

Whangarei Kiwi Sanctuary

Annual Report 2011 - 2012



Cover image: **Purua landowner and monitored kiwi**

Cover image credit: Chiemi Nagle

ISSN (if applicable)

ISBN (if applicable)

© Copyright [November, 2012], New Zealand Department of Conservation. This report may be cited as:
Topia, M. 2012. Whangārei Kiwi Sanctuary Annual Report 2011-2012. Department of Conservation,
Whangārei. 21 p.

CONTENTS

1.0 INTRODUCTION	4
1.1 OBJECTIVE	4
2.0 DOG CAMPAIGN	4
2.1 INCREASING GENERAL PUBLIC AWARENESS	5
2.1.1 <i>Advocacy birds</i>	5
2.1.2 <i>Media</i>	6
2.1.3 <i>Signage</i>	6
2.1.4 <i>Community events</i>	7
2.1.5 <i>Internet</i>	8
2.2 TARGETING SPECIFIC AUDIENCES	8
2.2.1 <i>Landowners and residents living in and around kiwi areas</i>	8
2.2.2 <i>Dogging for kiwi on private property</i>	9
2.2.3 <i>Kiwi aversion training</i>	9
2.2.4 <i>School visits</i>	9
2.3 ENFORCEMENT	10
3.0 ENCOURAGING COMMUNITY KIWI INITIATIVES	10
3.1 NORTHLAND KIWI FORUM	10
3.2 TANEKAHA	11
3.3 TUTUKAKA	11
4.0 PREDATOR CONTROL	11
4.1 MUSTELID AND CAT CONTROL	12
4.2 COMMUNITY KIWI PROTECTION	15
5.0 SANCTUARY MONITORING	16
5.1 ADVOCACY BIRDS	16
5.2 KIWI DOG WORK	16
5.3 KIWI LISTENING	17
5.4 CAUSE OF DEATH	17
6.0 BNZ OPERATION NEST EGG™	18
6.1 MATAKOHE-LIMESTONE ISLAND BNZONE CRÈCHE – KIWI SEARCH AND CAPTURE	18
6.2 MOTUORA ISLAND BNZONE CRÈCHE – KIWI SEARCH AND CAPTURE	19
7.0 STAFFING	19
8.0 WHANGAREI HEADS LANDCARE FORUM REPORT 2011-2012 (BY TODD HAMILTON)	20
9.0 ACKNOWLEDGEMENTS	22
10.0 REFERENCES	22

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.

1.1 Objective

The objective of this document is to provide a summary report on all aspects of the WKS operations for the 2011-2012 species year (June 1 2011 – May 31 2012). 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. Individuals, organisations and Iwi who are involved with, and interested in, kiwi were invited to attend. It was well supported and a great way to move forward with the new direction of the WKS.

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 Advocacy birds

The WKS currently has 23 birds that are being monitored for advocacy purposes. Eight are spread over three of the WKS study block reserves (Hodges, Rarewarewa and Riponui) and 15 are on private land, spread over 10 different properties. The purpose of these birds is to raise general kiwi awareness via BNZ Operation Nest Egg advocacy opportunities and to get landowners, neighbours and entire 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, school classes, competition winners, council planners and corporate sponsors. Concerns have been raised nationally about using kiwi as advocacy tools, relating to the extra stress that this places on the bird. Proposed guidelines for the WKS team have been written by Emma Craig and can be viewed at [DOCDM-905585](#).

Fourteen kiwi were released from Motuora Island onto private land adjoining the Purua and Riponui reserves. A sample of these birds are being monitored and this has resulted in huge buy-in from people in the wider area that had previously been relatively uninterested in kiwi. They have now had many opportunities to go and see the kiwi that are living close to them and are keenly following their progress. This change in attitude is solely attributed to them getting up close and personal with kiwi and this new passion for kiwi has also greatly improved dog control in the area.

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



Ranger Paul Cornille with monitored kiwi and land owners whānau.

2.1.2 Media

The focus on using the media to raise awareness about kiwi continues. There have been 20+ media releases and articles relating to work in the Whangarei Kiwi Sanctuary. They have been published in school newsletters through to national newspapers. They have covered an array of topics such as a kiwi love story, kiwi releases, the dog threat, BNZ Operation Nest Egg, treatment of sick kiwi and aversion training days for pig hunters. Key messages about dogs and kiwi are kept consistent and mentioned even in kiwi stories that aren't directly about kiwi and the threat of dogs.

Two advertisements were aired on local radio stations and featured a 'dog' and 'kiwi' talking. They focused on the following key messages;

- Any dog can kill a kiwi
- Keep dogs under control at all times
- Report wandering dogs
- Keep dogs out of kiwi areas

There have been several filming opportunities featuring or related to the WKS. These have been about kiwi in general, dogs and aversion training, kiwi dog work and a BNZ Operation Nest Egg transfer to Motuora Island. In conjunction with BNZ Save the Kiwi and Bay of Islands Area Office, filming was carried out to make a video clip about two dog owners whose dogs had been through kiwi aversion training but had subsequently killed kiwi. This video is to remind people that they cannot solely rely on kiwi aversion. The clip was put on YouTube with links from the BNZSTK website.

