

Gurgesiella dorsalifera, Onefin Skate

Assessment by: Pollom, R. *et al.*



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Taxonomy

Kingdom	Phylum	Class	Order	Family
Animalia	Chordata	Chondrichthyes	Rajiformes	Gurgesiellidae

Scientific Name: *Gurgesiella dorsalifera* McEachran & Compagno, 1980

Common Name(s):

- English: Onefin Skate

Taxonomic Source(s):

Fricke, R., Eschmeyer, W.N. and Van der Laan, R. (eds). 2020. Eschmeyer's Catalog of Fishes: genera, species, references. Updated 14 September 2020. Available at: <http://researcharchive.calacademy.org/research/ichthyology/catalog/fishcatmain.asp>.

Assessment Information

Red List Category & Criteria: Vulnerable A2d [ver 3.1](#)

Year Published: 2020

Date Assessed: July 1, 2019

Justification:

The Onefin Skate (*Gurgesiella dorsalifera*) is a small (to 53 cm total length) skate that occurs in the Southwest Atlantic from Rio de Janeiro to Santa Catarina State, Brazil. It is demersal on the continental slope at depths of 400–800 m. It is captured in deep-water demersal trawl fisheries, which were developed in Brazil in order to take some pressure off depleted inshore stocks. In southern Brazil, the trawl fishery began in the 1960s and entered a period of rapid expansion in the 1990s and 2000s, resulting in over 650 vessels fishing at depths of 20–1,000 m. From 2003 to 2007, this species was the second-most common discarded bycatch in southern Brazil shrimp trawls by the Spanish deep-water fleet (which comprised 68% of all deep-water trawls off Brazil during that time). This skate is also a common bycatch of the Argentine Squid fishery, which is intense and operates down to about 600 m depth. Although typically discarded, post-release mortality is suspected to be high and it is likely that fishing mortality is leading to a reduction in the population size. Overall, it is suspected that the Onefin Skate has undergone a population reduction of 30–49% over the past three generations (21 years), and it is assessed as Vulnerable A2d.

Previously Published Red List Assessments

2004 – Vulnerable (VU)

<https://dx.doi.org/10.2305/IUCN.UK.2004.RLTS.T44656A10932771.en>

Geographic Range

Range Description:

The Onefin Skate occurs in the Southwest Atlantic from Rio de Janeiro to Santa Catarina State, Brazil

(Last *et al.* 2016). It has an Extent of Occurrence of approximately 160,000 km² and an Area of Occupancy (based on its known bathymetric range on the continental slope) of about 42,000 km².

Country Occurrence:

Native, Extant (resident): Brazil

FAO Marine Fishing Areas:

Native: Atlantic - southwest

Distribution Map

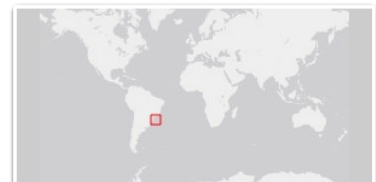


Legend

EXTANT (RESIDENT)

Compiled by:

IUCN SSC Shark Specialist Group 2018



The boundaries and names shown and the designations used on this map do not imply any official endorsement, acceptance or opinion by IUCN.



Population

Fishing over the entire bathymetric and geographic range of this species was intense in the early to mid-2000s, much of which continues without management measures. Although the level of post-release mortality is unknown, it is suspected to be high and leading to a reduction in the population size. Overall, it is suspected that the Onefin Skate has undergone a population reduction of 30–49% over the past three generations (21 years).

Current Population Trend: Decreasing

Habitat and Ecology (see Appendix for additional information)

The Onefin Skate is demersal on the continental slope at depths of 400–800 m (Last *et al.* 2016). It reaches a maximum size of 53 cm total length (TL); females mature at 37 cm TL and males at 38–42 cm TL (Last *et al.* 2016). Reproduction is oviparous. This skate is suspected to have a generation length similar to that estimated for the Whitespotted Skate (*Dentiraja cerva*), which has an age-at-maturity of 5 years, a maximum age of 9 years, and thus a generation length of 7 years (M.A. Treloar unpubl. data 2007).

