

Whangarei Kiwi Sanctuary

Annual Report Summary

2009-2010

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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. The population of kiwi in the WKS was estimated at 2089 in 2008 (Carlin and Murphy 2008).

1.1 Objective

The objective of this document is to provide a summary report on all aspects of the WKS operations for the 2009-2010 species year.

2.0 Predator Control

Northland brown 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 22,500 ha (includes core and buffer zones of approximately 17,400 and 5,100 ha respectively). Dogs are put through avian aversion training to avoid kiwi through the use of electric collars and dog advocacy work is carried out in the community.

The trapping regime that was started during the 2008-2009 year (Table 1), in response to the continual decline in chick survivorship, was continued.

Table 1. The current trapping regime as used from 2008/2009

Month	Trap checks and re-baiting frequency
November – March	Three-weekly
April – May; September – October	Monthly
June – August	Six-weekly

2.1 Mustelid and cat control

Mustelid traps are set around reserve edges, along selected ridges, stream edges and roadsides consisting of approximately 193 double set DOC 200, 283 double set Fenn 6, 12 double set DOC 250, 3 double set DOC 150, and 163 Steve Allan Modified Conibear traps (SA Cat traps) to target cats. The bait used was salted rabbit and salted possum in the Best Practice trap boxes and minced rabbit/possum or peanut butter and cat biscuits in the SA Cat traps.

A total of 252 target species were caught during 2009-2010 (Table 2), a similar number to the 259 caught during the 2008-2009 year. Across all sites combined there was no change in the number of stoats caught (155), a 15% increase in the number of weasels caught, and a 25% decrease in the number of cats caught. The number of ferrets caught dropped from two to one.

Table 2: Predator trapping results for 2009-2010. 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 continuous.

	Trapped area (ha)	Stoats	Weasels	Ferrets	Cats	TOTAL CAUGHT
Carter Holt Harvey		1	1	0	2	4
Hodges Bush		1	0	0	7	8
Lovells		3	1	0	0	4
Marlow		9	5	0	2	16
Allans/Masons/Goings		5	0	0	3	8
Motatau		13	1	0	5	19
Purua		13	2	0	7	22
Rarewarewa		2	1	0	9	12
Riponui/Goddards		1	0	0	3	4
Combined total (CHH-Riponui)	8206	48	11	0	38	97
Heads roadside/pikes	987	1	6	0	4	11
Manaia/Aubrey	125	0	3	0	0	3
Mimiwhangata	820	0	0	0	0	0
Ngunguru	1973	3	3	0	3	9
Pataua	233	1	0	0	0	1
Study Block Roadsides	1562	8	15	0	3	26
Taranui Road	686	3	2	1	0	6
Te Whara/Bream Head	906	4	17	0	0	21
Whangaruru	1893	20	13	0	1	34
Paired trial boxes	n/a	27	14	0	3	44
TOTAL	17393	115	84	1	52	252

Comment [c1]: Includes CHH, HB, Lovells, Marlow, AGM, Motatau, Purua, RRR, Rip, Goddards

As with previous years, stoat captures peaked between December and February (inclusive; Figure 1, Figure 2) which coincides with juvenile dispersal during the summer months (Pierce *et al.*, 2006). There was a large number of stoats caught in December and January, lower capture rates in February, March, and November, and six stoats or fewer caught per month between Jan and October, and April and May. When compared with the two previous trapping regimes, there is no obvious detriment of using the varied regime in terms of number of stoats caught. The varied regime caught fewer stoats on average than the fortnightly and monthly regimes from June to September, but more from October to March when chicks are most at risk (Figure 3).

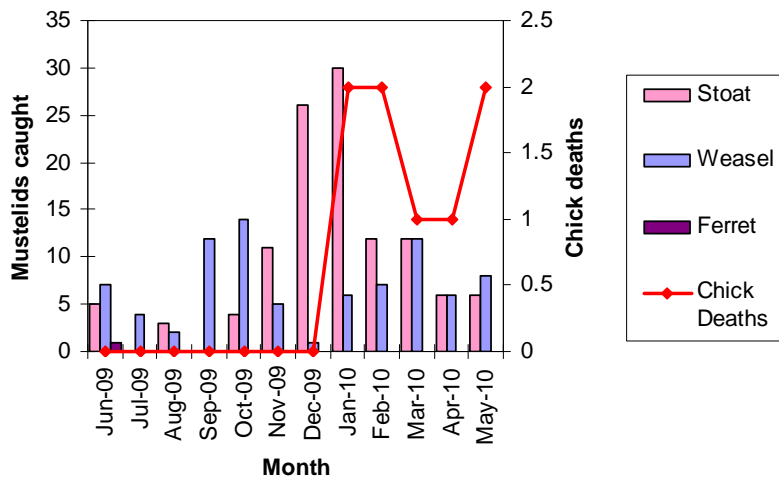


Figure 1. Mustelid caught by month during 2009-2010 compared with the number of known chick deaths due to stoat predation.

