

Banded Morwong (2020)

Cheilodactylus spectabilis



Victorian Fisheries Authority: Victorian Fisheries Authority, **Jeremy Lyle:** Institute for Marine and Antarctic Studies, University of Tasmania, **Nils Krueck:** Institute for Marine and Antarctic Studies, University of Tasmania, **Brett Stacy:** Institute for Marine and Antarctic Studies, University of Tasmania

STOCK STATUS OVERVIEW

Jurisdiction	Stock	Stock status	Indicators
Tasmania	Tasmania Banded Morwong Fishery	Sustainable	Stock assessment, CPUE

STOCK STRUCTURE

Banded Morwong is large temperate reef fish species that is targeted by gillnets for the domestic live fish trade. The species is distributed around south eastern Australia, including southern New South Wales, and eastern Victoria and Tasmania, as well as occurring off north eastern New Zealand. It is relatively common in depths of less than 50 m. There is currently no information available regarding the biological stock structure. However, once settled after a relatively long oceanic larval phase, they show a high degree of site fidelity [Murphy and Lyle 1999, Ziegler et al. 2006, Buxton et al. 2010], suggesting that the exploited Victorian and Tasmanian populations are likely to represent distinct populations.

Here, assessment of stock status is presented at the management unit level—Victoria Banded Morwong Fishery and Tasmania Banded Morwong Fishery.

STOCK STATUS

Tasmania Banded Morwong Fishery

In Tasmania, Banded Morwong are commercially harvested by a small-scale coastal gillnet fishery. In the early 1990s a targeted fishery for Banded Morwong started to supply domestic live fish markets. Effort directed at the species increased dramatically as a result, with catches peaking at 145 tonnes (t) in 1993–94. Catches fell sharply in the late 1990s, with 34.6 t landed in 1999–2000. Banded Morwong are a relatively minor component of the recreational fishery in Tasmania. The most recent survey in 2017–18 estimated the recreational landings of Banded Morwong at 2 tonnes (1 522 fish), making up slightly more than 5% of the total catch (commercial + recreational) during that season [Lyle et al. 2019].

A quota management system with a Total Allowable Catch (TAC) was introduced in late 2008 to the east coast fishery. In the past few years the TAC has undergone a staged reduction, effectively declining from 38.8 t in 2012–13 to 31.0 t in 2018–19. Additionally,, a temporal closure is in place for 1st March to 30th April each year, encompassing the species' peak spawning period. The species is subject to keyhole size limits, which are currently set at a minimum legal size of 360 mm and a maximum legal size of 460 mm.

A fishery-independent sampling program implemented early in the development of the fishery has revealed truncation in the length and age composition of the Banded Morwong stocks. In recent years, although age compositions appear to have stabilised, old fish (> 20 years) are now rarely observed. Relative proportions of fish < 8 years old have increased. Increases in mean length at age of individuals aged between 2–10 years, and declines in length at maturity, have also been observed.

In 2019 the model used to assess Banded Morwong in Tasmania was updated with recent biological information [Stacy et al. 2019]. Spawning stock biomass (SSB) was estimated to be at 44 per cent of initial SSB. The above evidence indicates that the biomass of this stock is unlikely to be depleted and that recruitment is unlikely to be impaired.

The model also indicates that the current harvest strategy is sufficient to maintain SSB above the limit reference point of 30% of initial SSB. Consequently the current level of fishing mortality is unlikely to cause the stock to become recruitment impaired.

On the basis of the evidence provided above, the management unit is classified as a **sustainable stock**.

Victoria Banded Morwong Fishery

Fishing effort and catch in the commercial live Banded Morwong fishery peaked from 2001–2003 soon after Banded Morwong permits were issued; permits were replaced with transferable licences in 2020 [Conron et al. 2020].

