video with Purua School about a bird that lives close to their school and has nested in general farmland and calls the roadside berm home. The video can be viewed at <http://www.youtube.com/watch?v=5a6TL6HS17k>

2.2 Targeting Specific Audiences

2.2.1 Landowners and residents living in and around kiwi areas

The WKS currently has 20 birds that are being monitored for advocacy purposes. Eight are spread over three of the WKS study block reserves (Hodges, Rarewarewa and Riponui) and the rest of the birds are monitored on private land. The purpose of these birds is to raise general kiwi awareness via BNZ Operation Nest Egg advocacy opportunities and to get landowners, neighbours and communities aware of kiwi and the dog problem. The WKS team try to use every biometrics handling, BNZ Operation Nest Egg collection or kiwi release as an advocacy opportunity and talk about the threat of dogs to kiwi as well as providing general kiwi information. People who have been taken out into the field to see kiwi include local land and home owners, their friends and family, staff working on local farms, school classes, competition winners, council planners and corporate sponsors.

A record of visits to the advocacy birds can be found at [DOCDM-288512](#) under the 'kiwi awareness visitors' tab.

2.2.2 Kiwi aversion training

Hunters and farmers with dogs in kiwi areas remain the main target group for kiwi aversion training. This is because these dogs are required to be in kiwi areas as part of their job. Although a small amount of pet dogs are put through kiwi aversion training, the very clear message given to the owners is that the best protection for kiwi is to never allow their dog to encounter a kiwi. And to never rely on kiwi aversion training to stop their dog killing a kiwi.

3.0 Encouraging Community Kiwi Initiatives

The Whangarei Kiwi Team has been heavily involved with two translocations of Northland brown kiwi at Marunui, on the south side of the Brynderwyns, and at Mataia, a large farm located on the Kaipara Harbour. This has been the culmination of years of hard work by these groups to make kiwi friendly areas and it has been an amazing experience to see the growth of these groups and help them achieve their kiwi aims. The projects are significant because not only are they the first community driven Northland brown kiwi translocations but also a milestone for Northland brown kiwi to reclaim areas where they have been locally extinct for a number of decades. The two community groups have been championing the dog message and have given kiwi a good platform for positive media messages.

3.1 Northland Kiwi Forum

The Northland Kiwi Forum (NKF) has continued its role to provide a support network and representation for 40+ landowner and community groups that are carrying out kiwi protection work for Northland brown kiwi. The NKF is administered by the Northland Regional Kiwi Coordinator whose role is to provide support, advice and source information upon request for members. Information of interest is also circulated to Forum members via email and a quarterly NKF newsletter has been developed this year to provide another medium to communicate interesting kiwi news.

The Northland Kiwi Forum working group (NKFWG) which has representatives from councils, captive institutions, community representatives from northern, eastern, southern and western areas, Kiwis for kiwi, Kiwi Recovery Group, NZ Landcare Trust, forestry, DOC area offices and Iwi networkers, meet four times a year to discuss kiwi issues and work to guide kiwi recovery in relation to the Northland brown kiwi Taxon Plan. The WKS are represented on the NKFWG by Clea Gardiner. Pete Graham is on the working group as a kiwi aversion trainer and dog issues representative.

An important development for the NKFWG has been to analyse the Northland brown kiwi funding bid applications for the 2013 Kiwis for Kiwi funding round and provide funding recommendations to the Kiwi Recovery Group. A meeting dedicated to this process was carried out and the final decisions made by the KRG and Kiwis for Kiwi were based on the recommendations that the NKFWG had put forward.

3.2 Tānekaha Landcare Group

The Tanekaha Landcare Group protects 700ha area of private land that is encompassed by Heaton and Hukurenui Roads. Todd Hamilton with funding from the Northland Regional Council has been instrumental in getting a stoat trapping programme going in this financial year. Monitoring for the existing male has continued by WKS staff and the bird's presence has been important in motivating and educating the landowners in that area. Tanekaha is an important milestone being one of the first landowner driven groups within the core WKS area (Riponui, Hodges, Rarewarewa, and Purua).

3.3 Marunui Conservation Ltd- Brynderwyns

Marunui Conservation Limited was set up in 1987 by renowned ecologist Teddy Goldsmith and his wife Katherine, with 423 hectares of indigenous forest now protected by the QEII National Trust Open Space Covenant. Marunui shareholders have worked long and hard to achieve a high level of pest control. Marunui was the first of the two translocations to have 14 kiwi released. The release was an excellent opportunity to showcase the hard work done on pest control and also dog advocacy. The actual day of the release was a great success with an estimated crowd of 250 from the local community.