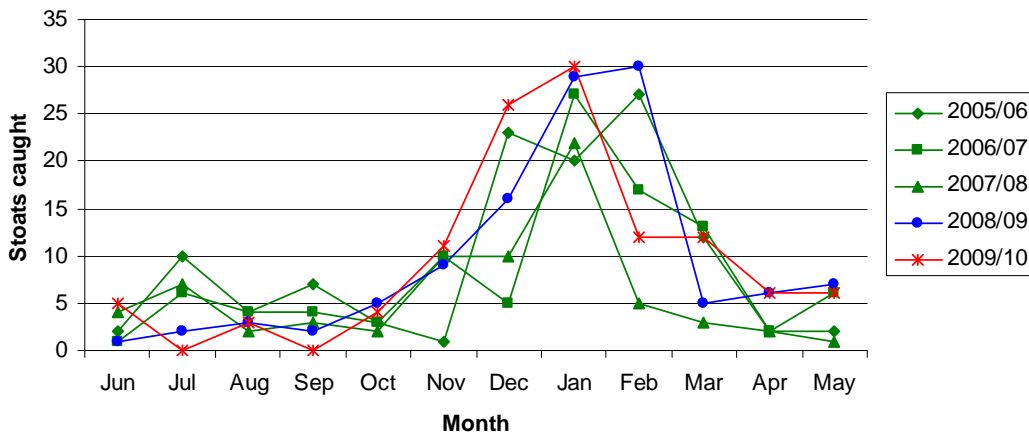


Figure 2. Comparison of stoats caught by month since 2005/06. The lines in green are the years under the monthly trapping regime, the line in blue is the first year of the varied trapping regime, and the red line is the 2009-2010 data.

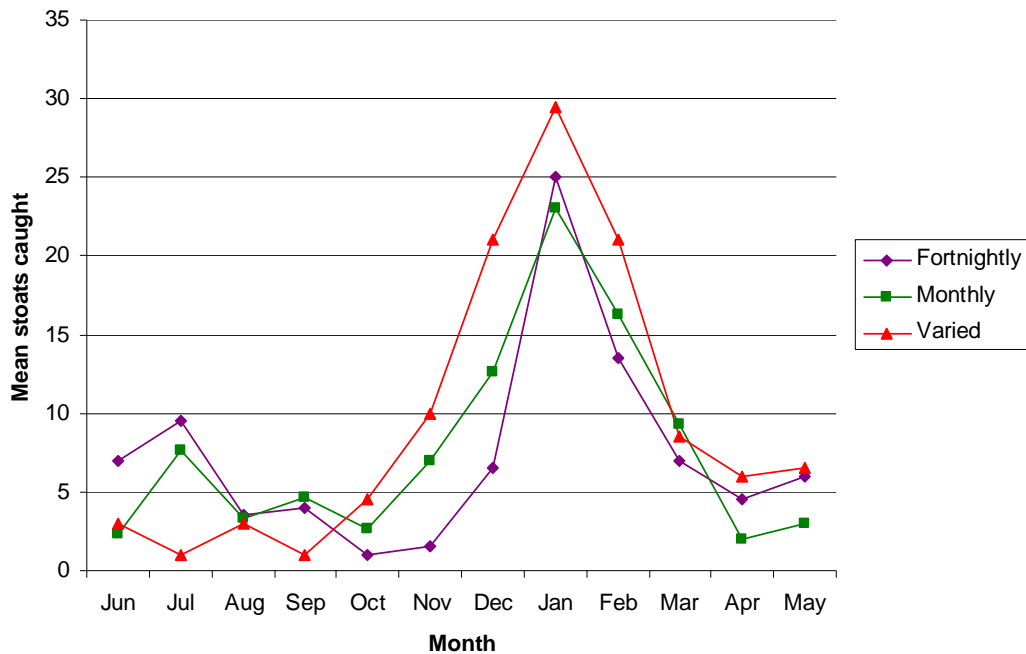


Figure 3. Comparison of mean stoats caught by month since 2003/04. The line in purple is a mean of the years under the fortnightly trapping regime (2003/04 and 2004/05), the line in green is a mean of the years under the monthly trapping regime (2005/06, 2006/07 and 2007/08), and the line in red is a mean of the years under the varied trapping regime (2008/09 and 2009/10).

