

Protecting Eastern Freshwater Cod – a guide for fishers and land managers

Eastern Freshwater Cod (also known as Clarence River Cod) is a threatened species under NSW and Commonwealth law.

Eastern Freshwater Cod can weigh up to 41 kg but are more commonly less than 5 kg and 660 mm. These large, predatory freshwater fish are native to the Clarence and Richmond Rivers in north-eastern New South Wales.

Populations of Eastern Freshwater Cod collapsed in the 1920s and 1930s and continued to decline until the 1980s, when the species was protected. Although once prolific, remnant (non-stocked) populations are now only found in parts of the Clarence River and its tributaries. No remnant populations are known to remain in the Richmond River system, however, stocked populations persist in some local tributaries. Reasons for the decline of Eastern Freshwater Cod include habitat loss and degradation, impacts from introduced species and illegal fishing.

HABITATS

Eastern Freshwater Cod are typically found in clear, flowing streams with rocky substrate and large amounts of in-stream cover. They are generally found in areas that have boulders or large woody debris. Such areas provide complex habitats for each stage of the species life cycle and influence and quality and quantity of food and shelter.

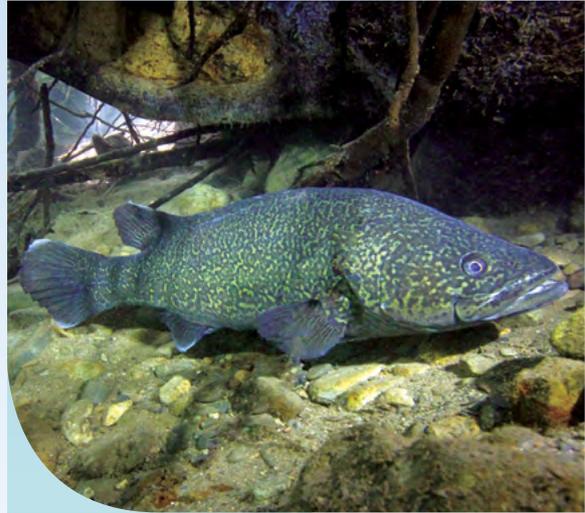


Photo by Brett Vercoe

EASTERN FRESHWATER COD STOCKING

A stocking program for Eastern Freshwater Cod involving a commercial hatchery commenced in the 1990s and ceased in 2003. The stocking took place at various locations throughout the Clarence and Richmond River systems. NSW DPI undertakes regular monitoring of Eastern Freshwater Cod populations to assess the long-term effectiveness of the stocking program.



Illustration by Pat Tully

The apparent abundance of Eastern Freshwater Cod in some areas often leads people to believe that the species has recovered and is no longer in danger of extinction. Despite some increase in the distribution and abundance of the endangered fish in recent years, the species still occupies only a fraction of its former territory.

While DPI surveys and angler reports indicate that stocked fish have survived, the populations remain relatively small in these areas.

