

# WHAT'S IN OUR FRESHWATERS?



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**MĀORI: KĀKAHI**

**ENGLISH: Freshwater mussel**

Kākahi are Aotearoa's native freshwater mussels. They live in soft-bottomed lakes, rivers and streams where they feed by filtering water. They have complex life cycles with a parasitic larval stage. The young larvae called 'glochidia' live for 2-4 weeks attached to the fins or gills of native host fish (e.g kōaro, bully species, banded kōkopu, common smelt). Kākahi are taonga species for Māori and an important part of healthy freshwater ecosystems.

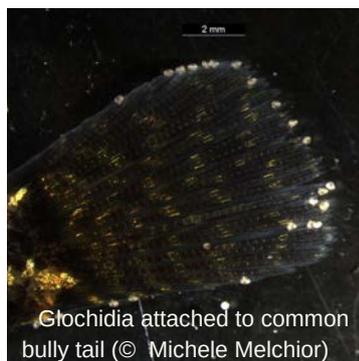
## Threats and conservation

Freshwater mussels are under threat and declining in New Zealand and worldwide. There are three species of kākahi in New Zealand of which 2 can be found in the northern Auckland region: *Echyridella menziesii* (more round in shape) is classified as '**At Risk - Declining**' and *Echyridella aucklandica* (generally more elongated) is '**Threatened - Nationally Vulnerable**'.

Threats to kākahi include habitat loss and degradation (too much **fine sediment** affects the filtration process), a **decline of host fish** populations (interrupted life cycle with failed recruitment), introduced fish (e.g. perch, trout), and terrestrial predators (rats, Pukeko).



Glochidium (© Michele Melchior)



Glochidia attached to common bully tail (© Michele Melchior)

## Cool Facts

- Some can live up to 50 years, and reach 13 cm in length
- You can age kākahi by counting the growth rings in their shell
- Unlike marine mussels which attach to rocks and can't move, kākahi can move, anchor and burrow within soft sediment using their "foot" muscle
- One kākahi can filter up to 1 litre of water per hour

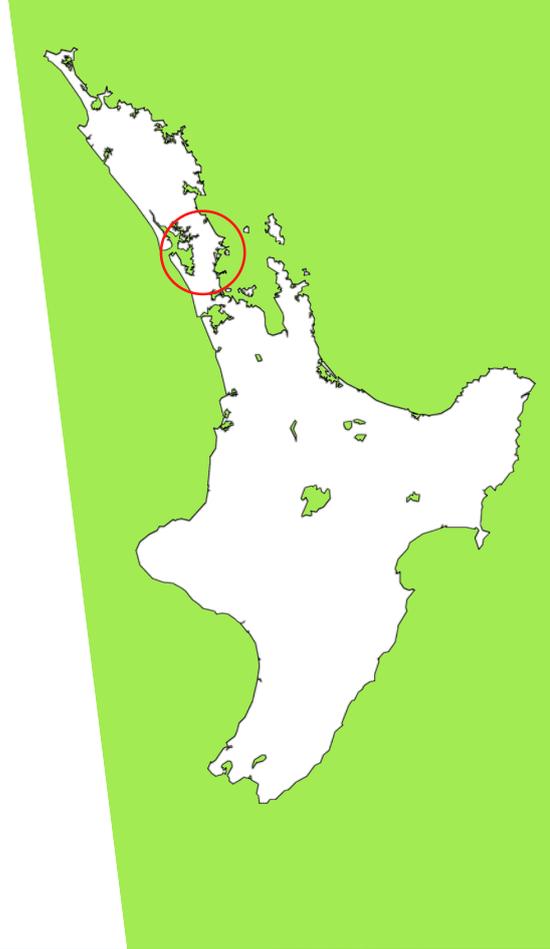


Adult and juvenile kākahi © Michele Melchior

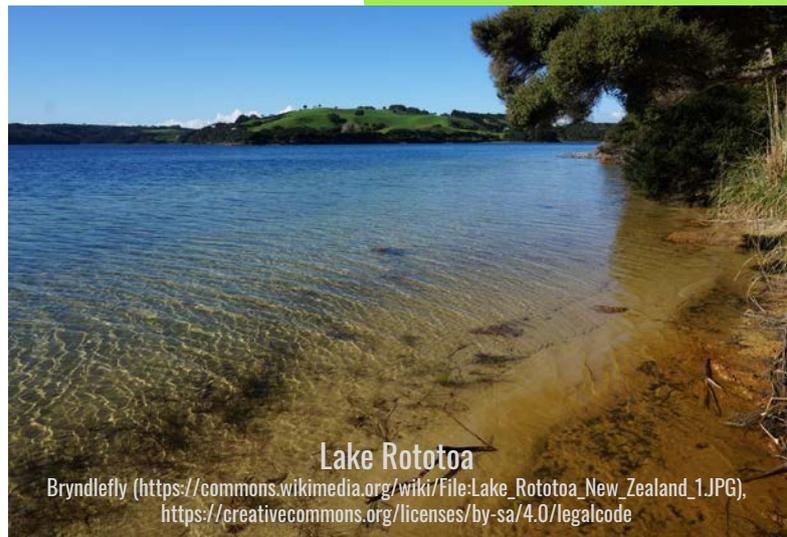
## In our area

Kākahi can be found in streams and lakes in the North Rodney area. Important research is being done in **Lake Rototoa** (Kaipara South Head) by members of **Aotearoa Lakes** (a citizen science initiative) and Auckland Council. Some of the work includes;

- 2620 square metres of kākahi beds in the lake have been surveyed
- average of only 7.2 live mussels per square meter
- all live individuals were adults (>51mm), no juveniles have been found thus far
- working on various ways to encourage successful kākahi recruitment including exclusion pens to keep pest fish species out during spawning seasons
- trying to identify kākahi habitat preferences and map out areas with the best conditions
- actively searching the various habitat types for juveniles



Ebi Hussain from Aotearoa Lakes doing kākahi surveys in Lake Rototoa



Lake Rototoa

Bryndlefly ([https://commons.wikimedia.org/wiki/File:Lake\\_Rototoa\\_New\\_Zealand\\_1.JPG](https://commons.wikimedia.org/wiki/File:Lake_Rototoa_New_Zealand_1.JPG)), <https://creativecommons.org/licenses/by-sa/4.0/legalcode>

## Want to help?

- Record (take a picture) and report any (alive or dead) kākahi sighting (via iNaturalist App, NIWA Freshwater Fish Database or email us at [admin@theforestbridgetrust.org.nz](mailto:admin@theforestbridgetrust.org.nz))
- Protect kākahi habitat by fencing and planting riparian vegetation for sediment control and shade
- Control predators (rats and mustelids)
- Protect native freshwater fish and their habitat
- Support Aotearoa Lakes and their work, visit <https://nzlakes.org/>

