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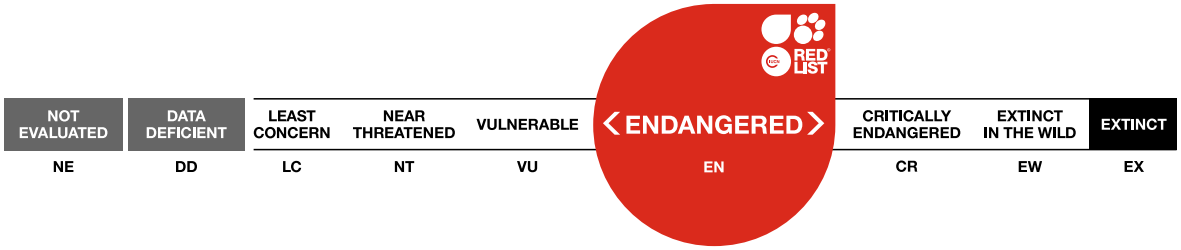
Bathyraja griseocauda, Graytail Skate

Assessment by: Pollom, R., Dulvy, N.K., Acuña, E., Bustamante, C., Chiaramonte, G.E., Cuevas, J.M., Herman, K., Paesch, L., Pompert, J. & Velez-Zuazo, X.



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Taxonomy

Kingdom	Phylum	Class	Order	Family
Animalia	Chordata	Chondrichthyes	Rajiformes	Arhynchobatidae

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

Synonym(s):

- *Raja griseocauda* Norman, 1937

Common Name(s):

- English: Graytail Skate, Greytail Skate
- Spanish; Castilian: Raya Gris, Raya Lija

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).

Assessment Information

Red List Category & Criteria: Endangered A2bd ver 3.1

Year Published: 2020

Date Assessed: February 8, 2019

Justification:

The Greytail Skate (*Bathyraja griseocauda*) is a large (to 157 cm total length) skate that occurs in the Southeast Pacific and Southwest Atlantic Oceans from Coquimbo, Chile south around Cape Horn and north to Uruguay, including the Falkland Islands (Malvinas), and is demersal on the mid-continental shelf and upper slope at depths of 30–1,010 m. It is captured in trawl and longline fisheries targeting skates, squid, shrimp, scallops, hake, and Patagonian Toothfish (*Dissostichus eleginoides*) that are inadequately managed and together operate throughout its range. Its large body size and relatively unproductive life history make it particularly vulnerable to overfishing. In the Southeast Pacific, this skate is captured and discarded dead in inadequately managed fisheries that operate throughout that portion of its range. In the Southwest Atlantic, where large skates are typically utilized or exported for human consumption, the catch-per-unit-effort (CPUE) for this skate in the Falkland Islands (Malvinas) multi-species skate fishery declined consistently and substantially from 120 to 23 kg/hr between 1994 and 2006, and increased to 70 kg/hr in 2013 due to a change in the area fished. Although no later data are available, this fishery continues and is still not managed at the species level. In Argentina, there are no species-specific data, but rays in general declined in CPUE in the 1990s and early 2000s. Overall, due to the level of inadequately managed fishing pressure it is exposed to across its range, its large size and relatively unproductive life history, the decline in CPUE of rays in general in some areas, and the noted decline in CPUE (although succeeded by an increase) of this species in the Falkland Islands, it is suspected that this skate has undergone a population reduction of 50–79% over the past three

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generations (69 years). Therefore, the Greytail Skate is assessed as Endangered A2bd.

Previously Published Red List Assessments

2007 – Endangered (EN)
https://dx.doi.org/10.2305/IUCN.UK.2007.RLTS.T63113A12609854.en

Geographic Range

Range Description:

The Greytail Skate occurs in the Southeast Pacific and Southwest Atlantic Oceans from Coquimbo, Chile south around Cape Horn and north to Uruguay, including the Falkland Islands (Malvinas) (Last *et al.* 2016).