2.2 Kiwi aversion training for dogs

A total of 319 dogs were trained or tested in the 2009-2010 period. Seventy one dogs were micro-chipped free of charge as an incentive to attract hunters to put their dogs through the avian aversion programme. Pete Graham ran kiwi aversion training days throughout the Northland and Auckland regions including Motatau, Puhoi, Puketi, Warkworth, Sandy Bay, and Tawharanui, using the modified “Waikato method” (as developed by Adele Smaill). As well as aversion training dogs at the events 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, kiwi habitats and their behaviour, to increase hunter/dog owner knowledge and kiwi awareness.

2.3 1080

A 1080 toxin operation was carried out at Riponui Scenic Reserve during the winter of 2009. The aim of this operation was to control rats and possums. The control of rats and possums using 1080 is also known to reduce stoat numbers, so it was expected that there would be positive effects for kiwi in the area.

The 1080 operation included a fence audit; landowner consultation; the production of factsheets, an operational plan and an AEE; increasing the adult kiwi sample via dogging, possum carcass clean-up, pre-feeding, laying and the removal of toxin baits, and the production of a pest link report.

As expected, there were positive effects for kiwi in the area. Prior to the 2009-2010 season no chicks had survived to 1000 g at Riponui since the 2004-2005 season. More than half (56%) of the Riponui chicks hatched in the 2009-2010 survived until six months.

A 1080 toxin operation is planned for Aponga Settlement Scenic Reserve (Rarewarewa) for winter 2010. Some of the planning and preparation for this has begun, including the production of factsheets [dme:\\docdm-609123](#) for public consultation and the operational plan and AEE have been started.

2.4 Rodent and mustelid indexing

No rodent or mustelid indexing occurred in the WKS in the 2009-2010 year but has been restarted for the 2010-2011 year.

3.0 Sanctuary Monitoring

3.1 Adults

This season a total of 80 adult kiwi were monitored in 10 study/sanctuary sites in the Whangarei Area. This included 24 kiwi (a mixture of adults and sub-adults) that were monitored by the Whangarei Heads Landcare Forum (WHLF) and four kiwi on Matakohe-Limestone Island which were monitored by the island rangers. Monthly mortality monitoring, six-monthly biometric checks and annual transmitter changes were carried out on all adult birds.

In the 2009 -2010 breeding season there were 92 nesting attempts by 64 pairs. This included 14 nests that had eggs collected for Bank of New Zealand Operation Nest Egg (BNZONE). A summary of the 2009-2010 breeding season can be viewed at [DOCDM-33180](#).

3.2 Sub-adults

Monitoring of sub-adults was continued this year to further confirm the age of first breeding at 3-4 years, and to keep breeders in the monitored sample to generate enough chicks to assess the effects of the 1080 operations. A total of 40 sub-adult kiwi were monitored this year with monthly mortality monitoring and tri-monthly biometrics being carried out by Miriam Ritchie. Two sub-adult birds had nesting attempts. Seven breeding kiwi were transferred to adult monitoring. All other breeding birds in the sub-adult sample had their transmitters removed unless they were required for BNZONE or advocacy purposes. Transmitters were also removed from all sub-adult females with the exception of two who are being used for advocacy purposes, and egg-timer transmitters were put on the sub-adult males to pick up nesting attempts. Sixteen transmitters were removed in total.

3.3 Wild chicks

This season there were a total of 41 chicks hatched in the wild from monitored birds plus one chick that was found by a kiwi dog and was of unknown parentage (this does not include chicks where their first record is being found dead or the outcome of the nest has been assumed). All 41 of the wild hatched chicks were radio tagged and transpondered. Monitored chicks were sighted fortnightly and had biometrics taken monthly. As at 31st May 2009;

- seven transmitters were removed after 180 days
- nine chicks were still being monitored
- 19 chicks had died (see Table 4 for details)
- three chicks had dropped their transmitters
- three chicks were missing

Chick survivorship at 31st May 2009 was 56% at Riponui (an increase from previous years), and 34% at the other sites with the current trapping regime. The chick survivorship target for WKS is 17%.

