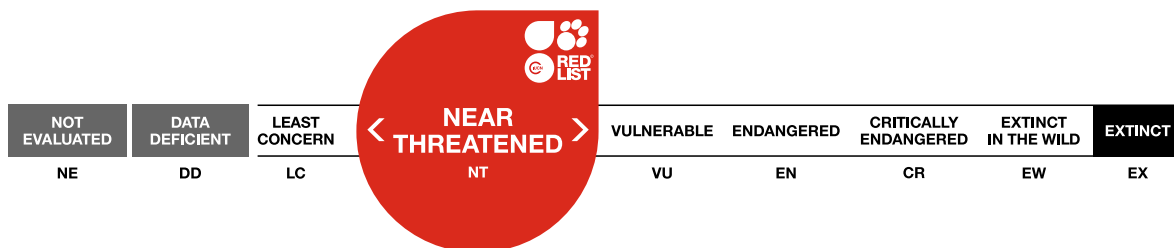


## *Bathyraja multispinis*, Multispine Skate

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



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**Short citation:** Pollom, R. *et al.* 2020. *Bathyraja multispinis*. The IUCN Red List of Threatened Species 2020: e.T63144A3121878. <https://dx.doi.org/10.2305/IUCN.UK.2020-3.RLTS.T63144A3121878.en> [see full citation at end]

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## Taxonomy

Kingdom	Phylum	Class	Order	Family
Animalia	Chordata	Chondrichthyes	Rajiformes	Arhynchobatidae

**Scientific Name:** *Bathyraja multispinis* (Norman, 1937)

### Synonym(s):

- *Raja multispinis* Norman, 1937
- *Rhinoraja multispinis* (Norman, 1937)

### Common Name(s):

- English: Multispine Skate
- Spanish; Castilian: Raya Aserrada

### Taxonomic Source(s):

Fricke, R., W.N. Eschmeyer and R. Van der Laan (eds.). 2020. Eschmeyer's catalog of fishes: Genera, species, references. Available at: <http://researcharchive.calacademy.org/research/ichthyology/catalog/fishcatmain.asp>. (Accessed: March 2020).

### Taxonomic Notes:

Compagno (1999, 2005) reallocated this species from *Bathyraja* to the genus *Rhinoraja* but the validity of this move remains unconfirmed. Both are currently in use, until a definitive systematic revision of these genera is conducted.

## Assessment Information

**Red List Category & Criteria:** Near Threatened A2bd [ver 3.1](#)

**Year Published:** 2020

**Date Assessed:** February 7, 2019

### Justification:

The Multispine Skate (*Bathyraja multispinis*) is a medium-sized (to 126 cm total length) skate that occurs in the Southeast Pacific Ocean from Coquimbo, Chile to Cape Horn and in the Southwest Atlantic Ocean from Santa Catarina, Brazil to Tierra del Fuego and the Falkland Islands (Malvinas) and is demersal on the continental and insular shelves and slopes at depths of 70–740 m. It is captured in demersal trawl and longline fisheries that operate throughout its range and there is little refuge at depth; it is likely to be retained for sale for human consumption in the Southwest Atlantic, but is discarded dead in the Southeast Pacific. Across its range, skates are typically not recorded or managed at the species level, and there are no estimates of population size. In Argentina, there are no species-specific data, but rays in general declined in catch-per-unit-effort (CPUE) in the 1990s and early 2000s. In the Falkland Islands (Malvinas) target skate fishery, this species showed an either stable or increasing trend in CPUE over the time-series from 1994 to 2013. Overall, due to the level of inadequately managed fisheries it is exposed to, general declines of skates in some parts of its range, and its lack of refuge at depth,

balanced with the increase in CPUE in the Falkland Islands (Malvinas), it is suspected that this skate has undergone a population reduction of 20–29% over the past three generations (45 years). Therefore, the Multispine Skate is assessed as Near Threatened, nearly meeting the threshold for Vulnerable A2bd.

