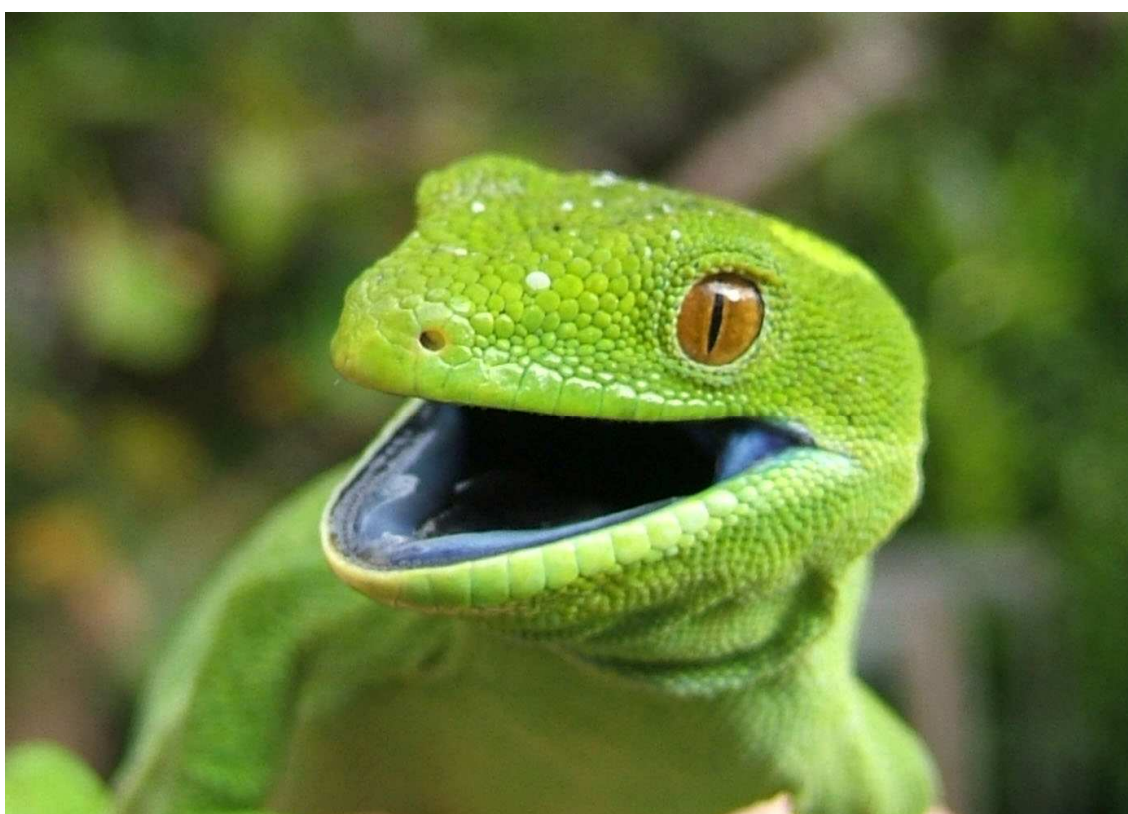




The Lizard Fauna of Greater Wellington's Regional Parks



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FOR FURTHER INFORMATION

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1. Introduction

The Greater Wellington region has a diverse lizard fauna. Table 1 list the lizards found in the region, their threat ranking and distribution with the Wellington conservancy. Nine species are likely to be found in or around the Regional Parks. Three species (Whitaker’s skink, Southern North Island speckled skink, common gecko “Marlborough mini”) are not likely to be found in the Parks due to their limited distribution.

Table 1: summary of lizard species know from the mainland in the Greater Wellington region and their threat status

Scientific name	Common name	Threat status	Distribution
<i>Cyclodina aenea</i>	Copper skink	NT	Poneke, Kapiti, Wairarapa
<i>Cyclodina ornata</i>	Ornate skink	GD (DP)	Poneke, Kapiti, Wairarapa
<i>Cyclodina whitakeri</i>	Whitaker’s skink	NV(CD, HI)	Poneke
<i>Oligosoma</i> “Southern North Island”	Southern North Island speckled skink	NE (HI, DP)	Wairarapa
<i>Oligosoma lineocellatum</i>	Spotted skink	GD (HI)	Poneke, Kapiti, Wairarapa
<i>Oligosoma nigriplantare polychroma</i>	Common skink	NT	Poneke, Kapiti, Wairarapa
<i>Oligosoma zelandicum</i>	Brown skink	S	Poneke, Kapiti,
<i>Hoplodactylus</i> “southern North Island forest gecko”	Southern North Island forest gecko	NT (DP)	Poneke, Kapiti, Wairarapa
<i>Hoplodactylus maculatus</i>	Common gecko	NT	Poneke, Kapiti, Wairarapa
<i>Hoplodactylus</i> “Marlborough mini”	Common gecko “Marlborough mini”	NT	Poneke
<i>Hoplodactylus pacificus</i>	Pacific gecko	GD (DP)	Poneke
<i>Naultinus elegans punctatus</i>	Wellington green gecko	GD (HI)	Poneke, Kapiti, Wairarapa