3.4 Cause of death

The 2009-2010 year has seen a decrease in the number of known dead kiwi overall, from 37 in the 2008-2009 year to 32 (Table 4). The number of kiwi killed by mustelids halved from 16 last year down to eight. This is probably a result of the 1080 toxin operation at Riponui. The number of kiwi known to be killed by dogs also reduced,

from ten last year to six this year. This may be a reflection of behaviour changes of dog owners in and around kiwi areas.

It was widely reported in the media that the drought over the 2009-2010 summer caused a loss of condition and some deaths among kiwi. However, this was not observed in the WKS study population (Hugh Robertson *pers. comm.*).

Table 4. Causes of death of monitored kiwi during 2009-2010 species year (2008-2009 year in parenthesis)

Cause of Death	Chick	Sub-Adult	Adult	Total
Mustelid predation	8 (16)	0 (0)	0 (0)	8
Dog predation	2 (0)	0 (7)	4 (3)	6
Unknown	6 (4)	0 (1)	0 (0)	6
Natural causes	4 (5)	0 (0)	0 (0)	4
Predation unknown	6 (1)	0 (0)	2 (0)	8
TOTAL	26	0	6	32

3.5 Kiwi dog work

The WKS has two fully certified kiwi dogs on our staff. Pete Graham is the handler of Manu and Rua, who are Hungarian Vizslas. Manu was fully certified for kiwi in March 2001, and was also fully certified for pateke in March 2004; and Rua was fully certified for kiwi in September 2007, and was also fully certified for pateke in September 2009. The results for Manu and Rua's seasons shown below are for only unknown or lost kiwi found (i.e. dropped their transmitters), many more known birds were encountered during the year.

Manu

- One new adult female from Whangaruru
- One new juvenile from Hodges bush

Rua

- four new adult kiwi
- two females without transmitters
- one adult male with an expired transmitter
- one new juvenile
- one new chick

Having the skills of Pete, Manu and Rua readily available is a huge asset to the kiwi team. The dogs are an essential tool to help locate kiwi, and a very important element

to promote public and media interest in the work of the WKS. The work of Pete, Manu and Rua is going to become even more important in the future when we look to use the dogs to search for kiwi on private land to get more landowner buy in for kiwi advocacy purposes.

3.6 Kiwi listening

Kiwi listening results from 2009 indicate that sites within the WKS have remained stable (Manaia/The Nook) or have showed signs of increased average calling rates (Kauri Mountain, Bream Head, Motatau/Marlow, Purua/Rarewarewa).

Tutukaka showed a marked decline in kiwi call rates. All stations listened at had a drop in call counts (two stations were not listened at in 2009 and the previous years results were used). The most dramatic decline occurred at TLC 6 station where call counts dropped from 15.2 in 2008 to 6.50 in 2009. This station did have a change in listener in 2009 and only two listening nights were completed so results are likely to be affected by this. Another year of listening is needed with all stations having four nights of listening completed to determine if the apparent decline is real.

The interpretation of kiwi listening data is made more difficult by sites and/or nights being missed, data sheets being filled out incorrectly, and data sheets being handed in late or not at all. The kiwi listening report for 2009 made the following recommendation to listeners: 'It is important that **on the night**, you fill out the kiwi call sheet completely (and legibly), do not leave any box unfilled and make sure you have recorded all the relevant information on the time, sex, direction and distance of each kiwi call'.

The complete report can be found at DOC DM-528110.

Kiwi listening for 2010 was scheduled for 30th May – 19th June and the results will be reported in next year's annual report.

4.0 BNZ Operation Nest Egg™

Twenty two eggs were collected for BNZONE during the 2009-2010 season by WKS staff, yielding 19 chicks (Table 5). The eggs were collected from 14 nests produced by 11 pairs. All the chicks hatched at Auckland Zoo. Six were released at Riponui Scenic Reserve and 12 at Motuora Island. One chick died at the Zoo following transponder

insertion. One male ('Blue' at Marlow) was found on two nests during the year, each containing three fertile eggs. Five of these eggs hatched successfully.

