

# Trumpeter Whiting (2020)

*Sillago maculata*



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## STOCK STATUS OVERVIEW

Jurisdiction	Stock	Stock status	Indicators
Queensland	Queensland	Undefined	Catch
New South Wales	New South Wales	Sustainable	Commercial catch and CPUE, and length and age

## STOCK STRUCTURE

Trumpeter whiting are distributed along the east coast of Australia from Lizard Island, Queensland to Narooma, New South Wales [Kailola et al., 1993]. The species is most abundant in southern Queensland, and especially Moreton Bay [Maclean 1971, Weng 1983, 1986], but information on biological stock boundaries remains unknown. Separate assessments of Trumpeter Whiting have been done in Queensland and New South Wales [Burchmore et al. 1988, Coull et al. 1995, Melville and Connolly 2003, Kendall and Gray 2009, Krük et al. 2009].

Here, assessment of stock status is presented at the jurisdictional level—Queensland and New South Wales.

## STOCK STATUS

**New South Wales** Trumpeter Whiting occur throughout New South Wales estuaries (with juveniles favouring seagrass areas and shallow habitats, while adults are common down to ~30 m), but commercial fishing effort is focused mostly between the Myall Lakes and Lake Illawarra [Gray and Kennelly 2003]. Up to 80% of the total commercial catch comes from hauling and seine nets, with the remainder bycaught by prawn trawlers in the Hawkesbury River [Gray et al. 1990]. Commercial catches peaked at 78 tonnes (t) in 1990–00, and then declined, but have remained fairly steady at 13 to 23 t in the past five years. The decline in commercial catches mirrors a contraction of fishing effort, including closures in previously exploited estuaries (such as Botany Bay and Port Jackson), and fewer

operators in remaining estuaries. Consequently, commercial catch rates have remained consistent over the past few years.

A bag limit of 20 whiting (all species combined) provides some control over recreational effort, but there is no legal size for Trumpeter Whiting which often manifests as low rates of release (up to 19% of the total catch; West et al. [2015]). The most recent estimate of the recreational harvest of Trumpeter Whiting in NSW (assuming correct species identification by anglers) was ~31 562 fish during 2017–18 [Murphy et al. 2020]. This estimate was based on a survey of recreational fishing licence (RFL) households, which comprised at least one person with a long-term (one or three year) fishing licence, but also included other fishers within the household. A similar survey of RFL households was done in 2013–14 during which an estimated 123 580 Trumpeter Whiting were recreationally harvested. Using mean weights of fish from Henry and Lyle [2003], these numbers equate to ~7 and 27 t.

Few Australian studies have assessed population parameters for Trumpeter Whiting, and there are no current estimates of mortality, although fishing mortality in New South Wales would be expected to have decreased due to reducing commercial fishing effort. Further, prior to the major reductions in commercial effort, Kendall and Gray [2009] revealed no changes in the population structure of Trumpeter Whiting in two central New South Wales estuaries over an eight-year period (1997 to 2004). Historical length-frequency data show no declines in mean sizes [Kendall and Gray 2008].

Spawning occurs during spring and summer and appears to be somewhat protracted, possibly reflecting water temperatures and with concomitant differences between estuaries [Burchmore et al. 1988, Kendall and Gray 2009]. Like other whiting species, female Trumpeter Whiting have indeterminate fecundity and probably spawn multiple times over summer (Kendall and Gray 2009). Size-at-age data derived from otoliths suggest Trumpeter Whiting grow quite quickly, with both sexes reaching mean sizes of maturity at ~15–19 cm FL, and at 1–3 years. Maximum sizes have been estimated at up to 25 cm FL and are slightly larger among females, which also reach an older age (12 vs 9 years). Kendall and Gray [2003] estimated catches in two central New South Wales estuaries at mostly 2–4 years old. The above evidence indicates that the biomass of the New South Wales stock is unlikely to be depleted, that recruitment is unlikely to be impaired, and 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, the New South Wales management unit is classified as a **sustainable stock**.

**Queensland** Trumpeter Whiting are found throughout Queensland, mostly in deeper bays, estuaries and mangrove creeks [Macleay 1971, Weng 1983, 1986, Williams 2002]. The species is a minor commercial by-product species and popular with recreational fishers. Commercial harvests have been intermittent since logbook reporting commenced in 1988-89 [QFISH 2020]. Trumpeter Whiting were mainly harvested by prawn trawlers [Williams 2002], with catches peaking at >500 t in the late 1980s [QFISH 2020]. However, management changes to the East Coast Trawl Fishery in 2000 prohibited retaining any whiting species, restricting commercial harvests to incidental net and line catches, and reducing average annual catches to <1 t. Seasonal and spatial closures are also in place to limit the bycatches of Trumpeter Whiting in Moreton Bay. Estimates of recreational harvests since 2000 show decreasing catches with ~50 per cent less Trumpeter Whiting reported during 2019-20 (28 t) than during 2010-11 (56 t) [Teixeira et al. 2021]. Recreational harvests are restricted by a possession limit of 50 fish, although there is no minimum legal size.

