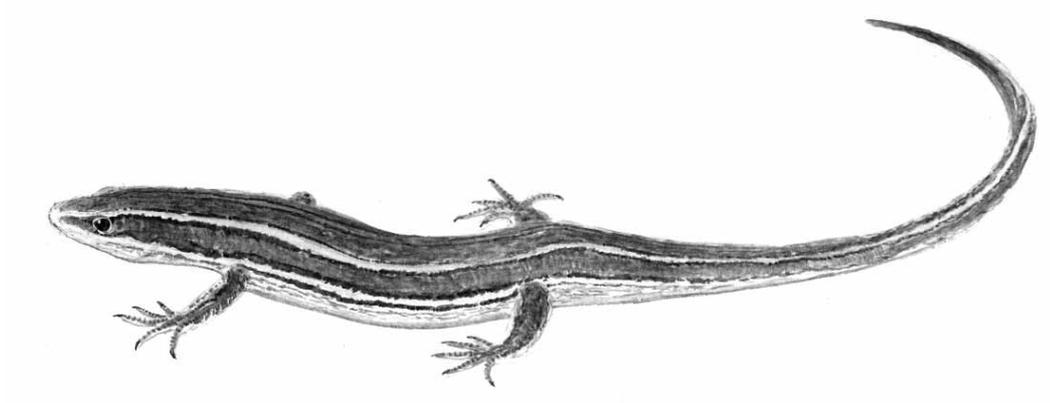
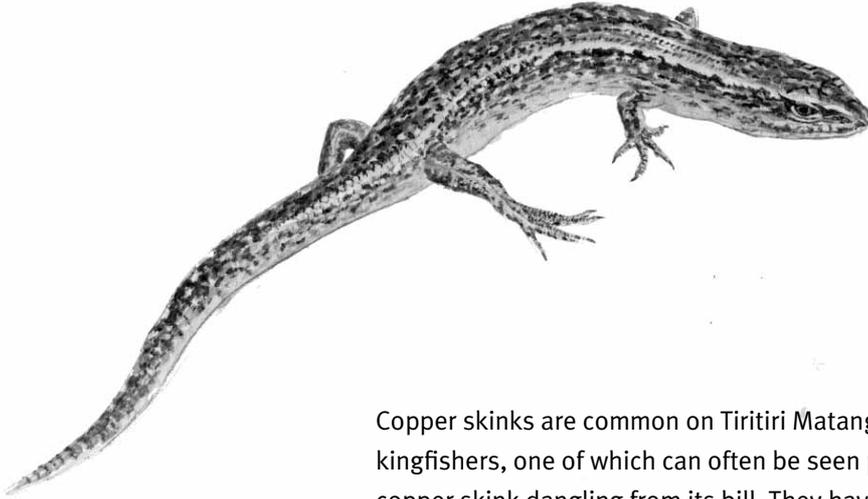


Other reptiles



Copper skink

Cyclodina aenea



Copper skinks are common on Tiritiri Matangi Island, and provide food for kingfishers, one of which can often be seen perched on the wharf with a copper skink dangling from its bill. They have always been on the island.

What do they look like?

They grow to about 60mm (SVL) and are sleek, glossy and copper coloured, with a tail that may be flushed with red. Because they are nocturnal and rarely emerge from under cover, they are not often noticed.

What do they eat?

Like all skinks, they are mainly carnivorous and eat insects. They also eat coprosma berries and similar fruits, and take nectar.

Breeding

Like almost all New Zealand skinks, copper skinks bear live babies. Their babies are sometimes up to half the length of an adult.

Where else can they be found?

Copper skinks can be found all over New Zealand, even being quite widespread in Auckland City. In the city, the diurnal introduced Australian rainbow skink, which looks similar to the copper skink is more likely to be noticed.



Did you know?

Prior to the translocation of 30 shore skinks in December 2006, the copper skink was one of only two kinds of skinks living on Tiritiri Matangi.