Table 5: BNZONE results for 2009-2010 (does not include salvaged eggs)

	Riponui	Hodges Bush	Rarewarewa	Marlow	Bream Head
Collected	9	3	2	6	2
Infertile/rotten	1	0	0	0	1
Eggs failed	0	0	0	1	0
Hatched	8	3	2	5	1
Died ^u	1	0	0	0	0
Creched	7	3	2	5	1
% Egg viability	89	100	100	100	50
% Hatch	100	100	100	83	100
% Chick survival	88	100	100	100	100

^u Chick died after transponder was inserted

4.1 Matakohe-Limestone Island ONE Crèche – Kiwi search and capture

Seven kiwi were transferred from Matakohe-Limestone Island during the 2009-2010 year. Six of these kiwi were released at Mount Manaia over two releases, and one was released at Marlow. James Fraser and his kiwi dogs Percy and Breeze (accompanied by island staff and Todd Hamilton) made two trips to the island to search for kiwi (in July and August 2009), and searched during the day and at night

After four years as rangers on Matakohe-Limestone Island, Pete and Cathy Mitchell finished up in late 2009. Cathy now works part-time for the WKS, including assisting with the monitoring of the kiwi on Matakohe-Limestone Island, and Pete is now working for the Whangarei Heads Landcare Trust as the resident ranger at Bream Head. The ranger role on Matakohe-Limestone Island has been taken up by Jo and Ben Barr. Jo and Ben both come from conservation backgrounds and are proving to be a great asset to the island.

4.2 Motuora Island ONE Crèche – Kiwi search and capture

This year there were eleven kiwi captured on Motuora Island for transfer back to the WKS. Ten of these kiwi were released at Ngunguru on land where the Tutukaka

Landcare Coalition (TLC) carries out predator control. A single kiwi was released at a Hodges Bush outlier to try to provide a male for a female that had previously been paired with another female. Unfortunately the replacement 'male' also turned out to be a female, so this individual was later added to the TLC population.

Table 6. Number of North Island Brown Kiwi (NIBK) 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	Total ki release
Whangarei Heads	7	32	20	9	11		79
Tawharanui Open Sanctuary	-	-	17	25	4		46
Bream Head and The Nook	45	-	-	-	-		45
Hodges	5	-	-	-	-	1	6
Ngunguru	-	4	-	-	-	10	14
TOTAL	57	36	37	34	15	11	190

5.0 Advocacy

5.1 Dog Campaign

In May 2010 work began on developing a campaign to tackle the dogs versus kiwi issue in Northland as per the WKS shift of focus review in June 2009. The effort put into this dog work was less than originally planned due to substantial effort needing to be redirected into carrying out the Riponui 1080 operation at short notice and the subsequent chick monitoring.

A senior community relations officer with the Department of Conservation, Sioux Campbell, has taken on this challenge as a dedicated project. The aim is to pull all the existing knowledge, experience and activity together and combine it with robust public engagement techniques to form a cohesive strategic plan. Much of the work to date has involved desk top research and talking to people already engaged in the issue, to ensure best efforts are captured and less effective approaches put aside. Priorities identified include local social research and learning including stakeholder/target audience analysis, consulting with recognised professionals in the social marketing arena, targeted awareness-raising (including via the DOC website), and the need to

proceed collaboratively. It is anticipated that the campaign plan will be completed by the end of November, with some of the requisite actions already underway.

The kiwi team continued to advocate for the prevention of kiwi killed by dogs in Northland by using a variety of means to get the message out into the wider community.

A public meeting was held at Riponui during October 2009 to discuss the issue of wandering dogs in the Riponui area, the effects of these dogs, and ways to address the issue. There was a good turn-out and buy-in from the community and the Kiwi Team hope to see fewer kiwi deaths from dogs in this area. An outcome of the community meeting was the production of a 'Community Action Plan for Uncontrolled Dogs' brochure (DOCDM 508200). Staff took this brochure around the majority of meeting attendees to get feedback and encourage ownership of 'their' kiwi.

A successful community day was held at Waimahae Marae at Motatau in February 2010. The aim of the day was to educate people about the effect dogs are having on kiwi and to encourage good dog control, as well as providing general information about kiwi and kiwi monitoring. An important part of the day was the kiwi aversion training. Fifty five dogs were put through the training and 19 dogs were micro-chipped. Kiwi aversion training is the main draw card in getting people to attend these events. All of the kiwi team were involved in this day, with assistance from Lesley Baigent.