Hitchmough, 2005. GD = gradual decline; NE = nationally endangered; NT= not threatened; NV = nationally vulnerable; S = sparse. Qualifiers are represented in brackets: CD conservation dependent = ; DP = data poor; HI = human induced.

Distribution: DOC area offices within Wellington where the species is present.

2. Objective

The objective of this survey is to:

1. Endeavour to identify lizard species present in the Regional Parks by using the most appropriate methodology in the most promising habitat and or localities.

3. Study areas

The study areas will include the following Regional Park sites:

- Queen Elizabeth Regional Park
- Belmont Regional Park
- Akatarawa Forest Park
- East Harbour Regional Park: Northern Block
- East Harbour Regional Park: Lakes Block
- Wainuiomata Mainland Island

4. Methods

4.1 Survey dates

Each park will be surveyed for one week in late 2009. This will mainly involve day searches with one evening search for each park.

Table 2: Dates for lizard surveys in the Regional Parks.

Regional Park to be surveyed	Dates of survey
Queen Elizabeth Regional Park	16 – 20 November 2009
Belmont Regional Park	23 – 27 November 2009
Akatarawa Forest Park	30 November – 4 December 2009
East Harbour Regional Park: Northern Block	7 – 11 December 2009
Wainuiomata Mainland Island	14 – 18 December 2009
East Harbour Regional Park: Lakes Block	21 – 23 December 2009

Two weeks in early 2010 (26 January – Friday 5 February) will be used to do extra night work as warmer evenings improve the chances of locating nocturnal lizards, and will give time to target species not yet found.

Surveys will be done in accordance with Department of Conservation permit WE/298/RES.

4.2 Survey techniques

Due to the size of the Regional Parks it is impossible to cover the areas in a systematic way. Instead habitats and / or sites where lizard species are most likely to be found will be targeted. Therefore some searching will be undertaken in the main habitat types. This type of survey has been modelled on the work of A.H. Whitaker on Kapiti Island.

Day searches will be undertaken by looking at micro sites where diurnal lizards are most likely to be basking or foraging. Possible retreat sites for inactive lizards will also be searched (e.g. turning logs, stones or debris; searching through vegetation; looking under loose bark on trunks; using a torch to look in cracks and crevices).

Night searches will be undertaken on warm evenings (about 14°C) by using a binocular-mounted spotlight or headlamp to locate active nocturnal geckos.

Pitfall traps and artificial cover objects (ACOs) may be set in some sites where other search methods are less effective (e.g. boulder banks, scree, forest floor).

4.3 Processing information

Captured animals will be processed in the following way. Standard measurements will be taken. Snout – vent length (SVL) and tail length (TL) will be taken by using a ruler and measuring to the nearest 1.0mm. Weights will be taken using Pesola spring balances to the nearest 0.1gm.

Capture location will be recorded by GPS and notes of time and habitat will be made. Distinctive animals will be photographed (eg. pattern or colouring).

Temperatures will be recorded for night time captures and max – min temperatures will be recorded for animals caught in pitfall traps.

4.4 Hygiene

Equipment that has been in contact with lizards will be washed (eg. pitfall traps and lizard bags) before being transported to another Park.

5. Lizards in the Regional Parks

5.1 Background information

Information has been gathered from the Herpetofauna data base (last modified 28 July 2009) to ascertain if lizards have been found in or around the parks previously. This information is represented in maps ... and tables 4-9.

Five of the Regional Park sites that are to be surveyed are in the Ponoke area. Therefore the Lizard action plan for Ponoke Area, Wellington Conservancy: 2009 – 2014 has been a valuable document for guiding survey priorities.

Table 3: Actions from the Lizard action plan for Ponoke Area and their relevance for greater Wellington Regional Parks.

