

Jackass Morwong (2020)

Nemadactylus macropterus



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STOCK STATUS OVERVIEW

Jurisdiction	Stock	Stock status	Indicators
Commonwealth, New South Wales, Tasmania	Eastern	Sustainable	Estimated biomass, fishing mortality
Commonwealth, Tasmania, South Australia	Western	Sustainable	Estimated biomass, fishing mortality

STOCK STRUCTURE

Jackass Morwong (*Nemadactylus macropterus*) are distributed around southern Australia including Tasmania [Jordan 2001]. Genetic studies have found no differences between the stocks and although otolith microstructure analyses have shown some differences between fish in southern Tasmania, New South Wales and Victoria [Elliott and Ward 1994, Morison et al. 2011, Thresher et al. 1994], a recent review of stock structure found limited evidence in support of the existence of separate stocks east and west of Tasmania [Bessell-Browne et al. 2020]. To maintain consistency with the approach taken for SAFS 2018 in which the species was considered to comprise biological stocks (Eastern and Western), and to maintain consistency with the current stock assessment and management approach within the SESSF, the species is assessed here as two management units (Eastern and Western).

Here, assessment of stock status is presented at the management unit level—Eastern and Western.

STOCK STATUS

Eastern Eastern Jackass Morwong is primarily caught by the Commonwealth managed Southern and Eastern Scalefish and Shark Fishery (SESSF) with small catches from State jurisdictions. Stock status classification reported here is based on stock assessments conducted for the SESSF, which include reported State catches.

In New South Wales, the commercial catch is principally taken in the Ocean Trap

and Line Fishery, with smaller quantities taken by other fisheries. Annual commercial catch from New South Wales waters has been between 1.3 t and 10.3 t in each of the last 10 years. These commercial catches represent 0.4 percent to 7.4 percent of the total cross-jurisdictional catch annually and therefore represent a minor component of the fishing mortality for the stock.

For Victoria, commercial catch during the 2019-20 financial year was zero. Although recreational catch has occurred it is believed to be small compared to other sources of fishing mortality. As the majority of catch is taken in the Commonwealth, catch from Victoria is unlikely to influence the biomass of the stock.

In Tasmania, Jackass Morwong (predominantly the Eastern stock) are taken in the multi-gear, multi-species Tasmanian Scalefish Fishery (TSF). Maximum records of commercial TSF catches occurred in the late 1990s, peaking at 33.2 t in 1997/98 [Krueck et al. 2020]. Total catches from Tasmanian waters, including Commonwealth reports, peaked at 126.8 t in the same year. In more recent years, total catches have been much lower, remaining below 3.5 t since 2011/12. A total catch of 2.6 t was recorded in 2018/19 [Krueck et al. 2020]. Commercial catch rates in Tasmanian waters relative to 1995/1996 have remained fairly stable since 2007/08, but at a reduced level (~40%) [Krueck et al. 2020]. Jackass Morwong is a popular recreational target species, and recreational catches in Tasmanian waters are generally notably higher than those of the commercial sector. Peak catches estimated for the recreational sector have historically exceeded 30 t (31.9 t in 2000/01) but have been estimated at between 8.4 t and 16.1 t in more recent years [Lyle et al. 2019, Krueck et al. 2020].

The Eastern Jackass Morwong stock in the SESSF is managed as a Tier 1 stock under the SESSF Harvest Strategy Framework [AFMA, 2019]. The 2018 Tier 1 stock assessment [Day and Castillo-Jordán 2018] informed the management of the stock for the 2019–20 fishing season.

The Eastern Jackass Morwong stock was assessed to be overfished in 2008, with spawning biomass estimated to be below the limit reference point B20 [Stobutzki et al. 2009], resulting in the setting of a zero recommended biological catch (RBC). In 2009, biomass increased slightly above the limit reference point and the depletion was reported to be 0.24B0 in early 2010. However, the stock remained classified as subject to overfishing because the catch in the east exceeded the zero RBC in 2009–10 and the 143 t RBC in 2010–11 fishing seasons [Helidoniotis et al. 2017, Stobutzki et al. 2009].

A new base case assessment was developed in 2011 for Eastern Jackass Morwong, which included productivity changes from 1998 onwards resulting from a shift in recruitment due to changes in oceanographic conditions [Wayte 2013]. The new base case provided a better fit to the data, but the assessment remained sensitive to natural mortality, the last year of recruitment estimation and the stock-recruit relationship [Tuck 2015]. Under the lower productivity scenario, gradual recovery was observed since 2011. The spawning biomass for the stock was estimated to have increased from 26 per cent in 2011 to 35 per cent in 2012 [Tuck et al. 2015a]. The latest Tier 1 stock assessment in 2018 [Day & Castillo-Jordán 2018] estimated the spawning stock biomass at the start of 2018 to be 30% (0.30SB0). This led to an RBC of 261 t for the 2019–20 fishing season. The stock is therefore unlikely to be depleted and recruitment is unlikely to be impaired.