### **Previously Published Red List Assessments**

2018 – Near Threatened (NT)

<https://dx.doi.org/10.2305/IUCN.UK.2007.RLTS.T63144A136603219.en>

2007 – Near Threatened (NT)

<https://dx.doi.org/10.2305/IUCN.UK.2007.RLTS.T63144A12622905.en>

## **Geographic Range**

### **Range Description:**

The Multispine Skate occurs in the Southeast Pacific Ocean from Coquimbo, Chile to Cape Horn (Bustamante *et al.* 2014) and in the Southwest Atlantic Ocean from Santa Catarina, Brazil to Tierra del Fuego and the Falkland Islands (Malvinas) (Last *et al.* 2016).

### **Country Occurrence:**

**Native, Extant (resident):** Argentina; Brazil; Chile; Falkland Islands (Malvinas); Uruguay

### **FAO Marine Fishing Areas:**

**Native:** Atlantic - southwest

**Native:** Pacific - southeast

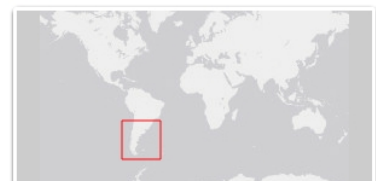
# Distribution Map



## Legend

■ EXTANT (RESIDENT)

Compiled by:  
IUCN SSC Shark Specialist Group 2019



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



## Population

There are no estimates of population size for this skate. Across its range, skates are typically not recorded or managed at the species level. Species-specific catch time-series for Argentinian skate fisheries are unavailable, but overall skate landings were <1,000 t prior to 1994, rising to >15,000 t in 2001, reaching a peak of 28,038 t in 2007 and dropping to 17,793 t in 2017 (G. Chiaramonte, unpubl. data 2019). In the Argentina-Uruguay Common Fishing Zone (AUCFZ), species-specific data are not available but landings of 'offshore skates' have only been recorded since 2014 and have fluctuated between 2,000 and 4,500 t (CTMFM 2018). In the Falkland Islands (Malvinas) target skate fishery, this species showed an either stable or increasing trend in standardized catch-per-unit-effort (CPUE) in a 1994–2013 time-series (Winter *et al.* 2015).

Overall, due to the level of inadequately managed fisheries it is exposed to, general declines of skates in some parts of its range, and its lack of refuge at depth, balanced with the increase in CPUE in the Falkland Islands (Malvinas), it is suspected that this skate has undergone a population reduction of 20–29% over the past three generations (45 years).

**Current Population Trend:** Decreasing

## Habitat and Ecology (see Appendix for additional information)

The Multispine Skate is demersal on the continental and insular shelves and slopes at depths of 70–740 m (Last *et al.* 2016). It reaches a maximum length of 126 cm total length (TL) and size at maturity is 97 cm TL (Last *et al.* 2016). As in other skates, reproduction is oviparous (Last *et al.* 2016). Generation length (GL) is suspected to be about 15 years, based on data available for the smaller Whitedotted Skate (*Bathyraja albomaculata*), which reaches a maximum size of 100 cm TL, has an age-at-maturity of 10 years, a longevity of 17 years, and thus a GL of 13.5 years (Henderson *et al.* 2005).

**Systems:** Marine

## Use and Trade

In the Southwest Atlantic, skates larger than ~30 cm disc width are typically utilized or exported for human consumption (Laptikhovsky 2004). In the Southeast Pacific, this species is not known to be utilized and is discarded dead in Chile. Korean buyers there prefer long-nosed dark-bellied skates (*Dipturus* spp.) rather than *Bathyraja* spp.

## Threats (see Appendix for additional information)

This skate is captured in demersal trawl and longline fisheries. In the Southeast Pacific, it is captured rarely in the targeted Yellownose Skate (*Dipturus chilensis*) fishery, which operates at depths of 30–300 m. There is also a deepwater crustacean fishery operating between 280 and 474 m (E. Acuña unpubl. data 2019). Trawl and longline fisheries targeting Chilean Hake (*Merluccius australis*) operate there at depths of 50–300 m (Mateo *et al.* 2019) and likely capture this skate.

