NSW GOVERNMENT Department of Primary Industries

primefact

Eel-Tailed Catfish population in the Murray-Darling Basin, *Tandanus tandanus*

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Figure 1: Eel-Tailed Catfish (Illustration by Pat Tully)

Introduction

Eel-Tailed Catfish, also commonly known as Freshwater Catfish, is an Australian endemic species. The western population was once highly abundant and widespread throughout the Murray-Darling River System in NSW, Queensland, Victoria and South Australia (with the exception of the cooler parts of the southern tributaries). However, in NSW most riverine populations have declined significantly since the 1970s, and the species is no longer common in many areas where it was formally abundant. Eel-Tailed Catfish is now rare or absent from many rivers and creeks in Victoria as well as many of the major tributaries in NSW including the central Murray, Darling, Murrumbidgee, Lachlan, Paroo and Warrego Rivers.

The Murray-Darling Basin population of Eel-Tailed Catfish is listed as an **endangered population** in NSW. There are heavy penalties for harming, possessing, buying or selling individuals from the population (except from listed impoundments), or for harming their habitat (see 'Legal Implications').

Description

Eel-Tailed Catfish is a medium-sized fish with a large head and a compressed rear portion of the body. It has a relatively long life span, living for at least 8 years. Individuals have been reported to grow to 900 mm in length and 6.8 kg in weight; however they are more likely to grow to 500 mm and 2 kg.

Eel-Tailed Catfish have small eyes and a sub-terminal (down turned) mouth surrounded by barbels to assist with benthic feeding. The first dorsal fin has a short base but is relatively tall, located just behind the head and with a serrated spine at the front of the fin. The most distinguishing feature is its long, continuous, second dorsal, caudal and anal fins which are joined to form an eel-like tail extending over the rear half of the body. The skin is smooth with no scales. Adults are generally olive-green to brown in colour on the dorsal side and the belly whitish in colour. Juveniles are generally grey-brown with mottled dark spots around the body.

Habitat and ecology

- Eel tailed catfish is a non-migratory, benthic (bottom dwelling) species. It is relatively sedentary and adults typically only move within a 5 km range. Individuals are more active at night compared with during the day.
- The species inhabits a diverse range of freshwater environments including rivers, creeks, lakes, billabongs and lagoons.
- It prefers clear, sluggish or still waters, but can also be found in flowing streams with turbid waters. Substrates range from mud to gravel and rock.
- Individuals are sexually mature at 3-5 years of age and spawn in spring/summer when water temperatures are 20-24ºC.
- Males construct and defend a nest up to 2 metres in diameter, made from pebbles and gravel.
- The eggs are large (~3mm) and non-adhesive which settle towards the centre of the nest. The male fish remains with the nest to fan, clean and guard the eggs, which hatch after about 7 days. Larvae are approximately 7 mm long at hatching.
- Eel-Tailed Catfish is predominantly an opportunistic carnivore, feeding mainly on small fish, freshwater prawns, yabbies, snails, aquatic insects and zooplankton.

Why is the Murray-Darling Basin population of Eel-Tailed Catfish threatened?

- Loss of suitable habitat (lakes, billabongs, lagoons) through river regulation.
- Competitive and predatory interactions with introduced species such as Common Carp (*Cyprinus carpio*) and Redfin Perch (*Perca fluviatilis*).
- Loss of habitat and spawning sites through siltation.
- Reduced success of spawning and recruitment due to alterations to flow patterns and flooding regimes.
- Reduced habitat and loss of temperature spawning cues due to cold-water discharge from the base of large dams and high-level weirs.
- Run-off of chemical pollution into waterways, including agricultural pesticides.
- Historical commercial and recreational overfishing.

Conservation and recovery actions

- Implement education initiatives to improve awareness of the Eel-Tailed Catfish and ways to minimise impacts on the species by preparing and distributing appropriate advisory material.
- Maximise compliance activities at identified important sites.
- Allocate and manage environmental water flows in regulated rivers to restore natural seasonal flow patterns, and to reduce the impact of cold water downstream of dams.
- Undertake priority rehabilitation, restoration and enhancement work at key sites.
- Implement the NSW Freshwater Fish Stocking Fishery Management Strategy to prevent significant impacts from stocking.
- Conduct targeted surveys to determine the current distribution and abundance of Eel-Tailed Catfish.
- Report any sightings of the species via the NSW DPI online form: www.dpi.nsw.gov.au/fisheries/species-protection/report-it
- A full list of strategies to be adopted for promoting the recovery of the Eel-Tailed Catfish from the Murray-Darling Basin is set out in the NSW DPI Priorities Action Statement: www.dpi.nsw.gov.au/fisheries/species-protection

Figure 2: Eel-Tailed Catfish (Photo: Gunther Schmida)

Legal implications

It is illegal to catch and keep, buy, sell, possess or harm Eel-Tailed Catfish from the Murray-Darling Basin population (or any other threatened species in NSW) without a specific permit, licence or other appropriate approval, and significant penalties apply. For endangered populations these penalties can include fines of up to $220,000 and up to 2 years in prison.

All fishing for Eel-Tailed Catfish is prohibited in western flowing waters all year including the backed waters of western impoundments, except the backed up waters of the following impoundments: Ben Chifley Dam, Burrendong Dam, Chaffey Dam, Copeton Dam, Keepit Dam, Pindari Dam, Split Rock Dam, Windamere Dam and Wyangala Dam.

There can also be significant penalties for causing damage to the habitat of a threatened species without approval through actions such as dredging river beds, removing large woody debris and constructing barriers that block the free passage of fish.

Clearing that constitutes a routine agricultural management activity, and certain routine farming practice activities (other than clearing) are permitted, provided the activities are to the minimum extent reasonably necessary and all other relevant statutory approvals or authorities have been obtained.

The impact of developments or activities that require consent or approval (in accordance with the *Environmental Planning and Assessment Act 1979*) must be assessed and considered by consent or determining authorities. Where such actions are likely to result in a significant impact on a threatened species or its habitat, a detailed species impact statement must be prepared.

Strategies to be adopted for promoting the recovery of the Murray-Darling Basin population of Eel-Tailed Catfish to a position of viability in nature must be set out in the NSW DPI Priorities Action Statement.

A recovery plan may be prepared in accordance with the provisions of the *Fisheries Management Act 1994* to promote the recovery of the population to a position of viability in nature.

Bibliography and further reading

Fisheries Scientific Committee (2008) Final Determination - The *Tandanus tandanus* – Eel-Tailed Catfish in the Murray/Darling Basin as an endangered population.

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Lintermans, M. (2009) *Fishes of the Murray-Darling Basin: An introductory guide*. Murray-Darling Basin Authority, Canberra, ACT.

Morris, S.A., Pollard, D.A., Gehrke, P.C., Pogonoski, J.J. (2001) Threatened and potentially threatened freshwater fishes of coastal New South Wales and the Murray-Darling Basin. Report to Fisheries Action Program and World Wide Fund for Nature Project No. AA0959.98. *New South Wales Fisheries Final Report Series* No. 33. Sydney.

Figure 3: Eel-Tailed Catfish habitat (Photo: NSW DPI)

Figure 4: Eel-Tailed Catfish (Photo: Gunther Schmida)

For further information

See the NSW DPI website: www.dpi.nsw.gov.au

Contact the NSW DPI Threatened Species Unit:

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