

# TUATARA

## OUR ANCIENT TREASURE he taonga nō onamata

Gone from our pockets, but  
not from our hearts.



**Why are tuatara so special?** Tuatara is known as a "living fossil" because it has been around for so long (see timeline). New Zealand is the only country in the world where tuatara survive in the wild.

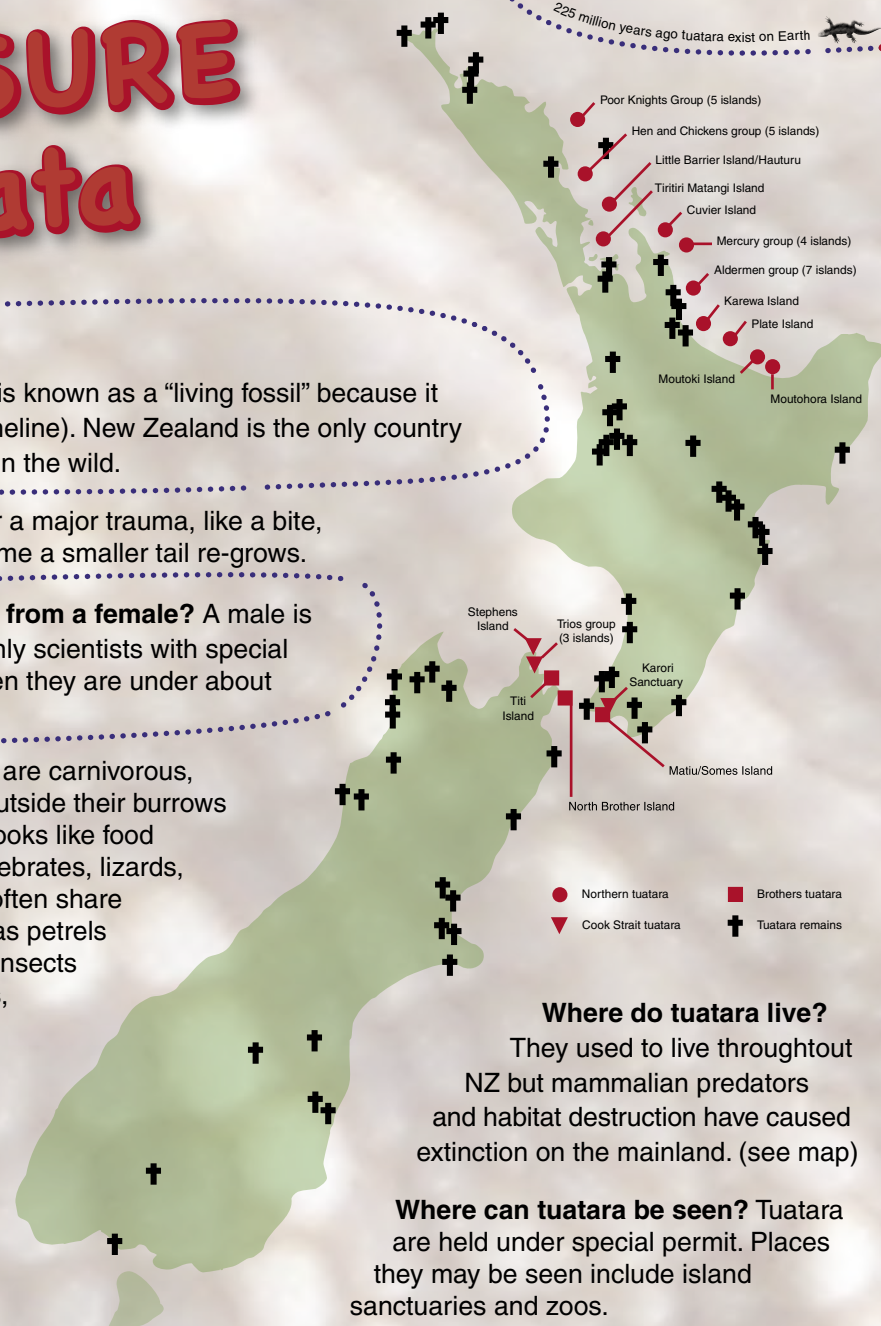
**Can a tuatara drop its tail?** After a major trauma, like a bite, part of the tail may fall off. Over time a smaller tail re-grows.

**How do you tell a male tuatara from a female?** A male is bigger and has a larger crest. Only scientists with special equipment can tell their sex when they are under about 13 years of age.

**What do tuatara eat?** Tuatara are carnivorous, opportunist feeders. They sit outside their burrows and whatever goes past that looks like food gets grabbed – such as invertebrates, lizards, and smaller tuatara. Tuatara often share burrows with sea birds such as petrels and shearwaters, eating the insects that live in the bird droppings, and sometimes the birds' eggs and chicks.



225 million years ago tuatara exist on Earth



### Where do tuatara live?

They used to live throughout NZ but mammalian predators and habitat destruction have caused extinction on the mainland. (see map)

**Where can tuatara be seen?** Tuatara are held under special permit. Places they may be seen include island sanctuaries and zoos.

**When are tuatara active?** Tuatara are nocturnal animals so at night they come out of their burrows to eat. However, since a lot of their energy comes from sunlight, they need to bask in the sun during part of the day. Sunlight is vital for their growth and development.

**What do tuatara feel like?** They have dry, cool skin and muscular bodies. The spine is quite soft and is made from keratin. The feet are strong with sharp claws.

**Does a tuatara shed its skin?** A tuatara sheds its skin once or twice a year. The skin sloughs off in pieces. The colour of the new skin is brighter than the old skin.