A record of media articles and filming can be viewed at [DOCDM-288512](#).

2.1.3 Signage

Roadside traffic signs with a picture of kiwi and the message 'control dogs' have been put up in Ngunguru, Riponui, Rarewarewa, Whangarei Heads, Whananaki, Hupara and Purua.



Kiwi Live Here signs were created last year and about 50+ signs have been put up mainly around the study block area. They are located at busy thoroughfares on farms where employees and visitors are likely to see them, such as entrance ways to cowsheds, houses, farm buildings and raceways. Farmers have been very receptive to them being put up and they act as constant reminders to people on the farm that kiwi are there.



Pete Graham’s truck has been branded with a photo of a dog with a kiwi and the message ‘Any dog can kill a kiwi – where is your dog?’. See photo below. 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.



2.1.4 Community events

A number of community events have been organised by the WKS team and they have also participated in events organised by others.

A community meeting held at the Purua Hall in July 2011 was well attended by about 20 locals. The focus was to discuss the problem of wandering dogs in Purua. As a result of the discussion the WKS put together a ‘Community action plan for uncontrolled dogs in Purua’ [DOC DM-785686](#) and sent it with a covering letter explaining the situation to all residents living in the area. Another outcome of this meeting was the organisation of two ‘See and hear a kiwi’ events.

Kiwi aversion training for dogs (predominately farm dogs) that live around the study block reserves have been organised (see section 2.2.3 for more information) and this is going to be an annual occurrence.

The team has also attended and had displays at the Matapouri community day and the open day at Kiwi North and have attended trapper workshops run by NZ Landcare Trust and BNZ Save the Kiwi Trust.

A more detailed list of advocacy events can be viewed at [DOCDM-288512](#).

2.1.5 Internet

The Department of Conservation (DOC) website has been updated and new content added. There is now more current information about DOC's work with kiwi in Northland, focussing particularly on the WKS and information about the Northland Brown kiwi. The WKS newsletter and past annual reports have also been made available on the website. There are also links to other sources of kiwi information particularly the BNZSTK website.

2.2 Targeting Specific Audiences

2.2.1 Landowners and residents living in and around kiwi areas

Whangarei Kiwi Sanctuary staff strongly believe that monitoring kiwi on private property is one of the best ways to get landowners and residents to develop a sense of ownership over the kiwi on their property and to improve dog control. People that have kiwi monitored on their property are naturally interested in what is happening with those birds and take up the opportunity to go and see them whenever a bird is due to be handled often with family, friends and neighbours in tow. We are able to show them the different habitats kiwi can live in on their property and it further enforces the need for good dog control. A culture of good dog control has developed amongst people with kiwi on their land and WKS staff believe that the trigger point when something is done about wandering dogs has tipped in favour of kiwi. They have heard of a handful of dogs being shot by landowners. This is nothing new in rural living as stock harassment provides a quick reason for a farmer to get rid of a wandering dog but now it is also the threat of the dog to kiwi on properties that comes into the decision making. There is still a reluctance to involve the council as people in small communities don't like reporting their neighbours. If the council does get involved it is usually due to DOC contacting them.

Where there is not the opportunity to monitor kiwi on a landowners property, the WKS team try to get those people out to see kiwi that are monitored near their property. The message is given to these people that there is potential for them to have kiwi on their own property and that by exercising good dog control themselves, it increases the likelihood of kiwi moving in. It also raises their awareness and attachment to kiwi. An example of increased awareness of kiwi was when a woman who lives in Purua approached a girl riding a horse with a dog, to say that there were kiwi living on the side of the road and that the dog needed to be under control. The woman knew about the kiwi because Paul Cornille had taken the family to see the bird roosting in the kikuyu next to the road multiple times.

Large landowners around the kiwi reserves are being targeted by DOC in order to get them on board in promoting good dog control with their employees. Some of these landowners don't actually have a lot of kiwi habitat on their land but they still play a significant role in kiwi protection. Kiwi walk through their properties as they move around and they also have a lot of dogs that can (and do) easily reach the places where kiwi live. Greg Lovell and Lloyd Roberts hold kiwi aversion days on their properties so that their farm workers can put their dogs through the training. Lloyd Roberts has made this compulsory for his farm employees' dogs. This support from these and other large landowners is helping to noticeably reduce the number of wandering dogs seen in the Purua, Rarewarewa and Riponui areas.



Purua landowner and neighbours involved in a transmitter change of a kiwi living on private land.

2.2.2 Dogging for kiwi on private property

Pete and Rua looked over the Wright's property on Irvine Road and Mills' land on Crows Nest Road but did not find any birds. However, a search on Mike Camm's property led Rua to find a nest which was a good result.

2.2.3 Kiwi aversion training

Hunters and farmers with dogs in kiwi areas are the main target group for aversion training. This is because these dogs are required to be in kiwi areas as part of their job. Although pet dogs are (reluctantly) put through aversion training the message given to the owners is that the best protection for kiwi is to never allow their dog to encounter a kiwi by having good dog control.