The decrease in catch and effort were brought about by localised depletion of stocks (fishers' observations), but fishers were able to maintain relatively high CPUE by spreading their effort throughout the extensive inshore reef systems in eastern Victoria [Conron et al. 2020]. Nevertheless, catch rates began to decline after 2006, falling below the reference period average [Conron et al. 2020], and reaching a low in 2010, which was associated with a decline in fishing effort [Conron et al. 2020]. The two active operators in the fishery have maintained relatively low levels of fishing effort in recent years, resulting in an increase in CPUE from the low in 2010 until 2016, which was well above the average for 2000–2015 used as a reference period [Conron et al. 2020]. However, CPUE has declined during the last two years, with the 2018–19 financial year being below the reference period average [Conron et al. 2020]. It will be important to monitor this fishery during the coming years to ensure this is not an indication of stock depletion. It is important to note, however, that with <50 days of fishing effort in most years driving the trend in recent years (some <20 days), CPUE may not be a reliable indicator of biomass across the entire breadth of the fishery.

The Banded Morwong fishery was likely fully exploited by Ocean Access License holders before it became a specialised target fishery with two operators. This is corroborated by fishers' observations during the mid-to-late 2000s when further declines were observed. This is consistent with the longevity of this species and the pattern observed in Tasmania where a full quantitative stock assessment of the fishery is undertaken. As a result, fishers decreased fishing effort with consequent increases in CPUE. Declines in CPUE to below the reference period average in the last two years are associated with increasing fishing effort and it will be important to monitor how this fishery performs in the coming years. Permits were replaced with transferable licences in 2020. The available evidence

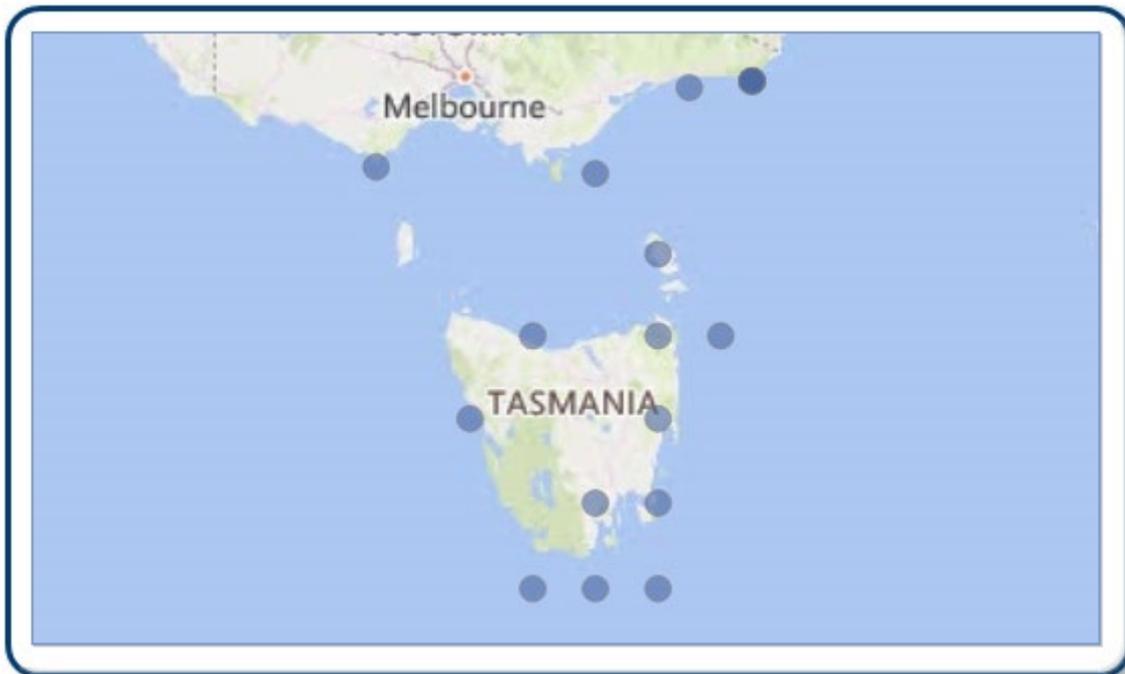
indicates that the commercial Banded Morwong fishery in eastern Victoria is unlikely to be recruitment impaired. However, given the limited number of operators, the use of CPUE as a proxy for biomass may be unreliable. On the basis of the evidence provided above, the Victoria Banded Morwong Fishery management unit is classified as an **undefined stock**.

