

Ocean Sand Crab (2020)

Ovalipes australiensis



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STOCK STATUS OVERVIEW

Jurisdiction	Stock	Stock status	Indicators
Western Australia	Western Australia	Sustainable	Catch, nominal catch rates
New South Wales	New South Wales	Undefined	Catch, standardised catch rates
South Australia	South Australia	Sustainable	Catch, targetted nominal catch rates

STOCK STRUCTURE

Ocean Sand Crab is distributed in Australia from Wide Bay in Queensland around the south and east coasts to Rottnest Island in Western Australia, including Tasmanian Waters [Kailola et al. 1993].

In South Australia, the commercial fishery for Ocean Sand Crab is heavily concentrated in and around Coffin Bay on the West Coast, and catches have also occurred in Gulf St Vincent and Spencer Gulf [Steer et al. 2020]. Commercial fishing for Ocean Sand Crab in Western Australia is currently focused on nearshore waters in and around the south coastal town of Albany.

The biological stock delineation of Ocean Sand Crab remains unclear. Here, assessment of stock status is presented at the jurisdictional level—South Australia, Western Australia, and New South Wales.

STOCK STATUS

New South Wales In NSW Ocean Sand Crab is caught as by-product of the Ocean Trawl Fishery (OTF), mainly from waters north of Coffs Harbour. This fishery has produced > 90 per cent of the catch of the catch of Ocean Sand Crab in NSW since 2009–

10. Reported landings declined from 9.6 tonnes (t) (2013–14) to 3.2 t (2017–18) and the 1.2 t landed in 2018–19 was well below the 10-year average landings of 5.5 t. Standardised commercial catch rates (in mean CPUE kg.day⁻¹) is likely to be the most reliable index of relative abundance for Sand Crab. For recent data analysed as mean daily catch rates (available from 2009–10 to 2018–19), catch rates have declined and were below the 10-year average over the last two years. Recreational catch is unknown [Murphy et al. 2020]. There are no data available to estimate biomass or exploitation rates. In addition, there is no knowledge on recruitment or harvestable biomass. This prevents assessment of current stock size or fishing pressure. Consequently, there is insufficient information available to confidently classify the status of this stock.

On the basis of the evidence provided above, Ocean Sand Crab in NSW is classified as an **undefined stock**.

South Australia

In South Australia, access to take Ocean Sand Crab is provided via a Marine Scalefish Fishery (MSF) licence endorsed with Sand Crab entitlements [PIRSA 2013]. Commercial fishers are restricted to a nominated quantity of crab nets/pots. Recreational fishers also target Sand Crabs using hoop or drop nets, and have a combined Ocean Sand/Blue Swimmer Crab bag and boat limit of 20 and 60 crabs, respectively [PIRSA 2016]. Throughout South Australia, a minimum legal size of 100 mm carapace width (measured across the widest point) has been enforced since 1992 [Jones 1995]. The fishery is largely based on the capture of male crabs, as the majority of females captured are below the minimum legal size [Jones and Deakin 1997].

The most recent stock assessment [Steer et al. 2020] used data up to 31 December 2018. The primary measures of biomass and fishing mortality for the South Australian jurisdiction are the total commercial catch and targeted nominal CPUE. Comparisons between recent catch and CPUE trends and values in the past decade is considered to provide a reliable proxy for relative biomass and fishing mortality.

Trends in commercial catches of Sand Crab have generally declined since 2005. The total harvest in 2018 was 44.2 t, this was below the ten-year average (2008–17; 67.7 ± 5.9 t). Recreational catch levels are considered to be relatively low, and the most recent estimate was 9.9 t in 2013–14 [Giri and Hall 2015]. Commercial catch rate has been highly variable, however, and there has been a general increase since 2007. In 2018, the targeted crab net/pot catch rate was 131 kg/fisherday, which was above the 10-year average (2008–17; 113.4 ± 4.3 kg/fisherday). Increasing catch rates and decreasing catch and effort levels are likely a result of increases in efficiencies in the fishery, rather than evidence of a decline in recruitment. The above evidence indicates that biomass of this stock is unlikely to be depleted and that recruitment is unlikely to be impaired. Furthermore, the above evidence indicates that the current level of fishing mortality is unlikely to cause the stock to become recruitment impaired.

On the basis of the evidence provided above, Ocean Sand Crab in South Australia is classified as a **sustainable stock**.

