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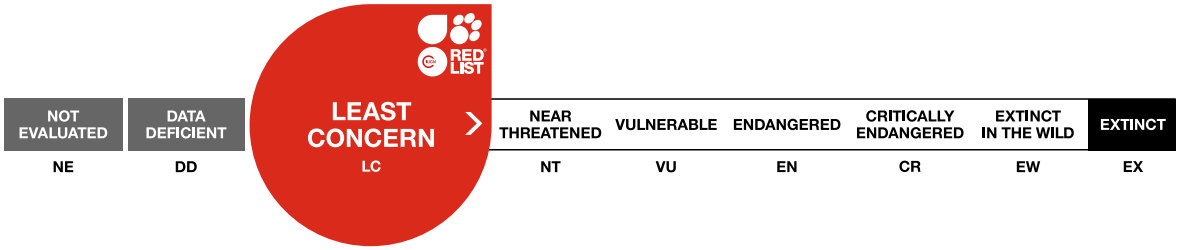
Sebastes oculatus, Patagonian Rockfish

Assessment by: Buratti, C., Díaz de Astarloa, J., Hüne, M., Irigoyen, A., Landaeta, M., Riestra, C. & Vieira, J.P.



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Taxonomy

Kingdom	Phylum	Class	Order	Family
Animalia	Chordata	Actinopterygii	Scorpaeniformes	Sebastidae

Scientific Name: *Sebastes oculatus* Valenciennes in Cuvier & Valenciennes, 1833

Common Name(s):

- English: Patagonian Rockfish
- Spanish; Castilian: Cabrilla, Scrofalo

Taxonomic Source(s):

Fricke, R., Eschmeyer, W.N. and Van der Laan, R. (eds). 2020. Eschmeyer's Catalog of Fishes: genera, species, references. Updated 02 March 2020. Available at: http://researcharchive.calacademy.org/research/ichthyology/catalog/fishcatmain.asp.

Assessment Information

Red List Category & Criteria: Least Concern ver 3.1

Year Published: 2020

Date Assessed: December 6, 2019

Justification:

This demersal, reef-associated species is common and abundant through much of its range. It is taken in fisheries at relatively low levels and may be impacted by invasive salmon. Global-level declines are not considered to be approaching a Near Threatened or threatened level at this time; therefore, it is listed as Least Concern.

Geographic Range

Range Description:

This species occurs in the southeast Pacific from 10°S off Peru to the southern tip of Chile and in the southwest Atlantic north to Buenos Aires Province, Argentina around 38°S, including the Malvinas Islands (Rocha-Olivares *et al*. 1999, Barrientos *et al.* 2006, Nuñez *et al.* 2010, Buratti 2020, M. Landaeta pers. comm. 2020). The depth range is 1-500 metres, but it primarily occurs between 61-226 m (Buratti 2020).

Country Occurrence:

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

FAO Marine Fishing Areas:

Native: Atlantic - southwest

Native: Pacific - southeast

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Distribution Map

Legend

EXTANT (RESIDENT)

Compiled by:

IUCN Marine Biodiversity Unit/GMSA 2020

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

This species is common and abundant in relatively shallow waters (0-50 m) in fjords within its range (Irigoyen *et al*. 2013, Venerus *et al*. 2016), but also has a large abundance on the mid- to outer continental shelf area off Argentina. On the Pacific coast, it is infrequently recorded north of 40°S. It occurs in low densities in the Malvinas (Buratti 2020). Abundance may be lower towards the southern portion of its range. Larvae are very abundant (Landaeta *et al.* 2015, Castillo-Hidalgo *et al.* 2018). It is easily confused with *Helicolenus dactylopterus*. Spearfishing activity in central Chile may cause localised declines.