In the Southwest Atlantic, the Multispine Skate is caught in otter trawls in southern Brazil where fishing pressure is intense and largely unmanaged (Rincon *et al.* 2017). From the late 1990s, deepwater fisheries along the southeast and southern coasts of Brazil developed to remove some pressure from

depleted coastal resources (Perez *et al.* 2009). These fisheries targeted a variety of species at depths of 200 m to greater than 1,000 m. Development of these fisheries was intense; the entire area fished for deepwater shrimp species was estimated to be swept nearly twice over a three-year period (2003–2006), reducing biomass estimates of the target species (*Aristaeopsis edwardsiana*) by up to 50% (Dallagnolo *et al.* 2009).

In Argentina, small numbers of this skate are captured in the Patagonian Scallop (*Zygochlamys patagonica*) fishery, which operates mostly along the 100 m isobath (Schejter *et al.* 2012), and likely only interacts with the upper portion of this skate's depth range. In the Falkland Islands (Malvinas) target skate trawl fishery, which operates no deeper than about 400 m, this species is caught in low numbers (Winter *et al.* 2015). Patagonian Toothfish fisheries there are likely to capture this species.

Overall, this skate is captured in inadequately managed fisheries across its range, it may not be productive enough to withstand fishing pressure, and it has little if any refuge at depth.

## Conservation Actions (see Appendix for additional information)

There are no species-specific protections or conservation measures in place for this skate. In Chile, the target skate fishery is regulated through reference points and an annual total allowable catch (TAC) for the target Yellownose Skate (70 t in 2018), with no further species-specific measures in place (Mateo *et al.* 2019). The Chilean Hake fishery there is certified by the Marine Stewardship Council, however there are again no species-specific bycatch measures in place. Regulations and management tools need to be species-specific due to differing life histories and abundance patterns between the targeted species and other species caught as bycatch such as this.

In Argentina, there are theoretically total allowable catches (TACs), minimum sizes and overall annual quotas for skates, however, little attention is paid to these and there is no regular monitoring by authorities. In the AUCFZ, it is managed with the group 'offshore skates' through a total allowable catch (CTMFM 2018). In the Falkland Islands (Malvinas), vessels fishing under general finfish licences are prohibited from targeting skates, although a small bycatch (below 10%) is allowed. The target skate fishery there is managed, but not at the species level (Winter *et al.* 2015). Further research is needed on life history, population size and trend, and threats. Management measures should be implemented to ensure this species does not become threatened in the near future, and all fisheries should be monitored for bycatch at the species level.

## Credits

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

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## Citation

Pollom, R., Dulvy, N.K., Acuña, E., Bustamante, C., Charvet, P., Chiamonte, G.E., Cuevas, J.M., Herman, K., Paesch, L., Pompert, J. & Velez-Zuazo, X. 2020. *Bathyraja multispinis*. *The IUCN Red List of Threatened Species* 2020: e.T63144A3121878. <https://dx.doi.org/10.2305/IUCN.UK.2020-3.RLTS.T63144A3121878.en>

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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?
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
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	No	Yes	No

### 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 -> 5.4.2. Intentional use: (large 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 -> 5.4.3. 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>)

<b>Conservation Action in Place</b>
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
Subject to any international management / trade controls: No

## Conservation Actions Needed

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

<b>Conservation Action Needed</b>
3. Species management -> 3.1. Species management -> 3.1.1. Harvest management

## Research Needed

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

<b>Research Needed</b>
1. Research -> 1.2. Population size, distribution & trends
1. Research -> 1.3. Life history & ecology
1. Research -> 1.4. Harvest, use & livelihoods
1. Research -> 1.5. Threats
2. Conservation Planning -> 2.3. Harvest & Trade Management Plan
3. Monitoring -> 3.1. Population trends

<b>Research Needed</b>
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3. Monitoring -> 3.2. Harvest level trends
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## Additional Data Fields

<b>Distribution</b>
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Lower depth limit (m): 740
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Upper depth limit (m): 70
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<b>Habitats and Ecology</b>
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Generation Length (years): 15
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