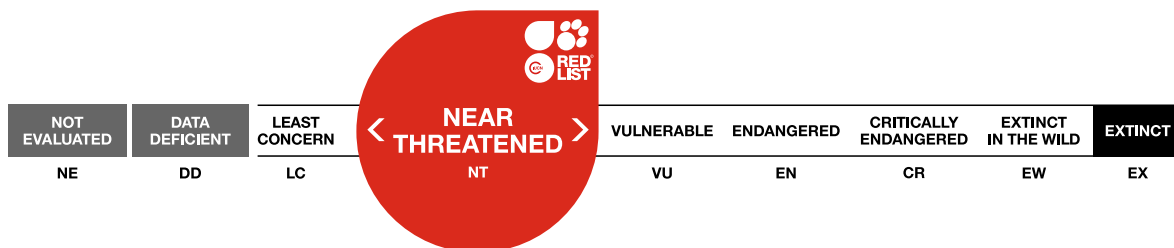


Sympterygia bonapartii, Smallnose Fanskate

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



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Taxonomy

Kingdom	Phylum	Class	Order	Family
Animalia	Chordata	Chondrichthyes	Rajiformes	Arhynchobatidae

Scientific Name: *Sympterygia bonapartii* Müller & Henle, 1841

Synonym(s):

- *Raia marplatensis* Marini, 1935
- *Sympterygia bonapartei* Müller & Henle, 1841

Common Name(s):

- English: Smallnose Fanskate
- Spanish; Castilian: Raya Marmorada

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: Near Threatened A2bd [ver 3.1](#)

Year Published: 2020

Date Assessed: July 1, 2019

Justification:

The Smallnose Fanskate (*Sympterygia bonapartii*) is a medium-sized (to 88 cm total length) skate that occurs in the Southeast Pacific in the Strait of Magellan, Chile, and in the Southwest Atlantic from Rio de Janeiro, Brazil to Santa Cruz, Argentina. It is demersal on the continental shelf and upper slope and inhabits depths down to 100 m and occasionally to 500 m deep. This skate is captured in intense artisanal and commercial demersal trawl and longline fisheries and recreational fisheries in Argentina. Research trawl surveys conducted on the southern Brazilian shelf indicate a reduction in catch-per-unit-effort (CPUE) of 94% between 1980 and 2005. In Uruguay, research surveys exhibit an increase in catch-per-unit-effort between 1984 and 2008 followed by a stabilization. Overall, the Smallnose Fanskate is subjected to intense largely unregulated fishing pressure across most of its range, but is able to survive when discarded. The larger part of this species' range is in central and southern Argentina where fishing mortality is likely to be lower. Due to the level of fisheries mortality that this species is exposed in the northern part of its range, balanced with lower pressure in the south, and its high survivorship when discarded, it is suspected that the Smallnose Fanskate has undergone a population reduction of 20–29% over the past three generations (49.5 years), and it is assessed as Near Threatened (nearly meeting Vulnerable A2bd).

Previously Published Red List Assessments

2004 – Data Deficient (DD)

Geographic Range

Range Description:

The Smallnose Fanskate occurs in the Southeast Pacific in the Strait of Magellan, Chile, and in the Southwest Atlantic from Santa Cruz, Argentina to Rio de Janeiro, Brazil (Menni and Stehmann 2000, Last *et al.* 2016).

Country Occurrence:

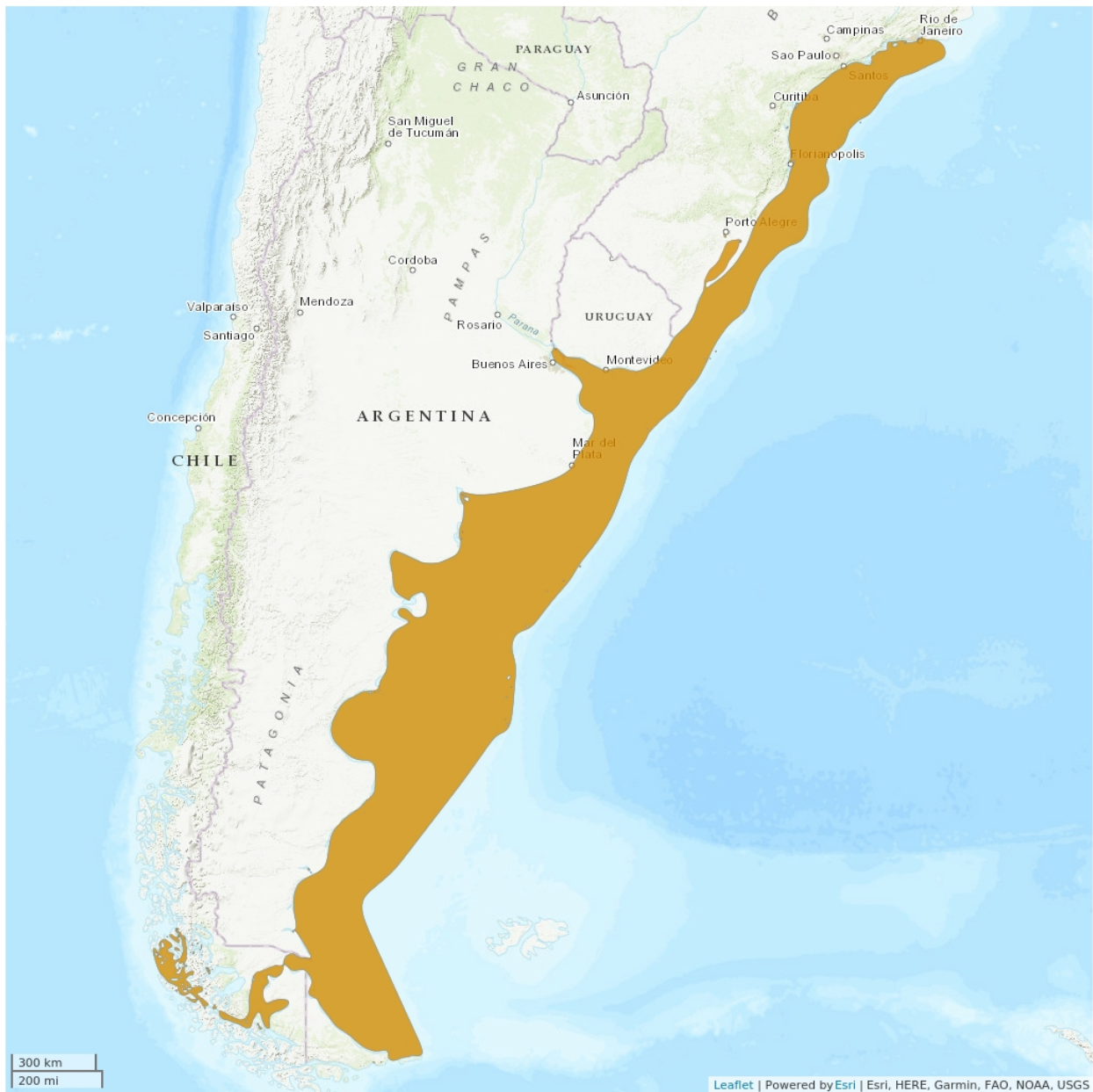
Native, Extant (resident): Argentina; Brazil; Chile; Uruguay

FAO Marine Fishing Areas:

Native: Atlantic - southwest

Native: Pacific - southeast

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

In southern Brazil, research trawl surveys indicate a reduction in catch-per-unit-effort (CPUE) of 94% between 1980 and 2005 (Ferreira *et al.* 2010). In Uruguay, research surveys revealed an increase in catches between 1984 and 2008 followed by a stabilization (L. Paesch unpubl. data 2018). In 794 research trawls conducted in the Argentina-Uruguay Common Fishing Zone between 2010 and 2016, this skate was the most common and was recorded in 490 hauls, or 67%. It made up nearly a quarter of the skate catch by weight (Paesch 2018). In the Rio del Plata Estuary, the landings of coastal rays including this species was low until the mid-1990s, but increased retention led to substantial increases in landings which peaked in 2008, followed by a decline (Chiaramonte 2014, Cortés *et al.* 2014). In the San Matías Gulf, Argentina, this skate was the most common elasmobranch by number in trawl fisheries between 2004 and 2010 (Estalles 2012), and it is targeted in relatively intense recreational fisheries (Venerus and Cedrola 2017). It is suspected that a modest reduction in population size has occurred in Argentina. Due to the level of fisheries mortality that this species is exposed to across its range, combined with the fact that it is still observed commonly in fisheries despite this pressure, and has high survivorship when discarded, it is suspected that the Smallnose Fanskate has undergone a population reduction of 20–29% over the past three generations (49.5 years).

Current Population Trend: Decreasing

Habitat and Ecology (see Appendix for additional information)

The Smallnose Fanskate is demersal on the continental shelf and upper slope at depths of 0–100 m and occasionally to 500 m (Last *et al.* 2016). It reaches a maximum size of 88 cm total length (TL); females mature at 51–74 cm TL and males at 50–69 cm TL (Oddone and Velasco 2004, Basallo and Oddone 2014, Weigmann 2016, Estalles *et al.* 2017). Nursery areas are suspected to be in estuaries where adults and juveniles are more abundant than other areas (Mabragaña *et al.* 2002). Age-at-maturity is 9 years for both sexes and maximum age is 24 and 19 years for females and males, respectively (Hozbor and Massa 2015). Generation length is therefore estimated to be 16.5 years.

Systems: Marine

Use and Trade

This skate is taken as a utilized bycatch where caught, and is consumed or sold locally or exported to Asia. In Argentina, skates were discarded until 1994, but are now one of the most important commercial species (Chiaramonte 2014). The wings are removed and sold mainly to Asian markets at high prices (Dent and Clarke 2015).

Threats (see Appendix for additional information)

The Smallnose Fanskate is captured in artisanal and commercial demersal trawl and longline fisheries, which are intense in at least half of its range. It is also targeted in recreational fisheries in some areas. 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). Artisanal fisheries there are also intense, and 58% of stocks targeted by artisanal fishers are over-exploited, half of those being collapsed (Vasconcellos *et al.* 2011). In São Paulo state alone, there are over 300 small-scale trawl vessels (Rodrigues *et al.* 2019). In Uruguay, the industrial trawl fleet was

developed in the late 1970s, and many stocks were over-exploited by the 1990s (Defeo *et al.* 2011, Lorenzo *et al.* 2015). The industrial fleet, which mainly targets hake, croaker, and weakfish, increased from 46 vessels in 1975 to a peak of 121 in 2004, followed by a decline to 81 vessels in 2010 (Lorenzo *et al.* 2015). During the expansion phase of this fishery, landings increased six-fold from 1975 to 1981. Subsequent depletion of these species led to a diversification of the fisheries into non-traditional (i.e. bycatch) species, masking the decline in previous target species (Lorenzo *et al.* 2015). Reported bycatch is not identified to species level, and chondrichthyan species are registered in the fisheries statistics grouped into generic names (Paesch and Domingo 2003). This species is captured but discarded in Uruguayan artisanal fisheries (Silveira *et al.* 2018). In Argentina, commercial fishing began in the late 1800s, became industrialized after World War II (Mateo 2006), and increased rapidly in the 1980s (Watson *et al.* 2006). By 1992 there were over 300 coastal trawlers. This number increased to over 400 in 2015, and the number of fishing trips undertaken by that fleet nearly doubled from over 7,600 to nearly 14,000 over that time frame. The overall number of fishing vessels in operation in Argentina has grown from under 300 in 1990 to nearly 1,000 in 2015 (Dirección Nacional de Planificación Pesquera 2016). The shrimp fishery there takes a lot of bycatch, including this species in relatively large numbers (Cedrola *et al.* 2005). This species is typically discarded from this fishery, but it is suspected to have a high survival rate (J.M. Cuevas unpubl. data 2018). Maximum size of individuals was reduced by 10 cm TL between 1995 and 2005 (J.M. Cuevas unpubl. data 2018). This skate is targeted in recreational fisheries in Argentina, which are poorly regulated in most areas. Such fisheries have been in operation since at least the 1960s, when large tournaments with up to 4,000 participants began to be held (Venerus and Cedrola 2017). Overall, the Smallnose Fanskate is subjected to intense fishing pressure across most of its range, but is able to survive when discarded as it is in some areas.

