



TRANSLOCATION OF SHORE SKINK (*Oligosoma smithi*) FROM MIMIWHANGATA TO MATAKOHE-LIMESTONE ISLAND (NOVEMBER/DECEMBER 2007)

Report prepared by Cathy and Peter Mitchell
for the Friends of Matakohē-Limestone Island, January 2008.

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ABSTRACT

Thirty Shore Skinks (*Oligosoma smithi*) were captured at Mimiwhangata in mid-November 2007 for translocation to Matakohē-Limestone Island as part of the island restoration project. The skinks were selected for a female biased population of 1:2 (total number, 11 males and 19 females). Sixteen of the females were gravid.

The skinks were held in quarantine at Massey University, Albany Campus, while disease screening was carried out. The sex, snout-vent lengths (SVL), weights, identifying features and ID photos for each animal were recorded. Faecal swabs were taken for *Salmonella* culture, and faecal samples were collected for *Cryptosporidia* testing. During transport and quarantine the skinks were held in individual containers and fed mealworms raised at Massey University.

Ten of the thirty Shore Skinks were positive for *Salmonella Warragul* and one was positive for *Salmonella Mississippi*. All the Shore Skinks tested negative for *Cryptosporidia*. Thirty out of 30 of the Copper Skink residents on Matakohē-Limestone Island were *Salmonella* negative, and 15 out of 15 of these skinks were *Cryptosporidia* negative.

On December 22nd 2007, 29 Shore Skinks were released onto Shipwreck Bay on Matakohē-Limestone Island. The remaining skink, which was positive for *Salmonella Mississippi*, was released back at the capture site on the same day.

INTRODUCTION / BACKGROUND

The Shore Skink (*Oligosoma smithi*) is a native skink of the *Oligosoma* genus. This coastal inhabitant species is active during the day and frequently sun-basks. Similar to most native New Zealand skinks, with the exception of *O. suteri*, Shore Skinks give birth to live young. Although widespread, they only occur in the north of the North Island including northern offshore islands. The Shore Skink is always found close to the shoreline, preferring open areas, for example driftwood at high tide mark and mat-forming vegetation in the sand dunes. It forages down to the intertidal zone at low tide and is primarily carnivorous, feeding on arthropods.

Matakohē-Limestone Island is a 40 ha (approx.) island located in the upper Whangarei Harbour. The island is a designated Scenic Reserve managed by a voluntary community incorporated society, Friends of Matakohē-Limestone Island (FOMLI), formed in 1991. A full-time ranger is resident on the island. A large scale restoration programme is underway with species introductions carried out (both assisted and unassisted) as habitat and food source increase. The island is predator-free, with the possible exception of a very small number of mice (less than 0.05% tracking over the last 3 years). It is highly likely that many species of lizard, including Shore Skink, originally inhabited Matakohē-Limestone Island. There is a resident population of the native Copper Skink (*Cyclodina aenea*) on Matakohē-Limestone Island.

Miller (2004) carried out a survey of lizards at Mimiwhangata, to determine whether three species of skink (Suters, *O. suteri*; Moko, *O. moko*; and Striped, *O. striatum*) were present. Shore Skink was not a target species, nevertheless they were the only species located during the survey. None were caught in pitfall traps, all were found by hand searches of the area. Shore Skinks were found on Kaituna Beach “amongst rocks at each end”. They were located “everywhere I looked on the shore” at the Peninsula Headland. Due to its close geographic location to the release site and the availability of the species, this area was selected as a source population for the translocation.

The purpose of the translocation is to establish a new population of Shore Skink on Matakoho-Limestone Island, as identified in the Matakoho-Limestone Restoration Plan, J Ritchie (2000). This is primarily a species restoration exercise, but will additionally provide valuable advocacy opportunities. The Shore Skink is the first of up to eight species of lizard planned for translocation to Matakoho-Limestone Island over the next three years.

METHODS / RESULTS

Preliminary Disease Screen of Resident Skinks.

A preliminary disease screen of the resident Copper Skinks was carried out to ensure they would not present a threat to the newly introduced skinks. Copper Skinks were caught either by hand-searching, or live pitfall traps.

