



**FRESHWATER FISH**  
**Climbing Galaxias**

***Galaxias brevipinnis***

AUS	SA	AMLR	Endemism
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Photo: © Michael Hammer

**Conservation Significance**

The majority of SA range is confined to the AMLR and Kangaroo Island. The AMLR distribution is therefore disjunct, isolated from other extant occurrences within SA.<sup>2</sup>

Recommended for listing as Vulnerable under NPW Act as part of the threatened species status review in 2003.<sup>1</sup>

**Description**

Largest Australian galaxiid. Stocky, scaleless fish reaching a maximum size of about 25 cm, but more commonly 10-18 cm. Smaller individuals can be confused with Mountain Galaxias. Undercut lower jaw, dark spot behind gill cover and larger pelvic and anal fins than Mountain Galaxia. Adults similar to Spotted Galaxias which have jaws equal in length and uniform large spots on the body. Often quite dark and can be confused with River Blackfish which have a long single dorsal fin and small finger-like pelvic fins. Transparent juveniles (whitebait) identified by the anal fin beginning behind the origin of the dorsal fin and dark chevron-shaped bars on sides; they lack a black band at the base of the tail.<sup>3</sup>

**Distribution and Population**

Recent studies (2001-2005) confirmed known locations, added numerous new records for three of the four regions and added a new region, the Tod River of southern Eyre Peninsula.<sup>3</sup>

Within the AMLR the species occurs in the Fleurieu Peninsula, Gawler River, Myponga River, Onkaparinga River and Torrens River Basins, within the South Australian Gulf Drainage Division.<sup>2</sup>

Additions to the other regions include:

- Adelaide region – Victoria Creek (Gawler Catchment), upper River Torrens, Brownhill Creek and the Onkaparinga Catchment including Scott Creek and the main channel of the Onkaparinga River between the upper Gorge and above Mount Bold Reservoir
- most streams with permanent pools in the Southern Fleurieu
- most streams on western Kangaroo Island, plus another small population in Willson River (eastern Kangaroo Island).<sup>3</sup>

Distribution within known catchments is patchy, and with the exception of KI and some streams of Southern Fleurieu, abundances are quite low (especially in the Adelaide region). Current status on Eyre Peninsula is unknown.

At least two locations where it was previously known appear to no longer support populations: Fourth Creek and EMLR, where despite extensive sampling, no individuals have been found.<sup>3</sup>

The historic distribution is poorly documented. Early records include four distinct areas:

- Adelaide region - Morialta Gully (Fourth Creek, prior to 1928)
- Southern Fleurieu Peninsula - Myponga River and Deep Creek (1949)
- Kangaroo Island - Cygnet River (1883, 1912), Breakneck and Rocky rivers (1948-50)
- EMLR – Angas River, Strathalbyn (1914).

Additional records between 1950 and the 1980s expanded known distribution: Watts Gully (Gawler Catchment), Jupiter Echunga Creek (Onkaparinga Catchment), Cape Jervis and Hindmarsh River, and Kangaroo Island (Middle, Western, De Mole, Ravine des Casoars, South West, Stunsail Boom, Harriet and Eleanor rivers).<sup>3</sup>

**Habitat**

Occurs in mid to upper catchment sections in deeper, cool pools that are often spring fed and have high levels of instream cover (rock) and a good buffer of riparian vegetation (shade, edge cover and source of food). Will also move into flowing areas between pools (riffles). Environmental flows appear important in maintaining the required cool and oxygenated habitat, and to aid dispersal of the species within systems.<sup>3</sup>

**Further information:**

Biodiversity Conservation Unit, Adelaide Region  
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Prepared as part of the Regional Recovery Plan for Threatened Species and Ecological Communities of Adelaide and the Mount Lofty Ranges, South Australia 2009 - 2014



## ADELAIDE AND MOUNT LOFTY RANGES SOUTH AUSTRALIA Threatened Species Profile

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Prefers clear, flowing water in shaded streams with rocky substrates. Occasionally occurs in lakes. Swims near the bottom. Distribution appears to be adversely affected by introduced trout. Where predation by Rainbow Trout occurs, tends to be more common high in the catchment not accessible to trout.<sup>5</sup> Able to climb vertical rock faces tens of meters high by adhering to damp rock surfaces with its large downward facing pelvic and pectoral fins and moving upward by wriggling 'like a lizard'.<sup>4</sup>