Conservation Actions (see Appendix for additional information)

This species is listed in the Brazilian Ordinance of Ministry of the Environment No. 445, which restricts all harvest and trade of species listed as Endangered or Critically Endangered on the Brazilian National Red List (Feitosa *et al.* 2018, Oddone *et al.* 2018). This legislation came into force in December 2014, however, it was suspended for all of 2015 and the first half of 2016 due to pressure from the fishing industry (Begossi *et al.* 2017). This ordinance faces increasing industry pressure, including a court challenge to suspend the legislation again, by the Secretaria Nacional de Aquicultura e Pesca (SAP), who brought forward their contention that the Brazilian National Red List was designed specifically for terrestrial species (Spautz 2019). The adequacy of enforcement is unknown. It is included in the annual maximum permitted catch (MPC) of the fishery for coastal skates in the Argentina-Uruguay Common Fishing Zone. This measure is currently not likely to be an adequate management measure, because landings have been higher than the quotas. In Argentina, the release of this species is mandatory inside the Punta Bermeja Natural Protected Area (slightly modified from Annex I, Legal Provision N. 999/2015 of the Secretariat of Environment and Sustainable Development of Río Negro) (Venerus and Cedrola 2017). There are no known protections or conservation measures in place in the Chilean portion of its range. Further research is needed on life history, and population size and trend, and harvest management and species-specific monitoring should be undertaken in all commercial and artisanal fisheries to ensure that this species does not become threatened in the near future.

Credits

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Reviewer(s): Dulvy, N.K. & Kyne, P.M.

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

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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?
9. Marine Neritic -> 9.3. Marine Neritic - Subtidal Loose Rock/pebble/gravel	Resident	Suitable	Yes
9. Marine Neritic -> 9.4. Marine Neritic - Subtidal Sandy	Resident	Suitable	Yes
9. Marine Neritic -> 9.5. Marine Neritic - Subtidal Sandy-Mud	Resident	Suitable	Yes
9. Marine Neritic -> 9.6. Marine Neritic - Subtidal Muddy	Resident	Suitable	Yes
9. Marine Neritic -> 9.10. Marine Neritic - Estuaries	Resident	Suitable	Yes
11. Marine Deep Benthic -> 11.1. Marine Deep Benthic - Continental Slope/Bathyl Zone (200-4,000m)	-	-	-

Use and Trade

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

End Use	Local	National	International
Food - human	Yes	Yes	Yes

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 -> 5.4.3. Unintentional effects: (subsistence/small scale) [harvest]	Ongoing	Majority (50-90%)	Slow, significant declines	Medium impact: 6
	Stresses:	2. Species Stresses -> 2.1. Species mortality		
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

Conservation Action in Place
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: Yes
Invasive species control or prevention: Not Applicable
In-place species management
Harvest management plan: Yes
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
Subject to any international management / trade controls: No

Conservation Actions Needed

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

Conservation Action Needed
3. Species management -> 3.1. Species management -> 3.1.1. Harvest management
3. Species management -> 3.1. Species management -> 3.1.2. Trade management

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
1. Research -> 1.4. Harvest, use & livelihoods
2. Conservation Planning -> 2.3. Harvest & Trade Management Plan
3. Monitoring -> 3.1. Population trends
3. Monitoring -> 3.2. Harvest level trends
3. Monitoring -> 3.3. Trade trends

Additional Data Fields

Distribution
Lower depth limit (m): 500
Upper depth limit (m): 0
Habitats and Ecology
Generation Length (years): 16.5

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