John Hawley and Cecilia Walker have used the Motuora capture trip to become the first Approved Kiwi Handlers at Marunui. The steep terrain has made it difficult for monitoring the birds but this has not hampered Marunui from doing an excellent job. <http://www.doc.govt.nz/getting-involved/events-and-awards/awards/conservation-champions/marunui-conservation/>

3.4 Mataia Restoration Project – Glorit

The Mataia Restoration Project was established Gill and Kevin Adshead who own a large working farm on the Kaipara Harbour near Helensville. Established on a 1300 hectare working farm, the 400 hectares of restored native coastal forest has been retired from farming and is the core area for the next translocation in the 2013-2014 financial year. Gill and Kevin know that the birds will move in and out of this area and the goal is to increase the area under protection beyond their 1300 hectare boundaries to include up to 10,000ha of neighbouring properties. Progress has included adding shade cloth around the entire perimeter fence of the property to act as a deterrent to kiwi wandering out of the area and dogs wandering in. This shade cloth has a limited life but will give the community some time to increase the protected area. The installation of the cloth has been a huge undertaking but will hopefully prove to be vital in ensuring the birds establish in a kiwi friendly environment. Mataia is working towards having the capacity to monitor and handle kiwi. Julie Alach and Shane Hood have used the Motuora trips and first few handles at Mataia to become approved kiwi handlers.

<http://www.kiwisforkiwi.org/what-we-do/who-are-kiwis-for-kiwi/community-efforts/auckland/mataia-restoration-project/>

See [Mataia Restoration Project Annual Report](#) for more detail.

4.0 Predator Control

Northland brown kiwi recovery at WKS is based on controlling mustelid (and cats) to increase kiwi chick survival, and controlling dogs to increase adult survival. Mustelid are controlled through a network of traps laid over approximately 21,300 ha (includes core and buffer zones of approximately 16,500 and 4,800 ha respectively). Dogs (mainly hunting) are put through avian aversion training to avoid kiwi through the use of electric collars and an intensive dog advocacy programme is carried out in the community.

The trapping regime in the Whangarei Kiwi Sanctuary consists of an intensive trapping frequency over summer and a less intensive regime over winter. The frequency over the summer period between November and February is fortnightly and salted rabbit bait is used during this active period for stoats. The regime outside of the peak period varies from 3 – 6 week checks. The winter period is used for trap and track maintenance.

Table 2. WKS trap checking frequency

| Month | Trap checking frequency 2012/2013 |
|-----------------------------|--|
| December January/February | 2 weekly |
| March and November | 3 weekly |
| April/May September/October | 4 weekly |
| June/July/August | 6 weekly |

4.1 Mustelid and Cat Control

Mustelid traps are set around reserve edges, along selected ridges, stream edges and roadsides consisting of approximately 475 double set DOC 200, 49 double set Fenn 6, 20 DOC250 and 165 Steve Allan Modified Conibear traps (SA cat traps) to target cats. The total number of traps is 709 traps. The bait used in Best Practice trap boxes was salted rabbit and possum. Over winter eggs are used instead as the meat deteriorates very quickly in these months. In the SA cat traps possum/rabbit mince was used and a peanut butter/cat biscuit mix used over winter.

A total of 252 target species were caught during 2012-2013, which is fairly consistent from the previous year of 261. No ferrets were caught again this year. Concerns raised by Hugh Robertson regarding no ferret catch were discussed with Darren Peters (DOC National Office) who believes that if there were any out there, the WKS trapper would be catching the young and females. However he did suggest that we added some more DOC250 traps in areas where our bush borders onto farm land as a precaution.

Bait trials have been in progress since August 2012, two types of the Good Nature oil lure have been trialled in paired trap boxes and a Good Nature rabbit paste was trialled in trap boxes in the Purua reserve using an alternating bait technique. The first oil lure was a lot stronger smelling than the second oil lure and seemed to be very attractive to rats.

Also trialled was an electronic pest caller designed by Brad Windust from Kerikeri. Fifty of these callers were installed in trap boxes randomly selected across the WKS. The battery life of the pest callers was about 6-8 weeks; the callers were only used once as they needed some fine tuning but are a very clever idea and could have potential. This study needs to be done on an annual basis in order to have more robust results.

Please refer to Appendix One for tables and graphs of trapping data.

4.2 Community Kiwi Protection

Alongside the predator control work of the WKS which covers over 16,000ha there are also over 9,600ha of land under protection through community predator control. The work carried out by these groups compliments the work done by the WKS and extends the area in and around the sanctuary that is under protection. The WKS team are happy to use their expertise and experience to assist these community groups. We appreciate the work and dedication that is put in by these volunteers for the benefit of kiwi and conservation in general.

Table 3. Areas under management by groups doing predator control in and around the Whangarei Kiwi Sanctuary

| Location | Organisation | Area under management (ha) |
|-------------|--------------------------------|----------------------------|
| Bream Head | Bream Head Conservation Trust | 200 |
| Whangarei | Whangarei Heads Landcare Forum | 4000 |
| Tutukākā | Tutukākā Landcare Coalition | 3500 |
| Ngunguru | Sandy Bay Kiwi | 500 |
| Whangaruru | Whangaruru Ratepayers | 380 |
| Brynderwyns | Marunui Conservation Ltd | 420 |
| Glorit | Mataia Properties Restoration | 400 |
| Pukenui | Pukenui Forest Trust | 400 |
| Hikurangi | Tanekaha Landcare | 700 |

5.0 Sanctuary Monitoring

5.1 Advocacy birds

As part of the dogs and kiwi plan, around 20 kiwi are being monitored for advocacy purposes. There is a core group of eight kiwi that mainly reside in the kiwi reserves that were retained for advocacy purposes because they are good breeders, have quiet personalities and are a mixture of ages. They are relatively easy to access and their territories occupy different habitats e.g. bush, farmland, pine, bush/farm edges. There are also another 15 kiwi that are being monitored on private land. The number and location of kiwi that are monitored on private land is more dynamic with transmitters being put on and taken off birds when the situation calls for it.

