

Protecting Macquarie Perch – a guide for fishers and land managers

IDENTIFYING A MACQUARIE PERCH

Macquarie Perch (*Macquaria australasica*) is a moderate-sized freshwater fish. It is a relatively long-lived species with reports of fish aged up to 26 years. Recent research indicates that there may be at least two distinct forms of Macquarie Perch, one from the western rivers (Murray-Darling Basin/western form) and one from the eastern rivers (Hawkesbury-Nepean Rivers/coastal form). The species has also been stocked or translocated to several reservoirs and streams

Macquarie Perch have been recorded growing to 55 cm long and 3.5 kg within the western distribution of their range, but are distinctly smaller in maximum size in the eastern distribution of their range (coastal form) where they grow up to 25 cm. The colour of Macquarie Perch within the western form varies from almost black to silver or bluish grey, to green-brown on top and lighter on the underside. Coastal drainage fish are often grey-brown and dark grey blotched. Juveniles in both forms may be mottled and adults have large, distinct scales, prominent fins and large white eyes.

Macquarie Perch can be mistaken for other native species so it is important that fishers and land managers can identify each species.

A THREATENED SPECIES

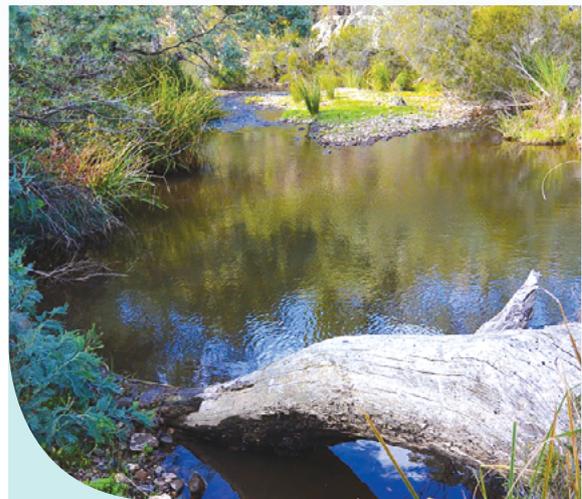
The natural historic distribution of Macquarie Perch included the upstream reaches of all major river systems in the south-eastern part of the Murray-Darling Basin, lowland reaches of the Loddon, Ovens, Goulburn, Mltta Mitta, Murray and Murrumbidgee Rivers, as well as the eastern draining river catchments – Hawkesbury-Nepean rivers in the north, south to the Shoalhaven River catchment and including the Georges River catchment. There has been a very significant decline in the distribution and abundance of Macquarie Perch in NSW. The species is now extinct in the Macquarie River, where it was originally described in 1830. While fragmented populations persist throughout the former range, they are small, restricted and geographically isolated. **Macquarie Perch is listed as an endangered species under NSW and Commonwealth law, and there are heavy penalties for harming, possessing, buying or selling them or for damaging their habitat.**



A Macquarie Perch. Photo by Gunther Schmida.