On October 22nd 2007 three groups of approximately five people (15 total), hand searched for Copper Skinks around the island. In addition 12 pitfall traps present on the island had been set and baited the night before. Two skinks were caught in pitfall traps and more than 40 skinks were hand captured in just over 1.5 hours. Hence hand searching was very effective, with some of the areas searched having good populations of skinks. Not all skinks caught were recorded, but of the 40 captured approximately 10 (or 25%), were juveniles. Juveniles were not sampled for disease testing.

A total of 30 adult Copper Skinks were measured and sexed (see Appendix 1). Cloacal swabs were taken from all these skinks for *Salmonella* culture. Faecal samples were taken from 15 skinks for *Cryptosporidia* testing. Testing was carried out at IVABS, Massey University, Palmerston North. All samples were negative for *Salmonella* and *Cryptosporidia*.

Collection Trip at Mimiwhangata October 2007

Thirty Shore Skinks were collected from Mimiwhangata beaches between 13th and 14th of November 2007. A group of eight people arrived at Mimiwhangata at about midday on the 13th and were joined by Conservation Corps students who were working out there that day. Richard Drake performed a *karakia* on south Kupe Beach prior to collection.

After the *karakia*, the students helped set the first group of eight pitfalls on the south beach. A group of four people then stayed on and set 22 more pitfall traps at six additional locations on the peninsula. During this time, hand searching was also carried out. Eighteen skinks were caught in the hand searches, 12 of which were suitable for translocation. The skinks for translocation were sexed, then placed in individual containers, with vegetation for refuge and water containers. The remaining skinks were released immediately at their capture sites.

The following day the pitfalls were checked and re-baited. Six skinks had been caught in the pitfalls overnight. Hand searching also continued and the full quota of 30 suitable skinks was caught by midday on the 14th.

The pitfall traps were checked again the following morning. Seven skinks had been caught overnight. These were released and the pitfall traps were removed and the holes filled in.

A total 61 skinks were captured during the collection trip. See Appendix 3 for capture data on Shore skinks at Mimiwhangata.

All of the skinks for translocation were transported by car down to the Ecology and Conservation Group at the Massey University Albany Campus on the afternoon of November 14th.

The 30 selected skinks had a female-biased sex ratio of 1: 2 – that is 10 males and 20 females. (On rechecking on arrival at the quarantine facility it was found that a female had been incorrectly sexed, thus there actually were 11 males and 19 females). Many of the females were gravid. The skinks were

deliberately caught over several beaches in order to minimise the impact on any one source population. This would also increase the genetic diversity of the translocated population.

Location of Skinks

1. South Kupe beach. Eight pitfalls were set on this beach and hand searching was also carried out on the first day. No skinks were located by either method. This is a sandy beach backed by dunes. In some places low scrub or small pohutakawa trees were present, but there was little in the way of seaweed or driftwood refuges.
2. North Kupe beach (K). Two pitfalls were set at the south end just north of the small point. Hand searching on the 13th disturbed a skink which eluded capture. No skinks were caught in the pitfall traps. Hand searching continued northwards to the end of the beach. Six skinks were caught. This is a sandy beach with dried seaweed and driftwood located on the sand dunes, which are sparsely vegetated. (see photo Appendix 4)
3. South Kaituna beach. Hand searching was carried out at the south end of this beach, but no skinks were located. This is a sandy beach backed by grassy dunes. There was little in the way of weed or driftwood refuges on this beach.
4. Ngarauo beach (N). Four pitfalls were set on this beach. These caught two skinks on the 14th and one skink on the 15th. Hand searching of this beach was rewarding with eight skinks caught the first day. This is a boulder beach with steep rocky sides with minimal vegetation and plenty of seaweed drift providing cover. (see Appendix 4)
5. Small boulder beaches (O). A series of small boulder beaches extend west of Ngarauo separated from each other by small rocky headlands. Eight pitfalls were set along these beaches. These caught two skinks the first day and one skink the second. Four skinks were caught by hand searching on these beaches the first day and seven the second day. These beaches provided a similar habitat to Ngarauo beach.
6. Sandy beach. There is a sandy beach west of the O boulder beaches. No skinks were found here. In many places the clay banks and cliffs run directly to the beach and high tide mark. There is little permanent cover and there was also very little in the way of seaweed present on the beach.
7. Pongaheka South (PS). Four pitfalls were set on this beach. These caught two skinks on the 14th and four skinks on the 15th. Hand searching on this beach was also rewarding with 16 skinks caught on the 14th. The beach consists of a boulder fringe running into sand. Grass and dense flax adjoin the boulders and there was plenty of seaweed and driftwood present. (see Appendix 4)
8. Pongaheka North (PN). Four pitfalls were set here. One skink was caught in these pitfalls on the 15th. Seven skinks were caught by hand searching on the 14th. This beach offered similar habitat to Pongaheka South but became progressively overshadowed by pohutakawa and other trees, and thus quite damp, at its northernmost end.
9. Mimiwhangata Beach. This beach was not searched.