Todd Hamilton from Whangarei Heads Landcare Forum (WHLF), Pete and Cathy Mitchell from the Bream Head Conservation Trust (BHCT) and Mike Camm from TLC continue to monitor kiwi within the WKS as part of their groups work protecting kiwi. Todd is monitoring six breeding males in Rarewarewa and Riponui Reserves and eleven kiwi in the Whangarei Heads area. Pete and Cathy monitor four kiwi at Bream Head and Mike is monitoring a reducing number of birds in Ngunguru/Tutukaka. Bernie Buhler is monitoring three adult kiwi on Matakohe/Limestone Island kiwi crèche. The WKS work with these groups to help them achieve their goals and the ability of these groups to monitor kiwi is testament to the hard work they have put in to get to this stage of their kiwi protection programmes.

5.2 Kiwi Dog Work

Pete Graham is the handler of the Whangarei sanctuary's only fully certified kiwi dog, Rua.

Rua, a Hungarian Vizsla, has been working with Pete and the kiwi team since September 2007, and was also fully certified for pateke in September 2009.

Rua has been particularly useful this year in helping locate kiwi that were transferred to Mataia and Marunui for their biometric and transmitter checks, these transferred birds have been located in habitat that is very favourable for the kiwi but not so favourable for the people trying to catch them.

Pete has also acquired a new Hungarian Vizsla pup called Tama and it is his intention to train him for kiwi work as well.

5.3 Kiwi Listening

Kiwi listening for 2012 was scheduled for 7 – 27 June, with a back-up window 6 - 26 July. These listening windows were later than the usual mid-May start, due to the timing of the moon.

Following the increase in kiwi call count rates for all clusters in 2011, all but one cluster (Southern) trended down in 2012. However, they were all above the 2010 mean counts, so they are still showing a pattern of general stability with natural fluctuations over time. The Western cluster appears to be the only one showing an overall downward trend, which is undoubtedly in part a reflection of poor dog control near the Western sites (Craig 2013).

Results in the WKS have been positive for 2012. In Whangarei Heads two clusters (Manaia-Nook, and Bream Head/Taurikura) recorded increases in their mean call count rates further to the previous year's gains, and the remaining cluster (Kauri Mountain) recorded a very similar result to the previous year. Tutukaka recorded a solid increase from seven calls/hour to just over ten calls/hour. The Motatau-Marlow cluster recorded an increase from the previous year. Calls in the Purua-Rarewarewa cluster decreased slightly, but were within the relatively high and stable range that has been recorded for this cluster for the last seven years. These positive

results are likely to reflect growing kiwi numbers in the areas thanks to the tremendous effort of the local landowners and community in protecting them.

The data for the 2012 listening period was sent in faster and with more thorough and clear recording than previous years. This made reporting an easier exercise than in the past.

The complete kiwi listening report can be found at DOCDM-1205759.

Kiwi listening for 2013 has been scheduled for 28 May – 17 June with a back-up window 26 June - 16 July. Results for 2013 will be included in the 2013/14 annual report.

5.4 Cause of Death

The 2012-13 season has had fewer dead kiwi recovered or handed into the Department. This will be largely due to the greatly reduced radio tagged birds being monitored by WKS.

Notable deaths include three young kiwi drowning; one in a farm trough, one in a fish pond and one in a swimming pool. A 1.89 kg bird translocated from Motuora was killed by a stoat (confirmed via DNA analysis) one month after release into the Marunui block. This kill was unusual in that historically kiwi that have reached 1200g are much less likely to be the victim of stoat attacks, so the death of a kiwi approaching 1.9kg was a real concern.

The other deaths of note were three road kills all from the Whangarei Heads area however hopefully the efforts being put into kiwi advocacy by the community and the Department will raise awareness of this issue in the Whangarei Heads area and wider environs.

Table 4. Causes of death for kiwi during 2012-2013

| Cause of Death | Chick | Sub-Adult | Adult | Total |
|---------------------------|--------------|------------------|--------------|--------------|
| Mustelid predation | 3 | 0 | 1 | 4 |
| Dog predation | 0 | 0 | 3 | 3 |
| Drowning | 1 | 3 | 0 | 4 |
| Natural causes | 0 | 0 | 1 | 1 |
| Vehicle | 0 | 0 | 3 | 3 |
| Unknown | 0 | 0 | 1 | 1 |
| TOTAL | 4 | 3 | 9 | 16 |

6.0 BNZ Operation Nest Egg™

In the 2012-2013 nesting season 18 eggs were collected for BNZ Operation Nest Egg by WKS staff, yielding 15 chicks.

