

Supporting native fish



While most of our native fish species are small, they make up for it by being very beautiful. Their size also means that they are ideally suited to aquariums and backyard ponds. Native fish are an excellent alternative to ornamental and exotic species which can have a devastating impact on Adelaide's natural aquatic environments.

Fishes of South Australia

South Australia has an amazing array of freshwater plants and animals. Fifty-six species of native freshwater fishes are found here, with 25 occurring in the Adelaide and Mount Lofty Ranges region.

The 25 species of native freshwater fish found within the region include lampreys, eels, catfish, gudgeons and galaxiids. Of these, three are considered threatened at the national level and another seven are considered threatened within this region. Unfortunately another four species found at the time of European settlement have become regionally extinct.

The Common Galaxia (aka Common Jollytail) measures around 100 – 200 mm and can be found in many of the rivers and streams in the region, highlighting the importance of looking after even our smallest creeks and streams in the region. Many of our native fish are small bodied, so don't assume that just because there are none to be seen they're not there!

Threats

Several freshwater native fish species have been driven to the edge of extinction in South Australia, including the southern Purple-spotted Gudgeon. A number of factors jeopardise the survival of native fish. The introduction of exotic species, and modification and destruction of aquatic habitat have led to a decline in the distribution and abundance of native fish since European settlement. Alarmingly, around 8% of Australia's freshwater fishes are threatened with extinction, and 25% have declined significantly in population or only occur in restricted areas.

In some regions, drought has put even more pressure on fish populations. Poor water quality as a result of pollution, reduced flow rates in streams, increased sediment load, altered water temperature has caused eutrophication (nutrient load increase).

Over-fishing, competition with introduced carp (*Cyprinus carpio*) and predation by introduced trout (*Salmo trutta*) and Redfin (*Perca fluviatilis*) have also impacted upon their survival.

Chemical use

Do not use any herbicides or pesticides, the latter are lethal to all insects which are food for your fish. Also avoid using chemicals around your pond or boggy area as these can contaminate the water.



The locally extinct Southern Purple-spotted Gudgeon male (*Mogurnda adspersa*) protecting and fanning its eggs
Photo by Scotte Wedderburn

Habitat requirements

Native fish can live in aquariums or ponds. Their first requirement is suitable water quality, with temperature and oxygen concentration being the main factors. For example the Purple-spotted Gudgeon can live in a pond, but may need to be brought inside during the colder winter months if water temperatures drop below 15°C.

Next, most fish species require suitable physical habitat. This can be in the form of rocks and aquatic plants. These encourage the establishment of a natural food source for fish, offer cover from predators and provide suitable surfaces for laying their eggs.

Incorporating local native plants into your pond or aquarium will also help take up some nutrients left by the waste from the fish.

Ensure the pond will never flow into a waterway (directly or indirectly) should overflowing or local flooding occur before stocking with fish. It may be necessary to shade the pond during summer to prevent the water temperature from getting too high.

The pond also requires oxygenation, which may occur naturally if the surface area is big enough. Otherwise the pond may need a pump to move the water around, particularly when water temperature is high during summer.

The pond can be filled, or the level maintained with rainwater, however many native fish species can tolerate Adelaide tap water.

Avoid using noxious weeds that create havoc in our waterways such as Water Hyacinth (*Eichharnia crassipes*), Water Lettuce (*Pistia stratiotes*) and Salvinia (*Salvinia molesta*).

Also avoid planting introduced deciduous trees near ponds, as they increase nutrient loads when leaves drop and choke the pond's ecosystem. Some pines and oleanders may also have toxins in the leaves that can poison the water.



Did you know?

Goldfish (*Carassius auratus*) are a common feature of many garden ponds. Introduced to Australia in the 1860s as an ornamental fish, they soon escaped into our waterways and are now common throughout areas such as the Murray-Darling Basin. This has had negative ramifications for our native fish.

Plague Minnow (*Gambusia holbrooki*), formerly known as 'mosquitofish', is a pest introduced from Central America to assist in the control of mosquitos and ornamental fish in waterways.

However, it was found that they do not eat as many mosquito larvae as initially thought, only turning to mosquito larvae when other food sources are depleted.

In fact, many native fish consume more mosquito larvae than this species. Plague Minnow directly compete with native fish for food and habitat as well as eating their eggs!

Select local native plant species that will provide habitat. Avoid using noxious weeds that create havoc in our waterways such as Water Hyacinth (*Eichharnia crassipes*), Water Lettuce (*Pistia stratiotes*) and Salvinia (*Salvinia molesta*).

Also avoid planting introduced deciduous trees near ponds, as they increase nutrient loads when leaves drop and choke the pond's ecosystem. Some pines and oleanders may also have toxins in the leaves that can poison the water.

Why a backyard for wildlife?

In Australia, gardening has been recognised as one of our favourite pastimes. What we do in our home gardens has the potential to benefit or harm the natural environment.

By developing and maintaining a garden that follows the five basic Backyards 4 Wildlife principles you will contribute to a better local environment, help conserve our local flora and fauna, create important habitat, reduce your maintenance costs, and reduce the threat of invasive environmental weeds.

Top 5 tips

1. Use plants native to your suburb.
2. Plant species that are a range of heights.
3. Use mix of local native plants that flower throughout the year.
4. Manage your pets responsibly.
5. Minimise chemical use.

Please consider applying some of these principles to your own backyard, so that together we can help grow a great living environment for Adelaide.



An Empire or Carp Gudgeon (*Hypseleotris kluningeri*) can be a great addition to your pond. It will eat mosquito larvae and is a fantastic alternative to a goldfish.

Photo by Scotte Wedderburn.

More information

South Australian Native Fish Association www.sanfa.org.au

Visit the urban biodiversity page of our website to access more Backyards 4 Wildlife information and contact details for specialist native plant nurseries.

www.naturalresources.sa.gov.au/adelaide/loftyranges

Or contact your nearest Natural Resources Centre

Black Hill

115 Maryvale Road, Athelstone, SA 5076
P (08) 8336 0901

Eastwood

205 Greenhill Road, Eastwood, SA 5063
P (08) 8273 9100

Gawler

8 Adelaide Road, Gawler South, SA 5118
P (08) 8523 7700

Willunga

5 Aldinga Road, Willunga, SA 5172
P (08) 8550 3400

Licensed under Creative Commons Attribution 3.0 Australia License
www.creativecommons.org/licenses/by/3.0/au Copyright owner:
Crown in right of the State of South Australia 2016

While every reasonable effort has been made to verify the information in this fact sheet use of the information contained is at your sole risk. The department recommends that you independently verify the information before taking any action.