A total of 359 dogs were trained or tested by Pete Graham in the 2011-2012 period, 30 more than in the 2010-2011 year. Twenty dogs were micro-chipped free of charge to the hunters as an incentive to attract them to put their dogs through the avian aversion programme.

Pete Graham ran kiwi aversion training days throughout the Northland region including, Rotu Forest in Dargaville, Lovell's farm at Otaikairangi, Roberts farm at Riponui, the Purua Hall, Finlayson's farm at Purua, Clements farm at Purua, Tāhere farm on Pataua North Rd, Taurikura at Whangarei Heads, and Clements Road at Matapouri. The training days held at the Lovell's and Roberts properties were organised by Pete and Paul Cornille and they encouraged the surrounding local dog owners to these events, especially targeting those with problem dogs. Pete also carried out aversion training for individual or small groups of dog owners at Barge Park in Whangarei.

All dog owners were told on the day about the limitations of the method, dog owner responsibility and kiwi habitats and behaviour, thus increasing dog owner knowledge and awareness of kiwi. Trainers in Northland are Pete Graham, Lesley Baigent, Warren Morunga, Wallis Cox and Jason Hanham.

2.2.4 School visits

Increasing kiwi awareness amongst school children who live in kiwi zones is carried out when opportunities arise for the children to see a kiwi. Maromaku and Purua Schools have each been out in the field to see kiwi on two different occasions. Kiwi were taken to Ngunguru pre-school and primary school and Whangarei Heads primary school before they were to be released at their respective locations. Pete also did a presentation at Westmount School in Dargaville at the request of the school.

3.2 Tānekaha

The establishment of a new community group called Tanekaha Landcare is an exciting initiative in a 700ha area of private land that is encompassed by Heaton and Hukurenui Roads. WKS staff started to monitor kiwi in this area when a female from Hodges Bush travelled a fair distance there and paired up with another female in 2006. In early 2011 an adult male (Two Toes) who had been at the Whangarei Native Bird Recovery Centre (WNBRC) with an injured foot (trap injury) needed to be released as it would not eat a captive diet. It was decided that this was a good opportunity to break up the female-female pair by relocating one of the females to another property and introducing the new male. The male kiwi thrived in its new environment and was soon found to be on a nest!

In the meantime the kiwi team attended a trapper's day in Kerikeri. It was here that Northland Regional Council (NRC) indicated that they have money available for Community Pest Control Areas (CPCA). Paul Cornille approached Edwin Smith; a local landowner he had talked to previously about kiwi, to advise him about the CPCA funds and suggest that Tanekaha area would be ideal for kiwi protection. He agreed to approach the other landowners in the area to gauge interest. From here the project got under way with several meetings facilitated by DOC and NRC with the landowners. Tānekaha have indicated that they are interested in using toxin next autumn. If this eventuates, DOC has stated that 8-10 kiwi could be released there following the toxin operation. Todd Hamilton has been contracted to help set up and service traps for the group and the first lot of traps have been put out. This is a great example of multiple organisations working together to get a new kiwi protection initiative underway. Tanekaha is in close proximity to Riponui Scenic Reserve and the WKS team are committed to helping them achieve their goals. They intend to put out listening devices and have already taken two groups to listen to kiwi calls at the Lovell's property. Two Toes is still being monitored and it has been decided that all his eggs will be taken for BNZ Operation Nest Egg until the predators have been knocked back and they will involve group members in that process.

3.3 Tutukākā

The WKS team have continued to work closely with Tutukaka Landcare Coalition (TLC) to build their skills in kiwi monitoring and handling. Staff go out into the field with TLC members to teach correct transmitter attachment and how to best approach and identify kiwi nests. These visits help to create a really good working relationship and thus transfer knowledge to TLC.

The WKS team are available to actively help all community groups in their work with kiwi.

4.0 Predator Control

Northland brown kiwi recovery at WKS is based on controlling mustelids (and cats) to increase kiwi chick survival, and controlling dogs to increase adult survival. Mustelids 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 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.

A change was made to the trapping regime this year with trap checking frequency increased during December-February to target mustelids more intensively during the peak kiwi hatching time (Table 1). The change was made in response to reduced stoat captures last year and to determine whether this increase in trap checking frequency was possible with the current staffing capability of the team. The effectiveness of the new trapping regime cannot be compared to previous years in terms of chick survival as chicks are no longer being monitored. The only comparisons that can be made to previous years are the number of target species caught.

