



Australian Government



# Native Fish Strategy

## FISH FACTSHEET: TROUT COD (BLUE-NOSE COD)



Scientific Name

*Maccullochella macquariensis* (Cuvier, 1829)

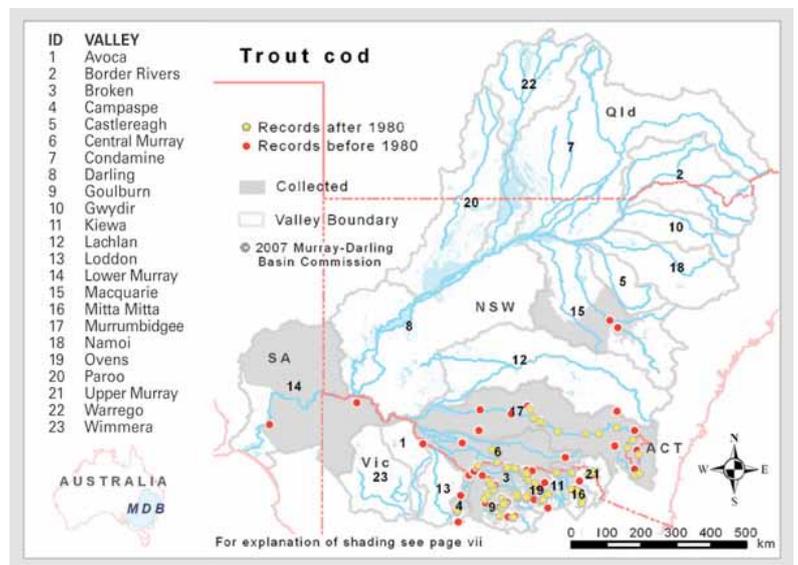
photo by Gunther Schmida

### CONSERVATIONS STATUS

Threatened.

### DISTRIBUTION AND ABUNDANCE

There are now only three self-sustaining populations of Trout cod remaining in the wild. The largest is in the Murray River between Yarrawonga and Barmah (approximately 200 km of river), the others are small translocated populations present in Cataract Dam, and in about 15 km of the upper reaches of Sevens Creek near Euroa in Vic. Because of early confusion regarding the identification of Trout cod, information on the historic distribution of the species is unclear.



Trout cod was originally described from the Macquarie River, where it has not been recorded since the 1820s, other than a single unconfirmed record from the Turon River in the 1970s. It was not known from the Darling River. Formerly widespread in the southern Murray-Darling Basin (Murray, Murrumbidgee and Macquarie rivers, NSW/ACT; Ovens, Goulburn, Campaspe, King, Buffalo, Mitta Mitta rivers, Vic; Murray River, SA), the species declined significantly in the 1970s. A long-term stocking program since the late 1980s has reintroduced Trout cod to a number of locations in the Basin including sites on the Murrumbidgee, Macquarie, Ovens, Goulburn, Tumut and upper Murray drainages. The species has also been stocked in Bendora Reservoir, ACT, and Talbingo Reservoir, NSW. Unfortunately, these reintroductions have not resulted in the establishment of viable populations, although breeding has been recorded in the Goulburn and Cotter rivers and is suspected in the mid-Murrumbidgee River.

## IDENTIFICATION

A large, deep-bodied fish with a large mouth reaching to below the back of the eye. Maximum size 16kg and 850mm; usually <math>\leftarrow</math> 5kg. The head profile is straight, and the upper jaw overhangs the lower. The tail is rounded and the pelvic fins are located below the pectorals. The overhanging upper jaw and a speckled body pattern which is blue-grey rather than yellow-green, distinguishes this species from the otherwise similarly-shaped Murray cod. Most individuals have a dark stripe through the eye, although this feature is also present in young Murray cod.

## BIOLOGY AND HABITAT

Only formally recognised as a separate species from Murray cod in 1972, some aspects of the biology of Trout cod are poorly known. The species is usually associated with deeper water (pools) and instream cover such as logs and boulders. In the Murray River, where it is found with Murray cod, it occupies slightly faster-flowing locations. Sexual maturity is reached at 3-5 years of age when fish are 0.75-1.5kg and spawning occurs in late spring (mid-October-mid-November). Fecundity is ~1200-11,000 eggs per female. The eggs are large (2.5-3.6mm diameter), adhesive, and probably deposited on hard substrates such as logs and rocks. After 5-10 days, larvae of about 6-9mm length hatch.

The diet includes fish, yabbies, mudeyes, aquatic insect larvae, shrimps and freshwater prawns. Recent research in the lowlands of the Murrumbidgee River has demonstrated that adults occupy small areas of less than 500 m centred on a 'home snag', and occasionally undertake exploratory movements of 20-60 km involving a return to their home.

## POTENTIAL THREATS

Threats include interactions with alien species such as trout and Redfin perch, and habitat modification such as desnagging, sedimentation, clearing of riparian vegetation, river regulation and cold-water pollution from dams. Overfishing of remnant populations has also contributed to declines and needs to be carefully managed if reintroductions are to be successful.

## GENERAL REFERENCES

- Berra & Weatherley 1972;
- Cadwallader & Gooley 1984;
- Douglas et al . 1994;
- Ebner et al . 2006;
- Harris & Rowland 1996;
- Ingram & Rimmer 1992;
- King et al . 2005;
- Koehn & Harrington 2006;
- Lintermans et al . 1988, 2005;
- Morris et al . 2001.

## PDF LINKS

Fishes of the Murray-Darling Basin: An introductory Guide;  
<http://mdba.gov.au/files/publications/MDBA-Fish-species-book.pdf>

**First published - January 2009**

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