On the Atlantic coast, it is most abundant on rocky reefs to 70 m depth south of 44°S. According to scientific surveys conducted between 34°S and 48°S from 1993 to 2019 to monitor Argentine hake and Argentine squid, the highest relative densities of this species (*Sebastes oculatus*) were recorded south of 43°S between 125-150 metres (Buratti 2020). The population off Argentina is separated genetically by depth range, with a shallow, coastal population and an offshore shelf population (Venerus *et al*. 2013). According to long term data collected during recreational angling competitions, catch per unit effort of this species has declined over time in Argentina (Venerus and Cedrola 2017).

Current Population Trend: Unknown

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

This demersal species inhabits coastal, rocky reefs as well as cold-water coral reefs. The maximum total length is 41 cm (Venerus *et al*. 2016). In Argentina, it most frequently occurs on the mid and outer continental shelf as well as on coastal, rocky reefs of Patagonia (Buratti 2020). It is mainly a carcinophagous fish that feeds on benthic or demersal-benthic prey, although with an important contribution of some demersal fish species. The reproductive strategy includes internal fertilization. Males and females develop an anatomically complementary genital papillae to improve the efficiency of the spermatic passage. The different morphology of the papillae is the only external sexual dimorphism found. The reproductive cycle is annual with a synchronous cycle for males and females. The functional maturity of males and the stage of migration of the nucleus in females has its peak of greatest abundance in early spring, copulation and fertilization would occur approximately at the same time. The gestation lasts about one month and the parturition occurs towards the end of spring. The average relative fecundity was estimated at 134.14 oocytes/gr^{-1} and the total lengths at first maturity is between 16 and 24 cm (Marcinkevicius 2019).

Systems: Marine

Use and Trade

This species is not directly targeted, but is taken as bycatch in longline fishing fleets and offshore commercial trawl fisheries, especially the Argentine hake fishery (Buratti 2020). Throughout its range, it is occasionally landed (retained as bycatch) at relatively low levels. It is also taken by artisanal and recreational hook-and-line and spearfishers in central Chile and the North Patagonian gulfs of Argentina (Venerus *et al*. 2016).

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

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At this time, fishing activity is not expected to be driving global-level population declines approaching a Near Threatened or threatened level. Individuals of the non-native Chinook Salmon (*Oncorhynchus tschawytscha*) escaped from the aquaculture industry into waters of the straits of southern Chile in the mid-1980s and had become invasive throughout the area by 2005. In the fjords and Chilean part of the Patagonia Sea region, the transfer of disease from consumption of salmon food pellets may impact this species and juveniles could be consumed by the invasive salmon (Hüne *et al.* 2018, M. Hüne pers. comm. 2019).

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

There are no species-specific conservation measures. There are no fishing regulations for this species in Argentina (C. Buratti pers. comm. 2020).

Credits

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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 -> 9.2. Marine Neritic - Subtidal Rock and Rocky Reefs	Resident	Suitable	Yes
9. Marine Neritic -> 9.8. Marine Neritic - Coral Reef	Resident	Suitable	Yes

Use and Trade

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

End Use	Local	National	International
Food - human	Yes	No	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 -> 5.4.1. Intentional use: (subsistence/small scale) [harvest]	Ongoing	Minority (50%)	Unknown	Unknown
	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	Minority (50%)	Unknown	Unknown
	Stresses:	2. Species Stresses -> 2.1. Species mortality		
8. Invasive and other problematic species, genes & diseases -> 8.1. Invasive non-native/alien species/diseases -> 8.1.1. Unspecified species	Ongoing	Minority (50%)	Unknown	Unknown
	Stresses:	2. Species Stresses -> 2.1. Species mortality 2. Species Stresses -> 2.2. Species disturbance 2. Species Stresses -> 2.3. Indirect species effects		

Conservation Actions Needed

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

Conservation Action Needed
2. Land/water management -> 2.2. Invasive/problematic species control
3. Species management -> 3.1. Species management -> 3.1.1. Harvest management

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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

Additional Data Fields

Distribution
Lower depth limit (m): 500
Upper depth limit (m): 1

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.

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