The eggs were collected from 19 nests produced by 16 pairs. Two eggs (from Rarewarewa) were collected and taken to WNBRC, all the rest of the eggs were taken to Auckland Zoo. The chicks that hatch from WNBRC are released onto Matakohe-Limestone Island and Auckland Zoo hatched chicks are released onto Motuora Island in the Hauraki Gulf, although this year one chick from Auckland Zoo was released back onto Matakohe-Limestone Island.

Table 5. BNZONE results for 2012-2013

| Site | Collected | Infertile/ rotten | Eggs failed | Hatched | Died | Crèched | % Egg viability | % Hatch | % Chick survival |
|--------------------|-----------|----------------------|----------------|-----------|----------|-----------|--------------------|-----------|---------------------|
| Hodges Bush | 5 | | | 5 | | 5 | 100 | 100 | 100 |
| Rarewarewa | 5 | | 1* | 4 | 1^ | 3 | 100 | 80 | 60 |
| Riponui | 6 | | 1# | 5 | | 5 | 100 | 83 | 83 |
| Purua | 2 | | | 2 | | 2 | 100 | 100 | 100 |
| Total | 18 | 0 | 2 | 16 | 1 | 15 | 100 | 89 | 83 |

died during hatch –malpositioned * mid embryonic death ^ died during surgery -retained yolk sac

6.1 Matakohe-Limestone Island BNZONE Crèche – Kiwi Search and Capture

This season 13 chicks successfully hatched –12 were transferred to the Matakohe Limestone Island crèche (the other was killed by a stoat before reaching the transfer age of ten days).

Night spotlighting and kiwi dogs are used to recapture the sub adult kiwi for release when they reach in excess of 1200g.

Ten sub adult kiwi have been recaptured and released this season at Tutukaka and the Heads, including two to Bream Head.. Limestone Island also reached a significant milestone with Badger becoming the 100th bird to come off Matakohe-Limestone Island.

Matakohe-Limestone Island has a new ranger Bernie Buhler replacing the previous ranger Ben Barr. Bernie is close to becoming a certified kiwi handler.

Motuora Island BNZONE Crèche – Kiwi Search and Capture

In April and May 2013, 27 birds were transferred from Motuora Island and released at two new kiwi restoration sites south of Whangarei, Marunui and Mataia. All twenty seven transferred birds are monitored by the community groups concerned.

It is interesting to note that 15 out of the 27 birds transferred were island bred and not part of the Operation Nest Egg process.

Table 6. Number of Northland Brown Kiwi that have been released at sites by DOC, Whangarei Heads Landcare Forum (WHLF) and Tawharanui Open Sanctuary Society Inc (TOSSI) since 2004/05

| | 2004/ 2005 | 2005/ 2006 | 2006/ 2007 | 2007/ 2008 | 2008/ 2009 | 2009/ 2010 | 2010/ 2011 | 2011/ 2012 | 2012/ 2013 | Total kiwi released |
|---------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------------------|
| Whangarei Heads | 7 | 32 | 20 | 9 | 11 | - | 6 | 4 | 6 | 95 |
| Tawharanui Open Sanctuary | - | - | 17 | 25 | 4 | - | - | - | - | 46 |
| Bream Head and The Nook | 45 | - | - | - | - | - | 2 | - | 2 | 49 |
| Hodges | 5 | - | - | - | - | 1 | - | - | - | 6 |
| Ngunguru | - | 4 | - | - | - | 10 | - | 16 | 2 | 32 |
| Purua | - | - | - | - | - | - | - | 3 | - | 3 |
| Riponui | - | - | - | - | - | - | - | 12 | - | 12 |
| Marunui | - | - | - | - | - | - | - | - | 14 | 14 |
| Mataia | - | - | - | - | - | - | - | - | 14 | 14 |
| TOTAL | 57 | 36 | 37 | 34 | 15 | 11 | 8 | 35 | 38 | 271 |

7.0 Staffing

The Whangarei Kiwi team has four full time staff members, being Paul Macdonald, Paul Cornille, Pete Graham and Rolf Fuchs. Gina Williams and Emma Craig have been working on a job share basis. Clea Gardiner has returned to the Kiwi team after a temporary secondment as the Northland Regional Kiwi Co-ordinator. This year has seen Sean Gifford, Jason Tipene and Mike Martin employed as part time trappers in the Study Blocks, Motatau and Whangaruru respectively.

8.0 Whangarei Heads Landcare Forum - Backyard Kiwi Report 2012-2013 (By Todd Hamilton)

8.1 Kiwi Predator CPCA - Northland Regional Council Funding

We have had our second year of five years of NRC funding for the “Whangarei Heads Kiwi Predator Control CPCA”. This funding includes hardware such as traps, transmitters etc and also 91 hours labour per month for WHLF trapping and kiwi monitoring. The CPCA is in partnership with BHCT who also gain funding from it. Thank you to Don McKenzie and Kane McElrea of the NRC for your ongoing support.