EASTERN FRESHWATER COD SEASONAL FISHING CLOSURE



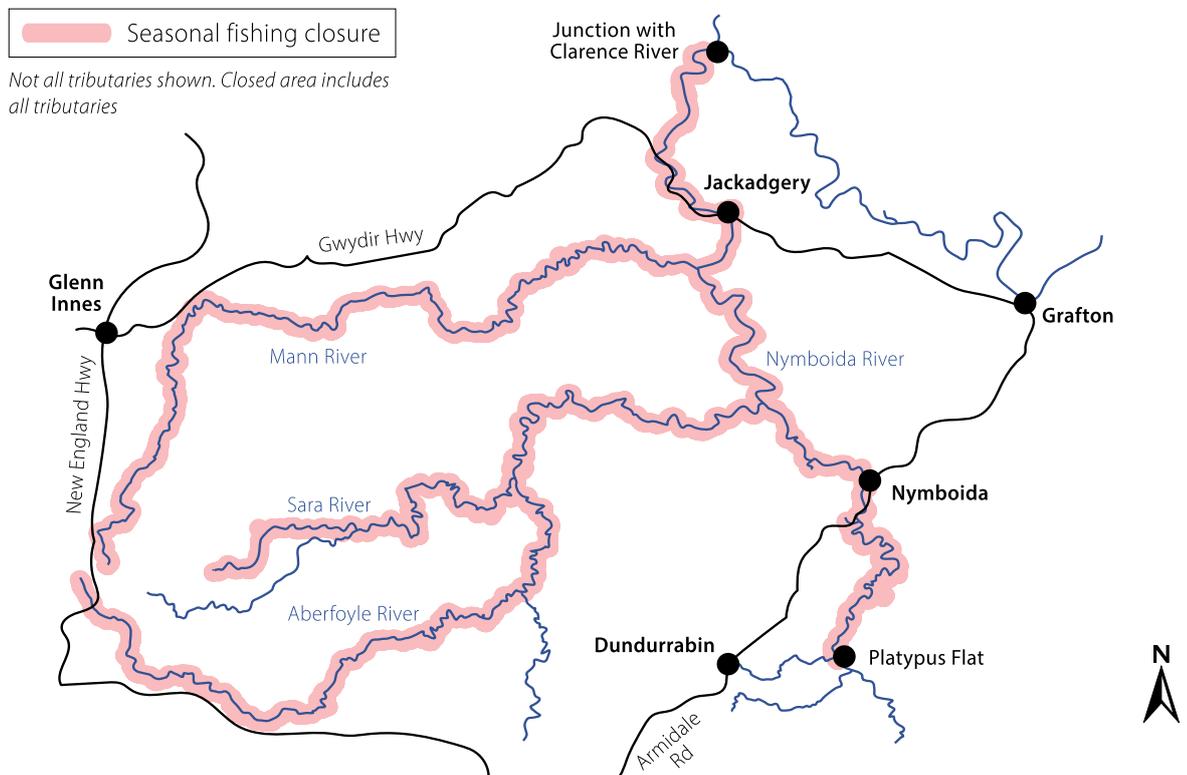
DELIBERATELY FISHING FOR EASTERN FRESHWATER COD IS ILLEGAL AND SIGNIFICANT PENALTIES APPLY.

If you accidentally catch an Eastern Freshwater Cod you must release it immediately, causing the least possible harm. **ALL FISHING IS PROHIBITED** during August to October inclusive in the Mann River and all of its tributaries upstream of its junction with the Clarence River (which includes the Boyd, Sara and Guy Fawkes Rivers) and the Nymboida River and all of its tributaries from its junction with the Mann River upstream to Platypus Flat. The closure extends over their breeding and nesting season, when they are highly susceptible to being caught.

The closure does not apply to notified trout waters, which are regulated separately.

The possession of fishing gear in, or adjacent to closed waters is also an offence.

In addition to the 3 month total fishing restrictions in the Mann and Nymboida Rivers, and because of the endangered status of Eastern Freshwater Cod, people found to be targeting or in possession of the species at any time or at any location, face significant penalties.



IMPACTS OF ILLEGAL FISHING

Any illegal activity that reduces the species numbers is considered harmful to the viability of the population and long-term conservation of the species. Targeted or indirect capture of Eastern Freshwater Cod directly reduces Cod numbers, removes breeding age adults and disturbs breeding activities including egg and larvae guarding, leading to increased predation of eggs and juveniles by other fish, eels and turtles.

Despite the protected status of Eastern Freshwater Cod, reports and evidence indicate that illegal fishing activities take place. Eastern Freshwater Cod are regularly caught and released by anglers who either target or indirectly catch them while targeting other species such as Australian Bass and Freshwater Catfish.

Targeting of Eastern Freshwater Cod by any person at any time is an offence under the threatened species provisions of the Fisheries Management Act 1994.

