Government of **Western Australia**
Department of **Fisheries**

BETTER FISHERIES

AQUATIC INVADERS IDENTIFICATION GUIDE

FRESHWATER

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PROTECTING OUR WATERS
FROM AQUATIC PESTS

Introduced species are a threat to our inland waterways!

The inland waters of Western Australia are home to many species of native fish and crustaceans, including the highly prized marron, but are gradually being invaded by introduced species that don't occur naturally in our rivers and lakes. Some have little effect on the local ecologies, but others can be devastating and need to be controlled.

You can help the Department of Fisheries to keep our inland fisheries healthy. Be on the lookout for these introduced pests. Report their presence to the **FISHWATCH** service on **1800 815 507**

Cover picture: The fish pictured on the cover of this brochure is the redfin perch *(Perca fluviatilis)*. Introduced to Western Australia from Europe in the 1890s, they have spread rapidly into dams, waterways and are voracious predators feeding on marron, gilgies, frogs, insects and native fish, as well as trout eggs and fry. Although a popular target for recreational anglers, in lakes and dams, redfin populations become stunted as they deplete the food supply and become worthless for angling.

Species guide

Yabbies

(Cherax albidus and Cherax destructor)

ID: Four ridges on their heads (two prominent), fine hairs in inner edge of claws *(C. albidus)* or no hair on the inner ridge of claws *(C. destructor)* and usually paler (beige) than local freshwater crayfish (dark brownish).

Action: If you catch a yabbie, keep it. There are no bag limits so you can eat or freeze them. Don't use them for live bait. Don't release them into rivers, lakes or dams.

About: A freshwater crayfish introduced from Victoria in the 1930s, yabbies can be farmed in dams on the eastern side of the Albany Highway. Illegal introductions to the west of the Albany Highway now threaten marron in south-west rivers. Yabbies breed faster and out-compete marron, undermine riverbanks by burrowing and can carry diseases affecting other native freshwater crayfish species.

Redfin perch

(Perca fluviatilis)

ID: The fish have distinctive red fins and many have dark vertical banding.

Action: Large redfin are good sport fish which taste good and there are no bag or size limits on them. Please keep ALL redfin you catch and don't release them into our waterways or dams.

About: Redfin perch have been in Western Australia since the 1890s when anglers introduced them into Albany for recreational fishing. They have spread rapidly into dams and waterways and are voracious predators, consuming marron, gilgies, frogs, insects and native fish, as well as trout eggs and fry. In closed waters of lakes and dams, redfin populations become stunted as they deplete the food supply and become worthless for angling.

Carp and goldfish

(Cyprinus carpio and Carassius auratus)

ID: Carp and goldfish come in a range of sizes (goldfish can grow up to 4.5 kilograms and carp to 40 kilograms) and colours, but in the wild are often bronze or olive-gold. Both have a single dorsal fin and carp have a pair of 'whiskers' under their chins used to feel for prey in muddy water.

Action: Don't release carp or goldfish into waterways. These species should only be held in secure ornamental ponds that can't overflow and let fish escape. If you catch one, either eat it or dispose of it humanely.

About: Carp and goldfish are now found widely throughout south-west waterways, possibly released from aquaria or introduced by migrants as traditional food. They change habitats by digging around in river and lake beds, uprooting plants and muddying the water. Nutrients are increased and algal blooms can result, reducing natural food and cover for other species. They compete with native species for food and may eat their young.

Mosquitofish

(Gambusia holbrooki)

ID: Gambusia are small fish, up to 60 mm long. They are olive-brown to bronze or silvery, with a single dorsal fin and the males have a long anal fin. They are often in small schools and may be mistaken for swordtails or guppies.

Action: Mosquitofish are classed as noxious in the state of Western Australia. It is illegal in WA to be in possession of any noxious fish, keep, breed, hatch or culture it, consign or convey it, put it into a container or receptacle in which it might remain alive, or release it into any waters. If you catch one, dispose of it humanely and never use it for live bait or return it to any waterways or dams. If you need to control mosquitoes, consider using native fish.

About: Although they were introduced from Central America in 1934 to help control mosquitoes, gambusia only eat mosquito larvae if nothing else is available. Native fish, whose eggs they consume, usually eat far more mosquito larvae. Gambusia nip and damage the fins of other fish and their live young survive better than the offspring of egg-laying fish.

Tilapia or Mozambique mouthbrooder

(Oreochromis mossambicus)

ID: Tilapia can grow to 400 mm long and two kilograms in weight but most are smaller. Dark in colour, they have a single long dorsal fin and large anal fin. They have prominent lips and are often found in small schools.

