



# Save the Murray

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## Alien Fish



Up to 12 introduced or alien species of fish have been recorded in the Murray-Darling Basin. The range and impacts of each species on the environment and on native fish varies. Some fish were introduced for recreational angling while others were accidentally introduced through the aquarium trade.

### What species are aliens?

- Carp - *Cyprinus carpio*
- Goldfish - *Carassius auratus*
- Gambusia or Mosquito fish - *Gambusia holbrooki*
- Oriental weatherloach - *Misgurnus anguillicaudatus*
- Tilapia - *Oreochromis mossambicus*
- Roach - *Rutilus rutilus*
- Tench - *Tinca tinca*
- Redfin - *Perca fluviatilis*
- Atlantic Salmon - *Salmo salar*
- Brown Trout - *Salmo trutta*
- Rainbow Trout - *Oncorhynchus mykiss*
- Brook Trout - *Salvelinus fontinalis*

### Mosquito fish

Mosquito fish are native to North America and were introduced to control mosquito larvae (but does not prefer mosquito wrigglers to other invertebrates). Mosquito fish feed on a wide variety of foods. They eat insects such as ants and flies together with aquatic beetles, bugs and other fauna. Their high reproductive rate and extended breeding season may overwhelm

suitable habitats with juveniles and deplete food supplies. They are now present in nearly every wetland in the Murray-Darling Basin.

### Redfin Perch

The earliest recorded introduction of Redfin perch into Australia was in 1862. The redfin was introduced as a sporting fish for recreational angling. Redfin perch prefer slow moving water that has aquatic vegetation growth. They are able to feed on a wide range of foods including crustaceans and molluscs. They are heavy predators of fish species and can breed rapidly. Redfin perch are considered to be a major threat to our native fish species. Release following capture is illegal.

### Tench

The Tench is capable of growing up to about 50cm long. It was introduced into the River Murray by acclimatisation societies in 1876 and spread rapidly throughout the Murray-Darling System. Its numbers reduced drastically in the 1970's when Carp (*Cyprinus carpio*) became abundant. Other introduced fish pose a more serious problem to native fishes than Tench

### Goldfish

The Goldfish is an extremely widespread species found throughout the Murray Darling Basin The Goldfish was imported into Australia in the 1860's as an ornamental fish. It has the capacity to survive in extremely degraded habitats and therefore does well in slow waters of high temperature and low oxygen content. It also has the capacity to feed on a variety of foods including plant materials, organic detritus, small aquatic insects and other animals.

### Why are alien fish a problem?

Introduced fish compete with native fish for food and habitat and can spread disease to native populations. In some cases, introduced species prey directly on the larvae and fry (baby fish) of native species, and can have devastating effects on their population. For example, Redfin are a voracious predator of small native fish. Since the introduction of carp and river regulation in the Murray-Darling Basin, the numbers of



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## Alien Fish Continued

native fish have significantly declined. Introduced carp are now the most widely spread fish in the Murray-Darling Basin and one of Australia's biggest environmental pests.

### What is being done?

Research is currently being conducted into how to best address the problem of alien fish. Current research is looking into biological controls including ways of genetically manipulating carp to interfere with their breeding cycles and stop them from reproducing. On-ground work to eradicate carp from River Murray wetlands is an activity that the government has supported for the past decade, and this strategy has been very successful in the localised removal of this pest species.

To reduce the spread of alien fish and give our native fish a chance, we need to manage issues such as water quality, environmental flows, fish passages and snags to maintain or return conditions to those best suited to native fish. In a more natural environment, native fish have more chance to compete with alien fish.

It is important for anglers to understand that using live bait when fishing has been associated with the spread of alien fish species. Don't use live bait in our river systems.