Hochstetter's Frog

Pepeketua (Leiopelma hochstetteri)

Auckland's frogs – are they in your forest stream?

The threatened Hochstetter's frog is one of only four native frog species in New Zealand, and is the most widespread native frog species. They occur in isolated populations throughout the northern half of the North Island.

In the Auckland Region, there are four distinct genetic groups of Hochstetter's frogs (Great Barrier, Northland, Hunua and Waitakere). Hochstetter's frogs are classified as "At Risk" species.

Did you know?

- New Zealand native frogs do not croak or make loud mating calls like other frogs. They find each other by using visual cues or through pheromones (chemical signals between animals).
- Hochstetter's frog is the only native frog to have partial webbing between the hind toes.
- Hochstetter's frogs feed on invertebrate prey (like insects, worms, and snails) that they can take hold of using their arms and gulp down.
- Hochstetter's frog is the only New Zealand frog species to have a tadpole stage. Our three other species do not have a true free swimming tadpole stage but develop in their eggs, hatching as froglets.

Contact the biodiversity team at Auckland Council to report Hochstetter's frog sightings, or to get assistance with potential frog habitats.

Find out more: phone 09 301 0101, email biodiversity@aucklandcouncil.govt.nz or visit www.aucklandcouncil.govt.nz

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Te Kaunihera o Tāmaki Makaurau

Key frog facts:

- Female Hochstetter's frogs grow up to 50mm long, while male frogs grow up to 38mm long. Juvenile Hochstetter's frogs can be as small as 7mm long.
- Colour varies from green to brown, and gives good camouflage, so they can be very difficult to see.
- Frogs are very sensitive to changes in the environment and are often used as a measure of a healthy ecosystem
- Native frogs only lay between 4 and 22 eggs at a time – some species in other parts of the world can lay in excess of 35,000 eggs at a time!

Threats

- Habitat destruction
  - directly (e.g. forestry and agriculture, subdivision, storm water discharge, quarrying), or
  - indirectly (e.g. feral goats and pigs causing erosion leading to stream siltation).
- Introduced predators such as rats, mustelids (e.g. stoats; ferrets; weasels), hedgehogs, and cats.
- Herbicides and pesticides cause developmental problems or fatalities in frogs. Please read the label thoroughly and if spraying near waterways ensure you only use herbicides approved for this use.
- Diseases, such as the amphibian chytrid fungus and Ranavirus, are major threats to New Zealand frogs. Diseases can survive in damp conditions and may be transported between frog populations on muddy clothing and footwear."
- Introduced frogs may transmit disease and directly compete or prey upon native frogs. In late 1999, a sighting of the aggressive Eastern banjo frog in Auckland raised fears that if this pest invaded Auckland, it would out-compete native frogs.

Where do they live?

- Hochstetter's frog is semi-aquatic, living in and around shaded streams.
- They are commonly found in streams running through native forests and occasionally in pine plantations.
- Hochstetter's are nocturnal (active at night), and shelter primarily under rocks, logs, or leaf litter during the day.

Frog behaviour:

- Hochstetter's frogs are small, nocturnal, well camouflaged and, unlike introduced frogs, don't give away their position by croaking.
- During mating, the male clasps the female around the waist and fertilises her eggs as they are laid, primarily under stones, fallen vegetation, or sometimes in tunnels bored by dragonfly larvae.
- Hochstetter's frogs do not carry their young around on their back like the other New Zealand native frog species do.

What is Auckland Council doing to help frogs?

Auckland Council is working with landowners to protect and restore Auckland's natural environment to provide essential habitats for the Hochstetter's frog.

Frog research and education

The council is working with partners, communities, schools and interest groups to increase our knowledge on the distribution of the Hochstetter's frog populations and to advocate awareness and management opportunities with private landowners for these unique threatened species. We are also working to derive a better understanding of how pine plantation harvest impacts on frogs where some small populations still occur.

What can you do to help frogs?

Protect, restore and connect

You can play your part to protect the frogs in your area with actions such as:

- restoring native trees and plants over and around streams
- reducing the amount of sediment that enters streams by preventing stock access to stream banks
- creating a buffer area of vegetation around streams and installing sediment traps, especially on each side of stream crossings or bridges
- controlling introduced predators
- always clean your shoes when moving between frog habitats
- learn more about our native frogs at www.nzfrogs.org.

You can assist the Auckland Council by reporting any sightings of native frogs.

Record the location, type of habitat (e.g. stream edge, forest floor), time and date you sighted them, and if possible take photographs. Remember, there are also three introduced species of frog in New Zealand. These species are easily distinguished from native frogs because they have loud mating calls and pass through a tadpole stage.

Avoid touching the frogs, because you may damage their sensitive skin. Remember, all native frogs are protected by the New Zealand Wildlife Act. This means it is illegal to disturb or collect any native frog from the wild without a permit from the Department of Conservation.