Commonwealth logbook-reported catch for Eastern Jackass Morwong in the CTS and GHAT sectors of the SESSF was 76.7 t in the 2019–20 fishing season (124.6 t in 2018–19 fishing season). Discards have been estimated to be 12.9 t based on the weighted average of the previous four calendar years (2015 to 2018) [Burch et al., 2019]. When estimated discards are combined with average state catch and Commonwealth logbook catch for 2019–20, the total fishing mortality is below 261 t per year. This level of fishing pressure is unlikely to cause the

stock to become recruitment impaired.

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

Western

Western Jackass Morwong is primarily caught by the Commonwealth managed Southern and Eastern Scalefish and Shark Fishery (SESSF) with negligible catches from State jurisdictions. Stock status classification reported here is based on stock assessments conducted for the SESSF, which include reported State catches.

In Tasmanian waters, commercial catches of the Western stock account for a small share of total commercial catches, averaging 0.6 t per year over the recorded history of the fishery. The maximum recorded catch was 1.6 t in 1997/98. In the most recent assessment year (2018/19), catches of the Western stock were below 100 kg.

There have been no catches of Jackass Morwong reported in South Australia's commercial multi-species, multi-gear and multi-sectoral Marine Scalefish Fishery since at least 1984. Small quantities (<5 t per yr) of undifferentiated 'Morwong' species have been recorded in the past 20 years. There is no information available on the catch of Jackass Morwong by Aboriginal and Torres Strait Islander people in South Australian waters. The most recent recreational fishing survey in South Australia in 2013–14 indicated that the annual catch of Jackass Morwong was zero.

For Victoria, commercial catch from the 2017 calendar year onwards was zero. Although recreational catch has occurred it is believed to be small compared to other sources of fishing mortality. As the majority of catch is taken in the Commonwealth, catch from Victoria is unlikely influence the biomass of the stock.

Western Jackass Morwong in Commonwealth fisheries is managed as a Tier 1 stock under the SESSF Harvest Strategy Framework [AFMA, 2019]. The 2018 Tier 1 stock assessment [Day and Castillo-Jordán 2018a] informed the management of the stock for the 2019–20 fishing season.

The latest Tier 1 stock assessment in 2018 [Day & Castillo-Jordán 2018a] estimated the spawning stock biomass at the start of 2018 was 0.66% (0.66 SB0). This led to an RBC of 235 t for the 2019–20 fishing season. There is some underlying uncertainty in the Western Jackass Morwong assessment resulting from sporadic age data, length compositions based on a very low number of sampled fish and relatively poor fits to the CPUE data, however the assessment was accepted by the South East Resource Assessment Group. The stock is therefore unlikely to be depleted and recruitment is unlikely to be impaired.

Commonwealth logbook-reported catch for Western Jackass Morwong in the CTS and GHAT sectors of the SESSF was 12.1 t in the 2019–20 fishing season (61.4 t in 2018–19 fishing season). Discards have been estimated to be 3.8 t based on the weighted average of the previous four calendar years (2015 to 2018) [Burch et al., 2019]. When estimated discards are combined with average state catch and Commonwealth logbook catch for 2019–20, the total fishing mortality is below 235 t per year. This level of fishing pressure is unlikely to cause the stock to become recruitment impaired.

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

BIOLOGY

Jackass Morwong biology [Stobutzki et al. 2009]

Species	Longevity / Maximum Size	Maturity (50 per cent)
Jackass Morwong	20–35 years, ~700 mm TL	3 years, 230–270 mm FL

DISTRIBUTION



Distribution of reported commercial catch of Jackass Morwong

TABLES

Fishing methods	Commonwealth	New South Wales	South Australia	Tasmania	Victoria
Charter					
Hook and Line		✓			
Rod and reel		✓			✓
Commercial					
Danish Seine	✓				
Demersal Gillnet	✓				
Demersal Longline	✓				
Fish Trap		✓			
Hand Line, Hand Reel or Powered Reels				✓	
Otter Trawl	✓				
Unspecified			✓	✓	

Various		✓			
Recreational					
Gillnet				✓	
Hook and Line		✓		✓	✓
Rod and reel		✓			
Setline				✓	

Management Methods					
	Commonwealth	New South Wales	South Australia	Tasmania	Victoria
Charter					
Bag and possession limits		✓			
Fishing gear and method restrictions			✓		
Gear restrictions		✓			
Licence		✓	✓		
Limited entry			✓		
Marine park closures		✓			
Size limit		✓			
Commercial					
Catch limits		✓			
Fishing gear and method restrictions			✓		
Gear restrictions	✓	✓		✓	
Limited entry	✓	✓	✓	✓	
Marine park closures	✓	✓			
Mesh size regulations		✓			
Quota	✓				
Size limit		✓		✓	
Spatial closures	✓	✓			
Spatial restrictions			✓		
Total allowable catch	✓				
Vessel restrictions		✓			
Recreational					