HABITATS

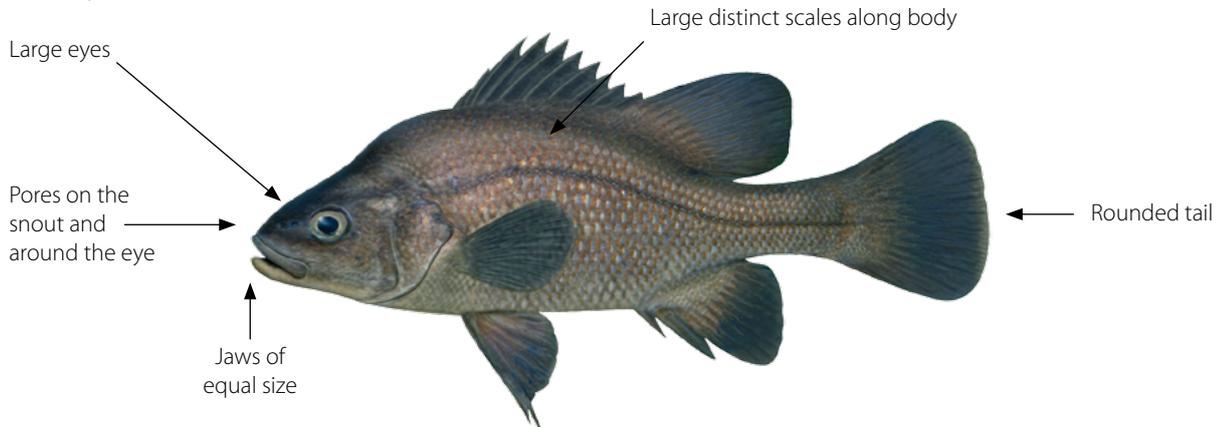
Macquarie Perch occur in waters with lots of cover such as aquatic vegetation, snags, boulders and overhanging banks. They can tolerate relatively cold water temperatures but require a temperature rise in spring to at least 16°C for spawning to occur. Spawning occurs above riffles (shallow running water), where adhesive eggs are deposited among small boulders, pebbles and gravel.



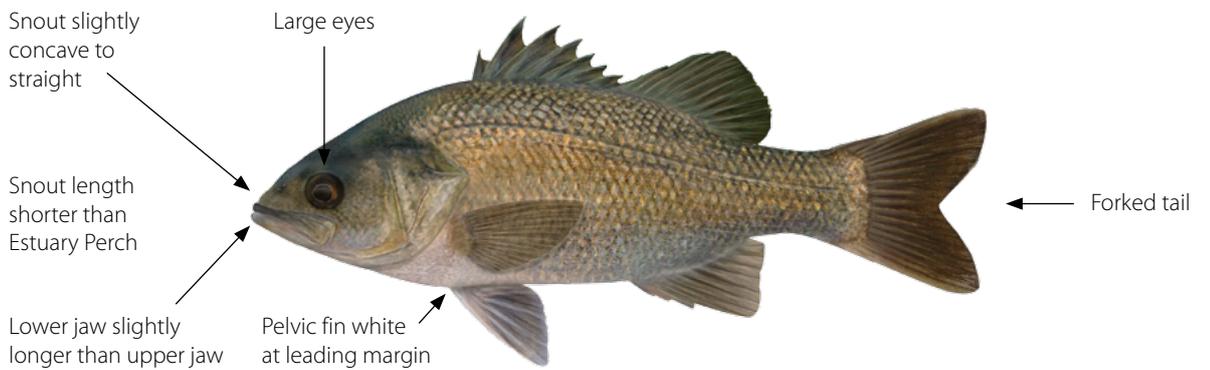
An example of Macquarie Perch habitat. Photo by Luke Pearce.