Quarantine at Massey University

Disease testing was undertaken on the Shore Skinks to ensure they did not carry any pathogens which could present a threat to the fauna already present on Matakohe-Limestone Island. During this period they were held at the quarantine facility at the Ecology and Conservation Group, Massey University, Albany. The skinks were held in individual containers, checked everyday for any obvious symptoms of potential sickness, periodically provided fresh water and fed meal-worms grown at the facility. The skinks were held at this facility for a period of five weeks, until the final disease testing results became available on December 22nd.

All skinks were weighed, snout-vent length (SVL) measured, and identifying features were recorded (see Appendix 5). The skinks were also all individually photographed for identification purposes. Faecal samples were collected for disease screening by placing skinks in individual cleaned and disinfected icecream containers. Trigene spray was used to disinfect the containers, which were then allowed to air dry before use. Paper towels were used as 'clean' refuges while the skinks were in the containers and water was provided.

Once faeces were obtained skinks were placed back into their individual boxes and the faecal samples were swabbed with paediatric transport media swabs for *Salmonella* testing. (Note: It was a permit requirement that faecal swabs, rather than cloacal swabs, were used for this test). The rest of the faecal sample was then

collected for *Cryptosporidia* testing. These samples were all sent to New Zealand Veterinary Pathology (NZ Vet Path), Hamilton for testing.

Shore Skink disease test results

Out of the thirty Shore Skinks disease screened for *Salmonella*, eleven tested positive for *Salmonella*. Typing showed that ten of the skinks had *Salmonella Warragul* and one had *Salmonella Mississippi*. On discussion with the Pathologists at Massey University, it was decided that the Warragul serovar was not a threat, but Mississippi has been associated with disease in humans in New Zealand. The skink carrying this serovar was therefore released back to its capture site at Mimiwhangata on the evening of the release day, December 22nd 2007.

Testing of the faecal samples at NZ Vet Path, gave a positive *Cryptosporidia* result for three skinks. Samples from these three skinks were then sent down to Massey University, Palmerston North for more specific testing by IFA. This test was negative, so all skinks could safely be released to the island.

Shore Skink release

On the morning of December 22nd 2007, the 30 Shore Skinks travelled by car in individual containers to Onerahi. The 29 skinks were then transferred to the island barge and transported to the pontoon landing at Matakohe-Limestone Island. The remaining skink was held in its container in a safe location at Onerahi, until it could be taken by car back to Mimiwhangata later that day.

On arrival at Matakohe-Limestone Island, the skinks were welcomed and blessed. Te Warahi Heteraka of *Ngatiwai* and Te Ihi Tito of *Te Parawhau* led the welcome and handing over of the skinks. Those present included Marleen Baling (Massey University), many members of the FOMLI Committee and members of the general public, approximately 20 people in total.

The skinks were released at the previously identified site at Shipwreck Bay. All were released within 20 metres of each other. A gravid female was seen on the foreshore two days later, but at this stage there has been no attempt to carry out any monitoring (see below).

