



FRESHWATER FISH  
Pouched Lamprey

*Geotria australis*

AUS	SA	AMLR	Endemism
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Photos: © Michael Hammer

### Conservation Significance

In SA, the majority of the distribution is confined within the AMLR, disjunct from the remaining extant distribution. Within the AMLR the species' relative area of occupancy is classified as 'Very Restricted'.<sup>2</sup>

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

### Description

Eel-like fish reaching 70 cm. Adults have a unique jawless, suction cap like mouth (*oral disk*). Distinguished readily from other freshwater fish by the series of circular openings on the head (*gills*), the oral disk, and two distinct dorsal fins (eels have a long singular fin). Similar in appearance to Shorthead Lamprey (and are often confused) but have eyes positioned to the side of the body (laterally) and circles of finer teeth on the outer oral disk. Pouched Lamprey is also generally lighter in colour and adults

returning to freshwater are larger in size. Only males develop a pouch behind the head, and only once they are ready to spawn, hence this character is not reliable for identification. The worm like juveniles (ammocetes) can be distinguished by the alignment of the cloaca (akin to an anus) relative to the front edge of the dorsal fin.<sup>3</sup>

### Distribution and Population

Within the AMLR the species only occurs in the Lower Murray River and Torrens River Basins, within the South Australian Gulf and Murray-Darling Drainage Divisions.<sup>2</sup>

Current distribution and abundance not known with any certainty. Opportunistic records have diminished and sampling within historical habitat in Adelaide Hills catchments and elsewhere suggest that occurrence in SA is limited.<sup>3</sup>

Due to the unusual appearance of lampreys there is a reasonable level of opportunistic historic records, mostly prior to 1930, held at SA Museum; there is no formal study of its former abundance. Has been recorded from four main freshwater areas:

- Adelaide region within and near the larger streams – River Torrens (1886) and Onkaparinga River (1901, 1906) including a record of a sub-adult high up in the catchment at Cox Creek, Bridgewater (1879)
- the Lower SA MDB including Coorong/Lower Lakes, tributary streams (Bremer, Angas and Finniss rivers) and Lower River Murray (from as far upstream as Mannum in 1932)
- Kangaroo Island (non specific location, 1928)
- Lower South East - SA section of the Glenelg River (1928) and from Ewens Ponds (1982).<sup>3</sup>

### Biology and Ecology

Multi-staged lifecycle switching between fresh and marine habitat via determined migrations (a diadromous species). Details of the general lifecycle model and biology are yet to be confirmed in SA. Adults live at sea for two years where they use their oral disk to latch onto a host fish and feed parasitically. They migrate into freshwater streams and rivers during winter and spring, being able to negotiate small barriers with the aid of the suction cap like oral disc. Spawning occurs the following spring (probably in flowing upper reaches of streams) with adults not eating while in freshwater and generally being found amongst structure such as rocks and snags. Juveniles (ammocetes) are worm-like, living in the stream bed in

### Further information:

Biodiversity Conservation Unit, Adelaide Region  
Phone: (61 8) 8336 0901 Fax: (61 8) 8336 0999  
<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



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silty areas with shade and slow permanent flow, a habitat type generally occupying only a small proportion of available river and stream habitat (again, this is poorly known). Ammocetes are filter feeders, consuming algae and zooplankton. Juveniles grow until metamorphosis, after around 4.5 years, then migrate downstream to the sea during winter flows. Dispersal patterns not known, e.g. whether individuals can disperse to different catchments.<sup>3</sup>

### Aboriginal Significance

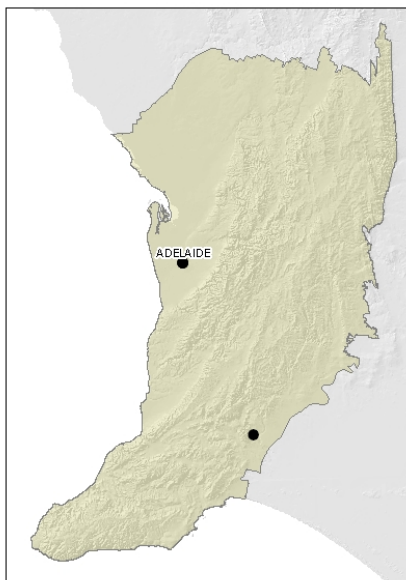
Post-1983 records indicate the AMLR distribution occurs in Ngarrindjeri Nation and Kaurna Nation.<sup>2</sup>

### Threats

Primary threats appear to be major catchment modifications affecting hydrology, habitat and fish movement (e.g. reservoirs, farm dams and weirs). Such barriers restrict access to suitable spawning habitat or increase exposure to predators, including trout and potentially Marron (Kangaroo Island) which may prey on eggs and juvenile lampreys. Reduced stream/river flows and processes such as dredging also present potential threats to larval and adult habitat.<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.

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.

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