There are no sustainability concerns for Trumpeter Whiting, but there is insufficient evidence to confidently classify the status of this stock. On the basis of the evidence provided above, the management unit in Queensland is

classified as an **undefined stock**.

## BIOLOGY

**Trumpeter Whiting biology** [Burchmore et al. 1988, Kendall and Gray 2009]

Species	Longevity / Maximum Size	Maturity (50 per cent)
Trumpeter Whiting	Longevity/maximum size: 12 years, 25 cm FL	Maturity 1–3 years; 14.6 to 19.2 cm FL

## DISTRIBUTION



Distribution of reported commercial catch of Trumpeter Whiting

## TABLES

Fishing methods	New South Wales	Queensland
Charter		
Handline	✓	
Commercial		

Beam Trawl		✓
Haul Seine/Beach Seine	✓	
Line		✓
Net		✓
Otter Trawl	✓	
Seine Nets	✓	
Trawl		✓
Various	✓	
<b>Recreational</b>		
Bait Pump		✓
Handline	✓	
Hook and Line		✓

<b>Management Methods</b>		
	<b>New South Wales</b>	<b>Queensland</b>
<b>Charter</b>		
Bag limits	✓	
Fishing gear and method restrictions	✓	
Licence	✓	
Limited entry	✓	
Possession limit	✓	
Spatial closures	✓	
<b>Commercial</b>		
Fishing gear and method restrictions	✓	✓
Gear restrictions	✓	
Limited entry	✓	
Limited entry (licensing)		✓
Marine park closures		✓
Seasonal closures		✓
Spatial closures	✓	✓
<b>Recreational</b>		
Bag limits	✓	

Fishing gear and method restrictions	✓	
Licence	✓	
Marine park closures		✓
Possession limit		✓
Spatial closures	✓	

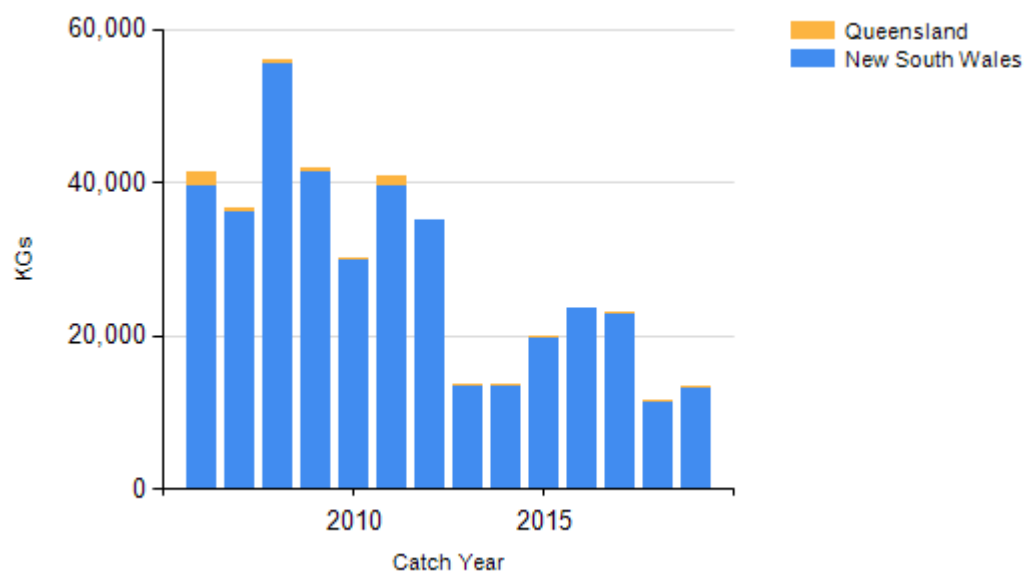
Catch	New South Wales	Queensland
Commercial	13.2169 t	0.1391 t
Indigenous	Unknown	Unknown
Recreational	7 to 27 t	28 t (2019-20)

**Queensland – Indigenous (management methods)** for more information see <https://www.daf.qld.gov.au/business-priorities/fisheries/traditional-fishing>

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

**New South Wales –** <https://www.dpi.nsw.gov.au/fishing/aboriginal-fishing>.

#### CATCH CHART



Commercial catch of Trumpeter Whiting - note confidential catch not shown

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