DISCUSSION

Shore Skink populations at Mimiwhangata

Shore Skink populations at Mimiwhangata have not been properly surveyed. The survey by Miller (2004) only recorded presence of Shore Skinks in the area, but no accurate data on numbers or density.

This translocation of Shore Skinks from Mimiwhangata has given more detailed data on populations present at this site. It was found that the number of skinks varied with habitat type and refuge availability. No skinks were found or caught in pitfalls on the sandy South Kaituna Beach. In contrast, there were good numbers of skinks found on all the boulder beaches at the north end of the Mimiwhangata Peninsula. Possibly the skinks are better able to escape predators in the refuges offered by the boulders on these beaches.

The catch rate for hand searching was 3.9 skinks/ person hour, and for the pitfalls was 21.7 skinks/ 100 trap nights. No skinks were caught in the pitfalls set on South Kaituna beach. The catch rate for the 22 pitfalls set on the northern boulder beaches was 32.5 skinks/ 100 trap nights. In total 61 skinks were caught, of these 25 were female, 18 were male and 18 were juveniles. Most of the females caught were gravid. The 17 juveniles caught represented 29.5% of the captured skinks. These results indicate that there is a healthy, breeding population of Shore Skink at the Mimiwhangata Peninsula.

Disease screening of skinks

The Copper Skinks collected on Matakohe-Limestone Island were negative for both *Salmonella* and *Cryptosporidia*. This is the first recorded disease screen for the island, and the result suggests a healthy Copper Skink population not only in numbers but also health. All skinks caught were in good condition and had no obvious signs or symptoms of sickness.

All the Shore Skinks collected were also negative for *Cryptosporidia*, however 11/ 30 (33%) were *Salmonella* positive. Lizards will often carry *Salmonella* with no ill effects to the lizard concerned. They can however potentially act as a source of infection to other fauna and to humans. *Salmonella Mississippi* has been recorded as causing disease in humans in New Zealand so to minimise any potential negative effect to either other wildlife or humans, the skink carrying this serovar was not translocated and it was released back to the capture site. *Salmonella Warragul* has not been associated with clinical disease in humans or animals in

New Zealand and the skinks carrying this serovar were therefore released to Matakoho-Limestone Island.

The *Salmonella*-positive skinks came from almost all the capture sites, namely K, N, O and PS beaches. The skinks from PN beach were *Salmonella* negative, however only three skinks from this beach were translocated and hence tested. Thus it is possible that *Salmonella* is also present in this area, but not detected due to the small sample size.

Monitoring

Post-translocation monitoring of the Shore Skinks will be undertaken as detailed in the Translocation Proposal. Monitoring will be undertaken 1, 2, 3, 5, 10 and 15 years following release, to determine survival of translocated individuals, evidence of breeding and eventually establishment of a self-sustaining population (more new than transferred individuals). Monitoring will be carried out primarily using pitfall traps and some hand searching.

ACKNOWLEDGEMENTS

This project can be considered a success, and we would like to thank the following people who made it so:

- *Ngatiwai* have *mana whenua* over Mimiwhangata, and *Te Parawhau* over Matakoho-Limestone Island. Both groups were involved in all stages of this project.
- Marleen Baling and the team at Massey University, Albany Campus, for their practical assistance and advice with all stages of the project and their care of the skinks while they were in quarantine.
- Department of Conservation staff who gave advice (Peter Anderson, and Richard Parrish – ex DoC), and assistance with preparation of the translocation proposal and obtaining the permits (Andrea Booth, Donna Stuthridge and Bryce Lummis).
- The many FOMLI Committee members and volunteers who gave their time to help with the project, in particular Gerry Brackenbury, Pam Stevens and Richard Drake.

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APPENDICES

Appendix 1: Copper Skink data from Matakoho-Limestone Island capture on 22 October 2007

Appendix 2: Map of Mimiwhangata showing sites where pitfall traps were set (red dots) for Shore Skinks between 13th and 15th November 2007.

Appendix 3: Capture data on Shore Skinks at Mimiwhangata between 13th and 15th November 2007.

Appendix 4: Photos of Shore Skink capture sites at Mimiwhangata.

