

## SPECIES MANAGEMENT PROFILE

*Galaxias johnstoni* Clarence Galaxias

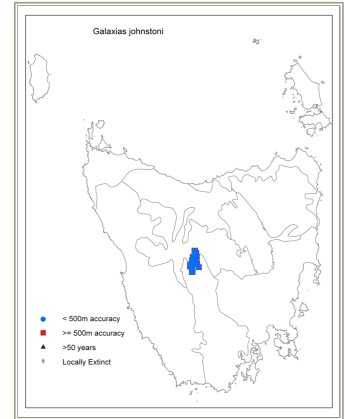
**Group:** Chordata (vertebrates), Actinopterygii (bony fish), Salmoniformes (salmonids), Galaxiidae

**Status:** *Threatened Species Protection Act 1995*: **endangered**  
*Environment Protection and Biodiversity Conservation Act 1999*: **Endangered**

**Endemic Status:** Endemic in Tasmania and restricted



The Clarence Galaxias (*Galaxias johnstoni*) is a small to medium sized native freshwater fish growing to a maximum length of 140 mm. The species is restricted to a small number of streams in the upper Derwent River catchment in the southern Central Plateau of Tasmania, including the Nive, Clarence and Little River sub-catchments. There are eight known populations, with the largest populations found in Clarence Lagoon and Lake Knight (formerly known as unnamed lagoon at Wentworth Hills). Clarence Galaxias does not co-occur with any other fish species, except Brook Trout (*Salvelinus fontinalis*) in Clarence Lagoon. All populations of the Clarence Galaxias are limited downstream by the presence of Brown Trout (*Salmo trutta*), and are all protected from trout invasion by some form of barrier (waterfall, fluctuating water levels, etc.). The spread of trout into habitat currently supporting populations of the Clarence Galaxias remains the major threat to the species.



### Key Points

- Important:** Is this species in your area? Do you need a permit? Ensure you've covered all the issues by checking the Planning Ahead page.
- Important:** Different threatened species may have different requirements. For any activity you are considering, read the Activity Advice pages for background information and important advice about managing around the needs of multiple threatened species.

### Habitat

- 'Habitat' refers to both known habitat for the species (i.e. in or near habitat where the species has been recorded) and potential habitat (i.e. areas of habitat with appropriate characteristics for the species and within the species potential range which have not yet been surveyed).
- If in doubt about whether a site represents potential habitat for this species, contact the Threatened Species Section for further advice.
- The known range of the Clarence Galaxias includes isolated parts of the upper Derwent River catchment in the southern Central Plateau including the Clarence River, Nive River and Little River sub-catchments (see distribution map, above). The potential range for the Clarence Galaxias is unlikely to extend beyond the known range.
- Habitat for the Clarence Galaxias includes the following elements: high altitude lakes, marshes and streams; deep pools are preferred although fish may spread into other areas when water levels are high; all occupied habitats are free of other fish species (except Brook Trout in Clarence Lagoon) and are protected from trout invasion or establishment by some sort of barrier (e.g. a waterfall or fluctuating water levels).

### What to avoid

- Spread of exotic fish (particularly Brown Trout, Rainbow Trout *Oncochynchus mykiss*, Redfin Perch *Perca fluviatilis*) into the species' habitat

### Surveying

Key	Survey reliability more info
M	Peak survey period
M	Potential survey period
M	Non-survey period

To ensure you follow the law - check whether your survey requires a permit. Always report any new records to the Natural Values Atlas, or send the information direct to the Threatened Species Section. Refer to the Activity Advice: Surveying page for background information.

<i>Galaxias johnstoni</i>	Spring	Summer	Autumn	Winter
Clarence Galaxias	S S O O N N D D J J F F M M A A M M J J J J A A			

- The principal method for surveying for freshwater fish including the Clarence Galaxias involves electro-fishing. Fyke netting is

also an effective sampling method for this species. Both techniques require specialist equipment and expertise. Electro-fishing involves passing an electric current through the stream water to stun any fish present. When performed correctly, the sampled fish are generally unharmed. This technique should only be performed by trained specialists with the appropriate permits.