Has the capacity to recolonise habitats following the removal of threats.<sup>5</sup>

### Biology and Ecology

Thought to be a diadromous species; after spawning in autumn and winter (spawning occurs in streamside vegetation above the normal water levels), larvae are swept out to sea where they develop for several months before returning to freshwater in spring as small transparent juveniles (whitebait). This lifecycle is yet to be confirmed in SA, and may occur wholly within some stream catchments, especially for populations that are landlocked above permanent pools in Southern Fleurieu.<sup>3,4</sup>

Population demographics and age structure are little known. Generalised invertebrate carnivore feeding on a wide variety of organisms. Takes aquatic and terrestrial invertebrates, as well as mayfly, caddis larvae and amphipods.<sup>4</sup>

### Aboriginal Significance

Post-1983 records indicate the AMLR distribution occurs in Kaurna, Peramangk and southern Ngarrindjeri Nations.<sup>2</sup>

### Threats

In SA there is little evidence for recent declines although this is likely to be masked by a lack of prior data. A large portion of the species' extent of occurrence seems relatively secure in less modified streams of Southern Fleurieu and Kangaroo Island. This situation could easily change with increasing water resource development. Abundance in >50% of known habitat is thought to have significantly declined.<sup>3</sup>

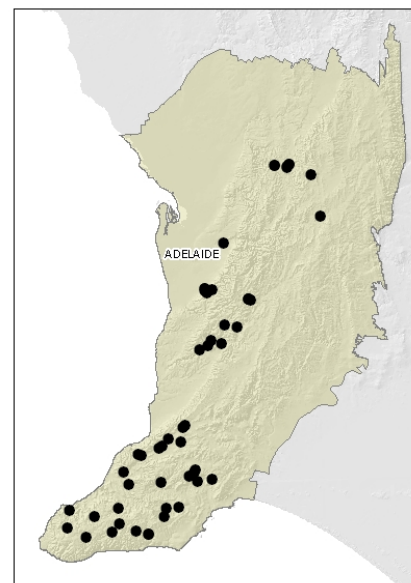
Reasons for population decline and continuing threats include:

- altered catchment hydrology affecting the permanency and quality of pools, e.g. decline of springs and delayed onset of seasonal flows due to water abstraction (these factors are likely to become more pronounced with climate change)

- habitat loss or degradation, especially the loss of stream-side vegetation
- major barriers or disruptions to dispersal due to instream structures, such as dams, reservoirs, vertical weirs or road culverts
- altered lower stream reaches, especially reduced flow, are likely to impede the colonisation of juveniles (if this lifecycle occurs in a region)
- predation by and competition from introduced fish species (trout and possibly Redfin).<sup>3</sup>

Additional current direct threats have been identified and rated for this species. Refer to the main plan accompanying these profiles.

### Regional Distribution



Map based on filtered post-1983 records.<sup>2</sup> Note, this map does not necessarily represent the actual species' distribution within the AMLR.

### References

Note: In some cases original reference sources are not included in this list, however they can be obtained from the reference from which the information has been sourced (the reference cited in superscript).

1 Department for Environment and Heritage (2003 ). *Review of the Status of Threatened Species in South Australia. Proposed Schedules under the South Australian National Parks and Wildlife Act 1972 Discussion Paper*. National Parks and Wildlife Council in partnership with the Department for Environment and Heritage.

2 Department for Environment and Heritage (2007). *Adelaide and Mount Lofty Ranges Regional Recovery Pilot Project Database*. Unpublished data extracted and edited from BDBSA, SA Herbarium (July 2007) and other sources.

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**SOUTH AUSTRALIA**  
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3 Hammer, M., Wedderburn, S. and Van Weenen, J. (2007). *Action Plan for South Australian Freshwater Fishes: 2007-2012 Draft*. Native Fish Australia (SA) Inc., Adelaide.

4 Native Fish Australia (2006). *Species Profile: Climbing Galaxias*. Available from <http://www.nativefish.asn.au> (accessed August 2007).

5 Turner, M. S. (2001). *Conserving Adelaide's Biodiversity: Resources*. Urban Forest Biodiversity Program, Adelaide.

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