8.2 Kiwi Predator Trapping Programme at the Whangarei Heads

We are into our 11th season of predator trapping of an approximate 4000ha area at the Whangarei Heads. This trapping program compliments the trapping carried out by the DOC Whangarei Kiwi Sanctuary trappers and the BHCT.

Table 7. Summary of captures by Whangarei Heads Landcare Forum Kiwi Recovery programme.

| Total captures (October to September each year) | | | | | | | |
|---|----------|------------|------------|------------|------------|-------------|--------------|
| | Ferret | Stoat | Weasel | Cat | Hedgehog | Rat | Possum |
| 2002/2003 | 1 | 55 | 46 | 18 | 65 | 391 | NA |
| 2003/2004 | 4 | 22 | 21 | 22 | 52 | 319 | 24 |
| 2004/2005 | 1 | 30 | 17 | 38 | 95 | 403 | 285 |
| 2005/2006 | 0 | 26 | 13 | 29 | 82 | 357 | 191+ |
| 2006/2007 | 0 | 26 | 8 | 17 | 68 | 304 | 147 |
| 2007/2008 | 0 | 19 | 22 | 18 | 84 | 346 | 75+ |
| 2008/2009 | 0 | 21 | 25 | 12 | 112 | 351 | 144+ |
| 2009/2010 | 0 | 17 | 20 | 20 | 87 | 321 | 139+ |
| 2010/2011 | 1 | 24 | 27 | 15 | 86 | 338 | 109+ |
| 2011/2012 | 0 | 25 | 27 | 20 | 56 | 390 | 98+ |
| 2012/2013* | 0 | 37 | 15 | 17 | | | |
| Total | 7 | 302 | 241 | 226 | 787 | 3520 | 1212+ |

* Interim results for 2012/2013 season till August 2013

The 2012-13 season has been our biggest stoat season since our initial “knock down” of 2002-3.

Based on the Whangarei Kiwi Sanctuary study on trapping effectiveness our ongoing trapping is complimented with the targeted secondary poisoning of trap shy stoats by a pulse of Brodifacoum once every three or four years rotating through suitable areas. This season Taurikura Ridge was our pulsed area. This combination of an extensive trapping network and a controlled brodifacoum pulse should be leading to high kiwi chick survival in our area. This has been reflected in the increasing kiwi call counts over the past six seasons– 2.4 calls/hr/station 2007 to 6.4 calls/hr/station 2013.

8.3 Kiwi Radio Monitoring Program at the Whangarei Heads

An important part of the advocacy work at the Whangarei Heads is the radio monitoring of a sample of kiwi and updating of landowners and other locals of where and what those birds are doing – this is done through personal contact, newsletters, Facebook and our website (www.backyardkiwi.org.nz). We are currently monitoring ten adult and sub-adult kiwi. The monthly locations of these kiwi are shown on our website map. The chick timer transmitters also provided interesting information about the individual kiwi for the locals – time of “getting up” in the evening, length of activity each night and any nesting behaviour.

Monitoring with the smart “chick timer” radio transmitters showed 13 chicks hatched from ten nesting attempts by our six kiwi dads– where possible chicks are transponded (ID chipped) and sampled for DNA but are not radio monitored.

There have been only four known kiwi deaths in the WHLF area this season:

- Drummond - one of our radio monitored sub-adults ended up in a farm dam – presumably a drowning by misadventure.
- A wild sub-adult was killed by a dog at Kerr Road while feeding on a lifestyle block property’s lawn.
- Sesqui – an untransmitted BNZONE female released in 2006 was run over by a car.
- A wild adult female was killed by a life style block dog that had undergone aversion training but the training had expired. WHLF discourage the aversion training of pet dogs in the area as they deem it ineffective and can lead to poor dog control by pet owners.

8.4 BNZONE programme – funded by Kiwis for kiwi and Clover Technologies

This is a joint programme involving WHLF, BHCT and Tutukaka Landcare Coalition with the support of DOC Whangarei Kiwi Sanctuary. We monitor six breeding males in the DOC managed Riponui and Rarewarewa blocks. “Chick timer” transmitters are used to indicate chick hatching times minimizing any nesting disturbance through the monitoring.

This season 13 chicks successfully hatched –12 were transferred to the Matakohe Limestone Island crèche (the other was stoated before reaching the transfer age of ten days). Night spotlighting and kiwi dogs are used to recapture the sub adult kiwi for release when they reach in excess of 1200g. Ten sub adult kiwi have been recaptured and released this season at Tutukaka and the Heads, including two to Bream Head. One thousand and fifty people have made the most of these opportunities to get up close and personal with a live wild kiwi in their backyard through these releases.

We are grateful to Kiwis for kiwi for their continued funding for this BNZONE work in the 2013-14 season. Also many thanks to Clea Gardiner and her team from the Whangarei Kiwi Sanctuary for their ongoing support.