## Helping the species

- If you live or work or pass through (i.e. bushwalk) in the area where the species occurs (see distribution map, above), look out for and record any observations of the species. All records of this species can provide important information on distribution and abundance.
- If you are interested in knowing for certain whether the species occurs on your land, organise a formal survey. You may need to employ an ecological consultant to do this. Your local Bushcare or Field Naturalist club may be able to assist you with a survey.
- Important! Always report any observations of the species to the NRE Natural Values Atlas, or else provide the data direct to the Threatened Species Section. Records stored on the NVA are a permanent record and are accessible to other people interested in this species.
- Consider the needs of the whole habitat. Preserving a threatened species' habitat is the best way to manage both the species and the environment in which it lives.
- Remember that introducing exotic fish species, such as trout or Redfin Perch, to waters where they are currently absent can have potentially devastating impacts on native fish populations. Avoid any activities which could inadvertently lead to exotic fish introductions, and inform others about the potential risks of introducing exotic fish.
- For long-term protection of localities on private land – consider protection of habitat through a vegetation management agreement or conservation covenant. See the NRE Private Land Conservation Program for more details.

## Cutting or clearing trees or vegetation

- Removing streamside vegetation can have profound effects on in-stream water quality.
- To avoid impacting on known localities – do not remove trees or other streamside and lakeside vegetation around and upstream of known localities.

## Burning

- To avoid changes to hydrology and habitats, including increased sedimentation from ash or soil washed from the surrounding land – avoid uncontrolled burning of streamside and lakeside vegetation in the vicinity of known localities.

## Dam Construction

- Streams supporting the Clarence Galaxias are all protected from exotic fish (trout and Redfin Perch) invasion by some form of barrier (waterfalls, water level fluctuations), and maintaining these barriers to fish movements is vital in protecting the populations.
- Construction of dams and water storages can lead to the loss of these barriers to fish movement (by inundating the barriers).
- To avoid loss of remaining populations – do not construct dams or other water storages in locations where these may lead to the loss of barriers that prevent fish movement.
- To avoid loss of habitat for this species – ensure appropriate surveys are undertaken during the planning stage for dam/water storage construction in areas of habitat.

## Agriculture

## Construction

## Earthworks

## Changing water flow / quality

- To avoid inundation of habitat, alteration of hydrological regimes and breaching of barriers to introduced fish – avoid construction of water storages in or near known localities of the Clarence Galaxias.

## Use of chemicals

- To avoid in-stream impacts on Clarence Galaxias populations – do not use herbicides and pesticides in the vicinity of known

localities where this could lead to input of chemicals toxic to the species into the waterway.

### Fish stocking

- The Clarence Galaxias cannot coexist with introduced fish, particularly Brown Trout and Redfin Perch.
- To avoid introduction of exotic fish to waterways inhabited by the Clarence Galaxias – do not carry out any activities, including active stocking, which could lead to the establishment of introduced fish.

### Road construction

- To avoid significantly increasing risks to populations from illegal stocking of exotic fish species - do not create new roads near known localities of the species.

### Recreation

- This species cannot coexist with introduced fish, particularly Brown Trout and Redfin Perch.
- To avoid increasing the risk of population extinction – do not carry out any activities which could enable exotic fish to enter and establish in waterways supporting the Clarence Galaxias.

### Further information

Check also for listing statement or notesheet pdf above (below the species image).

### Recovery Plan

**Cite as:** Threatened Species Section (2022). ( ): *Species Management Profile for Tasmania's Threatened Species*  
*Link.* <https://www.threatenedspecieslink.tas.gov.au/Pages/Clarence-Galaxias.aspx>. Department of Natural Resources and Environment Tasmania. Accessed on 19/8/2022.

**Contact details:** Threatened Species Section, Department of Natural Resources and Environment Tasmania, GPO Box 44, Hobart, Tasmania, Australia, 7001. Phone (1300 368 550).

**Permit:** A permit is required under the Tasmanian *Threatened Species Protection Act 1995* to 'take' (which includes kill, injure, catch, damage, destroy and collect), keep, trade in or process any specimen or products of a listed species. Additional permits may also be required under other Acts or regulations to take, disturb or interfere with any form of wildlife or its products, (e.g. dens, nests, bones). This may also depend on the tenure of the land and other agreements relating to its management.