Species	Actions	Relevance
Pacific Gecko	Investigate any reports from the Upper Hutt and Moonshine areas of “common geckos” since Pacific gecko is most likely to be confused with common. (high)	Akatarawa Forest Park East Harbour Regional Park: Northern Block
Spotted Skink	Respond to sightings of spotted skink at Wainuiomata coast, Baring Head and Turakirae Head (high)	East Harbour Regional Park: Lakes Block
Spotted Skink	Respond to sightings of spotted skink at Korokoro stream mouth and in Percy Reserve. (medium)	Belmont Regional Park
Spotted Skink	Survey for presence at sites of historical records or where suitable habitat occurs. (medium)	Belmont Regional Park East Harbour Regional Park: Lakes Block
Ornate Skink	Survey sites where historic records indicate presence (or suitable habitat nearby), to confirm presence (medium)	Akatarawa Forest Park Belmont Regional Park East Harbour Regional Park: Northern Block Wainuiomata Mainland Island
Brown skink	Investigate sightings in area east of State Highway One from Ngauranga, including Newlands, Horokiwi, and Korokoro stream to determine distribution. (low)	Belmont Regional Park
Copper Skink	Investigate sighting at Turakirae to confirm copper skinks are still present. (med)	East Harbour Regional Park: Lakes Block

5.2 Queen Elizabeth Regional Park

Only the common skink has been recorded from Queen Elizabeth Park (20008) and there a Wellington green gecko was found just south of the park in Paekakariki (2001). Other species that are most likely to occur in the park are copper skink, ornate skink, brown skink, Southern North Island forest gecko and common gecko.

Table 4: Lizards species known from the Wellington region and their occurrence in Queen Elizabeth Park

Scientific name	Common name	Occurrence or closest location (s)
<i>Cyclodina aenea</i>	Copper skink	Raumati South, Pukerua Bay, Kapiti Island
<i>Cyclodina ornata</i>	Ornate skink	Waikanae, Johnsonville, Upper Hutt, Kapiti Island
<i>Oligosoma lineocellatum</i>	Spotted skink	Plimmerton
<i>Oligosoma nigriplantare polychroma</i>	Common skink	Queen Elizabeth Park
<i>Oligosoma zelandicum</i>	Brown skink	Pukerua Bay, Kapiti Island
<i>Hoplodactylus</i> "southern North Island forest gecko"	Southern North Island forest gecko	Plimmerton, Paraparaumu, Kapiti Island
<i>Hoplodactylus maculatus</i>	Common gecko	Paekakariki, Paraparaumu, Kapiti Island
<i>Hoplodactylus pacificus</i>	Pacific gecko	Moonshine Valley
<i>Naultinus elegans punctatus</i>	Wellington green gecko	Pukerua Bay, Paekakariki Hill Road, Waikanae, Kapiti Island

Survey priorities

- ❖ Foredune and back dune area (gorse, broom and broadleaf) search for skinks and geckos.
- ❖ Kahikatea remnant, regenerating bush good for pitfall trapping for skinks and gecko searches.
- ❖ Manuka wetland search for Wellington green gecko and forest gecko.

5.3 Belmont Regional Park

Only Wellington green geckos (1996, 1965) and Southern North Island forest geckos (1965) have been recorded from Belmont Regional Park. Other species that are most likely to occur in the park are copper skink, ornate skink, common skink, brown skink, and the common gecko have all been found in the Western Hills between Horokiwi and the Haywards. There is the possibility that a relict population of spotted skinks could be in the area of the Korokoro Stream mouth.

Table 5: Lizards species known from the Wellington region and their occurrence in Belmont Regional Park

Scientific name	Common name	Occurrence or closest location (s)
<i>Cyclodina aenea</i>	Copper skink	Plimmerton, Percy Reserve, Belmont
<i>Cyclodina ornata</i>	Ornate skink	Johnsonville, Korokoro, Silverstream
<i>Oligosoma lineocellatum</i>	Spotted skink	Mouth of Korokoro Stream, Percy Reserve
<i>Oligosoma nigriplantare polychroma</i>	Common skink	Johnsonville, Korokoro, Maungaraki, Belmont Normandale, Whitby
<i>Oligosoma zelandicum</i>	Brown skink	Horokiwi, Johnsonville, Pukerua Bay
<i>Hoplodactylus</i> "southern North Island forest gecko"	Southern North Island forest gecko	Belmont Regional Park
<i>Hoplodactylus maculatus</i>	Common gecko	Korokoro, Maungaraki, Belmont, Papakowhai,
<i>Hoplodactylus pacificus</i>	Pacific gecko	Moonshine Valley
<i>Naultinus elegans punctatus</i>	Wellington green gecko	Belmont Regional Park

Survey priorities

- ❖ Cornish street area - set pitfall traps for spotted skinks.
- ❖ Bush off Oakleigh Street entrance – set pitfall traps for *Cyclodina* skinks and search for geckos.
- ❖ Area near Horokiwi – search for brown skinks.
- ❖ Search rock outcrops at Boulder hill for skinks and geckos.