Systems: Marine

Use and Trade (see Appendix for additional information)

The Onefin Skate is typically discarded at sea (Perez *et al.* 2013, Rincon *et al.* 2017).

Threats (see Appendix for additional information)

The Onefin Skate is captured in deep-water demersal trawl fisheries, which were developed in Brazil in the late 1990s in order to take some pressure off depleted inshore stocks (Perez *et al.* 2009). In southern Brazil, the trawl fishery began in the 1960s and entered a period of rapid expansion in the 1990s and 2000s, resulting in over 650 vessels fishing at depths of 20–1,000 m (Port *et al.* 2016). Development of these fisheries was intense; the entire area fished for deep-water shrimp species was estimated to be swept nearly twice over a three-year period (2003–2006) (Dallagnolo *et al.* 2009). From 2003 to 2007, this skate was noted as being the second-most common discarded bycatch in southern Brazil shrimp trawls by the Spanish deep-water fleet (which comprised 68% of all deep-water trawls off Brazil during that time) (Perez *et al.* 2013). This skate is also a common bycatch of the Argentine Squid (*Illex argentinus*) fishery, which is intense and operates down to about 600 m depth (Rincon *et al.* 2017). Although typically discarded, post-release mortality is suspected to be high. Overall, this species has been subject to intense fishing pressure that lacks adequate management across its restricted range, and it has no refuge at depth.

Conservation Actions (see Appendix for additional information)

There are no species-specific protections or conservation measures in place for this skate. Management measures are needed in order to ensure this skate does not become threatened in the near future. Further research is needed on life history and population size and trend, and bycatch should be monitored in trawl fisheries to the species level.

Credits

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Authority/Authorities: IUCN SSC Shark Specialist Group (sharks and rays)

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Rincon, G., Mazzoleni, R.C., Palmeira, A.R.O. and Lessa, R.P.T. 2017. Deep-water sharks, rays, and chimaeras of Brazil. In: Rodrigues-Filho, L.F. and De Luna Sales, J.B. (eds), *Chondrichthyes: Multidisciplinary Approach*, pp. 83–112. IntechOpen, London, UK.

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External Resources

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Appendix

Habitats

(<http://www.iucnredlist.org/technical-documents/classification-schemes>)

Habitat	Season	Suitability	Major Importance?
11. Marine Deep Benthic -> 11.1. Marine Deep Benthic - Continental Slope/Bathyl Zone (200-4,000m)	-	-	-

Threats

(<http://www.iucnredlist.org/technical-documents/classification-schemes>)

Threat	Timing	Scope	Severity	Impact Score
5. Biological resource use -> 5.4. Fishing & harvesting aquatic resources -> 5.4.4. Unintentional effects: (large scale) [harvest]	Ongoing	Majority (50-90%)	Slow, significant declines	Medium impact: 6
	Stresses:	2. Species Stresses -> 2.1. Species mortality		

Conservation Actions in Place

(<http://www.iucnredlist.org/technical-documents/classification-schemes>)

Conservation Action in Place
In-place research and monitoring
Action Recovery Plan: No
Systematic monitoring scheme: No
In-place land/water protection
Conservation sites identified: No
Area based regional management plan: No
Occurs in at least one protected area: No
Invasive species control or prevention: Not Applicable
In-place species management
Harvest management plan: No
Successfully reintroduced or introduced benignly: No
Subject to ex-situ conservation: No
In-place education
Subject to recent education and awareness programmes: No
Included in international legislation: No

Conservation Action in Place

Subject to any international management / trade controls: No

Research Needed

(<http://www.iucnredlist.org/technical-documents/classification-schemes>)

Research Needed

1. Research -> 1.2. Population size, distribution & trends

1. Research -> 1.3. Life history & ecology

3. Monitoring -> 3.1. Population trends

Additional Data Fields

Distribution

Estimated area of occupancy (AOO) (km ²): 42000

Estimated extent of occurrence (EOO) (km ²): 160000

Lower depth limit (m): 800

Upper depth limit (m): 400

Habitats and Ecology

Generation Length (years): 7

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