



Gadopsis marmoratus

FRESHWATER FISH
River Blackfish

AUS	SA	AMLR	Endemism
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Photo: © Michael Hammer

Conservation Significance

In SA, the AMLR distribution is disjunct from the remaining extant distribution. Within the AMLR the species' relative area of occupancy is classified as 'Very Restricted'.²

Recommended for listing as Endangered under NPW Act as part of the threatened species status review in 2003.¹

Under the SA *Fisheries Act 2007* its status is Protected.

Description

Medium sized, elongate and slender fish reaching 35 cm (commonly 15-20 cm). Can be confused with Climbing Galaxia (both are slippery, dark in colour and adults are similar in size), however there are numerous features for distinguishing the two – River Blackfish have small scales, a long dorsal fin (> half body length) and unique modified pelvic fins which have single branched rays (finger-like). Two forms of River Blackfish occur in Australia in systems north and south of the Great Dividing Range. The 'northern' form occurs patchily in the MDB and SESA/Glenelg River system, and the 'southern' form in the remainder of coastal Victorian catchments and northern TAS. Genetic and morphological evidence suggests the two forms are distinct species which may eventually be recognised.^{3,4}

Distribution and Population

Occurs in a few isolated populations in waterways adjacent to the River Murray. Remnant populations may still exist in streams draining into the Murray River from the MLR. Recorded from MLR, YP and Adelaide Plains blocks.³

Within the AMLR the species only occurs in the Lower Murray River Basin, within the Murray-Darling

Drainage Division.²

Has declined significantly and area of occurrence is now less than 500km², in six separate locations. There have been no verified records from the River Murray for at least 50 years. Four small populations remain in the eastern MLR: the Tookayerta Creek Catchment, a section of the Angas River; two pools on Rodwell Creek (Bremer Catchment); and a section of the lower Marne River. Appears to have disappeared from the Finniss Catchment. Habitat in Dawson Creek, where the species was common in the 1980s, has dried regularly over summer and autumn in recent years. Habitat in the Marne River has contracted considerably since 1997 with the demise of feeding springs. In the South East, recent local extinction is likely for Henry Creek, and Mosquito Creek has experienced significant pool drying and loss of feeding springs during the last ten years. Secure populations remain in the Ewens Ponds region. Presumed locally extinct from Kangaroo Island and the Upper River Torrens after extensive sampling.³

Historically occurred widely in the SAMDB in tributary streams with records from the Tookayerta, Finniss (including Meadows Creek and Bull Creek), Angas (including Dawson Creek), Bremer and Marne catchments, and the main channel and anabranches of the River Murray. South East records are from widespread locations (may have had a more continuous distribution but historic information is limited) including Henry Creek (Upper South East), Robe Lakes (1903), Rendelsham (1944), Mosquito Creek and in the Lower South East near Ewens Ponds and Eight Mile Creek. Single record from Kangaroo Island (1987; no specific collection details). Reports from the Torrens and Onkaparinga rivers made in the early 1900s by an authoritative source are without verified records; presence here remains to be confirmed.³

Habitat

Remaining habitat comprises large, deep, spring fed pools or flowing stream sections, with an abundance of emergent (fringing) vegetation (e.g. reeds) or snags. All habitats have some form of linkage to groundwater providing a secure water supply (historically, at least).³ Integrity of habitat is crucial to long-term survival of this species. Life cycle is entirely in freshwater.⁴

Further information:

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<http://www.environment.sa.gov.au/>

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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



Government
of South Australia



ADELAIDE AND MOUNT LOFTY RANGES SOUTH AUSTRALIA Threatened Species Profile

Department
for Environment
and Heritage

Biology and Ecology

Under the likely scenario of two species of River Blackfish, detailed biological information has only been drawn from studies in SA and the MDB.

Nocturnal predator consuming larger macro-invertebrates such as shrimp and caddis fly larvae and the occasional small fish. Spawning thought to occur in late spring in hollows or within undercut banks. Probably lives four to five years and is not known to move large distances, instead occupying relatively small home ranges. Larvae and first year juveniles depend on cover such as leaf litter or emergent and riparian vegetation.³

Aboriginal Significance

Post-1983 records indicate the entire AMLR distribution occurs in Ngarrindjeri Nation, one area bordering with Peramangk Nation.²

Threats

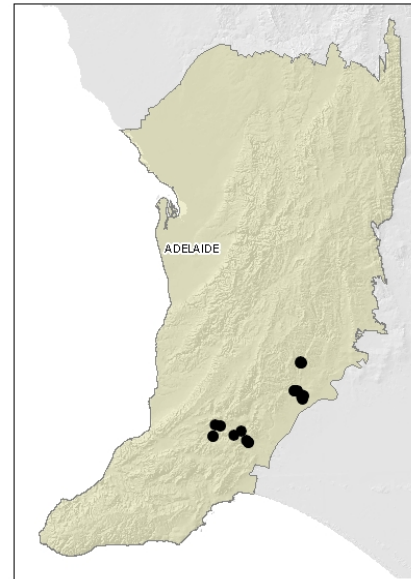
Reasons for population decline and continuing threats include:

- loss or degradation of watercourse habitat
- altered flow regimes, delayed onset of seasonal flows due to water abstraction from watercourses and the occurrence of unnatural cycles of drying, which may impede movement between riparian areas (likely to become more pronounced with climate change)
- reduction in water quality, including pollutants, sediment and salinity
- loss or degradation of stream-side vegetation and silting of watercourses, e.g. impact of livestock
- major barriers or disruptions to dispersal due to instream structures, such as dams, reservoirs, vertical weirs, road culverts
- impact of past fishing on the species leading to population and recruitment decline
- predation by and competition from introduced fish species (trout and possibly Redfin).³

Water pollution due to mining activities (past and current, e.g. near Strathalbyn and on Rodwell Creek) pose an ongoing threat to a remnant populations (M. Hammer *pers. comm.*).

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.² 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.

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

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