5.4 Akatarawa Forest Park

Only the Southern North Island forest gecko has been recorded from Akatarawa Forest Park (1965). Other species that are most likely to occur in the park are copper skink, ornate skink, common skink, brown skink, common gecko and the Wellington green gecko. There is also the possibility that Pacific geckos may be present in this park.

Table 6: Lizards species known from the Wellington region and their occurrence in Akatarawa Forest Park.

Scientific name	Common name	Occurrence or closest location (s)
<i>Cyclodina aenea</i>	Copper skink	Pukerua Bay, Pauatahanui, Pinehaven, Trentham, Raumati South
<i>Cyclodina ornata</i>	Ornate skink	Silverstream, Pinehaven, Waikanae
<i>Oligosoma lineocellatum</i>	Spotted skink	Plimmerton, Percy's Reserve
<i>Oligosoma nigriplantare polychroma</i>	Common skink	Pukerua Bay, Pauatahanui, Pinehaven, Whitemans Valley, Paekakariki, paraparaumu
<i>Oligosoma zelandicum</i>	Brown skink	Pukerua bay, Horokiwi, Kapiti Island
<i>Hoplodactylus</i> "southern North Island forest gecko"	Southern North Island forest gecko	Akatarawa summit, Pakuratahi Forks, Moonshine, Paraparaumu
<i>Hoplodactylus maculatus</i>	Common gecko	Pukerua Bay, Pauatahanui, Upper Hutt, Paekakariki, Paraparaumu
<i>Hoplodactylus pacificus</i>	Pacific gecko	Moonshine Valley
<i>Naultinus elegans punctatus</i>	Wellington green gecko	Kaitoke, Harwards, Paekakariki Hill Road, Waikanae

Survey priorities

- ❖ Clearing at bottom of Woolshed Road (manuka and broadleaf forest) good area to search for geckos.
- ❖ Clearing Toitoi Road (manuka, broadleaf and fernland) good area to search for geckos and pitfall trap for skinks.
- ❖ Puketiro Road (Pylons) good area to search for skinks in grassland and forest edges (pitfall trap) and geckos in forest edge.

5.5 East Harbour Regional Park: Northern Block

Copper skinks (1968), Southern North Island forest geckos (1965) and Wellington green geckos (1965, 1996) have been recorded from East Harbour Park: northern block. There is also an unconfirmed report of Pacific gecko being sighted at Butterfly Creek. Other species that are most likely to occur in the park are ornate skink, common skink and the common gecko.

Table 7: Lizards species known from the Wellington region and their occurrence in East Harbour Regional Park

Scientific name	Common name	Occurrence or closest location (s)
<i>Cyclodina aenea</i>	Copper skink	East Harbour Regional Park
<i>Cyclodina ornata</i>	Ornate skink	Days Bay, Korokoro,
<i>Oligosoma lineocellatum</i>	Spotted skink	Baring Head, Matiu/Somes Island, Makaro Island, Mokopuna Island
<i>Oligosoma nigriplantare polychroma</i>	Common skink	Wainuiomata coast, Eastbourne, Lowry Bay
<i>Oligosoma zelandicum</i>	Brown skink	Horokiwi
<i>Hoplodactylus</i> “southern North Island forest gecko”	Southern North Island forest gecko	East Harbour Regional Park
<i>Hoplodactylus maculatus</i>	Common gecko	Eastbourne, Days Bay, Butterfly Creek
<i>Hoplodactylus pacificus</i>	Pacific gecko	Pinehaven, Butterfly creek?
<i>Naultinus elegans punctatus</i>	Wellington green gecko	East Harbour Regional Park

Survey priorities

- ❖ Search areas where weed team have sighted forest geckos (by Gibb’s covenant) and green geckos (Mackenzie track)
- ❖ Pifall trap area where copper skinks were found in 1968 (east of Butterfly Creek and by Gibb’s covenant).
- ❖ Search area where Tony Whitaker saw what may be a Pacific gecko.