References:

SOTM website (Non Avian Fauna).

'Forest and Bird' Magazine No 294, Nov. 1999.

New Zealand Herpetological Society website: www.reptiles.org.nz

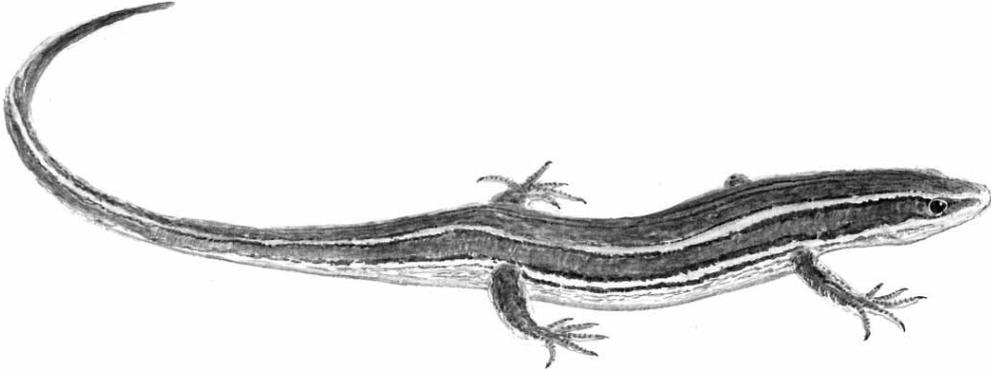
Also: www.kaipatiki.org.nz

DOC pamphlet: 'Attracting Lizards to your Garden'.

Behavioural interactions between copper (*Cyclodina aenea*) and moko (*Oligosoma moco*) skinks: implications for translocations. Researcher: Melinda HABGOOD
Supervisors: Assoc Prof Dianne Brunton Advisor: Dr Graham Ussher (ARC).

Moko skink

Oligosoma moco



There have always been moko skinks on Tiritiri Matangi. When members of the New Zealand Herpetological Society searched Fisherman's Bay in 1994, they found about 20 moko skinks and caught six. All those caught were gravid (pregnant). When released, all headed down into the gaps between the beach stones. Other Moko skinks were seen at Northeast Bay, in the grassland at Pohutukawa Cove, and north and south of the landing.

What do they look like?

Moko skinks are quite small and slender, with a particularly long tail and a short blunt snout. They grow up to about 73mm SVL. They are a coppery dark brown, with darker brown stripes along the top of the back and two pale stripes, one running from the snout, along the side and on to the base of the tail, and the other running from the nostril to the groin. A wide mid-brown band runs between those two pale ones. The underside of the moko skink is very pale, but sometimes has darker specks.

What do they eat?

Moko skinks are mainly carnivorous and eat insects. They also eat coprosma berries and similar fruits, and take nectar.

Breeding

Moko skinks, like almost all New Zealand skinks, bear live young. They mate in spring, and the babies are born about four months later, although there has been one instance of a female which gave birth eight months after being captured and kept in a cage on her own!

Where else can they be found?

They are usually found on islands off the east coast of the North Island, but have also been found on the mainland in the Bay of Plenty.



Did you know?

Moko skinks are usually found in quite open areas and in the long grass, where they can bask in the sun but still be sheltered by small dense shrubs.

Moko skinks are only found in the upper North Island.

References:

Robb, Joan. 'New Zealand Amphibians & Reptiles' Auckland: Collins, 1980.

SOTM Bulletin No 19, December 1994.

Gill, B & Whitaker, T. 'New Zealand Frogs and Reptiles' Auckland: David Bateman (1996) 2001.

Behavioural interactions between copper (*Cyclodina aenea*) and moko (*Oligosoma moco*) skinks: implications for translocations. Researcher: Melinda HABGOOD
Supervisors: Assoc Prof Dianne Brunton Advisor: Dr Graham Ussher (ARC).