Table 1. A comparison of the change in the trapping regime for 2011/2012

Month	Trap checking frequency	
	2008/2009 – 2010/2011	2011/2012
January/February	3 weekly	2 weekly
March	3 weekly	3 weekly
April/May	4 weekly	4 weekly
June/July/August	6 weekly	6 weekly
September/October	4 weekly	4 weekly
November	3 weekly	3 weekly
December	3 weekly	2 weekly

4.1 Mustelid and Cat Control

Mustelid traps are set around reserve edges, along selected ridges, stream edges and roadsides consisting of approximately 311 double set DOC 200, 153 double set Fenn 6, 24 DOC250 and 136 Steve Allan Modified Conibear traps (SA cat traps) to target cats. The bait used in Best Practice trap boxes was salted rabbit and possum/rabbit mince. 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 bait trial began in May 2012 which is comparing Goodnature's oil and paste lures to the WKS usual baits. To test the lures a paired and alternating trap layout is being used. Preliminary results from this trial will be reported in next year's annual report.

A total of 261 target species were caught during 2011-2012 (Table 2), which is a 21% increase on the 215 caught in 2010-2011 and comparable with 252 targets caught in 2009-2010 year. Across all sites there was an increase in the number of stoats and weasels caught this year, up by 15% and 59% respectively, and a small 4% decrease in cat catch. 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 boundary borders onto farm land as a precaution.

Table 2: Predator trapping results for 2011-2012. Trapped hectareage totals do not include buffer areas. Trapped hectareage for Carter Holt Harvey through to Riponui/Goddards is provided as a combined total as the sites are contiguous.

	Trapped area (ha)	Stoats	Weasels	Ferrets	Cats	TOTAL CAUGHT
Carter Holt Harvey		2	1	0	2	5
Hodges Bush		0	0	0	3	3
Lovell's		0	0	0	0	0
Marlow		5	13	0	4	22
Allans/Masons/Goings		4	2	0	2	8
Motatau		8	3	0	8	19
Purua		5	1	0	8	14
Rarewarewa		2	4	0	4	10
Riponui/Goddards		2	1	0	8	11
Combined total (CHH-Riponui)	8206					
Heads roadside/pikes	987	1	6	0	4	11
Manaia/Aubrey	125	1	3	0	1	5
Ngunguru	1973	6	11	0	2	19
Pataua	233	1	0	0	0	1
Study Block Roadsides	1562	9	8	0	11	28
Taranui Road	686	6	6	0	2	14
Te Whara/Bream Head	906	11	17	0	0	28
Whangaruru	1893	14	13	0	4	31
Paired trial boxes	n/a	16	11	0	5	32
TOTAL	16571	93	100	0	68	261

There was a marked increase in stoat captures in January compared to last year but it was similar to the two years previous to that (Figure 1). The drop in stoat numbers in January for the 2010/11 year can not be attributed to the 1080 operation in Rarewarewa (August 2010) as the number of stoats caught in January 2011 in Rarewarewa (2010/11 year) was zero, compared to one for the same month in 2011/12 year. The surrounding study block reserves and roadside trapping have also been taken into consideration as catch rates for these sites in 2010/11 could have potentially be affected by a 1080 operation in Rarewarewa. However, they too all have very similar if not the same low stoat catch rates in January for 2010/11 and 2011/12. A comparison of the means of the different trapping programmes indicates that the old varied regime caught more stoats on average over the critical November – March period than the fortnightly and monthly regimes (Figure 2). The new varied regime is following this trend but more data from successive trapping years is required for the comparison to be conclusive. Although no analysis has been done in this report to see whether these differences are significant it lends support to the change to a varied trapping regime for best practice mustelid control. There was a large increase in the number of weasels caught this year and they were caught consistently over the course of the year with relatively high numbers caught in August, February and April (Figure 3).

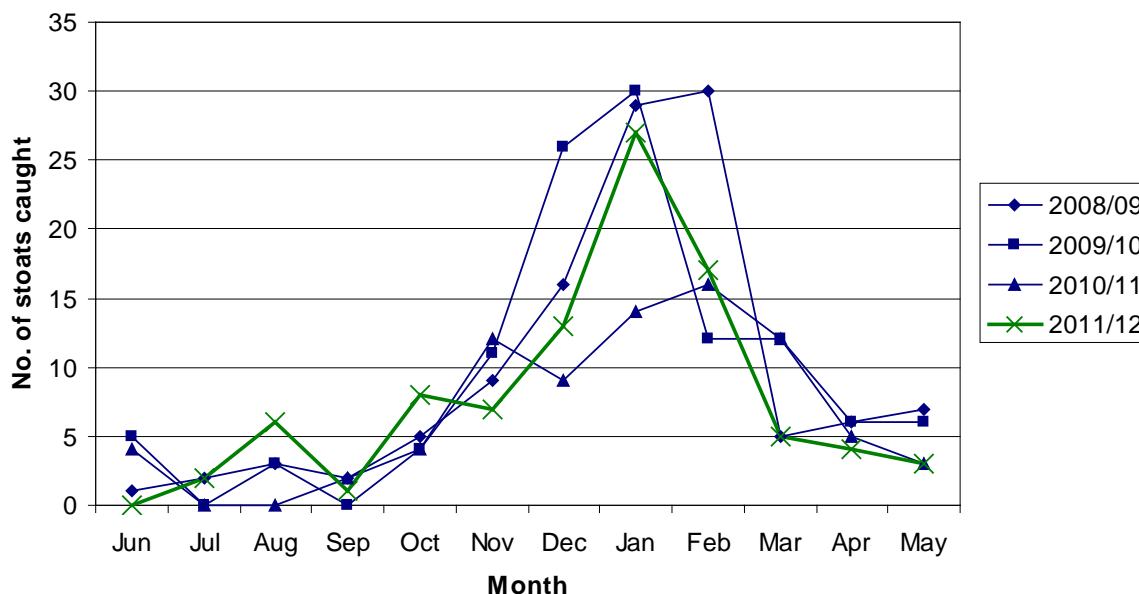


Figure 1. Comparison of stoats caught by month since 2008/09. The blue lines are the years under the old varied trapping regime, the green line is this years new varied trapping regime.