5.6 East Harbour Regional Park: Lakes Block

Only the common skink (2008) and common gecko (2008) have been recorded from East Harbour Regional Park: Lakes Block. Other species that are most likely to occur in the coastal area of the park are copper skink and spotted skink.

Table 8: Lizards species known from the Wellington region and their occurrence in Lakes Block

Scientific name	Common name	Occurrence or closest location (s)
<i>Cyclodina aenea</i>	Copper skink	Butterfly Creek, Wainuiomata coast, Eastbourne
<i>Cyclodina ornata</i>	Ornate skink	Days Bay, Korokoro,
<i>Oligosoma lineocellatum</i>	Spotted skink	Baring Head, Matiu/Somes Island, Makaro Island, Mokopuna Island
<i>Oligosoma nigriplantare polychroma</i>	Common skink	Pencarrow Lakes Block
<i>Oligosoma zelandicum</i>	Brown skink	Horokiwi
<i>Hoplodactylus</i> "southern North Island forest gecko"	Southern North Island forest gecko	Days Bay, Eastbourne, Wainuiomata
<i>Hoplodactylus maculatus</i>	Common gecko	Pencarrow Lakes Block
<i>Hoplodactylus pacificus</i>	Pacific gecko	Pinehaven
<i>Naultinus elegans punctatus</i>	Wellington green gecko	Butterfly Creek

Survey priorities

- ❖ Search coastal area for spotted skinks and copper skinks.
- ❖ Search Baring Head for spotted skinks and copper skinks.

5.6 Wainuiomata Mainland Island

Only sloughed skin of a Southern North Island forest gecko (2008) has been recorded from the Wainuiomata Mainland Island. Other species that are most likely to occur in the park are copper skink, ornate skink, common skink, common gecko and the Wellington green gecko.

Table 9: Lizards species known from the Wellington region and their occurrence in Wainuiomata Mainland Island

Scientific name	Common name	Occurrence or closest location (s)
<i>Cyclodina aenea</i>	Copper skink	Wainuiomata Coast, Butterfly Creek, Pinehaven
<i>Cyclodina ornata</i>	Ornate skink	Days Bay, Korokoro, Silverstream, Pinehaven
<i>Oligosoma lineoocellatum</i>	Spotted skink	Wainuiomata coast, Matiu/Somes Island, Makaro Island, Mokopuna Island
<i>Oligosoma nigriplantare polychroma</i>	Common skink	Wainuiomata coast, Lowry Bay, Pinehaven
<i>Oligosoma zelandicum</i>	Brown skink	Horokiwi
<i>Hoplodactylus</i> "southern North Island forest gecko"	Southern North Island forest gecko	Wainuiomata Mainland Island
<i>Hoplodactylus maculatus</i>	Common gecko	Wainuiomata coast, Butterfly creek, Catchpool, Lowry Bay, Upper Hutt
<i>Hoplodactylus pacificus</i>	Pacific gecko	Pinehaven
<i>Naultinus elegans punctatus</i>	Wellington green gecko	Wainuiomata, Moores Valley, Catchpool, Orongorongo, Stokes valley, Pinehaven

Survey priorities

- ❖ Search western and northern boundary of mainland island (forest edge).
- ❖ Search main road (within forest) on edge of mainland island for geckos
- ❖ Search manuka wetland in Skull Gully for geckos. Pitfall trap in skull gully for *Cyclodina* skinks.
- ❖ Search open grassland before Mainland Island area for *Oligosoma* skinks.

6. Equipment

Field equipment:	Pitfall traps and ACOs:
<ul style="list-style-type: none"> • Binocular mounted spotlight • Hand held thermometer (approx \$165) • Headlamp • torch • Batteries • GPS • Lizard bags • Data sheet • Ruler • 10g persola scales • 50gm persola scales • Disinfectant soap 	<ul style="list-style-type: none"> • 30 buckets, lids, mesh and pear • 30 onduline ACOs • Max – min thermometer (approx \$35) • Colour tape • Spade • Grubber • Virkon 2007 • Brush • Gloves

7. References

Adams, L. 2009: Lizard Action Plan For Poneke Area, Wellington Conservancy, 2009 – 2014. Department of Conservation, Wellington, New Zealand.

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Whitaker, T. 1994: Survey Methods for Lizards. Ecological Management, No. 2, Threatened Species Unit, Department of Conservation, Wellington, New Zealand.