

## Spinner Shark, *Carcharhinus brevipinna*

<b>Report Card assessment</b>	<b>Sustainable</b>		
IUCN Red List Australian Assessment	Least Concern	IUCN Red List Global Assessment	Near Threatened
Assessors	Burgess, G.H. & Smart, J.J.		
Report Card Remarks	In Australia, fishing pressure is currently well managed		

### Summary

The Spinner Shark is a common, coastal pelagic shark found in warm-temperate and tropical waters across the globe. It frequents nearshore waters and is often captured in commercial and recreational fisheries. It is sensitive to fishing pressure and habitat degradation of coastal nursery habitats. Little information is known



Source: CSIRO national Fish Collection. License: CC By Attribution.

on the status of Spinner Sharks throughout its distribution. Within Australia, fishing pressure is currently well managed. The Spinner Shark is assessed globally as Near Threatened (IUCN) and in Australia as Least Concern (IUCN), while Australian stocks are classified as Sustainable (SAFS).

### Distribution

Within Australia, the Spinner Shark is found across northern Australia, from Walpole (Western Australia), throughout the Northern Territory, Queensland and to southern New South Wales (Last and Stevens 2009). It is distributed throughout the world, including the east coast of the United States, Brazil, Mediterranean Sea, west coast of Central Africa, South Africa, Madagascar and throughout the Indo-Pacific. A recent genetic study detected evidence suggesting there may be multiple, genetically-distinct stocks throughout its Australian range (Geraghty et al. 2013).

### Stock structure and status

There is currently very little information on population size and stock status for the Spinner Shark in Australian waters. A suite of management measures introduced from 2009 have led to a substantial reduction in fishing effort targeting adults in New South Wales waters. Generally, the species is currently considered to be sustainably harvested by Australian commercial and recreational fisheries.

### Fisheries

In Australia, both juveniles and adults are targeted or taken as bycatch by commercial gillnet, trawl and longline, and recreational line fisheries (Harry et al. 2011, Geraghty et al. 2014). The species is commonly misidentified as the Australian Blacktip Shark (*C. tilstoni*) or the Common Blacktip Shark (*C.*

*limbatus*) (Tillett et al. 2012). Spinner Shark life history can maintain high levels of fishing pressure on juveniles, although high fishing pressure on adults may lead to depletion (Simpfendorfer 1999, Prince 2005). Coastal development is likely to threaten nursery habitats, however the impacts are not known.

### Habitat and biology

The Spinner Shark is commonly found in coastal habitats such as beaches, bays, river mouths and also in offshore pelagic waters. It uses nearshore waters and bays as nursery habitats (Compagno 2001). Maximum size is estimated to be 300 cm total length (TL) and maximum age estimated as 31 years (Allen and Winter 2002, Carlson and Baremore 2005, Joung et al. 2005, Geraghty et al. 2014). In Australia, males mature at 209 cm TL and females at 225 cm TL (Geraghty et al. 2014).

Longevity and maximum size	Longevity: estimated 31 years Max size: 300 cm TL
Age and/or size at maturity (50%)	Males: estimated 8.5 years, 209 cm TL Females: estimated 10.1 years, 225 cm TL

**Link to IUCN Page:** <http://www.iucnredlist.org/details/39368/0>

**Link to page at Shark References:** <http://shark-references.com/species/view/Carcharhinus-brevipinna>

### References

- Allen, B.R. & Wintner, S.P. 2002. Age and Size of the spinner shark *Carcharhinus brevipinna* (Müller and Henle, 1839) off the Kwazulu-Natal coast, South Africa. *South African Journal of Marine Science* 24(1): 1-8.
- Carlson, J.K. & Baremore, I.E. 2005. Growth dynamics of the spinner shark (*Carcharhinus brevipinna*) off the United States southeast and Gulf of Mexico coasts: a comparison of methods. 103 (2): 280-291. *Fishery Bulletin* 103(2): 280 - 291.
- Compagno, L.J.V. 2001. Sharks of the World. An annotated and illustrated catalogue of the shark species known to date. Volume 3. Carcharhiniformes. FAO, Rome.
- Geraghty PT, Macbeth WG, Harry AV, Bell JE, Yerman MN, Williamson JE (2014) Age and growth parameters for three heavily exploited shark species off temperate eastern Australia. *ICES Journal of Marine Science: Journal du Conseil* 71:559-573
- Geraghty, P.T., Williamson, J.E., Macbeth, W.G., Wintner, S.P., Harry, A.V., Ovenden, J.R., Gillings, M.R. (2013) Population Expansion and Genetic Structure in *Carcharhinus brevipinna* in the Southern Indo-Pacific. *PLoS ONE* 8(9): e75169. doi:10.1371/journal.pone.0075169
- Harry, A.V., Tobin, A.J., Simpfendorfer, C.A., Welch, D.J., Mapleston, A., White, J., Williams, A.J., and Stapley, J. 2011. Evaluating catch and mitigating risk in a multispecies, tropical, inshore shark fishery within the Great Barrier Reef World Heritage Area. *Marine and Freshwater Research* 62: 710-721.
- Joung, S.J. Liao, Y.-Y. Liu, K.-M. Chen, C.T. Leu, L.C. 2005. Age, Growth, and Reproduction of the Spinner Shark, *Carcharhinus brevipinna*, in the Northeastern Waters of Taiwan. *Zoological Studies* 44(1): 102 -110.
- Last, P.R. and Stevens, J.D. 2009. Sharks and Rays of Australia. Second Edition. CSIRO Publishing, Collingwood, Australia.
- Prince, J. D. 2005. Gauntlet Fisheries for Elasmobranchs – the Secret of Sustainable Shark Fisheries. *J. Northw. Atl. Fish. Sci.* 35: 407-416.
- Simpfendorfer C.A. 1999. Demographic analysis of the dusky shark fishery in southwestern Australia. In: J.A. Musick (ed.), *Life in the slow lane: ecology and conservation of long-lived marine animals*, pp. 149?160. American Fisheries Society Symposium 23, Bethesda, Maryland, USA.
- Tillett, B.J., Field, I.C., Bradshaw, C.J.A., Johnson, G., Buckworth, R.C., Meekan, M.G., Ovenden, J.R. 2012. Accuracy of species identification by fisheries observers in a north Australian shark fishery. *Fisheries Research* 127: 109-115.