BIOLOGY

Banded Morwong biology [Ewing et al. 2007, Ziegler et al. 2007]

Species	Longevity / Maximum Size	Maturity (50 per cent)
Banded Morwong	96 years, 578 mm FL	2.5 years, 320 mm FL

DISTRIBUTION



Distribution of reported commercial catch of Banded Morwong

TABLES

Fishing methods	Tasmania	Victoria
Commercial		
Gillnet	✓	
Recreational		
Gillnet	✓	
Spearfishing	✓	✓

Management Methods	Tasmania	Victoria

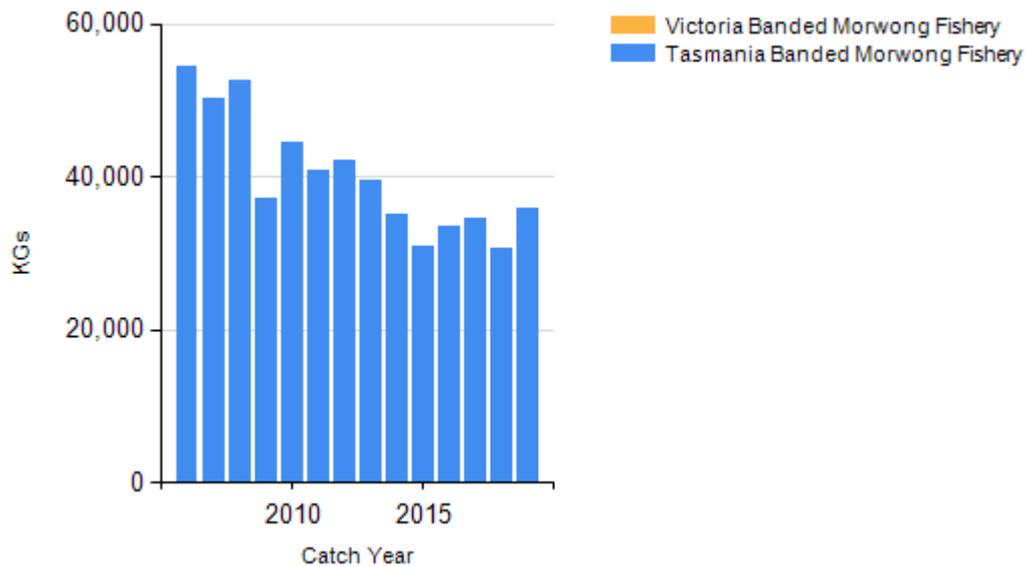
Commercial		
Effort limits	✓	✓
Limited entry	✓	✓
Seasonal closures	✓	✓
Size limit	✓	✓
Spatial closures		✓
Total allowable catch	✓	✓
Recreational		
Bag limits	✓	✓
Licence		✓
Possession limit		✓
Seasonal closures	✓	
Size limit	✓	✓
Spatial closures		✓

Catch		
	Tasmania	Victoria
Commercial	35.971 t	
Indigenous	No Catch	Unknown (No catch under permit)
Recreational	0.5 t (2012–13)	Unknown

Commercial catch of Banded Morwong - note confidential catch not shown

Victoria – Indigenous (Management Methods) A person who identifies as Aboriginal or Torres Strait Islander is exempt from the need to obtain a Victorian recreational fishing licence, provided they comply with all other rules that apply to recreational fishers, including rules on equipment, catch limits, size limits and restricted areas. Traditional (non-commercial) fishing activities that are carried out by members of a traditional owner group entity under an agreement pursuant to Victoria’s *Traditional Owner Settlement Act 2010* are also exempt from the need to hold a recreational fishing licence, subject to any conditions outlined in the agreement. Native title holders are also exempt from the need to obtain a recreational fishing licence under the provisions of the Commonwealth’s *Native Title Act 1993*.

CATCH CHART



Commercial catch of Banded Morwong - note confidential catch not shown

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