Common gecko

Hoplodactylus maculatus



As its name suggests, this is the most widespread and abundant New Zealand gecko.

When members of the New Zealand Herpetological Society first searched Tiritiri Matangi Island in 1994, no sign of these geckos was found, but in 2005 their presence was confirmed when footprints were discovered in rodent tracking tunnels. After that they were actually seen and photographed at The Arches on Tiritiri Matangi's eastern coast. So the common gecko has always been on the island.

It is thought they would once have been numerous on the island, but were decimated by the burgeoning population of kiore prior to rat eradication in 1993. As they only produce two young (twins) each year, these gecko will take a very long time to become common on Tiritiri Matangi once more.

What do they look like?

They can be seen in various combinations of brown, grey, fawn and even bluish-grey, and have an indistinct patterning of flecks and streaks. They are usually about 145 – 150mm in total length, though some can be a little bigger. In torchlight, their eye reflections are pink. Their bodies appear slightly flattened rather than rounded.

What do they sound like?

Generally, like most New Zealand geckos, common geckos make a variety of barking and chirping noises, usually when they are disturbed or under stress.

What do they eat?

They eat insects, fruit and nectar, and are mostly ground foragers (though they also climb trees). On Tiritiri Matangi they can be seen at night out over the eastern cliffs on the flowering pohutukawa trees which cling to the rocky coastal edges. Also, because they eat great quantities of *coprosma propinqua* fruits, they are very important for their role in dispersing the seeds of this bush.

Breeding

As stated, common geckos produce just one set of twins each year. They bear live young, as do all geckos, and babies are born between February and May. The young are slow to mature.

Where else can they be found?

The common gecko can be found throughout New Zealand, including most offshore islands, although their mainly ground-dwelling habits have made them particularly vulnerable to predators such as cats.



Did you know?

Although the common gecko is nocturnal it often comes out during the day to bask in the sun.

Common gecko's are long-lived. On average, in the wild, they live about 13 years, though some have been recorded as living at least 17 years. In captivity they have been recorded living 37 years.

Until the translocation of Duvaucel's geckos in 2006, the common gecko was the only gecko on the island.

References:

SOTM bulletin no 19 December 1994.

SOTM bulletin 59 November 2004.

'Dawn Chorus' bulletin no 64 February 2006.

Robb, Joan. 'New Zealand Amphibians & Reptiles' Auckland: Collins 1980.

Bannock, Whitaker & Hickling. 'Extreme longevity of the common gecko (*hoplodactylus maculatus*) on Motunau Island, Canterbury New Zealand' – reported in : 'New Zealand Journal of Ecology' vol. 23 No. 1: 1999.

Ngarara / lizards

Lizards belong to the reptile family. Worldwide, reptiles include crocodiles, turtles, snakes, lizards and tuatara.

In New Zealand there are many different species of lizard, found from sea level to the high country.

On Motutapu Island, near Tiritiri Matangi Island, Maori midden sites containing the remains of ten species of lizard have been discovered. Middle Island in the Mercury group has the same ten species as Motutapu, so Tiritiri Matangi probably originally had a similar number of species.

Some lizards are active at night (nocturnal) while others only come out during the day (diurnal).

The main threats to lizards come from introduced predators, especially rats, and loss of habitat, especially from agricultural development.

Ancient Maori thought lizards had supernatural powers and they feared them because they were thought to be connected with death. Geckos were more feared than skinks, and green geckos were thought to be the most evil of all. However, lizards were also seen as being able to protect people, and in places, carvings of lizards can be seen at the front of some whareniui to ensure the safety of the building and of its people.



Did you know?

All New Zealand lizards are either geckos or skinks.

There are about 26 lizard families in the world.

New Zealand has just two: skinks and geckos.

Reference:

Orbell, Margaret. 'The Illustrated Encyclopedia of Maori Myths and Legends' Christchurch: Canterbury University Press (1995) 1999.