Appendix 5: Shore Skink data recorded at Massey University (Albany Campus) during quarantine between 14 November 2007 and 22 December 2007.

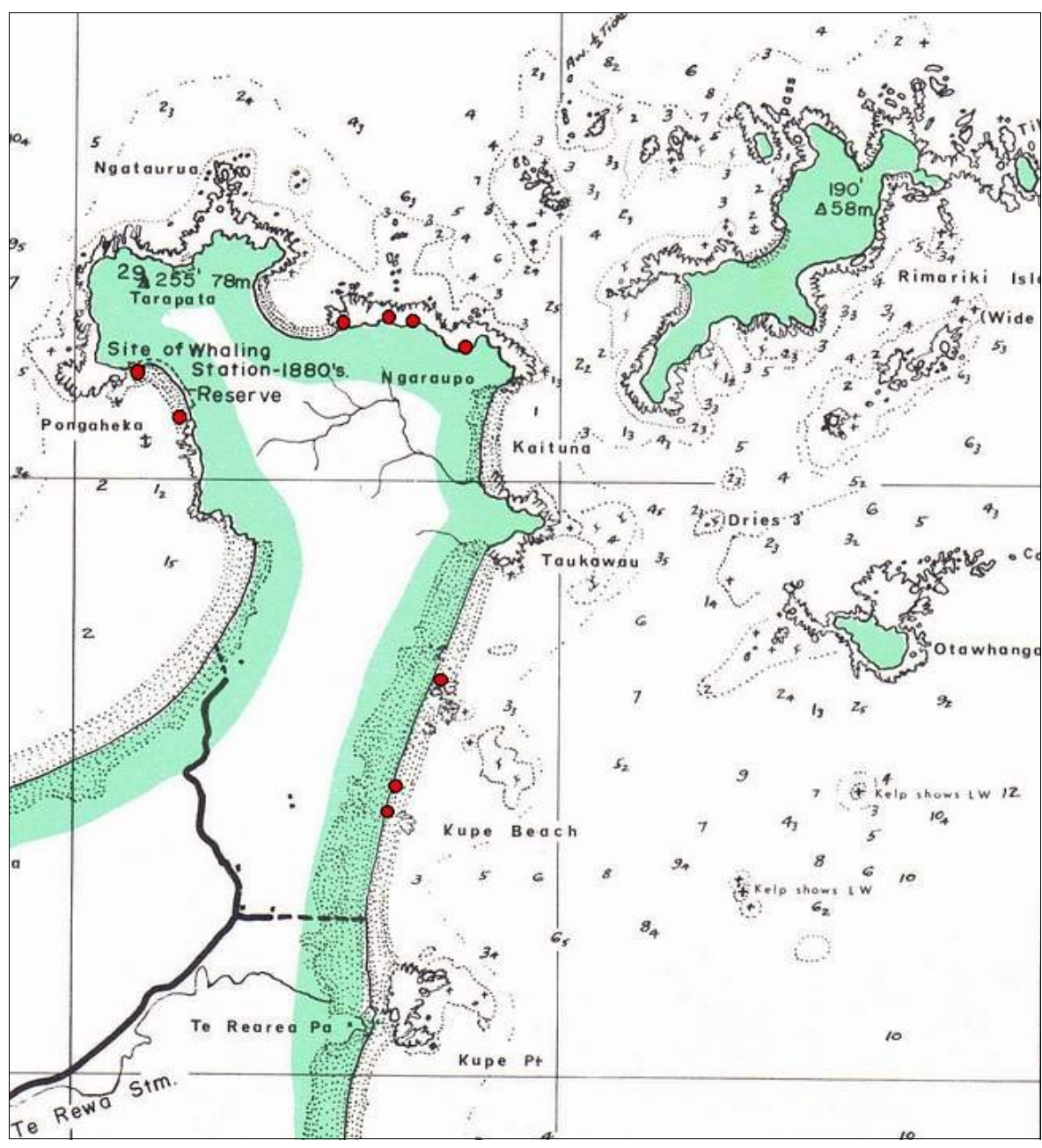
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Appendix 1: Copper Skink data from Matakoho-Limestone Island capture on 22 October 2007.