The promising initiative, lead by Paul Cornille, to encourage interest amongst landowners whose property adjoins the reserves or where they have kiwi on the forested areas of their land near the reserves has continued. During the 2009-2010 year Paul and the rest of the Kiwi Team took at least 70 groups of visitors into the field to see transmitterd kiwi, or to observe dogging for kiwi on their land. This has increased good relationships, and increased awareness of the importance of good dog control. This initiative links with the kiwi/dog campaign.

5.2 Media

Media interest in kiwi, and specifically dogs killing kiwi, has continued in the 2009-2010 year. This has included live and pre-recorded interviews on TV3's Target, TV One's Birdland and local station Channel North. Printed media exposure of the issue

has included The Herald, The Northern Advocate, Scene Magazine, and local newspapers. This issue has also been featured in radio reports.

There was a lot of media interest in a kiwi that was killed by a dog at Bream Head as this kiwi was sent to 'Ecogene' for genetic analysis. The aim was to find out if it was possible to find dog DNA (from saliva) on the kiwi to confirm cause of death. Unfortunately, no dog DNA was found despite multiple attempts. It was concluded that the time since death would need to be very brief to successfully find dog DNA.

There was also a lot of media interest in Northland and nationally on the effects of the drought on kiwi, particularly as a few young kiwi were found in poor condition and in the open during the day. The articles around this issue were not generated by DOC.

Whangarei Kiwi Sanctuary staff maintained a culture of recognising the Bank of New Zealand Save the Kiwi Trust in all advocacy/media opportunities.

The records of our media articles, advocacy events that we have been involved in and visitors that have been taken into the field by us can be viewed at [DOCDM-288512](#).

6.0 Staffing

The 2009-2010 year has seen many staffing changes for the WKS team. Emma Craig has been on maternity leave since October 2008, and was working from home occasionally until February 2010 when she started back 15 hours per week, primarily working on the Northland Kiwi Taxon Plan. Megan Topia began her maternity leave in January 2010, and is occasionally working from home inputting data while taking care of her baby. Miriam Ritchie has been appointed on a part-time basis to fill 40% of Megan's position until she returns. Cathy Mitchell has joined the team on a part-time basis, training the new rangers on Matakohē-Limestone Island and helping out with kiwi monitoring. Sioux Campbell has also joined the team part-time as the facilitator of the dog campaign. Rowan Taylor has left to travel overseas, so Miriam is helping out Paul MacDonald with the trapping for 20% of her time. John Gardiner (JG, Area Manager) retired in late 2009, and his replacement Sue Reed joined the area in early 2010.

The entire kiwi team has been involved with the Whangarei Area Office Conservation Action Planning Strategy (CAPS), primarily ensuring that all of the work in and around

the WKS is included in the strategy. Pete, Emma and Clea have been providing a TSO role for DOC, forestry and private kiwi projects in Northland including on the ground training in predator control, kiwi listening, handling and first aid, and kiwi sign. Pete is also contracted to use his dogs for brown teal work, and Miriam is often called on to help out other areas and projects with the use of her rodent dogs.

7.0 Whangarei Heads Landcare Forum Report (By Todd Hamilton) 2009-2010

7.1 BNZONE 2009/10

The Whangarei Heads Landcare Forum BNZONE programme is funded by the BNZSKT and has a DOC permit to carry out the Forums' own BNZONE programme.

The project monitors five adult males at Purua Scenic Reserve. Eggs are generally not taken for incubation as it is considered more cost effective to monitor the nests until the eggs hatch, and then transfer the chicks soon after hatching to Matakohe-Limestone Island Kiwi Crèche. The males are fitted with 'Chick Timer' transmitters which minimises the invasiveness of the monitoring on the kiwi and also allows efficient use of monitoring field time.

This season six first clutch chicks were transferred from Purua Scenic Reserve to Matakohe-Limestone Island. Northland experienced its driest summer on record for the 2009/2010 season, limiting the kiwi breeding season, and consequently only one second clutch chick was produced to give a total of seven chicks transferred for the season.

Eight kiwi over 1200g were recaptured on Limestone Island in the period covered by this report and released on private land at the Whangarei Heads where eight years of predator control and community advocacy has been carried out.