*Sphenodon guntheri*

### TWO SPECIES

*Sphenodon punctatus*



Brothers Island tuatara



Cook Strait tuatara



Northern tuatara

**How is a tuatara different from a lizard?** Physical differences include:

- The skull has extra holes
- A pineal eye covered by opaque scales
- Bony points that stick out on the ribs and extra chevron shaped extensions to the ribs that support the underbelly.
- Serrated jaw bones which work as teeth.
- A single row of teeth on the lower jaw which fit between a double row at the back of the top jaw.
- A male tuatara has no penis
- No ear holes.

**If a male tuatara doesn't have a penis, how do they mate?** Tuatara have cloaca, or vents like birds have. Mating happens in February and March when the female has eggs to fertilize.

**When do tuatara become adults?** By the age of 16 years, tuatara reach sexual maturity. In captivity this occurs earlier. It may be 50 years before the animal reaches its full size.

**Can tuatara hear sounds?** Although they have no external earhole, scientists have discovered that tuatara are able to hear well. They also make croaking noises.



**What temperatures do tuatara prefer?** Tuatara enjoy cooler temperatures than any other reptile. They live in a range of between 10°C and 20°C. They may hibernate at < 5°C and may die of heat stress at > 25°C.

**Why are tuatara so slow in moving?** They're not! Tuatara seem to have three speeds.

- They may sit motionless for hours, blending in and camouflaged against the background as they bask in the sun.
- Moving off at a sedate pace, they amble to wherever they are going.
- If catching food or moving away from danger they move very fast over short distances.

**How does the breeding cycle work?** Breeding usually happens every two years. If a female has eggs in her body ready to be fertilized she gives a head nod to a displaying male and if she accepts him mating occurs. Eggs are laid about 8 months later. Eggs are soft tissue and by the time they hatch they increase in size by 200-300%.

The female digs a hole and buries 10 to 18 eggs. Soil temperature and moisture content is critical. In the wild eggs often don't hatch so a captive breeding programme, **Head Start** is used. Eggs are taken from the wild and incubated under careful conditions. Most eggs kept at a temperature of 20°C hatch into females, while most eggs kept at 23°C produce males.

After hatching, the baby tuatara are returned to the wild, either to the island that the eggs came from, or to a new location to re-create another population.

65 million years ago around the Earth? Dinosaurs die out



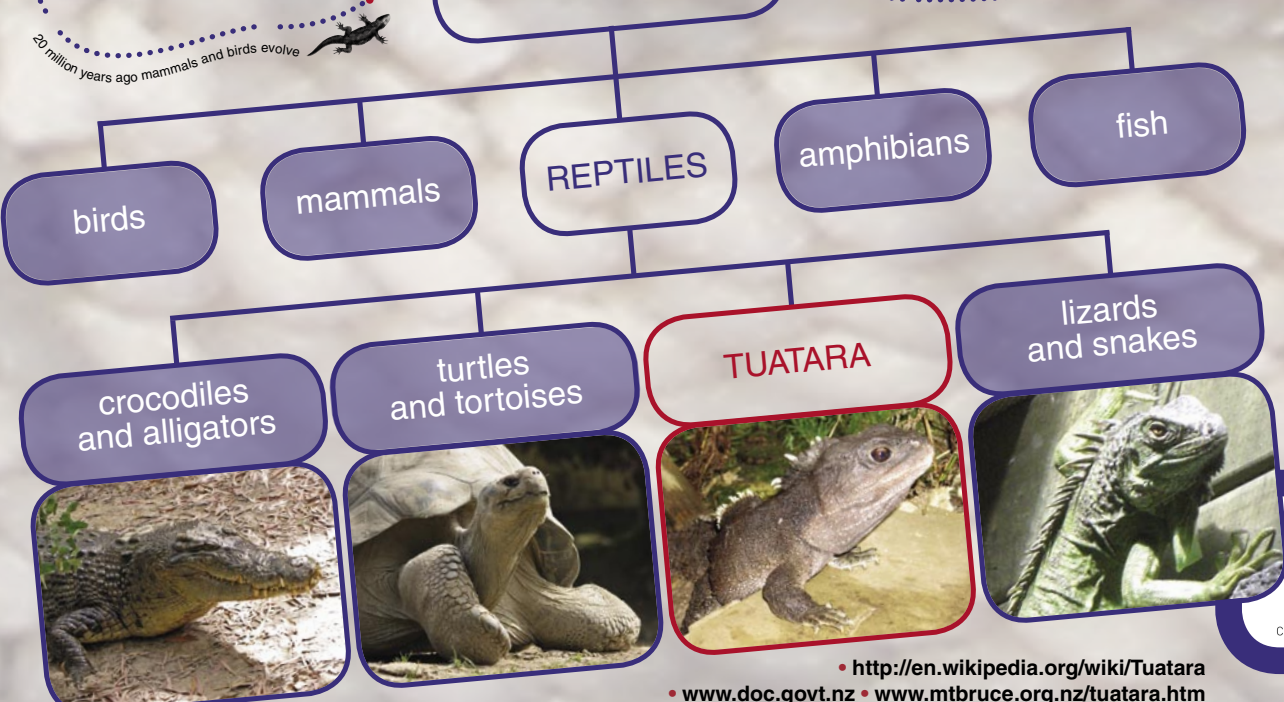
**How long do tuatara live?** No one knows for sure as records have not been kept accurately for long enough – but for over 100 years.

It is believed that Henry (Southland museum) is 105 years old.

**Head Start** has meant that many more tuatara are now alive than would have been if eggs had been left in the wild. Scientists have been able to discover the best ways to ensure successful breeding.

**How do baby tuatara survive?** About 13 months after the eggs are laid, baby tuatara start to emerge. They look like small versions of their parents. Young tuatara are active during the day which is when most adults are asleep. Adult tuatara take no interest in their young – apart from as food! Tuatara are not good at being caring parents.

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