Western Australia

No commercial catches of Ocean Sand Crab had been reported in WA prior to the issue of a five-year Instrument of Exemption (IOE) in 2016 that endorsed a single commercial fisher to target sand crabs using purpose-designed hourglass traps in waters along the South Coast between Cape Leeuwin and Hopetoun. Fishing between 2016 and 2019 has concentrated along coastal beaches in and around Albany, with fishing effort primarily driven by market demand (annual catches ranging from around 1–2 t). Although occasional catches have been reported by boat-based recreational fishers, Ocean Sand Crab is not considered an important recreational species in WA. No Ocean Sand Crab catches were reported by boat-based recreational

fishers in WA during 2017–18 [Ryan et al. 2019]. While stock size and relative exploitation along the south coast is not yet fully understood, the level of commercial and recreational catch and effort remains very low.

On the basis of the evidence provided above, Ocean Sand Crab in Western Australia is classified as **sustainable stock**.

BIOLOGY

Species	Longevity / Maximum Size	Maturity (50 per cent)
Ocean Sand Crab	Ocean Sand Crabs grow to slightly more than 100 mm carapace width [Jones and Morgan 1994]. Longevity of Ocean Sand Crabs is unknown.	Size and age at maturity are unknown for Ocean Sand Crabs. A study on the reproductive biology of Ocean Sand Crabs in Coffin Bay (SA) determined that they are winter spawners with reproductive activity peaking in July and berried females present until late August [Deakin 1996].

DISTRIBUTION



TABLES

Fishing methods			
	New South Wales	South Australia	Western Australia
Commercial			

Crab Trap			✓
Gillnet			✓
Otter Trawl	✓		
Pots and Traps		✓	
Unspecified		✓	
Various	✓		
Recreational			
Various	✓		

Management Methods		
	New South Wales	Western Australia
Commercial		
Egg bearing females protected	✓	
Fishing gear and method restrictions	✓	✓
Limited entry	✓	✓
Spatial closures	✓	
Spatial restrictions		✓
Recreational		
Bag and possession limits	✓	✓

Catch			
	New South Wales	South Australia	Western Australia
Commercial	1.2127 t	63.5933 t	0 t
Recreational	Unknown (2017–18)		Nil recorded (2017–18)

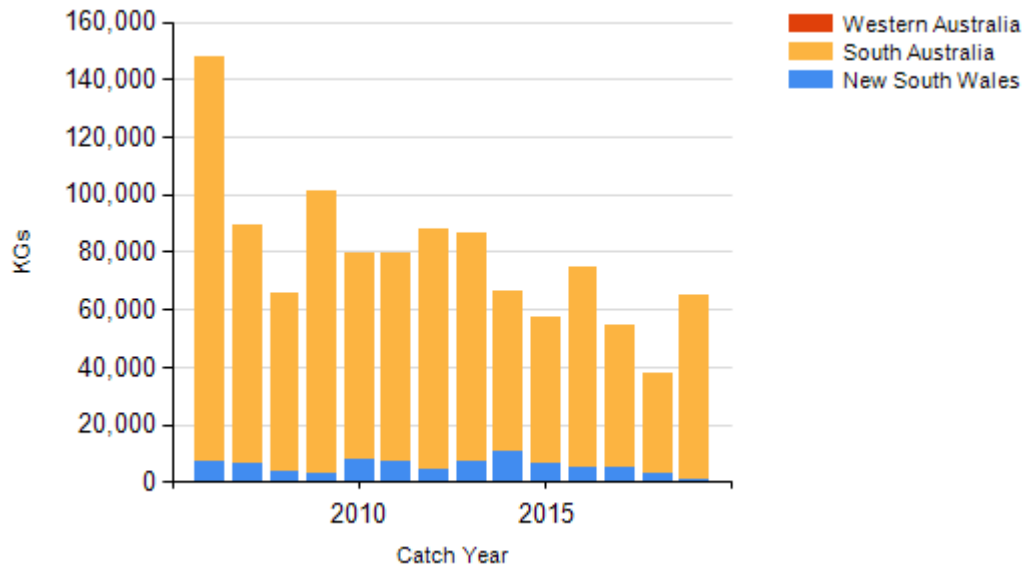
New South Wales – Indigenous (Management Methods)

<https://www.dpi.nsw.gov.au/fishing/aboriginal-fishing>

New South Wales – Recreational (Catch) Murphy et al. [2020].

Western Australia - 2017–18 boat based recreational catch nil [Ryan et al. 2019]

CATCH CHART



References	
Murphy et al. 2020	Murphy, J.J., Ochwada-Doyle, F.A., West, L.D., Stark, K.E. and Hughes, J.M., 2020. The NSW Recreational Fisheries Monitoring Program - survey of recreational fishing, 2017/18. NSW DPI - Fisheries Final Report Series No. 158.
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