Monitoring of a sample of (15) of the kiwi released at Whangarei Heads continued. The kiwi monitoring continues to be a powerful advocacy vehicle for encouraging dog control.

We are pleased to report that once again none of the monitored kiwi have been killed by dogs this season (the last dog kill of a transmitted kiwi was November 2006) nor have any monitored birds died from other causes.

However in the past year five un-transmitted kiwi were found dead by members of the public in the Whangarei Heads area. Two of these kiwi were killed by dogs (both chicks; one at the Nook and one in the Bream Head Scenic Reserve), two were killed by cars and one chick was found dead with brodifacoum in its system, but it is not yet known if this was the cause of death. These five deaths were all local bred, 'wild' kiwi. Hopefully this indicates that the effectiveness of the trapping regime is protecting kiwi chicks.

The Landcare Forum continued to appreciate the fantastic logistical and technical support given to the project by the Whangarei DOC Kiwi team.

7.2 Whangarei Heads Landcare Forum Trapping

Thanks to funding from central government Biodiversity Condition Funding, and the Northland Regional Council, Whangarei Heads Landcare Forum trappers continued to undertake predator trapping over approximately 2600 ha encompassing The Nook, Kauri Mountain, Taurikura Ridge, Robinson Road, McKenzie Bay area, Eastern Manaia, Kerr Road and Western Manaia.

Trap coverage comprises 212 double Fenn sets, 20 single DOC 200 sets, 7 double DOC 200 sets (baited with salted rabbit) and 28 SA Cat traps.

Table 7. Total captures of predators/pests for the season (end of September – October)

Year	Ferret	Stoat	Weasel	Hedgehog	Cat	Rat	Possum
2002/03	1	55	46	65	18	391	Not recorded
2003/04	4	22	21	52	22	319	24
2004/05	1	30	17	95	38	403	140+
2005/06	0	26	13	82	29	357	191+
2006/07	0	26	8	68	17	304	147+
2007/08	0	19	22	84	18	346	150+
2008/09	0	21	25	112	12	351+	150+
2009/10*	0	16	10	81	18	227+	94+

* interim numbers

We are very aware of the results of the Whangarei Kiwi Sanctuary trapping programmes declining stoat catch rates and also the declining chick survival of the monitored chicks over the past few seasons. The WHLF stoat catch rates are also

declining and we are conscious of the importance of good trap maintenance and setting routines (including removing or burying old rabbit bait) to minimise the possibility of producing trap shy stoats. Fortunately a Department of Conservation 1080 operation is being undertaken in September 2010 at Mt Manaia Reserve. This is located centrally on the Whangarei Heads and should greatly assist with the removal of any trap shy animals from the area.

7.3 Kiwi listening results at Whangarei Heads

Whangarei Heads continues to be part of the annual kiwi call monitoring. The mean call rates recorded increased from 2.4 calls/hr/station in 2007 to 3.8 in 2008 and to 4.0 calls/hr/station in 2009.

8.0 Acknowledgements

The Whangarei Kiwi Sanctuary team would like to thank many individuals/organisations for their involvement and support with different aspects of the Sanctuary's work. The Whangarei Heads Landcare Forum for their BNZONE, predator control programme and advocacy work and organisation of trappers training days and the Northland Kiwi Hui. Pete and Cathy Mitchell, and Jo and Ben Barr (Friends of Matakoho-Limestone Island) for carrying out kiwi recovery work in the Matakoho crèche. 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 Tito from Te Parawhau and Clive Stone from Ngati Wai for their time and support in relation to consultation about research, kiwi releases or egg lifting and filming in their respective rohe. Thank you to the landowners who let us access monitored kiwi through their land, in particular Bill and Joan Lovell who have continued their wonderful support. Thank you to the BNZ Save the Kiwi Trust, in particular Wendy Sporle for her support, enthusiasm and hard work and Michelle Impey for her support in supplying materials/prizes for advocacy events. Thank you to Lesley Baigent for her work with kiwi aversion training and helping us out at the Motatau community day. Thanks also to BlueOrb for helping us to create posters for the Motatau Community Day. Thank you to Northland Conservancy, RDI, Head Office and Whangarei Area Staff who have given advice and support to the programme, in particular Hugh Robertson and Avi Holzapfel.

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