Country Occurrence:

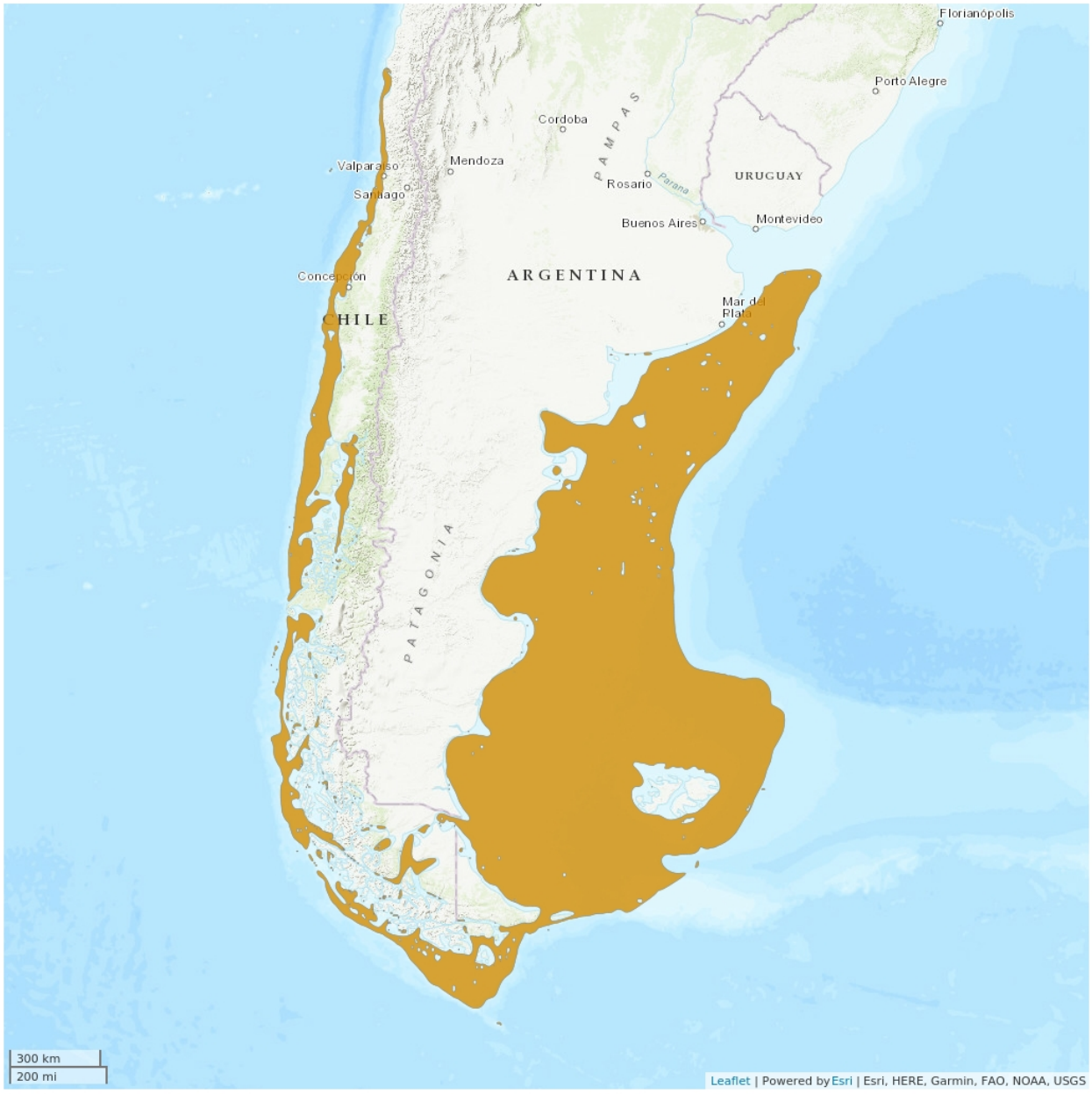
Native, Extant (resident): Argentina; Chile; Falkland Islands (Malvinas); Uruguay

FAO Marine Fishing Areas:

Native: Atlantic - southwest

Native: Pacific - southeast

Distribution Map



Legend

EXTANT (RESIDENT)

Compiled by:

IUCN SSC Shark Specialist Group 2018

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

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Population

There are no population size estimates for this skate.

In the Southeast Pacific, it is captured and discarded dead in inadequately managed fisheries that operate throughout that portion of its range.

In the Southwest Atlantic, the catch-per-unit-effort (CPUE) for this skate in the Falkland Islands (Malvinas) multi-species skate fishery declined consistently and substantially from 120 to 23 kg/hr between 1994 and 2006, and increased to 70 kg/hr in 2013, likely due to a shift in the area fished (Wakeford *et al.* 2005, Winter *et al.* 2015). Although no later data are available, this fishery continues and is still not 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).