#	Skink ID	Sex	Gravid?	SVL (mm)	Weight (g)	Regen. tail (mm)	Comments
1	House	Male	-	47.0	2.00	yes	condition good.
2	Water tank	Male	-	49.0	2.33	yes	condition good.
3	House ply	?	-	46.0	2.01	no	condition good, lost tail.
4	Petrel site	Female	no	52.0	2.42	no	condition good.
5	Pitfall R12	Female	gravid	54.0	2.79	no	condition v. good.
6	Bait KN0	Juvenile	-	41.0	1.26	no	condition good.
7	Pitfall H8	Female	gravid	54.0	3.35	yes	condition v. good.
8	Shipwreck Track	Male	-	47.0	1.90	yes	condition good.
9	Shipwreck Bay	Male	-	45.0	1.55	yes	condition good.
10	Sth Shipwreck	Female	gravid	58.0	3.35	yes	condition good. Foot missing.
11	Mid Singlemans	Juvenile	-	40.0	1.12	yes	condition good.
12	Mid Singlemans	Female	no	50.0	1.99	no	condition good. Toe loss: 4/0/1/0
13	Hall Ruins	Female	gravid	52.0	2.69	yes	condition v. good.
14	15	Juvenile	-	44.0	1.44	yes	condition good.
15	14	Female	no	52.0	2.71	yes	condition good.
16	13	Female	no	43.0	1.59	yes	condition good.
17	Singlemans	Female	no	49.0	2.23	no	condition v. good.
18	Singlemans	Female	no	54.0	2.08	yes	condition v. good.
19	Pine logs	Female	no	60.0	3.17	yes	condition good.
20	Pine logs	Male	-	56.0	1.88	yes	condition v. good.
21	16	Female	no	46.0	2.09	yes	condition v. good.
22	Pine logs	Female	no	52.0	2.78	yes	condition v. good.
23	Pine logs	Female	no	52.0	2.86	yes	condition good.
24	17	Female	no	47.0	2.39	yes	condition good.
25	Gantry	Male	-	60.0	3.66	yes	condition v. good. Scar on R lateral side
26	Fallen Macrocarpa	Female	no	46.0	1.75	yes	condition good.
27	Foreshore Fishers	Female	?	53.0	3.28	no	condition good.
28	Fallen Macrocarpa	Female	no	54.0	3.13	yes	condition v. good.
29	Front Managers	Female	no	59.0	3.38	yes	condition good, back R foot missing.
30	Periwinkles	Female	?	52.0	3.26	yes	condition v. good.

In addition, 1 male, 1 female and at least 9 juveniles were captured and released with no disease screening.

Appendix 2: Map of Mimiwhangata showing sites where pitfall traps were set (red dots) for Shore Skinks between 13th and 15th November 2007.



Appendix 3: Capture data on Shore Skinks at Mimiwhangata between 13th and 15th November 2007.