Geckos and skinks

The main features of New Zealand geckos

They have digital pads, which allow them to climb smooth surfaces. In fact, the 'sticking' power of the gecko's feet is so great that just two feet in contact with the surface is enough to support the entire body weight.

Their upper and lower eyelids are fused (most lizards have moveable eyelids), so their eyes are always open, even when asleep.

Eyes are covered by a transparent scale, which geckos lick to keep clean.

They have thin, soft, velvety, baggy skin, a broad head and a flattened body.

They slough their skins every six to eight weeks in spring and summer.

New Zealand geckos bear live young, though all other geckos in the world lay eggs.

Tree geckos hardly ever shed their tails, because they need them for climbing, but ground-dwelling geckos do so quite readily.

They eat insects, fruit, and nectar.

The oldest known gecko living in the wild is at least 42 years old.

New Zealand's native geckos are sorted into two groups:

Hoplodactylus

These are grey-brown and nocturnal, although they do bask in the sun sometimes.

They are able to change the intensity of their skin colour.

On Tiritiri Matangi we have the common gecko and Duvaucel's Gecko.

Naultinus

These are the green geckos, and they are diurnal.

They are not able to change their skin colour at all.

Naultinus geckos are tree climbers, so they are the least likely to drop their tail as a means of escape as they need their tail to grip onto branches when climbing.

NOTE: Although the tuatara looks like a lizard, it is actually the last remaining member of an ancient group of reptiles – Sphenodontia – that was around during the time of the dinosaur, over 200 million years ago.

The main features of New Zealand skinks

Skinks are often overlooked because they are small and secretive.

They have smooth, shiny tight-fitting skin created by scales which overlap in rows, and they look a bit like snakes on legs.

They also have a long tapering tail and short legs with narrow toes.

Their lower eyelid moves but the upper one is fixed – so skinks can blink.

They smell things through their tongue, not their nostrils.

All New Zealand skinks except one, bear live young.

They mainly eat insects and spiders, but occasionally fruit.

They generally have three to six babies, sometimes more, in February/ March.

New Zealand's native skinks are sorted into two groups:

Oligosoma

These prefer open dry habitats and are diurnal. In fact, they are avid sun-baskers! They have longer toes.

On Tiritiri Matangi we have the moko skink and the shore skink.

Cyclodina

These prefer shady areas. They are mostly nocturnal or crepuscular (active at dawn) but will sun bask at times.

On Tiritiri Matangi we have the copper skink.

References:

Gill, Brian. 'New Zealand Frogs and Reptiles' Illus. Tony Whitaker. NZ: David Bateman (1996) 2001.

Sharell, Richard. 'The Tuatara Lizards and Frogs of New Zealand' London: Collins, 1966.

Whitaker, T & Thomas, B. 'New Zealand Lizards: An annotated bibliography'. Lower Hutt: Ecology Division DSIR, 1989.

Richardson, Sally, Royal Society Fellow 2006 'Do You Know Your Local Lizards?' (Poster).

Saving our lizards

Although there are twice as many endemic lizards in New Zealand as endemic birds, and some of them are just as endangered, they receive far less attention.

Many native lizard species are restricted to isolated locations, with 19 species currently identified as requiring conservation management intervention.

Translocation is a widely accepted management tool, but before such a drastic measure is taken, careful scientific studies are undertaken.

One study was undertaken by the University of Auckland before releasing lizards on Tiritiri Matangi, and was overseen by Dr Graham Ussher, a herpetologist who is also a member of SOTM. This study was to determine to what extent copper skinks and moko skinks would impact on each other if living in close proximity.

The study recommended that fundamental concepts of competition be considered prior to translocations and concluded that, in this case, there was a lack of competition between the two species. This was encouraging for future translocations of endangered reptiles to Tiritiri Matangi Island .

References:

University of Auckland Thesis by Melinda Habgood : 'Behavioural interactions between copper (*Cyclodina aenea*) and moko (*Oligosoma moco*) skinks: implications for translocations'.