HOW TO IDENTIFY A MACQUARIE PERCH

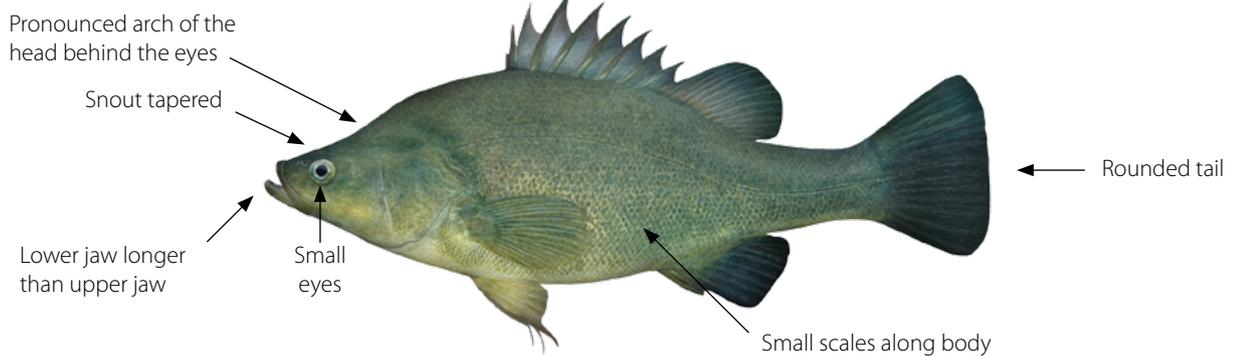
MACQUARIE PERCH



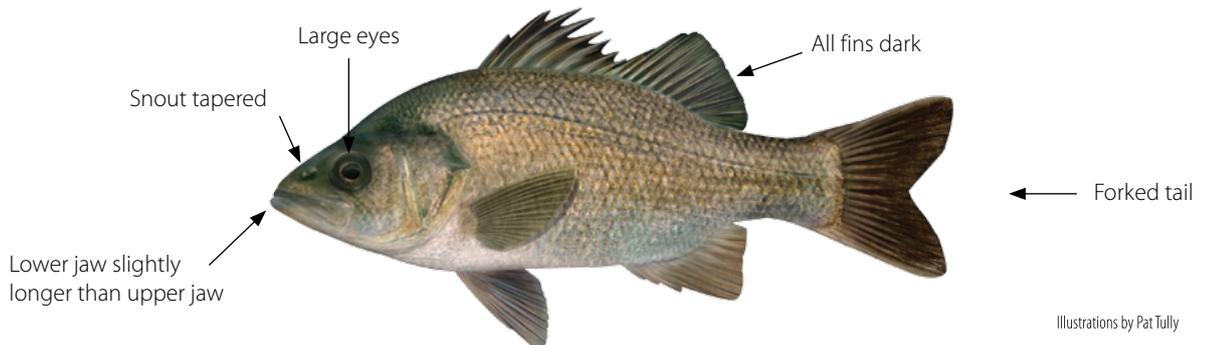
AUSTRALIAN BASS



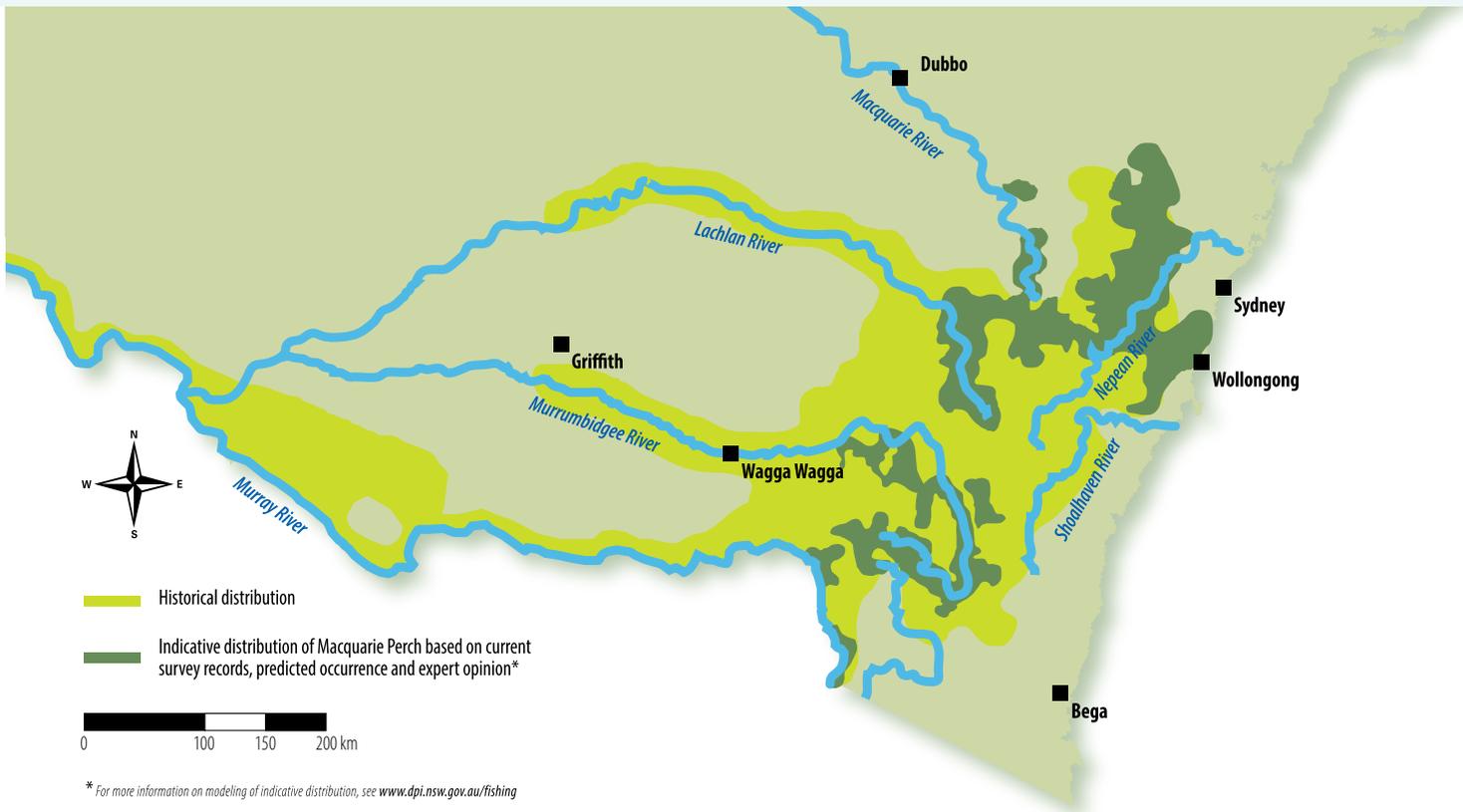
GOLDEN PERCH



ESTUARY PERCH



Illustrations by Pat Tully



WHY IS MACQUARIE PERCH AN ENDANGERED SPECIES?

Macquarie Perch populations have significantly reduced over time due to a range of factors including:

- » Dams can discharge cold water which may disrupt temperature cues for spawning;
- » The construction of dams, weirs and road crossing creates barriers to fish movement;
- » Removal of riparian vegetation increases erosion and siltation, resulting in the loss of deep pool habitat and smothering cobble bed spawning habitat and eggs;
- » Infection of Macquarie Perch by Epizootic Haematopoietic Necrosis Virus (EHNV), which is carried by the introduced species Redfin Perch and farmed Rainbow Trout;
- » Historic overfishing and illegal fishing practices;
- » Pollution from domestic, agricultural and industrial sources; and
- » Competition with and predation by introduced fish, particularly Redfin Perch, European Carp, Brown Trout and Rainbow Trout

ARTIFICIAL BREEDING AND CONSERVATION STOCKING

NSW DPI recently bred Macquarie Perch with the aim of releasing them into a safe refuge site, isolated from

the impacts of Redfin Perch. After extensive habitat mapping and site surveys, a suitable waterway in the Abercrombie River catchment was identified and over 19,000 captive-bred fingerlings were released into the waterway. Research surveys in May 2017 collected evidence that the refuge population is now successfully breeding. This is the first time since the early 1900s that a new breeding population of Macquarie Perch has been established in NSW, which is a significant achievement in recovering the species. NSW DPI will undertake regular monitoring of the refuge population to assess the long-term effectiveness of the stocking program.



Macquarie Perch fingerlings being released into the Retreat River. Photo by Luke Pearce.

WHERE TO FROM HERE?

A Priorities Action Statement has been prepared by NSW DPI for Macquarie Perch that sets out the actions required to recover the species. NSW DPI supports targeted projects to promote the recovery of the species, and has been a significant contributor to the National Recovery Plan for Macquarie Perch prepared by the Commonwealth Department of the Environment and Energy.