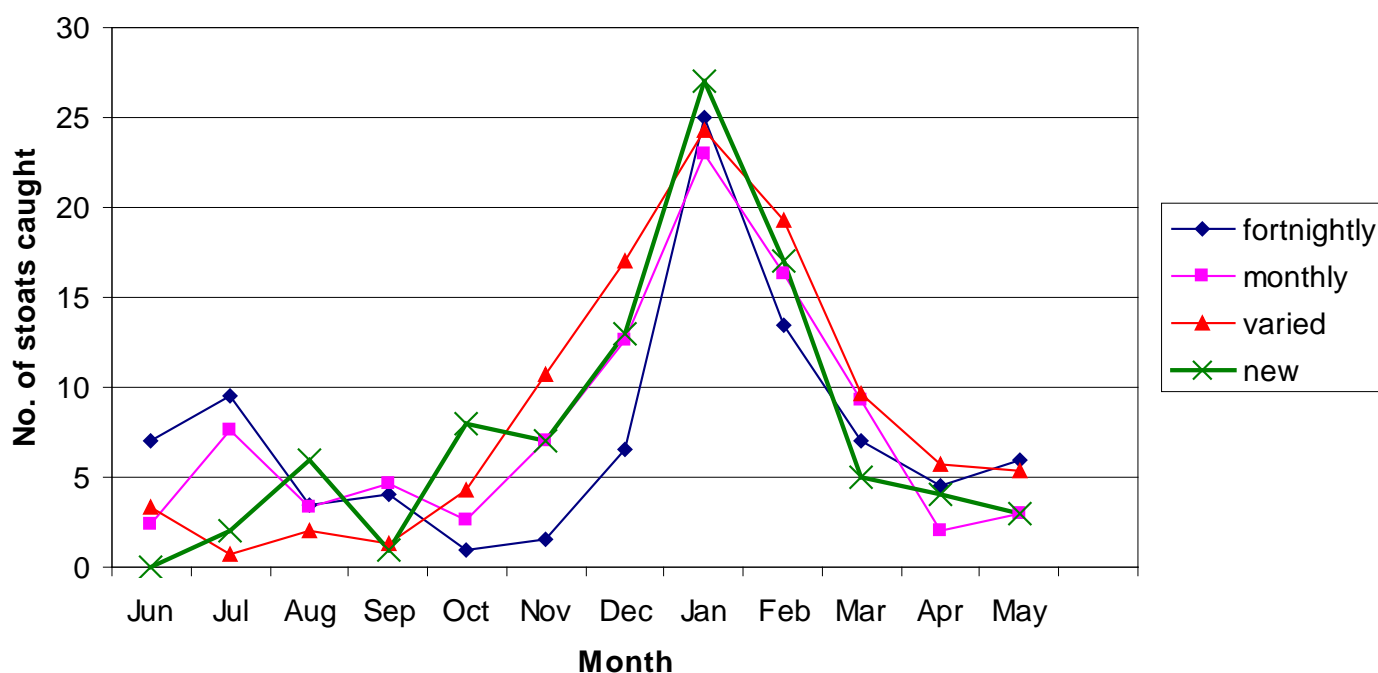


Figure 2. Comparison of the mean stoats caught by month since 2003/04. The blue line is a mean of the years under the fortnightly trapping regime (2003/04 and 2004/05), the pink line is a mean of the years under the monthly trapping regime (2005/06, 2006/07 and 2007/08), the red line is a mean of the years under the varied trapping regime (2008/09, 2009/10 and 2010/2011) and the green line is the new trapping regime that was started this year.