#	Skink ID	Photo ID	Sex	Capture location	Capture method	Date	Translocated ?
1	K1	2860-2865	Female	Kupe North	Hand	13-Nov	Yes
2	K2	2878-2873	Male	Kupe North	Hand	13-Nov	Yes
3	K3	2856-2859	Male	Kupe North	Hand	13-Nov	Yes
4	K4	2866-2869	Female	Kupe North	Hand	13-Nov	Yes
5	K5	2952-2957	Male	Kupe North	Hand	13-Nov	Yes
6			Juvenile	Kupe North	Hand	13-Nov	No
7	N1	2963-2966	Male	Ngaraupo	Hand	13-Nov	Yes
8	N2	2948-2951	Female	Ngaraupo	Hand	13-Nov	Yes
9	N3	2958-2962	Female	Ngaraupo	Hand	13-Nov	Yes
10	N4		Juvenile	Ngaraupo	Hand	13-Nov	No
11	N5	2927-2930	Female	Ngaraupo	Hand	13-Nov	Yes
12	N6	2940-2947	Male	Ngaraupo	Hand	13-Nov	Yes
13	N7		Female	Ngaraupo	Hand	13-Nov	No, tail loss
14	N8		Juvenile	Ngaraupo	Hand	13-Nov	No
15	N9		Male	Ngaraupo	Pitfall	14-Nov	No
16	N10		Male	Ngaraupo	Pitfall	14-Nov	No
17	N11		Juvenile	Ngaraupo	Pitfall	14-Nov	No
18	O1		Juvenile	O beaches	Hand	13-Nov	No
19	O2		Juvenile	O beaches	Hand	13-Nov	No
20	O3	2931-2939	Male	O beaches	Hand	13-Nov	Yes
21	O4	2973-2977	Female	O beaches	Hand	13-Nov	Yes
22	O5	3003-3009	Female	O beaches	Hand	14-Nov	Yes
23	O7	2992-2998	Female	O beaches	Hand	14-Nov	Yes
24	O8	2978-2981	Female	O beaches	Pitfall	14-Nov	Yes
25	O9	2967-2972	Male	O beaches	Pitfall	14-Nov	Yes
26	O10		Female	O beaches	Hand	14-Nov	No
27	O11	2982-2986	Male	O beaches	Hand	14-Nov	Yes
28	O12		Female	O beaches	Hand	14-Nov	No
29	O13		Juvenile	O beaches	Hand	14-Nov	No
30	O14		Juvenile	O beaches	Hand	14-Nov	No
31	O15		Male	O beaches	Pitfall	15-Nov	No
32	PS1	2914-2917	Female	Pongaheka South	Pitfall	14-Nov	Yes
33	PS2	2922-2926	Female	Pongaheka South	Pitfall	14-Nov	Yes
34	PS3	2918-2921	Male	Pongaheka South	Hand	14-Nov	Yes
35	PS4	2901-2906	Female	Pongaheka South	Hand	14-Nov	Yes
36	PS5	2891-2896	Female	Pongaheka South	Hand	14-Nov	Yes
37	PS6	2907-2913	Male	Pongaheka South	Hand	14-Nov	Yes
38	PS7	2897-2900	Female	Pongaheka South	Hand	14-Nov	Yes
39	PS8	2883-2886	Male	Pongaheka South	Hand	14-Nov	Yes
40	PS9	2874-2877	Female	Pongaheka South	Hand	14-Nov	Yes
41	PS10	2887-2890	Female	Pongaheka South	Hand	14-Nov	Yes
42	PS11		Juvenile	Pongaheka South	Hand	14-Nov	No
43	PS12		Juvenile	Pongaheka South	Hand	14-Nov	No
44	PS13		Juvenile	Pongaheka South	Hand	14-Nov	No
45	PS14		Juvenile	Pongaheka South	Hand	14-Nov	No
46	PS15		Juvenile	Pongaheka South	Hand	14-Nov	No
47	PS16		Juvenile	Pongaheka South	Hand	14-Nov	No
48	PS17		Juvenile	Pongaheka South	Hand	14-Nov	No
49	PS18		Male	Pongaheka South	Hand	14-Nov	No
50	PS19		Female	Pongaheka South	Pitfall	15-Nov	No
51	PS20		Female	Pongaheka South	Pitfall	15-Nov	No
52	PS21		Male	Pongaheka South	Pitfall	15-Nov	No
53	PS22		Juvenile	Pongaheka South	Pitfall	15-Nov	No
54	PN1		Male	Pongaheka North	Hand	14-Nov	No
55	PN2	2878-2882	Female	Pongaheka North	Hand	14-Nov	Yes
56	PN3	2999-3002	Female	Pongaheka North	Hand	14-Nov	Yes
57	PN4		Male	Pongaheka North	Hand	14-Nov	No
58	PN5	2987-2991	Female	Pongaheka North	Hand	14-Nov	Yes
59	PN6		Juvenile	Pongaheka North	Hand	14-Nov	No
60	PN7		Juvenile	Pongaheka North	Hand	14-Nov	No
61	PN8		Female	Pongaheka North	Pitfall	15-Nov	No

Appendix 4: Photos of Shore Skink capture sites at Mimiwhangata.