Bag and possession limits		✓		✓	
Bag limits				✓	✓
Fishing gear and method restrictions			✓	✓	
Gear restrictions		✓			✓
Licence		✓		✓	✓
Marine park closures		✓			✓
Size limit		✓		✓	✓

Catch	Commonwealth	New South Wales	South Australia	Tasmania	Victoria
Commercial	185.929 t	2.54585 t	0 t	2.34761 t	
Indigenous		Negligible (2017-18)	Unknown	Unknown	Unknown (No catch under permits)
Recreational		Negligible (2017-18)	Unknown	16.1 t (in 2012/13)	Unknown

Commonwealth – Commercial (Management Methods/Catch) Data provided for the Commonwealth align with the Commonwealth Southern and Eastern Scalefish and Shark Fishery for the 2018-19 financial year.

Commonwealth – Recreational The Commonwealth does not manage recreational fishing in Commonwealth waters. Recreational fishing in Commonwealth waters is managed by the state or territory immediately adjacent to those waters, under its management regulations.

Commonwealth – Indigenous The Australian government does not manage non-commercial Indigenous fishing in Commonwealth waters, with the exception of Torres Strait. In general, non-commercial Indigenous fishing in Commonwealth waters is managed by the state or territory immediately adjacent to those waters

New South Wales – Recreational catch and Indigenous catch New South Wales Indigenous and Recreational catch estimates of Negligible are based on zero catches of Jackass morwong recorded during the 2017-18 survey of the catch of NSW 1-3 year recreational licence holders [Murphy et al. 2020]

New South Wales – (Indigenous management methods) Customary Fishing Management Arrangements. See <https://www.dpi.nsw.gov.au/fishing/aboriginal-fishing>

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*.

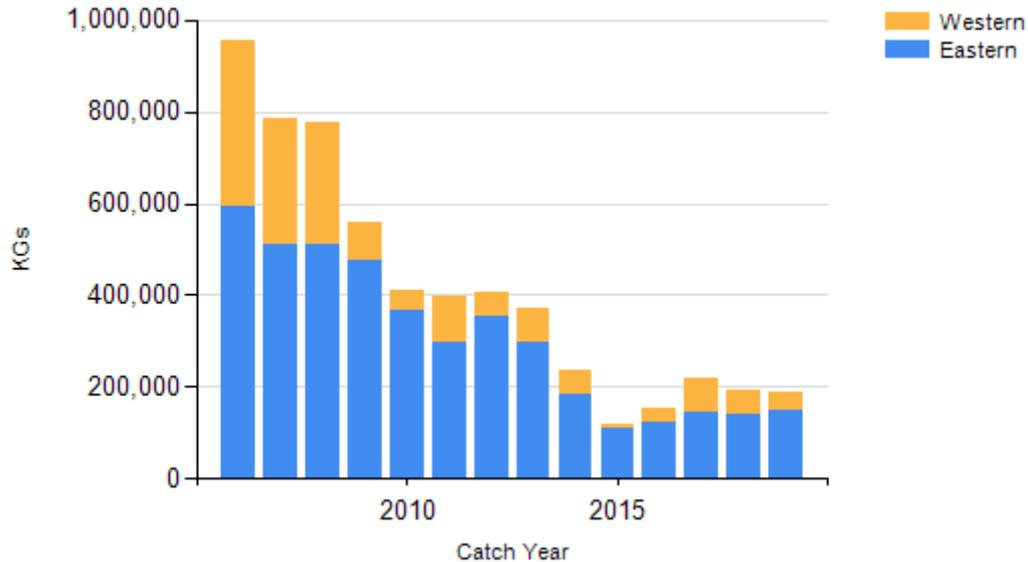
Tasmania – Commercial (catch) Catches reported for the Tasmanian Scalefish Fishery are for the period 1 July to 30 June the following year. The most recent assessment available is for 2018/19.

Tasmania – Recreational (management methods) In Tasmania, a recreational licence is required for fishers using dropline or longline gear, along with nets, such as gillnet or beach seine. A bag limit of 10 individuals and possession limit of 20 individuals (all morwong species combined excluding Banded Morwong) is in place for recreational fishers.

Tasmania – Indigenous (management methods)

<https://dpiwpe.tas.gov.au/Documents/Policy%20for%20Aboriginal%20tags%20and%20allotting%20an%20UIC.pdf>

CATCH CHART



Commercial catch of Jackass Morwong - note confidential catch not shown

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