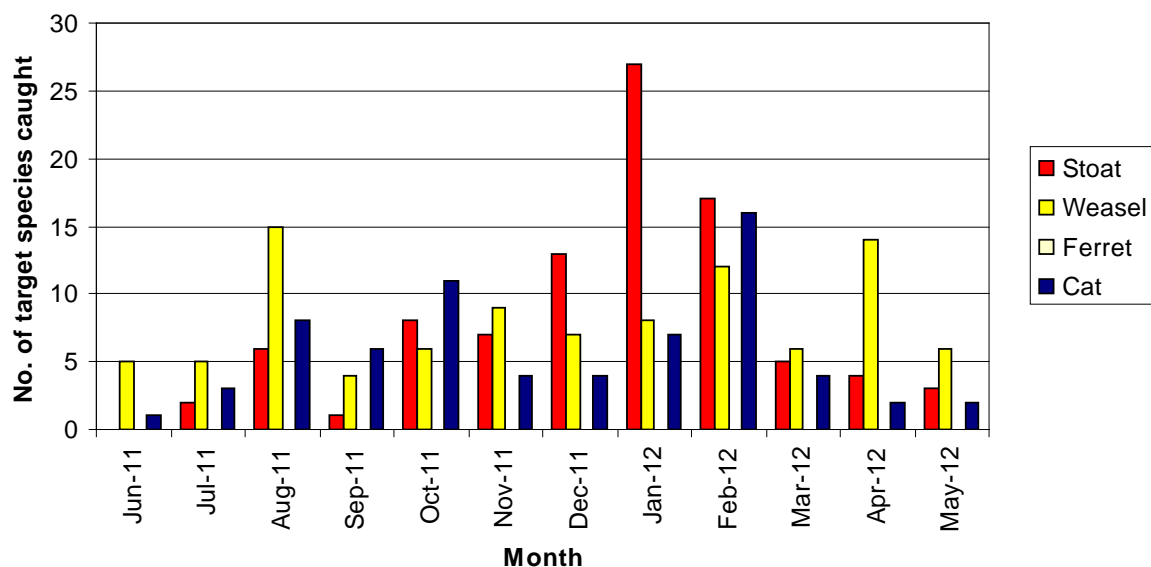


Figure 3. Mustelids and cats caught by month during 2011-2012

4.2 Community Kiwi Protection

Alongside the predator control work of the WKS which covers over 16,000 ha there are also over 9,600 ha of land under protection through community predator control (Table 3). 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 (particularly Paul MacDonald, Pete Graham and Clea Gardiner) 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
Marunui	Marunui Conservation	420
Mataia	Mataia Properties Restoration	215
Pukenui	Pukenui Forest Trust	400
		9615

5.0 Sanctuary Monitoring

5.1 Advocacy birds

As part of the dogs and kiwi plan up to 25 kiwi are being monitored for advocacy purposes. The process of removing transmitters from adult and sub-adult kiwi that were not going to be monitored continued on from the previous year and was completed this year. The transmitters were removed when the birds were due for biometrics handling or transmitter renewal which is why the process took time to complete. No chicks were monitored this season.

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 currently 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 seven breeding males in Rarewarewa and Riponui Reserves and nine kiwi in the Whangarei Heads area. Pete and Cathy monitor four kiwi at Bream Head and Mike is monitoring six kiwi in Ngunguru/Tutukaka. Jo and Ben Barr monitor four adult kiwi on Matakohe/Limestone Island kiwi crèche as well. 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. The results for Rua's season shown below are for only the unknown or lost kiwi (i.e. dropped their transmitters), he has found. Many more known birds were encountered during the year.

Birds that were found with old metal bands had them removed and replaced with new metal bands, and microchips were inserted where needed.

Rua's results 2011/12:

- One non-transmittered adult found on a nest in Purua (now has a transmitter)
- Two long lost birds from Purua found
- A mate of a known bird from Purua found
- Six un-banded birds from Hodges found (now banded)
- One new adult male from Rarewarewa found

A certified dog is an essential tool to help locate kiwi and promote public and media interest in the work of the WKS, and having the skills of Pete and Rua readily available is a valuable asset to the sanctuary. 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 2011 was scheduled for 20 May – 9 June, with a back-up window 18 June – 8 July. Poor weather in the first window meant that the second window was used in a number of cases.

There were very positive results for kiwi listening across the entire northern, eastern, western and southern areas. Kiwi call rates (and presumably kiwi numbers) trended upwards in all four clusters for the 2011 listening period. The first time this has been observed since listening records began. These results are undoubtedly a response to continued kiwi protection throughout Northland (Craig, 2011).

Results in the WKS have been very positive. The Motatau-Marlow and Purua-Rarewarewa listening sites recorded good increases in call counts from 4.5 calls/hour to 7.1 calls/hour and 10.6-12.6 calls/hour respectively. In Whangarei Heads all three clusters (Manaia-Nook, Kauri Mountain, Bream Head) recorded very pleasing increases in calls counts with some impressive gains in Bream Head with the call counts increasing from 2.7 to 6.6 calls/hour. This is just reward for the hard work protecting kiwi that is done by community groups in the Whangarei Heads area. Tutukaka recorded a slight increase in call counts to 7.0 calls/hour and is slowly increasing after an observed decrease in 2009.

The results from 2011 are very encouraging not just for the sites within WKS but throughout Northland. It is evidence of the exceptional effort made in protecting and growing the kiwi population in our region.

The complete kiwi listening report can be found at [DOCDM-881991](#).

Kiwi listening for 2012 was scheduled for 7-27 June, with a back-up window and 6-26 July. Results for 2012 will be included in the 2012/13 annual report.