HANDY FISHING TIPS

When fishing, please consider the following tips to maximise the survival of Eastern Freshwater Cod:

- » Use methods and rigs that reduce deep hooking - target fish with artificial lures or choose 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 whilst 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 are catching Eastern Freshwater Cod or other threatened or protected species, you should consider trying to avoid hooking them by changing your location, baits or your fishing rigs.

THE FUTURE FOR EASTERN FRESHWATER COD

The re-establishment of Eastern Freshwater Cod at a small number of locations represents the early stages of recovery. Eastern Freshwater Cod are still in danger of extinction. The recovery of the species relies on an ongoing concerted effort by government and the wider community. A lot has been achieved by government and the community to assist with recovery including for example research into the species biology, ecology, distribution and habitat requirements; undertaking a wide range of habitat rehabilitation activities such as revegetation, weed control, fencing and fish passage improvement works; and enhanced education and advisory activities.



Photo by Brett Vercoe

WHERE TO FROM HERE?

A recovery plan has been prepared for Eastern Freshwater Cod that sets out the actions required to recover the species to a position of viability in nature. A performance criteria set out in the recovery plan is to establish a minimum of two additional naturally reproducing Eastern Freshwater Cod populations in each of the Clarence and Richmond River catchment.

The independent Fisheries Scientific Committee is responsible for listing threatened species of fish and marine vegetation and for reviewing scientific information to assess whether a species should be downgraded or de-listed from the NSW *Fisheries Management Act 1994*. The Committee assesses the eligibility of each species for listing against criteria set out in the Fisheries management (General) Regulation 2010. Eastern Freshwater Cod will be de-listed when they cease to be eligible for listing as a threatened species in accordance with the criteria set out in the regulations.

FIVE THINGS YOU CAN DO TO HELP

1. Take a moment to study this guide and familiarise yourself with the Eastern Freshwater Cod seasonal fishing closure.
2. If you catch an Eastern Freshwater Cod (or other threatened or protected species), release it carefully causing the least possible harm.
3. If you live on or manage land adjacent to Eastern Freshwater Cod habitat prevent stock from directly accessing waterways, manage and protect riparian vegetation, revegetate degraded riparian areas and prevent erosion.
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/fisheries/compliance/report-illegal-activity
5. Participate in the NSW DPI Protected and Threatened Species Sighting Program. If you catch or see an Eastern Freshwater Cod, record the details and send the information to the NSW DPI Threatened Species Section by emailing: fisheries.threatenedspecies@dpi.nsw.gov.au or completing the online report form: www.dpi.nsw.gov.au/fisheries/species-protection/report-it

WHAT IF YOU ARE NOT SURE?

If you catch an Eastern Freshwater Cod or if you are unsure, release the fish back to the water with minimal harm. Significant penalties apply for buying, selling, possessing or harming any threatened or protected species in NSW.

REFERENCES AND FURTHER READING

Butler, G.L., Rowland, S.J., Baverstock P.R., Brooks, L. 2014. Movement patterns and habitat selection of the Endangered Eastern Freshwater Cod *Maccullochella ikei* in the Mann River, Australia. *Endang Species Res* 23: 35-49.

Lintermans, M., Rowland, S.J., Koehn, J., Butler, G., Simpson, R. and Wooden, I. 2005. The status, threats and management of freshwater cod species in Australia, in *Management of Murray Cod in the Murray–Darling Basin*. Workshop held in Canberra, 3–4 June 2004: Statement, recommendations and supporting papers, Eds M. Lintermans and B. Phillips (Murray–Darling Basin Commission, Canberra), pp. 15–29.

NSW Department of Primary Industries, 2001. Eastern Freshwater Cod (*Maccullochella ikei*): Recovery Plan. Threatened Species Unit, NSW DPI, Port Stephens Fisheries Institute.

FOR MORE INFORMATION

NSW DPI has a number of publications available on Eastern Freshwater Cod. The publications are available on-line at the NSW DPI website: www.dpi.nsw.gov.au

Alternatively, contact NSW DPI Threatened Species Section:

Port Stephens Fisheries Institute
Locked Bag 1
Nelson Bay NSW 2315

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

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