Overall, due to the level of inadequately managed fishing pressure it is exposed to across its range, its large size and relatively unproductive life history, the decline in CPUE of rays in general in some areas, and the noted decline in CPUE (although succeeded by an increase) of this species in the Falkland Islands, it is suspected that the Greytail Skate has undergone a population reduction of 50–79% over the past three generations (69 years).

Current Population Trend: Decreasing

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

The Greytail Skate is demersal on the mid-continental shelf and upper slope at depths of 30–1,010 m (Last *et al.* 2016). It reaches a maximum size of 157 cm total length (TL) (Last *et al.* 2016); females mature at 108.2 cm TL and males at 94.5 cm TL (Arkhipkin *et al.* 2008). As in other skates, reproduction is oviparous; size at hatch is 20 cm TL (Arkhipkin *et al.* 2008). Female age at maturity is 17.8 years and maximum age is 28 years; generation length is therefore about 23 years (Arkhipkin *et al.* 2008).

Systems: Marine

Use and Trade

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

Threats **(see Appendix for additional information)**

The Greytail skate is captured, typically as bycatch, in bottom longline and trawl fisheries.

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In the Southeast Pacific, this skate is captured by the bottom longline fishery targeting Patagonian Toothfish (*Dissostichus eleginoides*), which operates at depths of 800–1,400 m (Reyes and Torres-Flores 2009), and the deepwater crustacean fishery operating between 280 and 474 m (E. Acuña unpubl. data 2019). Trawl and longline fisheries targeting Chilean Hake (*Merluccius australis*) operate at depths of 50–300 m (Mateo *et al.* 2019) and also likely capture this skate.

In the Southwest Atlantic, this species is targeted along with other skates in the Falkland Islands (Malvinas) multi-species skate trawl fishery, which is managed as a single population and does not distinguish between species. It is also caught as bycatch in squid and finfish trawl fisheries, where it does not survive as a discard (Laptikhovsky 2004). Patagonian Toothfish longline fisheries also operate off the Falkland Islands (Malvinas) (Henderson *et al.* 2005). In Argentina, one study showed that this skate was present in about 7% of trawl hauls for Patagonian Scallop (*Zygochlamys patagonica*) in 2010 (Schejter *et al.* 2012). It is also likely caught there in groundfish fisheries.

Overall, this skate is captured in trawl and longline fisheries that are inadequately managed and operate throughout its range. Its large body size and relatively unproductive life history make it particularly vulnerable to overfishing.

Conservation Actions **(see Appendix for additional information)**

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

In Argentina, there are theoretically TACs, minimum sizes and overall annual quotas for skates, however, little attention is paid to these and there is no regular monitoring by authorities (M. Stehmann pers. comm. 2006). In the AUCFZ, it is managed with the group 'offshore skates' through a total allowable catch (CTMFM 2018). Species-specific assessments of direct and indirect catches are a priority.

The Falkland Islands (Malvinas) multispecies skate fishery is managed by limiting fishing effort. The effort that each vessel is likely to exert is calculated (based on size, duration of license and past fishing history) and, since 1994, only a limited number of licences are granted to ensure that the total allowable effort (determined from assessments of stock status) is not exceeded. Stock status assessments are not, however, species-specific and a sustainable total allowable effort for the entire stock may not translate to sustainable levels of effort for individual species (Agnew *et al.* 2000). Following declines in CPUE in the early 1990s, in 1996, the southern area (below 52°S) was closed to rajid fishing and the fishery is now restricted to the area north of the islands. This closure is extended to 50°30'S (between 56°30W and 58°W) during the second season of each year to exclude the skate fishing fleet from Patagonian Longfin Squid (*Doryteuthis gahi*) fishing grounds (Agnew *et al.* 2000). All licensed vessels there are required to provide daily catch and effort details, including discards of commercial and non-commercial species to the Falkland Island Fisheries Department. There is, however, no requirement to report species-specific information. Scientific observers are deployed onboard vessels in order to quantify the

catch composition by species and to obtain detailed biological data on individual species (Winter *et al.* 2015).

Further research is needed on population size and trends and threats. 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)

Bibliography

Agnew, D.J., Nolan, C.P., Beddington, J.R. and Baranowski, R. 2000. Approaches to the assessment and management of multispecies skate and ray fisheries using the Falkland Islands fishery as an example. *Canadian Journal of Fisheries and Aquatic Science* 57: 429-440.