'Dawn Chorus', Bulletin 50, Winter 2002.

Why lizards?

Not only are lizards cute and interesting little creatures to look at, they play an important role in keeping the land healthy, because they disperse the seeds of some of our native plants and help pollinate flowers. So they are worth trying to attract to your garden.

We need to be aware that because lizards are small and shy and secretive we usually don't even know they are there in our own backyard.

Are lizards all the same?

New Zealand is home to more than 80 species of lizard. There are two different types – geckos and skinks. Geckos have baggy, velvety skin with broad heads. Skinks are sleek and smooth-skinned, like small snakes with legs. Skinks especially can thrive in suburban gardens and rural properties, if their needs for food and shelter are met.

OK, so how do I get lizards in my garden?

Marieke Lettink from Canterbury has produced an information pamphlet on ways to encourage lizards to your garden.

She suggests you plant a collection of low-lying spreading shrubs such as *muehlenbeckia*, as well as tussocks, and make small 'lizard homes' out of stacks of roofing materials.

They like dry and reasonably open places, with good vegetation cover, and things like rock gardens, divaricating shrubs and even bark chips.

Insect-attracting plants such as tussock are good too.

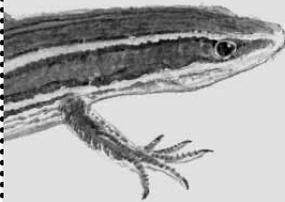
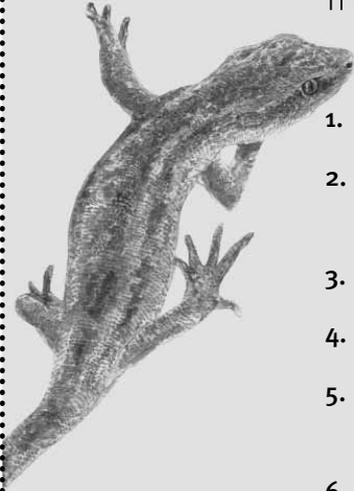
You need a mix of good cover and sunny places, especially for the skinks, as they like to come out and bask. As the sun moves around during the day, they'll move around with it.

Rock walls can make good lizard habitat and corridors for lizards to move between gardens. Keep a few gaps in between rocks for them to creep into, plant tussocks in-between and they will come out and bask on rocks.

Fallen logs, sticks, bark, woody weeds and fern fronds left lying in an unused corner are useful too. Skinks like to feel a roof over their heads and will wedge themselves into small cracks or into dry rolled-up leaves.

Lizards naturally have a small home range and will generally stay put if they have everything they need.

Ways to encourage lizards into your garden!



1. **Don't keep a cat, and dissuade other cats from visiting the garden.**
2. **Encourage thick plant growth on banks, in borders and along hedgerows.**
3. **Leave an area of grass to grow untended.**
4. **Mulch heavily and encourage a build-up of deep leaf litter.**
5. **Place logs, planks or bits of corrugated iron where plants can grow around or over them.**
6. **Make rockeries with many loosely placed stones (not firmly embedded in soil) or create stone heaps.**
7. **Use dense ground-cover plants.**
8. **Leave numerous cracks when building stone or block walls.**
9. **Plant berry or nectar-producing species, especially native divaricating shrubs.**
10. **Allow vines on buildings to reach the roof (but get rid of vines if they're weeds!) so geckos can easily get in and out.**
11. **Minimise or eliminate pest spraying so that insect populations increase.**

The pamphlet, 'Attracting lizards to your garden' written by Marieke Lettink and Tony Whitaker gives instructions on how to create artificial lizard homes in your garden using corrugated roofing stacked two or three high with small stones between. (Corks can also be used to act as spacers).

Contact your local DOC office to find out what species of lizard you can expect to find in your garden and how to encourage more of them to stay. They may have copies of the pamphlet or know where you can get it.