

Benthobatis kreffti, Krefft's Blind Numbfish

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Taxonomy

Kingdom	Phylum	Class	Order	Family
Animalia	Chordata	Chondrichthyes	Torpediniformes	Narcinidae

Scientific Name: *Benthobatis krefftii* Rincón, Stehmann & Vooren, 2001

Common Name(s):

- English: Krefft's Blind Numbfish, Brazilian Blind Electric Ray
- Spanish; Castilian: Arraia Cega

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:

Krefft's Blind Numbfish (*Benthobatis krefftii*) is a small (to 30 cm total length) deep-water ray that occurs in the Southwest Atlantic from São Paulo to Rio Grande do Sul, Brazil. It is benthic on the continental slope at depths of 450–530 m. It is captured in deep-water demersal trawl fisheries, which developed rapidly in the 1990s and early 2000s in Brazil and remain intense and unmanaged. Overall, due to the level of unmanaged fishing pressure it is exposed to and its lack of refuge at depth, it is suspected that Krefft's Blind Numbfish has undergone a population reduction of 30–49% over the past three generations (15 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.T44577A10921737.en>

Geographic Range

Range Description:

Krefft's Blind Numbfish occurs in the Southwest Atlantic from São Paulo to Rio Grande do Sul, Brazil (Last *et al.* 2016, Martins and Gadig 2019). It has an estimated Extent of Occurrence of approximately 150,000 km² and an Area of Occupancy of about 13,000 km².

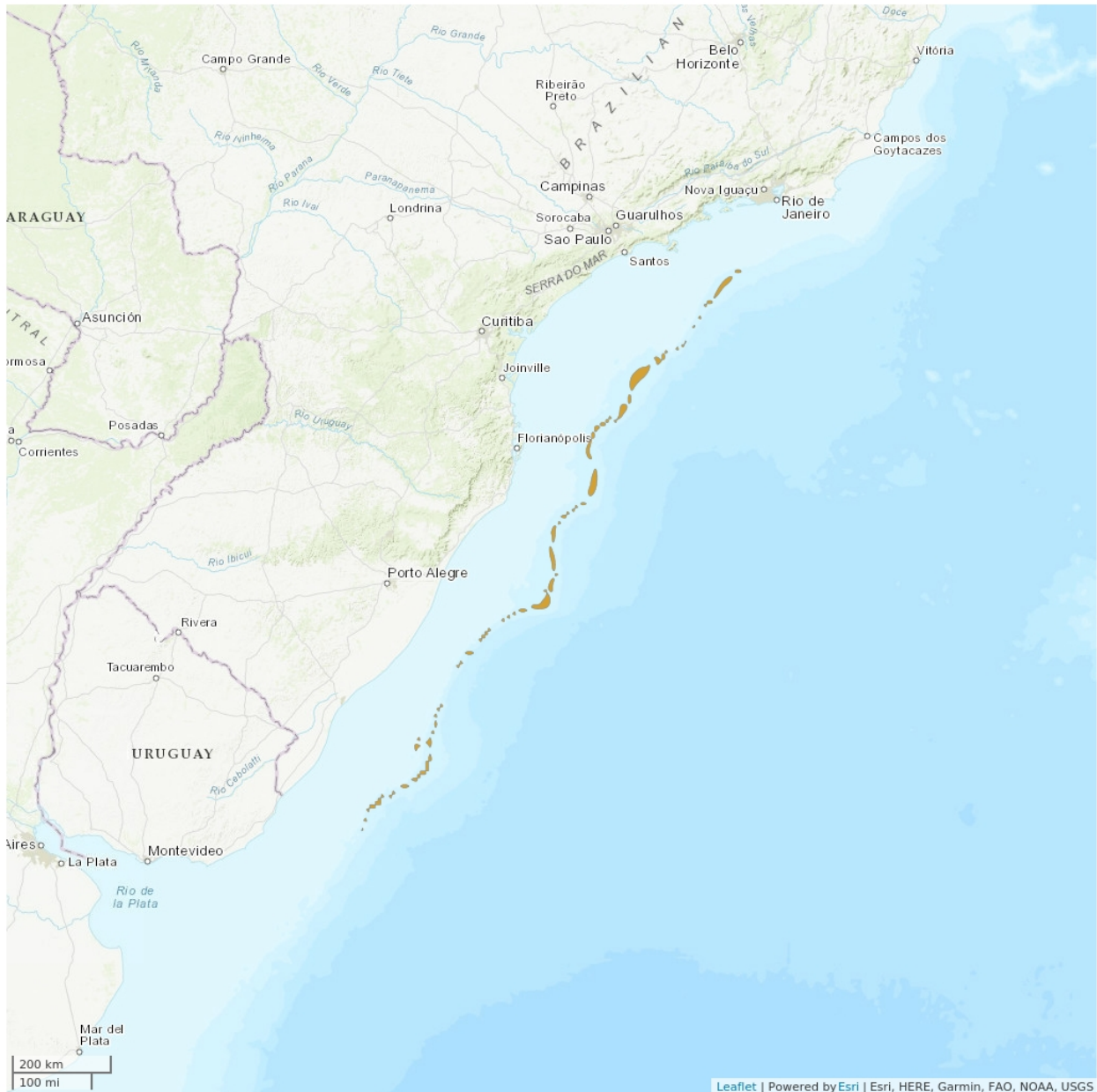
Country Occurrence:

Native, Extant (resident): Brazil

FAO Marine Fishing Areas:

Native: Atlantic - southwest

Distribution Map

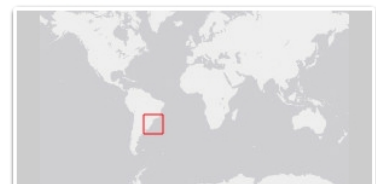


Legend

■ 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 numbfish was intense in the early to mid-2000s, and much of it continues today without adequate management. Overall, due to the level of fishing pressure that this skate is exposed to, combined with its relatively fast life history traits that allow it to withstand some fishing pressure, it is suspected that this numbfish has undergone a population reduction of 30–49% over the past three generations (15 years).

Current Population Trend: Decreasing

Habitat and Ecology (see Appendix for additional information)

Krefft's Blind Numbfish is benthic on the continental slope at depths of 450–530 m (Last *et al.* 2016). It reaches a maximum size of 30 cm total length (TL); females mature at 19–20 cm TL and males at 15–18 cm TL (Last *et al.* 2016, Martins and Gadig 2019). Reproduction is viviparous and females give birth to 1–3 pups per litter that are 9–10 cm TL (Last *et al.* 2016, Martins and Gadig 2019). Generation length is unknown, but a plausible conservative estimate would be ~5 years based on data available for the Cortez Numbfish (*Narcine entemedor*), which has a larger maximum size of at least 75 cm TL, an age-at-maturity of 6 years, a maximum age of 15 years, and thus a generation length of 10.5 years (Villavicencio-Garayzar 2000).

Systems: Marine

Use and Trade (see Appendix for additional information)

Numbfishes are typically discarded and not used as food (Last *et al.* 2016).

Threats (see Appendix for additional information)

Krefft's Blind Numbfish 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). This species is also caught in the Argentine Squid (*Illex argentinus*) fishery (Rincon *et al.* 2017). Overall, this species is subject to intense and unmanaged fishing pressure across its 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 numbfish. Management and mitigation of bycatch is needed in order to ensure this species does not become more 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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External Resources

For [Supplementary Material](#), and for [Images and External Links to Additional Information](#), please see the Red List website.

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: Unknown
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
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Research Needed

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

Research Needed

1. Research -> 1.2. Population size, distribution & trends
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1. Research -> 1.3. Life history & ecology
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3. Monitoring -> 3.1. Population trends

Additional Data Fields

Distribution

Estimated area of occupancy (AOO) (km ²): 13000

Estimated extent of occurrence (EOO) (km ²): 150000

Lower depth limit (m): 530

Upper depth limit (m): 450

Habitats and Ecology

Generation Length (years): 5

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