Some key targeted actions that are being undertaken to support the recovery of the species include:

- » Priority rehabilitation, restoration and enhancement work at key sites known to support Macquarie Perch populations.
- » Allocating and managing environmental water flows in regulated rivers to restore natural seasonal flow patterns and to reduce the impact of cold water downstream of dams.
- » Taking action to prevent the spread of introduced species into Macquarie Perch habitat.
- » Conducting targeted sampling at stocked sites to assess the status of stocked populations.
- » Actively seek grants or investor partnerships to fund research and monitoring programs.
- » Improving awareness of the threatened status of Macquarie Perch and ways to minimise impacts on the species by preparing and distributing appropriate advisory material.

HANDY FISHING TIPS

Macquarie Perch is a listed threatened species and deliberately fishing for them is illegal. However when fishing for other species in waters within the range of Macquarie Perch, consider the following tips to maximise the survival of any inadvertently caught Macquarie Perch:

- » Use methods and rigs that reduce deep hooking – fish for your target species with artificial lures or flies, and use non-offset circle hooks when using bait.
- » If the fish is hooked deeply, cut the line as close as possible to the fish's mouth. Do not try to remove the hook.
- » Use barbless hooks or hooks with reduced barbs to make removal easier and minimise damage.
- » Avoid lifting the fish from the water – if possible unhook the fish while it is still in the water. Try to retrieve hooks from mouth-hooked fish and release the fish as quickly as possible.
- » Support the weight of the fish properly.

Use wet hands or wet gloves when handling fish to minimise damage to their skin.

Don't hold the fish by the gills or eyes.

- » Use knotless mesh nets – avoid knotted landing nets which may damage the fish's scales, skin, eyes and fins.
- » Use only legal fishing gear – the use of gaff hooks, spears, spear guns or similar devices is totally prohibited in any freshwater environment.
- » If you find that you catch Macquarie Perch or other threatened species, you should consider trying to avoid hooking them by changing your location, baits or your fishing rigs. Report the catch and release of Macquarie Perch to NSW DPI.

FIVE THINGS YOU CAN DO TO HELP

1. Take a moment to study this guide and familiarise yourself with the appearance of Macquarie Perch.
2. If you catch a Macquarie Perch, or any other threatened species, release it carefully with the least possible harm.
3. If you live on or manage land adjacent to Macquarie Perch habitat, prevent stock from directly accessing waterways, manage and protect vegetation on river banks, revegetate degraded riparian areas, and prevent erosion. Become involved in habitat restoration or other programs that improve habitat for native fish.
4. Report illegal or suspect fishing activities by:
 - » Contacting your nearest Fisheries Office
 - » Using the Fishers Watch Phone line 1800 043 536; or
 - » Completing the online report from: www.dpi.nsw.gov.au/fishing/compliance/report-illegal-activity
5. Participate in the NSW DPI Threatened Species Sighting Program. If you catch or see a Macquarie Perch, take a photo, record the details and send the information to the NSW DPI Threatened Species Unit by emailing: fisheries.threatenedspecies@dpi.nsw.gov.au or completing the online report form: www.dpi.nsw.gov.au/fishing/species-protection/report-it

WHAT IF YOU ARE NOT SURE?

If you catch a Macquarie Perch or if you are unsure, release the fish back to the water with minimal harm. Significant penalties apply for taking, attempting to take, harming, possessing, buying or selling any threatened or protected species in NSW without the appropriate approvals.

FOR MORE INFORMATION

NSW DPI has a number of publications available on Macquarie Perch. The publications are available online at the NSW DPI website: www.dpi.nsw.gov.au

Alternatively contact NSW DPI Threatened Species Unit:

PO Box 1305
CROWS NEST NSW 1585

Email: fisheries.threatenedspecies@dpi.nsw.gov.au

Fishing regulations may change during the life of this publication. It is the responsibility of fishers to ensure they are acting within the law at all times.

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Disclaimer: The information contained in this publication is based on knowledge and understanding at the time of writing (November 2017). However, because of advances in knowledge, users are reminded of the need to ensure that information upon which they rely is up to date and to check currency of the information with the appropriate officer of the Department of Primary Industries or the user's independent adviser.

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