8.5 Backyard kiwi Advocacy

With uncontrolled dogs the biggest threat to the Whangarei Heads kiwi population our “Backyard kiwi” advocacy remains crucial. In addition to personal contact that advocacy includes:

- Signage - Main sign at Whangarei Heads turn off, interpretation sign at garage and seven road signs.
- Communication includes:
 - Website – approximately 250 hits per month
 - three On line –Email newsletter to BYK data base
 - Multiple Community & School Newsletters
 - Several newspaper articles.
 - five community kiwi releases
- The sale of art prints of “Backyard Kiwi” for fundraising is ticking over with two further prints released at our ten year celebration.

- Our “I saw a kiwi” and “I heard a kiwi” bumper stickers feature on many cars in the district.
- Our Backyard kiwi pamphlets to help inform visitors about kiwi at the Whangarei Heads are being picked up regularly from the local cafes and shops.

Backyard Kiwi has featured strongly in two books published this year:

- Heather Hunt and Annemarie Florian’s children’s picture book “Kiwi the real story” has been named as a finalist in the New Zealand Post Children’s Book Awards 2013.
- Peter Hayden and Rod Morris’s “An Extraordinary Land” has just been released.

9.0 Acknowledgements

The Whangarei Kiwi Sanctuary team would like to thank the many individuals and organisations for their involvement, support and effort to help protect kiwi in the Whangarei area.

In particular we would like to thank the Whangarei Heads Landcare Forum, Tutukākā Landcare Coalition and Bream Head Conservation Trust for their dedication to protecting kiwi in their area through predator control, monitoring kiwi and advocacy work and to the all the other dedicated and hard working community groups that are working to protect kiwi. Friends of Matakōhe-Limestone Island for carrying out kiwi recovery work in the Matakōhe crèche. To the NZ Landcare Trust for running trapper training days, their contribution to the Northland Kiwi Forum and organising the Dargaville Field Days. The staff at Auckland Zoo for the significant part they play in the BNZONE process. The Whangarei Native Bird Recovery Centre for treating injured birds and incubating eggs for BNZONE. Thank you to the landowners who let us have access to monitored kiwi and to check traps on their land. Northland Regional Council for the significant input and resources in supporting community groups establish pest control initiatives.

Thank you to the Kiwis for kiwi for their support and resources, their contribution to the Northland Kiwi Forum and all their work in kiwi advocacy. Thank you to Northland Conservancy, Research, Development and Innovation, National Office and Whangarei Area Staff who have given advice and support to the programme, in particular Hugh Robertson, Darren Peters and Avi Holzapfel. We would like to acknowledge Ngati Hine, Ngati Manuhiri, Te Marutuahu, Hauraki collective, Tamaki collective, Ngati Paoa, Ngati wai Trust Board, Te Kawerau a Maki, Ngati Whatua ki Kaipara, Te Uri o Hau settlement trust, Te Parawhau, Patuharakeke Te Iwi trust board, the Motuora Restoration Society (in particular the island rangers Sian and Toby) the QE II National Trust, Department of Conservation Warkworth Area Office bio-security team and the Kiwi Recovery Group for all their assistance and tautoko during this seasons translocations.

It has also been a huge year for Marunui and the Mataia Restoration Project - it has been hugely rewarding supporting and working alongside these two enthusiastic groups.

10.0 References

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11.0 Appendix One

Table 8. Predator trapping results for 2012-2013. Trapped hectare totals do not include buffer areas. Trapped hectare for Carter Holt Harvey through to Riponui/Goddards is provided as a combined total as the sites are contiguous.

| | Trapped area (ha) | Cats | Stoats | Weasels | Ferrets | TOTAL CAUGHT |
|-------------------------------------|-------------------|-----------|-----------|------------|----------|--------------|
| Carter Holt Harvey | | 1 | 3 | 0 | 0 | 4 |
| Hodges Bush | | 1 | 6 | 0 | 0 | 7 |
| Lovell's | | 3 | 1 | 0 | 0 | 4 |
| Marlow | | 2 | 5 | 16 | 0 | 23 |
| Allans/Masons/Goings | | 5 | 0 | 1 | 0 | 6 |
| Motatau | | 4 | 4 | 3 | 0 | 11 |
| Purua | | 4 | 1 | 1 | 0 | 6 |
| Rarewarewa | | 10 | 3 | 1 | 0 | 14 |
| Riponui/Goddards | | 4 | 3 | 1 | 0 | 8 |
| Combined total (CHH-Riponui) | 8206 | | | | | |
| Heads roadside/pikes | 987 | 3 | 1 | 15 | 0 | 19 |
| Manaia/Aubrey | 125 | 0 | 0 | 4 | 0 | 4 |
| Ngunguru | 1973 | 4 | 4 | 5 | 0 | 13 |
| Pataua | 233 | 2 | 2 | 3 | 0 | 7 |
| Study Block Roadsides | 1562 | 6 | 8 | 22 | 0 | 36 |
| Taranui Road | 686 | 2 | 3 | 6 | 0 | 11 |
| Te Whara / Bream Head | 906 | 0 | 3 | 9 | 0 | 12 |
| Whangaruru | 1893 | 2 | 29 | 6 | 0 | 37 |
| Paired trial animal callers | n/a | 1 | 0 | 2 | 0 | 3 |
| Paired trial assorted | n/a | 0 | 0 | 3 | 0 | 4 |
| Paired trial Good Nature oil | n/a | 2 | 12 | 5 | 0 | 19 |
| Alternating trial Good Nature paste | n/a | 0 | 1 | 4 | 0 | 5 |
| TOTAL | 16571 | 56 | 89 | 107 | 0 | 253 |