5.4 Cause of Death

The 2011-2012 year has seen an increase in the number of known dog kills, with death by dogs increasing from two last year to nine this year (Table 5). Four of the dog kills were in the Whangarei Heads area (three of these at the Nook), three in Riponui in a single incident and two at Matapouri (DNA testing for dog saliva discussed in section 2.3). This is a distressingly high number of dead kiwi due to dogs and is a stark reminder of the serious impact dogs are still having on the kiwi population within the WKS. Most of the dead kiwi were unknown birds and handed in or reported to DOC or Todd Hamilton by the public.

A necropsy examination carried out by Massey University confirmed that an adult male in Riponui was likely to have been killed by a ferret. This is a very interesting discovery as a ferret has not been caught in a trap at Riponui since 2003 and highlights concerns raised by Hugh Robertson regarding the non-capture of ferrets in traps. Three kiwi were found drowned this year in troughs and ponds (Table 5) and there were four kiwi hit by vehicles in the Ngunguru area. In previous years drowning and vehicle hits have not been such a common cause of death. The reduced number of chick deaths is not comparable to previous years as chicks are no longer being monitored by the WKS team. The ones that were found dead were from a very small number of chicks that had transmitters on them temporarily for various reasons e.g. a transmitter put on a chick which was too young to have a transponder inserted so that it can be found again in a few days when it is old enough to have one inserted.

Table 5. Causes of death of monitored kiwi during 2011-2012 species year (2010-2011 year in parenthesis)

Cause of Death	Chick	Sub-Adult	Adult	Total
Mustelid predation	3(25)	0(0)	1(0)	4
Dog predation	0(0)	0(0)	9(2)	9
Unknown	1(5)	2(0)	2(0)	5
Natural causes	0(2)	0(0)	1(0)	1
Other (drowning/vehicle)	0(0)	2(0)	5(0)	7
TOTAL	4	4	18	26

6.0 BNZ Operation Nest Egg™

Thirty three eggs were collected for BNZ Operation Nest Egg during the 2011-2012 season by WKS staff, yielding 24 chicks (Table 6). 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. An egg from Matakohe/Limestone Island was collected and taken to Auckland Zoo because the male deserted the nest after human disturbance but the egg was infertile and has not been included in the table below. 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 6: BNZONE results for 2011-2012

Site	Collected	Infertile/rotten	Eggs failed	Hatched	Died	Crèched	% Egg viability	% Hatch	% Chick survival
Hodges Bush	16	4	1 [#]	11	0	11	75%	92%	100%
Rarewarewa	4	1	0	3	0	3	75%	100%	100%
Riponui	8	1	1 [*]	6	0	6	88%	100%	100%
Purua	5	0	1 [#]	4	0	4	100%	80%	100%
Total	33	6	3	24	0	24	85%	93%	100%

[#]Died after internal pip ^{*}Egg damaged from the carrier falling during transportation

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

Five kiwi were transferred from Matakohe-Limestone Island during the 2011-2012 year. Three kiwi were released at Whangarei Heads (plus an additional kiwi that was transferred straight from Rarewarewa), one at Ngunguru and one at Purua. All birds were caught during night searches by island staff and Todd Hamilton.

6.2 Motuora Island BNZONE Crèche – Kiwi Search and Capture

In April 2012, 29 birds were transferred from Motuora Island and released at four sites within the WKS. Fifteen birds were released at Tutukaka, two at Purua and 12 were released at two Riponui sites. The 14 birds that went to Purua and Riponui all went onto private land adjoining the kiwi reserves. A sample of these kiwi are being monitored by WKS staff and TLC.

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	Total kiwi released
Whangarei Heads	7	32	20	9	11	-	6	4	89
Tawharanui Open Sanctuary	-	-	17	25	4	-	-	-	46
Bream Head and The Nook	45	-	-	-	-	-	2	-	47
Hodges	5	-	-	-	-	1	-	-	6
Ngunguru	-	4	-	-	-	10	-	16	30
Purua	-	-	-	-	-	-	-	3	3
Riponui	-	-	-	-	-	-	-	12	12
TOTAL	57	36	37	34	15	11	8	35	233

7.0 Staffing

The end of the year has seen Emma Craig begin a year's maternity leave and Sioux Campbell depart for Australia. Don Robertson was acting Programme Manager over the period this annual report covers while Clea Gardiner took a year off to work for the BNZ Save the Kiwi Trust as the Northland Regional Kiwi Co-ordinator. Miriam Ritchie has left the kiwi team for a role in the Biodiversity Threats team. We would like to thank Don for his contribution during his year as Acting Programme Manager and Miriam for all the hard work she has done during her time with the kiwi team. Along with Clea's return, Pete Graham, Paul Cornille and Paul MacDonald have been joined in the kiwi team by Gina Williams and Rolf Fuchs from Northland Conservancy.

8.0 Whangārei Heads Landcare Forum Report 2011-2012 (By Todd Hamilton)

Kiwi Predator CPCA - Northland Regional Council Funding

The big news for us this year has been the successful establishment of the “Whangarei Heads Kiwi Predator Control CPCA” which is being funded by the NRC for a five year period. 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.

