

Weng's Skate, *Dipturus wengi*

Report Card assessment	Sustainable		
IUCN Red List Australian Assessment	Least Concern (Endemic to Australia)	IUCN Red List Global Assessment	Least Concern
Global Assessors	Bigman, J.S., Ebert, D.A. & Kyne, P.M.		
Australian Assessors	Kyne, P.M., Heupel, M.R., White, W.T., Simpfendorfer, C.A. (Shark Action Plan) & Rigby, C.L.		
Report Card Remarks	Mostly occurs deeper than current fisheries operations, and limited effort and marine park refuge in northern part of its range where it most common.		

Summary

Weng's Skate is a medium-sized deepwater species endemic to east Australia from tropical to temperate waters. It is most common in the tropics and rarer in temperate southern waters. The species is an incidental catch of trawl fisheries and is caught in the Commonwealth Trawl Sector (CTS) of the Commonwealth Southern and Eastern Scalefish Fishery (SESSF), with significant declines in all skate species noted over 20 years from 1977–1997. This species was a small component of those catches. It likely has undergone population



decline in this fishery which historically had high fishing pressure, however, fishing deeper than 700 m in most of the SESSF has been prohibited which would provide significant refuge for this species. In the northern part of its range it may be taken in the Line Sector of the Commonwealth managed Coral Sea Fishery (CSF), though the sector rarely fishes to depths beyond 600 m and has minimal effort, and trawling is no longer permitted in the CSF. It would also have significant refuge in the Coral Sea Marine Park. Therefore, Weng's Skate is assessed as Least Concern (IUCN) (Kyne et al. 2021) and Sustainable (SAFS).

Distribution

Weng's Skate is endemic to tropical to temperate waters of east Australia (Last et al. 2016). It occurs in a wide range from Cairns (Queensland) to Tasmania (Last and Stevens 2009).

Stock structure and status

There is currently no information on population size, structure, or trend for the species. However, it is considered to be most common in the northern tropics and rarer in the southern temperate waters (Last and Stevens 2009).

Fisheries

Weng's Skate is an incidental catch of mostly trawl fisheries. In the southern part of its range, it is caught in the Commonwealth Trawl Sector (CTS) of the Commonwealth Southern and Eastern Scalefish Fishery (SESSF), though a lack of species-specific skate identification precludes estimates of catch levels (Sporcic et al. 2021). In recent years, an estimated 30% of 'mixed skates' are retained in the CTS (Daley and Gray 2020). There was a decline of 75–88% in mean catch rates of deepwater skates in this sector over 20 years from 1977–1997, with these catches including small numbers of Weng's Skate (as *Raja* sp. I) in waters of 550–605 m depth (Graham et al. 2001). The species has likely gone undergone population decline due to the historically high levels of fishing pressure in the CTS (Bigman et al. 2015, Kyne et al. 2021). However, fishing deeper than 700 m has been prohibited since 2007 in these SESSF waters which provides it significant refuge. The species vulnerability to fishing and climate change in southern waters was assessed as low (Walker et al. 2021). In the northern part of its range, the species may be caught in the Line Sector of the Commonwealth managed Coral Sea Fishery (CSF), though the sector rarely fishes to depths beyond 600 m and it has limited effort with only 1–2 vessels active in recent years (Patterson et al. 2022). It may have been previously captured in the Trawl Sector of the CSF, though as of 2018–2019, trawling is no longer permitted (Patterson et al. 2022). It would receive significant refuge with the implementation of the Coral Sea Marine Park in 2014 which includes zoning and gear restrictions (Patterson et al. 2022, Parks Australia 2023).

Habitat and biology

Weng's Skate is demersal on the upper and mid-continental slope at depths of 485–1,165 m, though mostly at 600–1,000 m (Séret and Last 2008, Last et al. 2016). Maximum size is approximately 128 cm total length (TL) and males mature at approximately 102–112 cm TL (Last et al. 2016). Little else is known of its biology.

Longevity and maximum size	Longevity: unknown Max size: ~128 cm TL
Age and/or size at maturity (50%)	Males: ~102–112 cm TL Females: unknown

CAAB Code: 37 031034

Link to IUCN Page: <https://www.iucnredlist.org/species/195453/68621850>

Link to page at Shark References: <https://shark-references.com/species/view/Dipturus-wengi>

References

- Bigman, J.S., Ebert, D.A. and Kyne, P.M. 2015. *Dipturus wengi*. *The IUCN Red List of Threatened Species* 2015: e.T195453A68621850
- Daley, R.K. and Gray, C. A. 2020. On-the-water management solutions to halt the decline and support the recovery of Australia's endemic elasmobranchs. Report for the Australian Marine Conservation Society and Humane Society International.
- Graham, K.J., Andrew, N.L. and Hodgson, K.E. 2001. Changes in the relative abundances of sharks and rays on Australian South East Fishery trawl grounds after twenty years of fishing. *Journal of Marine and Freshwater Research* 52: 549–561.
- Kyne, P.M., Heupel, M.R., White, W.T. and Simpfendorfer, C.A. 2021. *The Action Plan for Australian Sharks and Rays 2021*. National Environmental Science Program, Marine Biodiversity Hub, Hobart.
- Last, P.R. and Stevens, J.D. 2009. *Sharks and Rays of Australia*. Second Edition. CSIRO Publishing, Collingwood, Australia.
- Last, P., White, W., Carvalho, M.R. de, Séret, B., Stehmann, M. and Naylor, G.J.P. 2016. *Rays of the World*. CSIRO Publishing, Clayton, Victoria, Australia.
- Parks Australia 2023. Coral Sea Marine Park. <https://parksaustralia.gov.au/marine/parks/coral-sea/>.
- Patterson, H., Bromhead, D., Galeano, D., Larcombe, J., Timmiss, T., Woodhams, J. and Curtotti, R. 2022. *Fishery status reports 2022*, Australian Bureau of Agricultural and Resource Economics and Sciences, Canberra.
- Séret, B. and Last, P.R. 2008. A new Australian skate of the genus *Dipturus* (*Rajoidei: Rajidae*). In: Last, P.R., White, W.T., Pogonoski, J.J., and Gledhill, D.C (eds), Descriptions of New Australian Skates, CSIRO Marine and Atmospheric Research Paper No. 021.
- Sporcic, M., Bulman, C.M. and Fuller, M. 2021. *Ecological Risk Assessment for the Effects of Fishing. Report for Southern and Eastern Scalefish and Shark Fishery (Commonwealth Trawl Sector): Otter trawl Sub-fishery 2012-2016*. Report for the Australian Fisheries Management Authority. 277 p.

Walker, T.I., Day, R.W., Awruch, C.A., Bell, J.D., Braccini, J.M., Dapp, D.R., Finotto, L., Frick, L.H., Garcés-García, K.C., Guida, L., Huveneers, C., Martins, C.L., Rochowski, B.E.A., Tovar-Ávila, J., Trinnie, F.I. and Reina, R.D. 2021. Ecological vulnerability of the chondrichthyan fauna of southern Australia to the stressors of climate change, fishing and other anthropogenic hazards. *Fish and Fisheries* 22(5), 1105–1135.