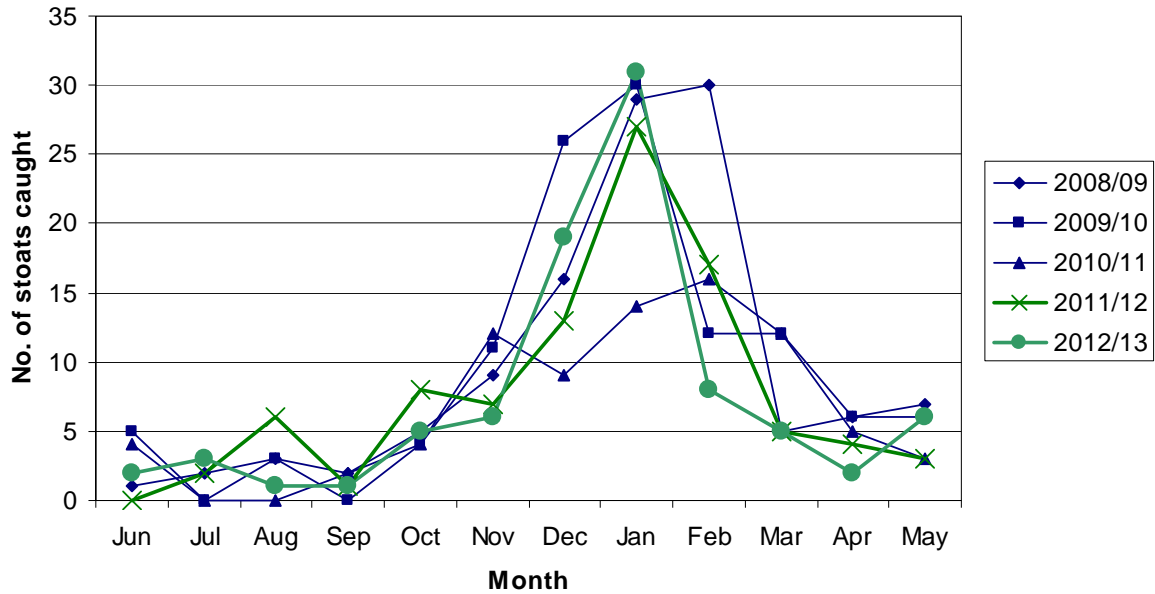


Figure 4. Comparison of stoats caught by month since 2008/09. The blue lines are the years under the old varied trapping regime; the green lines are the new varied trapping regime.