Kiwi Predator trapping Program at the Whangarei Heads

We are into our 10th season of predator trapping of approximately 4000ha at the Whangarei Heads. This trapping program compliments the trapping carried out by DOC Whangarei Kiwi Sanctuary trappers in the area.

Table 1. 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	23	19	65	390+	125+
Total	7	257	209	199	731	3130	1114+

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 3 or 4 years rotating through the suitable areas. This program should lead to a high kiwi chick survival in our area. This has been reflected in the increasing kiwi call counts for the previous 4 seasons– (2.4 calls/hr/station 2007 to 5.9 calls/hr/station 2011). This year’s call count is to take place in June (interim results are 5.9 calls/hr/station).

More than 50 people attended a Trapper Training day held in conjunction with NZ Landcare Trust in the area. Predator and pest trapping skills were honed, and new trappers added to the network of community trappers

Kiwi Monitoring Program at the Whangarei Heads

An important part of the advocacy work at the Whangarei Heads is the radio telemetry monitoring of a sample of kiwi and updating landowners and other locals of where those birds are and what they are doing. This is done through personal contact, newsletters and our website (www.backyardkiwi.org.nz). Unfortunately we had issues with a batch of faulty transmitters this year, 4 failed in quick succession, reducing our radio monitored kiwi from 13 to nine. The monthly locations of these kiwi are shown on our website map.

Monitoring showed nine chicks hatched from 10 nesting attempts – where possible chicks are transponded and sampled for DNA but are not radio monitored.

There have been seven known kiwi deaths at the Whangarei Heads in the past 12 months:

Three dog kills: one transmitted wild bird and two un-transmitted wild birds. Of particular concern was that the dog involved in one of these kills had recently undergone kiwi aversion training. This reinforces the risk of carrying out aversion training on lifestyle block dogs.

We have also had two wild kiwi drown, one in a goldfish pond in a garden and the other in a natural gut between rocks. These ‘natural causes’ are distressing, but unavoidable.

A transmitted BNZONE kiwi died of natural causes 13 months after release (autopsied by Massey University).

Unfortunately a young wild kiwi lost a toe to an illegally set leg hold trap and then died of a fungal infection while at the Whangarei Native Bird Recovery Centre.

BNZONE program – funded by BNZSTK and Biodiversity funds

We monitor seven breeding males in DOC managed Riponui and Rarewarewa Reserves (this is a change from our past source area of Purua). “Chick timer” transmitters are used to indicate chick hatching times minimizing any nesting disturbance by the monitoring.

This season was an extremely productive year with 19 chicks successfully hatched –18 were transferred to Matakohe/Limestone Island crèche (the other was killed by a stoat before reaching the transfer age of 10 days).

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

Only four sub-adult kiwi have been released this season at the Heads (the previous dry year restricted our ONE chick numbers to five) but around 600 people got the chance to get up close and personal with alive wild kiwi in their backyard through the releases. A release of a single kiwi in January attracted over 200 people! Two of the birds were released in conjunction with the BHCT at the Bream Head Te Whara Scenic Reserve.

More releases are planned in the up coming months

We have applied to BNZSTK for funding for the ONE program for the 2012-2013 season in a collaborative bid with the Bream Head Conservation Trust and Tutukaka Landcare Coalition.

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 turn off, interpretation sign at garage and seven road signs – one recently paid for by landowners.
- Communication includes:

- Website – approx 250 hits per month
- 3 x On line –Email newsletter to BYK data base
- 3 x Community & School Newsletters,
- Several newspaper articles.
- “I Heard a Kiwi” Night
- 3 x community kiwi releases
- Print display on recent Heads Arts Trail

The sale of art prints of “Backyard Kiwi” for fund raising are ticking over with two new prints to be released shortly.

We also have a new “I saw a kiwi” bumper sticker and a new Backyard kiwi pamphlet to help inform visitors about kiwi at the Whangarei Heads.

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, the 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. 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, organising the Dargaville Field Days and for promoting biodiversity protection. 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. Kevin Prime from Ngati Hine, Te Ihi and Fred Tito from Te Parawhau Trust and Clive Stone from Ngati Wai Trust Board for their time and support in relation to consultation about research, translocations, kiwi releases or egg lifting and filming in their respective rohe. Thank you to the landowners who let us have access to monitored kiwi and to check traps on their land. Thank you to the BNZ Save the Kiwi Trust (now 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.

10.0 References

- Campbell, S. 2011. Saving our kiwi from dogs! Tiakina o tatou kiwi mai nga kuri! A community relations and engagement plan for Northland. Department of Conservation. [DOCDM-795028](#)
- Craig, E. 2012. Call count monitoring of Northland brown kiwi 2011. Department of Conservation [DOCDM-881991](#)
- De Monchy, P; Robertson, H.; Holzapfel, S.A.; Colbourne, R.; Hackwell, K. 2009. A review of DOC’s kiwi sanctuaries, and a plan for 2009-14. DOC internal report [DOCDM 386386](#)