

Supporting Native Fish

Backyards for Wildlife Fact Sheet

Supporting Native Fish in Your Garden

While most of our native fish species are small they make up for it by being extremely beautiful and unique. 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

When discussing fishes of the Adelaide region, including the Mt Lofty Ranges, biologists commonly split the area into two subregions: Murray Darling Basin and Gulf Streams. Fifty-six species of native freshwater fishes are found in South Australia, with 25 occurring in the Mount Lofty Ranges.

Habitat Requirements

The first requirement for native fish is suitable water quality, with water 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 colder winter months when water temperatures drop below around 15°C.

Next, most fish species require suitable physical habitat 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.



The locally extinct Southern Purple Spotted Gudgeon male (*Morgurnda adspersa*) protecting and fanning its eggs. (photo: Scotte Wedderburn)



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

Threats

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, the current 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*) have also impacted upon their survival.

Chemical Use

Do not use any herbicides or pesticides as 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.

What Can You Do?

There are no breeding programs for pond stocking and most native fish currently come from interstate. Some species worth considering include: Murray rainbowfish (*Melanotaenia fluviatilis*), Flatheaded gudgeon (*Philypnodon grandiceps*), Carp gudgeon (*Hypseleotris kluningeri*), galaxias (*Galaxias* sp.) and Purple spotted gudgeons (*Morgurnda adspersa*).

Make sure you select a small species, and not something that will grow too big for the pond, like catfish, Murray cod or perch that some shops sell.

Do not use Plague Minnow (*Gambusia holbrooki*), formerly known as 'mosquitofish', as they are exotic and were 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!

Water

Ensure the pond will never flow into a waterway (directly or indirectly) before stocking with fish and it may be necessary to shade the pond during summer to prevent the water temperature from getting to high.

The pond also requires oxygenation, which may occur naturally if the surface area is big enough. Otherwise the pond may need to be oxygenated using aquarium pumps, particularly when water temperature is high during summer. The pond can be filled, or the level maintained with rainwater, but many native fish species can tolerate Adelaide tap water.

Incorporating local native plants into your pond or aquarium will help take up some nutrients left by the waste from the fish, as well as providing habitat for them.

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.

Why not consider native fish as an alternative? Native fish can be introduced into your garden pond and provide an attractive and environmentally friendly alternative to goldfish. They are also available in a wide range of shapes and colours. Selected aquarium shops specialise in native fish so contact one in your local area for further information.

For further reading on native fish visit the BFW website www.backyards4wildlife.com.au

Why a Backyard for Wildlife?

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

By choosing to develop and maintain a garden that follows the five basic Backyards for Wildlife principles (see below), you can help contribute to a better local environment while at the same time conserve our local flora and fauna, create important habitat, reduce your maintenance costs, and reduce the threat of invasive environmental weeds.

Backyards for Wildlife principles:

1. USE LOCALLY NATIVE PLANTS.
2. USE PLANTS THAT ARE A RANGE OF HEIGHTS.
3. PROVIDE FLOWERS 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 all help grow a great living environment for Adelaide.

Find Out More

Visit www.backyards4wildlife.com.au to access more Backyards for Wildlife and biodiversity information including an interactive map with lists of what grew in your suburb prior to 1836, a plant database and contact details for specialist native plant nurseries.



Backyards for Wildlife is managed by the SA Department for Environment and Heritage, with support from the Adelaide & Mount Lofty Ranges Natural Resources Management Board and the Australian Government

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