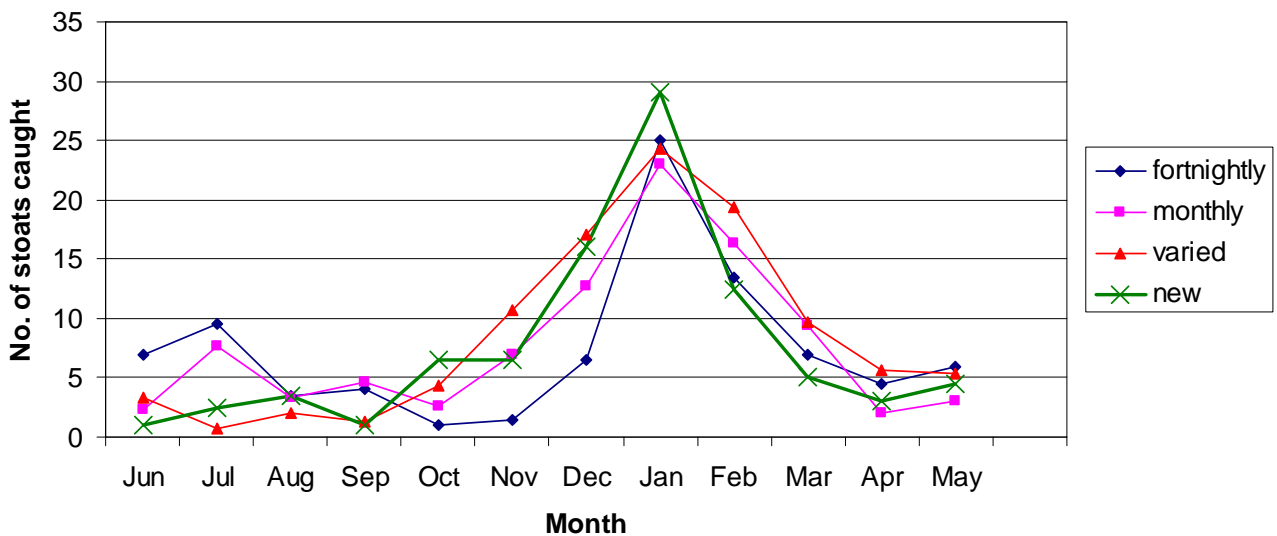


Figure 5. Comparison of the mean stoats caught by month since 2003/04. The blue line is a mean of the years under the fortnightly trapping regime (2003/04 and 2004/05), the pink line is a mean of the years under the monthly trapping regime (2005/06, 2006/07 and 2007/08), the red line is a mean of the years under the varied trapping regime (2008/09, 2009/10 and 2010/2011) and the green line is a mean of the years under the varied trapping regime (2011/12 and 2012/13).

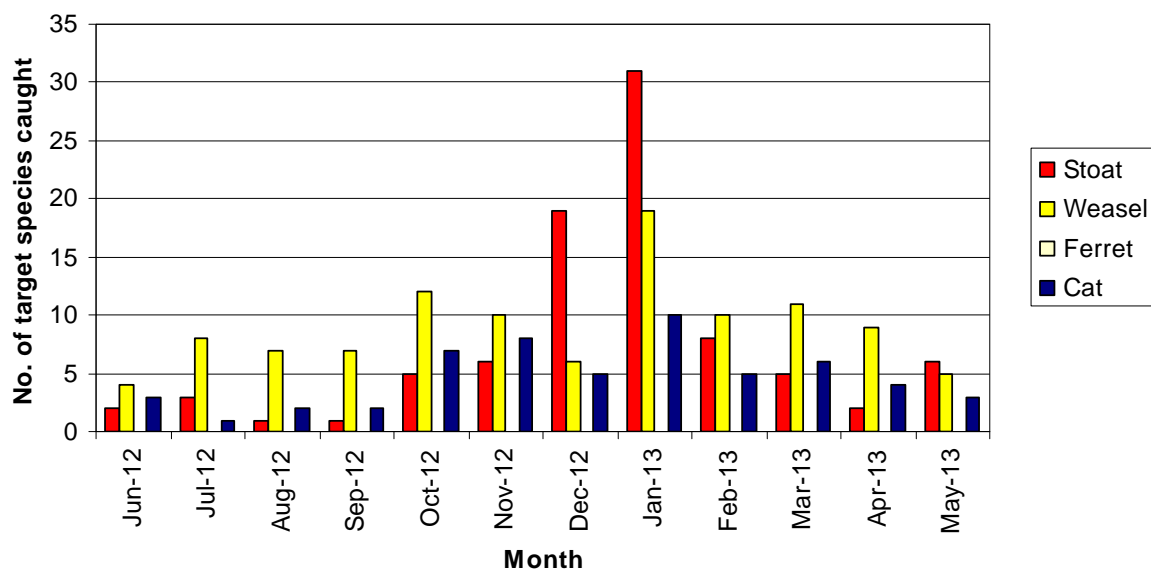


Figure 6. Mustelids and cats caught by month during 2012-2013. NB: No ferrets were caught during 2012/13.

Table 9. Good Nature oil lure #1 vs. egg pair trial June 12 to August 12

| Catch | Good nature oil lure #1 | Egg |
|----------|-------------------------|-----|
| Rat | 28 | 17 |
| Stoaat | 0 | 2 |
| Weasel | 0 | 1 |
| Cat | 1 | 0 |
| Rabbit | 0 | 1 |
| Possum | 0 | 1 |
| Hedgehog | 1 | 1 |

Table 10. Good Nature oil lure #2 vs salted rabbit October 2012 – July 2013

| Catch | Good nature oil lure #2 | Salted Rabbit |
|----------|-------------------------|---------------|
| Rat | 22 | 55 |
| Stoaat | 1 | 11 |
| Weasel | 1 | 2 |
| Cat | 0 | 1 |
| Rabbit | 0 | 0 |
| Possum | 0 | 2 |
| Hedgehog | 6 | 11 |

Table 11. Good Nature rabbit paste trial August 2012 – January 2013

| Catch | Rabbit paste | Rabbit | Hen egg |
|----------|--------------|--------|---------|
| Rat | 23 | 10 | 3 |
| Stoat | 0 | 1 | 0 |
| Weasel | 1 | 3 | 1 |
| Hedgehog | 0 | 1 | 0 |
| Mouse | 0 | 1 | 0 |
| Possum | 0 | 1 | 0 |

Table 12. Brad Windust pest callers (rabbit and rat callers) trial March 2013 – May

| Catch | Brad Windust Pest Caller + salted rabbit (50 traps) |
|----------|--|
| Rat | 16 |
| Stoat | 0 |
| Weasel | 2 |
| Cat | 1 |
| Possum | 1 |
| Hedgehog | 5 |