Arkhipkin, A.I., Baumgartner, N., Brickle, P., Laptikhovsky, V.V., Pompert, J.H.W. and Shcherbich, Z.N. 2008. Biology of the skates *Bathyraja brachyurops* and *B. griseocauda* in waters around the Falkand Islands, Southwest Atlantic. *ICES Journal Of Marine Science* 65(4): 560–570.

Comisión Técnica Mixta del Frente Maritimo (CTMFM). 2018. Plan de acción regional para la conservación y pesca sustentable de los condrictios en el área del Tratado del Río de la Plata y su Frente Marítimo. CTMFM Publicaciones Ocasionales. Montevideo, Uruguay. 144 pp.

Henderson, A.C., Arkhipkin, A.I. and Chtcherbich J.N. 2005. Distribution, growth and reproduction of the white-spotted skate *Bathyraja albomaculata* (Norman, 1937) around the Falkland Islands. *Journal of Northwest Atlantic Fishery Science* 35: 79–87.

IUCN. 2020. The IUCN Red List of Threatened Species. Version 2020-3. Available at: www.iucnredlist.org. (Accessed: 10 December 2020).

Laptikhovsky, V.V. 2004. Survival rates for rays discarded by the bottom squid trawl fishery of the Falkland Islands. *Fishery Bulletin* 102: 757-759.

Last, P., White, W., de Carvalho, M., Séret, B., Stehmann, M. and Naylor, G. 2016. *Rays of the World*. CSIRO Publishing, Clayton.

Mateo, I., Polonio, V. and Saa, E. 2019. Marine Stewardship Council Full Assessment Public Comments Draft Report For The Chile Austral hake (*Merluccius australis*) industrial trawl and longline, Facilitated by Federación de Industrias Pesqueras Del Sur Austral. SAI Global, Dundalk, Ireland.

Reyes, P. R., Torres-Florez, J. P. 2009. Diversidad, distribución, riqueza y abundancia de condrictios de aguas profundas a través del archipiélago patagónico austral, Cabo de Hornos, Islas Diego Ramírez y el sector norte del paso Drake. *Revista de Biología Marina y Oceanografía* 44: 243-251.

Schejter, L., Escolar, M., Remaggi, C., Álvarez-Colombo, G., Ibañez, P. and Bremec, C.S. 2012. By-catch composition of the Patagonian scallop fishery: the fishes. *Latin American Journal of Aquatic Research* 40(4): 1094–1099.

Wakeford, R.C., Agnew, D.J., Middleton, D.A.J., Pomport, J.H.W. and Laptikhovsky, V.V. 2005. Management of the Falkland Islands Multispecies ray fishery: Is species specific management required? Symposium, 11-13 September 2001: Elasmobranch fisheries: Managing for sustainable use and biodiversity conservation. *Journal of Northwest Atlantic Fisheries Science* 35: 309-324.

Winter, A., Pompert, J., Arkhipkin, A. and Brewin, P.E. 2015. Interannual variability in the skate assemblage on the South Patagonian shelf and slope. *Journal of Fish Biology* 87(6): 1449–1468.

Citation

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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	Whole (>90%)	Slow, significant declines	Medium impact: 7
	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	Whole (>90%)	Slow, significant declines	Medium impact: 7
	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	Whole (>90%)	Slow, significant declines	Medium impact: 7
	Stresses:	2. Species Stresses -> 2.1. Species mortality		

Conservation Actions in Place

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

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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
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 -> 3.2. Species recovery
5. Law & policy -> 5.2. Policies and regulations
5. Law & policy -> 5.4. Compliance and enforcement -> 5.4.2. National level

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

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Research Needed
1. Research -> 1.5. Threats
2. Conservation Planning -> 2.1. Species Action/Recovery Plan
2. Conservation Planning -> 2.3. Harvest & Trade Management Plan
3. Monitoring -> 3.1. Population trends
3. Monitoring -> 3.2. Harvest level trends

Additional Data Fields

Distribution
Lower depth limit (m): 1,010
Upper depth limit (m): 30
Habitats and Ecology
Generation Length (years): 23

The IUCN Red List Partnership

The IUCN Red List of Threatened Species™ is produced and managed by the IUCN Global Species Programme, the IUCN Species Survival Commission (SSC) and The IUCN Red List Partnership.

The IUCN Red List Partners are: Arizona State University; BirdLife International; Botanic Gardens Conservation International; Conservation International; NatureServe; Royal Botanic Gardens, Kew; Sapienza University of Rome; Texas A&M University; and Zoological Society of London.