Kupe North beach



Ngaraupo beach

Pongaheka South beach



Appendix 5: Shore Skink data recorded at Massey University (Albany Campus) during quarantine between 14 November 2007 and 22 December 2007

#	Skink ID	Photo ID	Sex	Gravid?	SVL (mm)	Initial WT (g)	Final WT (g)	Regen. tail (mm)	Comments
1	K3	2856-2859	Male	-	64.0	5.36	5.49	16.0	condition v. good, orange tail. Toe loss: 0/0/0/0
2	K1	2860-2865	Female	early stage	54.0	3.47	4.20	8.0	condition v. good, long tail. 0/0/0/0
3	K4	2866-2869	Female	yes	56.5	4.25	5.49	-	condition v. good, long tail. 0/0/0/0
4	K2	2878-2873	Male	-	56.0	3.45	3.80	22.0	condition good, orange tail. 0/4/0/4
5	PS9	2874-2877	Female	early stage	56.0	3.19	4.90	-	condition good. 0/0/0/0
6	PN2	2878-2882	Female	no?	56.0	3.90	4.87	-	condition good. Sloughing. 0/0/0/0
7	PS8	2883-2886	Male	-	53.0	3.39	3.51	11.0	condition good. 0/0/0/0
8	PS10	2887-2890	Female	early stage	56.5	4.29	4.92	-	condition v. good. 0/0/0/2
9	PS5	2891-2896	Female	gravid	54.0	3.87	4.67	7.0	condition v. good. 4/0/0/0
10	PS7	2897-2900	Female	no	52.0	2.76	3.46	2.5	condition good. 0/0/0/0
11	PS4	2901-2906	Female	gravid	58.0	4.41	5.19	5.0	condition good. 0/0/0/0
12	PS6	2907-2913	Male	-	50.0	2.85	3.10	8.5	condition v. good. 0/0/0/0
13	PS1	2914-2917	Female	gravid	64.0	4.86	5.59	38.0	condition v. good. 0/5/0/0
14	PS3	2918-2921	Male	-	49.0	2.86	3.15	6.0	condition good. 0/0/0/0
15	PS2	2922-2926	Female	gravid	62.0	4.41	5.16	tail tip loss	condition v. good. Long tail. 0/0/0/0
16	N5	2927-2930	Female	gravid	61.0	5.03	6.15	26.0	condition v. good. 0/4/0/0
17	O3	2931-2939	Male	-	59.0	4.00	4.61	30.0	condition good. 0/0/0/5
18	N6	2940-2947	Male	-	54.0	3.89	4.24	tail tip loss	condition good. 0/0/0/0
19	N2	2948-2951	Female	gravid	61.0	4.56	5.38	35.0	condition good. 0/0/0/0
20	K5	2952-2957	Male	-	53.0	2.56	2.97	7.0	condition good, stumpy tail. 0/4/0/4
21	N3	2958-2962	Female	-	61.0	4.26	5.20	27.0	condition v. good. 0/0/0/0
22	N1	2963-2966	Male	-	50.0	3.01	3.48	10.0	condition good. 0/0/0/0
23	O9	2967-2972	Male	-	61.0	4.08	4.80	5.0	condition good, long tail. 0/0/0/0
24	O4	2973-2977	Female	gravid	60.0	5.16	5.00	22.0	condition v. good. 0/0/34/0
25	O8	2978-2981	Female	gravid	58.5	4.00	5.20	20.0	condition good. 0/0/0/0
26	O11	2982-2986	Male	-	54.0	3.59	3.90	18.0	condition v. good. 0/0/0/0
27	PN5	2987-2991	Female	gravid	64.0	5.16	6.14	29.0	condition v. good. 0/0/0/0
28	O7	2992-2998	Female	early stage	60.0	4.34	5.06	23.0	condition good, mites on FR, FL (highest numbers) & BR legs. 0/0/0/0
29	PN3	2999-3002	Female	gravid	68.0	6.55	7.56	1.5	condition v. good, long tail, scar on belly. 0/0/4/3
30	O5	3003-3009	Female	gravid	52.0	2.80	3.58	30.0	condition good.