Action: All species in the genus Oreochromis, including the tilapia *(O. mossambicus)* are classed as noxious in the state of Western Australia. It is illegal in WA to be in possession of any noxious fish, keep, breed, hatch or culture it, consign or convey it, put it into a container or receptacle in which it might remain alive, or release it into any waters. If you catch one, dispose of it humanely and never release or return it to waterways or dams.

About: First found in Carnarvon in 1981, tilapia probably came as ornamental fish and escaped or were released. They are a threat in tropical waterways as they eat a wide range of food, including fish eggs. The males dig nests and defend them, changing habitats and causing more turbid water. Tilapia breed rapidly and can quickly dominate local fish communities.

Guppies

(Poecilia reticulata)

ID: Males rarely exceed 30 mm and females 60 mm. Usually bronze or olive, guppies have a broad body and slender tail. In the wild, the males lose their ornamental tails but they resemble gambusia and swordtails rather than native fish.

Action: If you keep guppies, don't let them escape. If you catch them don't return them to the water.

About: Guppies are native to South America and the Caribbean and probably escaped from fish tanks. They have been recorded in the Lyndon-Minilya River Basin of the Gascoyne region. Guppies breed very rapidly and efficiently and compete with native fish for food and space.

Swordtails

(Xiphophorus helleri)

ID: Swordtails can reach 120 mm but are usually about 80 mm long. Males have a very long lower part of their tail (the "sword") while females have an angular dorsal fin. Orange coloured in aquaria, they become bronze or olive in the wild. They can be confused with guppies and gambusia, but not native fish.

Action: Never release swordtails into dams or waterways. If you catch them, don't return them to the water.

About: First reported in the wild in the 1960s in the Eastern States, swordtails are now found in the Irwin River near Dongara. Native to Central America, they are a prized aquarium species so it is likely they escaped, or were released, from fish tanks. They produce many broods a year and out-compete native species for food and habitat. In Queensland an explosion in swordtail populations has led to a decline in nine native species.

Important points:

- Never release introduced species into our waterways or dams. Design or locate fish tanks and ornamental ponds so the fish can't escape. Take unwanted aquatic animals back to suppliers or dispose of them humanely (refrigerate the fish in water, and when the fish stops moving put the bag into the freezer overnight – this method is endorsed by the RSPCA WA Inc).
- All noxious fish should be destroyed immediately in an humane manner. It is illegal in WA to be in possession of any noxious fish, keep, breed, hatch or culture it, consign or convey it, put it into a container or receptacle in which it might remain alive, or release it into any waters. (for more information about noxious fish, visit **www.fish.wa.gov.au**).
- Consider stocking native WA species for mosquito control.
- If you catch any of the introduced species in this brochure, don't return them to the water. Either eat them or immediately dispose of them humanely.
- Be aware of your surroundings. Report the presence of freshwater pest species to the Department of Fisheries using the **FISHWATCH** service on **1800 815 507**. This helps us track infestation and control the problem. Some dams and waterways are being cleared of introduced species and restocked with natives and it is important to monitor them.

The Aquatic Biosecurity Charter

The Department of Fisheries invites interested parties to join in a partnership to promote the protection of Western Australia's oceans and rivers from aquatic pest species.

The Aquatic Biosecurity Charter (see below) is aimed at all members of the Western Australian community, ranging from industry and community interest groups to individuals. Anyone who has an interest in protecting our precious marine and freshwater ecosystems from aquatic pests can sign up to the charter.

Charter signatories will receive an official charter certificate.

The Charter

Our commitment:

- We believe Western Australia's diverse and rich aquatic environments make up a unique and precious resource for everybody to use and enjoy.
- We will work with the Department of Fisheries to ensure our aquatic ecosystems and biodiversity are protected against pests and diseases.
- We will support the development of the best research, innovation and policy to ensure that world-class prevention, control and emergency response strategies prevent the spread of aquatic pests and diseases in Western Australia's precious waters.

If you, or any organisation you are involved with an interest in the aquatic environment, would like to sign up to the charter, visit **www.fish.wa.gov.au/biosecurity**

If you require more information, telephone **(08) 9482 7333** or email **biosecurity@fish.wa.gov.au**

WA aquatic biosecurity program

The Department of Fisheries is leading the effort to stop destructive pests and diseases spreading into our precious oceans and rivers.

To find out more, email **biosecurity@fish.wa.gov.au**
or visit **www.fish.wa.gov.au/biosecurity**

FURTHER INFORMATION

Visit the Department's website at **www.fish.wa.gov.au** or contact:

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FISHWATCH
ILLEGAL FISHING REPORTS
1800-815-507

Fish for the future

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