



Government of South Australia



Australian Government

MURRAY FUTURE Lower Lakes & Coorong Recovery

FACT SHEET

Southern purple-spotted gudgeon



An adult southern purple-spotted gudgeon

South Australia has an amazing array of freshwater plants and animals but record low inflows to the River Murray have meant that many of these are now under extreme threat.

The freshwater habitats that they rely on for food, shelter and breeding have been drying at an alarming rate, especially since 2006.

Several freshwater native fish species have been driven to the edge of extinction in South Australia, including the southern purple-spotted gudgeon.

Rescue to recovery

Emergency rescue

In South Australia the southern purple-spotted gudgeon was believed to have been extinct in the wild since the early 1970s, but in 2004 it was rediscovered at one wetland location on the River Murray between Blanchtown and Wellington. However, conditions at this site were deteriorating rapidly and by 2007 an emergency fish rescue was undertaken before the site completely dried. fish in wetlands and farm dams has been underway since 2008.

Captive breeding

The rescued fish became part of a captive breeding program at locations across the state, including Cleland Wildlife Park. This program was set up by Native Fish Australia (SA), the Murray-Darling Basin Authority, the South Australian Murray-Darling Basin Natural Resources Management Board and the Department of Environment and Natural Resources (DENR). Additional breeding facilities were later established at Alberton Primary School and Urrbrae Agricultural High School.

New homes

The next step was to find suitable wild (natural) sites in which to reintroduce endangered fish, as well as surrogate refuges in wetlands and farm dams. One natural wetland and several surrogate refuges have been found that suit the needs of the southern purple-spotted gudgeon.

Young fish bred in captivity have been released into a wild site at Piawalla Wetland (Murray Bridge) with further releases into suitable surrogate homes planned. Ideally offspring produced at Piawalla and in surrogate homes will be released back into their former wild sites once conditions improve.

How to spot a southern purple-spotted gudgeon

The southern purple-spotted gudgeon (*Mogurnda adspersa*) is a small, attractive fish, commonly growing to 6-12 cm in length. The body is a yellowish to golden brown colour, overlaid with dark brown to red and white spots, interspersed with areas of iridescent bluish-purple more notably towards the tail.

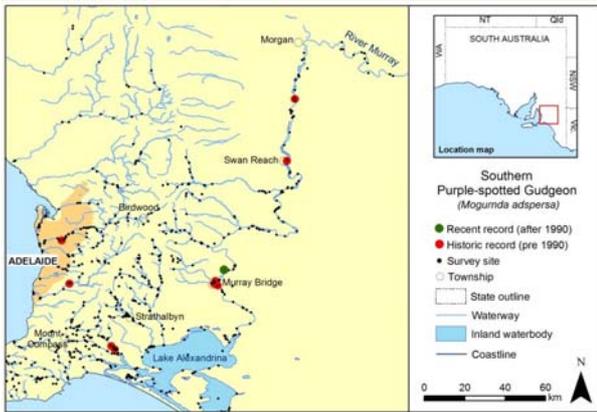
Struggle to survive

The southern purple-spotted gudgeon is currently listed as:

- Critically Endangered in South Australia and is protected under the Fisheries Management Act 2007
- Threatened (regionally extinct) in Victoria
- Endangered in New South Wales.



Ideal southern purple-spotted gudgeon habitat



Distribution of the southern purple-spotted gudgeon in South Australia. Sourced from *Action Plan for South Australian Freshwater Fishes 2009*

Where can you find a Southern purple-spotted gudgeon?

The southern purple-spotted gudgeon was historically widespread and common in patches throughout the Lower Murray in South Australia, but is now rarely found in the wild.

What does it eat?

The southern purple-spotted gudgeon is carnivorous and will eat anything it can catch including aquatic macroinvertebrates (such as insect larvae), glass shrimp, small fish, tadpoles and small yabbies. It spends a lot of time lying on the bottom of the waterway waiting to ambush any creature that comes too close.

Breeding

Southern purple-spotted gudgeons breed in spring when water temperatures are higher than 20°C. The eggs are sticky and are laid in a single batch on aquatic vegetation, rocks or logs.

The male looks after the eggs, guarding and fanning them until they hatch, which takes 3-9 days (depending on the temperature of the water).

The eggs are fanned to ensure that sediment does not build up and smother the young fish before they can hatch.

What is its habitat like?

In South Australia southern purple-spotted gudgeons occur in permanent water such as slow-flowing streams and wetlands.

They love aquatic plants, where they live, eat and breed. The vegetation can be either submerged (such as water ribbon and foxtail) or emergent reeds (such as club rushes). They can also use overhanging edge vegetation such as grasses, undercut banks and rock as additional cover.

It is important to conserve and enhance the habitat (including water plants) at sites where southern purple-spotted gudgeon were once found so that they may be returned to the wild in the future.

Threats

A major threat is habitat deterioration, caused by:

- reduced flows
- increased turbidity (more fine particles suspended in the water)
- poor water quality, especially increasing salinity
- loss of aquatic plants.

This has been the main factor behind the decline of the southern purple-spotted gudgeon.

Introduced fish such as the predatory redfin, carp (which may stir up sediments and smother the eggs of southern purple-spotted gudgeons) and the successful and very aggressive introduced *Gambusia* (or plague minnow) have also played a part in driving the species towards extinction.

How to help

- Join a local catchment management group and become involved in revegetation and site enhancement projects.
- Leave snags (tree branches) and rocks in the water as they provide habitat for fish and macroinvertebrates.
- Don't remove or interfere with vegetation in and around water as it provides important aquatic habitat.
- If you catch an introduced fish such as redfin don't return it to the water.
- Never remove native fish from the water.
- If you find an interesting fish take a photo of it and email it to research@nativefishsa.asn.au
- Reduce water usage in the home to leave more for our water dependent wildlife.
- Try not to add to pollutants entering our waterways.
- You can do this by reducing your use of fertilisers and pesticides, washing your car on the lawn to filter out debris, and picking up dog and cat droppings.

Planning for the future

Actively managing threatened populations in the region is a priority action in *Securing the Future: A long-term plan for the Coorong, Lower Lakes and Murray Mouth*.

Securing the Future outlines priority actions aimed at building resilience in the environment and maintaining the ecosystem in a state from which it can recover when freshwater flows improve.

The goal is a healthy, productive and resilient wetland system that maintains its status as a wetland of international importance.

Further Information

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Reference

Action Plan for South Australian Freshwater Fishes 2009
Native Fish Australia (SA) Inc.
www.nativefishsa.asn.au